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**INTERNAL AERODYNAMICS MANUAL**

June 1970

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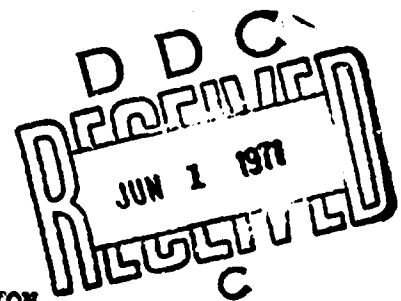
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NAVAL AIR SYSTEMS COMMAND  
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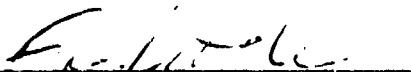
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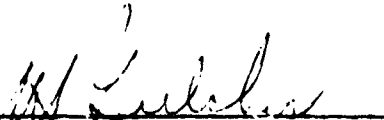
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ABSTRACT

The Internal Aerodynamics Handbook has been developed in order to provide a convenient, accurate and reliable internal aerodynamics design manual which enables rapid determination of the internal airflow effects on airplane performance. It also enables the computation of internal airflow systems performance by developed theoretical and empirical methods. The scope of the design manual relates specifically to internal aerodynamics for the complete aircraft speed range up to and including Mach 3.5. In addition to the detailed data and methods presentation, an extensive bibliography is provided.

KEY WORDS

Additive Drag  
Airflow  
Control System  
Cooling  
Diffuser  
Ejector  
Exhaust Nozzle  
High Bypass Ratio  
Inlet  
Instability  
Installation Loss  
Jet Effects  
Thermodynamics  
Thrust  
Thrust Reverser

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## INTRODUCTION

Airbreathing vehicles have been developed for much of the flight spectrum applicable to their operation. In the twenty year history of turbojet operation, flight speeds have advanced from moderate subsonic to Mach 3 and beyond. Recently, new innovations have appeared such as high by-pass ratio turbofans with high air handling capacities which make induction system losses and associated drag more critical performance items than with conventional turbojets. Variable 3-dimensional inlets, translating spikes, and translating cowls are fairly recent innovations aimed at propulsion system optimization. New exhaust system techniques such as variable guided expansion ejector nozzles, blow-in-door nozzles and IP suppression plug nozzles are appearing on the scene to broaden the spectrum of performance trade-off to be accomplished.

A large quantity of data has been gathered on airbreathing propulsion system performance. Some of these data reside with this contractor in its several divisions, in publications of several governmental agencies and of other contractors. In the field of propulsion, inlet and exhaust flows and their effects on vehicle performance characteristics, there has existed a definite need to bring isolated, though related, items of data together to be correlated and interpreted in the light of known theory. The effort presented herein was developed as a tool by which future design evaluations can be made on the basis of a much more complete and comprehensive correlation of the large quantity of existing data than has been available in the past.

## APPENDIX

*report*  
The Appendix is organized into six sections and consists of tabulations that will facilitate theoretical thermodynamic calculations. These sections of the Appendix are:

- Appendix A. Basic Thermodynamic Relationships,
- Appendix B. Normal Shock Wave Parameters,
- Appendix C. Two-Dimensional Shock Wave Parameters,
- Appendix D. Three-Dimensional Shock Wave Analysis,
- Appendix E. Corrected Weight Flow Parameters,
- Appendix F. Parameters For Thrust Calculation.

Appendix A. Basic Thermodynamic Relationships

This appendix contains some useful basic thermodynamic relationships. Included are:

- a. The ratio of Total to Static Pressure,  $P_t/P$
- b. The ratio of Total to Static Temperature,  $T_t/T$
- c. The Stream Tube Relationship,  $A/A^*$
- d. The ratio of Compressible Dynamic Pressure to Total Pressure,  $q_c/P_t$
- e. The ratio of Local Velocity to Velocity at Mach 1.0,  $V/a^*$ .

## Appendix A (continued)

Tabulation of:

Ratio of Total to Static Pressure,  $P_t/P$

The ratio is tabulated versus Mach number.

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
0.0	1.00000	1.00000	1.00000	1.00001	1.00001	1.00002	1.00003	1.00003	1.00004	1.00006
0.01	1.00007	1.00008	1.00010	1.00012	1.00014	1.00016	1.00018	1.00020	1.00021	1.00023
0.02	1.00028	1.00031	1.00034	1.00037	1.00040	1.00044	1.00047	1.00051	1.00053	1.00056
0.03	1.00063	1.00067	1.00072	1.00076	1.00081	1.00086	1.00091	1.00096	1.00101	1.00104
0.04	1.00112	1.00118	1.00124	1.00129	1.00136	1.00142	1.00148	1.00155	1.00161	1.00168
0.05	1.00175	1.00182	1.00189	1.00197	1.00204	1.00212	1.00220	1.00228	1.00236	1.00244
0.06	1.00252	1.00261	1.00269	1.00278	1.00287	1.00296	1.00305	1.00315	1.00324	1.00334
0.07	1.00343	1.00353	1.00363	1.00374	1.00384	1.00394	1.00405	1.00416	1.00427	1.00438
0.08	1.00449	1.00460	1.00471	1.00483	1.00495	1.00507	1.00519	1.00531	1.00543	1.00556
0.09	1.00568	1.00581	1.00594	1.00607	1.00620	1.00633	1.00647	1.00660	1.00674	1.00688
0.10	1.00702	1.00716	1.00730	1.00745	1.00759	1.00774	1.00789	1.00804	1.00819	1.00834
0.11	1.00850	1.00865	1.00881	1.00897	1.00913	1.00929	1.00945	1.00962	1.00978	1.00995
0.12	1.01012	1.01029	1.01046	1.01063	1.01080	1.01098	1.01116	1.01134	1.01152	1.01170
0.13	1.01188	1.01206	1.01225	1.01244	1.01263	1.01282	1.01301	1.01320	1.01339	1.01358
0.14	1.01379	1.01399	1.01419	1.01439	1.01459	1.01479	1.01500	1.01521	1.01542	1.01563
0.15	1.01584	1.01605	1.01627	1.01648	1.01670	1.01692	1.01714	1.01736	1.01758	1.01781
0.16	1.01803	1.01826	1.01849	1.01872	1.01895	1.01919	1.01942	1.01966	1.01990	1.02014
0.17	1.02038	1.02062	1.02086	1.02111	1.02135	1.02160	1.02185	1.02210	1.02235	1.02261
0.18	1.02286	1.02312	1.02338	1.02364	1.02390	1.02416	1.02443	1.02469	1.02496	1.02523
0.19	1.02550	1.02577	1.02604	1.02632	1.02659	1.02687	1.02715	1.02743	1.02771	1.02800
0.20	1.02828	1.02857	1.02886	1.02914	1.02944	1.02973	1.03002	1.03032	1.03061	1.03091
0.21	1.03121	1.03151	1.03182	1.03212	1.03243	1.03273	1.03304	1.03335	1.03366	1.03398
0.22	1.03429	1.03461	1.03493	1.03525	1.03557	1.03589	1.03621	1.03654	1.03686	1.03719
0.23	1.03752	1.03785	1.03819	1.03852	1.03886	1.03919	1.03953	1.03987	1.04022	1.04056
0.24	1.04090	1.04125	1.04160	1.04195	1.04230	1.04265	1.04301	1.04336	1.04372	1.04408
0.25	1.04444	1.04480	1.04516	1.04553	1.04589	1.04626	1.04663	1.04700	1.04738	1.04778
0.26	1.04812	1.04850	1.04888	1.04926	1.04964	1.05003	1.05041	1.05080	1.05119	1.05158
0.27	1.05197	1.05236	1.05275	1.05315	1.05355	1.05395	1.05435	1.05475	1.05515	1.05556
0.28	1.05596	1.05637	1.05678	1.05719	1.05761	1.05802	1.05844	1.05886	1.05927	1.05970
0.29	1.06012	1.06054	1.06097	1.06139	1.06182	1.06225	1.06269	1.06312	1.06355	1.06399

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
0.30	1.06443	1.06487	1.06531	1.06575	1.06620	1.06665	1.06709	1.06754	1.06799	1.06845
0.31	1.06890	1.06936	1.06982	1.07027	1.07073	1.07120	1.07166	1.07213	1.07259	1.07306
0.32	1.07353	1.07401	1.07448	1.07495	1.07543	1.07591	1.07639	1.07687	1.07736	1.07784
0.33	1.07833	1.07882	1.07931	1.07980	1.08029	1.08079	1.08128	1.08178	1.08228	1.08278
0.34	1.08329	1.08379	1.08430	1.08480	1.08531	1.08583	1.08634	1.08685	1.08737	1.08789
0.35	1.08841	1.08893	1.08945	1.08998	1.09050	1.09103	1.09156	1.09209	1.09263	1.09316
0.36	1.09370	1.09424	1.09478	1.09532	1.09586	1.09640	1.09695	1.09750	1.09805	1.09860
0.37	1.09915	1.09971	1.10027	1.10082	1.10138	1.10195	1.10251	1.10308	1.10364	1.10421
0.38	1.10478	1.10535	1.10593	1.10650	1.10708	1.10766	1.10824	1.10882	1.10941	1.10999
0.39	1.11058	1.11117	1.11176	1.11235	1.11295	1.11354	1.11414	1.11474	1.11534	1.11595
0.40	1.11655	1.11716	1.11777	1.11838	1.11899	1.11960	1.12022	1.12084	1.12145	1.12208
0.41	1.12270	1.12332	1.12395	1.12458	1.12521	1.12584	1.12647	1.12711	1.12774	1.12838
0.42	1.12902	1.12966	1.13031	1.13095	1.13160	1.13225	1.13290	1.13355	1.13421	1.13487
0.43	1.13552	1.13618	1.13685	1.13751	1.13817	1.13884	1.13951	1.14018	1.14086	1.14153
0.44	1.14221	1.14288	1.14356	1.14425	1.14493	1.14562	1.14630	1.14699	1.14768	1.14838
0.45	1.14907	1.14977	1.15047	1.15117	1.15187	1.15257	1.15328	1.15399	1.15470	1.15541
0.46	1.15612	1.15684	1.15755	1.15827	1.15899	1.15972	1.16044	1.16117	1.16190	1.16263
0.47	1.16336	1.16409	1.16483	1.16557	1.16631	1.16705	1.16779	1.16854	1.16928	1.17003
0.48	1.17078	1.17154	1.17229	1.17305	1.17381	1.17457	1.17533	1.17610	1.17686	1.17763
0.49	1.17840	1.17917	1.17995	1.18072	1.18150	1.18228	1.18306	1.18385	1.18463	1.18542
0.50	1.18621	1.18700	1.18780	1.18859	1.18939	1.19019	1.19099	1.19180	1.19260	1.19341
0.51	1.19422	1.19503	1.19584	1.19666	1.19748	1.19830	1.19912	1.19994	1.20077	1.20159
0.52	1.20242	1.20325	1.20409	1.20492	1.20576	1.20660	1.20744	1.20829	1.20913	1.20998
0.53	1.21083	1.21168	1.21253	1.21339	1.21425	1.21511	1.21597	1.21683	1.21770	1.21857
0.54	1.21944	1.22031	1.22118	1.22206	1.22294	1.22382	1.22470	1.22558	1.22647	1.22736
0.55	1.22825	1.22914	1.23004	1.23094	1.23183	1.23274	1.23364	1.23454	1.23545	1.23636
0.56	1.23727	1.23819	1.23910	1.24002	1.24094	1.24186	1.24279	1.24371	1.24464	1.24557
0.57	1.24651	1.24744	1.24838	1.24932	1.25026	1.25120	1.25215	1.25310	1.25405	1.25500
0.58	1.25595	1.25691	1.25787	1.25883	1.25979	1.26076	1.26173	1.26270	1.26367	1.26464
0.59	1.26562	1.26660	1.26758	1.26856	1.26955	1.27053	1.27152	1.27251	1.27351	1.27450

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
0.60	1.27550	1.27650	1.27751	1.27851	1.27952	1.28053	1.28154	1.28255	1.28357	1.28459
0.61	1.28561	1.28663	1.28766	1.28868	1.28971	1.29075	1.29178	1.29282	1.29386	1.29490
0.62	1.29594	1.29699	1.29803	1.29908	1.30014	1.30119	1.30225	1.30331	1.30437	1.30543
0.63	1.30650	1.30757	1.30864	1.30971	1.31079	1.31187	1.31295	1.31403	1.31512	1.31620
0.64	1.31729	1.31839	1.31948	1.32058	1.32168	1.32278	1.32388	1.32499	1.32610	1.32721
0.65	1.32832	1.32944	1.33055	1.33168	1.33280	1.33392	1.33505	1.33618	1.33731	1.33845
0.66	1.33959	1.34073	1.34187	1.34301	1.34416	1.34531	1.34646	1.34762	1.34877	1.34993
0.67	1.35109	1.35226	1.35342	1.35459	1.35576	1.35694	1.35811	1.35929	1.36048	1.36166
0.68	1.36285	1.36403	1.36523	1.36642	1.36762	1.36881	1.37002	1.37122	1.37243	1.37363
0.69	1.37485	1.37606	1.37728	1.37850	1.37972	1.38094	1.38217	1.38340	1.38463	1.38586
0.70	1.38710	1.38834	1.38958	1.39082	1.39207	1.39332	1.39457	1.39583	1.39709	1.39835
0.71	1.39961	1.40087	1.40214	1.40341	1.40468	1.40596	1.40724	1.40852	1.40980	1.41109
0.72	1.41238	1.41367	1.41496	1.41626	1.41756	1.41886	1.42016	1.42147	1.42278	1.42409
0.73	1.42541	1.42673	1.42805	1.42937	1.43069	1.43202	1.43335	1.43469	1.43603	1.43736
0.74	1.43871	1.44005	1.44140	1.44275	1.44410	1.44546	1.44682	1.44818	1.44954	1.45091
0.75	1.45228	1.45365	1.45502	1.45640	1.45778	1.45916	1.46055	1.46194	1.46333	1.46472
0.76	1.46612	1.46752	1.46892	1.47033	1.47174	1.47315	1.47456	1.47598	1.47740	1.47882
0.77	1.48025	1.48167	1.48310	1.48454	1.48597	1.48741	1.48886	1.49030	1.49175	1.49320
0.78	1.49465	1.49611	1.49757	1.49903	1.50050	1.50195	1.50344	1.50491	1.50639	1.50787
0.79	1.50935	1.51083	1.51232	1.51381	1.51531	1.51681	1.51831	1.51981	1.52132	1.52282
0.80	1.52434	1.52585	1.52737	1.52889	1.53041	1.53194	1.53347	1.53500	1.53654	1.53808
0.81	1.53962	1.54117	1.54271	1.54426	1.54582	1.54738	1.54894	1.55050	1.55206	1.55363
0.82	1.55521	1.55678	1.55836	1.55994	1.56153	1.56311	1.56470	1.56630	1.56789	1.56949
0.83	1.57110	1.57270	1.57431	1.57592	1.57754	1.57916	1.58078	1.58240	1.58403	1.58566
0.84	1.58730	1.58894	1.59058	1.59222	1.59387	1.59552	1.59717	1.59883	1.60049	1.60215
0.85	1.60381	1.60548	1.60716	1.60883	1.61051	1.61219	1.61388	1.61557	1.61726	1.61895
0.86	1.62065	1.62235	1.62406	1.62577	1.62748	1.62919	1.63091	1.63263	1.63435	1.63608
0.87	1.63781	1.63955	1.64128	1.64302	1.64477	1.64652	1.64827	1.65002	1.65178	1.65354
0.88	1.65530	1.65707	1.65884	1.66062	1.66239	1.66416	1.66596	1.66775	1.66954	1.67133
0.89	1.67313	1.67493	1.67674	1.67854	1.68036	1.68217	1.68399	1.68581	1.68764	1.68947

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
0.90	1.69130	1.69313	1.69497	1.69682	1.69866	1.70051	1.70236	1.70422	1.70608	1.70794
0.91	1.70981	1.71168	1.71356	1.71543	1.71731	1.71920	1.72109	1.72298	1.72487	1.72677
0.92	1.72868	1.73058	1.73249	1.73440	1.73632	1.73824	1.74016	1.74209	1.74402	1.74596
0.93	1.74790	1.74984	1.75178	1.75373	1.75569	1.75764	1.75960	1.76157	1.76353	1.76551
0.94	1.76748	1.76946	1.77144	1.77343	1.77542	1.77741	1.77941	1.78141	1.78341	1.78542
0.95	1.78743	1.78945	1.79147	1.79349	1.79552	1.79755	1.79958	1.80162	1.80366	1.80571
0.96	1.80776	1.80981	1.81187	1.81393	1.81599	1.81806	1.82013	1.82221	1.82429	1.82638
0.97	1.82846	1.83055	1.83265	1.83475	1.83685	1.83896	1.84107	1.84319	1.84531	1.84743
0.98	1.84956	1.85169	1.85382	1.85596	1.85810	1.86025	1.86240	1.86455	1.86671	1.86887
0.99	1.87104	1.87321	1.87538	1.87756	1.87974	1.88193	1.88412	1.88631	1.88851	1.89072
1.00	1.89292	1.89513	1.89735	1.89957	1.90179	1.90401	1.90625	1.90848	1.91072	1.91296
1.01	1.91521	1.91746	1.91972	1.92198	1.92424	1.92651	1.92878	1.93105	1.93333	1.93562
1.02	1.93791	1.94020	1.94250	1.94480	1.94710	1.94941	1.95173	1.95404	1.95637	1.95869
1.03	1.96102	1.96336	1.96570	1.96804	1.97039	1.97274	1.97510	1.97746	1.97982	1.98219
1.04	1.98457	1.98694	1.98933	1.99171	1.99410	1.99650	1.99890	2.00130	2.00371	2.00612
1.05	2.00854	2.01096	2.01339	2.01582	2.01825	2.02069	2.02313	2.02558	2.02803	2.03049
1.06	2.03295	2.03542	2.03789	2.04036	2.04284	2.04532	2.04781	2.05030	2.05280	2.05530
1.07	2.05781	2.06032	2.06283	2.06535	2.06788	2.07040	2.07294	2.07548	2.07802	2.08056
1.08	2.08312	2.08567	2.08823	2.09080	2.09337	2.09594	2.09852	2.10111	2.10370	2.10629
1.09	2.10889	2.11149	2.11410	2.11671	2.11932	2.12195	2.12457	2.12720	2.12984	2.13248
1.10	2.13512	2.13777	2.14043	2.14309	2.14575	2.14842	2.15109	2.15377	2.15646	2.15914
1.11	2.16184	2.16453	2.16724	2.16994	2.17266	2.17537	2.17809	2.18082	2.18355	2.18629
1.12	2.18903	2.19178	2.19453	2.19729	2.20005	2.20281	2.20558	2.20836	2.21114	2.21393
1.13	2.21672	2.21951	2.22231	2.22512	2.22793	2.23075	2.23357	2.23639	2.23923	2.24206
1.14	2.24490	2.24775	2.25060	2.25346	2.25632	2.25918	2.26206	2.26493	2.26781	2.27070
1.15	2.27359	2.27649	2.27939	2.28230	2.28521	2.28813	2.29106	2.29398	2.29692	2.29986
1.16	2.30280	2.30575	2.30870	2.31166	2.31463	2.31760	2.32058	2.32356	2.32654	2.32953
1.17	2.33253	2.33553	2.33854	2.34155	2.34457	2.34759	2.35062	2.35366	2.35670	2.35974
1.18	2.36279	2.36585	2.36891	2.37198	2.37505	2.37813	2.38121	2.38430	2.38739	2.39049
1.19	2.39359	2.39670	2.39982	2.40294	2.40607	2.40920	2.41234	2.41548	2.41863	2.42179

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
1.20	2.42495	2.42811	2.43128	2.43446	2.43764	2.44083	2.44402	2.44722	2.45043	2.45364
1.21	2.45686	2.46008	2.46331	2.46654	2.46978	2.47302	2.47627	2.47953	2.48279	2.48606
1.22	2.48933	2.49261	2.49590	2.49919	2.50249	2.50579	2.50910	2.51241	2.51573	2.51906
1.23	2.52239	2.52572	2.52907	2.53242	2.53577	2.53913	2.54250	2.54587	2.54925	2.55264
1.24	2.55603	2.55942	2.56283	2.56623	2.56965	2.57307	2.57650	2.57993	2.58337	2.58681
1.25	2.59026	2.59372	2.59718	2.60065	2.60413	2.60761	2.61109	2.61459	2.61809	2.62159
1.26	2.62510	2.62862	2.63214	2.63567	2.63921	2.64275	2.64630	2.64986	2.65342	2.65698
1.27	2.66056	2.66414	2.66772	2.67132	2.67491	2.67852	2.68213	2.68575	2.68937	2.69300
1.28	2.69664	2.70028	2.70393	2.70759	2.71125	2.71492	2.71859	2.72227	2.72596	2.72965
1.29	2.73335	2.73706	2.74078	2.74449	2.74822	2.75195	2.75569	2.75944	2.76319	2.76695
1.30	2.77072	2.77449	2.77827	2.78205	2.78584	2.78964	2.79345	2.79726	2.80108	2.80490
1.31	2.80873	2.81257	2.81642	2.82027	2.82413	2.82799	2.83186	2.83574	2.83963	2.84352
1.32	2.84742	2.85132	2.85524	2.85916	2.86308	2.86701	2.87095	2.87490	2.87885	2.88281
1.33	2.88678	2.89075	2.89473	2.89872	2.90272	2.90672	2.91073	2.91474	2.91877	2.92279
1.34	2.92683	2.93087	2.93492	2.93898	2.94305	2.94712	2.95120	2.95528	2.95937	2.96347
1.35	2.96758	2.97170	2.97582	2.97994	2.98408	2.98822	2.99237	2.99653	3.00069	3.00486
1.36	3.00904	3.01323	3.01742	3.02162	3.02583	3.03004	3.03427	3.03849	3.04273	3.04698
1.37	3.05123	3.05549	3.05975	3.06402	3.06831	3.07259	3.07689	3.08119	3.08550	3.08982
1.38	3.09415	3.09849	3.10282	3.10717	3.11152	3.11586	3.12025	3.12463	3.12902	3.13341
1.39	3.13781	3.14222	3.14663	3.15106	3.15549	3.15993	3.16437	3.16883	3.17329	3.17776
1.40	3.18223	3.18672	3.19121	3.19571	3.20022	3.20473	3.20926	3.21379	3.21833	3.22287
1.41	3.22743	3.23199	3.23656	3.24114	3.24572	3.25032	3.25492	3.25953	3.26415	3.26877
1.42	3.27340	3.27805	3.28270	3.28735	3.29202	3.29669	3.30137	3.30606	3.31076	3.31546
1.43	3.32018	3.32490	3.32963	3.33437	3.33911	3.34387	3.34863	3.35340	3.35818	3.36296
1.44	3.36776	3.37256	3.37737	3.38219	3.38702	3.39186	3.39670	3.40155	3.40642	3.41129
1.45	3.41616	3.42105	3.42594	3.43085	3.43576	3.44068	3.44561	3.45054	3.45549	3.46044
1.46	3.46540	3.47037	3.47535	3.48034	3.48533	3.49034	3.49535	3.50037	3.50540	3.51044
1.47	3.51549	3.52054	3.52561	3.53068	3.53576	3.54085	3.54595	3.55106	3.55618	3.56130
1.48	3.56644	3.57158	3.57673	3.58189	3.58706	3.59224	3.59743	3.60262	3.60783	3.61304
1.49	3.61826	3.62349	3.62873	3.63398	3.63924	3.64451	3.64978	3.65507	3.66036	3.66567

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
1.50	3.67098	3.67630	3.68163	3.68697	3.69232	3.69767	3.70304	3.70842	3.71380	3.71919
1.51	3.72460	3.73001	3.73543	3.74086	3.74630	3.75175	3.75721	3.76268	3.76815	3.77364
1.52	3.77914	3.78464	3.79016	3.79568	3.80121	3.80676	3.81231	3.81787	3.82344	3.82902
1.53	3.83461	3.84021	3.84582	3.85143	3.85706	3.86270	3.86835	3.87400	3.87967	3.88534
1.54	3.89103	3.89672	3.90243	3.90814	3.91387	3.91960	3.92534	3.93110	3.93686	3.94263
1.55	3.94841	3.95421	3.96001	3.96582	3.97164	3.97747	3.98331	3.98917	3.99503	4.00090
1.56	4.00678	4.01267	4.01857	4.02448	4.03040	4.03633	4.04227	4.04822	4.05419	4.06016
1.57	4.06614	4.07213	4.07813	4.08414	4.09016	4.09620	4.10224	4.10829	4.11435	4.12042
1.58	4.12651	4.13260	4.13870	4.14482	4.15094	4.15708	4.16322	4.16938	4.17554	4.18172
1.59	4.18790	4.19410	4.20031	4.20653	4.21275	4.21899	4.22524	4.23150	4.23777	4.24405
1.60	4.25034	4.25665	4.26296	4.26928	4.27562	4.28196	4.28832	4.29468	4.30106	4.30745
1.61	4.31384	4.32025	4.32667	4.33310	4.33954	4.34600	4.35246	4.35893	4.36542	4.37191
1.62	4.37842	4.38494	4.39147	4.39801	4.40456	4.41112	4.41769	4.42427	4.43087	4.43747
1.63	4.44409	4.45072	4.45736	4.46401	4.47067	4.47734	4.48403	4.49072	4.49743	4.50414
1.64	4.51087	4.51761	4.52436	4.53113	4.53790	4.54469	4.55148	4.55829	4.56511	4.57194
1.65	4.57878	4.58564	4.59250	4.59938	4.60627	4.61317	4.62008	4.62700	4.63394	4.64088
1.66	4.64784	4.65481	4.66179	4.66878	4.67579	4.68280	4.68983	4.69687	4.70392	4.71099
1.67	4.71806	4.72515	4.73225	4.73936	4.74648	4.75361	4.76076	4.76792	4.77509	4.78227
1.68	4.78947	4.79667	4.80389	4.81112	4.81836	4.82562	4.83288	4.84016	4.84745	4.85476
1.69	4.86207	4.86940	4.87674	4.88409	4.89146	4.89883	4.90622	4.91362	4.92104	4.92846
1.70	4.93590	4.94335	4.95081	4.95829	4.96578	4.97328	4.98079	4.98832	4.99585	5.00340
1.71	5.01097	5.01854	5.02613	5.03373	5.04135	5.04897	5.05661	5.06426	5.07193	5.07960
1.72	5.08729	5.09500	5.10271	5.11044	5.11818	5.12594	5.13370	5.14148	5.14928	5.15708
1.73	5.16490	5.17273	5.18058	5.18843	5.19630	5.20419	5.21209	5.22000	5.22792	5.23585
1.74	5.24380	5.25177	5.25974	5.26773	5.27573	5.28375	5.29178	5.29982	5.30788	5.31595
1.75	5.32403	5.33212	5.34023	5.34836	5.35649	5.36464	5.37281	5.38098	5.38917	5.39738
1.76	5.40559	5.41382	5.42207	5.43033	5.43860	5.44688	5.45518	5.46350	5.47182	5.48016
1.77	5.48852	5.49689	5.50527	5.51367	5.52207	5.53050	5.53894	5.54739	5.55585	5.56433
1.78	5.57283	5.58133	5.58986	5.59839	5.60694	5.61551	5.62408	5.63268	5.64128	5.64990
1.79	5.65854	5.66719	5.67585	5.68453	5.69322	5.70193	5.71065	5.71938	5.72813	5.73690

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
1.80	5.74568	5.75447	5.76328	5.77210	5.78093	5.78979	5.79865	5.80753	5.81643	5.82534
1.81	5.83426	5.84320	5.85215	5.86112	5.87010	5.87910	5.88812	5.89714	5.90619	5.91524
1.82	5.92432	5.93340	5.94250	5.95162	5.96075	5.96990	5.97906	5.98824	5.99743	6.00664
1.83	6.01586	6.02510	6.03435	6.04362	6.05291	6.06220	6.07152	6.08085	6.09019	6.09955
1.84	6.10893	6.11832	6.12772	6.13715	6.14658	6.15603	6.16550	6.17499	6.18449	6.19400
1.85	6.20353	6.21308	6.22264	6.23222	6.24181	6.25142	6.26104	6.27068	6.28034	6.29001
1.86	6.29970	6.30940	6.31912	6.32886	6.33861	6.34837	6.35816	6.36796	6.37777	6.38760
1.87	6.39745	6.40731	6.41719	6.42709	6.43700	6.44693	6.45687	6.46684	6.47681	6.48681
1.88	6.49682	6.50684	6.51688	6.52694	6.53702	6.54711	6.55722	6.56734	6.57748	6.58764
1.89	6.59782	6.60801	6.61822	6.62844	6.63868	6.64894	6.65921	6.66951	6.67981	6.69014
1.90	6.70048	6.71084	6.72121	6.73161	6.74202	6.75244	6.76289	6.77335	6.78382	6.79432
1.91	6.80483	6.81536	6.82590	6.83647	6.84705	6.85764	6.86826	6.87889	6.88954	6.90021
1.92	6.91089	6.92159	6.93231	6.94305	6.95380	6.96457	6.97536	6.98617	6.99699	7.00783
1.93	7.01869	7.02957	7.04046	7.05138	7.06231	7.07325	7.08422	7.09520	7.10620	7.11722
1.94	7.12826	7.13931	7.15039	7.16148	7.17258	7.18371	7.19486	7.20602	7.21720	7.22840
1.95	7.23962	7.25085	7.26210	7.27338	7.28467	7.29598	7.30730	7.31865	7.33001	7.34139
1.96	7.35279	7.36421	7.37565	7.38710	7.39858	7.41007	7.42158	7.43311	7.44466	7.45623
1.97	7.46782	7.47942	7.49105	7.50269	7.51435	7.52603	7.53773	7.54945	7.56118	7.57294
1.98	7.58471	7.59651	7.60832	7.62015	7.63201	7.64388	7.65577	7.66767	7.67960	7.69155
1.99	7.70352	7.71550	7.72751	7.73953	7.75158	7.76364	7.77572	7.78783	7.79995	7.81209
2.00	7.82425	7.83643	7.84863	7.86085	7.87309	7.88535	7.89763	7.90993	7.92225	7.93459
2.01	7.94694	7.95932	7.97172	7.98414	7.99658	8.00904	8.02151	8.03401	8.04653	8.05907
2.02	8.07163	8.08421	8.09681	8.10943	8.12207	8.13473	8.14741	8.16011	8.17283	8.18557
2.03	8.19833	8.21112	8.22392	8.23674	8.24959	8.26245	8.27534	8.28825	8.30117	8.31412
2.04	8.32709	8.34008	8.35309	8.36612	8.37917	8.39225	8.40534	8.41845	8.43159	8.44475
2.05	8.45793	8.47113	8.48435	8.49759	8.51085	8.52413	8.53744	8.55077	8.56411	8.57748
2.06	8.59087	8.60429	8.61772	8.63118	8.64465	8.65815	8.67167	8.68521	8.69878	8.71236
2.07	8.72597	8.73960	8.75325	8.76692	8.78061	8.79433	8.80807	8.82183	8.83561	8.84941
2.08	8.86324	8.87708	8.89095	8.90485	8.91876	8.93270	8.94666	8.96064	8.97464	8.98867
2.09	9.00271	9.01678	9.03088	9.04499	9.05913	9.07329	9.08747	9.10168	9.11591	9.13016

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
2.10	9.14443	9.15873	9.17305	9.18739	9.20175	9.21614	9.23055	9.24499	9.25944	9.27392
2.11	9.28842	9.30295	9.31750	9.33207	9.34667	9.36128	9.37593	9.39059	9.40528	9.41999
2.12	9.43472	9.44948	9.46426	9.47907	9.49390	9.50875	9.52363	9.53853	9.55345	9.56840
2.13	9.58337	9.59836	9.61338	9.62842	9.64349	9.65858	9.67369	9.68883	9.70399	9.71917
2.14	9.73438	9.74962	9.76488	9.78016	9.79546	9.81080	9.82615	9.84153	9.85693	9.87236
2.15	9.88781	9.90329	9.91879	9.93432	9.94987	9.96544	9.98104	9.99667	10.01232	10.02799
2.16	10.04369	10.05942	10.07516	10.09094	10.10674	10.12256	10.13841	10.15428	10.17018	10.18610
2.17	10.20205	10.21803	10.23402	10.25005	10.26610	10.28217	10.29827	10.31440	10.33055	10.34673
2.18	10.36293	10.37916	10.39541	10.41169	10.42800	10.44433	10.46068	10.47707	10.49347	10.50991
2.19	10.52637	10.54285	10.55936	10.57590	10.59246	10.60905	10.62567	10.64231	10.65898	10.67567
2.20	10.69239	10.70914	10.72592	10.74271	10.75954	10.77639	10.79327	10.81018	10.82711	10.84407
2.21	10.86105	10.87807	10.89511	10.91217	10.92926	10.94638	10.96353	10.98070	10.99790	11.01513
2.22	11.03238	11.04967	11.06697	11.08431	11.10167	11.11906	11.13648	11.15392	11.17140	11.18890
2.23	11.20642	11.22398	11.24156	11.25917	11.27680	11.29447	11.31216	11.32988	11.34763	11.36541
2.24	11.38321	11.40104	11.41890	11.43679	11.45470	11.47265	11.49062	11.50861	11.52664	11.54470
2.25	11.56278	11.58089	11.59904	11.61720	11.63540	11.65363	11.67188	11.69016	11.70847	11.72681
2.26	11.74518	11.76358	11.78201	11.80046	11.81894	11.83746	11.85600	11.87457	11.89317	11.91179
2.27	11.93045	11.94914	11.96785	11.98660	12.00537	12.02418	12.04301	12.06187	12.08076	12.09968
2.28	12.11863	12.13761	12.15662	12.17566	12.19473	12.21383	12.23295	12.25211	12.27130	12.29052
2.29	12.30976	12.32904	12.34825	12.36768	12.38705	12.40645	12.42588	12.44533	12.46482	12.48434
2.30	12.50389	12.52347	12.54308	12.56272	12.58239	12.60209	12.62182	12.64158	12.66137	12.68120
2.31	12.70105	12.72093	12.74085	12.76080	12.78077	12.80078	12.82082	12.84089	12.86100	12.88113
2.32	12.90129	12.92149	12.94171	12.96197	12.98226	13.00258	13.02293	13.04332	13.06373	13.08418
2.33	13.10466	13.12517	13.14571	13.16629	13.18689	13.20753	13.22820	13.24890	13.26963	13.29040
2.34	13.31120	13.33203	13.35289	13.37378	13.39471	13.41567	13.43666	13.45768	13.47874	13.49982
2.35	13.52095	13.54210	13.56329	13.58450	13.60576	13.62704	13.64836	13.66971	13.69109	13.71251
2.36	13.73396	13.75544	13.77695	13.79850	13.82008	13.84170	13.86335	13.88503	13.90674	13.92849
2.37	13.95027	13.97209	13.99394	14.01582	14.03774	14.05969	14.08167	14.10369	14.12574	14.14782
2.38	14.16994	14.19210	14.21428	14.23650	14.25876	14.28105	14.30337	14.32573	14.34812	14.37055
2.39	14.39301	14.41551	14.43804	14.46060	14.48320	14.50584	14.52850	14.55121	14.57395	14.59672

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
2.40	14.61953	14.64237	14.66525	14.68816	14.71111	14.73410	14.75711	14.78017	14.80326	14.82638
2.41	14.84954	14.87274	14.89597	14.91924	14.94254	14.96588	14.98925	15.01266	15.03611	15.05959
2.42	15.08310	15.10666	15.13025	15.15387	15.17753	15.20123	15.22496	15.24873	15.27254	15.29638
2.43	15.32026	15.34417	15.36813	15.39211	15.41614	15.44020	15.46430	15.48843	15.51261	15.53681
2.44	15.56106	15.58534	15.60966	15.63402	15.65841	15.68284	15.70731	15.73182	15.75636	15.78094
2.45	15.80556	15.83021	15.85491	15.87964	15.90441	15.92921	15.95406	15.97894	16.00385	16.02881
2.46	16.05381	16.07884	16.10391	16.12902	16.15417	16.17935	16.20458	16.22984	16.25514	16.28048
2.47	16.30585	16.33127	16.35672	16.38222	16.40775	16.43332	16.45893	16.48458	16.51026	16.53599
2.48	16.56176	16.58756	16.61340	16.63928	16.66521	16.69117	16.71717	16.74321	16.76929	16.79541
2.49	16.82156	16.84776	16.87400	16.90028	16.92659	16.95295	16.97935	17.00578	17.03226	17.05878
2.50	17.08533	17.11193	17.13857	17.16525	17.19196	17.21872	17.24552	17.27236	17.29924	17.32616
2.51	17.35312	17.38012	17.40716	17.43425	17.46137	17.48854	17.51574	17.54299	17.57028	17.59761
2.52	17.62498	17.65239	17.67984	17.70734	17.73487	17.76245	17.79007	17.81773	17.84543	17.87318
2.53	17.90096	17.92879	17.95666	17.98457	18.01253	18.04052	18.06856	18.09664	18.12476	18.15292
2.54	18.18113	18.20938	18.23767	18.26601	18.29438	18.32280	18.35127	18.37977	18.40832	18.43691
2.55	18.46554	18.49422	18.52294	18.55170	18.58051	18.60936	18.63825	18.66719	18.69617	18.72519
2.56	18.75426	18.78336	18.81252	18.84172	18.87096	18.90024	18.92957	18.95894	18.98836	19.01782
2.57	19.04732	19.07687	19.10647	19.13610	19.16579	19.19551	19.22528	19.25510	19.28496	19.31486
2.58	19.34481	19.37481	19.40485	19.43493	19.46506	19.49523	19.52545	19.55572	19.58603	19.61638
2.59	19.64678	19.67723	19.70772	19.73825	19.76884	19.79946	19.83014	19.86086	19.89162	19.92243
2.60	19.95329	19.98419	20.01514	20.04613	20.07718	20.10826	20.13940	20.17058	20.20180	20.23308
2.61	20.26440	20.29576	20.32717	20.35864	20.39014	20.42170	20.45330	20.48494	20.51664	20.54838
2.62	20.58017	20.61200	20.64389	20.67582	20.70780	20.73982	20.77190	20.80402	20.83619	20.86840
2.63	20.90067	20.93295	20.96534	20.99775	21.03020	21.06271	21.09526	21.12786	21.16051	21.19321
2.64	21.22596	21.25875	21.29160	21.32449	21.35743	21.39042	21.42346	21.45654	21.48968	21.52286
2.65	21.55610	21.58938	21.62272	21.65610	21.68953	21.72301	21.75655	21.79013	21.82376	21.85743
2.66	21.89117	21.92495	21.95877	21.99266	22.02659	22.06056	22.09459	22.12868	22.16280	22.19699
2.67	22.23122	22.26550	22.29983	22.33422	22.36865	22.40313	22.43767	22.47226	22.50689	22.54156
2.68	22.57632	22.61111	22.64596	22.68095	22.71590	22.75079	22.78584	22.82094	22.85609	22.89130
2.69	22.92655	22.96186	22.99722	23.03263	23.06809	23.10361	23.13917	23.17479	23.21046	23.24619

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9
2.70	23.28197	23.31780	23.35368	23.38961	23.42560	23.46164	23.49774	23.53388	23.57008	23.60633
2.71	23.64264	23.67900	23.71541	23.75188	23.78840	23.82497	23.86160	23.89828	23.93502	23.97180
2.72	24.00865	24.04554	24.08249	24.11950	24.15656	24.19367	24.23084	24.26806	24.30533	24.34266
2.73	24.38005	24.41749	24.45498	24.49253	24.53014	24.56780	24.60551	24.64328	24.68111	24.71899
2.74	24.75693	24.79492	24.83296	24.87106	24.90922	24.94744	24.98571	25.02403	25.06241	25.10085
2.75	25.13935	25.17789	25.21650	25.25516	25.29388	25.33266	25.37149	25.41038	25.44932	25.48832
2.76	25.52730	25.56649	25.60567	25.64490	25.68419	25.72353	25.76293	25.80239	25.84190	25.88148
2.77	25.92111	25.96030	26.00054	26.04035	26.08021	26.12013	26.16011	26.20014	26.24024	26.28039
2.78	26.32060	26.36087	26.40120	26.44159	26.48203	26.52253	26.56310	26.60372	26.64440	26.68514
2.79	26.72594	26.76680	26.80771	26.84869	26.88972	26.93082	26.97198	27.01319	27.05447	27.09580
2.80	27.13719	27.17865	27.22016	27.26173	27.30337	27.34506	27.38682	27.42863	27.47051	27.51245
2.81	27.55444	27.59650	27.63862	27.68080	27.72304	27.76534	27.80770	27.85013	27.89261	27.93516
2.82	27.97777	28.02043	28.06317	28.10596	28.14881	28.19173	28.23471	28.27775	28.32085	28.36402
2.83	28.40724	28.45053	28.49389	28.53730	28.58078	28.62431	28.66792	28.71158	28.75531	28.79910
2.84	28.84296	28.88687	28.93086	28.97490	29.01901	29.06317	29.10741	29.15171	29.19607	29.24049
2.85	29.28498	29.32953	29.37415	29.41883	29.46358	29.50839	29.55327	29.59820	29.64321	29.68828
2.86	29.73341	29.77860	29.82367	29.86919	29.91459	29.96004	30.00557	30.05115	30.09681	30.14253
2.87	30.18831	30.23416	30.28008	30.32606	30.37210	30.41822	30.46440	30.51064	30.55696	30.60333
2.88	30.64978	30.69629	30.74287	30.78951	30.83622	30.88300	30.92984	30.97676	31.02373	31.07078
2.89	31.11789	31.16507	31.21232	31.25964	31.30702	31.35447	31.40199	31.44957	31.49723	31.54495
2.90	31.59274	31.64060	31.68853	31.73652	31.78459	31.83272	31.88092	31.92919	31.97753	32.02594
2.91	32.07441	32.12296	32.17157	32.22026	32.26901	32.31783	32.36672	32.41569	32.46472	32.51382
2.92	32.56299	32.61223	32.66154	32.71092	32.76037	32.80990	32.85949	32.90915	32.95888	33.00869
2.93	33.05856	33.10851	33.15853	33.20861	33.25877	33.30900	33.35930	33.40967	33.46012	33.51063
2.94	33.56122	33.61188	33.66261	33.71341	33.76429	33.81524	33.86626	33.91735	33.96851	34.01975
2.95	34.07106	34.12244	34.17389	34.22542	34.27702	34.32869	34.38044	34.43226	34.48415	34.53612
2.96	34.58816	34.64027	34.69246	34.74472	34.79706	34.84947	34.90195	34.95451	35.00714	35.05984
2.97	35.11262	35.16548	35.21841	35.27141	35.32449	35.37764	35.43087	35.48418	35.53756	35.59101
2.98	35.64454	35.69815	35.75182	35.80558	35.85941	35.91332	35.96731	36.02137	36.07550	36.12971
2.99	36.18400	36.23837	36.29281	36.34733	36.40192	36.45660	36.51134	36.56617	36.62107	36.67606

PTO/PO

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.000	36.7327	36.7879	36.8431	36.8984	36.9537	37.0092	37.0647	37.1203	37.1760	37.2318	37.2876
3.010	37.2876	37.3435	37.3995	37.4556	37.5117	37.5680	37.6243	37.6807	37.7371	37.7937	37.8503
3.020	37.8503	37.9070	37.9638	38.0207	38.0776	38.1346	38.1917	38.2489	38.3062	38.3635	38.4209
3.030	38.4209	38.4784	38.5360	38.5937	38.6514	38.7093	38.7672	38.8252	38.8832	38.9414	38.9996
3.040	38.9996	39.0579	39.1163	39.1748	39.2334	39.2920	39.3507	39.4095	39.4684	39.5274	39.5864
3.050	39.5864	39.6456	39.7048	39.7641	39.8235	39.8829	39.9425	40.0021	40.0618	40.1216	40.1815
3.060	40.1815	40.2414	40.3015	40.3616	40.4218	40.4821	40.5425	40.6030	40.6635	40.7242	40.7849
3.070	40.7849	40.8457	40.9066	40.9675	41.0286	41.0897	41.1510	41.2123	41.2737	41.3352	41.3967
3.080	41.3967	41.4584	41.5201	41.5819	41.6438	41.7058	41.7679	41.8301	41.8923	41.9547	42.0171
3.090	42.0171	42.0796	42.1422	42.2049	42.2677	42.3305	42.3935	42.4565	42.5196	42.5829	42.6462
3.100	42.6462	42.7095	42.7730	42.8366	42.9002	42.9640	43.0278	43.0917	43.1557	43.2198	43.2840
3.110	43.2840	43.3482	43.4126	43.4770	43.5416	43.6062	43.6709	43.7357	43.8006	43.8656	43.9306
3.120	43.9306	43.9958	44.0611	44.1264	44.1918	44.2573	44.3230	44.3887	44.4544	44.5203	44.5863
3.130	44.5863	44.6524	44.7185	44.7848	44.8511	44.9175	44.9841	45.0507	45.1174	45.1842	45.2511
3.140	45.2511	45.3180	45.3851	45.4523	45.5195	45.5869	45.6543	45.7218	45.7895	45.8572	45.9250
3.150	45.9250	45.9929	46.0609	46.1290	46.1972	46.2655	46.3339	46.4023	46.4709	46.5395	46.6083
3.160	46.6083	46.6771	46.7461	46.8151	46.8842	46.9534	47.0228	47.0922	47.1617	47.2313	47.3010
3.170	47.3010	47.3708	47.4407	47.5107	47.5807	47.6509	47.7212	47.7916	47.8620	47.9326	48.0032
3.180	48.0032	48.0740	48.1448	48.2158	48.2868	48.3580	48.4292	48.5006	48.5720	48.6435	48.7151
3.190	48.7151	48.7869	48.8587	48.9306	49.0026	49.0748	49.1470	49.2193	49.2917	49.3642	49.4368
3.200	49.4368	49.5096	49.5824	49.6553	49.7283	49.8014	49.8746	49.9479	50.0213	50.0948	50.1684
3.210	50.1684	50.2421	50.3159	50.3899	50.4639	50.5380	50.6122	50.6865	50.7609	50.8354	50.9100
3.220	50.9100	50.9848	51.0596	51.1345	51.2095	51.2846	51.3599	51.4352	51.5106	51.5862	51.6618
3.230	51.6618	51.7375	51.8134	51.8893	51.9654	52.0415	52.1178	52.1941	52.2706	52.3471	52.4238
3.240	52.4238	52.5006	52.5775	52.6544	52.7315	52.8087	52.8860	52.9634	53.0409	53.1185	53.1962

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.250	53.1962	53.2740	53.3519	53.4300	53.5081	53.5863	53.6647	53.7431	53.8217	53.9004	53.9791
3.260	53.9791	54.0580	54.1370	54.2161	54.2953	54.3746	54.4540	54.5335	54.6131	54.6928	54.7727
3.270	54.7727	54.8526	54.9327	55.0128	55.0931	55.1735	55.2540	55.3346	55.4153	55.4961	55.5770
3.280	55.5770	55.6580	55.7392	55.8204	55.9018	55.9832	56.0648	56.1465	56.2283	56.3102	56.3922
3.290	56.3922	56.4743	56.5566	56.6389	56.7214	56.8039	56.8866	56.9694	57.0523	57.1353	57.2185
3.300	57.2185	57.3017	57.3850	57.4685	57.5521	57.6358	57.7196	57.8035	57.8875	57.9716	58.0559
3.310	58.0559	58.1402	58.2247	58.3093	58.3940	58.4788	58.5637	58.6487	58.7339	58.8192	58.9045
3.320	58.9045	58.9900	59.0757	59.1614	59.2472	59.3332	59.4192	59.5054	59.5917	59.6781	59.7647
3.330	59.7647	59.8513	59.9381	60.0250	60.1119	60.1990	60.2863	60.3736	60.4611	60.5487	60.6363
3.340	60.6363	60.7241	60.8121	60.9001	60.9883	61.0766	61.1650	61.2535	61.3421	61.4309	61.5197
3.350	61.5197	61.6087	61.6978	61.7870	61.8764	61.9658	62.0554	62.1451	62.2349	62.3249	62.4149
3.360	62.4149	62.5051	62.5954	62.6858	62.7764	62.8670	62.9578	63.0487	63.1397	63.2309	63.3221
3.370	63.3221	63.4135	63.5050	63.5966	63.6884	63.7802	63.8722	63.9644	64.0566	64.1489	64.2414
3.380	64.2414	64.3340	64.4267	64.5196	64.6126	64.7057	64.7989	64.8922	64.9857	65.0793	65.1730
3.390	65.1730	65.2668	65.3608	65.4549	65.5491	65.6434	65.7379	65.8325	65.9272	66.0220	66.1170
3.400	66.1170	66.2120	66.3073	66.4026	66.4980	66.5936	66.6894	66.7852	66.8812	66.9773	67.0735
3.410	67.0735	67.1698	67.2663	67.3629	67.4596	67.5565	67.6535	67.7506	67.8478	67.9452	68.0427
3.420	68.0427	68.1403	68.2381	68.3359	68.4340	68.5321	68.6304	68.7288	68.8273	68.9260	69.0248
3.430	69.0248	69.1237	69.2227	69.3219	69.4212	69.5206	69.6202	69.7199	69.8197	69.9197	70.0198
3.440	70.0198	70.1200	70.2204	70.3209	70.4215	70.5223	70.6231	70.7242	70.8253	70.9266	71.0280
3.450	71.0280	71.1296	71.2312	71.3330	71.4350	71.5371	71.6393	71.7416	71.8441	71.9468	72.0495
3.460	72.0495	72.1524	72.2554	72.3586	72.4619	72.5653	72.6688	72.7725	72.8764	72.9803	73.0845
3.470	73.0845	73.1887	73.2931	73.3976	73.5022	73.6070	73.7119	73.8170	73.9222	74.0275	74.1330
3.480	74.1330	74.2386	74.3444	74.4503	74.5563	74.6624	74.7687	74.8752	74.9818	75.0885	75.1953
3.490	75.1953	75.3023	75.4095	75.5167	75.6242	75.7317	75.8394	75.9472	76.0552	76.1633	76.2716



PTO/PO

TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.500	76.2716	76.3800	76.4885	76.5972	76.7060	76.8150	76.9241	77.0333	77.1427	77.2522	77.3619
3.510	77.3619	77.4717	77.5817	77.6918	77.8020	77.9124	78.0229	78.1336	78.2444	78.3554	78.4665
3.520	78.4665	78.5777	78.6891	78.8007	78.9124	79.0242	79.1362	79.2483	79.3605	79.4729	79.5855
3.530	79.5855	79.6982	79.8110	79.9240	80.0372	80.1504	80.2639	80.3774	80.4912	80.6050	80.7191
3.540	80.7191	80.8332	80.9475	81.0620	81.1766	81.2914	81.4063	81.5213	81.6365	81.7519	81.8674
3.550	81.8674	81.9830	82.0988	82.2148	82.3309	82.4471	82.5635	82.6800	82.7967	82.9136	83.0306
3.560	83.0306	83.1477	83.2650	83.3825	83.5001	83.6178	83.7357	83.8538	83.9720	84.0904	84.2089
3.570	84.2089	84.3275	84.4464	84.5653	84.6844	84.8037	84.9232	85.0427	85.1625	85.2824	85.4024
3.580	85.4024	85.5226	85.6430	85.7635	85.8841	86.0050	86.1259	86.2471	86.3684	86.4898	86.6114
3.590	86.6114	86.7331	86.8550	86.9771	87.0993	87.2217	87.3442	87.4669	87.5898	87.7128	87.8360
3.600	87.8360	87.9593	88.0828	88.2064	88.3302	88.4541	88.5783	88.7025	88.8270	88.9516	89.0763
3.610	89.0763	89.2012	89.3263	89.4515	89.5769	89.7025	89.8282	89.9540	90.0801	90.2063	90.3326
3.620	90.3326	90.4591	90.5858	90.7126	90.8396	90.9668	91.0941	91.2216	91.3493	91.4771	91.6050
3.630	91.6050	91.7332	91.8615	91.9899	92.1186	92.2474	92.3763	92.5054	92.6347	92.7642	92.8938
3.640	92.8938	93.0236	93.1535	93.2836	93.4139	93.5443	93.6749	93.8057	93.9366	94.0678	94.1990
3.650	94.1990	94.3305	94.4621	94.5938	94.7258	94.8579	94.9902	95.1226	95.2552	95.3880	95.5209
3.660	95.5209	95.6541	95.7873	95.9208	96.0544	96.1882	96.3222	96.4563	96.5906	96.7251	96.8597
3.670	96.8597	96.9946	97.1295	97.2647	97.4000	97.5355	97.6712	97.8070	97.9430	98.0792	98.2156
3.680	98.2156	98.3521	98.4888	98.6257	98.7628	98.9000	99.0374	99.1749	99.3127	99.4506	99.5887
3.690	99.5887	99.7270	99.8654	100.0040	100.1428	100.2818	100.4209	100.5602	100.6997	100.8394	100.9792
3.700	100.9792	101.1193	101.2594	101.3998	101.5404	101.6811	101.8220	101.9631	102.1044	102.2458	102.3874
3.710	102.3874	102.5292	102.6712	102.8133	102.9557	103.0982	103.2408	103.3837	103.5268	103.6700	103.8134
3.720	103.8134	103.9570	104.1008	104.2447	104.3888	104.5331	104.6776	104.8223	104.9672	105.1122	105.2574
3.730	105.2574	105.4028	105.5484	105.6942	105.8401	105.9863	106.1326	106.2791	106.4258	106.5726	106.7197
3.740	106.7197	106.8669	107.0143	107.1619	107.3097	107.4577	107.6059	107.7542	107.9027	108.0515	108.2004

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.750	108.2004	108.3494	108.4987	108.6482	108.7978	108.9477	109.0977	109.2479	109.3983	109.5489	109.6997
3.760	109.6997	109.8506	110.0018	110.1531	110.3046	110.4563	110.6083	110.7604	110.9126	111.0651	111.2178
3.770	111.2178	111.3707	111.5237	111.6769	111.8304	111.9840	112.1378	112.2918	112.4460	112.6004	112.7550
3.780	112.7550	112.9097	113.0647	113.2199	113.3752	113.5308	113.6865	113.8424	113.9985	114.1549	114.3114
3.790	114.3114	114.4681	114.6250	114.7821	114.9394	115.0969	115.2546	115.4125	115.5705	115.7288	115.8873
3.800	115.8873	116.0459	116.2048	116.3639	116.5231	116.6826	116.8422	117.0021	117.1621	117.3224	117.4828
3.810	117.4828	117.6435	117.8043	117.9654	118.1266	118.2880	118.4497	118.6115	118.7736	118.9358	119.0983
3.820	119.0983	119.2609	119.4238	119.5868	119.7500	119.9135	120.0772	120.2410	120.4051	120.5693	120.7338
3.830	120.7338	120.8985	121.0633	121.2284	121.3937	121.5592	121.7249	121.8907	122.0568	122.2231	122.3897
3.840	122.3897	122.5564	122.7233	122.8904	123.0577	123.2253	123.3930	123.5610	123.7291	123.8975	124.0660
3.850	124.0660	124.2348	124.4038	124.5730	124.7424	124.9120	125.0818	125.2519	125.4221	125.5925	125.7632
3.860	125.7632	125.9341	126.1051	126.2764	126.4479	126.6196	126.7916	126.9637	127.1360	127.3086	127.4813
3.870	127.4813	127.6543	127.8275	128.0009	128.1745	128.3484	128.5224	128.6967	128.8711	129.0458	129.2207
3.880	129.2207	129.3958	129.5712	129.7467	129.9225	130.0984	130.2746	130.4510	130.6276	130.8045	130.9815
3.890	130.9815	131.1588	131.3363	131.5140	131.6919	131.8700	132.0484	132.2269	132.4057	132.5847	132.7640
3.900	132.7640	132.9434	133.1231	133.3030	133.4831	133.6634	133.8439	134.0247	134.2057	134.3869	134.5683
3.910	134.5683	134.7500	134.9319	135.1140	135.2963	135.4788	135.6616	135.8446	136.0278	136.2112	136.3948
3.920	136.3948	136.5787	136.7628	136.9471	137.1317	137.3165	137.5014	137.6867	137.8721	138.0578	138.2437
3.930	138.2437	138.4298	138.6162	138.8028	138.9896	139.1766	139.3639	139.5514	139.7391	139.9270	140.1152
3.940	140.1152	140.3036	140.4922	140.6811	140.8702	141.0595	141.2491	141.4388	141.6288	141.8191	142.0095
3.950	142.0095	142.2002	142.3912	142.5823	142.7737	142.9654	143.1572	143.3493	143.5416	143.7342	143.9270
3.960	143.9270	144.1200	144.3132	144.5067	144.7005	144.8944	145.0886	145.2830	145.4777	145.6726	145.8678
3.970	145.8678	146.0631	146.2587	146.4546	146.6506	146.8470	147.0435	147.2403	147.4373	147.6346	147.8321
3.980	147.8321	148.0298	148.2278	148.4261	148.6245	148.8232	149.0221	149.2213	149.4208	149.6204	149.8203
3.990	149.8203	150.0204	150.2208	150.4214	150.6223	150.8234	151.0248	151.2264	151.4282	151.6303	151.8326

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.000	151.8326	152.0351	152.2380	152.4410	152.6443	152.8478	153.0516	153.2556	153.4599	153.6644	153.8692
4.010	153.8692	154.0742	154.2795	154.4850	154.6907	154.8967	155.1030	155.3095	155.5162	155.7232	155.9304
4.020	155.9304	156.1379	156.3457	156.5536	156.7619	156.9704	157.1791	157.3881	157.5973	157.8068	158.0165
4.030	158.0165	158.2265	158.4367	158.6472	158.8580	159.0690	159.2802	159.4917	159.7034	159.9154	160.1277
4.040	160.1277	160.3402	160.5530	160.7660	160.9793	161.1928	161.4066	161.6206	161.8349	162.0495	162.2643
4.050	162.2643	162.4793	162.6947	162.9102	163.1261	163.3422	163.5585	163.7751	163.9920	164.2091	164.4265
4.060	164.4265	164.6441	164.8620	165.0802	165.2986	165.5173	165.7362	165.9555	166.1749	166.3946	166.6146
4.070	166.6146	166.8349	167.0554	167.2762	167.4972	167.7185	167.9400	168.1619	168.3840	168.6063	168.8289
4.080	168.8289	169.0518	169.2749	169.4984	169.7220	169.9460	170.1702	170.3947	170.6194	170.8444	171.0697
4.090	171.0697	171.2952	171.5210	171.7471	171.9734	172.2001	172.4269	172.6541	172.8815	173.1092	173.3372
4.100	173.3372	173.5654	173.7939	174.0227	174.2517	174.4810	174.7106	174.9405	175.1706	175.4010	175.6316
4.110	175.6316	175.8626	176.0938	176.3253	176.5571	176.7891	177.0214	177.2540	177.4869	177.7200	177.9534
4.120	177.9534	178.1871	178.4211	178.6553	178.8898	179.1246	179.3597	179.5950	179.8307	180.0666	180.3027
4.130	180.3027	180.5392	180.7759	181.0130	181.2502	181.4878	181.7257	181.9638	182.2022	182.4409	182.6799
4.140	182.6799	182.9192	183.1587	183.3985	183.6387	183.8790	184.1197	184.3607	184.6019	184.8434	185.0852
4.150	185.0852	185.3273	185.5697	185.8123	186.0553	186.2985	186.5420	186.7858	187.0299	187.2743	187.5189
4.160	187.5189	187.7639	188.0091	188.2547	188.5005	188.7466	188.9929	189.2396	189.4866	189.7339	189.9814
4.170	189.9814	190.2292	190.4774	190.7258	190.9745	191.2235	191.4728	191.7223	191.9722	192.2224	192.4728
4.180	192.4728	192.7236	192.9746	193.2260	193.4776	193.7296	193.9818	194.2343	194.4871	194.7402	194.9936
4.190	194.9936	195.2473	195.5013	195.7556	196.0102	196.2651	196.5202	196.7757	197.0315	197.2876	197.5440
4.200	197.5440	197.8006	198.0576	198.3149	198.5724	198.8303	199.0885	199.3470	199.6057	199.8648	200.1242
4.210	200.1242	200.3839	200.6439	200.9042	201.1647	201.4256	201.6868	201.9484	202.2101	202.4723	202.7347
4.220	202.7347	202.9974	203.2604	203.5237	203.7874	204.0513	204.3156	204.5801	204.8450	205.1102	205.3756
4.230	205.3756	205.6414	205.9075	206.1739	206.4406	206.7077	206.9750	207.2426	207.5106	207.7788	208.0474
4.240	208.0474	208.3163	208.5855	208.8550	209.1248	209.3950	209.6654	209.9362	210.2073	210.4786	210.7504

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.250	210.7504	211.0224	211.2947	211.5673	211.8403	212.1136	212.3872	212.6611	212.9353	213.2098	213.4847
4.260	213.4847	213.7599	214.0354	214.3112	214.5873	214.8638	215.1406	215.4176	215.6950	215.9728	216.2508
4.270	216.2508	216.5292	216.8079	217.0869	217.3663	217.6459	217.9259	218.2062	218.4868	218.7678	219.0490
4.280	219.0490	219.3307	219.6126	219.8948	220.1774	220.4603	220.7435	221.0271	221.3109	221.5951	221.8797
4.290	221.8797	222.1645	222.4497	222.7352	223.0211	223.3072	223.5937	223.8806	224.1677	224.4552	224.7430
4.300	224.7430	225.0311	225.3196	225.6085	225.8976	226.1871	226.4769	226.7670	227.0575	227.3483	227.6394
4.310	227.6394	227.9309	228.2227	228.5148	228.8073	229.1001	229.3933	229.6867	229.9806	230.2747	230.5692
4.320	230.5692	230.8640	231.1592	231.4547	231.7506	232.0467	232.3432	232.6401	232.9373	233.2348	233.5327
4.330	233.5327	233.8309	234.1295	234.4284	234.7276	235.0272	235.3271	235.6274	235.9280	236.2290	236.5303
4.340	236.5303	236.8319	237.1339	237.4362	237.7389	238.0419	238.3453	238.6490	238.9531	239.2575	239.5622
4.350	239.5622	239.8673	240.1728	240.4786	240.7847	241.0912	241.3980	241.7052	242.0128	242.3206	242.6289
4.360	242.6289	242.9375	243.2464	243.5557	243.8654	244.1754	244.4857	244.7964	245.1075	245.4189	245.7307
4.370	245.7307	246.0428	246.3552	246.6681	246.9812	247.2946	247.6087	247.9229	248.2375	248.5525	248.8678
4.380	248.8678	249.1835	249.4995	249.8160	250.1327	250.4498	250.7673	251.0851	251.4033	251.7219	252.0408
4.390	252.0408	252.3601	252.6797	252.9997	253.3201	253.6408	253.9619	254.2833	254.6051	254.9273	255.2499
4.400	255.2499	255.5728	255.8961	256.2197	256.5437	256.8681	257.1928	257.5179	257.8434	258.1692	258.4954
4.410	258.4954	258.8220	259.1490	259.4763	259.8040	260.1320	260.4604	260.7892	261.1184	261.4479	261.7778
4.420	261.7778	262.1081	262.4388	262.7698	263.1012	263.4330	263.7651	264.0976	264.4305	264.7638	265.0974
4.430	265.0974	265.4315	265.7659	266.1006	266.4358	266.7713	267.1072	267.4435	267.7802	268.1172	268.4546
4.440	268.4546	268.7924	269.1306	269.4691	269.8081	270.1474	270.4871	270.8272	271.1676	271.5085	271.8497
4.450	271.8497	272.1913	272.5333	272.8757	273.2184	273.5616	273.9051	274.2490	274.5933	274.9380	275.2831
4.460	275.2831	275.6286	275.9744	276.3206	276.6673	277.0143	277.3617	277.7095	278.0576	278.4062	278.7551
4.470	278.7551	279.1045	279.4543	279.8044	280.1549	280.5058	280.8571	281.2088	281.5609	281.9134	282.2663
4.480	282.2663	282.6196	282.9732	283.3273	283.6817	284.0366	284.3918	284.7475	285.1035	285.4600	285.8168
4.490	285.8168	286.1740	286.5317	286.8897	287.2482	287.6070	287.9662	288.3259	288.6859	289.0463	289.4072

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.500	289.4072	289.7684	290.1300	290.4921	290.8545	291.2174	291.5807	291.9443	292.3084	292.6728	293.0377
4.510	293.0377	293.4030	293.7687	294.1348	294.5013	294.8682	295.2355	295.6032	295.9714	296.3399	296.7088
4.520	296.7088	297.0782	297.4480	297.8181	298.1887	298.5598	298.9312	299.3030	299.6752	300.0479	300.4209
4.530	300.4209	300.7945	301.1683	301.5426	301.9174	302.2925	302.6680	303.0440	303.4204	303.7972	304.1744
4.540	304.1744	304.5521	304.9301	305.3086	305.6875	306.0668	306.4465	306.8267	307.2073	307.5882	307.9697
4.550	307.9697	308.3515	308.7338	309.1165	309.4995	309.8831	310.2670	310.6514	311.0362	311.4214	311.8071
4.560	311.8071	312.1931	312.5797	312.9666	313.3539	313.7417	314.1299	314.5186	314.9076	315.2971	315.6870
4.570	315.6870	316.0774	316.4682	316.8594	317.2511	317.6431	318.0357	318.4286	318.8220	319.2158	319.6100
4.580	319.6100	320.0047	320.3998	320.7953	321.1913	321.5877	321.9846	322.3819	322.7796	323.1777	323.5763
4.590	323.5763	323.9754	324.3749	324.7747	325.1751	325.5759	325.9772	326.3788	326.7809	327.1835	327.5865
4.600	327.5865	327.9899	328.3938	328.7981	329.2029	329.6081	330.0138	330.4199	330.8264	331.2334	331.6408
4.610	331.6408	332.0487	332.4570	332.8658	333.2750	333.6847	334.0949	334.5054	334.9164	335.3279	335.7398
4.620	335.7398	336.1522	336.5650	336.9783	337.3920	337.8062	338.2208	338.6359	339.0514	339.4674	339.8839
4.630	339.8839	340.3008	340.7181	341.1359	341.5542	341.9729	342.3922	342.8118	343.2319	343.6524	344.0734
4.640	344.0734	344.4949	344.9168	345.3392	345.7621	346.1854	346.6092	347.0334	347.4581	347.8833	348.3089
4.650	348.3089	348.7350	349.1615	349.5885	350.0160	350.4439	350.8724	351.3012	351.7306	352.1604	352.5907
4.660	352.5907	353.0214	353.4526	353.8843	354.3165	354.7491	355.1822	355.6157	356.0498	356.4843	356.9193
4.670	356.9193	357.3547	357.7907	358.2270	358.6639	359.1012	359.5390	359.9773	360.4161	360.8554	361.2951
4.680	361.2951	361.7353	362.1760	362.6171	363.0587	363.5008	363.9434	364.3865	364.8301	365.2741	365.7186
4.690	365.7186	366.1636	366.6090	367.0550	367.5014	367.9483	368.3957	368.8436	369.2920	369.7408	370.1902
4.700	370.1902	370.6400	371.0903	371.5411	371.9924	372.4441	372.8964	373.3492	373.8024	374.2561	374.7103
4.710	374.7103	375.1651	375.6202	376.0759	376.5321	376.9888	377.4459	377.9036	378.3617	378.8204	379.2795
4.720	379.2795	379.7392	380.1993	380.6599	381.1210	381.5826	382.0448	382.5074	382.9705	383.4341	383.8982
4.730	383.8982	384.3628	384.8279	385.2935	385.7596	386.2262	386.6933	387.1609	387.6290	388.0976	388.5668
4.740	388.5668	389.0364	389.5065	389.9772	390.4483	390.9200	391.3921	391.8648	392.3379	392.8116	393.2858

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.750	393.2858	393.7605	394.2357	394.7114	395.1876	395.6643	396.1415	396.6193	397.0976	397.5764	398.0557
4.760	398.0557	398.5354	399.0158	399.4966	399.9779	400.4598	400.9422	401.4251	401.9085	402.3924	402.8769
4.770	402.8769	403.3618	403.8473	404.3333	404.8198	405.3069	405.7944	406.2825	406.7711	407.2602	407.7499
4.780	407.7499	408.2400	408.7308	409.2219	409.7137	410.2060	410.6988	411.1921	411.6859	412.1803	412.6752
4.790	412.6752	413.1706	413.6666	414.1630	414.6600	415.1576	415.6557	416.1543	416.6534	417.1531	417.6533
4.800	417.6533	418.1540	418.6553	419.1571	419.6594	420.1623	420.6657	421.1696	421.6741	422.1791	422.6846
4.810	422.6846	423.1907	423.6973	424.2045	424.7122	425.2204	425.7292	426.2385	426.7484	427.2588	427.7698
4.820	427.7698	428.2812	428.7933	429.3058	429.8190	430.3326	430.8468	431.3616	431.8768	432.3927	432.9091
4.830	432.9091	433.4260	433.9435	434.4616	434.9801	435.4993	436.0190	436.5391	437.0599	437.5813	438.1031
4.840	438.1031	438.6256	439.1486	439.6721	440.1963	440.7209	441.2461	441.7719	442.2982	442.8250	443.3525
4.850	443.3525	443.8805	444.4090	444.9382	445.4678	445.9980	446.5288	447.0602	447.5921	448.1246	448.6576
4.860	448.6576	449.1912	449.7253	450.2601	450.7953	451.3312	451.8676	452.4046	452.9421	453.4802	454.0189
4.870	454.0189	454.5582	455.0980	455.6383	456.1793	456.7208	457.2630	457.8056	458.3489	458.8926	459.4370
4.880	459.4370	459.9820	460.5275	461.0736	461.6203	462.1675	462.7154	463.2638	463.8127	464.3623	464.9124
4.890	464.9124	465.4631	466.0144	466.5663	467.1187	467.6717	468.2253	468.7795	469.3343	469.8897	470.4456
4.900	470.4456	471.0021	471.5592	472.1169	472.6752	473.2340	473.7935	474.3535	474.9141	475.4753	476.0371
4.910	476.0371	476.5995	477.1625	477.7260	478.2902	478.8549	479.4202	479.9862	480.5527	481.1198	481.6875
4.920	481.6875	482.2558	482.8247	483.3942	483.9643	484.5349	485.1062	485.6780	486.2505	486.8236	487.3972
4.930	487.3972	487.9715	488.5464	489.1218	489.6979	490.2746	490.8518	491.4297	492.0082	492.5873	493.1670
4.940	493.1670	493.7472	494.3281	494.9096	495.4917	496.0744	496.6577	497.2416	497.8262	498.4113	498.9971
4.950	498.9971	499.5834	500.1704	500.7580	501.3462	501.9350	502.5244	503.1144	503.7051	504.2963	504.8882
4.960	504.8882	505.4807	506.0738	506.6675	507.2618	507.8568	508.4524	509.0486	509.6454	510.2428	510.8409
4.970	510.8409	511.4395	512.0388	512.6388	513.2393	513.8405	514.4423	515.0447	515.6477	516.2514	516.8557
4.980	516.8557	517.4606	518.0662	518.6723	519.2791	519.8865	520.4946	521.1033	521.7126	522.3226	522.9332
4.990	522.9332	523.5444	524.1562	524.7687	525.3819	525.9955	526.6099	527.2250	527.8406	528.4569	529.0738

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
5.00	529.09	535.29	541.56	547.90	554.30	560.76	567.29	573.89	580.56	587.30	594.10
5.10	594.10	600.98	607.92	614.94	622.02	629.18	636.42	643.72	651.10	658.55	666.08
5.20	666.08	673.69	681.37	689.13	696.97	704.88	712.88	720.95	729.11	737.35	745.66
5.30	745.66	754.07	762.55	771.12	779.77	788.51	797.34	806.25	815.25	824.34	833.52
5.40	833.52	842.79	852.15	861.60	871.14	880.78	890.51	900.33	910.25	920.27	930.38
5.50	930.38	940.59	950.90	961.31	971.82	982.43	993.14	1003.96	1014.87	1025.90	1037.02
5.60	1037.02	1048.26	1059.60	1071.04	1082.60	1094.27	1106.04	1117.93	1129.93	1142.05	1154.27
5.70	1154.27	1166.62	1179.07	1191.65	1204.34	1217.15	1230.08	1243.14	1256.31	1269.60	1283.02
5.80	1283.02	1296.57	1310.24	1324.03	1337.95	1352.00	1366.18	1380.50	1394.94	1409.51	1424.22
5.90	1424.22	1439.06	1454.04	1469.16	1484.41	1499.80	1515.33	1531.00	1546.82	1562.77	1578.88
6.00	1578.88	1595.12	1611.52	1628.06	1644.75	1661.58	1678.57	1695.72	1713.01	1730.46	1748.07
6.10	1748.07	1765.83	1783.75	1801.83	1820.07	1838.47	1857.03	1875.76	1894.65	1913.71	1932.94
6.20	1932.94	1952.34	1971.90	1991.64	2011.55	2031.64	2051.90	2072.34	2092.95	2113.74	2134.72
6.30	2134.72	2155.88	2177.21	2198.74	2220.45	2242.35	2264.43	2286.71	2309.18	2331.84	2354.69
6.40	2354.69	2377.74	2400.99	2424.44	2448.08	2471.93	2495.98	2520.24	2544.70	2569.37	2594.24
6.50	2594.24	2619.33	2644.63	2670.14	2695.87	2721.81	2747.97	2774.35	2800.95	2827.78	2854.83
6.60	2854.83	2882.10	2909.60	2937.33	2965.29	2993.48	3021.91	3050.57	3079.47	3108.61	3137.99
6.70	3137.99	3167.61	3197.47	3227.58	3257.94	3288.55	3319.40	3350.51	3381.88	3413.49	3445.37
6.80	3445.37	3477.51	3509.91	3542.57	3575.49	3608.68	3642.14	3675.87	3709.88	3744.15	3778.71
6.90	3778.71	3813.54	3848.65	3884.04	3919.71	3955.68	3991.92	4028.46	4065.29	4102.41	4139.83
7.00	4139.83	4177.54	4215.55	4253.87	4292.49	4331.41	4370.64	4410.18	4450.03	4490.19	4530.67
7.10	4530.67	4571.47	4612.59	4654.02	4695.79	4737.88	4780.29	4823.04	4866.12	4909.53	4953.29
7.20	4953.29	4997.38	5041.81	5086.58	5131.70	5177.17	5222.99	5269.17	5315.70	5362.58	5409.83
7.30	5409.83	5457.43	5505.40	5553.74	5602.45	5651.52	5700.98	5750.80	5801.01	5851.60	5902.57
7.40	5902.57	5953.93	6005.67	6057.81	6110.34	6163.26	6216.59	6270.31	6324.44	6378.97	6433.92

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TOTAL TO STATIC PRESSURE RATIO

MACH NO.	0.	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
7.50	6433.92	6489.27	6545.04	6601.22	6657.82	6714.85	6772.30	6830.17	6888.48	6947.22	7006.39
7.60	7006.39	7066.00	7126.05	7186.54	7247.49	7308.87	7370.71	7433.01	7495.76	7558.97	7622.65
7.70	7622.65	7686.79	7751.40	7816.48	7882.04	7948.07	8014.58	8081.58	8149.06	8217.03	8285.49
7.80	8205.49	8354.45	8423.91	8493.06	8564.33	8635.29	8706.77	8778.77	8851.27	8924.30	8997.86
7.90	8997.86	9071.93	9146.54	9221.68	9297.35	9373.57	9450.32	9527.62	9605.47	9683.87	9762.83
8.00	9762.83	9842.34	9922.42	10003.06	10084.27	10166.05	10248.41	10331.34	10414.86	10498.96	10583.65
8.10	10583.65	10668.94	10754.81	10841.29	10928.38	11016.06	11104.36	11193.27	11282.80	11372.95	11463.73
8.20	11463.73	11555.13	11647.16	11739.83	11833.14	11927.09	12021.69	12116.94	12212.84	12309.40	12406.62
8.30	12406.62	12504.51	12603.07	12702.30	12802.20	12902.79	13004.06	13106.02	13208.68	13312.03	13416.08
8.40	13416.08	13520.63	13626.30	13732.47	13839.37	13946.98	14055.32	14164.39	14274.19	14384.73	14496.01
8.50	14496.01	14608.04	14720.61	14834.34	14948.63	15063.68	15179.50	15296.08	15413.45	15531.59	15650.52
8.60	15650.52	15770.24	15890.74	16012.05	16134.16	16257.07	16380.80	16505.34	16630.70	16756.89	16883.90
8.70	16883.90	17011.74	17140.43	17269.96	17400.33	17531.56	17663.64	17796.59	17930.40	18065.08	18200.64
8.80	18200.64	18337.08	18474.40	18612.61	18751.72	18891.73	19032.64	19174.46	19317.20	19460.86	19605.44
8.90	19605.44	19750.95	19897.39	20044.78	20193.11	20342.38	20492.61	20643.81	20795.97	20949.09	21103.20
9.00	21103.20	21258.28	21414.35	21571.41	21729.47	21888.53	22048.60	22209.68	22371.78	22534.90	22699.05
9.10	22699.05	22864.23	23030.45	23197.72	23366.04	23535.42	23705.86	23877.36	24049.94	24223.59	24398.34
9.20	24398.34	24574.17	24751.09	24929.12	25108.25	25288.50	25469.87	25652.36	25835.98	26020.74	26206.64
9.30	26206.64	26393.69	26581.90	26771.26	26961.79	27153.49	27346.37	27540.44	27735.69	27932.14	28129.80
9.40	28129.80	28328.66	28528.74	28730.04	28932.57	29136.33	29341.33	29547.58	29755.09	29963.84	30173.87
9.50	30173.87	30385.17	30597.75	30811.62	31026.77	31243.23	31460.99	31680.05	31900.44	32122.16	32345.20
9.60	32345.20	32569.58	32795.31	33022.39	33250.83	33480.63	33711.81	33944.37	34178.31	34413.64	34650.37
9.70	34650.37	34888.52	35128.07	35369.05	35611.45	35855.29	36100.57	36347.30	36595.49	36845.14	37096.26
9.80	37096.26	37348.87	37602.96	37858.53	38115.62	38374.20	38634.31	38895.93	39159.09	39423.79	39690.02
9.90	39690.02	39957.82	40227.17	40498.09	40770.59	41044.66	41320.34	41597.61	41876.49	42156.97	42439.09

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## Appendix A (continued)

Tabulation of:

Ratio of Total to Static Temperature,  $T_t/T$ 

The ratio is tabulated versus Mach number.

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.010	1.00000	1.00000	1.00000	1.00000	1.00000	1.00000	1.00001	1.00001	1.00001	1.00002	1.00002
0.020	1.00008	1.00019	1.00034	1.00053	1.00077	1.00104	1.00134	1.00169	1.00208	1.00251	1.00298
0.030	1.00018	1.00042	1.00077	1.00122	1.00177	1.00242	1.00317	1.00402	1.00497	1.00602	1.00717
0.040	1.00032	1.00072	1.00127	1.00197	1.00282	1.00382	1.00497	1.00627	1.00772	1.00937	1.01122
0.050	1.00050	1.00100	1.00160	1.00230	1.00310	1.00400	1.00500	1.00610	1.00730	1.00860	1.01000
0.060	1.00072	1.00144	1.00228	1.00322	1.00426	1.00540	1.00664	1.00798	1.00942	1.01096	1.01260
0.070	1.00098	1.00196	1.00304	1.00422	1.00550	1.00688	1.00836	1.00994	1.01162	1.01340	1.01528
0.080	1.00128	1.00256	1.00394	1.00542	1.00698	1.00864	1.01040	1.01226	1.01422	1.01628	1.01844
0.090	1.00162	1.00324	1.00496	1.00678	1.00870	1.01072	1.01284	1.01506	1.01738	1.01980	1.02232
0.100	1.00200	1.00400	1.00600	1.00800	1.01000	1.01200	1.01400	1.01600	1.01800	1.02000	1.02200
0.110	1.00242	1.00484	1.00726	1.00968	1.01210	1.01452	1.01694	1.01936	1.02178	1.02420	1.02662
0.120	1.00288	1.00576	1.00864	1.01152	1.01440	1.01728	1.02016	1.02304	1.02592	1.02880	1.03168
0.130	1.00338	1.00676	1.01014	1.01352	1.01690	1.02028	1.02366	1.02704	1.03042	1.03380	1.03718
0.140	1.00392	1.00784	1.01176	1.01568	1.01960	1.02352	1.02744	1.03136	1.03528	1.03920	1.04312
0.150	1.00450	1.00900	1.01350	1.01800	1.02250	1.02700	1.03150	1.03600	1.04050	1.04500	1.04950
0.160	1.00512	1.01024	1.01536	1.02048	1.02560	1.03072	1.03584	1.04096	1.04608	1.05120	1.05632
0.170	1.00578	1.01156	1.01734	1.02312	1.02890	1.03468	1.04046	1.04624	1.05202	1.05780	1.06358
0.180	1.00648	1.01296	1.01944	1.02592	1.03238	1.03884	1.04530	1.05176	1.05822	1.06468	1.07114
0.190	1.00722	1.01444	1.02166	1.02888	1.03610	1.04332	1.05054	1.05776	1.06498	1.07220	1.07942
0.200	1.00800	1.01600	1.02400	1.03200	1.04000	1.04800	1.05600	1.06400	1.07200	1.08000	1.08800
0.210	1.00882	1.01764	1.02646	1.03528	1.04410	1.05292	1.06174	1.07056	1.07938	1.08820	1.09702
0.220	1.00968	1.01936	1.02904	1.03872	1.04840	1.05808	1.06776	1.07744	1.08712	1.09680	1.10648
0.230	1.01058	1.02116	1.03174	1.04232	1.05290	1.06348	1.07406	1.08464	1.09522	1.10580	1.11638
0.240	1.01152	1.02304	1.03456	1.04608	1.05760	1.06912	1.08064	1.09216	1.10368	1.11520	1.12672
0.250	1.01250	1.02500	1.03750	1.05000	1.06250	1.07500	1.08750	1.10000	1.11250	1.12500	1.13750
0.260	1.01352	1.02704	1.04056	1.05408	1.06760	1.08112	1.09464	1.10816	1.12168	1.13520	1.14872
0.270	1.01458	1.02916	1.04374	1.05832	1.07290	1.08748	1.10206	1.11664	1.13122	1.14580	1.16038
0.280	1.01568	1.03136	1.04704	1.06272	1.07840	1.09408	1.10976	1.12544	1.14112	1.15680	1.17248
0.290	1.01682	1.03364	1.05032	1.06700	1.08368	1.10036	1.11704	1.13372	1.15040	1.16708	1.18376

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.300	1.01800	1.01812	1.01824	1.01836	1.01848	1.01860	1.01873	1.01885	1.01897	1.01910	1.01922
0.310	1.01922	1.01934	1.01947	1.01959	1.01972	1.01984	1.01997	1.02010	1.02022	1.02035	1.02048
0.320	1.02048	1.02061	1.02074	1.02087	1.02100	1.02112	1.02126	1.02139	1.02152	1.02165	1.02178
0.330	1.02178	1.02191	1.02204	1.02218	1.02231	1.02244	1.02258	1.02271	1.02285	1.02298	1.02312
0.340	1.02312	1.02326	1.02339	1.02353	1.02367	1.02380	1.02394	1.02408	1.02422	1.02436	1.02450
0.350	1.02450	1.02464	1.02478	1.02492	1.02506	1.02520	1.02535	1.02549	1.02563	1.02578	1.02592
0.360	1.02592	1.02606	1.02621	1.02635	1.02650	1.02664	1.02679	1.02694	1.02708	1.02723	1.02738
0.370	1.02738	1.02753	1.02768	1.02783	1.02798	1.02812	1.02828	1.02843	1.02858	1.02873	1.02888
0.380	1.02888	1.02902	1.02918	1.02934	1.02949	1.02964	1.02980	1.02995	1.03011	1.03026	1.03042
0.390	1.03042	1.03058	1.03073	1.03089	1.03105	1.03120	1.03136	1.03152	1.03168	1.03184	1.03200
0.400	1.03200	1.03216	1.03232	1.03248	1.03264	1.03280	1.03297	1.03313	1.03329	1.03346	1.03362
0.410	1.03362	1.03378	1.03395	1.03411	1.03428	1.03444	1.03461	1.03478	1.03494	1.03511	1.03528
0.420	1.03528	1.03545	1.03562	1.03579	1.03596	1.03612	1.03630	1.03647	1.03664	1.03681	1.03698
0.430	1.03698	1.03715	1.03732	1.03750	1.03767	1.03784	1.03802	1.03819	1.03837	1.03854	1.03872
0.440	1.03872	1.03889	1.03907	1.03925	1.03943	1.03960	1.03978	1.03996	1.04014	1.04032	1.04050
0.450	1.04050	1.04068	1.04086	1.04104	1.04122	1.04140	1.04159	1.04177	1.04195	1.04214	1.04232
0.460	1.04232	1.04250	1.04269	1.04287	1.04306	1.04324	1.04343	1.04362	1.04380	1.04399	1.04418
0.470	1.04418	1.04437	1.04456	1.04475	1.04494	1.04512	1.04532	1.04551	1.04570	1.04589	1.04608
0.480	1.04608	1.04627	1.04646	1.04665	1.04685	1.04704	1.04724	1.04743	1.04763	1.04782	1.04802
0.490	1.04802	1.04822	1.04841	1.04861	1.04881	1.04900	1.04920	1.04940	1.04960	1.04980	1.05000
0.500	1.05000	1.05020	1.05040	1.05060	1.05080	1.05100	1.05121	1.05141	1.05161	1.05182	1.05202
0.510	1.05202	1.05222	1.05243	1.05263	1.05284	1.05304	1.05325	1.05346	1.05366	1.05387	1.05408
0.520	1.05408	1.05429	1.05450	1.05471	1.05492	1.05512	1.05534	1.05555	1.05576	1.05597	1.05618
0.530	1.05618	1.05639	1.05660	1.05682	1.05703	1.05724	1.05746	1.05767	1.05789	1.05810	1.05832
0.540	1.05832	1.05854	1.05875	1.05897	1.05919	1.05940	1.05962	1.05984	1.06006	1.06028	1.06050
0.550	1.06050	1.06072	1.06094	1.06116	1.06138	1.06160	1.06183	1.06205	1.06227	1.06250	1.06272
0.560	1.06272	1.06294	1.06317	1.06339	1.06362	1.06384	1.06407	1.06430	1.06452	1.06475	1.06498
0.570	1.06498	1.06521	1.06544	1.06567	1.06590	1.06612	1.06636	1.06659	1.06682	1.06705	1.06728
0.580	1.06728	1.06751	1.06774	1.06798	1.06821	1.06844	1.06868	1.06891	1.06915	1.06938	1.06962
0.590	1.06962	1.06986	1.07009	1.07033	1.07057	1.07080	1.07104	1.07128	1.07152	1.07176	1.07200

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.600	1.07200	1.07224	1.07248	1.07272	1.07296	1.07320	1.07345	1.07369	1.07393	1.07418	1.07442
0.610	1.07442	1.07466	1.07491	1.07515	1.07540	1.07564	1.07589	1.07614	1.07638	1.07663	1.07688
0.620	1.07688	1.07713	1.07738	1.07763	1.07788	1.07812	1.07838	1.07863	1.07888	1.07913	1.07938
0.630	1.07938	1.07963	1.07988	1.08014	1.08039	1.08064	1.08090	1.08115	1.08141	1.08166	1.08192
0.640	1.08192	1.08218	1.08243	1.08269	1.08295	1.08320	1.08346	1.08372	1.08398	1.08424	1.08450
0.650	1.08450	1.08476	1.08502	1.08528	1.08554	1.08580	1.08607	1.08633	1.08659	1.08686	1.08712
0.660	1.08712	1.08738	1.08765	1.08791	1.08818	1.08844	1.08871	1.08898	1.08924	1.08951	1.08978
0.670	1.08978	1.09005	1.09032	1.09059	1.09086	1.09112	1.09140	1.09167	1.09194	1.09221	1.09248
0.680	1.09248	1.09275	1.09302	1.09330	1.09357	1.09384	1.09412	1.09439	1.09467	1.09494	1.09522
0.690	1.09522	1.09550	1.09577	1.09605	1.09633	1.09660	1.09688	1.09716	1.09744	1.09772	1.09800
0.700	1.09800	1.09828	1.09856	1.09884	1.09912	1.09940	1.09969	1.09997	1.10025	1.10054	1.10082
0.710	1.10082	1.10110	1.10139	1.10167	1.10196	1.10224	1.10253	1.10282	1.10310	1.10339	1.10368
0.720	1.10368	1.10397	1.10426	1.10455	1.10484	1.10512	1.10542	1.10571	1.10600	1.10629	1.10658
0.730	1.10658	1.10687	1.10716	1.10746	1.10775	1.10804	1.10834	1.10863	1.10893	1.10922	1.10952
0.740	1.10952	1.10982	1.11011	1.11041	1.11071	1.11100	1.11130	1.11160	1.11190	1.11220	1.11250
0.750	1.11250	1.11280	1.11310	1.11340	1.11370	1.11400	1.11431	1.11461	1.11491	1.11522	1.11552
0.760	1.11552	1.11582	1.11613	1.11643	1.11674	1.11704	1.11735	1.11766	1.11796	1.11827	1.11858
0.770	1.11858	1.11889	1.11920	1.11951	1.11982	1.12012	1.12044	1.12075	1.12106	1.12137	1.12168
0.780	1.12168	1.12199	1.12230	1.12262	1.12293	1.12324	1.12356	1.12387	1.12419	1.12450	1.12482
0.790	1.12482	1.12514	1.12545	1.12577	1.12609	1.12640	1.12672	1.12704	1.12736	1.12768	1.12800
0.800	1.12800	1.12832	1.12864	1.12896	1.12928	1.12960	1.12993	1.13025	1.13057	1.13090	1.13122
0.810	1.13122	1.13154	1.13187	1.13219	1.13252	1.13284	1.13317	1.13350	1.13382	1.13415	1.13448
0.820	1.13448	1.13481	1.13514	1.13547	1.13580	1.13612	1.13646	1.13679	1.13712	1.13745	1.13778
0.830	1.13778	1.13811	1.13844	1.13878	1.13911	1.13944	1.13978	1.14011	1.14045	1.14078	1.14112
0.840	1.14112	1.14146	1.14179	1.14213	1.14247	1.14280	1.14314	1.14348	1.14382	1.14416	1.14450
0.850	1.14450	1.14484	1.14518	1.14552	1.14586	1.14620	1.14655	1.14689	1.14723	1.14758	1.14792
0.860	1.14792	1.14826	1.14861	1.14895	1.14930	1.14964	1.14999	1.15034	1.15068	1.15103	1.15138
0.870	1.15138	1.15175	1.15208	1.15243	1.15278	1.15312	1.15348	1.15383	1.15418	1.15453	1.15488
0.880	1.15488	1.15523	1.15558	1.15594	1.15629	1.15664	1.15700	1.15735	1.15771	1.15806	1.15842
0.890	1.15842	1.15878	1.15913	1.15949	1.15985	1.16020	1.16056	1.16092	1.16128	1.16164	1.16200

TOTAL ISOENTHALPIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.900	1.16200	1.16236	1.16272	1.16308	1.16344	1.16380	1.16417	1.16453	1.16489	1.16526	1.16562
0.910	1.16562	1.16598	1.16635	1.16671	1.16708	1.16744	1.16781	1.16818	1.16854	1.16891	1.16928
0.920	1.16928	1.16965	1.17002	1.17039	1.17076	1.17112	1.17150	1.17187	1.17224	1.17261	1.17298
0.930	1.17298	1.17335	1.17372	1.17410	1.17447	1.17484	1.17522	1.17559	1.17597	1.17634	1.17672
0.940	1.17672	1.17710	1.17747	1.17785	1.17823	1.17860	1.17898	1.17936	1.17974	1.18012	1.18050
0.950	1.18050	1.18088	1.18126	1.18164	1.18202	1.18240	1.18279	1.18317	1.18355	1.18394	1.18432
0.960	1.18432	1.18470	1.18509	1.18547	1.18586	1.18624	1.18662	1.18702	1.18740	1.18779	1.18818
0.970	1.18818	1.18857	1.18896	1.18935	1.18974	1.19012	1.19052	1.19091	1.19130	1.19169	1.19208
0.980	1.19208	1.19247	1.19286	1.19326	1.19365	1.19404	1.19444	1.19483	1.19523	1.19562	1.19602
0.990	1.19602	1.19642	1.19681	1.19721	1.19761	1.19800	1.19840	1.19880	1.19920	1.19960	1.20000

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.000	1.20000	1.20040	1.20080	1.20120	1.20160	1.20200	1.20241	1.20281	1.20321	1.20362	1.20402
1.010	1.20402	1.20442	1.20483	1.20523	1.20564	1.20604	1.20645	1.20686	1.20726	1.20767	1.20808
1.020	1.20808	1.20849	1.20890	1.20931	1.20972	1.21012	1.21054	1.21095	1.21136	1.21177	1.21218
1.030	1.21218	1.21259	1.21300	1.21342	1.21383	1.21424	1.21466	1.21507	1.21549	1.21590	1.21632
1.040	1.21632	1.21674	1.21715	1.21757	1.21799	1.21840	1.21882	1.21924	1.21966	1.22008	1.22050
1.050	1.22050	1.22092	1.22134	1.22176	1.22218	1.22260	1.22303	1.22345	1.22387	1.22430	1.22472
1.060	1.22472	1.22514	1.22557	1.22599	1.22642	1.22684	1.22727	1.22770	1.22812	1.22855	1.22898
1.070	1.22898	1.22941	1.22984	1.23027	1.23070	1.23112	1.23156	1.23199	1.23242	1.23285	1.23328
1.080	1.23328	1.23371	1.23414	1.23458	1.23501	1.23544	1.23588	1.23631	1.23675	1.23718	1.23762
1.090	1.23762	1.23806	1.23849	1.23893	1.23937	1.23980	1.24024	1.24068	1.24112	1.24156	1.24200
1.100	1.24200	1.24244	1.24288	1.24332	1.24376	1.24420	1.24465	1.24509	1.24553	1.24598	1.24642
1.110	1.24642	1.24686	1.24731	1.24775	1.24820	1.24864	1.24909	1.24954	1.24998	1.25043	1.25088
1.120	1.25088	1.25133	1.25178	1.25223	1.25268	1.25312	1.25358	1.25403	1.25448	1.25493	1.25538
1.130	1.25538	1.25583	1.25628	1.25674	1.25719	1.25764	1.25810	1.25855	1.25901	1.25946	1.25992
1.140	1.25992	1.26038	1.26083	1.26129	1.26175	1.26220	1.26266	1.26312	1.26358	1.26404	1.26450
1.150	1.26450	1.26496	1.26542	1.26588	1.26634	1.26680	1.26727	1.26773	1.26819	1.26866	1.26912
1.160	1.26912	1.26958	1.27005	1.27051	1.27098	1.27144	1.27191	1.27238	1.27284	1.27331	1.27378
1.170	1.27378	1.27425	1.27472	1.27519	1.27566	1.27612	1.27660	1.27707	1.27754	1.27801	1.27848
1.180	1.27848	1.27895	1.27942	1.27990	1.28037	1.28084	1.28132	1.28179	1.28227	1.28274	1.28322
1.190	1.28322	1.28370	1.28417	1.28465	1.28513	1.28560	1.28608	1.28656	1.28704	1.28752	1.28800
1.200	1.28800	1.28848	1.28896	1.28944	1.28992	1.29040	1.29089	1.29137	1.29185	1.29234	1.29282
1.210	1.29282	1.29330	1.29379	1.29427	1.29476	1.29524	1.29573	1.29622	1.29670	1.29719	1.29768
1.220	1.29768	1.29817	1.29866	1.29915	1.29964	1.30012	1.30062	1.30111	1.30160	1.30209	1.30258
1.230	1.30258	1.30307	1.30356	1.30406	1.30455	1.30504	1.30554	1.30603	1.30653	1.30702	1.30752
1.240	1.30752	1.30802	1.30851	1.30901	1.30951	1.31000	1.31050	1.31100	1.31150	1.31200	1.31250
1.250	1.31250	1.31300	1.31350	1.31400	1.31450	1.31500	1.31551	1.31601	1.31651	1.31702	1.31752
1.260	1.31752	1.31802	1.31853	1.31903	1.31954	1.32004	1.32055	1.32106	1.32156	1.32207	1.32258
1.270	1.32258	1.32309	1.32360	1.32411	1.32462	1.32512	1.32564	1.32615	1.32666	1.32717	1.32768
1.280	1.32768	1.32819	1.32870	1.32922	1.32973	1.33024	1.33076	1.33127	1.33179	1.33230	1.33282
1.290	1.33282	1.33334	1.33385	1.33437	1.33489	1.33540	1.33592	1.33644	1.33696	1.33748	1.33800

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.300	1.33800	1.33852	1.33904	1.33956	1.34008	1.34060	1.34113	1.34165	1.34217	1.34270	1.34322
1.310	1.34322	1.34374	1.34427	1.34479	1.34532	1.34584	1.34637	1.34690	1.34742	1.34795	1.34848
1.320	1.34848	1.34901	1.34954	1.35007	1.35060	1.35112	1.35166	1.35219	1.35272	1.35325	1.35378
1.330	1.35378	1.35431	1.35484	1.35538	1.35591	1.35644	1.35698	1.35751	1.35805	1.35858	1.35912
1.340	1.35912	1.35966	1.36019	1.36073	1.36127	1.36180	1.36234	1.36288	1.36342	1.36396	1.36450
1.350	1.36450	1.36504	1.36558	1.36612	1.36666	1.36720	1.36775	1.36829	1.36883	1.36938	1.36992
1.360	1.36992	1.37045	1.37101	1.37155	1.37210	1.37264	1.37319	1.37374	1.37428	1.37483	1.37538
1.370	1.37538	1.37593	1.37648	1.37703	1.37758	1.37812	1.37868	1.37923	1.37978	1.38033	1.38088
1.380	1.38088	1.38143	1.38198	1.38254	1.38309	1.38364	1.38420	1.38475	1.38531	1.38586	1.38642
1.390	1.38642	1.38698	1.38753	1.38809	1.38865	1.38920	1.38976	1.39032	1.39088	1.39144	1.39200
1.400	1.39200	1.39256	1.39312	1.39368	1.39424	1.39480	1.39537	1.39593	1.39649	1.39706	1.39762
1.410	1.39762	1.39818	1.39875	1.39931	1.40004	1.40044	1.40101	1.40158	1.40214	1.40271	1.40328
1.420	1.40328	1.40385	1.40442	1.40499	1.40556	1.40612	1.40670	1.40727	1.40784	1.40841	1.40898
1.430	1.40898	1.40955	1.41012	1.41070	1.41127	1.41184	1.41242	1.41299	1.41357	1.41414	1.41472
1.440	1.41472	1.41530	1.41587	1.41645	1.41703	1.41760	1.41818	1.41876	1.41934	1.41992	1.42050
1.450	1.42050	1.42108	1.42166	1.42224	1.42282	1.42340	1.42399	1.42457	1.42515	1.42574	1.42632
1.460	1.42632	1.42690	1.42749	1.42807	1.42866	1.42924	1.42983	1.43042	1.43100	1.43159	1.43218
1.470	1.43218	1.43277	1.43336	1.43395	1.43454	1.43512	1.43572	1.43631	1.43690	1.43749	1.43808
1.480	1.43808	1.43867	1.43926	1.43986	1.44045	1.44104	1.44164	1.44223	1.44283	1.44342	1.44402
1.490	1.44402	1.44462	1.44521	1.44581	1.44641	1.44700	1.44760	1.44820	1.44880	1.44940	1.45000
1.500	1.45000	1.45060	1.45120	1.45180	1.45240	1.45300	1.45361	1.45421	1.45481	1.45542	1.45602
1.510	1.45602	1.45662	1.45723	1.45783	1.45844	1.45904	1.45965	1.46026	1.46086	1.46147	1.46208
1.520	1.46208	1.46269	1.46330	1.46391	1.46452	1.46512	1.46574	1.46635	1.46696	1.46757	1.46818
1.530	1.46818	1.46879	1.46940	1.47002	1.47063	1.47124	1.47186	1.47247	1.47309	1.47370	1.47432
1.540	1.47432	1.47494	1.47555	1.47617	1.47679	1.47740	1.47802	1.47864	1.47926	1.47988	1.48050
1.550	1.48050	1.48112	1.48174	1.48236	1.48298	1.48360	1.48423	1.48485	1.48547	1.48610	1.48672
1.560	1.48672	1.48734	1.48797	1.48859	1.48922	1.48984	1.49047	1.49110	1.49172	1.49235	1.49298
1.570	1.49298	1.49361	1.49424	1.49487	1.49549	1.49612	1.49675	1.49739	1.49802	1.49865	1.49928
1.580	1.49928	1.49991	1.50054	1.50118	1.50181	1.50244	1.50308	1.50371	1.50435	1.50498	1.50562
1.590	1.50562	1.50626	1.50689	1.50753	1.50817	1.50880	1.50944	1.51008	1.51072	1.51136	1.51200

## TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.600	1.51200	1.51264	1.51328	1.51392	1.51456	1.51520	1.51585	1.51649	1.51713	1.51778	1.51842
1.610	1.51842	1.51906	1.51971	1.52035	1.52100	1.52164	1.52229	1.52294	1.52358	1.52423	1.52488
1.620	1.52488	1.52553	1.52618	1.52683	1.52748	1.52812	1.52878	1.52943	1.53008	1.53073	1.53138
1.630	1.53138	1.53203	1.53268	1.53334	1.53399	1.53464	1.53530	1.53595	1.53661	1.53726	1.53792
1.640	1.53792	1.53858	1.53923	1.53989	1.54055	1.54120	1.54186	1.54252	1.54318	1.54384	1.54450
1.650	1.54450	1.54516	1.54582	1.54648	1.54714	1.54780	1.54847	1.54913	1.54979	1.55046	1.55112
1.660	1.55112	1.55178	1.55245	1.55311	1.55378	1.55444	1.55511	1.55578	1.55644	1.55711	1.55778
1.670	1.55778	1.55845	1.55912	1.55979	1.56046	1.56112	1.56180	1.56247	1.56314	1.56381	1.56448
1.680	1.56448	1.56515	1.56582	1.56650	1.56717	1.56784	1.56852	1.56919	1.56987	1.57054	1.57122
1.690	1.57122	1.57190	1.57257	1.57325	1.57393	1.57460	1.57528	1.57596	1.57664	1.57732	1.57800
1.700	1.57800	1.57868	1.57936	1.58004	1.58072	1.58140	1.58209	1.58277	1.58345	1.58414	1.58482
1.710	1.58482	1.58550	1.58619	1.58687	1.58756	1.58824	1.58893	1.58962	1.59030	1.59099	1.59168
1.720	1.59168	1.59237	1.59306	1.59375	1.59444	1.59512	1.59582	1.59651	1.59720	1.59789	1.59858
1.730	1.59858	1.59927	1.59996	1.60066	1.60135	1.60204	1.60274	1.60343	1.60413	1.60482	1.60552
1.740	1.60552	1.60622	1.60691	1.60761	1.60831	1.60900	1.60970	1.61040	1.61110	1.61180	1.61250
1.750	1.61250	1.61320	1.61390	1.61460	1.61530	1.61600	1.61671	1.61741	1.61811	1.61882	1.61952
1.760	1.61952	1.62022	1.62093	1.62163	1.62234	1.62304	1.62375	1.62446	1.62516	1.62587	1.62658
1.770	1.62658	1.62729	1.62800	1.62871	1.62942	1.63012	1.63084	1.63155	1.63226	1.63297	1.63368
1.780	1.63368	1.63439	1.63510	1.63582	1.63653	1.63724	1.63796	1.63867	1.63939	1.64010	1.64082
1.790	1.64082	1.64154	1.64225	1.64297	1.64369	1.64440	1.64512	1.64584	1.64656	1.64728	1.64800
1.800	1.64800	1.64872	1.64944	1.65016	1.65088	1.65160	1.65233	1.65305	1.65377	1.65450	1.65522
1.810	1.65522	1.65594	1.65667	1.65739	1.65812	1.65884	1.65957	1.66030	1.66102	1.66175	1.66248
1.820	1.66248	1.66321	1.66394	1.66467	1.66539	1.66612	1.66685	1.66759	1.66832	1.66905	1.66978
1.830	1.66978	1.67051	1.67124	1.67198	1.67271	1.67344	1.67418	1.67491	1.67565	1.67638	1.67712
1.840	1.67712	1.67786	1.67859	1.67933	1.68007	1.68080	1.68154	1.68228	1.68302	1.68376	1.68450
1.850	1.68450	1.68524	1.68598	1.68672	1.68746	1.68820	1.68895	1.68969	1.69043	1.69118	1.69192
1.860	1.69192	1.69266	1.69341	1.69415	1.69490	1.69564	1.69639	1.69714	1.69788	1.69863	1.69938
1.870	1.69938	1.70013	1.70088	1.70163	1.70237	1.70312	1.70387	1.70463	1.70538	1.70613	1.70688
1.880	1.70688	1.70763	1.70838	1.70914	1.70989	1.71064	1.71140	1.71215	1.71291	1.71366	1.71442
1.890	1.71442	1.71513	1.71593	1.71669	1.71745	1.71820	1.71896	1.71972	1.72048	1.72124	1.72200



TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.900	1.72200	1.72276	1.72352	1.72428	1.72504	1.72580	1.72657	1.72733	1.72809	1.72886	1.72962
1.910	1.72962	1.73038	1.73115	1.73191	1.73268	1.73344	1.73421	1.73498	1.73574	1.73651	1.73728
1.920	1.73728	1.73805	1.73882	1.73959	1.74036	1.74112	1.74190	1.74267	1.74344	1.74421	1.74498
1.930	1.74498	1.74575	1.74652	1.74730	1.74807	1.74884	1.74962	1.75039	1.75117	1.75194	1.75272
1.940	1.75272	1.75350	1.75427	1.75505	1.75583	1.75660	1.75738	1.75816	1.75894	1.75972	1.76050
1.950	1.76050	1.76128	1.76206	1.76284	1.76362	1.76440	1.76517	1.76597	1.76675	1.76754	1.76832
1.960	1.76832	1.76910	1.76989	1.77067	1.77146	1.77224	1.77303	1.77382	1.77460	1.77539	1.77618
1.970	1.77618	1.77697	1.77776	1.77855	1.77934	1.78012	1.78092	1.78171	1.78250	1.78329	1.78408
1.980	1.78408	1.78487	1.78566	1.78646	1.78725	1.78804	1.78884	1.78963	1.79043	1.79122	1.79202
1.990	1.79202	1.79282	1.79361	1.79441	1.79521	1.79600	1.79680	1.79760	1.79840	1.79920	1.80000
2.000	1.80000	1.80080	1.80160	1.80240	1.80320	1.80400	1.80481	1.80561	1.80641	1.80722	1.80802
2.010	1.80802	1.80882	1.80963	1.81043	1.81124	1.81204	1.81285	1.81366	1.81446	1.81527	1.81608
2.020	1.81608	1.81689	1.81770	1.81851	1.81932	1.82012	1.82094	1.82175	1.82256	1.82337	1.82418
2.030	1.82418	1.82499	1.82580	1.82661	1.82743	1.82824	1.82906	1.82987	1.83069	1.83150	1.83232
2.040	1.83232	1.83314	1.83395	1.83477	1.83559	1.83640	1.83722	1.83804	1.83886	1.83968	1.84050
2.050	1.84050	1.84132	1.84214	1.84296	1.84378	1.84460	1.84543	1.84625	1.84707	1.84790	1.84872
2.060	1.84872	1.84954	1.85037	1.85119	1.85202	1.85284	1.85367	1.85450	1.85532	1.85615	1.85698
2.070	1.85698	1.85781	1.85864	1.85947	1.86029	1.86112	1.86195	1.86279	1.86362	1.86445	1.86528
2.080	1.86528	1.86611	1.86694	1.86778	1.86861	1.86944	1.87028	1.87111	1.87195	1.87278	1.87362
2.090	1.87362	1.87445	1.87529	1.87613	1.87697	1.87780	1.87864	1.87948	1.88032	1.88116	1.88200
2.100	1.88200	1.88284	1.88368	1.88452	1.88536	1.88620	1.88705	1.88789	1.88873	1.88958	1.89042
2.110	1.89042	1.89126	1.89211	1.89295	1.89380	1.89464	1.89549	1.89634	1.89718	1.89803	1.89888
2.120	1.89888	1.89973	1.90058	1.90143	1.90227	1.90312	1.90397	1.90483	1.90568	1.90653	1.90738
2.130	1.90738	1.90823	1.90908	1.90994	1.91079	1.91164	1.91250	1.91335	1.91421	1.91506	1.91592
2.140	1.91592	1.91678	1.91763	1.91849	1.91935	1.92020	1.92106	1.92192	1.92278	1.92364	1.92450
2.150	1.92450	1.92536	1.92622	1.92708	1.92794	1.92880	1.92967	1.93053	1.93139	1.93226	1.93312
2.160	1.93312	1.93398	1.93485	1.93571	1.93658	1.93744	1.93831	1.93918	1.94004	1.94091	1.94178
2.170	1.94178	1.94265	1.94352	1.94439	1.94525	1.94612	1.94699	1.94787	1.94874	1.94961	1.95048
2.180	1.95048	1.95135	1.95222	1.95310	1.95397	1.95484	1.95572	1.95659	1.95747	1.95834	1.95922
2.190	1.95922	1.96010	1.96097	1.96185	1.96273	1.96360	1.96448	1.96536	1.96624	1.96712	1.96800

## TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.200	1.96800	1.96888	1.96976	1.97064	1.97152	1.97240	1.97329	1.97417	1.97505	1.97594	1.97682
2.210	1.97682	1.97770	1.97859	1.97947	1.98036	1.98124	1.98213	1.98302	1.98390	1.98479	1.98568
2.220	1.98568	1.98657	1.98746	1.98835	1.98924	1.99012	1.99102	1.99191	1.99280	1.99369	1.99458
2.230	1.99458	1.99547	1.99636	1.99726	1.99815	1.99904	1.99994	2.00083	2.00173	2.00262	2.00352
2.240	2.00352	2.00442	2.00531	2.00621	2.00711	2.00800	2.00890	2.00980	2.01070	2.01160	2.01250
2.250	2.01250	2.01340	2.01430	2.01520	2.01610	2.01700	2.01791	2.01881	2.01971	2.02062	2.02152
2.260	2.02152	2.02242	2.02333	2.02423	2.02514	2.02604	2.02695	2.02786	2.02876	2.02967	2.03058
2.270	2.03058	2.03149	2.03240	2.03331	2.03422	2.03512	2.03604	2.03695	2.03786	2.03877	2.03968
2.280	2.03968	2.04059	2.04150	2.04242	2.04333	2.04424	2.04516	2.04607	2.04699	2.04790	2.04882
2.290	2.04882	2.04974	2.05065	2.05157	2.05249	2.05340	2.05432	2.05524	2.05616	2.05708	2.05800
2.300	2.05800	2.05892	2.05984	2.06076	2.06168	2.06260	2.06353	2.06445	2.06537	2.06630	2.06722
2.310	2.06722	2.06814	2.06907	2.06999	2.07092	2.07184	2.07277	2.07370	2.07462	2.07555	2.07648
2.320	2.07648	2.07741	2.07834	2.07927	2.08020	2.08112	2.08206	2.08299	2.08392	2.08485	2.08578
2.330	2.08578	2.08671	2.08764	2.08858	2.08951	2.09044	2.09138	2.09231	2.09325	2.09418	2.09512
2.340	2.09512	2.09606	2.09699	2.09793	2.09887	2.09980	2.10074	2.10168	2.10262	2.10356	2.10450
2.350	2.10450	2.10544	2.10638	2.10732	2.10826	2.10920	2.11015	2.11109	2.11203	2.11298	2.11392
2.360	2.11392	2.11486	2.11581	2.11675	2.11770	2.11864	2.11959	2.12054	2.12148	2.12243	2.12338
2.370	2.12338	2.12433	2.12528	2.12623	2.12717	2.12812	2.12907	2.13003	2.13098	2.13193	2.13288
2.380	2.13288	2.13383	2.13478	2.13574	2.13669	2.13764	2.13860	2.13955	2.14051	2.14146	2.14242
2.390	2.14242	2.14338	2.14433	2.14529	2.14625	2.14720	2.14816	2.14912	2.15008	2.15104	2.15200
2.400	2.15200	2.15296	2.15392	2.15488	2.15584	2.15680	2.15777	2.15873	2.15969	2.16066	2.16162
2.410	2.16162	2.16258	2.16355	2.16451	2.16548	2.16644	2.16741	2.16838	2.16934	2.17031	2.17128
2.420	2.17128	2.17225	2.17322	2.17419	2.17515	2.17612	2.17709	2.17807	2.17904	2.18001	2.18098
2.430	2.18098	2.18195	2.18292	2.18390	2.18487	2.18584	2.18682	2.18779	2.18877	2.18974	2.19072
2.440	2.19072	2.19170	2.19267	2.19365	2.19463	2.19560	2.19658	2.19756	2.19854	2.19952	2.20050
2.450	2.20050	2.20148	2.20246	2.20344	2.20442	2.20540	2.20639	2.20737	2.20835	2.20934	2.21032
2.460	2.21032	2.21130	2.21229	2.21327	2.21426	2.21524	2.21623	2.21722	2.21820	2.21919	2.22018
2.470	2.22018	2.22117	2.22216	2.22315	2.22413	2.22512	2.22611	2.22711	2.22810	2.22909	2.23008
2.480	2.23008	2.23107	2.23206	2.23306	2.23405	2.23504	2.23604	2.23703	2.23803	2.23902	2.24002
2.490	2.24002	2.24102	2.24201	2.24301	2.24401	2.24500	2.24600	2.24700	2.24800	2.24900	2.25000

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.500	2.25000	2.25100	2.25200	2.25300	2.25400	2.25500	2.25601	2.25701	2.25801	2.25902	2.26002
2.510	2.26002	2.26102	2.26203	2.26303	2.26404	2.26504	2.26605	2.26706	2.26806	2.26907	2.27008
2.520	2.27008	2.27109	2.27210	2.27311	2.27412	2.27512	2.27614	2.27715	2.27816	2.27917	2.28018
2.530	2.28018	2.28119	2.28220	2.28322	2.28423	2.28524	2.28626	2.28727	2.28829	2.28930	2.29032
2.540	2.29032	2.29134	2.29235	2.29337	2.29439	2.29540	2.29642	2.29744	2.29846	2.29948	2.30050
2.550	2.30050	2.30152	2.30254	2.30356	2.30458	2.30560	2.30663	2.30765	2.30867	2.30970	2.31072
2.560	2.31072	2.31174	2.31277	2.31379	2.31482	2.31584	2.31687	2.31790	2.31892	2.31995	2.32098
2.570	2.32098	2.32201	2.32304	2.32407	2.32510	2.32612	2.32716	2.32819	2.32922	2.33025	2.33128
2.580	2.33128	2.33231	2.33334	2.33438	2.33541	2.33644	2.33748	2.33851	2.33955	2.34058	2.34162
2.590	2.34162	2.34266	2.34369	2.34473	2.34577	2.34680	2.34784	2.34888	2.34992	2.35096	2.35200
2.600	2.35200	2.35304	2.35408	2.35512	2.35616	2.35720	2.35825	2.35929	2.36033	2.36138	2.36242
2.610	2.36242	2.36346	2.36451	2.36555	2.36660	2.36764	2.36869	2.36974	2.37078	2.37183	2.37288
2.620	2.37288	2.37393	2.37498	2.37603	2.37707	2.37812	2.37917	2.38023	2.38128	2.38233	2.38338
2.630	2.38338	2.38443	2.38548	2.38654	2.38759	2.38864	2.38970	2.39075	2.39181	2.39286	2.39392
2.640	2.39392	2.39498	2.39603	2.39709	2.39815	2.39920	2.40026	2.40132	2.40238	2.40344	2.40450
2.650	2.40450	2.40556	2.40662	2.40768	2.40874	2.40980	2.41087	2.41193	2.41299	2.41406	2.41512
2.660	2.41512	2.41618	2.41725	2.41831	2.41938	2.42044	2.42151	2.42258	2.42364	2.42471	2.42578
2.670	2.42578	2.42685	2.42792	2.42899	2.43005	2.43112	2.43219	2.43327	2.43434	2.43541	2.43648
2.680	2.43648	2.43755	2.43862	2.43970	2.44077	2.44184	2.44292	2.44399	2.44507	2.44614	2.44722
2.690	2.44722	2.44830	2.44937	2.45045	2.45153	2.45260	2.45368	2.45476	2.45584	2.45692	2.45800
2.700	2.45800	2.45908	2.46016	2.46124	2.46232	2.46340	2.46449	2.46557	2.46665	2.46774	2.46882
2.710	2.46882	2.46990	2.47099	2.47207	2.47316	2.47424	2.47533	2.47642	2.47750	2.47859	2.47968
2.720	2.47968	2.48077	2.48186	2.48295	2.48403	2.48512	2.48621	2.48731	2.48840	2.48949	2.49058
2.730	2.49058	2.49167	2.49276	2.49386	2.49495	2.49604	2.49714	2.49823	2.49933	2.50042	2.50152
2.740	2.50152	2.50262	2.50371	2.50481	2.50591	2.50700	2.50810	2.50920	2.51030	2.51140	2.51250
2.750	2.51250	2.51360	2.51470	2.51580	2.51690	2.51800	2.51911	2.52021	2.52131	2.52242	2.52352
2.760	2.52352	2.52462	2.52573	2.52683	2.52794	2.52904	2.53015	2.53126	2.53236	2.53347	2.53458
2.770	2.53458	2.53569	2.53680	2.53791	2.53901	2.54012	2.54123	2.54235	2.54346	2.54457	2.54568
2.780	2.54568	2.54679	2.54790	2.54902	2.55013	2.55124	2.55235	2.55347	2.55459	2.55570	2.55682
2.790	2.55682	2.55794	2.55905	2.56017	2.56129	2.56240	2.56352	2.56464	2.56576	2.56688	2.56800

TOTAL TO STATIC TEMPERATURE RATIO

YACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.800	2.56900	2.56912	2.57024	2.57136	2.57248	2.57360	2.57473	2.57585	2.57697	2.57810	2.57922
2.810	2.57922	2.58034	2.58147	2.58259	2.58372	2.58484	2.58597	2.58710	2.58822	2.58935	2.59048
2.820	2.59048	2.59161	2.59274	2.59387	2.59500	2.59612	2.59726	2.59839	2.59952	2.60065	2.60178
2.830	2.60178	2.60291	2.60404	2.60518	2.60631	2.60744	2.60858	2.60971	2.61085	2.61198	2.61312
2.840	2.61312	2.61426	2.61539	2.61653	2.61767	2.61880	2.61994	2.62108	2.62222	2.62336	2.62450
2.850	2.62450	2.62564	2.62678	2.62792	2.62906	2.63020	2.63135	2.63249	2.63363	2.63478	2.63592
2.860	2.63592	2.63706	2.63821	2.63935	2.64050	2.64164	2.64279	2.64394	2.64508	2.64623	2.64738
2.870	2.64738	2.64853	2.64968	2.65083	2.65198	2.65312	2.65428	2.65543	2.65658	2.65773	2.65888
2.880	2.65888	2.66003	2.66118	2.66234	2.66349	2.66464	2.66580	2.66695	2.66811	2.66926	2.67042
2.890	2.67042	2.67158	2.67273	2.67389	2.67505	2.67620	2.67736	2.67852	2.67968	2.68084	2.68200
2.900	2.68200	2.68316	2.68432	2.68548	2.68664	2.68780	2.68897	2.69013	2.69129	2.69246	2.69362
2.910	2.69362	2.69478	2.69595	2.69711	2.69828	2.69944	2.70061	2.70178	2.70294	2.70411	2.70528
2.920	2.70528	2.70645	2.70762	2.70879	2.70995	2.71112	2.71229	2.71347	2.71464	2.71581	2.71698
2.930	2.71698	2.71815	2.71932	2.72050	2.72167	2.72284	2.72402	2.72519	2.72637	2.72754	2.72872
2.940	2.72872	2.72990	2.73107	2.73225	2.73343	2.73460	2.73578	2.73696	2.73814	2.73932	2.74050
2.950	2.74050	2.74168	2.74286	2.74404	2.74522	2.74640	2.74759	2.74877	2.74995	2.75114	2.75232
2.960	2.75232	2.75350	2.75469	2.75587	2.75705	2.75824	2.75943	2.76062	2.76180	2.76299	2.76418
2.970	2.76418	2.76537	2.76656	2.76775	2.76893	2.77012	2.77131	2.77251	2.77370	2.77489	2.77608
2.980	2.77608	2.77727	2.77846	2.77966	2.78085	2.78204	2.78324	2.78443	2.78563	2.78682	2.78802
2.990	2.78802	2.78922	2.79041	2.79161	2.79281	2.79400	2.79520	2.79640	2.79760	2.79880	2.80000
3.000	2.80000	2.80120	2.80240	2.80360	2.80480	2.80600	2.80721	2.80841	2.80961	2.81082	2.81202
3.010	2.81202	2.81322	2.81443	2.81563	2.81684	2.81804	2.81925	2.82046	2.82166	2.82287	2.82408
3.020	2.82408	2.82529	2.82650	2.82771	2.82891	2.83012	2.83133	2.83255	2.83376	2.83497	2.83618
3.030	2.83618	2.83739	2.83860	2.83982	2.84103	2.84224	2.84346	2.84467	2.84589	2.84710	2.84832
3.040	2.84832	2.84954	2.85075	2.85197	2.85319	2.85440	2.85562	2.85684	2.85806	2.85928	2.86050
3.050	2.86050	2.86172	2.86294	2.86416	2.86538	2.86660	2.86783	2.86905	2.87027	2.87150	2.87272
3.060	2.87272	2.87394	2.87517	2.87639	2.87762	2.87884	2.88007	2.88130	2.88252	2.88375	2.88498
3.070	2.88498	2.88621	2.88744	2.88867	2.88989	2.89112	2.89235	2.89359	2.89482	2.89605	2.89728
3.080	2.89728	2.89851	2.89974	2.90098	2.90221	2.90344	2.90468	2.90591	2.90715	2.90838	2.90962
3.090	2.90962	2.91086	2.91209	2.91333	2.91457	2.91580	2.91704	2.91828	2.91952	2.92076	2.92200

TI0/TO

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.000	2.8000	2.8012	2.8024	2.8036	2.8048	2.8060	2.8072	2.8084	2.8096	2.8108	2.8120
3.010	2.8120	2.8132	2.8144	2.8156	2.8168	2.8180	2.8193	2.8205	2.8217	2.8229	2.8241
3.020	2.8241	2.8253	2.8265	2.8277	2.8289	2.8301	2.8313	2.8325	2.8338	2.8350	2.8362
3.030	2.8362	2.8374	2.8386	2.8398	2.8410	2.8422	2.8435	2.8447	2.8459	2.8471	2.8483
3.040	2.8483	2.8495	2.8508	2.8520	2.8532	2.8544	2.8556	2.8568	2.8581	2.8593	2.8605
3.050	2.8605	2.8617	2.8629	2.8642	2.8654	2.8666	2.8678	2.8690	2.8703	2.8715	2.8727
3.060	2.8727	2.8739	2.8752	2.8764	2.8776	2.8788	2.8801	2.8813	2.8825	2.8838	2.8850
3.070	2.8850	2.8862	2.8874	2.8887	2.8899	2.8911	2.8924	2.8936	2.8948	2.8960	2.8973
3.080	2.8973	2.8985	2.8997	2.9010	2.9022	2.9034	2.9047	2.9059	2.9071	2.9084	2.9096
3.090	2.9096	2.9109	2.9121	2.9133	2.9146	2.9158	2.9170	2.9183	2.9195	2.9208	2.9220
3.100	2.9220	2.9232	2.9245	2.9257	2.9270	2.9282	2.9294	2.9307	2.9319	2.9332	2.9344
3.110	2.9344	2.9357	2.9369	2.9382	2.9394	2.9406	2.9419	2.9431	2.9444	2.9456	2.9469
3.120	2.9469	2.9481	2.9494	2.9506	2.9519	2.9531	2.9544	2.9556	2.9569	2.9581	2.9594
3.130	2.9594	2.9606	2.9619	2.9631	2.9644	2.9656	2.9669	2.9682	2.9694	2.9707	2.9719
3.140	2.9719	2.9732	2.9744	2.9757	2.9769	2.9782	2.9795	2.9807	2.9820	2.9832	2.9845
3.150	2.9845	2.9858	2.9870	2.9883	2.9895	2.9908	2.9921	2.9933	2.9946	2.9959	2.9971
3.160	2.9971	2.9984	2.9996	3.0009	3.0022	3.0034	3.0047	3.0060	3.0072	3.0085	3.0098
3.170	3.0098	3.0110	3.0123	3.0136	3.0149	3.0161	3.0174	3.0187	3.0199	3.0212	3.0225
3.180	3.0225	3.0237	3.0250	3.0263	3.0276	3.0288	3.0301	3.0314	3.0327	3.0339	3.0352
3.190	3.0352	3.0365	3.0378	3.0390	3.0403	3.0416	3.0429	3.0442	3.0454	3.0467	3.0480
3.200	3.0480	3.0493	3.0506	3.0518	3.0531	3.0544	3.0557	3.0570	3.0582	3.0595	3.0608
3.210	3.0608	3.0621	3.0634	3.0647	3.0660	3.0672	3.0685	3.0698	3.0711	3.0724	3.0737
3.220	3.0737	3.0750	3.0763	3.0775	3.0788	3.0801	3.0814	3.0827	3.0840	3.0853	3.0866
3.230	3.0866	3.0879	3.0892	3.0905	3.0917	3.0930	3.0943	3.0956	3.0969	3.0982	3.0995
3.240	3.0995	3.1008	3.1021	3.1034	3.1047	3.1060	3.1073	3.1086	3.1099	3.1112	3.1125

T10/T0

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.250	3.1125	3.1138	3.1151	3.1164	3.1177	3.1190	3.1203	3.1216	3.1229	3.1242	3.1255
3.260	3.1255	3.1268	3.1281	3.1294	3.1307	3.1320	3.1333	3.1347	3.1360	3.1373	3.1386
3.270	3.1386	3.1399	3.1412	3.1425	3.1438	3.1451	3.1464	3.1477	3.1491	3.1504	3.1517
3.280	3.1517	3.1530	3.1543	3.1556	3.1569	3.1582	3.1596	3.1609	3.1622	3.1635	3.1648
3.290	3.1648	3.1661	3.1674	3.1688	3.1701	3.1714	3.1727	3.1740	3.1754	3.1767	3.1780
3.300	3.1780	3.1793	3.1806	3.1820	3.1833	3.1846	3.1859	3.1872	3.1885	3.1899	3.1912
3.310	3.1912	3.1925	3.1939	3.1952	3.1965	3.1978	3.1992	3.2005	3.2018	3.2031	3.2045
3.320	3.2045	3.2058	3.2071	3.2085	3.2098	3.2111	3.2124	3.2138	3.2151	3.2164	3.2178
3.330	3.2178	3.2191	3.2204	3.2218	3.2231	3.2244	3.2258	3.2271	3.2284	3.2298	3.2311
3.340	3.2311	3.2325	3.2338	3.2351	3.2365	3.2378	3.2391	3.2405	3.2418	3.2432	3.2445
3.350	3.2445	3.2458	3.2472	3.2485	3.2499	3.2512	3.2525	3.2539	3.2552	3.2566	3.2579
3.360	3.2579	3.2593	3.2606	3.2619	3.2633	3.2646	3.2660	3.2673	3.2687	3.2700	3.2714
3.370	3.2714	3.2727	3.2741	3.2754	3.2768	3.2781	3.2795	3.2808	3.2822	3.2835	3.2849
3.380	3.2849	3.2862	3.2876	3.2889	3.2903	3.2916	3.2930	3.2943	3.2957	3.2971	3.2984
3.390	3.2984	3.2998	3.3011	3.3025	3.3038	3.3052	3.3066	3.3079	3.3093	3.3106	3.3120
3.400	3.3120	3.3134	3.3147	3.3161	3.3174	3.3188	3.3202	3.3215	3.3229	3.3242	3.3256
3.410	3.3256	3.3270	3.3283	3.3297	3.3311	3.3324	3.3336	3.3352	3.3365	3.3379	3.3393
3.420	3.3393	3.3406	3.3420	3.3434	3.3447	3.3461	3.3475	3.3489	3.3502	3.3516	3.3530
3.430	3.3530	3.3543	3.3557	3.3571	3.3585	3.3598	3.3612	3.3626	3.3640	3.3653	3.3667
3.440	3.3667	3.3681	3.3695	3.3708	3.3722	3.3736	3.3750	3.3764	3.3777	3.3791	3.3805
3.450	3.3805	3.3819	3.3833	3.3846	3.3860	3.3874	3.3888	3.3902	3.3915	3.3929	3.3943
3.460	3.3943	3.3957	3.3971	3.3985	3.3999	3.4012	3.4026	3.4040	3.4054	3.4068	3.4082
3.470	3.4082	3.4096	3.4109	3.4123	3.4137	3.4151	3.4165	3.4179	3.4193	3.4207	3.4221
3.480	3.4221	3.4235	3.4249	3.4262	3.4276	3.4290	3.4304	3.4318	3.4332	3.4346	3.4360
3.490	3.4360	3.4374	3.4388	3.4402	3.4416	3.4430	3.4444	3.4458	3.4472	3.4486	3.4500

TT/TO

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.500	3.4500	3.4514	3.4528	3.4542	3.4556	3.4570	3.4584	3.4598	3.4612	3.4626	3.4640
3.510	3.4640	3.4654	3.4668	3.4682	3.4696	3.4710	3.4724	3.4738	3.4753	3.4767	3.4781
3.520	3.4781	3.4795	3.4809	3.4823	3.4837	3.4851	3.4865	3.4879	3.4893	3.4908	3.4922
3.530	3.4922	3.4936	3.4950	3.4964	3.4978	3.4992	3.5006	3.5021	3.5035	3.5049	3.5063
3.540	3.5063	3.5077	3.5091	3.5106	3.5120	3.5134	3.5148	3.5162	3.5177	3.5191	3.5205
3.550	3.5205	3.5219	3.5233	3.5248	3.5262	3.5276	3.5290	3.5304	3.5319	3.5333	3.5347
3.560	3.5347	3.5361	3.5376	3.5390	3.5404	3.5418	3.5433	3.5447	3.5461	3.5475	3.5490
3.570	3.5490	3.5504	3.5518	3.5533	3.5547	3.5561	3.5575	3.5590	3.5604	3.5618	3.5633
3.580	3.5633	3.5647	3.5661	3.5676	3.5690	3.5704	3.5719	3.5733	3.5747	3.5762	3.5776
3.590	3.5776	3.5790	3.5805	3.5819	3.5834	3.5848	3.5862	3.5877	3.5891	3.5905	3.5920
3.600	3.5920	3.5934	3.5949	3.5963	3.5978	3.5992	3.6006	3.6021	3.6035	3.6050	3.6064
3.610	3.6064	3.6079	3.6093	3.6107	3.6122	3.6136	3.6151	3.6165	3.6180	3.6194	3.6209
3.620	3.6209	3.6223	3.6238	3.6252	3.6267	3.6281	3.6296	3.6310	3.6325	3.6339	3.6354
3.630	3.6354	3.6368	3.6383	3.6397	3.6412	3.6426	3.6441	3.6455	3.6470	3.6485	3.6499
3.640	3.6499	3.6514	3.6528	3.6543	3.6557	3.6572	3.6587	3.6601	3.6616	3.6630	3.6645
3.650	3.6645	3.6659	3.6674	3.6689	3.6703	3.6718	3.6733	3.6747	3.6762	3.6776	3.6791
3.660	3.6791	3.6806	3.6820	3.6835	3.6850	3.6864	3.6879	3.6894	3.6908	3.6923	3.6938
3.670	3.6938	3.6952	3.6967	3.6982	3.6996	3.7011	3.7026	3.7041	3.7055	3.7070	3.7085
3.680	3.7085	3.7099	3.7114	3.7129	3.7144	3.7158	3.7173	3.7188	3.7203	3.7217	3.7232
3.690	3.7232	3.7247	3.7262	3.7276	3.7291	3.7306	3.7321	3.7335	3.7350	3.7365	3.7380
3.700	3.7380	3.7395	3.7409	3.7424	3.7439	3.7454	3.7469	3.7484	3.7498	3.7513	3.7528
3.710	3.7528	3.7543	3.7557	3.7573	3.7587	3.7602	3.7617	3.7632	3.7647	3.7662	3.7677
3.720	3.7677	3.7692	3.7706	3.7721	3.7736	3.7751	3.7766	3.7781	3.7796	3.7811	3.7826
3.730	3.7826	3.7841	3.7856	3.7870	3.7885	3.7900	3.7915	3.7930	3.7945	3.7960	3.7975
3.740	3.7975	3.7990	3.8005	3.8020	3.8035	3.8050	3.8065	3.8080	3.8095	3.8110	3.8125

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TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.750	3.8125	3.8140	3.8155	3.8170	3.8185	3.8200	3.8215	3.8230	3.8245	3.8260	3.8275
3.760	3.8275	3.8290	3.8305	3.8320	3.8335	3.8350	3.8365	3.8380	3.8395	3.8411	3.8426
3.770	3.8426	3.8441	3.8456	3.8471	3.8486	3.8501	3.8516	3.8531	3.8546	3.8562	3.8577
3.780	3.8577	3.8592	3.8607	3.8622	3.8637	3.8652	3.8667	3.8683	3.8698	3.8713	3.8728
3.790	3.8728	3.8743	3.8758	3.8774	3.8789	3.8804	3.8819	3.8834	3.8849	3.8865	3.8880
3.800	3.8880	3.8895	3.8910	3.8925	3.8941	3.8956	3.8971	3.8986	3.9002	3.9017	3.9032
3.810	3.9032	3.9047	3.9063	3.9078	3.9093	3.9108	3.9124	3.9139	3.9154	3.9169	3.9185
3.820	3.9185	3.9200	3.9215	3.9230	3.9246	3.9261	3.9276	3.9292	3.9307	3.9322	3.9338
3.830	3.9338	3.9353	3.9368	3.9384	3.9399	3.9414	3.9430	3.9445	3.9460	3.9476	3.9491
3.840	3.9491	3.9506	3.9522	3.9537	3.9553	3.9568	3.9583	3.9599	3.9614	3.9629	3.9645
3.850	3.9645	3.9660	3.9676	3.9691	3.9706	3.9722	3.9737	3.9753	3.9768	3.9784	3.9799
3.860	3.9799	3.9814	3.9830	3.9845	3.9861	3.9876	3.9892	3.9907	3.9923	3.9938	3.9954
3.870	3.9954	3.9969	3.9985	4.0000	4.0016	4.0031	4.0047	4.0062	4.0078	4.0093	4.0109
3.880	4.0109	4.0124	4.0140	4.0155	4.0171	4.0186	4.0202	4.0217	4.0233	4.0248	4.0264
3.890	4.0264	4.0280	4.0295	4.0311	4.0326	4.0342	4.0357	4.0373	4.0389	4.0404	4.0420
3.900	4.0420	4.0435	4.0451	4.0467	4.0482	4.0498	4.0513	4.0529	4.0545	4.0560	4.0576
3.910	4.0576	4.0592	4.0607	4.0623	4.0639	4.0654	4.0670	4.0686	4.0701	4.0717	4.0733
3.920	4.0733	4.0748	4.0764	4.0780	4.0795	4.0811	4.0827	4.0842	4.0858	4.0874	4.0890
3.930	4.0890	4.0905	4.0921	4.0937	4.0953	4.0968	4.0984	4.1000	4.1015	4.1031	4.1047
3.940	4.1047	4.1063	4.1079	4.1094	4.1110	4.1126	4.1142	4.1157	4.1173	4.1189	4.1205
3.950	4.1205	4.1221	4.1236	4.1252	4.1268	4.1284	4.1300	4.1316	4.1331	4.1347	4.1363
3.960	4.1363	4.1379	4.1395	4.1411	4.1426	4.1442	4.1458	4.1474	4.1490	4.1506	4.1522
3.970	4.1522	4.1537	4.1553	4.1569	4.1585	4.1601	4.1617	4.1633	4.1649	4.1665	4.1681
3.980	4.1681	4.1697	4.1712	4.1728	4.1744	4.1760	4.1776	4.1792	4.1808	4.1824	4.1840
3.990	4.1840	4.1856	4.1872	4.1888	4.1904	4.1920	4.1936	4.1952	4.1968	4.1984	4.2000



T10/T0

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.000	4.2000	4.2016	4.2032	4.2048	4.2064	4.2080	4.2096	4.2112	4.2128	4.2144	4.2160
4.010	4.2160	4.2176	4.2192	4.2208	4.2224	4.2240	4.2256	4.2272	4.2288	4.2305	4.2321
4.020	4.2321	4.2337	4.2353	4.2369	4.2385	4.2401	4.2417	4.2433	4.2449	4.2465	4.2482
4.030	4.2482	4.2498	4.2514	4.2530	4.2546	4.2562	4.2578	4.2595	4.2611	4.2627	4.2643
4.040	4.2643	4.2659	4.2675	4.2691	4.2708	4.2724	4.2740	4.2756	4.2772	4.2789	4.2805
4.050	4.2805	4.2821	4.2837	4.2853	4.2870	4.2886	4.2902	4.2918	4.2935	4.2951	4.2967
4.060	4.2967	4.2983	4.2999	4.3016	4.3032	4.3048	4.3064	4.3081	4.3097	4.3113	4.3130
4.070	4.3130	4.3146	4.3162	4.3178	4.3195	4.3211	4.3227	4.3244	4.3260	4.3276	4.3293
4.080	4.3293	4.3309	4.3325	4.3342	4.3358	4.3374	4.3391	4.3407	4.3423	4.3440	4.3456
4.090	4.3456	4.3472	4.3489	4.3505	4.3521	4.3538	4.3554	4.3571	4.3587	4.3603	4.3620
4.100	4.3620	4.3636	4.3653	4.3669	4.3685	4.3702	4.3718	4.3735	4.3751	4.3768	4.3784
4.110	4.3784	4.3800	4.3817	4.3833	4.3850	4.3866	4.3883	4.3899	4.3916	4.3932	4.3949
4.120	4.3949	4.3965	4.3982	4.3998	4.4015	4.4031	4.4048	4.4064	4.4081	4.4097	4.4114
4.130	4.4114	4.4130	4.4147	4.4163	4.4180	4.4196	4.4213	4.4229	4.4246	4.4262	4.4279
4.140	4.4279	4.4296	4.4312	4.4329	4.4345	4.4362	4.4378	4.4395	4.4412	4.4428	4.4445
4.150	4.4445	4.4461	4.4478	4.4495	4.4511	4.4528	4.4544	4.4561	4.4578	4.4594	4.4611
4.160	4.4611	4.4628	4.4644	4.4661	4.4678	4.4694	4.4711	4.4728	4.4744	4.4761	4.4778
4.170	4.4778	4.4794	4.4811	4.4828	4.4844	4.4861	4.4878	4.4894	4.4911	4.4928	4.4945
4.180	4.4945	4.4961	4.4978	4.4995	4.5011	4.5028	4.5045	4.5062	4.5078	4.5095	4.5112
4.190	4.5112	4.5129	4.5145	4.5162	4.5179	4.5196	4.5213	4.5229	4.5246	4.5263	4.5280
4.200	4.5280	4.5297	4.5313	4.5330	4.5347	4.5364	4.5381	4.5397	4.5414	4.5431	4.5448
4.210	4.5448	4.5465	4.5482	4.5498	4.5515	4.5532	4.5549	4.5566	4.5583	4.5600	4.5617
4.220	4.5617	4.5633	4.5650	4.5667	4.5684	4.5701	4.5718	4.5735	4.5752	4.5769	4.5786
4.230	4.5786	4.5802	4.5819	4.5836	4.5853	4.5870	4.5887	4.5904	4.5921	4.5938	4.5955
4.240	4.5955	4.5972	4.5989	4.6006	4.6023	4.6040	4.6057	4.6074	4.6091	4.6108	4.6125

T10/I0

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.250	4.6125	4.6142	4.6159	4.6176	4.6193	4.6210	4.6227	4.6244	4.6261	4.6278	4.6295
4.260	4.6295	4.6312	4.6329	4.6346	4.6363	4.6380	4.6397	4.6414	4.6431	4.6448	4.6466
4.270	4.6466	4.6483	4.6500	4.6517	4.6534	4.6551	4.6568	4.6585	4.6602	4.6619	4.6637
4.280	4.6637	4.6654	4.6671	4.6688	4.6705	4.6722	4.6739	4.6756	4.6774	4.6791	4.6808
4.290	4.6808	4.6825	4.6842	4.6859	4.6877	4.6894	4.6911	4.6928	4.6945	4.6963	4.6980
4.300	4.6980	4.6997	4.7014	4.7031	4.7049	4.7066	4.7083	4.7100	4.7117	4.7135	4.7152
4.310	4.7152	4.7169	4.7186	4.7204	4.7221	4.7238	4.7255	4.7273	4.7290	4.7307	4.7325
4.320	4.7325	4.7342	4.7359	4.7376	4.7394	4.7411	4.7428	4.7446	4.7463	4.7480	4.7498
4.330	4.7498	4.7515	4.7532	4.7549	4.7567	4.7584	4.7601	4.7619	4.7636	4.7654	4.7671
4.340	4.7671	4.7688	4.7706	4.7723	4.7740	4.7758	4.7775	4.7793	4.7810	4.7827	4.7845
4.350	4.7845	4.7862	4.7880	4.7897	4.7914	4.7932	4.7949	4.7967	4.7984	4.8001	4.8019
4.360	4.8019	4.8036	4.8054	4.8071	4.8089	4.8106	4.8124	4.8141	4.8159	4.8176	4.8193
4.370	4.8193	4.8211	4.8228	4.8246	4.8263	4.8281	4.8298	4.8316	4.8333	4.8351	4.8368
4.380	4.8368	4.8386	4.8404	4.8421	4.8439	4.8456	4.8474	4.8491	4.8509	4.8526	4.8544
4.390	4.8544	4.8561	4.8579	4.8597	4.8614	4.8632	4.8649	4.8667	4.8684	4.8702	4.8720
4.400	4.8720	4.8737	4.8755	4.8772	4.8790	4.8808	4.8825	4.8843	4.8861	4.8878	4.8896
4.410	4.8896	4.8914	4.8931	4.8949	4.8966	4.8984	4.9002	4.9019	4.9037	4.9055	4.9072
4.420	4.9072	4.9090	4.9108	4.9126	4.9143	4.9161	4.9179	4.9196	4.9214	4.9232	4.9249
4.430	4.9249	4.9267	4.9285	4.9303	4.9320	4.9338	4.9356	4.9374	4.9391	4.9409	4.9427
4.440	4.9427	4.9445	4.9462	4.9480	4.9498	4.9516	4.9534	4.9551	4.9569	4.9587	4.9605
4.450	4.9605	4.9622	4.9640	4.9658	4.9676	4.9694	4.9712	4.9729	4.9747	4.9765	4.9783
4.460	4.9783	4.9801	4.9819	4.9836	4.9854	4.9872	4.9890	4.9908	4.9926	4.9944	4.9961
4.470	4.9961	4.9979	4.9997	5.0015	5.0033	5.0051	5.0069	5.0087	5.0105	5.0123	5.0140
4.480	5.0140	5.0158	5.0176	5.0194	5.0212	5.0230	5.0248	5.0266	5.0284	5.0302	5.0320
4.490	5.0320	5.0338	5.0356	5.0374	5.0392	5.0410	5.0428	5.0446	5.0464	5.0482	5.0500

TIQ/TO

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.500	5.0500	5.0518	5.0536	5.0554	5.0572	5.0590	5.0608	5.0626	5.0644	5.0662	5.0680
4.510	5.0680	5.0698	5.0716	5.0734	5.0752	5.0770	5.0788	5.0806	5.0824	5.0842	5.0860
4.520	5.0860	5.0879	5.0897	5.0915	5.0933	5.0951	5.0969	5.0987	5.1005	5.1023	5.1041
4.530	5.1041	5.1060	5.1078	5.1096	5.1114	5.1132	5.1150	5.1168	5.1187	5.1205	5.1223
4.540	5.1223	5.1241	5.1259	5.1277	5.1296	5.1314	5.1332	5.1350	5.1368	5.1386	5.1405
4.550	5.1405	5.1423	5.1441	5.1459	5.1477	5.1496	5.1514	5.1532	5.1550	5.1569	5.1587
4.560	5.1587	5.1605	5.1623	5.1642	5.1660	5.1678	5.1696	5.1715	5.1733	5.1751	5.1769
4.570	5.1769	5.1788	5.1806	5.1824	5.1843	5.1861	5.1879	5.1897	5.1916	5.1934	5.1952
4.580	5.1952	5.1971	5.1989	5.2007	5.2026	5.2044	5.2062	5.2081	5.2099	5.2117	5.2136
4.590	5.2136	5.2154	5.2173	5.2191	5.2209	5.2228	5.2246	5.2264	5.2283	5.2301	5.2320
4.600	5.2320	5.2338	5.2356	5.2375	5.2393	5.2412	5.2430	5.2449	5.2467	5.2485	5.2504
4.610	5.2504	5.2522	5.2541	5.2559	5.2578	5.2596	5.2615	5.2633	5.2651	5.2670	5.2688
4.620	5.2688	5.2707	5.2725	5.2744	5.2762	5.2781	5.2799	5.2818	5.2836	5.2855	5.2873
4.630	5.2873	5.2892	5.2910	5.2929	5.2948	5.2966	5.2985	5.3003	5.3022	5.3040	5.3059
4.640	5.3059	5.3077	5.3096	5.3115	5.3133	5.3152	5.3170	5.3189	5.3207	5.3226	5.3245
4.650	5.3245	5.3263	5.3282	5.3300	5.3319	5.3338	5.3356	5.3375	5.3394	5.3412	5.3431
4.660	5.3431	5.3449	5.3468	5.3487	5.3505	5.3524	5.3543	5.3561	5.3580	5.3599	5.3617
4.670	5.3617	5.3636	5.3655	5.3673	5.3692	5.3711	5.3730	5.3748	5.3767	5.3786	5.3804
4.680	5.3804	5.3823	5.3842	5.3861	5.3879	5.3898	5.3917	5.3936	5.3954	5.3973	5.3992
4.690	5.3992	5.4011	5.4029	5.4048	5.4067	5.4086	5.4104	5.4123	5.4142	5.4161	5.4180
4.700	5.4180	5.4198	5.4217	5.4236	5.4255	5.4274	5.4292	5.4311	5.4330	5.4349	5.4368
4.710	5.4368	5.4387	5.4405	5.4424	5.4443	5.4462	5.4481	5.4500	5.4519	5.4538	5.4556
4.720	5.4556	5.4575	5.4594	5.4613	5.4632	5.4651	5.4670	5.4689	5.4708	5.4726	5.4745
4.730	5.4745	5.4764	5.4783	5.4802	5.4821	5.4840	5.4859	5.4878	5.4897	5.4916	5.4935
4.740	5.4935	5.4954	5.4973	5.4992	5.5011	5.5030	5.5049	5.5068	5.5087	5.5106	5.5125

T10/I0

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.750	5.5125	5.5144	5.5163	5.5182	5.5201	5.5220	5.5239	5.5258	5.5277	5.5296	5.5315
4.760	5.5315	5.5334	5.5353	5.5372	5.5391	5.5410	5.5429	5.5448	5.5467	5.5486	5.5505
4.770	5.5505	5.5524	5.5544	5.5563	5.5582	5.5601	5.5620	5.5639	5.5658	5.5677	5.5696
4.780	5.5696	5.5715	5.5735	5.5754	5.5773	5.5792	5.5811	5.5830	5.5849	5.5869	5.5888
4.790	5.5888	5.5907	5.5926	5.5945	5.5964	5.5984	5.6003	5.6022	5.6041	5.6060	5.6080
4.800	5.6080	5.6099	5.6118	5.6137	5.6156	5.6176	5.6195	5.6214	5.6233	5.6253	5.6272
4.810	5.6272	5.6291	5.6310	5.6329	5.6349	5.6368	5.6387	5.6407	5.6426	5.6445	5.6464
4.820	5.6464	5.6484	5.6503	5.6522	5.6541	5.6561	5.6580	5.6599	5.6619	5.6638	5.6657
4.830	5.6657	5.6677	5.6696	5.6715	5.6735	5.6754	5.6773	5.6793	5.6812	5.6831	5.6851
4.840	5.6851	5.6870	5.6889	5.6909	5.6928	5.6948	5.6967	5.6986	5.7006	5.7025	5.7045
4.850	5.7045	5.7064	5.7083	5.7103	5.7122	5.7142	5.7161	5.7180	5.7200	5.7219	5.7239
4.860	5.7239	5.7258	5.7278	5.7297	5.7317	5.7336	5.7355	5.7375	5.7394	5.7414	5.7433
4.870	5.7433	5.7453	5.7472	5.7492	5.7511	5.7531	5.7550	5.7570	5.7589	5.7609	5.7628
4.880	5.7628	5.7648	5.7667	5.7687	5.7706	5.7726	5.7746	5.7765	5.7785	5.7804	5.7824
4.890	5.7824	5.7843	5.7863	5.7882	5.7902	5.7922	5.7941	5.7961	5.7980	5.8000	5.8020
4.900	5.8020	5.8039	5.8059	5.8078	5.8098	5.8118	5.8137	5.8157	5.8176	5.8196	5.8216
4.910	5.8216	5.8235	5.8255	5.8275	5.8294	5.8314	5.8334	5.8353	5.8373	5.8393	5.8412
4.920	5.8412	5.8432	5.8452	5.8471	5.8491	5.8511	5.8530	5.8550	5.8570	5.8590	5.8609
4.930	5.8609	5.8629	5.8649	5.8668	5.8688	5.8708	5.8728	5.8747	5.8767	5.8787	5.8807
4.940	5.8807	5.8826	5.8846	5.8866	5.8886	5.8906	5.8925	5.8945	5.8965	5.8985	5.9005
4.950	5.9005	5.9024	5.9044	5.9064	5.9084	5.9104	5.9123	5.9143	5.9163	5.9183	5.9203
4.960	5.9203	5.9223	5.9242	5.9262	5.9282	5.9302	5.9322	5.9342	5.9362	5.9381	5.9401
4.970	5.9401	5.9421	5.9441	5.9461	5.9481	5.9501	5.9521	5.9541	5.9560	5.9580	5.9600
4.980	5.9600	5.9620	5.9640	5.9660	5.9680	5.9700	5.9720	5.9740	5.9760	5.9780	5.9800
4.990	5.9800	5.9820	5.9840	5.9860	5.9880	5.9900	5.9920	5.9940	5.9959	5.9979	5.9999

T10/T0

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
5.00	6.00	6.02	6.04	6.06	6.08	6.10	6.12	6.14	6.16	6.18	6.20
5.10	6.20	6.22	6.24	6.26	6.28	6.30	6.33	6.35	6.37	6.39	6.41
5.20	6.41	6.43	6.45	6.47	6.49	6.51	6.53	6.55	6.58	6.60	6.62
5.30	6.62	6.64	6.66	6.68	6.70	6.72	6.75	6.77	6.79	6.81	6.83
5.40	6.83	6.85	6.88	6.90	6.92	6.94	6.96	6.98	7.01	7.03	7.05
5.50	7.05	7.07	7.09	7.12	7.14	7.16	7.18	7.20	7.23	7.25	7.27
5.60	7.27	7.29	7.32	7.34	7.36	7.38	7.41	7.43	7.45	7.48	7.50
5.70	7.50	7.52	7.54	7.57	7.59	7.61	7.64	7.66	7.68	7.70	7.73
5.80	7.73	7.75	7.77	7.80	7.82	7.84	7.87	7.89	7.91	7.94	7.96
5.90	7.96	7.99	8.01	8.03	8.06	8.08	8.10	8.13	8.15	8.18	8.20
6.00	8.20	8.22	8.25	8.27	8.30	8.32	8.34	8.37	8.39	8.42	8.44
6.10	8.44	8.47	8.49	8.52	8.54	8.56	8.59	8.61	8.64	8.66	8.69
6.20	8.69	8.71	8.74	8.76	8.79	8.81	8.84	8.86	8.89	8.91	8.94
6.30	8.94	8.96	8.99	9.01	9.04	9.06	9.09	9.12	9.14	9.17	9.19
6.40	9.19	9.22	9.24	9.27	9.29	9.32	9.35	9.37	9.40	9.42	9.45
6.50	9.45	9.48	9.50	9.53	9.55	9.58	9.61	9.63	9.66	9.69	9.71
6.60	9.71	9.74	9.76	9.79	9.82	9.84	9.87	9.90	9.92	9.95	9.98
6.70	9.98	10.00	10.03	10.06	10.09	10.11	10.14	10.17	10.19	10.22	10.25
6.80	10.25	10.28	10.30	10.33	10.36	10.38	10.41	10.44	10.47	10.49	10.52
6.90	10.52	10.55	10.58	10.60	10.63	10.66	10.69	10.72	10.74	10.77	10.80
7.00	10.80	10.83	10.86	10.88	10.91	10.94	10.97	11.00	11.03	11.05	11.08
7.10	11.08	11.11	11.14	11.17	11.20	11.22	11.25	11.28	11.31	11.34	11.37
7.20	11.37	11.40	11.43	11.45	11.48	11.51	11.54	11.57	11.60	11.63	11.66
7.30	11.66	11.69	11.72	11.75	11.78	11.80	11.83	11.86	11.89	11.92	11.95
7.40	11.95	11.98	12.01	12.04	12.07	12.10	12.13	12.16	12.19	12.22	12.25

T10/10

TOTAL TO STATIC TEMPERATURE RATIO

MACH NO.	0.	0.01	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.1
7.50	12.25	12.28	12.31	12.34	12.37	12.40	12.43	12.46	12.49	12.52	12.55
7.60	12.55	12.58	12.61	12.64	12.67	12.70	12.74	12.77	12.80	12.83	12.86
7.70	12.86	12.89	12.92	12.95	12.98	13.01	13.04	13.07	13.11	13.14	13.17
7.80	13.17	13.20	13.23	13.26	13.29	13.32	13.36	13.39	13.42	13.45	13.46
7.90	13.48	13.51	13.55	13.58	13.61	13.64	13.67	13.70	13.74	13.77	13.80
8.00	13.80	13.83	13.86	13.90	13.93	13.96	13.99	14.02	14.06	14.09	14.12
8.10	14.12	14.15	14.19	14.22	14.25	14.28	14.32	14.35	14.38	14.42	14.45
8.20	14.45	14.48	14.51	14.55	14.58	14.61	14.65	14.68	14.71	14.74	14.78
8.30	14.78	14.81	14.84	14.88	14.91	14.94	14.98	15.01	15.04	15.08	15.11
8.40	15.11	15.15	15.18	15.21	15.25	15.28	15.31	15.35	15.38	15.42	15.45
8.50	15.45	15.48	15.52	15.55	15.59	15.62	15.65	15.69	15.72	15.76	15.79
8.60	15.79	15.83	15.86	15.90	15.93	15.96	16.00	16.03	16.07	16.10	16.14
8.70	16.14	16.17	16.21	16.24	16.28	16.31	16.35	16.38	16.42	16.45	16.49
8.80	16.49	16.52	16.56	16.59	16.63	16.66	16.70	16.74	16.77	16.81	16.84
8.90	16.84	16.88	16.91	16.95	16.98	17.02	17.06	17.09	17.13	17.16	17.20
9.00	17.20	17.24	17.27	17.31	17.34	17.38	17.42	17.45	17.49	17.53	17.56
9.10	17.56	17.60	17.63	17.67	17.71	17.74	17.78	17.82	17.85	17.89	17.93
9.20	17.93	17.96	18.00	18.04	18.08	18.11	18.15	18.19	18.22	18.26	18.30
9.30	18.30	18.34	18.37	18.41	18.45	18.48	18.52	18.56	18.60	18.63	18.67
9.40	18.67	18.71	18.75	18.78	18.82	18.86	18.90	18.94	18.97	19.01	19.05
9.50	19.05	19.09	19.13	19.16	19.20	19.24	19.28	19.32	19.36	19.39	19.43
9.60	19.43	19.47	19.51	19.55	19.59	19.62	19.66	19.70	19.74	19.78	19.82
9.70	19.82	19.86	19.90	19.93	19.97	20.01	20.05	20.09	20.13	20.17	20.21
9.80	20.21	20.25	20.29	20.33	20.37	20.40	20.44	20.48	20.52	20.56	20.60
9.90	20.60	20.64	20.68	20.72	20.76	20.80	20.84	20.88	20.92	20.96	21.00

## Appendix A (continued)

Tabulation of the Stream Tube Relationship,  $A/A^*$ 

The relationship is tabulated versus Mach number.  $A/A^*$  is the ratio of local stream tube area to the stream tube area that would be occupied if the local flow were accelerated or decelerated isentropically to a Mach number of 1.0. In using the ratio in a continuity calculation, a correction must be made for differences in total pressure between the two stations under consideration; i.e.

$$(A/A^*)_2 = A_2 \cdot A_1 / (A/A^*)_1 \quad P_{t1}/P_{t2}$$

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.	0.	578.70409289	35257192	90228144	67732115	74249	9645271	8267439	7234074	6430354	5787385
0.010	57.87384	52.61325	48.22948	44.52019	41.34084	38.58546	36.17454	34.04730	32.15646	30.46469	28.94213
0.020	28.94213	27.56461	26.31235	25.16902	24.12099	23.15683	22.26687	21.44285	20.67771	19.95537	19.30054
0.030	19.30054	18.67863	18.09561	17.54794	17.03251	16.54655	16.08761	15.65349	15.24225	14.85210	14.48149
0.040	14.48149	14.12897	13.79325	13.47316	13.16764	12.87572	12.59650	12.32917	12.07300	11.82730	11.59144
0.050	11.59144	11.36485	11.14698	10.93735	10.73550	10.54099	10.35345	10.17250	9.99780	9.82904	9.66591
0.060	9.66591	9.50814	9.35548	9.20767	9.06449	8.92572	8.79118	8.66065	8.53398	8.41099	8.29153
0.070	8.29153	8.17543	8.06258	7.95282	7.84604	7.74212	7.64094	7.54240	7.44640	7.35283	7.26161
0.080	7.26161	7.17265	7.08587	7.00119	6.91854	6.83784	6.75902	6.68202	6.60678	6.53324	6.46134
0.090	6.46134	6.39103	6.32226	6.25497	6.18912	6.12466	6.06156	5.99976	5.93923	5.87993	5.82183
0.100	5.82183	5.76486	5.70906	5.65432	5.60065	5.54800	5.49636	5.44568	5.39596	5.34715	5.29923
0.110	5.29923	5.25218	5.20598	5.16061	5.11604	5.07224	5.02921	4.98692	4.94536	4.90449	4.86432
0.120	4.86432	4.82481	4.78596	4.74775	4.71015	4.67317	4.63678	4.60096	4.56571	4.53102	4.49686
0.130	4.49686	4.46323	4.43011	4.39750	4.36538	4.33374	4.30257	4.27186	4.24160	4.21179	4.18240
0.140	4.18240	4.15343	4.12488	4.09674	4.06898	4.04162	4.01464	3.98802	3.96177	3.93588	3.91034
0.150	3.91034	3.88515	3.86028	3.83575	3.81154	3.78765	3.76407	3.74079	3.71782	3.69513	3.67274
0.160	3.67274	3.65063	3.62879	3.60723	3.58593	3.56490	3.54412	3.52360	3.50333	3.48330	3.46351
0.170	3.46351	3.44396	3.42463	3.40554	3.38667	3.36802	3.34958	3.33136	3.31334	3.29553	3.27793
0.180	3.27793	3.26052	3.24330	3.22628	3.20945	3.19281	3.17634	3.16006	3.14395	3.12802	3.11226
0.190	3.11226	3.09667	3.08124	3.06598	3.05088	3.03594	3.02115	3.00652	2.99204	2.97770	2.96352
0.200	2.96352	2.94948	2.93558	2.92183	2.90821	2.89473	2.88138	2.86816	2.85508	2.84212	2.82929
0.210	2.82929	2.81659	2.80401	2.79155	2.77921	2.76699	2.75489	2.74290	2.73102	2.71926	2.70760
0.220	2.70760	2.69696	2.68462	2.67329	2.66206	2.65094	2.63991	2.62899	2.61817	2.60744	2.59681
0.230	2.59681	2.58628	2.57584	2.56549	2.55524	2.54507	2.53499	2.52501	2.51511	2.50529	2.49556
0.240	2.49556	2.48532	2.47635	2.46687	2.45747	2.44815	2.43891	2.42974	2.42066	2.41165	2.40271
0.250	2.40271	2.39385	2.38506	2.37634	2.36770	2.35912	2.35062	2.34219	2.33382	2.32552	2.31729
0.260	2.31729	2.30912	2.30102	2.29298	2.28501	2.27710	2.26925	2.26147	2.25374	2.24608	2.23847
0.270	2.23847	2.23092	2.22344	2.21601	2.20863	2.20131	2.19405	2.18685	2.17970	2.17260	2.16555
0.280	2.16555	2.15856	2.15162	2.14474	2.13790	2.13111	2.12438	2.11769	2.11106	2.10447	2.09793
0.290	2.09793	2.09144	2.08499	2.07859	2.07224	2.06593	2.05967	2.05345	2.04728	2.04115	2.03507



STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.300	2.03507	2.02902	2.02302	2.01707	2.01115	2.00527	1.99944	1.99365	1.98789	1.98218	1.97651
0.310	1.97651	1.97087	1.96528	1.95972	1.95420	1.94871	1.94327	1.93786	1.93249	1.92715	1.92185
0.320	1.92185	1.91659	1.91136	1.90616	1.90100	1.89587	1.89078	1.88572	1.88070	1.87570	1.87074
0.330	1.87074	1.86582	1.86092	1.85606	1.85122	1.84642	1.84165	1.83691	1.83220	1.82753	1.82288
0.340	1.82288	1.81826	1.81367	1.80910	1.80457	1.80007	1.79559	1.79114	1.78673	1.78233	1.77797
0.350	1.77797	1.77363	1.76932	1.76504	1.76078	1.75655	1.75234	1.74816	1.74401	1.73988	1.73578
0.360	1.73578	1.73170	1.72765	1.72362	1.71961	1.71563	1.71168	1.70774	1.70383	1.69995	1.69609
0.370	1.69609	1.69225	1.68843	1.68464	1.68086	1.67711	1.67339	1.66968	1.66600	1.66234	1.65870
0.380	1.65870	1.65508	1.65148	1.64790	1.64434	1.64081	1.63729	1.63380	1.63032	1.62687	1.62343
0.390	1.62343	1.62002	1.61662	1.61325	1.60989	1.60655	1.60323	1.59993	1.59665	1.59338	1.59014
0.400	1.59014	1.58691	1.58370	1.58051	1.57734	1.57419	1.57105	1.56793	1.56483	1.56174	1.55867
0.410	1.55867	1.55562	1.55259	1.54957	1.54657	1.54358	1.54062	1.53766	1.53473	1.53181	1.52890
0.420	1.52890	1.52602	1.52314	1.52029	1.51745	1.51462	1.51181	1.50901	1.50623	1.50347	1.50072
0.430	1.50072	1.49798	1.49526	1.49255	1.48986	1.48718	1.48452	1.48187	1.47923	1.47661	1.47401
0.440	1.47401	1.47141	1.46883	1.46626	1.46371	1.46117	1.45865	1.45613	1.45363	1.45115	1.44867
0.450	1.44867	1.44621	1.44376	1.44133	1.43890	1.43649	1.43410	1.43171	1.42934	1.42698	1.42463
0.460	1.42463	1.42229	1.41997	1.41765	1.41535	1.41307	1.41079	1.40852	1.40627	1.40403	1.40179
0.470	1.40160	1.39958	1.39737	1.39517	1.39298	1.39081	1.38864	1.38649	1.38435	1.38222	1.38010
0.480	1.38010	1.37799	1.37589	1.37380	1.37172	1.36965	1.36760	1.36555	1.36351	1.36148	1.35947
0.490	1.35947	1.35746	1.35546	1.35348	1.35150	1.34953	1.34758	1.34563	1.34369	1.34176	1.33984
0.500	1.33984	1.33793	1.33603	1.33414	1.33226	1.33039	1.32853	1.32667	1.32483	1.32299	1.32117
0.510	1.32117	1.31945	1.31754	1.31574	1.31395	1.31217	1.31040	1.30863	1.30687	1.30513	1.30339
0.520	1.30339	1.30166	1.29993	1.29822	1.29652	1.29482	1.29313	1.29145	1.28978	1.28811	1.28645
0.530	1.28645	1.28461	1.28316	1.28153	1.27991	1.27829	1.27668	1.27508	1.27349	1.27190	1.27032
0.540	1.27032	1.26875	1.26719	1.26563	1.26408	1.26254	1.26101	1.25948	1.25796	1.25645	1.25495
0.550	1.25495	1.25345	1.25196	1.25048	1.24900	1.24753	1.24607	1.24462	1.24317	1.24173	1.24029
0.560	1.24029	1.23887	1.23745	1.23603	1.23463	1.23323	1.23183	1.23045	1.22907	1.22769	1.22633
0.570	1.22633	1.22497	1.22361	1.22226	1.22092	1.21959	1.21826	1.21694	1.21562	1.21431	1.21301
0.580	1.21301	1.21171	1.21042	1.20913	1.20786	1.20658	1.20532	1.20405	1.20280	1.20155	1.20031
0.590	1.20031	1.19907	1.19784	1.19661	1.19540	1.19418	1.19297	1.19177	1.19058	1.18938	1.18820

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.600	1.18820	1.18702	1.18585	1.18468	1.18352	1.18236	1.18121	1.18006	1.17892	1.17778	1.17665
0.610	1.17665	1.17553	1.17441	1.17330	1.17219	1.17108	1.16999	1.16889	1.16781	1.16672	1.16565
0.620	1.16565	1.16457	1.16351	1.16244	1.16139	1.16034	1.15929	1.15825	1.15721	1.15618	1.15515
0.630	1.15515	1.15413	1.15311	1.15210	1.15109	1.15009	1.14909	1.14810	1.14711	1.14613	1.14515
0.640	1.14515	1.14417	1.14320	1.14224	1.14128	1.14032	1.13937	1.13843	1.13749	1.13655	1.13562
0.650	1.13562	1.13469	1.13376	1.13285	1.13193	1.13102	1.13011	1.12921	1.12832	1.12742	1.12654
0.660	1.12654	1.12555	1.12477	1.12390	1.12303	1.12216	1.12130	1.12044	1.11958	1.11873	1.11789
0.670	1.11789	1.11705	1.11621	1.11537	1.11455	1.11372	1.11290	1.11208	1.11127	1.11046	1.10965
0.680	1.10965	1.10885	1.10806	1.10726	1.10647	1.10569	1.10491	1.10413	1.10336	1.10259	1.10182
0.690	1.10182	1.10106	1.10030	1.09955	1.09880	1.09805	1.09731	1.09657	1.09583	1.09510	1.09437
0.700	1.09437	1.09365	1.09293	1.09221	1.09150	1.09079	1.09008	1.08938	1.08868	1.08799	1.08729
0.710	1.08729	1.08651	1.08592	1.08524	1.08456	1.08389	1.08322	1.08255	1.08189	1.08123	1.08057
0.720	1.08057	1.07992	1.07927	1.07862	1.07798	1.07734	1.07670	1.07607	1.07544	1.07481	1.07419
0.730	1.07419	1.07357	1.07296	1.07234	1.07173	1.07113	1.07052	1.06992	1.06933	1.06873	1.06814
0.740	1.06814	1.06756	1.06697	1.06639	1.06582	1.06524	1.06467	1.06410	1.06354	1.06298	1.06242
0.750	1.06242	1.06186	1.06131	1.06076	1.06021	1.05967	1.05913	1.05859	1.05806	1.05753	1.05700
0.760	1.05700	1.05647	1.05595	1.05543	1.05492	1.05440	1.05389	1.05339	1.05288	1.05238	1.05188
0.770	1.05188	1.05139	1.05089	1.05040	1.04992	1.04943	1.04895	1.04847	1.04800	1.04752	1.04705
0.780	1.04705	1.04659	1.04612	1.04566	1.04520	1.04474	1.04429	1.04384	1.04339	1.04295	1.04251
0.790	1.04251	1.04207	1.04163	1.04119	1.04076	1.04033	1.03991	1.03948	1.03906	1.03865	1.03823
0.800	1.03823	1.03762	1.03741	1.03700	1.03659	1.03619	1.03579	1.03540	1.03500	1.03461	1.03422
0.810	1.03422	1.03383	1.03345	1.03307	1.03269	1.03231	1.03194	1.03156	1.03120	1.03083	1.03046
0.820	1.03046	1.03010	1.02974	1.02939	1.02903	1.02868	1.02833	1.02798	1.02764	1.02730	1.02696
0.830	1.02696	1.02662	1.02629	1.02595	1.02562	1.02530	1.02497	1.02465	1.02433	1.02401	1.02370
0.840	1.02370	1.02338	1.02307	1.02276	1.02246	1.02215	1.02185	1.02155	1.02126	1.02096	1.02067
0.850	1.02067	1.02038	1.02009	1.01981	1.01952	1.01924	1.01896	1.01869	1.01841	1.01814	1.01787
0.860	1.01787	1.01760	1.01734	1.01708	1.01681	1.01656	1.01630	1.01605	1.01579	1.01554	1.01530
0.870	1.01530	1.01505	1.01481	1.01457	1.01433	1.01409	1.01386	1.01363	1.01340	1.01317	1.01294
0.880	1.01294	1.01272	1.01250	1.01228	1.01206	1.01184	1.01163	1.01142	1.01121	1.01100	1.01080
0.890	1.01080	1.01060	1.01039	1.01020	1.01000	1.00980	1.00961	1.00942	1.00923	1.00905	1.00886

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.900	1.00886	1.00868	1.00850	1.00832	1.00815	1.00797	1.00780	1.00763	1.00746	1.00729	1.00713
0.910	1.00713	1.00677	1.00681	1.00665	1.00649	1.00634	1.00619	1.00604	1.00589	1.00574	1.00560
0.920	1.00560	1.00545	1.00531	1.00518	1.00504	1.00490	1.00477	1.00464	1.00451	1.00438	1.00426
0.930	1.00426	1.00413	1.00401	1.00389	1.00378	1.00366	1.00355	1.00343	1.00332	1.00321	1.00311
0.940	1.00311	1.00300	1.00290	1.00280	1.00270	1.00260	1.00251	1.00241	1.00232	1.00223	1.00215
0.950	1.00215	1.00206	1.00197	1.00189	1.00181	1.00173	1.00166	1.00158	1.00151	1.00143	1.00136
0.960	1.00136	1.00130	1.00123	1.00117	1.00110	1.00104	1.00098	1.00092	1.00087	1.00082	1.00076
0.970	1.00076	1.00071	1.00066	1.00062	1.00057	1.00053	1.00049	1.00045	1.00041	1.00037	1.00034
0.980	1.00034	1.00030	1.00027	1.00024	1.00022	1.00019	1.00016	1.00014	1.00012	1.00010	1.00008
0.990	1.00008	1.00007	1.00005	1.00004	1.00003	1.00002	1.00001	1.00001	1.00000	1.00000	1.00000

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.000	1.00000	1.00000	1.00000	1.00001	1.00001	1.00002	1.00003	1.00004	1.00005	1.00007	1.00008
1.010	1.00008	1.00010	1.00012	1.00014	1.00016	1.00019	1.00021	1.00024	1.00027	1.00030	1.00033
1.020	1.00033	1.00036	1.00040	1.00044	1.00047	1.00051	1.00056	1.00060	1.00064	1.00069	1.00074
1.030	1.00074	1.00079	1.00084	1.00089	1.00095	1.00100	1.00106	1.00112	1.00118	1.00124	1.00131
1.040	1.00131	1.00137	1.00144	1.00151	1.00158	1.00165	1.00172	1.00180	1.00187	1.00195	1.00203
1.050	1.00203	1.00211	1.00219	1.00228	1.00236	1.00245	1.00254	1.00263	1.00272	1.00281	1.00291
1.060	1.00291	1.00300	1.00310	1.00320	1.00330	1.00340	1.00351	1.00361	1.00372	1.00383	1.00394
1.070	1.00394	1.00405	1.00416	1.00428	1.00439	1.00451	1.00463	1.00475	1.00487	1.00499	1.00512
1.080	1.00512	1.00525	1.00537	1.00550	1.00563	1.00577	1.00590	1.00603	1.00617	1.00631	1.00645
1.090	1.00645	1.00659	1.00673	1.00688	1.00702	1.00717	1.00732	1.00747	1.00762	1.00777	1.00793
1.100	1.00793	1.00808	1.00824	1.00840	1.00856	1.00872	1.00888	1.00905	1.00921	1.00938	1.00955
1.110	1.00955	1.00972	1.00989	1.01006	1.01024	1.01041	1.01059	1.01077	1.01095	1.01113	1.01131
1.120	1.01131	1.01150	1.01168	1.01187	1.01206	1.01225	1.01244	1.01263	1.01283	1.01302	1.01322
1.130	1.01322	1.01342	1.01362	1.01382	1.01402	1.01423	1.01443	1.01464	1.01485	1.01506	1.01527
1.140	1.01527	1.01548	1.01569	1.01591	1.01613	1.01634	1.01656	1.01678	1.01701	1.01723	1.01745
1.150	1.01745	1.01758	1.01791	1.01814	1.01837	1.01860	1.01883	1.01907	1.01930	1.01954	1.01978
1.160	1.01978	1.02032	1.02026	1.02050	1.02075	1.02099	1.02124	1.02149	1.02174	1.02199	1.02224
1.170	1.02224	1.02250	1.02275	1.02301	1.02326	1.02352	1.02378	1.02405	1.02431	1.02457	1.02484
1.180	1.02484	1.02511	1.02538	1.02565	1.02592	1.02619	1.02646	1.02674	1.02702	1.02729	1.02757
1.190	1.02757	1.02735	1.02814	1.02842	1.02870	1.02899	1.02928	1.02957	1.02986	1.03015	1.03044
1.200	1.03044	1.03073	1.03103	1.03133	1.03162	1.03192	1.03222	1.03253	1.03283	1.03313	1.03344
1.210	1.03344	1.03375	1.03406	1.03437	1.03468	1.03499	1.03530	1.03562	1.03593	1.03625	1.03657
1.220	1.03657	1.03689	1.03721	1.03754	1.03786	1.03819	1.03851	1.03884	1.03917	1.03950	1.03983
1.230	1.03983	1.04017	1.04050	1.04084	1.04118	1.04152	1.04186	1.04220	1.04254	1.04288	1.04323
1.240	1.04323	1.04358	1.04392	1.04427	1.04462	1.04497	1.04533	1.04568	1.04604	1.04639	1.04675
1.250	1.04675	1.04711	1.04747	1.04784	1.04820	1.04856	1.04893	1.04930	1.04967	1.05003	1.05041
1.260	1.05041	1.05078	1.05115	1.05153	1.05190	1.05228	1.05266	1.05304	1.05342	1.05380	1.05419
1.270	1.05419	1.05457	1.05496	1.05535	1.05574	1.05613	1.05652	1.05691	1.05731	1.05770	1.05810
1.280	1.05810	1.05850	1.05890	1.05930	1.05970	1.06010	1.06051	1.06091	1.06132	1.06173	1.06214
1.290	1.06214	1.06255	1.06296	1.06337	1.06379	1.06421	1.06462	1.06504	1.06546	1.06588	1.06630

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.300	1.06630	1.06673	1.06715	1.06758	1.06801	1.06844	1.06887	1.06930	1.06973	1.07016	1.07060
1.310	1.07060	1.07103	1.07147	1.07191	1.07235	1.07279	1.07323	1.07368	1.07412	1.07457	1.07502
1.320	1.07502	1.07547	1.07592	1.07637	1.07682	1.07728	1.07773	1.07819	1.07865	1.07910	1.07957
1.330	1.07957	1.08003	1.08049	1.08095	1.08142	1.08189	1.08235	1.08282	1.08329	1.08377	1.08424
1.340	1.08424	1.08471	1.08519	1.08567	1.08614	1.08662	1.08710	1.08758	1.08807	1.08855	1.08904
1.350	1.08904	1.08952	1.09001	1.09050	1.09099	1.09149	1.09198	1.09247	1.09297	1.09347	1.09396
1.360	1.09396	1.09446	1.09496	1.09547	1.09597	1.09647	1.09698	1.09749	1.09799	1.09850	1.09902
1.370	1.09902	1.09953	1.10004	1.10056	1.10107	1.10159	1.10211	1.10263	1.10315	1.10367	1.10419
1.380	1.10419	1.10472	1.10524	1.10577	1.10630	1.10683	1.10736	1.10789	1.10843	1.10896	1.10950
1.390	1.10950	1.11003	1.11057	1.11111	1.11165	1.11220	1.11274	1.11328	1.11383	1.11438	1.11493
1.400	1.11493	1.11548	1.11603	1.11658	1.11713	1.11769	1.11824	1.11880	1.11936	1.11992	1.12048
1.410	1.12048	1.12104	1.12161	1.12217	1.12274	1.12331	1.12387	1.12444	1.12502	1.12559	1.12616
1.420	1.12616	1.12674	1.12731	1.12789	1.12847	1.12905	1.12963	1.13021	1.13080	1.13138	1.13197
1.430	1.13197	1.13256	1.13315	1.13374	1.13433	1.13492	1.13551	1.13611	1.13671	1.13730	1.13790
1.440	1.13790	1.13850	1.13910	1.13971	1.14031	1.14092	1.14152	1.14213	1.14274	1.14335	1.14396
1.450	1.14396	1.14458	1.14519	1.14581	1.14642	1.14704	1.14766	1.14828	1.14890	1.14952	1.15015
1.460	1.15015	1.15078	1.15140	1.15203	1.15266	1.15329	1.15392	1.15456	1.15519	1.15583	1.15646
1.470	1.15646	1.15710	1.15774	1.15838	1.15902	1.15967	1.16031	1.16096	1.16161	1.16225	1.16290
1.480	1.16290	1.16355	1.16421	1.16486	1.16552	1.16617	1.16683	1.16749	1.16815	1.16881	1.16947
1.490	1.16947	1.17014	1.17080	1.17147	1.17213	1.17280	1.17347	1.17414	1.17482	1.17549	1.17617
1.500	1.17617	1.17684	1.17752	1.17820	1.17888	1.17956	1.18025	1.18093	1.18162	1.18230	1.18299
1.510	1.18299	1.18368	1.18437	1.18506	1.18576	1.18645	1.18715	1.18784	1.18854	1.18924	1.18994
1.520	1.18994	1.19064	1.19135	1.19205	1.19276	1.19347	1.19418	1.19489	1.19560	1.19631	1.19702
1.530	1.19702	1.19774	1.19846	1.19917	1.19989	1.20061	1.20133	1.20206	1.20278	1.20351	1.20423
1.540	1.20423	1.20496	1.20569	1.20642	1.20715	1.20789	1.20862	1.20936	1.21010	1.21083	1.21157
1.550	1.21157	1.21231	1.21306	1.21380	1.21455	1.21529	1.21604	1.21679	1.21754	1.21829	1.21904
1.560	1.21904	1.21980	1.22055	1.22131	1.22207	1.22283	1.22359	1.22435	1.22511	1.22588	1.22664
1.570	1.22664	1.22741	1.22818	1.22895	1.22972	1.23049	1.23127	1.23204	1.23282	1.23360	1.23438
1.580	1.23438	1.23516	1.23594	1.23672	1.23751	1.23829	1.23908	1.23987	1.24066	1.24145	1.24224
1.590	1.24224	1.24303	1.24383	1.24462	1.24542	1.24622	1.24702	1.24782	1.24862	1.24943	1.25023

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.600	1.25023	1.25104	1.25185	1.25266	1.25347	1.25428	1.25510	1.25591	1.25673	1.25754	1.25836
1.610	1.25836	1.25918	1.26001	1.26083	1.26165	1.26248	1.26330	1.26413	1.26496	1.26579	1.26663
1.620	1.26663	1.26746	1.26829	1.26913	1.26997	1.27081	1.27165	1.27249	1.27333	1.27418	1.27502
1.630	1.27502	1.27587	1.27672	1.27757	1.27842	1.27927	1.28012	1.28098	1.28184	1.28269	1.28355
1.640	1.28355	1.28441	1.28527	1.28614	1.28700	1.28787	1.28874	1.28960	1.29047	1.29135	1.29222
1.650	1.29222	1.29309	1.29397	1.29485	1.29572	1.29660	1.29748	1.29837	1.29925	1.30013	1.30102
1.660	1.30102	1.30191	1.30280	1.30369	1.30458	1.30547	1.30637	1.30726	1.30816	1.30906	1.30996
1.670	1.30996	1.31086	1.31176	1.31267	1.31357	1.31448	1.31539	1.31630	1.31721	1.31812	1.31904
1.680	1.31904	1.31995	1.32087	1.32179	1.32271	1.32363	1.32455	1.32547	1.32640	1.32732	1.32825
1.690	1.32825	1.32918	1.33011	1.33104	1.33198	1.33291	1.33385	1.33479	1.33572	1.33666	1.33761
1.700	1.33761	1.33855	1.33949	1.34044	1.34139	1.34234	1.34329	1.34424	1.34519	1.34614	1.34710
1.710	1.34710	1.34806	1.34902	1.34998	1.35094	1.35190	1.35286	1.35383	1.35480	1.35577	1.35673
1.720	1.35674	1.35771	1.35868	1.35965	1.36063	1.36161	1.36258	1.36356	1.36454	1.36553	1.36651
1.730	1.36651	1.36750	1.36848	1.36947	1.37046	1.37145	1.37245	1.37344	1.37443	1.37543	1.37643
1.740	1.37643	1.37743	1.37843	1.37943	1.38044	1.38144	1.38245	1.38346	1.38447	1.38548	1.38649
1.750	1.38649	1.38751	1.38852	1.38954	1.39056	1.39158	1.39260	1.39362	1.39464	1.39567	1.39670
1.760	1.39670	1.39773	1.39876	1.39979	1.40082	1.40186	1.40289	1.40393	1.40497	1.40601	1.40705
1.770	1.40705	1.40809	1.40914	1.41018	1.41123	1.41228	1.41333	1.41438	1.41543	1.41649	1.41755
1.780	1.41755	1.41860	1.41966	1.42072	1.42179	1.42285	1.42391	1.42498	1.42605	1.42712	1.42819
1.790	1.42819	1.42926	1.43034	1.43141	1.43249	1.43357	1.43465	1.43573	1.43681	1.43790	1.43898
1.800	1.43898	1.44007	1.44116	1.44225	1.44334	1.44443	1.44553	1.44662	1.44772	1.44882	1.44992
1.810	1.44992	1.45102	1.45213	1.45323	1.45434	1.45545	1.45656	1.45767	1.45878	1.45990	1.46101
1.820	1.46101	1.46213	1.46325	1.46437	1.46549	1.46661	1.46774	1.46887	1.46999	1.47112	1.47225
1.830	1.47225	1.47339	1.47452	1.47566	1.47679	1.47793	1.47907	1.48021	1.48136	1.48250	1.48365
1.840	1.48365	1.48480	1.48594	1.48710	1.48825	1.48940	1.49056	1.49171	1.49287	1.49403	1.49519
1.850	1.49519	1.49636	1.49752	1.49869	1.49986	1.50102	1.50220	1.50337	1.50454	1.50572	1.50689
1.860	1.50689	1.50807	1.50925	1.51043	1.51162	1.51280	1.51399	1.51518	1.51637	1.51756	1.51875
1.870	1.51875	1.51994	1.52114	1.52234	1.52353	1.52474	1.52594	1.52714	1.52835	1.52955	1.53076
1.880	1.53076	1.53197	1.53318	1.53439	1.53561	1.53683	1.53804	1.53926	1.54048	1.54171	1.54293
1.890	1.54293	1.54415	1.54538	1.54661	1.54784	1.54907	1.55031	1.55154	1.55278	1.55402	1.55526

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.900	1.55526	1.55650	1.55774	1.55899	1.56023	1.56148	1.56273	1.56398	1.56523	1.56649	1.56774
1.910	1.56774	1.56900	1.57026	1.57152	1.57278	1.57405	1.57531	1.57658	1.57785	1.57912	1.58039
1.920	1.58039	1.58166	1.58294	1.58422	1.58549	1.58677	1.58806	1.58934	1.59062	1.59191	1.59320
1.930	1.59320	1.59449	1.59578	1.59707	1.59837	1.59967	1.60096	1.60226	1.60356	1.60487	1.60617
1.940	1.60617	1.60748	1.60879	1.61010	1.61141	1.61272	1.61403	1.61535	1.61667	1.61799	1.61931
1.950	1.61931	1.62063	1.62196	1.62328	1.62461	1.62594	1.62727	1.62860	1.62994	1.63127	1.63261
1.960	1.63261	1.63395	1.63529	1.63663	1.63798	1.63932	1.64067	1.64202	1.64337	1.64473	1.64608
1.970	1.64608	1.64744	1.64879	1.65015	1.65151	1.65288	1.65424	1.65561	1.65698	1.65835	1.65972
1.980	1.65972	1.66109	1.66246	1.66384	1.66522	1.66660	1.66798	1.66936	1.67075	1.67213	1.67352
1.990	1.67352	1.67491	1.67630	1.67770	1.67909	1.68049	1.68189	1.68329	1.68469	1.68609	1.68750
2.000	1.68750	1.68891	1.69032	1.69173	1.69314	1.69455	1.69597	1.69739	1.69880	1.70023	1.70165
2.010	1.70165	1.70307	1.70450	1.70593	1.70736	1.70879	1.71022	1.71166	1.71309	1.71453	1.71597
2.020	1.71597	1.71741	1.71886	1.72030	1.72175	1.72320	1.72465	1.72610	1.72755	1.72901	1.73047
2.030	1.73047	1.73193	1.73339	1.73485	1.73631	1.73778	1.73925	1.74072	1.74219	1.74366	1.74514
2.040	1.74514	1.74662	1.74809	1.74957	1.75106	1.75254	1.75403	1.75551	1.75700	1.75850	1.75999
2.050	1.75999	1.76148	1.76298	1.76448	1.76598	1.76748	1.76898	1.77049	1.77200	1.77351	1.77502
2.060	1.77502	1.77653	1.77804	1.77956	1.78108	1.78260	1.78412	1.78564	1.78717	1.78870	1.79022
2.070	1.79022	1.79176	1.79329	1.79482	1.79636	1.79790	1.79944	1.80098	1.80252	1.80407	1.80561
2.080	1.80561	1.80716	1.80871	1.81027	1.81182	1.81338	1.81494	1.81650	1.81806	1.81962	1.82119
2.090	1.82119	1.82275	1.82432	1.82589	1.82747	1.82904	1.83062	1.83220	1.83378	1.83536	1.83694
2.100	1.83694	1.83853	1.84012	1.84171	1.84330	1.84489	1.84649	1.84808	1.84968	1.85128	1.85289
2.110	1.85289	1.85449	1.85610	1.85770	1.85931	1.86093	1.86254	1.86416	1.86577	1.86739	1.86902
2.120	1.86902	1.87064	1.87226	1.87389	1.87552	1.87715	1.87878	1.88042	1.88205	1.88369	1.88533
2.130	1.88533	1.88698	1.88862	1.89027	1.89191	1.89356	1.89522	1.89687	1.89853	1.90018	1.90184
2.140	1.90184	1.90350	1.90517	1.90683	1.90850	1.91017	1.91184	1.91351	1.91519	1.91686	1.91854
2.150	1.91854	1.92022	1.92191	1.92359	1.92528	1.92696	1.92866	1.93035	1.93204	1.93374	1.93544
2.160	1.93544	1.93714	1.93884	1.94054	1.94225	1.94396	1.94567	1.94738	1.94909	1.95081	1.95252
2.170	1.95252	1.95424	1.95597	1.95769	1.95941	1.96114	1.96287	1.96460	1.96634	1.96807	1.96981
2.180	1.96981	1.97155	1.97329	1.97503	1.97678	1.97853	1.98027	1.98203	1.98378	1.98553	1.98729
2.190	1.98729	1.98905	1.99081	1.99258	1.99434	1.99611	1.99788	1.99965	2.00142	2.00320	2.00497

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.200	2.00497	2.00675	2.00853	2.01032	2.01210	2.01389	2.01568	2.01747	2.01926	2.02106	2.02286
2.210	2.02286	2.02466	2.02646	2.02826	2.03007	2.03188	2.03368	2.03550	2.03731	2.03913	2.04094
2.220	2.04094	2.04276	2.04459	2.04641	2.04824	2.05006	2.05189	2.05373	2.05556	2.05740	2.05923
2.230	2.05923	2.06107	2.06292	2.06476	2.06661	2.06846	2.07031	2.07216	2.07401	2.07587	2.07773
2.240	2.07773	2.07959	2.08145	2.08332	2.08519	2.08706	2.08893	2.09080	2.09268	2.09455	2.09643
2.250	2.09643	2.09832	2.10020	2.10209	2.10397	2.10587	2.10776	2.10965	2.11155	2.11345	2.11535
2.260	2.11535	2.11725	2.11916	2.12106	2.12297	2.12488	2.12680	2.12871	2.13063	2.13255	2.13447
2.270	2.13447	2.13640	2.13832	2.14025	2.14218	2.14411	2.14605	2.14799	2.14993	2.15187	2.15381
2.280	2.15381	2.15576	2.15770	2.15965	2.16161	2.16356	2.16552	2.16747	2.16943	2.17140	2.17336
2.290	2.17336	2.17533	2.17730	2.17927	2.18124	2.18322	2.18520	2.18718	2.18916	2.19114	2.19313
2.300	2.19313	2.19512	2.19711	2.19910	2.20110	2.20310	2.20510	2.20710	2.20910	2.21111	2.21312
2.310	2.21312	2.21513	2.21714	2.21916	2.22117	2.22319	2.22521	2.22724	2.22926	2.23129	2.23332
2.320	2.23332	2.23536	2.23739	2.23943	2.24147	2.24351	2.24555	2.24760	2.24965	2.25170	2.25375
2.330	2.25375	2.25580	2.25786	2.25992	2.26198	2.26405	2.26611	2.26818	2.27025	2.27233	2.27440
2.340	2.27440	2.27648	2.27856	2.28064	2.28272	2.28481	2.28690	2.28899	2.29108	2.29318	2.29528
2.350	2.29528	2.29738	2.29948	2.30158	2.30369	2.30580	2.30791	2.31002	2.31214	2.31426	2.31638
2.360	2.31638	2.31850	2.32063	2.32276	2.32488	2.32702	2.32915	2.33129	2.33343	2.33557	2.33771
2.370	2.33771	2.33986	2.34201	2.34416	2.34631	2.34846	2.35062	2.35278	2.35494	2.35711	2.35927
2.380	2.35927	2.36144	2.36361	2.36579	2.36796	2.37014	2.37232	2.37451	2.37669	2.37888	2.38107
2.390	2.38107	2.38326	2.38546	2.38765	2.38985	2.39205	2.39426	2.39647	2.39867	2.40089	2.40310
2.400	2.40310	2.40532	2.40753	2.40975	2.41198	2.41420	2.41643	2.41866	2.42089	2.42313	2.42536
2.410	2.42537	2.42760	2.42985	2.43209	2.43434	2.43659	2.43884	2.44109	2.44335	2.44561	2.44787
2.420	2.44787	2.45013	2.45240	2.45467	2.45694	2.45921	2.46149	2.46377	2.46605	2.46833	2.47061
2.430	2.47061	2.47290	2.47519	2.47748	2.47978	2.48208	2.48438	2.48668	2.48898	2.49129	2.49360
2.440	2.49360	2.49591	2.49823	2.50054	2.50286	2.50519	2.50751	2.50984	2.51217	2.51450	2.51683
2.450	2.51683	2.51917	2.52151	2.52385	2.52619	2.52854	2.53089	2.53324	2.53559	2.53795	2.54031
2.460	2.54031	2.54267	2.54503	2.54740	2.54977	2.55214	2.55451	2.55689	2.55927	2.56165	2.56403
2.470	2.56403	2.56642	2.56881	2.57120	2.57359	2.57599	2.57839	2.58079	2.58319	2.58560	2.58801
2.480	2.58801	2.59042	2.59283	2.59525	2.59767	2.60009	2.60252	2.60494	2.60737	2.60980	2.61224
2.490	2.61224	2.61467	2.61711	2.61955	2.62200	2.62445	2.62689	2.62935	2.63180	2.63426	2.63672



STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.500	2.63672	2.63918	2.64165	2.64411	2.64658	2.64906	2.65153	2.65401	2.65649	2.65897	2.66146
2.510	2.66146	2.66374	2.66644	2.66893	2.67142	2.67392	2.67642	2.67893	2.68143	2.68394	2.68644
2.520	2.68645	2.68897	2.69148	2.69400	2.69652	2.69905	2.70158	2.70410	2.70664	2.70917	2.71171
2.530	2.71171	2.71425	2.71679	2.71934	2.72189	2.72444	2.72699	2.72954	2.73210	2.73466	2.73723
2.540	2.73723	2.73979	2.74236	2.74494	2.74751	2.75009	2.75267	2.75525	2.75783	2.76042	2.76301
2.550	2.76301	2.76560	2.76820	2.77080	2.77340	2.77600	2.77861	2.78122	2.78383	2.78645	2.78906
2.560	2.78906	2.79158	2.79430	2.79693	2.79956	2.80219	2.80482	2.80746	2.81010	2.81274	2.81538
2.570	2.81538	2.81803	2.82068	2.82333	2.82599	2.82864	2.83130	2.83397	2.83663	2.83930	2.84197
2.580	2.84197	2.84465	2.84732	2.85000	2.85268	2.85537	2.85806	2.86075	2.86344	2.86614	2.86884
2.590	2.86884	2.87154	2.87424	2.87695	2.87966	2.88237	2.88509	2.88780	2.89052	2.89325	2.89597
2.600	2.89598	2.89870	2.90144	2.90417	2.90691	2.90965	2.91239	2.91514	2.91789	2.92064	2.92339
2.610	2.92339	2.92615	2.92891	2.93167	2.93444	2.93720	2.93998	2.94275	2.94553	2.94831	2.95109
2.620	2.95109	2.95387	2.95666	2.95945	2.96225	2.96504	2.96784	2.97064	2.97345	2.97626	2.97907
2.630	2.97907	2.98188	2.98470	2.98752	2.99034	2.99316	2.99599	2.99882	3.00165	3.00449	3.00733
2.640	3.00733	3.01017	3.01302	3.01587	3.01872	3.02157	3.02443	3.02728	3.03015	3.03301	3.03588
2.650	3.03588	3.03875	3.04162	3.04450	3.04738	3.05026	3.05315	3.05604	3.05893	3.06182	3.06472
2.660	3.06472	3.06762	3.07052	3.07343	3.07634	3.07925	3.08216	3.08508	3.08800	3.09092	3.09385
2.670	3.09385	3.09678	3.09971	3.10265	3.10558	3.10852	3.11147	3.11441	3.11736	3.12032	3.12327
2.680	3.12327	3.12623	3.12919	3.13216	3.13512	3.13810	3.14107	3.14404	3.14702	3.15001	3.15299
2.690	3.15299	3.15598	3.15897	3.16197	3.16496	3.16796	3.17097	3.17397	3.17698	3.17999	3.18301
2.700	3.18301	3.18603	3.18905	3.19207	3.19510	3.19813	3.20116	3.20420	3.20724	3.21028	3.21333
2.710	3.21333	3.21638	3.21943	3.22248	3.22554	3.22860	3.23166	3.23473	3.23780	3.24087	3.24395
2.720	3.24395	3.24703	3.25011	3.25320	3.25628	3.25937	3.26247	3.26557	3.26867	3.27177	3.27488
2.730	3.27488	3.27799	3.28110	3.28421	3.28733	3.29046	3.29358	3.29671	3.29984	3.30297	3.30611
2.740	3.30611	3.30925	3.31240	3.31554	3.31869	3.32184	3.32500	3.32816	3.33132	3.33449	3.33766
2.750	3.33766	3.34083	3.34400	3.34718	3.35036	3.35355	3.35673	3.35992	3.36312	3.36631	3.36951
2.760	3.36951	3.37272	3.37592	3.37913	3.38235	3.38556	3.38878	3.39200	3.39523	3.39846	3.40169
2.770	3.40169	3.40492	3.40816	3.41140	3.41464	3.41789	3.42114	3.42440	3.42765	3.43091	3.43418
2.780	3.43418	3.43744	3.44071	3.44399	3.44726	3.45054	3.45383	3.45711	3.46040	3.46369	3.46699
2.790	3.46699	3.47029	3.47359	3.47689	3.48020	3.48351	3.48683	3.49015	3.49347	3.49679	3.50012

## STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.800	3.50012	3.50345	3.50679	3.51013	3.51347	3.51681	3.52016	3.52351	3.52686	3.53022	3.53355
2.810	3.53358	3.53694	3.54031	3.54368	3.54706	3.55043	3.55381	3.55720	3.56058	3.56396	3.56737
2.820	3.56737	3.57076	3.57416	3.57757	3.58097	3.58438	3.58780	3.59121	3.59462	3.59806	3.60148
2.830	3.60148	3.60491	3.60835	3.61178	3.61522	3.61867	3.62211	3.62556	3.62902	3.63247	3.63593
2.840	3.63593	3.63940	3.64286	3.64633	3.64981	3.65328	3.65675	3.66025	3.66373	3.66722	3.67072
2.850	3.67072	3.67422	3.67772	3.68122	3.68473	3.68824	3.69175	3.69527	3.69879	3.70231	3.70583
2.860	3.70584	3.70937	3.71291	3.71644	3.71999	3.72353	3.72708	3.73063	3.73418	3.73774	3.74130
2.870	3.74131	3.74487	3.74844	3.75201	3.75559	3.75917	3.76275	3.76633	3.76992	3.77352	3.77711
2.880	3.77711	3.78071	3.78431	3.78792	3.79153	3.79515	3.79876	3.80238	3.80601	3.80963	3.81327
2.890	3.81327	3.81690	3.82054	3.82418	3.82782	3.83147	3.83512	3.83878	3.84244	3.84610	3.84977
2.900	3.84977	3.85344	3.85711	3.86079	3.86447	3.86815	3.87184	3.87553	3.87922	3.88292	3.88662
2.910	3.88662	3.89033	3.89403	3.89775	3.90146	3.90518	3.90890	3.91263	3.91636	3.92009	3.92383
2.920	3.92383	3.92757	3.93131	3.93505	3.93881	3.94257	3.94632	3.95009	3.95385	3.95762	3.96139
2.930	3.96139	3.96517	3.96895	3.97273	3.97652	3.98031	3.98410	3.98790	3.99170	3.99551	3.99932
2.940	3.99932	4.00313	4.00694	4.01076	4.01459	4.01841	4.02224	4.02608	4.02992	4.03376	4.03760
2.950	4.03760	4.04145	4.04530	4.04916	4.05302	4.05688	4.06075	4.06462	4.06849	4.07237	4.07625
2.960	4.07625	4.08014	4.08403	4.08792	4.09182	4.09572	4.09962	4.10353	4.10744	4.11135	4.11527
2.970	4.11527	4.11920	4.12312	4.12705	4.13098	4.13492	4.13886	4.14281	4.14675	4.15071	4.15466
2.980	4.15466	4.15862	4.16259	4.16655	4.17052	4.17450	4.17848	4.18246	4.18644	4.19043	4.19443
2.990	4.19443	4.19842	4.20242	4.20643	4.21044	4.21445	4.21847	4.22248	4.22651	4.23054	4.23457
3.000	4.23457	4.23860	4.24264	4.24668	4.25073	4.25478	4.25883	4.26289	4.26695	4.27102	4.27509
3.010	4.27509	4.27916	4.28324	4.28732	4.29140	4.29549	4.29958	4.30368	4.30778	4.31188	4.31599
3.020	4.31599	4.32010	4.32421	4.32833	4.33246	4.33658	4.34071	4.34485	4.34899	4.35313	4.35727
3.030	4.35727	4.36142	4.36558	4.36974	4.37390	4.37806	4.38223	4.38640	4.39058	4.39476	4.39895
3.040	4.39895	4.40314	4.40733	4.41153	4.41573	4.41993	4.42414	4.42835	4.43257	4.43679	4.44101
3.050	4.44101	4.44524	4.44947	4.45371	4.45795	4.46219	4.46644	4.47069	4.47495	4.47921	4.48347
3.060	4.48347	4.48774	4.49201	4.49629	4.50057	4.50485	4.50914	4.51343	4.51773	4.52203	4.52635
3.070	4.52635	4.53064	4.53495	4.53926	4.54358	4.54791	4.55223	4.55657	4.56090	4.56524	4.56958
3.080	4.56959	4.57393	4.57828	4.58264	4.58700	4.59136	4.59573	4.60010	4.60448	4.60886	4.61324
3.090	4.61324	4.61763	4.62202	4.62642	4.63082	4.63523	4.63963	4.64405	4.64846	4.65288	4.65731

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
3.100	4.65731	4.66174	4.66617	4.67061	4.67505	4.67950	4.68395	4.68840	4.69286	4.69732	4.70178
3.110	4.70178	4.70625	4.71073	4.71521	4.71969	4.72417	4.72867	4.73316	4.73766	4.74216	4.74667
3.120	4.74667	4.75118	4.75570	4.76022	4.76474	4.76927	4.77380	4.77834	4.78288	4.78742	4.79197
3.130	4.79197	4.79652	4.80108	4.80564	4.81021	4.81478	4.81935	4.82393	4.82851	4.83310	4.83769
3.140	4.83769	4.84228	4.84688	4.85149	4.85609	4.86071	4.86532	4.86994	4.87457	4.87920	4.88383
3.150	4.88383	4.88847	4.89311	4.89775	4.90240	4.90706	4.91172	4.91638	4.92105	4.92572	4.93039
3.160	4.93039	4.93507	4.93976	4.94444	4.94914	4.95384	4.95854	4.96324	4.96795	4.97267	4.97738
3.170	4.97738	4.98211	4.98683	4.99157	4.99630	5.00104	5.00579	5.01053	5.01529	5.02004	5.02481
3.180	5.02481	5.02957	5.03434	5.03912	5.04390	5.04868	5.05347	5.05826	5.06306	5.06786	5.07266
3.190	5.07266	5.07747	5.08229	5.08711	5.09193	5.09675	5.10159	5.10642	5.11126	5.11611	5.12096
3.200	5.12096	5.12591	5.13087	5.13583	5.14080	5.14577	5.15074	5.15572	5.16070	5.16568	5.17069
3.210	5.16969	5.17459	5.17949	5.18440	5.18931	5.19422	5.19914	5.20407	5.20900	5.21393	5.21887
3.220	5.21887	5.22381	5.22876	5.23371	5.23866	5.24362	5.24859	5.25356	5.25853	5.26351	5.26849
3.230	5.26849	5.27348	5.27847	5.28347	5.28847	5.29347	5.29848	5.30350	5.30851	5.31354	5.31856
3.240	5.31857	5.32350	5.32863	5.33366	5.33872	5.34377	5.34883	5.35389	5.35895	5.36402	5.36909
3.250	5.36909	5.37417	5.37925	5.38434	5.38943	5.39453	5.39963	5.40473	5.40984	5.41496	5.42008
3.260	5.42008	5.42520	5.43033	5.43546	5.44060	5.44574	5.45089	5.45604	5.46119	5.46635	5.47152
3.270	5.47152	5.47669	5.48186	5.48704	5.49223	5.49742	5.50261	5.50781	5.51301	5.51822	5.52343
3.280	5.52343	5.52864	5.53386	5.53909	5.54432	5.54956	5.55480	5.56004	5.56529	5.57054	5.57580
3.290	5.57580	5.58106	5.58633	5.59160	5.59688	5.60216	5.60745	5.61274	5.61804	5.62334	5.62864
3.300	5.62865	5.63396	5.63927	5.64459	5.64992	5.65524	5.66058	5.66592	5.67126	5.67661	5.68196
3.310	5.68196	5.68732	5.69268	5.69805	5.70342	5.70880	5.71418	5.71957	5.72496	5.73036	5.73576
3.320	5.73576	5.74116	5.74657	5.75199	5.75741	5.76283	5.76826	5.77370	5.77914	5.78458	5.79003
3.330	5.79003	5.79549	5.80094	5.80641	5.81188	5.81735	5.82283	5.82831	5.83380	5.83929	5.84479
3.340	5.84479	5.85029	5.85580	5.86131	5.86683	5.87235	5.87788	5.88341	5.88895	5.89449	5.90004
3.350	5.90004	5.90559	5.91114	5.91670	5.92227	5.92784	5.93342	5.93900	5.94458	5.95018	5.95577
3.360	5.95577	5.96137	5.96698	5.97259	5.97820	5.98383	5.98945	5.99508	6.00072	6.00636	6.01200
3.370	6.01200	6.01765	6.02331	6.02897	6.03463	6.04030	6.04598	6.05166	6.05734	6.06304	6.06873
3.380	6.06873	6.07443	6.08014	6.08585	6.09156	6.09728	6.10301	6.10874	6.11447	6.12022	6.12596
3.390	6.12596	6.13171	6.13747	6.14323	6.14899	6.15477	6.16054	6.16632	6.17211	6.17790	6.18370

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
3.400	6.18370	6.18950	6.19531	6.20112	6.20693	6.21276	6.21858	6.22441	6.23025	6.23609	6.24194
3.410	6.24194	6.24779	6.25365	6.25951	6.26538	6.27125	6.27713	6.28302	6.28890	6.29480	6.30070
3.420	6.30070	6.30660	6.31251	6.31842	6.32434	6.33027	6.33620	6.34213	6.34807	6.35402	6.35997
3.430	6.35997	6.36592	6.37188	6.37785	6.38382	6.38980	6.39578	6.40177	6.40776	6.41376	6.41976
3.440	6.41976	6.42577	6.43178	6.43780	6.44382	6.44985	6.45588	6.46192	6.46797	6.47402	6.48007
3.450	6.48007	6.48613	6.49220	6.49827	6.50435	6.51043	6.51651	6.52261	6.52870	6.53480	6.54091
3.460	6.54091	6.54703	6.55314	6.55927	6.56540	6.57153	6.57767	6.58382	6.58997	6.59612	6.60228
3.470	6.60228	6.60845	6.61462	6.62080	6.62698	6.63317	6.63936	6.64556	6.65177	6.65797	6.66419
3.480	6.66419	6.67041	6.67664	6.68287	6.68910	6.69534	6.70159	6.70784	6.71410	6.72036	6.72663
3.490	6.72663	6.73291	6.73919	6.74547	6.75176	6.75806	6.76436	6.77067	6.77698	6.78329	6.78962
3.500	6.78962	6.79595	6.80228	6.80862	6.81496	6.82131	6.82767	6.83403	6.84040	6.84677	6.85315
3.510	6.85315	6.85953	6.86592	6.87232	6.87871	6.88512	6.89153	6.89795	6.90437	6.91080	6.91723
3.520	6.91723	6.92367	6.93011	6.93656	6.94302	6.94948	6.95594	6.96241	6.96889	6.97537	6.98186
3.530	6.98186	6.98836	6.99486	7.00136	7.00787	7.01439	7.02091	7.02744	7.03397	7.04051	7.04705
3.540	7.04705	7.05360	7.06016	7.06672	7.07328	7.07986	7.08643	7.09302	7.09961	7.10620	7.11280
3.550	7.11280	7.11941	7.12602	7.13264	7.13926	7.14589	7.15252	7.15916	7.16581	7.17246	7.17912
3.560	7.17912	7.18578	7.19245	7.19912	7.20580	7.21249	7.21918	7.22588	7.23258	7.23929	7.24600
3.570	7.24600	7.25272	7.25945	7.26618	7.27292	7.27966	7.28641	7.29316	7.29992	7.30669	7.31346
3.580	7.31346	7.32024	7.32702	7.33381	7.34060	7.34740	7.35421	7.36102	7.36784	7.37466	7.38149
3.590	7.38149	7.38833	7.39517	7.40202	7.40887	7.41573	7.42259	7.42946	7.43634	7.44322	7.45011
3.600	7.45011	7.45700	7.46390	7.47081	7.47772	7.48463	7.49156	7.49848	7.50542	7.51236	7.51931
3.610	7.51931	7.52626	7.53322	7.54018	7.54715	7.55413	7.56111	7.56810	7.57509	7.58209	7.58909
3.620	7.58909	7.59611	7.60312	7.61014	7.61717	7.62421	7.63125	7.63830	7.64535	7.65241	7.65947
3.630	7.65947	7.66654	7.67362	7.68070	7.68779	7.69489	7.70199	7.70909	7.71621	7.72332	7.73045
3.640	7.73045	7.73750	7.74472	7.75186	7.75901	7.76616	7.77332	7.78049	7.78766	7.79484	7.80203
3.650	7.80203	7.80922	7.81641	7.82362	7.83083	7.83804	7.84526	7.85249	7.85972	7.86696	7.87421
3.660	7.87421	7.88146	7.88872	7.89598	7.90325	7.91053	7.91781	7.92510	7.93239	7.93969	7.94700
3.670	7.94700	7.95431	7.96163	7.96895	7.97629	7.98362	7.99097	7.99832	8.00567	8.01303	8.02040
3.680	8.02040	8.02776	8.03516	8.04254	8.04993	8.05733	8.06474	8.07215	8.07957	8.08699	8.09442
3.690	8.09442	8.10186	8.10930	8.11675	8.12420	8.13166	8.13913	8.14660	8.15408	8.16157	8.16906

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
3.700	8.16907	8.17656	8.18407	8.19158	8.19910	8.20662	8.21415	8.22169	8.22923	8.23678	8.24433
3.710	8.24433	8.25139	8.25946	8.26703	8.27462	8.28220	8.28979	8.29739	8.30500	8.31261	8.32023
3.720	8.32023	8.32785	8.33548	8.34312	8.35077	8.35841	8.36607	8.37373	8.38140	8.38908	8.39676
3.730	8.39676	8.40445	8.41214	8.41984	8.42755	8.43526	8.44298	8.45071	8.45844	8.46618	8.47393
3.740	8.47393	8.48168	8.48944	8.49720	8.50498	8.51275	8.52054	8.52833	8.53613	8.54393	8.55174
3.750	8.55174	8.55956	8.56738	8.57521	8.58305	8.59089	8.59874	8.60659	8.61445	8.62232	8.63020
3.760	8.63020	8.63808	8.64597	8.65386	8.66176	8.66967	8.67758	8.68550	8.69343	8.70137	8.70931
3.770	8.70931	8.71725	8.72521	8.73317	8.74113	8.74911	8.75709	8.76507	8.77307	8.78106	8.78907
3.780	8.78907	8.79708	8.80510	8.81313	8.82116	8.82920	8.83725	8.84530	8.85336	8.86142	8.86949
3.790	8.86950	8.87757	8.88566	8.89375	8.90185	8.90996	8.91807	8.92619	8.93431	8.94244	8.95058
3.800	8.95058	8.95873	8.96688	8.97504	8.98320	8.99138	8.99956	9.00774	9.01593	9.02413	9.03234
3.810	9.03234	9.04055	9.04877	9.05700	9.06523	9.07347	9.08172	9.08997	9.09823	9.10650	9.11477
3.820	9.11477	9.12305	9.13134	9.13963	9.14793	9.15624	9.16455	9.17287	9.18120	9.18953	9.19788
3.830	9.19788	9.20622	9.21458	9.22294	9.23131	9.23968	9.24807	9.25646	9.26485	9.27326	9.28166
3.840	9.28167	9.29008	9.29851	9.30694	9.31537	9.32382	9.33227	9.34073	9.34919	9.35766	9.36614
3.850	9.36614	9.37463	9.38312	9.39162	9.40012	9.40864	9.41716	9.42568	9.43422	9.44276	9.45131
3.860	9.45131	9.45986	9.46842	9.47699	9.48557	9.49415	9.50274	9.51134	9.51994	9.52855	9.53717
3.870	9.53717	9.54579	9.55442	9.56306	9.57171	9.58036	9.58902	9.59769	9.60636	9.61504	9.62373
3.880	9.62373	9.63243	9.64113	9.64983	9.65855	9.66727	9.67600	9.68474	9.69349	9.70224	9.71100
3.890	9.71100	9.71976	9.72853	9.73731	9.74610	9.75489	9.76370	9.77250	9.78132	9.79014	9.79897
3.900	9.79897	9.80781	9.81665	9.82550	9.83436	9.84323	9.85210	9.86098	9.86986	9.87876	9.88766
3.910	9.88766	9.89657	9.90548	9.91440	9.92333	9.93227	9.94122	9.95017	9.95913	9.96809	9.97707
3.920	9.97707	9.98625	9.99503	10.00403	10.01303	10.02204	10.03106	10.04008	10.04911	10.05815	10.06720
3.930	10.06720	10.07625	10.08531	10.09438	10.10345	10.11253	10.12162	10.13072	10.13982	10.14893	10.15805
3.940	10.15805	10.16718	10.17631	10.18545	10.19460	10.20376	10.21292	10.22209	10.23127	10.24045	10.24964
3.950	10.24964	10.25884	10.26805	10.27726	10.28649	10.29571	10.30495	10.31419	10.32344	10.33270	10.34197
3.960	10.34197	10.35124	10.36052	10.36981	10.37911	10.38841	10.39772	10.40704	10.41637	10.42570	10.43504
3.970	10.43504	10.44439	10.45374	10.46311	10.47248	10.48185	10.49124	10.50063	10.51003	10.51944	10.52885
3.980	10.52885	10.53828	10.54771	10.55715	10.56659	10.57604	10.58550	10.59497	10.60445	10.61393	10.62342
3.990	10.62342	10.63292	10.64243	10.65194	10.66146	10.67099	10.68052	10.69007	10.69962	10.70918	10.71874

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
4.000	10.71875	10.72832	10.73790	10.74749	10.75709	10.76669	10.77631	10.78593	10.79555	10.80519	10.81483
4.010	10.81483	10.82448	10.83414	10.84381	10.85348	10.86316	10.87285	10.88255	10.89225	10.90196	10.91168
4.020	10.91168	10.92141	10.93115	10.94089	10.95064	10.96040	10.97016	10.97994	10.98972	10.99951	11.00930
4.030	11.00930	11.01911	11.02892	11.03874	11.04857	11.05840	11.06825	11.07810	11.08796	11.09783	11.10770
4.040	11.10770	11.11758	11.12747	11.13737	11.14728	11.15719	11.16711	11.17704	11.18698	11.19692	11.20688
4.050	11.20688	11.21684	11.22681	11.23678	11.24677	11.25676	11.26676	11.27677	11.28679	11.29681	11.30684
4.060	11.30684	11.31688	11.32693	11.33699	11.34705	11.35712	11.36720	11.37728	11.38738	11.39748	11.40759
4.070	11.40760	11.41771	11.42784	11.43798	11.44812	11.45827	11.46843	11.47860	11.48877	11.49895	11.50914
4.080	11.50915	11.51934	11.52955	11.53977	11.54999	11.56022	11.57046	11.58070	11.59096	11.60122	11.61149
4.090	11.61149	11.62177	11.63206	11.64236	11.65266	11.66297	11.67329	11.68362	11.69395	11.70430	11.71465
4.100	11.71465	11.72501	11.73538	11.74575	11.75614	11.76653	11.77693	11.78734	11.79776	11.80818	11.81862
4.110	11.81862	11.82906	11.83951	11.84996	11.86043	11.87090	11.88139	11.89188	11.90237	11.91288	11.92340
4.120	11.92340	11.93392	11.94445	11.95499	11.96554	11.97610	11.98666	11.99723	12.00781	12.01840	12.02900
4.130	12.02900	12.03951	12.05022	12.06084	12.07147	12.08211	12.09276	12.10341	12.11408	12.12475	12.13543
4.140	12.13543	12.14612	12.15682	12.16752	12.17823	12.18895	12.19968	12.21042	12.22117	12.23192	12.24269
4.150	12.24269	12.25346	12.26424	12.27503	12.28583	12.29663	12.30745	12.31827	12.32910	12.33994	12.35078
4.160	12.35079	12.36154	12.37250	12.38338	12.39426	12.40515	12.41605	12.42695	12.43787	12.44879	12.45972
4.170	12.45972	12.47066	12.48161	12.49257	12.50353	12.51451	12.52549	12.53648	12.54748	12.55849	12.56951
4.180	12.56951	12.58053	12.59157	12.60261	12.61366	12.62472	12.63579	12.64686	12.65795	12.66904	12.68014
4.190	12.68014	12.69125	12.70237	12.71350	12.72464	12.73578	12.74694	12.75810	12.76927	12.78045	12.79164
4.200	12.79164	12.80283	12.81404	12.82525	12.83648	12.84771	12.85895	12.87020	12.88145	12.89272	12.90399
4.210	12.90399	12.91526	12.92657	12.93787	12.94918	12.96050	12.97182	12.98316	12.99450	13.00585	13.01722
4.220	13.01722	13.02859	13.03997	13.05135	13.06275	13.07416	13.08557	13.09699	13.10843	13.11986	13.13131
4.230	13.13131	13.14277	13.15424	13.16572	13.17720	13.18869	13.20019	13.21170	13.22322	13.23475	13.24629
4.240	13.24629	13.25734	13.26939	13.28096	13.29253	13.30411	13.31570	13.32730	13.33891	13.35052	13.36215
4.250	13.36215	13.37379	13.38543	13.39708	13.40874	13.42041	13.43209	13.44378	13.45548	13.46719	13.47890
4.260	13.47890	13.49062	13.50236	13.51410	13.52585	13.53761	13.54938	13.56116	13.57294	13.58474	13.59654
4.270	13.59654	13.60836	13.62018	13.63201	13.64385	13.65570	13.66756	13.67943	13.69131	13.70319	13.71509
4.280	13.71509	13.72699	13.73891	13.75083	13.76276	13.77470	13.78665	13.79861	13.81057	13.82255	13.83454
4.290	13.83454	13.84653	13.85854	13.87055	13.88257	13.89460	13.90664	13.91869	13.93075	13.94282	13.95490

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
4.300	13.95490	13.96699	13.97908	13.99119	14.00330	14.01543	14.02756	14.03970	14.05185	14.06401	14.07618
4.310	14.07618	14.08936	14.10055	14.11274	14.12495	14.13716	14.14939	14.16162	14.17387	14.18612	14.19838
4.320	14.19838	14.21055	14.22293	14.23522	14.24752	14.25983	14.27215	14.28447	14.29681	14.30915	14.32151
4.330	14.32151	14.33387	14.34625	14.35863	14.37102	14.38342	14.39583	14.40825	14.42068	14.43312	14.44557
4.340	14.44557	14.45803	14.47050	14.48297	14.49546	14.50795	14.52046	14.53297	14.54550	14.55803	14.57057
4.350	14.57057	14.58312	14.59569	14.60826	14.62084	14.63343	14.64603	14.65863	14.67125	14.68388	14.69652
4.360	14.69652	14.70916	14.72182	14.73449	14.74716	14.75985	14.77254	14.78525	14.79796	14.81068	14.82341
4.370	14.82342	14.83616	14.84891	14.86167	14.87444	14.88722	14.90001	14.91281	14.92562	14.93844	14.95127
4.380	14.95127	14.96411	14.97695	14.98981	15.00268	15.01555	15.02844	15.04134	15.05424	15.06716	15.08008
4.390	15.08008	15.09302	15.10596	15.11891	15.13188	15.14485	15.15783	15.17083	15.18383	15.19684	15.20986
4.400	15.20986	15.22290	15.23594	15.24899	15.26205	15.27512	15.28820	15.30129	15.31439	15.32750	15.34062
4.410	15.34062	15.35375	15.36689	15.38004	15.39320	15.40636	15.41954	15.43273	15.44593	15.45914	15.47235
4.420	15.47235	15.48558	15.49882	15.51207	15.52532	15.53859	15.55187	15.56515	15.57845	15.59176	15.60507
4.430	15.60508	15.61840	15.63174	15.64508	15.65844	15.67180	15.68518	15.69857	15.71196	15.72537	15.73878
4.440	15.73879	15.75221	15.76565	15.77909	15.79255	15.80601	15.81949	15.83298	15.84647	15.85997	15.87349
4.450	15.87349	15.88702	15.90055	15.91410	15.92766	15.94122	15.95480	15.96838	15.98198	15.99559	16.00920
4.460	16.00920	16.02283	16.03646	16.05011	16.06377	16.07743	16.09111	16.10480	16.11849	16.13220	16.14592
4.470	16.14592	16.15965	16.17339	16.18713	16.20089	16.21466	16.22844	16.24223	16.25603	16.26983	16.28365
4.480	16.28366	16.29748	16.31132	16.32517	16.33903	16.35290	16.36678	16.38067	16.39457	16.40849	16.42241
4.490	16.42241	16.43634	16.45028	16.46423	16.47820	16.49217	16.50615	16.52015	16.53415	16.54816	16.56219
4.500	16.56219	16.57622	16.59027	16.60432	16.61839	16.63246	16.64655	16.66065	16.67476	16.68887	16.70300
4.510	16.70300	16.71714	16.73129	16.74545	16.75962	16.77380	16.78799	16.80219	16.81640	16.83062	16.84485
4.520	16.84485	16.85909	16.87335	16.88761	16.90189	16.91617	16.93046	16.94477	16.95908	16.97341	16.98775
4.530	16.98775	17.00210	17.01645	17.03082	17.04520	17.05959	17.07399	17.08840	17.10282	17.11725	17.13169
4.540	17.13170	17.14615	17.16061	17.17509	17.18957	17.20407	17.21857	17.23309	17.24761	17.26215	17.27670
4.550	17.27670	17.29126	17.30583	17.32041	17.33500	17.34960	17.36421	17.37883	17.39347	17.40811	17.42276
4.560	17.42277	17.43743	17.45211	17.46679	17.48149	17.49620	17.51092	17.52565	17.54039	17.55514	17.56990
4.570	17.56990	17.58467	17.59946	17.61425	17.62906	17.64387	17.65870	17.67353	17.68838	17.70324	17.71811
4.580	17.71811	17.73299	17.74788	17.76279	17.77770	17.79262	17.80756	17.82250	17.83746	17.85243	17.86740
4.590	17.86741	17.88240	17.89739	17.91240	17.92743	17.94246	17.95750	17.97256	17.98762	18.00270	18.01779

STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
4.600	18.01779	18.03289	18.04800	18.06312	18.07825	18.09339	18.10854	18.12371	18.13888	18.15407	18.16926
4.610	18.16927	18.18417	18.19969	18.21492	18.23016	18.24541	18.26068	18.27595	18.29124	18.30653	18.32184
4.620	18.32184	18.33716	18.35249	18.36783	18.38318	18.39854	18.41392	18.42930	18.44470	18.46010	18.47552
4.630	18.47552	18.49095	18.50639	18.52184	18.53731	18.55278	18.56826	18.58376	18.59927	18.61479	18.63032
4.640	18.63032	18.64536	18.66141	18.67698	18.69255	18.70814	18.72373	18.73934	18.75496	18.77059	18.78623
4.650	18.78623	18.80189	18.81755	18.83323	18.84891	18.86461	18.88032	18.89604	18.91177	18.92752	18.94327
4.660	18.94327	18.95904	18.97482	18.99061	19.00641	19.02222	19.03804	19.05387	19.06972	19.08558	19.10144
4.670	19.10145	19.11733	19.13322	19.14912	19.16503	19.18096	19.19689	19.21284	19.22880	19.24477	19.26076
4.680	19.26076	19.27675	19.29276	19.30877	19.32480	19.34084	19.35689	19.37296	19.38903	19.40511	19.42121
4.690	19.42121	19.43732	19.45344	19.46957	19.48572	19.50187	19.51804	19.53422	19.55041	19.56661	19.58282
4.700	19.58282	19.59905	19.61528	19.63153	19.64779	19.66406	19.68034	19.69664	19.71294	19.72926	19.74559
4.710	19.74559	19.76193	19.77828	19.79465	19.81102	19.82741	19.84381	19.86022	19.87664	19.89307	19.90952
4.720	19.90952	19.92598	19.94245	19.95893	19.97542	19.99193	20.00844	20.02497	20.04151	20.05806	20.07462
4.730	20.07463	20.09120	20.10779	20.12438	20.14099	20.15762	20.17425	20.19089	20.20755	20.22422	20.24090
4.740	20.24090	20.25760	20.27430	20.29102	20.30775	20.32449	20.34124	20.35801	20.37478	20.39157	20.40837
4.750	20.40837	20.42518	20.44201	20.45884	20.47569	20.49255	20.50942	20.52630	20.54320	20.56011	20.57703
4.760	20.57703	20.59396	20.61090	20.62786	20.64482	20.66180	20.67880	20.69580	20.71281	20.72984	20.74688
4.770	20.74688	20.76393	20.78100	20.79807	20.81516	20.83226	20.84937	20.86650	20.88363	20.90078	20.91794
4.780	20.91794	20.93512	20.95230	20.96950	20.98671	21.00392	21.02116	21.03841	21.05566	21.07293	21.09021
4.790	21.09021	21.10751	21.12481	21.14213	21.15946	21.17681	21.19416	21.21153	21.22891	21.24630	21.26370
4.800	21.26370	21.28112	21.29855	21.31599	21.33344	21.35091	21.36838	21.38587	21.40338	21.42089	21.43842
4.810	21.43842	21.45596	21.47351	21.49107	21.50865	21.52624	21.54384	21.56145	21.57907	21.59671	21.61436
4.820	21.61436	21.63203	21.64970	21.66739	21.68509	21.70280	21.72052	21.73826	21.75601	21.77377	21.79155
4.830	21.79155	21.80933	21.82713	21.84495	21.86277	21.88061	21.89846	21.91632	21.93419	21.95208	21.96998
4.840	21.96998	21.98789	22.00582	22.02375	22.04170	22.05966	22.07764	22.09562	22.11362	22.13164	22.14966
4.850	22.14966	22.16770	22.18575	22.20381	22.22189	22.23997	22.25807	22.27619	22.29431	22.31245	22.33060
4.860	22.33060	22.34877	22.36694	22.38513	22.40334	22.42155	22.43978	22.45802	22.47627	22.49453	22.51281
4.870	22.51281	22.53111	22.54941	22.56772	22.58605	22.60439	22.62275	22.64112	22.65950	22.67789	22.69629
4.880	22.69630	22.71472	22.73315	22.75159	22.77005	22.78852	22.80700	22.82549	22.84400	22.86252	22.88106
4.890	22.88106	22.89951	22.91817	22.93674	22.95533	22.97392	22.99253	23.01116	23.02979	23.04844	23.06711



STREAM TUBE RELATIONSHIP (A/A\*)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
4.900	23.06712	23.08579	23.10448	23.12318	23.14190	23.16062	23.17937	23.19812	23.21689	23.23566	23.25446
4.910	23.25446	23.27327	23.29209	23.31092	23.32976	23.34862	23.36749	23.38637	23.40527	23.42418	23.44310
4.920	23.44311	23.46204	23.48099	23.49996	23.51893	23.53792	23.55692	23.57594	23.59496	23.61401	23.63306
4.930	23.63306	23.65213	23.67121	23.69030	23.70941	23.72853	23.74767	23.76681	23.78597	23.80514	23.82433
4.940	23.82433	23.84353	23.86275	23.88197	23.90121	23.92046	23.93973	23.95901	23.97830	23.99760	24.01692
4.950	24.01693	24.03626	24.05560	24.07496	24.09434	24.11372	24.13312	24.15253	24.17196	24.19140	24.21085
4.960	24.21085	24.23032	24.24979	24.26929	24.28879	24.30831	24.32784	24.34739	24.36695	24.38652	24.40611
4.970	24.40611	24.42571	24.44533	24.46495	24.48459	24.50424	24.52391	24.54359	24.56329	24.58300	24.60272
4.980	24.60272	24.62245	24.64220	24.66197	24.68174	24.70153	24.72133	24.74115	24.76097	24.78082	24.80067
4.990	24.80068	24.82055	24.84043	24.86033	24.88024	24.90017	24.92010	24.94006	24.96002	24.98000	24.99999
5.000	25.00000	25.02000	25.04002	25.06006	25.08010	25.10017	25.12024	25.14033	25.16043	25.18055	25.20068
5.010	25.20068	25.22082	25.24098	25.26115	25.28134	25.30153	25.32175	25.34197	25.36221	25.38247	25.40273
5.020	25.40274	25.42302	25.44332	25.46362	25.48395	25.50428	25.52463	25.54500	25.56538	25.58577	25.60618
5.030	25.60618	25.62660	25.64703	25.66748	25.68794	25.70841	25.72890	25.74941	25.76993	25.79046	25.81100
5.040	25.81100	25.83157	25.85214	25.87273	25.89333	25.91394	25.93457	25.95521	25.97587	25.99654	26.01723
5.050	26.01723	26.03793	26.05864	26.07937	26.10011	26.12087	26.14164	26.16242	26.18322	26.20403	26.22486
5.060	26.22486	26.24570	26.26655	26.28742	26.30831	26.32920	26.35011	26.37104	26.39198	26.41293	26.43390
5.070	26.43390	26.45488	26.47588	26.49689	26.51791	26.53895	26.56000	26.58107	26.60215	26.62325	26.64436
5.080	26.64436	26.66548	26.68652	26.70777	26.72894	26.75012	26.77132	26.79253	26.81375	26.83499	26.85624
5.090	26.85625	26.87751	26.89879	26.92009	26.94140	26.96272	26.98406	27.00542	27.02678	27.04816	27.06956
5.100	27.06956	27.09097	27.11240	27.13384	27.15529	27.17676	27.19824	27.21974	27.24125	27.26278	27.28432
5.110	27.28432	27.30588	27.32745	27.34903	27.37063	27.39225	27.41387	27.43551	27.45717	27.47885	27.50053
5.120	27.50053	27.52223	27.54395	27.56568	27.58743	27.60918	27.63096	27.65275	27.67455	27.69637	27.71820
5.130	27.71820	27.74005	27.76191	27.78378	27.80568	27.82758	27.84950	27.87144	27.89339	27.91535	27.93733
5.140	27.93733	27.95933	27.98134	28.00336	28.02540	28.04745	28.06952	28.09160	28.11370	28.13581	28.15793
5.150	28.15794	28.18008	28.20224	28.22441	28.24659	28.26879	28.29101	28.31324	28.33548	28.35774	28.38002
5.160	28.38002	28.40231	28.42462	28.44694	28.46927	28.49162	28.51398	28.53636	28.55876	28.58117	28.60359
5.170	28.60359	28.62603	28.64849	28.67096	28.69344	28.71594	28.73845	28.76098	28.78353	28.80608	28.82866
5.180	28.82866	28.85125	28.87385	28.89647	28.91911	28.94176	28.96442	28.98710	29.00979	29.03250	29.05523
5.190	29.05523	29.07797	29.10073	29.12350	29.14628	29.16909	29.19190	29.21473	29.23758	29.26044	29.28331

## Appendix A (continued)

Tabulation of the Ratio of Compressible Dynamic Pressure  
to Total Pressure,  $q_c/P_t$ .

The ratio is tabulated versus Mach number.

$q_c/P_t$  is labelled QC/PT in the tabulation.

QC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.00	0.	0.00000	0.00000	0.00001	0.00001	0.00002	0.00003	0.00003	0.00004	0.00006	0.00007
0.01	0.00007	0.00002	0.00010	0.00012	0.00014	0.00016	0.00018	0.00020	0.00023	0.00025	0.00028
0.02	0.00028	0.00031	0.00034	0.00037	0.00040	0.00044	0.00047	0.00051	0.00055	0.00059	0.00063
0.03	0.00063	0.00067	0.00072	0.00076	0.00081	0.00086	0.00091	0.00096	0.00101	0.00106	0.00112
0.04	0.00112	0.00118	0.00125	0.00129	0.00135	0.00142	0.00148	0.00154	0.00161	0.00168	0.00175
0.05	0.00175	0.00182	0.00189	0.00196	0.00204	0.00211	0.00219	0.00227	0.00235	0.00243	0.00252
0.06	0.00252	0.00260	0.00269	0.00277	0.00286	0.00295	0.00304	0.00314	0.00323	0.00333	0.00342
0.07	0.00342	0.00352	0.00362	0.00372	0.00382	0.00393	0.00403	0.00414	0.00425	0.00436	0.00447
0.08	0.00447	0.00458	0.00469	0.00481	0.00492	0.00504	0.00516	0.00528	0.00540	0.00553	0.00565
0.09	0.00565	0.00578	0.00590	0.00603	0.00616	0.00629	0.00642	0.00656	0.00669	0.00683	0.00697
0.10	0.00697	0.00711	0.00725	0.00739	0.00753	0.00768	0.00783	0.00797	0.00812	0.00827	0.00842
0.11	0.00842	0.00858	0.00873	0.00889	0.00904	0.00920	0.00936	0.00952	0.00969	0.00985	0.01002
0.12	0.01002	0.01018	0.01035	0.01052	0.01069	0.01086	0.01103	0.01121	0.01138	0.01156	0.01174
0.13	0.01174	0.01192	0.01210	0.01228	0.01247	0.01265	0.01284	0.01303	0.01322	0.01341	0.01360
0.14	0.01360	0.01379	0.01399	0.01418	0.01438	0.01458	0.01478	0.01498	0.01518	0.01539	0.01559
0.15	0.01559	0.01580	0.01601	0.01622	0.01643	0.01664	0.01685	0.01706	0.01728	0.01750	0.01772
0.16	0.01772	0.01794	0.01816	0.01838	0.01860	0.01883	0.01905	0.01928	0.01951	0.01974	0.01997
0.17	0.01997	0.02020	0.02044	0.02067	0.02091	0.02115	0.02138	0.02162	0.02187	0.02211	0.02235
0.18	0.02235	0.02260	0.02285	0.02309	0.02334	0.02359	0.02384	0.02410	0.02435	0.02461	0.02486
0.19	0.02486	0.02512	0.02538	0.02564	0.02590	0.02617	0.02643	0.02670	0.02697	0.02723	0.02750
0.20	0.02750	0.02777	0.02805	0.02832	0.02859	0.02887	0.02915	0.02942	0.02970	0.02999	0.03027
0.21	0.03027	0.03055	0.03083	0.03112	0.03141	0.03170	0.03198	0.03228	0.03257	0.03286	0.03315
0.22	0.03315	0.03345	0.03375	0.03405	0.03434	0.03464	0.03494	0.03525	0.03555	0.03586	0.03617
0.23	0.03617	0.03647	0.03677	0.03709	0.03740	0.03772	0.03803	0.03834	0.03866	0.03898	0.03930
0.24	0.03930	0.03962	0.03994	0.04026	0.04059	0.04091	0.04123	0.04156	0.04189	0.04222	0.04255
0.25	0.04255	0.04288	0.04321	0.04355	0.04388	0.04422	0.04455	0.04489	0.04523	0.04557	0.04592
0.26	0.04592	0.04626	0.04660	0.04695	0.04730	0.04764	0.04799	0.04834	0.04869	0.04905	0.04940
0.27	0.04940	0.04975	0.05011	0.05047	0.05083	0.05118	0.05154	0.05191	0.05227	0.05263	0.05300
0.28	0.05300	0.05336	0.05373	0.05410	0.05447	0.05484	0.05521	0.05558	0.05596	0.05633	0.05671
0.29	0.05671	0.05709	0.05746	0.05784	0.05822	0.05861	0.05899	0.05937	0.05976	0.06014	0.06053

GC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.30	0.06053	0.06092	0.06131	0.06170	0.06209	0.06248	0.06288	0.06327	0.06367	0.06406	0.06446
0.31	0.06446	0.06486	0.06526	0.06566	0.06606	0.06647	0.06687	0.06727	0.06768	0.06809	0.06850
0.32	0.06850	0.06891	0.06932	0.06973	0.07014	0.07055	0.07097	0.07138	0.07180	0.07222	0.07264
0.33	0.07264	0.07306	0.07348	0.07390	0.07432	0.07475	0.07517	0.07560	0.07603	0.07645	0.07688
0.34	0.07688	0.07731	0.07774	0.07818	0.07861	0.07904	0.07948	0.07991	0.08035	0.08079	0.08123
0.35	0.08123	0.08167	0.08211	0.08255	0.08299	0.08344	0.08388	0.08433	0.08477	0.08522	0.08567
0.36	0.08567	0.08612	0.08657	0.08702	0.08747	0.08793	0.08838	0.08884	0.08929	0.08975	0.09021
0.37	0.09021	0.09067	0.09113	0.09159	0.09205	0.09252	0.09298	0.09344	0.09391	0.09438	0.09484
0.38	0.09484	0.09531	0.09578	0.09625	0.09672	0.09720	0.09767	0.09814	0.09862	0.09909	0.09957
0.39	0.09957	0.10005	0.10053	0.10100	0.10147	0.10197	0.10245	0.10293	0.10342	0.10390	0.10439
0.40	0.10439	0.10487	0.10536	0.10585	0.10634	0.10683	0.10732	0.10781	0.10830	0.10879	0.10929
0.41	0.10929	0.10978	0.11028	0.11078	0.11127	0.11177	0.11227	0.11277	0.11327	0.11377	0.11428
0.42	0.11428	0.11478	0.11529	0.11579	0.11630	0.11680	0.11731	0.11782	0.11833	0.11884	0.11935
0.43	0.11935	0.11986	0.12037	0.12089	0.12140	0.12192	0.12245	0.12295	0.12346	0.12398	0.12450
0.44	0.12450	0.12502	0.12554	0.12606	0.12658	0.12711	0.12763	0.12815	0.12868	0.12921	0.12973
0.45	0.12973	0.13026	0.13079	0.13132	0.13185	0.13238	0.13291	0.13344	0.13397	0.13451	0.13504
0.46	0.13504	0.13557	0.13611	0.13665	0.13718	0.13772	0.13826	0.13880	0.13934	0.13988	0.14042
0.47	0.14042	0.14096	0.14150	0.14205	0.14259	0.14314	0.14368	0.14423	0.14478	0.14532	0.14587
0.48	0.14587	0.14642	0.14697	0.14752	0.14807	0.14862	0.14918	0.14973	0.15028	0.15084	0.15139
0.49	0.15139	0.15195	0.15250	0.15306	0.15362	0.15418	0.15474	0.15530	0.15586	0.15642	0.15698
0.50	0.15698	0.15754	0.15811	0.15867	0.15923	0.15980	0.16036	0.16093	0.16150	0.16206	0.16263
0.51	0.16263	0.16320	0.16377	0.16434	0.16491	0.16548	0.16605	0.16663	0.16720	0.16777	0.16835
0.52	0.16835	0.16892	0.16950	0.17007	0.17065	0.17123	0.17180	0.17238	0.17296	0.17354	0.17412
0.53	0.17412	0.17470	0.17528	0.17586	0.17644	0.17703	0.17761	0.17819	0.17878	0.17936	0.17995
0.54	0.17995	0.18054	0.18112	0.18171	0.18230	0.18288	0.18347	0.18406	0.18465	0.18524	0.18583
0.55	0.18583	0.18643	0.18702	0.18761	0.18820	0.18880	0.18939	0.18998	0.19058	0.19118	0.19177
0.56	0.19177	0.19237	0.19296	0.19356	0.19416	0.19476	0.19536	0.19596	0.19656	0.19716	0.19776
0.57	0.19776	0.19836	0.19896	0.19956	0.20017	0.20077	0.20137	0.20198	0.20258	0.20319	0.20379
0.58	0.20379	0.20440	0.20501	0.20561	0.20622	0.20684	0.20744	0.20804	0.20865	0.20926	0.20987
0.59	0.20987	0.21048	0.21109	0.21171	0.21232	0.21293	0.21354	0.21415	0.21477	0.21538	0.21600

QC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.60	0.21600	0.21661	0.21722	0.21784	0.21846	0.21907	0.21969	0.22031	0.22092	0.22154	0.22216
0.61	0.22216	0.22278	0.22340	0.22401	0.22463	0.22525	0.22587	0.22650	0.22712	0.22774	0.22836
0.62	0.22836	0.22893	0.22960	0.23023	0.23085	0.23147	0.23210	0.23272	0.23335	0.23397	0.23460
0.63	0.23460	0.23522	0.23585	0.23647	0.23710	0.23773	0.23836	0.23898	0.23961	0.24024	0.24087
0.64	0.24087	0.24150	0.24213	0.24276	0.24338	0.24401	0.24465	0.24528	0.24591	0.24654	0.24717
0.65	0.24717	0.24730	0.24843	0.24907	0.24970	0.25033	0.25096	0.25160	0.25223	0.25287	0.25350
0.66	0.25350	0.25414	0.25477	0.25541	0.25604	0.25668	0.25731	0.25795	0.25859	0.25922	0.25986
0.67	0.25986	0.26050	0.26113	0.26177	0.26241	0.26305	0.26369	0.26432	0.26496	0.26560	0.26624
0.68	0.26624	0.26683	0.26752	0.26816	0.26880	0.26944	0.27008	0.27072	0.27136	0.27200	0.27265
0.69	0.27265	0.27329	0.27393	0.27457	0.27521	0.27586	0.27650	0.27714	0.27778	0.27843	0.27907
0.70	0.27907	0.27971	0.28036	0.28100	0.28165	0.28229	0.28293	0.28358	0.28422	0.28487	0.28551
0.71	0.28551	0.28616	0.28680	0.28745	0.28810	0.28874	0.28939	0.29003	0.29068	0.29133	0.29197
0.72	0.29197	0.29262	0.29327	0.29391	0.29456	0.29521	0.29586	0.29650	0.29715	0.29780	0.29845
0.73	0.29845	0.29909	0.29974	0.30039	0.30104	0.30169	0.30234	0.30298	0.30363	0.30428	0.30493
0.74	0.30493	0.30558	0.30623	0.30688	0.30753	0.30818	0.30883	0.30948	0.31013	0.31078	0.31143
0.75	0.31143	0.31208	0.31273	0.31338	0.31403	0.31468	0.31533	0.31598	0.31663	0.31728	0.31793
0.76	0.31793	0.31859	0.31923	0.31988	0.32053	0.32118	0.32183	0.32248	0.32313	0.32379	0.32444
0.77	0.32444	0.32509	0.32574	0.32639	0.32704	0.32769	0.32834	0.32899	0.32965	0.33030	0.33095
0.78	0.33095	0.33160	0.33225	0.33290	0.33355	0.33421	0.33486	0.33551	0.33616	0.33681	0.33746
0.79	0.33746	0.33811	0.33877	0.33942	0.34007	0.34072	0.34137	0.34202	0.34267	0.34333	0.34398
0.80	0.34398	0.34465	0.34529	0.34593	0.34658	0.34723	0.34788	0.34854	0.34919	0.34984	0.35049
0.81	0.35049	0.35114	0.35179	0.35244	0.35309	0.35374	0.35440	0.35505	0.35570	0.35635	0.35700
0.82	0.35700	0.35765	0.35830	0.35895	0.35960	0.36025	0.36090	0.36155	0.36220	0.36285	0.36350
0.83	0.36350	0.36415	0.36480	0.36545	0.36610	0.36675	0.36740	0.36805	0.36870	0.36935	0.37000
0.84	0.37000	0.37065	0.37130	0.37195	0.37260	0.37325	0.37389	0.37454	0.37519	0.37584	0.37649
0.85	0.37649	0.37713	0.37778	0.37843	0.37908	0.37973	0.38037	0.38102	0.38167	0.38232	0.38296
0.86	0.38296	0.38361	0.38426	0.38490	0.38555	0.38620	0.38684	0.38749	0.38814	0.38878	0.38943
0.87	0.38943	0.39008	0.39072	0.39137	0.39201	0.39266	0.39330	0.39395	0.39459	0.39524	0.39588
0.88	0.39588	0.39653	0.39717	0.39781	0.39846	0.39910	0.39975	0.40039	0.40103	0.40168	0.40232
0.89	0.40232	0.40296	0.40360	0.40425	0.40489	0.40553	0.40617	0.40681	0.40746	0.40810	0.40874

CC/PT

COMPRESSIBLE G TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.90	0.40074	0.40938	0.41002	0.41066	0.41130	0.41194	0.41258	0.41322	0.41386	0.41450	0.41514
0.91	0.41514	0.41578	0.41642	0.41706	0.41770	0.41835	0.41897	0.41961	0.42025	0.42089	0.42152
0.92	0.42152	0.42216	0.42280	0.42343	0.42407	0.42471	0.42534	0.42598	0.42661	0.42725	0.42788
0.93	0.42788	0.42852	0.42915	0.42979	0.43042	0.43106	0.43169	0.43232	0.43296	0.43359	0.43422
0.94	0.43422	0.43486	0.43549	0.43612	0.43675	0.43738	0.43801	0.43865	0.43928	0.43991	0.44054
0.95	0.44054	0.44117	0.44180	0.44243	0.44306	0.44369	0.44432	0.44494	0.44557	0.44620	0.44683
0.96	0.44683	0.44746	0.44808	0.44871	0.44934	0.44996	0.45059	0.45122	0.45184	0.45247	0.45309
0.97	0.45309	0.45372	0.45434	0.45497	0.45559	0.45621	0.45684	0.45746	0.45808	0.45871	0.45933
0.98	0.45933	0.45995	0.46057	0.46119	0.46182	0.46244	0.46306	0.46368	0.46430	0.46492	0.46554
0.99	0.46554	0.46616	0.46678	0.46739	0.46801	0.46863	0.46925	0.46987	0.47048	0.47110	0.47172
1.00	0.47172	0.47233	0.47295	0.47356	0.47418	0.47479	0.47541	0.47602	0.47664	0.47725	0.47786
1.01	0.47786	0.47848	0.47909	0.47970	0.48031	0.48093	0.48154	0.48215	0.48276	0.48337	0.48398
1.02	0.48398	0.48459	0.48520	0.48581	0.48642	0.48703	0.48763	0.48824	0.48885	0.48946	0.49006
1.03	0.49006	0.49067	0.49127	0.49188	0.49249	0.49309	0.49370	0.49430	0.49490	0.49551	0.49611
1.04	0.49611	0.49671	0.49732	0.49792	0.49852	0.49912	0.49972	0.50032	0.50093	0.50153	0.50213
1.05	0.50213	0.50272	0.50332	0.50392	0.50452	0.50512	0.50572	0.50631	0.50691	0.50751	0.50810
1.06	0.50810	0.50870	0.50930	0.50989	0.51049	0.51108	0.51167	0.51227	0.51286	0.51345	0.51405
1.07	0.51405	0.51464	0.51523	0.51582	0.51641	0.51700	0.51759	0.51818	0.51877	0.51936	0.51995
1.08	0.51995	0.52054	0.52113	0.52171	0.52230	0.52289	0.52347	0.52406	0.52465	0.52523	0.52582
1.09	0.52582	0.52640	0.52699	0.52757	0.52815	0.52873	0.52932	0.52990	0.53048	0.53106	0.53164
1.10	0.53164	0.53222	0.53280	0.53338	0.53396	0.53454	0.53512	0.53570	0.53628	0.53685	0.53743
1.11	0.53743	0.53801	0.53858	0.53916	0.53974	0.54031	0.54088	0.54146	0.54203	0.54260	0.54318
1.12	0.54318	0.54375	0.54432	0.54489	0.54546	0.54603	0.54661	0.54718	0.54774	0.54831	0.54888
1.13	0.54888	0.54945	0.55002	0.55059	0.55115	0.55172	0.55229	0.55285	0.55342	0.55398	0.55455
1.14	0.55455	0.55511	0.55567	0.55624	0.55680	0.55736	0.55792	0.55849	0.55905	0.55961	0.56017
1.15	0.56017	0.56073	0.56129	0.56185	0.56240	0.56296	0.56352	0.56408	0.56463	0.56519	0.56575
1.16	0.56575	0.56630	0.56686	0.56741	0.56797	0.56852	0.56907	0.56963	0.57018	0.57073	0.57128
1.17	0.57128	0.57183	0.57238	0.57293	0.57348	0.57403	0.57458	0.57513	0.57568	0.57622	0.57677
1.18	0.57677	0.57732	0.57786	0.57841	0.57896	0.57950	0.58005	0.58059	0.58113	0.58168	0.58222
1.19	0.58222	0.58276	0.58330	0.58384	0.58438	0.58492	0.58546	0.58600	0.58654	0.58708	0.58762

GC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	Q	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.20	0.58762	0.58816	0.58369	0.58923	0.58977	0.59030	0.59084	0.59137	0.59191	0.59244	0.59298
1.21	0.59298	0.59351	0.59404	0.59457	0.59511	0.59564	0.59617	0.59670	0.59723	0.59776	0.59829
1.22	0.59829	0.59881	0.59934	0.59987	0.60040	0.60092	0.60145	0.60198	0.60250	0.60303	0.60355
1.23	0.60355	0.60407	0.60460	0.60512	0.60564	0.60616	0.60669	0.60721	0.60773	0.60825	0.60877
1.24	0.60877	0.60929	0.60981	0.61032	0.61084	0.61136	0.61188	0.61239	0.61291	0.61342	0.61394
1.25	0.61394	0.61445	0.61497	0.61548	0.61599	0.61651	0.61702	0.61753	0.61804	0.61855	0.61906
1.26	0.61906	0.61957	0.62008	0.62059	0.62110	0.62161	0.62211	0.62262	0.62313	0.62363	0.62414
1.27	0.62414	0.62464	0.62515	0.62565	0.62616	0.62666	0.62716	0.62766	0.62817	0.62867	0.62917
1.28	0.62917	0.62967	0.63017	0.63067	0.63117	0.63166	0.63216	0.63266	0.63316	0.63365	0.63415
1.29	0.63415	0.63464	0.63514	0.63563	0.63613	0.63662	0.63711	0.63761	0.63810	0.63859	0.63908
1.30	0.63908	0.63957	0.64006	0.64055	0.64104	0.64153	0.64202	0.64251	0.64299	0.64348	0.64397
1.31	0.64397	0.64445	0.64494	0.64542	0.64591	0.64639	0.64688	0.64736	0.64784	0.64832	0.64880
1.32	0.64880	0.64929	0.64977	0.65025	0.65073	0.65121	0.65168	0.65216	0.65264	0.65312	0.65359
1.33	0.65359	0.65407	0.65455	0.65502	0.65550	0.65597	0.65644	0.65692	0.65739	0.65786	0.65833
1.34	0.65833	0.65880	0.65928	0.65975	0.66022	0.66069	0.66115	0.66162	0.66209	0.66256	0.66303
1.35	0.66303	0.66349	0.66396	0.66442	0.66489	0.66535	0.66582	0.66629	0.66674	0.66721	0.66767
1.36	0.66767	0.66813	0.66859	0.66905	0.66951	0.66997	0.67043	0.67089	0.67135	0.67181	0.67226
1.37	0.67226	0.67272	0.67318	0.67363	0.67409	0.67454	0.67500	0.67545	0.67590	0.67636	0.67681
1.38	0.67681	0.67726	0.67771	0.67816	0.67861	0.67906	0.67951	0.67996	0.68041	0.68086	0.68131
1.39	0.68131	0.68175	0.68220	0.68265	0.68309	0.68354	0.68398	0.68443	0.68487	0.68531	0.68576
1.40	0.68576	0.68620	0.68664	0.68708	0.68752	0.68796	0.68840	0.68884	0.68928	0.68972	0.69016
1.41	0.69016	0.69059	0.69103	0.69147	0.69190	0.69234	0.69277	0.69321	0.69364	0.69407	0.69451
1.42	0.69451	0.69494	0.69537	0.69580	0.69623	0.69667	0.69710	0.69753	0.69795	0.69838	0.69881
1.43	0.69881	0.69924	0.69967	0.70009	0.70052	0.70095	0.70137	0.70180	0.70222	0.70264	0.70307
1.44	0.70307	0.70349	0.70391	0.70433	0.70476	0.70518	0.70560	0.70602	0.70644	0.70686	0.70727
1.45	0.70727	0.70769	0.70811	0.70853	0.70894	0.70936	0.70978	0.71019	0.71061	0.71102	0.71143
1.46	0.71143	0.71185	0.71226	0.71267	0.71308	0.71349	0.71391	0.71432	0.71473	0.71514	0.71554
1.47	0.71554	0.71595	0.71636	0.71677	0.71718	0.71758	0.71799	0.71839	0.71880	0.71920	0.71961
1.48	0.71961	0.72001	0.72042	0.72082	0.72122	0.72162	0.72202	0.72242	0.72282	0.72322	0.72362
1.49	0.72362	0.72402	0.72442	0.72482	0.72522	0.72561	0.72601	0.72641	0.72680	0.72720	0.72759

## GC/PT

## COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.50	0.72759	0.72799	0.72839	0.72877	0.72917	0.72956	0.72995	0.73034	0.73073	0.73112	0.73151
1.51	0.73151	0.73190	0.73229	0.73268	0.73307	0.73346	0.73385	0.73423	0.73462	0.73500	0.73539
1.52	0.73539	0.73577	0.73616	0.73654	0.73693	0.73731	0.73769	0.73807	0.73846	0.73884	0.73922
1.53	0.73922	0.73960	0.73998	0.74036	0.74074	0.74111	0.74149	0.74187	0.74225	0.74262	0.74300
1.54	0.74300	0.74337	0.74375	0.74412	0.74450	0.74487	0.74525	0.74562	0.74599	0.74636	0.74673
1.55	0.74673	0.74710	0.74748	0.74785	0.74821	0.74858	0.74895	0.74932	0.74969	0.75006	0.75042
1.56	0.75042	0.75079	0.75116	0.75152	0.75189	0.75225	0.75261	0.75298	0.75334	0.75370	0.75407
1.57	0.75407	0.75443	0.75479	0.75515	0.75551	0.75587	0.75623	0.75659	0.75695	0.75731	0.75766
1.58	0.75766	0.75802	0.75838	0.75873	0.75909	0.75945	0.75980	0.76016	0.76051	0.76086	0.76122
1.59	0.76122	0.76157	0.76192	0.76227	0.76263	0.76298	0.76333	0.76368	0.76403	0.76438	0.76472
1.60	0.76472	0.76507	0.76542	0.76577	0.76612	0.76646	0.76681	0.76715	0.76750	0.76784	0.76819
1.61	0.76819	0.76853	0.76888	0.76922	0.76956	0.76990	0.77024	0.77059	0.77093	0.77127	0.77161
1.62	0.77161	0.77195	0.77229	0.77262	0.77296	0.77330	0.77364	0.77397	0.77431	0.77465	0.77498
1.63	0.77498	0.77532	0.77565	0.77599	0.77632	0.77665	0.77699	0.77732	0.77765	0.77798	0.77831
1.64	0.77831	0.77864	0.77897	0.77930	0.77963	0.77996	0.78029	0.78062	0.78095	0.78127	0.78160
1.65	0.78160	0.78193	0.78225	0.78258	0.78290	0.78323	0.78355	0.78388	0.78420	0.78452	0.78485
1.66	0.78485	0.78517	0.78549	0.78581	0.78613	0.78645	0.78677	0.78709	0.78741	0.78773	0.78805
1.67	0.78805	0.78837	0.78868	0.78900	0.78932	0.78963	0.78995	0.79026	0.79058	0.79089	0.79121
1.68	0.79121	0.79152	0.79184	0.79215	0.79246	0.79277	0.79308	0.79340	0.79371	0.79402	0.79433
1.69	0.79433	0.79464	0.79494	0.79525	0.79556	0.79587	0.79618	0.79648	0.79679	0.79710	0.79740
1.70	0.79740	0.79771	0.79801	0.79832	0.79862	0.79893	0.79923	0.79953	0.79983	0.80014	0.80044
1.71	0.80044	0.80074	0.80104	0.80134	0.80164	0.80194	0.80224	0.80254	0.80284	0.80313	0.80343
1.72	0.80343	0.80373	0.80403	0.80432	0.80462	0.80491	0.80521	0.80550	0.80580	0.80609	0.80639
1.73	0.80639	0.80668	0.80697	0.80726	0.80756	0.80785	0.80814	0.80843	0.80872	0.80901	0.80930
1.74	0.80930	0.80959	0.80988	0.81016	0.81045	0.81074	0.81103	0.81131	0.81160	0.81189	0.81217
1.75	0.81217	0.81246	0.81274	0.81303	0.81331	0.81359	0.81388	0.81416	0.81444	0.81472	0.81501
1.76	0.81501	0.81529	0.81557	0.81585	0.81613	0.81641	0.81669	0.81697	0.81725	0.81752	0.81780
1.77	0.81780	0.81808	0.81836	0.81863	0.81891	0.81918	0.81946	0.81973	0.82001	0.82028	0.82056
1.78	0.82056	0.82083	0.82110	0.82138	0.82165	0.82192	0.82219	0.82246	0.82274	0.82301	0.82328
1.79	0.82328	0.82355	0.82381	0.82408	0.82435	0.82462	0.82489	0.82516	0.82542	0.82569	0.82596



QC/PT

COMPRESSIBLE 2 TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.80	0.82596	0.82622	0.82649	0.82675	0.82702	0.82728	0.82755	0.82781	0.82807	0.82834	0.82860
1.81	0.82860	0.82886	0.82912	0.82938	0.82965	0.82991	0.83017	0.83043	0.83069	0.83095	0.83120
1.82	0.83120	0.83146	0.83172	0.83198	0.83224	0.83249	0.83275	0.83301	0.83326	0.83352	0.83377
1.83	0.83377	0.83403	0.83428	0.83454	0.83479	0.83504	0.83530	0.83555	0.83580	0.83605	0.83631
1.84	0.83631	0.83656	0.83681	0.83706	0.83731	0.83756	0.83781	0.83806	0.83831	0.83855	0.83880
1.85	0.83880	0.83905	0.83930	0.83954	0.83979	0.84004	0.84028	0.84053	0.84077	0.84102	0.84126
1.86	0.84126	0.84151	0.84175	0.84199	0.84224	0.84248	0.84272	0.84296	0.84321	0.84345	0.84369
1.87	0.84369	0.84393	0.84417	0.84441	0.84465	0.84489	0.84513	0.84536	0.84560	0.84584	0.84608
1.88	0.84608	0.84632	0.84655	0.84679	0.84703	0.84726	0.84750	0.84773	0.84797	0.84820	0.84843
1.89	0.84843	0.84867	0.84890	0.84913	0.84937	0.84960	0.84983	0.85006	0.85030	0.85053	0.85076
1.90	0.85076	0.85099	0.85122	0.85145	0.85168	0.85191	0.85213	0.85236	0.85259	0.85282	0.85305
1.91	0.85305	0.85327	0.85350	0.85373	0.85395	0.85418	0.85440	0.85463	0.85485	0.85508	0.85530
1.92	0.85530	0.85552	0.85575	0.85597	0.85619	0.85642	0.85664	0.85686	0.85708	0.85730	0.85752
1.93	0.85752	0.85774	0.85796	0.85818	0.85840	0.85862	0.85884	0.85906	0.85928	0.85950	0.85971
1.94	0.85971	0.85993	0.86015	0.86036	0.86058	0.86080	0.86101	0.86123	0.86144	0.86166	0.86187
1.95	0.86187	0.86209	0.86230	0.86251	0.86273	0.86294	0.86315	0.86336	0.86357	0.86379	0.86400
1.96	0.86400	0.86421	0.86442	0.86463	0.86484	0.86505	0.86526	0.86547	0.86568	0.86588	0.86609
1.97	0.86609	0.86630	0.86651	0.86671	0.86692	0.86713	0.86733	0.86754	0.86775	0.86795	0.86816
1.98	0.86816	0.86836	0.86856	0.86877	0.86897	0.86918	0.86938	0.86958	0.86978	0.86999	0.87019
1.99	0.87019	0.87039	0.87059	0.87079	0.87099	0.87119	0.87139	0.87159	0.87179	0.87199	0.87219
2.00	0.87219	0.87239	0.87259	0.87279	0.87299	0.87319	0.87338	0.87358	0.87377	0.87397	0.87417
2.01	0.87417	0.87436	0.87456	0.87475	0.87494	0.87514	0.87534	0.87553	0.87572	0.87592	0.87611
2.02	0.87611	0.87630	0.87649	0.87669	0.87688	0.87707	0.87726	0.87745	0.87764	0.87783	0.87802
2.03	0.87802	0.87821	0.87840	0.87859	0.87878	0.87897	0.87916	0.87935	0.87954	0.87972	0.87991
2.04	0.87991	0.88010	0.88028	0.88047	0.88066	0.88084	0.88103	0.88121	0.88140	0.88158	0.88177
2.05	0.88177	0.88195	0.88214	0.88232	0.88250	0.88269	0.88287	0.88305	0.88323	0.88342	0.88360
2.06	0.88360	0.88378	0.88396	0.88414	0.88432	0.88450	0.88468	0.88486	0.88504	0.88522	0.88540
2.07	0.88540	0.88558	0.88576	0.88593	0.88611	0.88629	0.88647	0.88664	0.88682	0.88700	0.88717
2.08	0.88717	0.88735	0.88753	0.88770	0.88788	0.88805	0.88823	0.88840	0.88857	0.88875	0.88892
2.09	0.88892	0.88910	0.88927	0.88944	0.88961	0.88979	0.88996	0.89013	0.89030	0.89047	0.89064

CC/PT

COMPRESSIBLE 2 TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.10	0.89064	0.89081	0.89098	0.89116	0.89133	0.89149	0.89166	0.89183	0.89200	0.89217	0.89234
2.11	0.89234	0.89251	0.89268	0.89284	0.89301	0.89318	0.89334	0.89351	0.89368	0.89384	0.89401
2.12	0.89401	0.89417	0.89434	0.89450	0.89467	0.89483	0.89500	0.89516	0.89533	0.89549	0.89565
2.13	0.89565	0.89582	0.89598	0.89614	0.89630	0.89647	0.89663	0.89679	0.89695	0.89711	0.89727
2.14	0.89727	0.89743	0.89759	0.89775	0.89791	0.89807	0.89823	0.89839	0.89855	0.89871	0.89887
2.15	0.89887	0.89902	0.89918	0.89934	0.89950	0.89965	0.89981	0.89997	0.90012	0.90028	0.90044
2.16	0.90044	0.90059	0.90075	0.90090	0.90106	0.90121	0.90137	0.90152	0.90167	0.90183	0.90198
2.17	0.90198	0.90213	0.90229	0.90244	0.90259	0.90274	0.90290	0.90305	0.90320	0.90335	0.90350
2.18	0.90350	0.90365	0.90380	0.90395	0.90410	0.90425	0.90440	0.90455	0.90470	0.90485	0.90500
2.19	0.90500	0.90515	0.90530	0.90545	0.90559	0.90574	0.90589	0.90604	0.90618	0.90633	0.90648
2.20	0.90648	0.90662	0.90677	0.90691	0.90706	0.90720	0.90735	0.90749	0.90764	0.90778	0.90793
2.21	0.90793	0.90807	0.90822	0.90836	0.90850	0.90865	0.90879	0.90893	0.90907	0.90922	0.90936
2.22	0.90936	0.90950	0.90964	0.90978	0.90992	0.91006	0.91021	0.91035	0.91049	0.91063	0.91077
2.23	0.91077	0.91091	0.91104	0.91118	0.91132	0.91146	0.91160	0.91174	0.91188	0.91201	0.91215
2.24	0.91215	0.91229	0.91243	0.91256	0.91270	0.91284	0.91297	0.91311	0.91324	0.91338	0.91352
2.25	0.91352	0.91365	0.91379	0.91392	0.91406	0.91419	0.91432	0.91446	0.91459	0.91473	0.91486
2.26	0.91486	0.91499	0.91512	0.91526	0.91539	0.91552	0.91565	0.91579	0.91592	0.91605	0.91618
2.27	0.91618	0.91631	0.91644	0.91657	0.91670	0.91683	0.91696	0.91709	0.91722	0.91735	0.91748
2.28	0.91748	0.91761	0.91774	0.91787	0.91800	0.91813	0.91825	0.91838	0.91851	0.91864	0.91876
2.29	0.91876	0.91889	0.91902	0.91914	0.91927	0.91940	0.91952	0.91965	0.91977	0.91990	0.92002
2.30	0.92002	0.92015	0.92027	0.92040	0.92052	0.92065	0.92077	0.92090	0.92102	0.92114	0.92127
2.31	0.92127	0.92139	0.92151	0.92163	0.92176	0.92188	0.92200	0.92212	0.92225	0.92237	0.92249
2.32	0.92249	0.92261	0.92273	0.92285	0.92297	0.92309	0.92321	0.92333	0.92345	0.92357	0.92369
2.33	0.92369	0.92381	0.92393	0.92405	0.92417	0.92429	0.92440	0.92452	0.92464	0.92476	0.92488
2.34	0.92488	0.92499	0.92511	0.92523	0.92534	0.92546	0.92558	0.92569	0.92581	0.92592	0.92604
2.35	0.92604	0.92616	0.92627	0.92639	0.92650	0.92662	0.92673	0.92685	0.92696	0.92707	0.92719
2.36	0.92719	0.92730	0.92742	0.92753	0.92764	0.92775	0.92787	0.92798	0.92809	0.92820	0.92832
2.37	0.92832	0.92843	0.92854	0.92865	0.92876	0.92887	0.92899	0.92910	0.92921	0.92932	0.92943
2.38	0.92943	0.92954	0.92965	0.92976	0.92987	0.92998	0.93009	0.93020	0.93030	0.93041	0.93052
2.39	0.93052	0.93063	0.93074	0.93085	0.93095	0.93106	0.93117	0.93128	0.93138	0.93149	0.93160

QC/PT

● COMPRESSIBLE G TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.40	0.93160	0.93171	0.93181	0.93192	0.93202	0.93213	0.93224	0.93234	0.93245	0.93255	0.93266
2.41	0.93266	0.93276	0.93287	0.93297	0.93303	0.93318	0.93329	0.93339	0.93349	0.93360	0.93370
2.42	0.93370	0.93380	0.93391	0.93401	0.93411	0.93422	0.93432	0.93442	0.93452	0.93463	0.93473
2.43	0.93473	0.93483	0.93493	0.93503	0.93513	0.93523	0.93533	0.93544	0.93554	0.93564	0.93574
2.44	0.93574	0.93584	0.93594	0.93604	0.93614	0.93624	0.93634	0.93643	0.93653	0.93663	0.93673
2.45	0.93673	0.93683	0.93693	0.93703	0.93712	0.93722	0.93732	0.93742	0.93752	0.93761	0.93771
2.46	0.93771	0.93781	0.93790	0.93800	0.93810	0.93819	0.93829	0.93839	0.93848	0.93858	0.93867
2.47	0.93867	0.93877	0.93886	0.93896	0.93905	0.93915	0.93924	0.93934	0.93943	0.93953	0.93962
2.48	0.93962	0.93971	0.93981	0.93990	0.93999	0.94009	0.94019	0.94027	0.94037	0.94046	0.94055
2.49	0.94055	0.94064	0.94074	0.94083	0.94092	0.94101	0.94110	0.94120	0.94129	0.94138	0.94147
2.50	0.94147	0.94156	0.94165	0.94174	0.94183	0.94192	0.94201	0.94210	0.94219	0.94228	0.94237
2.51	0.94237	0.94246	0.94255	0.94264	0.94273	0.94282	0.94291	0.94300	0.94309	0.94317	0.94326
2.52	0.94326	0.94335	0.94344	0.94353	0.94361	0.94370	0.94379	0.94388	0.94396	0.94405	0.94414
2.53	0.94414	0.94422	0.94431	0.94440	0.94448	0.94457	0.94466	0.94474	0.94483	0.94491	0.94500
2.54	0.94500	0.94508	0.94517	0.94525	0.94534	0.94542	0.94551	0.94559	0.94568	0.94576	0.94585
2.55	0.94585	0.94593	0.94601	0.94610	0.94618	0.94626	0.94635	0.94643	0.94651	0.94660	0.94668
2.56	0.94668	0.94676	0.94684	0.94693	0.94701	0.94709	0.94717	0.94725	0.94734	0.94742	0.94750
2.57	0.94750	0.94758	0.94766	0.94774	0.94782	0.94790	0.94799	0.94807	0.94815	0.94823	0.94831
2.58	0.94831	0.94839	0.94847	0.94855	0.94863	0.94871	0.94879	0.94886	0.94894	0.94902	0.94910
2.59	0.94910	0.94918	0.94926	0.94934	0.94942	0.94949	0.94957	0.94965	0.94973	0.94981	0.94988
2.60	0.94988	0.94996	0.95004	0.95012	0.95019	0.95027	0.95035	0.95042	0.95050	0.95058	0.95065
2.61	0.95065	0.95073	0.95080	0.95089	0.95096	0.95103	0.95111	0.95118	0.95126	0.95133	0.95141
2.62	0.95141	0.95148	0.95156	0.95163	0.95171	0.95178	0.95186	0.95193	0.95201	0.95208	0.95215
2.63	0.95215	0.95223	0.95230	0.95238	0.95245	0.95252	0.95260	0.95267	0.95274	0.95282	0.95289
2.64	0.95289	0.95296	0.95303	0.95311	0.95318	0.95325	0.95332	0.95339	0.95347	0.95354	0.95361
2.65	0.95361	0.95368	0.95375	0.95382	0.95389	0.95397	0.95404	0.95411	0.95418	0.95425	0.95432
2.66	0.95432	0.95439	0.95446	0.95453	0.95460	0.95467	0.95474	0.95481	0.95488	0.95495	0.95502
2.67	0.95502	0.95509	0.95516	0.95523	0.95529	0.95536	0.95543	0.95550	0.95557	0.95564	0.95571
2.68	0.95571	0.95577	0.95584	0.95591	0.95598	0.95605	0.95611	0.95618	0.95625	0.95632	0.95638
2.69	0.95638	0.95645	0.95652	0.95659	0.95665	0.95672	0.95679	0.95685	0.95692	0.95698	0.95705

CC/PT

COMPRESSIBLE 2 TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.70	0.95705	0.95711	0.95718	0.95725	0.95731	0.95738	0.95744	0.95751	0.95757	0.95764	0.95770
2.71	0.95776	0.95777	0.95783	0.95790	0.95796	0.95803	0.95809	0.95816	0.95822	0.95828	0.95835
2.72	0.95835	0.95841	0.95848	0.95854	0.95860	0.95867	0.95873	0.95879	0.95886	0.95892	0.95898
2.73	0.95898	0.95905	0.95911	0.95917	0.95923	0.95930	0.95936	0.95942	0.95948	0.95955	0.95961
2.74	0.95961	0.95967	0.95973	0.95979	0.95985	0.95992	0.95998	0.96004	0.96010	0.96016	0.96022
2.75	0.96022	0.96028	0.96034	0.96040	0.96046	0.96052	0.96059	0.96065	0.96071	0.96077	0.96083
2.76	0.96083	0.96089	0.96095	0.96101	0.96107	0.96113	0.96119	0.96124	0.96130	0.96136	0.96142
2.77	0.96142	0.96148	0.96154	0.96160	0.96166	0.96172	0.96177	0.96183	0.96189	0.96195	0.96201
2.78	0.96201	0.96206	0.96212	0.96218	0.96224	0.96230	0.96235	0.96241	0.96247	0.96253	0.96258
2.79	0.96258	0.96264	0.96270	0.96275	0.96281	0.96287	0.96292	0.96298	0.96304	0.96309	0.96315
2.80	0.96315	0.96321	0.96326	0.96332	0.96337	0.96343	0.96349	0.96354	0.96360	0.96365	0.96371
2.81	0.96371	0.96376	0.96382	0.96387	0.96393	0.96398	0.96404	0.96409	0.96415	0.96420	0.96426
2.82	0.96426	0.96431	0.96437	0.96442	0.96447	0.96453	0.96458	0.96464	0.96469	0.96474	0.96480
2.83	0.96480	0.96485	0.96490	0.96496	0.96501	0.96506	0.96512	0.96517	0.96522	0.96528	0.96533
2.84	0.96533	0.96538	0.96543	0.96549	0.96554	0.96559	0.96564	0.96570	0.96575	0.96580	0.96585
2.85	0.96585	0.96590	0.96596	0.96601	0.96606	0.96611	0.96616	0.96621	0.96627	0.96632	0.96637
2.86	0.96637	0.96642	0.96647	0.96652	0.96657	0.96662	0.96667	0.96672	0.96677	0.96682	0.96687
2.87	0.96687	0.96692	0.96697	0.96703	0.96708	0.96712	0.96717	0.96722	0.96727	0.96732	0.96737
2.88	0.96737	0.96742	0.96747	0.96752	0.96757	0.96762	0.96767	0.96772	0.96777	0.96782	0.96786
2.89	0.96786	0.96791	0.96796	0.96801	0.96806	0.96811	0.96815	0.96820	0.96825	0.96830	0.96835
2.90	0.96835	0.96840	0.96844	0.96849	0.96854	0.96859	0.96863	0.96868	0.96873	0.96878	0.96882
2.91	0.96882	0.96887	0.96892	0.96896	0.96901	0.96906	0.96910	0.96915	0.96920	0.96924	0.96929
2.92	0.96929	0.96934	0.96938	0.96943	0.96948	0.96952	0.96957	0.96961	0.96966	0.96970	0.96975
2.93	0.96975	0.96980	0.96984	0.96989	0.96993	0.96998	0.97002	0.97007	0.97011	0.97016	0.97020
2.94	0.97020	0.97025	0.97029	0.97034	0.97038	0.97043	0.97047	0.97052	0.97056	0.97061	0.97065
2.95	0.97065	0.97069	0.97074	0.97078	0.97083	0.97087	0.97091	0.97096	0.97100	0.97104	0.97109
2.96	0.97109	0.97113	0.97118	0.97122	0.97126	0.97131	0.97135	0.97139	0.97143	0.97148	0.97152
2.97	0.97152	0.97156	0.97161	0.97165	0.97169	0.97173	0.97178	0.97182	0.97186	0.97190	0.97195
2.98	0.97195	0.97199	0.97203	0.97207	0.97211	0.97216	0.97220	0.97224	0.97228	0.97232	0.97236
2.99	0.97236	0.97240	0.97245	0.97249	0.97253	0.97257	0.97261	0.97265	0.97269	0.97273	0.97278

QC/PT

COMPRESSIBLE Q TC TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.00	0.97278	0.97282	0.97286	0.97290	0.97294	0.97298	0.97302	0.97306	0.97310	0.97314	0.97318
3.01	0.97318	0.97322	0.97326	0.97330	0.97334	0.97338	0.97342	0.97346	0.97350	0.97354	0.97358
3.02	0.97358	0.97362	0.97366	0.97370	0.97374	0.97378	0.97382	0.97385	0.97389	0.97393	0.97397
3.03	0.97397	0.97401	0.97405	0.97409	0.97413	0.97417	0.97420	0.97424	0.97428	0.97432	0.97436
3.04	0.97436	0.97440	0.97443	0.97447	0.97451	0.97455	0.97459	0.97462	0.97466	0.97470	0.97474
3.05	0.97474	0.97478	0.97481	0.97485	0.97489	0.97493	0.97496	0.97500	0.97504	0.97507	0.97511
3.06	0.97511	0.97515	0.97519	0.97522	0.97526	0.97530	0.97533	0.97537	0.97541	0.97544	0.97548
3.07	0.97548	0.97552	0.97555	0.97559	0.97563	0.97566	0.97570	0.97573	0.97577	0.97581	0.97584
3.08	0.97584	0.97588	0.97591	0.97595	0.97599	0.97602	0.97606	0.97609	0.97613	0.97616	0.97620
3.09	0.97620	0.97623	0.97627	0.97631	0.97634	0.97638	0.97641	0.97645	0.97648	0.97652	0.97655
3.10	0.97655	0.97659	0.97662	0.97665	0.97669	0.97672	0.97676	0.97679	0.97683	0.97686	0.97690
3.11	0.97690	0.97693	0.97696	0.97700	0.97703	0.97707	0.97710	0.97713	0.97717	0.97720	0.97724
3.12	0.97724	0.97727	0.97730	0.97734	0.97737	0.97740	0.97744	0.97747	0.97750	0.97754	0.97757
3.13	0.97757	0.97760	0.97764	0.97767	0.97770	0.97774	0.97777	0.97780	0.97783	0.97787	0.97790
3.14	0.97790	0.97793	0.97797	0.97800	0.97803	0.97806	0.97810	0.97813	0.97816	0.97819	0.97822
3.15	0.97822	0.97826	0.97829	0.97832	0.97835	0.97838	0.97842	0.97845	0.97848	0.97851	0.97854
3.16	0.97854	0.97858	0.97861	0.97864	0.97867	0.97870	0.97873	0.97876	0.97880	0.97883	0.97886
3.17	0.97886	0.97889	0.97892	0.97895	0.97898	0.97901	0.97904	0.97907	0.97911	0.97914	0.97917
3.18	0.97917	0.97920	0.97923	0.97926	0.97929	0.97932	0.97935	0.97938	0.97941	0.97944	0.97947
3.19	0.97947	0.97950	0.97953	0.97956	0.97959	0.97962	0.97965	0.97968	0.97971	0.97974	0.97977
3.20	0.97977	0.97980	0.97983	0.97986	0.97989	0.97992	0.97995	0.97998	0.98001	0.98004	0.98007
3.21	0.98007	0.98010	0.98012	0.98015	0.98018	0.98021	0.98024	0.98027	0.98030	0.98033	0.98036
3.22	0.98036	0.98039	0.98041	0.98044	0.98047	0.98050	0.98053	0.98056	0.98059	0.98061	0.98064
3.23	0.98064	0.98067	0.98070	0.98073	0.98076	0.98078	0.98081	0.98084	0.98087	0.98090	0.98092
3.24	0.98092	0.98095	0.98098	0.98101	0.98104	0.98106	0.98109	0.98112	0.98115	0.98117	0.98120
3.25	0.98120	0.98123	0.98126	0.98129	0.98131	0.98134	0.98136	0.98139	0.98142	0.98145	0.98147
3.26	0.98147	0.98150	0.98153	0.98155	0.98158	0.98161	0.98164	0.98166	0.98169	0.98172	0.98174
3.27	0.98174	0.98177	0.98180	0.98182	0.98185	0.98187	0.98190	0.98193	0.98195	0.98198	0.98201
3.28	0.98201	0.98203	0.98206	0.98208	0.98211	0.98214	0.98216	0.98219	0.98221	0.98224	0.98227
3.29	0.98227	0.98229	0.98232	0.98234	0.98237	0.98239	0.98242	0.98245	0.98247	0.98250	0.98252

QC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.30	0.98252	0.98255	0.98257	0.98260	0.98262	0.98265	0.98267	0.98270	0.98272	0.98275	0.98277
3.31	0.98277	0.98280	0.98282	0.98285	0.98287	0.98290	0.98292	0.98295	0.98297	0.98300	0.98302
3.32	0.98302	0.98305	0.98307	0.98310	0.98312	0.98315	0.98317	0.98319	0.98322	0.98324	0.98327
3.33	0.98327	0.98329	0.98332	0.98334	0.98336	0.98339	0.98341	0.98344	0.98346	0.98348	0.98351
3.34	0.98351	0.98353	0.98356	0.98358	0.98360	0.98363	0.98365	0.98367	0.98370	0.98372	0.98374
3.35	0.98374	0.98377	0.98379	0.98381	0.98384	0.98386	0.98388	0.98391	0.98393	0.98395	0.98398
3.36	0.98398	0.98400	0.98402	0.98405	0.98407	0.98409	0.98412	0.98414	0.98416	0.98418	0.98421
3.37	0.98421	0.98423	0.98425	0.98428	0.98430	0.98432	0.98434	0.98437	0.98439	0.98441	0.98443
3.38	0.98443	0.98446	0.98448	0.98450	0.98452	0.98454	0.98457	0.98459	0.98461	0.98463	0.98466
3.39	0.98466	0.98468	0.98470	0.98472	0.98474	0.98477	0.98479	0.98481	0.98483	0.98485	0.98487
3.40	0.98487	0.98490	0.98492	0.98494	0.98496	0.98498	0.98500	0.98503	0.98505	0.98507	0.98509
3.41	0.98509	0.98511	0.98513	0.98515	0.98518	0.98520	0.98522	0.98524	0.98526	0.98528	0.98530
3.42	0.98530	0.98532	0.98534	0.98537	0.98539	0.98541	0.98543	0.98545	0.98547	0.98549	0.98551
3.43	0.98551	0.98553	0.98555	0.98557	0.98559	0.98562	0.98564	0.98566	0.98568	0.98570	0.98572
3.44	0.98572	0.98574	0.98576	0.98578	0.98580	0.98582	0.98584	0.98586	0.98588	0.98590	0.98592
3.45	0.98592	0.98594	0.98596	0.98598	0.98600	0.98602	0.98604	0.98606	0.98608	0.98610	0.98612
3.46	0.98612	0.98614	0.98616	0.98618	0.98620	0.98622	0.98624	0.98626	0.98628	0.98630	0.98632
3.47	0.98632	0.98634	0.98636	0.98638	0.98639	0.98641	0.98643	0.98645	0.98647	0.98649	0.98651
3.48	0.98651	0.98653	0.98655	0.98657	0.98659	0.98661	0.98662	0.98664	0.98666	0.98668	0.98670
3.49	0.98670	0.98672	0.98674	0.98676	0.98678	0.98679	0.98681	0.98683	0.98685	0.98687	0.98689
3.50	0.98689	0.98691	0.98693	0.98694	0.98696	0.98698	0.98700	0.98702	0.98704	0.98705	0.98707
3.51	0.98707	0.98709	0.98711	0.98713	0.98715	0.98716	0.98718	0.98720	0.98722	0.98724	0.98726
3.52	0.98726	0.98727	0.98729	0.98731	0.98733	0.98735	0.98736	0.98738	0.98740	0.98742	0.98743
3.53	0.98743	0.98745	0.98747	0.98749	0.98751	0.98752	0.98754	0.98756	0.98758	0.98759	0.98761
3.54	0.98761	0.98763	0.98765	0.98766	0.98768	0.98770	0.98772	0.98773	0.98775	0.98777	0.98778
3.55	0.98778	0.98780	0.98782	0.98784	0.98785	0.98787	0.98789	0.98790	0.98792	0.98794	0.98796
3.56	0.98796	0.98797	0.98799	0.98801	0.98802	0.98804	0.98806	0.98807	0.98809	0.98811	0.98812
3.57	0.98812	0.98814	0.98816	0.98817	0.98819	0.98821	0.98822	0.98824	0.98826	0.98827	0.98829
3.58	0.98829	0.98831	0.98832	0.98834	0.98836	0.98837	0.98839	0.98840	0.98842	0.98844	0.98845
3.59	0.98845	0.98847	0.98849	0.98850	0.98852	0.98853	0.98855	0.98857	0.98858	0.98860	0.98861

SC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.60	0.98861	0.98863	0.98865	0.98866	0.98868	0.98869	0.98871	0.98873	0.98874	0.98876	0.98877
3.61	0.98877	0.98879	0.98880	0.98882	0.98884	0.98885	0.98887	0.98888	0.98890	0.98891	0.98893
3.62	0.98893	0.98894	0.98896	0.98898	0.98899	0.98901	0.98902	0.98904	0.98905	0.98907	0.98908
3.63	0.98908	0.98910	0.98911	0.98913	0.98914	0.98916	0.98917	0.98919	0.98920	0.98922	0.98923
3.64	0.98923	0.98925	0.98926	0.98928	0.98929	0.98931	0.98932	0.98934	0.98935	0.98937	0.98938
3.65	0.98938	0.98940	0.98941	0.98943	0.98944	0.98946	0.98947	0.98949	0.98950	0.98952	0.98953
3.66	0.98953	0.98955	0.98956	0.98957	0.98959	0.98960	0.98962	0.98963	0.98965	0.98966	0.98968
3.67	0.98968	0.98969	0.98970	0.98972	0.98973	0.98975	0.98976	0.98978	0.98979	0.98980	0.98982
3.68	0.98982	0.98983	0.98985	0.98986	0.98987	0.98989	0.98990	0.98992	0.98993	0.98994	0.98996
3.69	0.98996	0.98997	0.98999	0.99000	0.99001	0.99003	0.99004	0.99006	0.99007	0.99008	0.99010
3.70	0.99010	0.99011	0.99012	0.99014	0.99015	0.99016	0.99018	0.99019	0.99021	0.99022	0.99023
3.71	0.99023	0.99025	0.99026	0.99027	0.99029	0.99030	0.99031	0.99033	0.99034	0.99035	0.99037
3.72	0.99037	0.99038	0.99039	0.99041	0.99042	0.99043	0.99045	0.99046	0.99047	0.99049	0.99050
3.73	0.99050	0.99051	0.99053	0.99054	0.99055	0.99056	0.99058	0.99059	0.99060	0.99062	0.99063
3.74	0.99063	0.99064	0.99066	0.99067	0.99068	0.99069	0.99071	0.99072	0.99073	0.99074	0.99076
3.75	0.99076	0.99077	0.99078	0.99080	0.99081	0.99082	0.99083	0.99085	0.99086	0.99087	0.99088
3.76	0.99088	0.99089	0.99091	0.99092	0.99093	0.99095	0.99096	0.99097	0.99098	0.99100	0.99101
3.77	0.99101	0.99102	0.99103	0.99105	0.99106	0.99107	0.99108	0.99109	0.99111	0.99112	0.99113
3.78	0.99113	0.99114	0.99116	0.99117	0.99118	0.99119	0.99120	0.99122	0.99123	0.99124	0.99125
3.79	0.99125	0.99126	0.99128	0.99129	0.99130	0.99131	0.99132	0.99134	0.99135	0.99136	0.99137
3.80	0.99137	0.99138	0.99139	0.99141	0.99142	0.99143	0.99144	0.99145	0.99146	0.99148	0.99149
3.81	0.99149	0.99150	0.99151	0.99152	0.99153	0.99155	0.99156	0.99157	0.99158	0.99159	0.99160
3.82	0.99160	0.99161	0.99163	0.99164	0.99165	0.99166	0.99167	0.99168	0.99169	0.99171	0.99172
3.83	0.99172	0.99173	0.99174	0.99175	0.99176	0.99177	0.99179	0.99180	0.99181	0.99182	0.99183
3.84	0.99183	0.99184	0.99185	0.99186	0.99187	0.99188	0.99190	0.99191	0.99192	0.99193	0.99194
3.85	0.99194	0.99195	0.99196	0.99197	0.99198	0.99199	0.99200	0.99202	0.99203	0.99204	0.99205
3.86	0.99205	0.99206	0.99207	0.99208	0.99209	0.99210	0.99211	0.99212	0.99213	0.99214	0.99216
3.87	0.99216	0.99217	0.99218	0.99219	0.99220	0.99221	0.99222	0.99223	0.99224	0.99225	0.99226
3.88	0.99226	0.99227	0.99228	0.99229	0.99230	0.99231	0.99232	0.99233	0.99234	0.99235	0.99237
3.89	0.99237	0.99238	0.99239	0.99240	0.99241	0.99242	0.99243	0.99244	0.99245	0.99246	0.99247



CC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.90	0.99247	0.99248	0.99249	0.99250	0.99251	0.99252	0.99253	0.99254	0.99255	0.99256	0.99257
3.91	0.99257	0.99258	0.99259	0.99260	0.99261	0.99262	0.99263	0.99264	0.99265	0.99266	0.99267
3.92	0.99267	0.99268	0.99269	0.99270	0.99271	0.99272	0.99273	0.99274	0.99275	0.99276	0.99277
3.93	0.99277	0.99278	0.99279	0.99280	0.99281	0.99282	0.99283	0.99284	0.99285	0.99286	0.99287
3.94	0.99286	0.99287	0.99288	0.99289	0.99290	0.99291	0.99292	0.99293	0.99294	0.99295	0.99296
3.95	0.99296	0.99297	0.99298	0.99299	0.99300	0.99301	0.99302	0.99303	0.99304	0.99305	0.99306
3.96	0.99305	0.99306	0.99307	0.99308	0.99309	0.99310	0.99311	0.99312	0.99313	0.99314	0.99315
3.97	0.99314	0.99315	0.99316	0.99317	0.99318	0.99319	0.99320	0.99321	0.99322	0.99323	0.99324
3.98	0.99324	0.99325	0.99326	0.99327	0.99328	0.99329	0.99330	0.99331	0.99332	0.99333	0.99334
3.99	0.99333	0.99334	0.99335	0.99336	0.99337	0.99338	0.99339	0.99340	0.99341	0.99342	0.99343
4.00	0.99341	0.99342	0.99343	0.99344	0.99345	0.99346	0.99347	0.99348	0.99349	0.99350	0.99351
4.01	0.99350	0.99351	0.99352	0.99353	0.99354	0.99355	0.99356	0.99357	0.99358	0.99359	0.99360
4.02	0.99359	0.99360	0.99361	0.99362	0.99363	0.99364	0.99365	0.99366	0.99367	0.99368	0.99369
4.03	0.99367	0.99368	0.99369	0.99370	0.99371	0.99372	0.99373	0.99374	0.99375	0.99376	0.99377
4.04	0.99375	0.99376	0.99377	0.99378	0.99379	0.99380	0.99381	0.99382	0.99383	0.99384	0.99385
4.05	0.99384	0.99385	0.99386	0.99387	0.99388	0.99389	0.99390	0.99391	0.99392	0.99393	0.99394
4.06	0.99392	0.99393	0.99394	0.99395	0.99396	0.99397	0.99398	0.99399	0.99400	0.99401	0.99402
4.07	0.99400	0.99401	0.99402	0.99403	0.99404	0.99405	0.99406	0.99407	0.99408	0.99409	0.99410
4.08	0.99408	0.99409	0.99410	0.99411	0.99412	0.99413	0.99414	0.99415	0.99416	0.99417	0.99418
4.09	0.99415	0.99416	0.99417	0.99418	0.99419	0.99420	0.99421	0.99422	0.99423	0.99424	0.99425
4.10	0.99423	0.99424	0.99425	0.99426	0.99427	0.99428	0.99429	0.99430	0.99431	0.99432	0.99433
4.11	0.99431	0.99432	0.99433	0.99434	0.99435	0.99436	0.99437	0.99438	0.99439	0.99440	0.99441
4.12	0.99438	0.99439	0.99440	0.99441	0.99442	0.99443	0.99444	0.99445	0.99446	0.99447	0.99448
4.13	0.99445	0.99446	0.99447	0.99448	0.99449	0.99450	0.99451	0.99452	0.99453	0.99454	0.99455
4.14	0.99453	0.99454	0.99455	0.99456	0.99457	0.99458	0.99459	0.99460	0.99461	0.99462	0.99463
4.15	0.99460	0.99461	0.99462	0.99463	0.99464	0.99465	0.99466	0.99467	0.99468	0.99469	0.99470
4.16	0.99467	0.99468	0.99469	0.99470	0.99471	0.99472	0.99473	0.99474	0.99475	0.99476	0.99477
4.17	0.99474	0.99475	0.99476	0.99477	0.99478	0.99479	0.99480	0.99481	0.99482	0.99483	0.99484
4.18	0.99480	0.99481	0.99482	0.99483	0.99484	0.99485	0.99486	0.99487	0.99488	0.99489	0.99490
4.19	0.99487	0.99488	0.99489	0.99490	0.99491	0.99492	0.99493	0.99494	0.99495	0.99496	0.99497



QC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.20	0.99494	0.99494	0.99495	0.99496	0.99496	0.99497	0.99498	0.99498	0.99499	0.99500	0.99500
4.21	0.99500	0.99501	0.99502	0.99503	0.99503	0.99504	0.99504	0.99505	0.99505	0.99506	0.99507
4.22	0.99507	0.99507	0.99508	0.99509	0.99509	0.99510	0.99511	0.99511	0.99512	0.99512	0.99513
4.23	0.99513	0.99514	0.99514	0.99515	0.99516	0.99516	0.99517	0.99517	0.99518	0.99519	0.99519
4.24	0.99519	0.99520	0.99521	0.99521	0.99522	0.99522	0.99523	0.99524	0.99524	0.99525	0.99525
4.25	0.99525	0.99526	0.99527	0.99527	0.99528	0.99529	0.99529	0.99530	0.99530	0.99531	0.99532
4.26	0.99532	0.99532	0.99533	0.99533	0.99534	0.99535	0.99535	0.99536	0.99536	0.99537	0.99538
4.27	0.99538	0.99538	0.99539	0.99539	0.99540	0.99541	0.99541	0.99542	0.99542	0.99543	0.99543
4.28	0.99543	0.99544	0.99545	0.99545	0.99546	0.99546	0.99547	0.99548	0.99548	0.99549	0.99549
4.29	0.99549	0.99550	0.99550	0.99551	0.99552	0.99552	0.99553	0.99553	0.99554	0.99554	0.99555
4.30	0.99555	0.99556	0.99556	0.99557	0.99557	0.99558	0.99558	0.99559	0.99560	0.99560	0.99561
4.31	0.99561	0.99561	0.99562	0.99562	0.99563	0.99563	0.99564	0.99565	0.99565	0.99566	0.99566
4.32	0.99566	0.99567	0.99567	0.99568	0.99568	0.99569	0.99570	0.99570	0.99571	0.99571	0.99572
4.33	0.99572	0.99572	0.99573	0.99573	0.99574	0.99575	0.99575	0.99576	0.99576	0.99577	0.99577
4.34	0.99577	0.99578	0.99578	0.99579	0.99579	0.99580	0.99580	0.99581	0.99581	0.99582	0.99583
4.35	0.99583	0.99583	0.99584	0.99584	0.99585	0.99585	0.99586	0.99586	0.99587	0.99587	0.99588
4.36	0.99588	0.99588	0.99589	0.99589	0.99590	0.99590	0.99591	0.99591	0.99592	0.99593	0.99593
4.37	0.99593	0.99594	0.99594	0.99595	0.99595	0.99596	0.99596	0.99597	0.99597	0.99598	0.99598
4.38	0.99598	0.99599	0.99599	0.99600	0.99600	0.99601	0.99601	0.99602	0.99602	0.99603	0.99603
4.39	0.99603	0.99604	0.99604	0.99605	0.99605	0.99606	0.99606	0.99607	0.99607	0.99608	0.99608
4.40	0.99608	0.99609	0.99609	0.99610	0.99610	0.99611	0.99611	0.99612	0.99612	0.99613	0.99613
4.41	0.99613	0.99614	0.99614	0.99615	0.99615	0.99616	0.99616	0.99617	0.99617	0.99618	0.99618
4.42	0.99618	0.99618	0.99619	0.99619	0.99620	0.99620	0.99621	0.99621	0.99622	0.99622	0.99623
4.43	0.99623	0.99623	0.99624	0.99624	0.99625	0.99625	0.99626	0.99626	0.99627	0.99627	0.99627
4.44	0.99627	0.99628	0.99628	0.99629	0.99629	0.99630	0.99630	0.99631	0.99631	0.99632	0.99632
4.45	0.99632	0.99633	0.99633	0.99634	0.99634	0.99635	0.99635	0.99636	0.99636	0.99637	0.99637
4.46	0.99637	0.99637	0.99638	0.99638	0.99639	0.99639	0.99640	0.99640	0.99641	0.99641	0.99641
4.47	0.99641	0.99642	0.99642	0.99643	0.99643	0.99644	0.99644	0.99645	0.99645	0.99646	0.99646
4.48	0.99646	0.99646	0.99647	0.99647	0.99648	0.99648	0.99649	0.99649	0.99650	0.99650	0.99650
4.49	0.99650	0.99651	0.99651	0.99652	0.99652	0.99653	0.99653	0.99654	0.99654	0.99654	0.99654

QC/PT

## COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.50	0.99654	0.99655	0.99655	0.99656	0.99656	0.99657	0.99657	0.99657	0.99658	0.99658	0.99659
4.51	0.99659	0.99659	0.99660	0.99660	0.99660	0.99661	0.99661	0.99662	0.99662	0.99663	0.99663
4.52	0.99663	0.99663	0.99664	0.99664	0.99664	0.99665	0.99665	0.99666	0.99666	0.99667	0.99667
4.53	0.99667	0.99668	0.99668	0.99668	0.99668	0.99669	0.99670	0.99670	0.99670	0.99671	0.99671
4.54	0.99671	0.99672	0.99672	0.99672	0.99673	0.99673	0.99674	0.99674	0.99674	0.99675	0.99675
4.55	0.99675	0.99676	0.99676	0.99676	0.99677	0.99677	0.99678	0.99678	0.99678	0.99679	0.99679
4.56	0.99679	0.99680	0.99680	0.99680	0.99681	0.99681	0.99682	0.99682	0.99682	0.99683	0.99683
4.57	0.99683	0.99684	0.99684	0.99684	0.99685	0.99685	0.99686	0.99686	0.99686	0.99687	0.99687
4.58	0.99687	0.99687	0.99688	0.99688	0.99689	0.99689	0.99689	0.99690	0.99690	0.99691	0.99691
4.59	0.99691	0.99691	0.99692	0.99692	0.99692	0.99693	0.99693	0.99694	0.99694	0.99694	0.99695
4.60	0.99695	0.99695	0.99695	0.99696	0.99696	0.99697	0.99697	0.99697	0.99698	0.99698	0.99698
4.61	0.99698	0.99699	0.99699	0.99700	0.99700	0.99700	0.99701	0.99701	0.99701	0.99702	0.99702
4.62	0.99702	0.99703	0.99703	0.99703	0.99704	0.99704	0.99704	0.99705	0.99705	0.99705	0.99706
4.63	0.99706	0.99706	0.99706	0.99707	0.99707	0.99708	0.99708	0.99708	0.99709	0.99709	0.99709
4.64	0.99709	0.99710	0.99710	0.99710	0.99711	0.99711	0.99711	0.99712	0.99712	0.99713	0.99713
4.65	0.99713	0.99713	0.99714	0.99714	0.99714	0.99715	0.99715	0.99715	0.99716	0.99716	0.99716
4.66	0.99716	0.99717	0.99717	0.99717	0.99718	0.99718	0.99718	0.99719	0.99719	0.99719	0.99720
4.67	0.99720	0.99720	0.99720	0.99721	0.99721	0.99722	0.99722	0.99722	0.99723	0.99723	0.99723
4.68	0.99723	0.99724	0.99724	0.99724	0.99725	0.99725	0.99725	0.99726	0.99726	0.99726	0.99727
4.69	0.99727	0.99727	0.99727	0.99728	0.99728	0.99728	0.99729	0.99729	0.99729	0.99730	0.99730
4.70	0.99730	0.99730	0.99731	0.99731	0.99731	0.99731	0.99732	0.99732	0.99732	0.99733	0.99733
4.71	0.99733	0.99733	0.99734	0.99734	0.99734	0.99735	0.99735	0.99735	0.99736	0.99736	0.99736
4.72	0.99736	0.99737	0.99737	0.99737	0.99738	0.99738	0.99738	0.99739	0.99739	0.99739	0.99740
4.73	0.99740	0.99740	0.99740	0.99740	0.99741	0.99741	0.99741	0.99742	0.99742	0.99742	0.99743
4.74	0.99743	0.99743	0.99743	0.99744	0.99744	0.99744	0.99744	0.99745	0.99745	0.99745	0.99746
4.75	0.99746	0.99746	0.99746	0.99747	0.99747	0.99747	0.99748	0.99748	0.99748	0.99748	0.99749
4.76	0.99749	0.99749	0.99749	0.99750	0.99750	0.99750	0.99751	0.99751	0.99751	0.99751	0.99752
4.77	0.99752	0.99752	0.99752	0.99753	0.99753	0.99753	0.99754	0.99754	0.99754	0.99754	0.99755
4.78	0.99755	0.99755	0.99755	0.99756	0.99756	0.99756	0.99757	0.99757	0.99757	0.99757	0.99758
4.79	0.99758	0.99758	0.99758	0.99759	0.99759	0.99759	0.99759	0.99760	0.99760	0.99760	0.99761

CC/PT

COMPRESSIBLE Q TO TOTAL PRESSURE RATIO

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.80	0.99761	0.99761	0.99761	0.99761	0.99762	0.99762	0.99762	0.99763	0.99763	0.99763	0.99763
4.81	0.99763	0.99764	0.99764	0.99764	0.99765	0.99765	0.99765	0.99765	0.99766	0.99766	0.99766
4.82	0.99766	0.99767	0.99767	0.99767	0.99768	0.99768	0.99768	0.99768	0.99768	0.99769	0.99769
4.83	0.99769	0.99770	0.99770	0.99770	0.99770	0.99771	0.99771	0.99771	0.99771	0.99771	0.99772
4.84	0.99772	0.99772	0.99772	0.99773	0.99773	0.99773	0.99773	0.99774	0.99774	0.99774	0.99774
4.85	0.99774	0.99775	0.99775	0.99775	0.99776	0.99776	0.99776	0.99776	0.99777	0.99777	0.99777
4.86	0.99777	0.99778	0.99778	0.99778	0.99778	0.99778	0.99779	0.99779	0.99779	0.99779	0.99780
4.87	0.99780	0.99780	0.99780	0.99781	0.99781	0.99781	0.99781	0.99782	0.99782	0.99782	0.99782
4.88	0.99782	0.99783	0.99783	0.99783	0.99783	0.99784	0.99784	0.99784	0.99784	0.99785	0.99785
4.89	0.99785	0.99785	0.99785	0.99786	0.99786	0.99786	0.99786	0.99787	0.99787	0.99787	0.99787
4.90	0.99787	0.99788	0.99788	0.99788	0.99788	0.99789	0.99789	0.99789	0.99789	0.99790	0.99790
4.91	0.99790	0.99790	0.99790	0.99791	0.99791	0.99791	0.99791	0.99792	0.99792	0.99792	0.99792
4.92	0.99792	0.99793	0.99793	0.99793	0.99793	0.99794	0.99794	0.99794	0.99794	0.99795	0.99795
4.93	0.99795	0.99795	0.99795	0.99796	0.99796	0.99796	0.99796	0.99797	0.99797	0.99797	0.99797
4.94	0.99797	0.99797	0.99798	0.99798	0.99798	0.99798	0.99799	0.99799	0.99799	0.99799	0.99800
4.95	0.99800	0.99800	0.99800	0.99801	0.99801	0.99801	0.99801	0.99801	0.99801	0.99802	0.99802
4.96	0.99802	0.99802	0.99802	0.99803	0.99803	0.99803	0.99803	0.99804	0.99804	0.99804	0.99804
4.97	0.99804	0.99804	0.99805	0.99805	0.99805	0.99805	0.99806	0.99806	0.99806	0.99806	0.99807
4.98	0.99807	0.99807	0.99807	0.99807	0.99807	0.99808	0.99808	0.99808	0.99808	0.99809	0.99809
4.99	0.99809	0.99809	0.99809	0.99810	0.99810	0.99810	0.99810	0.99810	0.99811	0.99811	0.99811

Appendix A (continued)

Tabulation of the Ratio of Local Velocity to Velocity at  
Mach 1.0,  $V/a^*$ .

The ratio is tabulated versus Mach number.

$V/a^*$  is labelled  $V/(A \text{ STAR})$  in the tabulation.

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.00	0.	0.00110	0.00219	0.00329	0.00438	0.00548	0.00657	0.00767	0.00876	0.00986	0.01095
0.01	0.01095	0.01205	0.01315	0.01424	0.01534	0.01643	0.01753	0.01862	0.01972	0.02081	0.02191
0.02	0.02191	0.02300	0.02410	0.02519	0.02629	0.02738	0.02848	0.02957	0.03067	0.03177	0.03286
0.03	0.03286	0.03396	0.03505	0.03615	0.03724	0.03834	0.03943	0.04053	0.04162	0.04272	0.04381
0.04	0.04381	0.04491	0.04600	0.04710	0.04819	0.04929	0.05038	0.05147	0.05257	0.05366	0.05476
0.05	0.05476	0.05585	0.05695	0.05804	0.05914	0.06023	0.06133	0.06242	0.06351	0.06461	0.06570
0.06	0.06570	0.06680	0.06789	0.06899	0.07008	0.07117	0.07227	0.07336	0.07446	0.07555	0.07664
0.07	0.07664	0.07774	0.07883	0.07992	0.08102	0.08211	0.08321	0.08430	0.08539	0.08649	0.08758
0.08	0.08758	0.08867	0.08977	0.09086	0.09195	0.09305	0.09414	0.09523	0.09632	0.09742	0.09851
0.09	0.09851	0.09960	0.10070	0.10179	0.10288	0.10397	0.10507	0.10616	0.10725	0.10834	0.10944
0.10	0.10944	0.11053	0.11162	0.11271	0.11380	0.11490	0.11599	0.11708	0.11817	0.11926	0.12035
0.11	0.12035	0.12144	0.12254	0.12363	0.12472	0.12581	0.12690	0.12799	0.12908	0.13017	0.13126
0.12	0.13126	0.13236	0.13345	0.13454	0.13563	0.13672	0.13781	0.13890	0.13999	0.14108	0.14217
0.13	0.14217	0.14326	0.14435	0.14544	0.14653	0.14762	0.14871	0.14980	0.15088	0.15197	0.15306
0.14	0.15306	0.15415	0.15524	0.15633	0.15742	0.15851	0.15960	0.16068	0.16177	0.16286	0.16395
0.15	0.16395	0.16504	0.16612	0.16721	0.16830	0.16939	0.17047	0.17156	0.17265	0.17374	0.17482
0.16	0.17482	0.17591	0.17700	0.17808	0.17917	0.18026	0.18134	0.18243	0.18352	0.18460	0.18569
0.17	0.18569	0.18678	0.18786	0.18895	0.19003	0.19112	0.19220	0.19329	0.19437	0.19546	0.19654
0.18	0.19654	0.19763	0.19871	0.19980	0.20088	0.20197	0.20305	0.20414	0.20522	0.20630	0.20739
0.19	0.20739	0.20847	0.20955	0.21064	0.21172	0.21280	0.21389	0.21497	0.21605	0.21714	0.21822
0.20	0.21822	0.21930	0.22038	0.22146	0.22255	0.22363	0.22471	0.22579	0.22687	0.22795	0.22904
0.21	0.22904	0.23012	0.23120	0.23228	0.23336	0.23444	0.23552	0.23660	0.23768	0.23876	0.23984
0.22	0.23984	0.24092	0.24200	0.24308	0.24416	0.24524	0.24632	0.24739	0.24847	0.24955	0.25063
0.23	0.25063	0.25171	0.25279	0.25386	0.25494	0.25602	0.25710	0.25817	0.25925	0.26033	0.26141
0.24	0.26141	0.26248	0.26356	0.26463	0.26571	0.26679	0.26786	0.26894	0.27001	0.27109	0.27217

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.25	0.27217	0.27324	0.27432	0.27539	0.27646	0.27754	0.27861	0.27969	0.28076	0.28184	0.28291
0.26	0.28291	0.28398	0.28506	0.28613	0.28720	0.28828	0.28935	0.29042	0.29149	0.29256	0.29364
0.27	0.29364	0.29471	0.29578	0.29685	0.29792	0.29899	0.30007	0.30114	0.30221	0.30328	0.30435
0.28	0.30435	0.30542	0.30649	0.30756	0.30863	0.30970	0.31077	0.31183	0.31290	0.31397	0.31504
0.29	0.31504	0.31611	0.31718	0.31824	0.31931	0.32038	0.32145	0.32251	0.32358	0.32465	0.32571
0.30	0.32571	0.32678	0.32785	0.32891	0.32998	0.33105	0.33211	0.33318	0.33424	0.33531	0.33637
0.31	0.33637	0.33743	0.33850	0.33956	0.34063	0.34169	0.34275	0.34382	0.34488	0.34594	0.34701
0.32	0.34701	0.34807	0.34913	0.35019	0.35126	0.35232	0.35338	0.35444	0.35550	0.35656	0.35762
0.33	0.35762	0.35868	0.35974	0.36080	0.36186	0.36292	0.36398	0.36504	0.36610	0.36716	0.36822
0.34	0.36822	0.36928	0.37034	0.37139	0.37245	0.37351	0.37457	0.37562	0.37668	0.37774	0.37879
0.35	0.37879	0.37985	0.38091	0.38196	0.38302	0.38407	0.38513	0.38618	0.38724	0.38829	0.38935
0.36	0.38935	0.39040	0.39145	0.39251	0.39356	0.39461	0.39567	0.39672	0.39777	0.39882	0.39988
0.37	0.39988	0.40093	0.40198	0.40303	0.40408	0.40513	0.40618	0.40723	0.40829	0.40934	0.41038
0.38	0.41038	0.41143	0.41248	0.41353	0.41458	0.41563	0.41668	0.41773	0.41877	0.41982	0.42087
0.39	0.42087	0.42192	0.42296	0.42401	0.42506	0.42610	0.42715	0.42819	0.42924	0.43029	0.43133
0.40	0.43133	0.43238	0.43342	0.43446	0.43551	0.43655	0.43760	0.43864	0.43968	0.44072	0.44177
0.41	0.44177	0.44281	0.44385	0.44489	0.44593	0.44698	0.44802	0.44906	0.45010	0.45114	0.45218
0.42	0.45218	0.45322	0.45426	0.45530	0.45634	0.45738	0.45841	0.45945	0.46049	0.46153	0.46257
0.43	0.46257	0.46360	0.46464	0.46568	0.46671	0.46775	0.46879	0.46982	0.47086	0.47189	0.47293
0.44	0.47293	0.47396	0.47500	0.47603	0.47706	0.47810	0.47913	0.48016	0.48120	0.48223	0.48326
0.45	0.48326	0.48429	0.48532	0.48636	0.48739	0.48842	0.48945	0.49048	0.49151	0.49254	0.49357
0.46	0.49357	0.49460	0.49563	0.49666	0.49768	0.49871	0.49974	0.50077	0.50179	0.50282	0.50385
0.47	0.50385	0.50488	0.50590	0.50693	0.50795	0.50898	0.51000	0.51103	0.51205	0.51308	0.51410
0.48	0.51410	0.51513	0.51615	0.51717	0.51819	0.51922	0.52024	0.52126	0.52228	0.52330	0.52433
0.49	0.52433	0.52535	0.52637	0.52739	0.52841	0.52943	0.53045	0.53147	0.53248	0.53350	0.53452

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.50	0.53452	0.53354	0.53656	0.53757	0.53859	0.53961	0.54063	0.54164	0.54266	0.54367	0.54469
0.51	0.54469	0.54570	0.54672	0.54773	0.54875	0.54976	0.55077	0.55179	0.55280	0.55381	0.55483
0.52	0.55483	0.55584	0.55685	0.55786	0.55887	0.55988	0.56089	0.56190	0.56291	0.56392	0.56493
0.53	0.56493	0.56594	0.56695	0.56796	0.56897	0.56998	0.57098	0.57199	0.57300	0.57400	0.57501
0.54	0.57501	0.57602	0.57702	0.57803	0.57903	0.58004	0.58104	0.58205	0.58305	0.58405	0.58506
0.55	0.58506	0.58606	0.58706	0.58806	0.58907	0.59007	0.59107	0.59207	0.59307	0.59407	0.59507
0.56	0.59507	0.59607	0.59707	0.59807	0.59907	0.60007	0.60106	0.60206	0.60306	0.60406	0.60505
0.57	0.60505	0.60605	0.60705	0.60804	0.60904	0.61003	0.61103	0.61202	0.61302	0.61401	0.61500
0.58	0.61500	0.61600	0.61699	0.61798	0.61898	0.61997	0.62096	0.62195	0.62294	0.62393	0.62492
0.59	0.62492	0.62591	0.62690	0.62789	0.62888	0.62987	0.63086	0.62185	0.63284	0.63382	0.63481
0.60	0.63481	0.63580	0.63678	0.63777	0.63875	0.63974	0.64073	0.64171	0.64269	0.64368	0.64466
0.61	0.64466	0.64565	0.64663	0.64761	0.64859	0.64958	0.65056	0.65154	0.65252	0.65350	0.65448
0.62	0.65448	0.65546	0.65644	0.65742	0.65840	0.65938	0.66036	0.66134	0.66231	0.66329	0.66427
0.63	0.66427	0.66524	0.66622	0.66720	0.66817	0.66915	0.67012	0.67110	0.67207	0.67305	0.67402
0.64	0.67402	0.67499	0.67597	0.67694	0.67791	0.67888	0.67985	0.68082	0.68180	0.68277	0.68374
0.65	0.68374	0.68471	0.68567	0.68664	0.68761	0.68858	0.68955	0.69052	0.69148	0.69245	0.69342
0.66	0.69342	0.69438	0.69535	0.69632	0.69728	0.69825	0.69921	0.70017	0.70114	0.70210	0.70306
0.67	0.70306	0.70403	0.70499	0.70595	0.70691	0.70787	0.70884	0.70980	0.71076	0.71172	0.71268
0.68	0.71268	0.71363	0.71459	0.71555	0.71651	0.71747	0.71842	0.71938	0.72034	0.72129	0.72225
0.69	0.72225	0.72321	0.72416	0.72512	0.72607	0.72702	0.72798	0.72893	0.72989	0.73084	0.73179
0.70	0.73179	0.73274	0.73369	0.73464	0.73560	0.73655	0.73750	0.73845	0.73940	0.74034	0.74129
0.71	0.74129	0.74224	0.74319	0.74414	0.74508	0.74603	0.74698	0.74792	0.74887	0.74981	0.75076
0.72	0.75076	0.75170	0.75265	0.75359	0.75454	0.75548	0.75642	0.75736	0.75831	0.75925	0.76019
0.73	0.76019	0.76113	0.76207	0.76301	0.76395	0.76489	0.76583	0.76677	0.76770	0.76864	0.76958
0.74	0.76958	0.77052	0.77145	0.77239	0.77333	0.77426	0.77520	0.77613	0.77707	0.77800	0.77893

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.75	0.77893	0.77987	0.78080	0.78173	0.78267	0.78360	0.78453	0.78546	0.78639	0.78732	0.78825
0.76	0.78825	0.78918	0.79011	0.79104	0.79197	0.79289	0.79382	0.79475	0.79568	0.79660	0.79753
0.77	0.79753	0.79846	0.79938	0.80031	0.80123	0.80215	0.80308	0.80400	0.80492	0.80585	0.80677
0.78	0.80677	0.80769	0.80861	0.80953	0.81046	0.81138	0.81230	0.81322	0.81413	0.81505	0.81597
0.79	0.81597	0.81689	0.81781	0.81872	0.81964	0.82056	0.82147	0.82239	0.82331	0.82422	0.82513
0.80	0.82513	0.82605	0.82696	0.82788	0.82879	0.82970	0.83061	0.83153	0.83244	0.83335	0.83426
0.81	0.83426	0.83517	0.83608	0.83699	0.83790	0.83881	0.83971	0.84062	0.84153	0.84244	0.84334
0.82	0.84334	0.84425	0.84516	0.84606	0.84697	0.84787	0.84878	0.84968	0.85058	0.85149	0.85239
0.83	0.85239	0.85329	0.85419	0.85510	0.85600	0.85690	0.85780	0.85870	0.85960	0.86050	0.86140
0.84	0.86140	0.86229	0.86319	0.86409	0.86499	0.86588	0.86678	0.86768	0.86857	0.86947	0.87036
0.85	0.87036	0.87126	0.87215	0.87305	0.87394	0.87483	0.87572	0.87662	0.87751	0.87840	0.87929
0.86	0.87929	0.88018	0.88107	0.88196	0.88285	0.88374	0.88463	0.88551	0.88640	0.88729	0.88818
0.87	0.88818	0.88906	0.88995	0.89083	0.89172	0.89260	0.89349	0.89437	0.89526	0.89614	0.89702
0.88	0.89702	0.89791	0.89879	0.89967	0.90055	0.90143	0.90231	0.90319	0.90407	0.90495	0.90583
0.89	0.90583	0.90671	0.90759	0.90846	0.90934	0.91022	0.91109	0.91197	0.91285	0.91372	0.91460
0.90	0.91460	0.91547	0.91634	0.91722	0.91809	0.91896	0.91984	0.92071	0.92158	0.92245	0.92332
0.91	0.92332	0.92419	0.92506	0.92593	0.92680	0.92767	0.92854	0.92940	0.93027	0.93114	0.93200
0.92	0.93200	0.93287	0.93374	0.93460	0.93547	0.93633	0.93720	0.93806	0.93892	0.93979	0.94065
0.93	0.94065	0.94151	0.94237	0.94323	0.94409	0.94495	0.94581	0.94667	0.94753	0.94839	0.94925
0.94	0.94925	0.95011	0.95097	0.95182	0.95268	0.95354	0.95439	0.95525	0.95610	0.95696	0.95781
0.95	0.95781	0.95867	0.95952	0.96037	0.96122	0.96208	0.96293	0.96378	0.96463	0.96548	0.96633
0.96	0.96633	0.96718	0.96803	0.96888	0.96973	0.97058	0.97142	0.97227	0.97312	0.97396	0.97481
0.97	0.97481	0.97566	0.97650	0.97735	0.97819	0.97903	0.97988	0.98072	0.98156	0.98241	0.98325
0.98	0.98325	0.98409	0.98493	0.98577	0.98661	0.98745	0.98829	0.98913	0.98997	0.99081	0.99164
0.99	0.99164	0.99248	0.99332	0.99415	0.99499	0.99583	0.99666	0.99750	0.99833	0.99916	1.00000



V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.00	1.00000	1.00083	1.00166	1.00250	1.00333	1.00416	1.00499	1.00582	1.00665	1.00748	1.00831
1.01	1.00831	1.00914	1.00997	1.01080	1.01162	1.01245	1.01328	1.01410	1.01493	1.01576	1.01658
1.02	1.01658	1.01740	1.01823	1.01905	1.01988	1.02070	1.02152	1.02234	1.02317	1.02399	1.02481
1.03	1.02481	1.02563	1.02645	1.02727	1.02809	1.02891	1.02973	1.03054	1.03136	1.03218	1.03300
1.04	1.03300	1.03381	1.03463	1.03544	1.03626	1.03707	1.03789	1.03870	1.03952	1.04033	1.04114
1.05	1.04114	1.04195	1.04277	1.04358	1.04439	1.04520	1.04601	1.04682	1.04763	1.04844	1.04924
1.06	1.04924	1.05005	1.05086	1.05167	1.05247	1.05328	1.05409	1.05489	1.05570	1.05650	1.05731
1.07	1.05731	1.05811	1.05891	1.05972	1.06052	1.06132	1.06212	1.06292	1.06372	1.06452	1.06532
1.08	1.06532	1.06612	1.06692	1.06772	1.06852	1.06932	1.07012	1.07091	1.07171	1.07251	1.07330
1.09	1.07330	1.07410	1.07489	1.07569	1.07648	1.07727	1.07807	1.07886	1.07965	1.08045	1.08124
1.10	1.08124	1.08203	1.08282	1.08361	1.08440	1.08519	1.08598	1.08677	1.08756	1.08834	1.08913
1.11	1.08913	1.08992	1.09070	1.09149	1.09228	1.09306	1.09385	1.09463	1.09541	1.09620	1.09698
1.12	1.09698	1.09776	1.09855	1.09933	1.10011	1.10089	1.10167	1.10245	1.10323	1.10401	1.10479
1.13	1.10479	1.10557	1.10635	1.10712	1.10790	1.10868	1.10946	1.11023	1.11101	1.11178	1.11256
1.14	1.11256	1.11333	1.11411	1.11488	1.11565	1.11643	1.11720	1.11797	1.11874	1.11951	1.12028
1.15	1.12028	1.12105	1.12182	1.12259	1.12336	1.12413	1.12490	1.12566	1.12643	1.12720	1.12797
1.16	1.12797	1.12873	1.12950	1.13026	1.13103	1.13179	1.13255	1.13332	1.13408	1.13484	1.13561
1.17	1.13561	1.13637	1.13713	1.13789	1.13865	1.13941	1.14017	1.14093	1.14169	1.14245	1.14320
1.18	1.14320	1.14396	1.14472	1.14548	1.14623	1.14699	1.14774	1.14850	1.14925	1.15001	1.15076
1.19	1.15076	1.15151	1.15227	1.15302	1.15377	1.15452	1.15528	1.15603	1.15678	1.15753	1.15828
1.20	1.15828	1.15903	1.15977	1.16052	1.16127	1.16202	1.16277	1.16351	1.16426	1.16500	1.16575
1.21	1.16575	1.16649	1.16724	1.16798	1.16873	1.16947	1.17021	1.17096	1.17170	1.17244	1.17318
1.22	1.17318	1.17392	1.17466	1.17540	1.17614	1.17688	1.17762	1.17836	1.17910	1.17983	1.18057
1.23	1.18057	1.18131	1.18204	1.18278	1.18351	1.18425	1.18498	1.18572	1.18645	1.18718	1.18792
1.24	1.18792	1.18865	1.18938	1.19011	1.19085	1.19158	1.19231	1.19304	1.19377	1.19450	1.19522

V7(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.025	1.019522	1.019595	1.019668	1.019741	1.019813	1.019886	1.019959	1.020031	1.020104	1.020176	1.020249
1.026	1.020249	1.020321	1.020394	1.020466	1.020538	1.020610	1.020683	1.020755	1.020827	1.020899	1.020971
1.027	1.020971	1.021043	1.021115	1.021187	1.021259	1.021331	1.021402	1.021474	1.021546	1.021618	1.021689
1.028	1.021689	1.021761	1.021832	1.021904	1.021975	1.022047	1.022118	1.022189	1.022261	1.022332	1.022403
1.029	1.022403	1.022474	1.022546	1.022617	1.022688	1.022759	1.022830	1.022901	1.022971	1.023042	1.023113
1.030	1.023113	1.023184	1.023255	1.023325	1.023396	1.023466	1.023537	1.023607	1.023678	1.023748	1.023819
1.031	1.023819	1.023889	1.023959	1.024030	1.024100	1.024170	1.024240	1.024310	1.024380	1.024450	1.024520
1.032	1.024520	1.024590	1.024660	1.024730	1.024800	1.024870	1.024939	1.025009	1.025079	1.025148	1.025218
1.033	1.025218	1.025287	1.025357	1.025426	1.025496	1.025565	1.025634	1.025704	1.025773	1.025842	1.025911
1.034	1.025911	1.025980	1.026049	1.026119	1.026188	1.026256	1.026325	1.026394	1.026463	1.026532	1.026601
1.035	1.026601	1.026669	1.026738	1.026807	1.026875	1.026944	1.027012	1.027081	1.027149	1.027217	1.027286
1.036	1.027286	1.027354	1.027422	1.027491	1.027559	1.027627	1.027695	1.027763	1.027831	1.027899	1.027967
1.037	1.027967	1.028035	1.028103	1.028171	1.028238	1.028306	1.028374	1.028441	1.028509	1.028577	1.028644
1.038	1.028644	1.028712	1.028779	1.028846	1.028914	1.028981	1.029048	1.029116	1.029183	1.029250	1.029317
1.039	1.029317	1.029384	1.029451	1.029518	1.029585	1.029652	1.029719	1.029786	1.029853	1.029919	1.029986
1.040	1.029986	1.030053	1.030119	1.030186	1.030253	1.030319	1.030386	1.030452	1.030518	1.030585	1.030651
1.041	1.030651	1.030717	1.030784	1.030850	1.030916	1.030982	1.031048	1.031114	1.031180	1.031246	1.031312
1.042	1.031312	1.031378	1.031444	1.031510	1.031575	1.031641	1.031707	1.031772	1.031838	1.031904	1.031969
1.043	1.031969	1.032035	1.032100	1.032165	1.032231	1.032296	1.032361	1.032427	1.032492	1.032557	1.032622
1.044	1.032622	1.032687	1.032752	1.032817	1.032882	1.032947	1.033012	1.033077	1.033142	1.033206	1.033271
1.045	1.033271	1.033336	1.033400	1.033465	1.033530	1.033594	1.033659	1.033723	1.033787	1.033852	1.033916
1.046	1.033916	1.033980	1.034045	1.034109	1.034173	1.034237	1.034301	1.034365	1.034429	1.034493	1.034557
1.047	1.034557	1.034621	1.034685	1.034749	1.034813	1.034876	1.034940	1.035004	1.035067	1.035131	1.035194
1.048	1.035194	1.035258	1.035321	1.035385	1.035448	1.035512	1.035575	1.035638	1.035701	1.035765	1.035828
1.049	1.035828	1.035891	1.035954	1.036017	1.036080	1.036143	1.036206	1.036269	1.036331	1.036394	1.036457

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.50	1.36457	1.36520	1.36582	1.36645	1.36708	1.36770	1.36833	1.36895	1.36958	1.37020	1.37082
1.51	1.37082	1.37145	1.37207	1.37269	1.37332	1.37394	1.37456	1.37518	1.37580	1.37642	1.37704
1.52	1.37704	1.37766	1.37828	1.37890	1.37952	1.38013	1.38075	1.38137	1.38199	1.38260	1.38322
1.53	1.38322	1.38383	1.38445	1.38506	1.38568	1.38629	1.38691	1.38752	1.38813	1.38874	1.38936
1.54	1.38935	1.38997	1.39058	1.39119	1.39180	1.39241	1.39302	1.39363	1.39424	1.39485	1.39546
1.55	1.39546	1.39606	1.39667	1.39728	1.39789	1.39849	1.39910	1.39970	1.40031	1.40091	1.40152
1.56	1.40152	1.40212	1.40273	1.40333	1.40393	1.40453	1.40514	1.40574	1.40634	1.40694	1.40754
1.57	1.40754	1.40814	1.40874	1.40934	1.40994	1.41054	1.41114	1.41174	1.41233	1.41293	1.41353
1.58	1.41353	1.41412	1.41472	1.41532	1.41591	1.41651	1.41710	1.41770	1.41829	1.41888	1.41948
1.59	1.41948	1.42007	1.42066	1.42125	1.42184	1.42244	1.42303	1.42362	1.42421	1.42480	1.42539
1.60	1.42539	1.42598	1.42656	1.42715	1.42774	1.42833	1.42892	1.42950	1.43009	1.43067	1.43126
1.61	1.43126	1.43185	1.43243	1.43301	1.43360	1.43418	1.43477	1.43535	1.43593	1.43651	1.43710
1.62	1.43710	1.43768	1.43826	1.43884	1.43942	1.44000	1.44058	1.44116	1.44174	1.44232	1.44290
1.63	1.44290	1.44347	1.44405	1.44463	1.44520	1.44578	1.44636	1.44693	1.44751	1.44808	1.44866
1.64	1.44866	1.44923	1.44981	1.45038	1.45095	1.45152	1.45210	1.45267	1.45324	1.45381	1.45438
1.65	1.45438	1.45495	1.45552	1.45609	1.45666	1.45723	1.45780	1.45837	1.45894	1.45950	1.46007
1.66	1.46007	1.46064	1.46120	1.46177	1.46234	1.46290	1.46347	1.46403	1.46460	1.46516	1.46572
1.67	1.46572	1.46629	1.46685	1.46741	1.46797	1.46854	1.46910	1.46966	1.47022	1.47078	1.47134
1.68	1.47134	1.47190	1.47246	1.47302	1.47358	1.47413	1.47469	1.47525	1.47581	1.47636	1.47692
1.69	1.47692	1.47748	1.47803	1.47859	1.47914	1.47970	1.48025	1.48080	1.48136	1.48191	1.48246
1.70	1.48246	1.48302	1.48357	1.48412	1.48467	1.48522	1.48577	1.48632	1.48687	1.48742	1.48797
1.71	1.48797	1.48852	1.48907	1.48962	1.49017	1.49071	1.49126	1.49181	1.49235	1.49290	1.49344
1.72	1.49344	1.49399	1.49454	1.49508	1.49562	1.49617	1.49671	1.49725	1.49780	1.49834	1.49888
1.73	1.49888	1.49942	1.49997	1.50051	1.50105	1.50159	1.50213	1.50267	1.50321	1.50375	1.50428
1.74	1.50428	1.50482	1.50536	1.50590	1.50644	1.50697	1.50751	1.50805	1.50858	1.50912	1.50965

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.75	1.50965	1.51019	1.51072	1.51126	1.51179	1.51232	1.51286	1.51339	1.51392	1.51445	1.51498
1.76	1.51498	1.51552	1.51605	1.51658	1.51711	1.51764	1.51817	1.51870	1.51923	1.51975	1.52028
1.77	1.52028	1.52081	1.52134	1.52186	1.52239	1.52292	1.52344	1.52397	1.52450	1.52502	1.52555
1.78	1.52555	1.52607	1.52659	1.52712	1.52764	1.52816	1.52869	1.52921	1.52973	1.53025	1.53077
1.79	1.53077	1.53130	1.53182	1.53234	1.53286	1.53338	1.53390	1.53441	1.53493	1.53545	1.53597
1.80	1.53597	1.53649	1.53700	1.53752	1.53804	1.53855	1.53907	1.53959	1.54010	1.54062	1.54113
1.81	1.54113	1.54164	1.54216	1.54267	1.54319	1.54370	1.54421	1.54472	1.54523	1.54575	1.54626
1.82	1.54626	1.54677	1.54728	1.54779	1.54830	1.54881	1.54932	1.54983	1.55033	1.55084	1.55135
1.83	1.55135	1.55186	1.55237	1.55287	1.55338	1.55389	1.55439	1.55490	1.55540	1.55591	1.55641
1.84	1.55641	1.55692	1.55742	1.55792	1.55843	1.55893	1.55943	1.55993	1.56044	1.56094	1.56144
1.85	1.56144	1.56194	1.56244	1.56294	1.56344	1.56394	1.56444	1.56494	1.56544	1.56593	1.56643
1.86	1.56643	1.56693	1.56743	1.56792	1.56842	1.56892	1.56941	1.56991	1.57040	1.57090	1.57139
1.87	1.57139	1.57189	1.57238	1.57288	1.57337	1.57386	1.57435	1.57485	1.57534	1.57583	1.57632
1.88	1.57632	1.57681	1.57730	1.57779	1.57828	1.57877	1.57926	1.57975	1.58024	1.58073	1.58122
1.89	1.58122	1.58171	1.58219	1.58268	1.58317	1.58365	1.58414	1.58463	1.58511	1.58560	1.58608
1.90	1.58608	1.58657	1.58705	1.58753	1.58802	1.58850	1.58898	1.58947	1.58995	1.59043	1.59091
1.91	1.59091	1.59140	1.59188	1.59236	1.59284	1.59332	1.59380	1.59428	1.59476	1.59524	1.59571
1.92	1.59571	1.59619	1.59667	1.59715	1.59762	1.59810	1.59858	1.59905	1.59953	1.60001	1.60048
1.93	1.60048	1.60096	1.60143	1.60191	1.60238	1.60285	1.60333	1.60380	1.60427	1.60475	1.60522
1.94	1.60522	1.60569	1.60616	1.60663	1.60710	1.60757	1.60805	1.60852	1.60898	1.60945	1.60992
1.95	1.60992	1.61039	1.61086	1.61133	1.61180	1.61226	1.61273	1.61320	1.61367	1.61413	1.61460
1.96	1.61460	1.61506	1.61553	1.61599	1.61646	1.61692	1.61739	1.61785	1.61831	1.61878	1.61924
1.97	1.61924	1.61970	1.62017	1.62063	1.62109	1.62155	1.62201	1.62247	1.62293	1.62339	1.62385
1.98	1.62385	1.62431	1.62477	1.62523	1.62569	1.62615	1.62661	1.62706	1.62752	1.62798	1.62843
1.99	1.62843	1.62889	1.62935	1.62980	1.63026	1.63071	1.63117	1.63162	1.63208	1.63253	1.63299

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.00	1.63299	1.63344	1.63389	1.63435	1.63480	1.63525	1.63570	1.63615	1.63660	1.63706	1.63751
2.01	1.63751	1.63796	1.63841	1.63886	1.63931	1.63976	1.64020	1.64065	1.64110	1.64155	1.64200
2.02	1.64200	1.64245	1.64289	1.64334	1.64379	1.64423	1.64468	1.64512	1.64557	1.64601	1.64646
2.03	1.64646	1.64690	1.64735	1.64779	1.64823	1.64868	1.64912	1.64956	1.65001	1.65045	1.65089
2.04	1.65089	1.65133	1.65177	1.65221	1.65265	1.65309	1.65353	1.65397	1.65441	1.65485	1.65529
2.05	1.65529	1.65573	1.65617	1.65661	1.65704	1.65748	1.65792	1.65836	1.65879	1.65923	1.65966
2.06	1.65966	1.66010	1.66054	1.66097	1.66141	1.66184	1.66227	1.66271	1.66314	1.66357	1.66401
2.07	1.66401	1.66444	1.66487	1.66531	1.66574	1.66617	1.66660	1.66703	1.66746	1.66789	1.66832
2.08	1.66832	1.66875	1.66918	1.66961	1.67004	1.67047	1.67090	1.67133	1.67175	1.67218	1.67261
2.09	1.67261	1.67304	1.67346	1.67389	1.67431	1.67474	1.67517	1.67559	1.67602	1.67644	1.67687
2.10	1.67687	1.67729	1.67771	1.67814	1.67856	1.67898	1.67941	1.67983	1.68025	1.68067	1.68109
2.11	1.68109	1.68152	1.68194	1.68236	1.68278	1.68320	1.68362	1.68404	1.68446	1.68488	1.68529
2.12	1.68529	1.68571	1.68613	1.68655	1.68697	1.68738	1.68780	1.68822	1.68863	1.68905	1.68947
2.13	1.68947	1.68988	1.69030	1.69071	1.69113	1.69154	1.69196	1.69237	1.69278	1.69320	1.69361
2.14	1.69361	1.69402	1.69444	1.69485	1.69526	1.69567	1.69608	1.69650	1.69691	1.69732	1.69773
2.15	1.69773	1.69814	1.69855	1.69896	1.69937	1.69978	1.70019	1.70059	1.70100	1.70141	1.70182
2.16	1.70182	1.70223	1.70263	1.70304	1.70345	1.70385	1.70426	1.70466	1.70507	1.70547	1.70588
2.17	1.70588	1.70628	1.70669	1.70709	1.70750	1.70790	1.70830	1.70871	1.70911	1.70951	1.70991
2.18	1.70991	1.71032	1.71072	1.71112	1.71152	1.71192	1.71232	1.71272	1.71312	1.71352	1.71392
2.19	1.71392	1.71432	1.71472	1.71512	1.71552	1.71592	1.71631	1.71671	1.71711	1.71751	1.71790
2.20	1.71790	1.71830	1.71870	1.71909	1.71949	1.71988	1.72028	1.72067	1.72107	1.72146	1.72186
2.21	1.72186	1.72225	1.72265	1.72304	1.72343	1.72383	1.72422	1.72461	1.72500	1.72539	1.72579
2.22	1.72579	1.72618	1.72657	1.72696	1.72735	1.72774	1.72813	1.72852	1.72891	1.72930	1.72969
2.23	1.72969	1.73008	1.73047	1.73085	1.73124	1.73163	1.73202	1.73240	1.73279	1.73318	1.73356
2.24	1.73356	1.73395	1.73434	1.73472	1.73511	1.73549	1.73588	1.73626	1.73665	1.73703	1.73741

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.25	1.73741	1.73780	1.73818	1.73856	1.73895	1.73933	1.73971	1.74009	1.74048	1.74086	1.74124
2.26	1.74124	1.74162	1.74200	1.74238	1.74276	1.74314	1.74352	1.74390	1.74428	1.74466	1.74504
2.27	1.74504	1.74542	1.74579	1.74617	1.74655	1.74693	1.74730	1.74768	1.74806	1.74843	1.74881
2.28	1.74881	1.74919	1.74956	1.74994	1.75031	1.75069	1.75106	1.75144	1.75181	1.75218	1.75256
2.29	1.75256	1.75293	1.75330	1.75368	1.75405	1.75442	1.75479	1.75517	1.75554	1.75591	1.75628
2.30	1.75628	1.75665	1.75702	1.75739	1.75776	1.75813	1.75850	1.75887	1.75924	1.75961	1.75998
2.31	1.75998	1.76035	1.76072	1.76108	1.76145	1.76182	1.76219	1.76255	1.76292	1.76329	1.76365
2.32	1.76365	1.76402	1.76438	1.76475	1.76511	1.76548	1.76584	1.76621	1.76657	1.76694	1.76730
2.33	1.76730	1.76766	1.76803	1.76839	1.76875	1.76912	1.76948	1.76984	1.77020	1.77056	1.77093
2.34	1.77093	1.77129	1.77165	1.77201	1.77237	1.77273	1.77309	1.77345	1.77381	1.77417	1.77453
2.35	1.77453	1.77488	1.77524	1.77560	1.77596	1.77632	1.77667	1.77703	1.77739	1.77774	1.77810
2.36	1.77810	1.77846	1.77881	1.77917	1.77953	1.77988	1.78024	1.78059	1.78095	1.78130	1.78165
2.37	1.78165	1.78201	1.78236	1.78271	1.78307	1.78342	1.78377	1.78413	1.78448	1.78483	1.78518
2.38	1.78518	1.78553	1.78589	1.78624	1.78659	1.78694	1.78729	1.78764	1.78799	1.78834	1.78869
2.39	1.78869	1.78904	1.78939	1.78973	1.79008	1.79043	1.79078	1.79113	1.79147	1.79182	1.79217
2.40	1.79217	1.79252	1.79286	1.79321	1.79356	1.79390	1.79425	1.79459	1.79494	1.79528	1.79563
2.41	1.79563	1.79597	1.79632	1.79666	1.79700	1.79735	1.79769	1.79803	1.79838	1.79872	1.79906
2.42	1.79906	1.79940	1.79975	1.80009	1.80043	1.80077	1.80111	1.80145	1.80179	1.80213	1.80248
2.43	1.80248	1.80282	1.80315	1.80349	1.80383	1.80417	1.80451	1.80485	1.80519	1.80553	1.80586
2.44	1.80586	1.80620	1.80654	1.80688	1.80721	1.80755	1.80789	1.80822	1.80856	1.80889	1.80923
2.45	1.80923	1.80957	1.80990	1.81024	1.81057	1.81091	1.81124	1.81158	1.81191	1.81224	1.81258
2.46	1.81258	1.81291	1.81324	1.81358	1.81391	1.81424	1.81457	1.81490	1.81524	1.81557	1.81590
2.47	1.81590	1.81623	1.81656	1.81689	1.81722	1.81755	1.81788	1.81821	1.81854	1.81887	1.81920
2.48	1.81920	1.81953	1.81986	1.82019	1.82051	1.82084	1.82117	1.82150	1.82182	1.82215	1.82248
2.49	1.82248	1.82280	1.82313	1.82346	1.82378	1.82411	1.82443	1.82476	1.82508	1.82541	1.82573

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.50	1.82573	1.82606	1.82638	1.82671	1.82703	1.82735	1.82768	1.82800	1.82832	1.82865	1.82897
2.51	1.82897	1.82929	1.82961	1.82994	1.83026	1.83058	1.83090	1.83122	1.83154	1.83186	1.83218
2.52	1.83218	1.83250	1.83282	1.83314	1.83346	1.83378	1.83410	1.83442	1.83474	1.83506	1.83538
2.53	1.83538	1.83569	1.83601	1.83633	1.83665	1.83696	1.83728	1.83760	1.83791	1.83823	1.83855
2.54	1.83855	1.83886	1.83918	1.83949	1.83981	1.84012	1.84044	1.84075	1.84107	1.84138	1.84170
2.55	1.84170	1.84201	1.84232	1.84264	1.84295	1.84326	1.84358	1.84389	1.84420	1.84451	1.84483
2.56	1.84483	1.84514	1.84545	1.84576	1.84607	1.84638	1.84669	1.84700	1.84731	1.84762	1.84793
2.57	1.84793	1.84824	1.84855	1.84886	1.84917	1.84948	1.84979	1.85010	1.85041	1.85071	1.85102
2.58	1.85102	1.85133	1.85164	1.85194	1.85225	1.85256	1.85286	1.85317	1.85348	1.85378	1.85409
2.59	1.85409	1.85439	1.85470	1.85500	1.85531	1.85561	1.85592	1.85622	1.85653	1.85683	1.85714
2.60	1.85714	1.85744	1.85774	1.85805	1.85835	1.85865	1.85895	1.85926	1.85956	1.85986	1.86016
2.61	1.86016	1.86046	1.86077	1.86107	1.86137	1.86167	1.86197	1.86227	1.86257	1.86287	1.86317
2.62	1.86317	1.86347	1.86377	1.86407	1.86437	1.86467	1.86496	1.86526	1.86556	1.86586	1.86616
2.63	1.86616	1.86645	1.86675	1.86705	1.86735	1.86764	1.86794	1.86824	1.86853	1.86883	1.86912
2.64	1.86912	1.86942	1.86971	1.87001	1.87031	1.87060	1.87089	1.87119	1.87148	1.87178	1.87207
2.65	1.87207	1.87237	1.87266	1.87295	1.87325	1.87354	1.87383	1.87412	1.87442	1.87471	1.87500
2.66	1.87500	1.87529	1.87558	1.87587	1.87617	1.87646	1.87675	1.87704	1.87733	1.87762	1.87791
2.67	1.87791	1.87820	1.87849	1.87878	1.87907	1.87936	1.87965	1.87993	1.88022	1.88051	1.88080
2.68	1.88080	1.88109	1.88137	1.88166	1.88195	1.88224	1.88252	1.88281	1.88310	1.88338	1.88367
2.69	1.88367	1.88396	1.88424	1.88453	1.88481	1.88510	1.88538	1.88567	1.88595	1.88624	1.88652
2.70	1.88652	1.88681	1.88709	1.88737	1.88766	1.88794	1.88822	1.88851	1.88879	1.88907	1.88935
2.71	1.88935	1.88964	1.88992	1.89020	1.89048	1.89076	1.89105	1.89133	1.89161	1.89189	1.89217
2.72	1.89217	1.89245	1.89273	1.89301	1.89329	1.89357	1.89385	1.89413	1.89441	1.89469	1.89497
2.73	1.89497	1.89524	1.89552	1.89580	1.89608	1.89636	1.89663	1.89691	1.89719	1.89747	1.89774
2.74	1.89774	1.89802	1.89830	1.89857	1.89885	1.89913	1.89940	1.89968	1.89995	1.90023	1.90050

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.75	1.90050	1.90078	1.90105	1.90133	1.90160	1.90188	1.90215	1.90242	1.90270	1.90297	1.90325
2.76	1.90325	1.90352	1.90379	1.90406	1.90434	1.90461	1.90488	1.90515	1.90543	1.90570	1.90597
2.77	1.90597	1.90624	1.90651	1.90678	1.90705	1.90732	1.90759	1.90786	1.90813	1.90840	1.90867
2.78	1.90867	1.90894	1.90921	1.90948	1.90975	1.91002	1.91029	1.91056	1.91083	1.91109	1.91136
2.79	1.91136	1.91163	1.91190	1.91217	1.91243	1.91270	1.91297	1.91323	1.91350	1.91377	1.91403
2.80	1.91403	1.91430	1.91457	1.91483	1.91510	1.91536	1.91563	1.91589	1.91616	1.91642	1.91669
2.81	1.91669	1.91695	1.91722	1.91748	1.91774	1.91801	1.91827	1.91853	1.91880	1.91906	1.91932
2.82	1.91932	1.91959	1.91985	1.92011	1.92037	1.92063	1.92090	1.92116	1.92142	1.92168	1.92194
2.83	1.92194	1.92220	1.92246	1.92272	1.92298	1.92324	1.92350	1.92376	1.92402	1.92428	1.92454
2.84	1.92454	1.92480	1.92506	1.92532	1.92558	1.92584	1.92610	1.92635	1.92661	1.92687	1.92713
2.85	1.92713	1.92739	1.92764	1.92790	1.92816	1.92841	1.92867	1.92893	1.92918	1.92944	1.92970
2.86	1.92970	1.92995	1.93021	1.93046	1.93072	1.93097	1.93123	1.93148	1.93174	1.93199	1.93225
2.87	1.93225	1.93250	1.93276	1.93301	1.93326	1.93352	1.93377	1.93402	1.93428	1.93453	1.93478
2.88	1.93478	1.93504	1.93529	1.93554	1.93579	1.93604	1.93630	1.93655	1.93680	1.93705	1.93730
2.89	1.93730	1.93755	1.93780	1.93805	1.93830	1.93855	1.93880	1.93905	1.93930	1.93955	1.93980
2.90	1.93980	1.94005	1.94030	1.94055	1.94080	1.94105	1.94130	1.94155	1.94179	1.94204	1.94229
2.91	1.94229	1.94254	1.94278	1.94303	1.94328	1.94353	1.94377	1.94402	1.94427	1.94451	1.94476
2.92	1.94476	1.94501	1.94525	1.94550	1.94574	1.94599	1.94623	1.94648	1.94672	1.94697	1.94721
2.93	1.94721	1.94746	1.94770	1.94795	1.94819	1.94843	1.94868	1.94892	1.94916	1.94941	1.94965
2.94	1.94965	1.94989	1.95014	1.95038	1.95062	1.95086	1.95111	1.95135	1.95159	1.95183	1.95207
2.95	1.95207	1.95232	1.95256	1.95280	1.95304	1.95328	1.95352	1.95376	1.95400	1.95424	1.95448
2.96	1.95448	1.95472	1.95496	1.95520	1.95544	1.95568	1.95592	1.95616	1.95639	1.95663	1.95687
2.97	1.95687	1.95711	1.95735	1.95759	1.95782	1.95806	1.95830	1.95854	1.95877	1.95901	1.95925
2.98	1.95925	1.95948	1.95972	1.95996	1.96019	1.96043	1.96067	1.96090	1.96114	1.96137	1.96161
2.99	1.96161	1.96184	1.96208	1.96231	1.96255	1.96278	1.96302	1.96325	1.96349	1.96372	1.96395



V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.00	1.96395	1.96419	1.96442	1.96465	1.96489	1.96512	1.96535	1.96559	1.96582	1.96605	1.96628
3.01	1.96628	1.96652	1.96675	1.96698	1.96721	1.96744	1.96768	1.96791	1.96814	1.96837	1.96860
3.02	1.96860	1.96883	1.96906	1.96929	1.96952	1.96975	1.96998	1.97021	1.97044	1.97067	1.97090
3.03	1.97090	1.97113	1.97136	1.97159	1.97182	1.97205	1.97227	1.97250	1.97273	1.97296	1.97319
3.04	1.97319	1.97342	1.97364	1.97387	1.97410	1.97432	1.97455	1.97478	1.97501	1.97523	1.97546
3.05	1.97546	1.97569	1.97591	1.97614	1.97636	1.97659	1.97681	1.97704	1.97727	1.97749	1.97772
3.06	1.97772	1.97794	1.97817	1.97839	1.97861	1.97884	1.97906	1.97929	1.97951	1.97974	1.97996
3.07	1.97996	1.98018	1.98041	1.98063	1.98085	1.98107	1.98130	1.98152	1.98174	1.98196	1.98219
3.08	1.98219	1.98241	1.98263	1.98285	1.98307	1.98330	1.98352	1.98374	1.98396	1.98418	1.98440
3.09	1.98440	1.98462	1.98484	1.98506	1.98528	1.98550	1.98572	1.98594	1.98616	1.98638	1.98660
3.10	1.98660	1.98682	1.98704	1.98726	1.98748	1.98770	1.98791	1.98813	1.98835	1.98857	1.98879
3.11	1.98879	1.98901	1.98922	1.98944	1.98966	1.98988	1.99009	1.99031	1.99053	1.99074	1.99096
3.12	1.99096	1.99118	1.99139	1.99161	1.99183	1.99204	1.99226	1.99247	1.99269	1.99290	1.99312
3.13	1.99312	1.99333	1.99355	1.99376	1.99398	1.99419	1.99441	1.99462	1.99484	1.99505	1.99526
3.14	1.99526	1.99548	1.99569	1.99590	1.99612	1.99633	1.99654	1.99676	1.99697	1.99718	1.99739
3.15	1.99739	1.99761	1.99782	1.99803	1.99824	1.99846	1.99867	1.99888	1.99909	1.99930	1.99951
3.16	1.99951	1.99972	1.99993	2.00015	2.00036	2.00057	2.00078	2.00099	2.00120	2.00141	2.00162
3.17	2.00162	2.00183	2.00204	2.00225	2.00246	2.00266	2.00287	2.00308	2.00329	2.00350	2.00371
3.18	2.00371	2.00392	2.00413	2.00433	2.00454	2.00475	2.00496	2.00516	2.00537	2.00558	2.00579
3.19	2.00579	2.00599	2.00620	2.00641	2.00661	2.00682	2.00703	2.00723	2.00744	2.00765	2.00785
3.20	2.00785	2.00806	2.00826	2.00847	2.00867	2.00888	2.00908	2.00929	2.00949	2.00970	2.00990
3.21	2.00990	2.01011	2.01031	2.01052	2.01072	2.01093	2.01113	2.01133	2.01154	2.01174	2.01194
3.22	2.01194	2.01215	2.01235	2.01255	2.01276	2.01296	2.01316	2.01336	2.01357	2.01377	2.01397
3.23	2.01397	2.01417	2.01437	2.01458	2.01478	2.01498	2.01518	2.01538	2.01558	2.01578	2.01598
3.24	2.01598	2.01618	2.01638	2.01659	2.01679	2.01699	2.01719	2.01739	2.01759	2.01779	2.01798

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.25	2.01798	2.01818	2.01838	2.01858	2.01878	2.01898	2.01918	2.01938	2.01958	2.01978	2.01997
3.26	2.01997	2.02017	2.02037	2.02057	2.02077	2.02096	2.02116	2.02136	2.02156	2.02175	2.02195
3.27	2.02195	2.02215	2.02234	2.02254	2.02274	2.02293	2.02313	2.02333	2.02352	2.02372	2.02391
3.28	2.02391	2.02411	2.02431	2.02450	2.02470	2.02489	2.02509	2.02528	2.02548	2.02567	2.02587
3.29	2.02587	2.02606	2.02625	2.02645	2.02664	2.02684	2.02703	2.02722	2.02742	2.02761	2.02781
3.30	2.02781	2.02800	2.02819	2.02838	2.02858	2.02877	2.02896	2.02916	2.02935	2.02954	2.02973
3.31	2.02973	2.02992	2.03012	2.03031	2.03050	2.03069	2.03088	2.03108	2.03127	2.03146	2.03165
3.32	2.03165	2.03184	2.03203	2.03222	2.03241	2.03260	2.03279	2.03298	2.03317	2.03336	2.03355
3.33	2.03355	2.03374	2.03393	2.03412	2.03431	2.03450	2.03469	2.03488	2.03507	2.03526	2.03544
3.34	2.03544	2.03563	2.03582	2.03601	2.03620	2.03639	2.03657	2.03676	2.03695	2.03714	2.03732
3.35	2.03732	2.03751	2.03770	2.03789	2.03807	2.03826	2.03845	2.03863	2.03882	2.03901	2.03919
3.36	2.03919	2.03938	2.03957	2.03975	2.03994	2.04012	2.04031	2.04049	2.04068	2.04087	2.04105
3.37	2.04105	2.04124	2.04142	2.04161	2.04179	2.04197	2.04216	2.04234	2.04253	2.04271	2.04290
3.38	2.04290	2.04308	2.04326	2.04345	2.04363	2.04381	2.04400	2.04418	2.04436	2.04455	2.04473
3.39	2.04473	2.04491	2.04510	2.04528	2.04546	2.04564	2.04583	2.04601	2.04619	2.04637	2.04655
3.40	2.04655	2.04673	2.04692	2.04710	2.04728	2.04746	2.04764	2.04782	2.04800	2.04818	2.04837
3.41	2.04837	2.04855	2.04873	2.04891	2.04909	2.04927	2.04945	2.04963	2.04981	2.04999	2.05017
3.42	2.05017	2.05035	2.05052	2.05070	2.05088	2.05106	2.05124	2.05142	2.05160	2.05178	2.05196
3.43	2.05196	2.05213	2.05231	2.05249	2.05267	2.05285	2.05302	2.05320	2.05338	2.05356	2.05373
3.44	2.05373	2.05391	2.05409	2.05427	2.05444	2.05462	2.05480	2.05497	2.05515	2.05533	2.05550
3.45	2.05550	2.05568	2.05585	2.05603	2.05621	2.05638	2.05655	2.05673	2.05691	2.05708	2.05726
3.46	2.05726	2.05743	2.05761	2.05778	2.05796	2.05813	2.05831	2.05848	2.05866	2.05883	2.05901
3.47	2.05901	2.05918	2.05935	2.05953	2.05970	2.05987	2.06005	2.06022	2.06040	2.06057	2.06074
3.48	2.06074	2.06091	2.06109	2.06126	2.06143	2.06161	2.06178	2.06195	2.06212	2.06229	2.06247
3.49	2.06247	2.06264	2.06281	2.06298	2.06315	2.06333	2.06350	2.06367	2.06384	2.06401	2.06418

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.50	2.06418	2.06435	2.06452	2.06469	2.06486	2.06503	2.06521	2.06538	2.06555	2.06572	2.06589
3.51	2.06589	2.06606	2.06623	2.06639	2.06656	2.06673	2.06690	2.06707	2.06724	2.06741	2.06758
3.52	2.06758	2.06775	2.06792	2.06809	2.06825	2.06842	2.06859	2.06876	2.06893	2.06910	2.06926
3.53	2.06926	2.06943	2.06960	2.06977	2.06993	2.07010	2.07027	2.07044	2.07060	2.07077	2.07094
3.54	2.07094	2.07110	2.07127	2.07144	2.07160	2.07177	2.07194	0.7210	2.07227	2.07243	2.07260
3.55	2.07260	2.07277	2.07293	2.07310	2.07326	2.07343	2.07359	2.07376	2.07392	2.07409	2.07425
3.56	2.07425	2.07442	2.07458	2.07475	2.07491	2.07508	2.07524	2.07541	2.07557	2.07573	2.07590
3.57	2.07590	2.07606	2.07622	2.07639	2.07655	2.07672	2.07688	2.07704	2.07720	2.07737	2.07753
3.58	2.07753	2.07769	2.07786	2.07802	2.07818	2.07834	2.07851	2.07867	2.07883	2.07899	2.07915
3.59	2.07915	2.07932	2.07948	2.07964	2.07980	2.07996	2.08012	2.08029	2.08045	2.08061	2.08077
3.60	2.08077	2.08093	2.08109	2.08125	2.08141	2.08157	2.08173	2.08189	2.08205	2.08221	2.08237
3.61	2.08237	2.08253	2.08269	2.08285	2.08301	2.08317	2.08333	2.08349	2.08365	2.08381	2.08397
3.62	2.08397	2.08413	2.08429	2.08444	2.08460	2.08476	2.08492	2.08508	2.08524	2.08539	2.08555
3.63	2.08555	2.08571	2.08587	2.08603	2.08618	2.08634	2.08650	2.08666	2.08681	2.08697	2.08713
3.64	2.08713	2.08729	2.08744	2.08760	2.08776	2.08791	2.08807	2.08823	2.08838	2.08854	2.08869
3.65	2.08869	2.08885	2.08901	2.08916	2.08932	2.08947	2.08963	2.08979	2.08994	2.09010	2.09025
3.66	2.09025	2.09041	2.09056	2.09072	2.09087	2.09103	2.09118	2.09134	2.09149	2.09164	2.09180
3.67	2.09180	2.09195	2.09211	2.09226	2.09242	2.09257	2.09272	2.09288	2.09303	2.09318	2.09334
3.68	2.09334	2.09349	2.09364	2.09380	2.09395	2.09410	2.09426	2.09441	2.09456	2.09471	2.09487
3.69	2.09487	2.09502	2.09517	2.09532	2.09548	2.09563	2.09578	2.09593	2.09608	2.09624	2.09639
3.70	2.09639	2.09654	2.09669	2.09684	2.09699	2.09714	2.09730	2.09745	2.09760	2.09775	2.09790
3.71	2.09790	2.09805	2.09820	2.09835	2.09850	2.09865	2.09880	2.09895	2.09910	2.09925	2.09940
3.72	2.09940	2.09955	2.09970	2.09985	2.10000	2.10015	2.10030	2.10045	2.10060	2.10075	2.10089
3.73	2.10089	2.10104	2.10119	2.10134	2.10149	2.10164	2.10179	2.10193	2.10208	2.10223	2.10238
3.74	2.10238	2.10253	2.10267	2.10282	2.10297	2.10312	2.10327	2.10341	2.10356	2.10371	2.10385

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
3.75	2.10385	2.10400	2.10415	2.10430	2.10444	2.10459	2.10474	2.10488	2.10503	2.10518	2.10532
3.76	2.10532	2.10547	2.10561	2.10576	2.10591	2.10605	2.10620	2.10634	2.10649	2.10664	2.10678
3.77	2.10678	2.10693	2.10707	2.10722	2.10736	2.10751	2.10765	2.10780	2.10794	2.10809	2.10823
3.78	2.10823	2.10838	2.10852	2.10866	2.10881	2.10895	2.10910	2.10924	2.10938	2.10953	2.10967
3.79	2.10967	2.10982	2.10996	2.11010	2.11025	2.11039	2.11053	2.11068	2.11082	2.11096	2.11111
3.80	2.11111	2.11125	2.11139	2.11153	2.11168	2.11182	2.11196	2.11210	2.11225	2.11239	2.11253
3.81	2.11253	2.11267	2.11281	2.11296	2.11310	2.11324	2.11338	2.11352	2.11366	2.11381	2.11395
3.82	2.11395	2.11409	2.11423	2.11437	2.11451	2.11465	2.11479	2.11493	2.11507	2.11521	2.11535
3.83	2.11535	2.11550	2.11564	2.11578	2.11592	2.11606	2.11620	2.11634	2.11648	2.11662	2.11675
3.84	2.11675	2.11689	2.11703	2.11717	2.11731	2.11745	2.11759	2.11773	2.11787	2.11801	2.11815
3.85	2.11815	2.11829	2.11842	2.11856	2.11870	2.11884	2.11898	2.11912	2.11925	2.11939	2.11953
3.86	2.11953	2.11967	2.11981	2.11994	2.12008	2.12022	2.12036	2.12049	2.12063	2.12077	2.12091
3.87	2.12091	2.12104	2.12118	2.12132	2.12145	2.12159	2.12173	2.12186	2.12200	2.12214	2.12227
3.88	2.12227	2.12241	2.12255	2.12268	2.12282	2.12295	2.12309	2.12323	2.12336	2.12350	2.12363
3.89	2.12363	2.12377	2.12390	2.12404	2.12418	2.12431	2.12445	2.12458	2.12472	2.12485	2.12499
3.90	2.12499	2.12512	2.12525	2.12539	2.12552	2.12566	2.12579	2.12593	2.12606	2.12620	2.12634
3.91	2.12634	2.12646	2.12660	2.12673	2.12687	2.12700	2.12713	2.12727	2.12740	2.12753	2.12767
3.92	2.12767	2.12780	2.12793	2.12807	2.12820	2.12833	2.12846	2.12860	2.12873	2.12886	2.12899
3.93	2.12899	2.12913	2.12926	2.12939	2.12952	2.12966	2.12979	2.12992	2.13005	2.13018	2.13032
3.94	2.13032	2.13045	2.13058	2.13071	2.13084	2.13097	2.13110	2.13124	2.13137	2.13150	2.13163
3.95	2.13163	2.13176	2.13189	2.13202	2.13215	2.13228	2.13241	2.13254	2.13267	2.13280	2.13294
3.96	2.13294	2.13307	2.13320	2.13333	2.13346	2.13359	2.13372	2.13384	2.13397	2.13410	2.13423
3.97	2.13423	2.13436	2.13449	2.13462	2.13475	2.13488	2.13501	2.13514	2.13527	2.13540	2.13552
3.98	2.13552	2.13565	2.13578	2.13591	2.13604	2.13617	2.13630	2.13642	2.13655	2.13668	2.13681
3.99	2.13681	2.13694	2.13706	2.13719	2.13732	2.13745	2.13757	2.13770	2.13783	2.13796	2.13808

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.00	2.13908	2.13821	2.13834	2.13847	2.13859	2.13872	2.13885	2.13897	2.13910	2.13923	2.13935
4.01	2.13935	2.13948	2.13961	2.13973	2.13986	2.13999	2.14011	2.14024	2.14036	2.14049	2.14062
4.02	2.14062	2.14074	2.14087	2.14099	2.14112	2.14124	2.14137	2.14149	2.14162	2.14174	2.14187
4.03	2.14187	2.14200	2.14212	2.14225	2.14237	2.14249	2.14262	2.14274	2.14287	2.14299	2.14312
4.04	2.14312	2.14324	2.14337	2.14349	2.14361	2.14374	2.14386	2.14399	2.14411	2.14423	2.14436
4.05	2.14436	2.14448	2.14461	2.14473	2.14485	2.14498	2.14510	2.14522	2.14535	2.14547	2.14559
4.06	2.14559	2.14571	2.14584	2.14596	2.14608	2.14621	2.14633	2.14645	2.14657	2.14670	2.14682
4.07	2.14682	2.14694	2.14706	2.14718	2.14731	2.14743	2.14755	2.14767	2.14779	2.14792	2.14804
4.08	2.14804	2.14816	2.14828	2.14840	2.14852	2.14864	2.14877	2.14889	2.14901	2.14913	2.14925
4.09	2.14925	2.14937	2.14949	2.14961	2.14973	2.14985	2.14997	2.15010	2.15022	2.15034	2.15046
4.10	2.15046	2.15058	2.15070	2.15082	2.15094	2.15106	2.15118	2.15130	2.15142	2.15154	2.15166
4.11	2.15166	2.15177	2.15189	2.15201	2.15213	2.15225	2.15237	2.15249	2.15261	2.15273	2.15285
4.12	2.15285	2.15297	2.15309	2.15320	2.15332	2.15344	2.15356	2.15368	2.15380	2.15391	2.15403
4.13	2.15403	2.15415	2.15427	2.15439	2.15451	2.15462	2.15474	2.15486	2.15498	2.15509	2.15521
4.14	2.15521	2.15533	2.15545	2.15556	2.15568	2.15580	2.15592	2.15603	2.15615	2.15627	2.15638
4.15	2.15638	2.15650	2.15662	2.15674	2.15685	2.15697	2.15708	2.15720	2.15732	2.15743	2.15755
4.16	2.15755	2.15767	2.15778	2.15790	2.15801	2.15813	2.15825	2.15836	2.15848	2.15859	2.15871
4.17	2.15871	2.15883	2.15894	2.15906	2.15917	2.15929	2.15940	2.15952	2.15963	2.15975	2.15986
4.18	2.15986	2.15998	2.16009	2.16021	2.16032	2.16044	2.16055	2.16067	2.16078	2.16089	2.16101
4.19	2.16101	2.16112	2.16124	2.16135	2.16147	2.16158	2.16169	2.16181	2.16192	2.16204	2.16215
4.20	2.16215	2.16226	2.16238	2.16249	2.16260	2.16272	2.16283	2.16294	2.16306	2.16317	2.16328
4.21	2.16328	2.16340	2.16351	2.16362	2.16373	2.16385	2.16396	2.16407	2.16419	2.16430	2.16441
4.22	2.16441	2.16452	2.16464	2.16475	2.16486	2.16497	2.16508	2.16520	2.16531	2.16542	2.16553
4.23	2.16553	2.16564	2.16576	2.16587	2.16598	2.16609	2.16620	2.16631	2.16642	2.16654	2.16665
4.24	2.16665	2.16676	2.16687	2.16698	2.16709	2.16720	2.16731	2.16742	2.16753	2.16765	2.16776

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.25	2.16776	2.16787	2.16798	2.16809	2.16820	2.16831	2.16842	2.16853	2.16864	2.16875	2.16886
4.26	2.16886	2.16897	2.16908	2.16919	2.16930	2.16941	2.16952	2.16963	2.16974	2.16985	2.16996
4.27	2.16996	2.17006	2.17017	2.17028	2.17039	2.17050	2.17061	2.17072	2.17083	2.17094	2.17105
4.28	2.17105	2.17115	2.17126	2.17137	2.17148	2.17159	2.17170	2.17181	2.17191	2.17202	2.17213
4.29	2.17213	2.17224	2.17235	2.17245	2.17256	2.17267	2.17278	2.17289	2.17299	2.17310	2.17321
4.30	2.17321	2.17332	2.17342	2.17353	2.17364	2.17375	2.17385	2.17396	2.17407	2.17418	2.17428
4.31	2.17428	2.17439	2.17450	2.17460	2.17471	2.17482	2.17492	2.17503	2.17514	2.17524	2.17535
4.32	2.17535	2.17546	2.17556	2.17567	2.17577	2.17588	2.17599	2.17609	2.17620	2.17630	2.17641
4.33	2.17641	2.17652	2.17662	2.17673	2.17683	2.17694	2.17704	2.17715	2.17726	2.17736	2.17747
4.34	2.17747	2.17757	2.17768	2.17778	2.17789	2.17799	2.17810	2.17820	2.17831	2.17841	2.17852
4.35	2.17852	2.17862	2.17872	2.17883	2.17893	2.17904	2.17914	2.17925	2.17935	2.17946	2.17956
4.36	2.17956	2.17966	2.17977	2.17987	2.17998	2.18008	2.18018	2.18029	2.18039	2.18049	2.18060
4.37	2.18060	2.18070	2.18080	2.18091	2.18101	2.18111	2.18122	2.18132	2.18142	2.18153	2.18163
4.38	2.18163	2.18173	2.18184	2.18194	2.18204	2.18214	2.18225	2.18235	2.18245	2.18255	2.18266
4.39	2.18266	2.18276	2.18286	2.18296	2.18307	2.18317	2.18327	2.18337	2.18347	2.18358	2.18368
4.40	2.18368	2.18378	2.18388	2.18398	2.18409	2.18419	2.18429	2.18439	2.18449	2.18459	2.18469
4.41	2.18469	2.18480	2.18490	2.18500	2.18510	2.18520	2.18530	2.18540	2.18550	2.18560	2.18570
4.42	2.18570	2.18581	2.18591	2.18601	2.18611	2.18621	2.18631	2.18641	2.18651	2.18661	2.18671
4.43	2.18671	2.18681	2.18691	2.18701	2.18711	2.18721	2.18731	2.18741	2.18751	2.18761	2.18771
4.44	2.18771	2.18781	2.18791	2.18801	2.18811	2.18821	2.18831	2.18841	2.18851	2.18860	2.18870
4.45	2.18870	2.18880	2.18890	2.18900	2.18910	2.18920	2.18930	2.18940	2.18950	2.18959	2.18969
4.46	2.18969	2.18979	2.18989	2.18999	2.19009	2.19018	2.19028	2.19038	2.19048	2.19058	2.19068
4.47	2.19068	2.19077	2.19087	2.19097	2.19107	2.19117	2.19126	2.19136	2.19146	2.19156	2.19165
4.48	2.19165	2.19175	2.19185	2.19195	2.19204	2.19214	2.19224	2.19234	2.19243	2.19253	2.19263
4.49	2.19263	2.19272	2.19282	2.19292	2.19302	2.19311	2.19321	2.19331	2.19340	2.19350	2.19360

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.50	2.19360	2.19369	2.19379	2.19388	2.19398	2.19408	2.19417	2.19427	2.19437	2.19446	2.19456
4.51	2.19456	2.19465	2.19475	2.19485	2.19494	2.19504	2.19513	2.19523	2.19532	2.19542	2.19552
4.52	2.19552	2.19561	2.19571	2.19580	2.19590	2.19599	2.19609	2.19618	2.19628	2.19637	2.19647
4.53	2.19647	2.19656	2.19666	2.19675	2.19685	2.19694	2.19704	2.19713	2.19723	2.19732	2.19742
4.54	2.19742	2.19751	2.19760	2.19770	2.19779	2.19789	2.19798	2.19808	2.19817	2.19826	2.19836
4.55	2.19836	2.19845	2.19855	2.19864	2.19873	2.19883	2.19892	2.19901	2.19911	2.19920	2.19930
4.56	2.19930	2.19939	2.19948	2.19958	2.19967	2.19976	2.19986	2.19995	2.20004	2.20013	2.20023
4.57	2.20023	2.20032	2.20041	2.20051	2.20060	2.20069	2.20079	2.20088	2.20097	2.20106	2.20116
4.58	2.20116	2.20125	2.20134	2.20143	2.20153	2.20162	2.20171	2.20180	2.20189	2.20199	2.20208
4.59	2.20208	2.20217	2.20226	2.20235	2.20245	2.20254	2.20263	2.20272	2.20281	2.20290	2.20300
4.60	2.20300	2.20309	2.20318	2.20327	2.20336	2.20345	2.20354	2.20364	2.20373	2.20382	2.20391
4.61	2.20391	2.20400	2.20409	2.20418	2.20427	2.20436	2.20445	2.20455	2.20464	2.20473	2.20482
4.62	2.20482	2.20491	2.20500	2.20509	2.20518	2.20527	2.20536	2.20545	2.20554	2.20563	2.20572
4.63	2.20572	2.20581	2.20590	2.20599	2.20608	2.20617	2.20626	2.20635	2.20644	2.20653	2.20662
4.64	2.20662	2.20671	2.20680	2.20689	2.20698	2.20707	2.20716	2.20725	2.20733	2.20742	2.20751
4.65	2.20751	2.20760	2.20769	2.20778	2.20787	2.20796	2.20805	2.20814	2.20822	2.20831	2.20840
4.66	2.20840	2.20849	2.20858	2.20867	2.20876	2.20885	2.20893	2.20902	2.20911	2.20920	2.20929
4.67	2.20929	2.20938	2.20946	2.20955	2.20964	2.20973	2.20982	2.20990	2.20999	2.21008	2.21017
4.68	2.21017	2.21025	2.21034	2.21043	2.21052	2.21061	2.21069	2.21078	2.21087	2.21096	2.21104
4.69	2.21104	2.21113	2.21122	2.21130	2.21139	2.21148	2.21157	2.21165	2.21174	2.21183	2.21191
4.70	2.21191	2.21200	2.21209	2.21217	2.21226	2.21235	2.21243	2.21252	2.21261	2.21269	2.21278
4.71	2.21278	2.21287	2.21295	2.21304	2.21312	2.21321	2.21330	2.21338	2.21347	2.21356	2.21364
4.72	2.21364	2.21373	2.21381	2.21390	2.21399	2.21407	2.21416	2.21424	2.21433	2.21441	2.21450
4.73	2.21450	2.21458	2.21467	2.21476	2.21484	2.21493	2.21501	2.21510	2.21518	2.21527	2.21535
4.74	2.21535	2.21544	2.21552	2.21561	2.21569	2.21578	2.21586	2.21595	2.21603	2.21612	2.21620

V/(A STAR)

RATIO OF LOCAL VELOCITY TO VELOCITY WHERE MACH NO. IS 1.0

MACH NO	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
4.75	2.21620	2.21629	2.21637	2.21645	2.21654	2.21662	2.21671	2.21679	2.21688	2.21696	2.21704
4.76	2.21704	2.21713	2.21721	2.21730	2.21738	2.21747	2.21755	2.21763	2.21772	2.21780	2.21788
4.77	2.21788	2.21797	2.21805	2.21814	2.21822	2.21830	2.21839	2.21847	2.21855	2.21864	2.21872
4.78	2.21872	2.21880	2.21889	2.21897	2.21905	2.21914	2.21922	2.21930	2.21939	2.21947	2.21955
4.79	2.21955	2.21963	2.21972	2.21980	2.21988	2.21997	2.22005	2.22013	2.22021	2.22030	2.22038
4.80	2.22038	2.22046	2.22054	2.22063	2.22071	2.22079	2.22087	2.22095	2.22104	2.22112	2.22120
4.81	2.22120	2.22128	2.22137	2.22145	2.22153	2.22161	2.22169	2.22177	2.22186	2.22194	2.22202
4.82	2.22202	2.22210	2.22218	2.22226	2.22235	2.22243	2.22251	2.22259	2.22267	2.22275	2.22283
4.83	2.22283	2.22292	2.22300	2.22308	2.22316	2.22324	2.22332	2.22340	2.22348	2.22356	2.22364
4.84	2.22364	2.22373	2.22381	2.22389	2.22397	2.22405	2.22413	2.22421	2.22429	2.22437	2.22445
4.85	2.22445	2.22453	2.22461	2.22469	2.22477	2.22485	2.22493	2.22501	2.22509	2.22517	2.22525
4.86	2.22525	2.22533	2.22541	2.22549	2.22557	2.22565	2.22573	2.22581	2.22589	2.22597	2.22605
4.87	2.22605	2.22613	2.22621	2.22629	2.22637	2.22645	2.22653	2.22661	2.22669	2.22676	2.22684
4.88	2.22684	2.22692	2.22700	2.22708	2.22716	2.22724	2.22732	2.22740	2.22748	2.22756	2.22763
4.89	2.22763	2.22771	2.22779	2.22787	2.22795	2.22803	2.22811	2.22818	2.22826	2.22834	2.22842
4.90	2.22842	2.22850	2.22858	2.22865	2.22873	2.22881	2.22889	2.22897	2.22905	2.22912	2.22920
4.91	2.22920	2.22928	2.22936	2.22944	2.22951	2.22959	2.22967	2.22975	2.22982	2.22990	2.22998
4.92	2.22998	2.23006	2.23013	2.23021	2.23029	2.23037	2.23044	2.23052	2.23060	2.23068	2.23075
4.93	2.23075	2.23083	2.23091	2.23099	2.23106	2.23114	2.23122	2.23129	2.23137	2.23145	2.23152
4.94	2.23152	2.23160	2.23168	2.23175	2.23183	2.23191	2.23198	2.23206	2.23214	2.23221	2.23229
4.95	2.23229	2.23237	2.23244	2.23252	2.23260	2.23267	2.23275	2.23282	2.23290	2.23298	2.23305
4.96	2.23305	2.23313	2.23320	2.23328	2.23336	2.23343	2.23351	2.23358	2.23366	2.23374	2.23381
4.97	2.23381	2.23389	2.23396	2.23404	2.23411	2.23419	2.23426	2.23434	2.23441	2.23449	2.23457
4.98	2.23457	2.23464	2.23472	2.23479	2.23487	2.23494	2.23502	2.23509	2.23517	2.23524	2.23532
4.99	2.23532	2.23539	2.23547	2.23554	2.23562	2.23569	2.23577	2.23584	2.23591	2.23599	2.23606



Appendix B. Normal Shock Wave Parameters

This appendix contains a tabulation of some of the more important thermodynamic property changes that take place across a normal shock.

Downstream Mach number,  $M_2$ ; Static Pressure Ratio,  $P_2/P_1$ ; Total Pressure Ratio,  $P_{t2}/P_{t1}$  are tabulated versus Upstream Mach number,  $M_1$ .

NORMAL SHOCK WAVE PARAMETERS

M1	M2	P2/P1	P12/P11	M1	M2	P2/P1	P12/P11
1.01	0.890	1.0234	1.0000	1.37	0.753	2.0230	0.9653
1.02	0.881	1.0471	1.0000	1.39	0.748	2.0551	0.9630
1.03	0.871	1.0710	1.0000	1.39	0.744	2.0874	0.9607
1.04	0.862	1.0952	0.9999	1.40	0.740	2.1200	0.9582
1.05	0.853	1.1197	0.9999	1.41	0.736	2.1528	0.9557
1.06	0.844	1.1442	0.9999	1.42	0.731	2.1858	0.9531
1.07	0.836	1.1690	0.9999	1.43	0.727	2.2190	0.9504
1.08	0.828	1.1941	0.9999	1.44	0.723	2.2525	0.9476
1.09	0.820	1.2194	0.9999	1.45	0.720	2.2862	0.9448
1.10	0.812	1.2450	0.9999	1.46	0.716	2.3202	0.9420
1.11	0.804	1.2708	0.9996	1.47	0.712	2.3544	0.9390
1.12	0.807	1.2968	0.9992	1.48	0.708	2.3888	0.9360
1.13	0.809	1.3230	0.9973	1.49	0.705	2.4234	0.9329
1.14	0.812	1.3495	0.9973	1.50	0.701	2.4583	0.9298
1.15	0.815	1.3762	0.9967	1.51	0.698	2.4934	0.9266
1.16	0.819	1.4032	0.9961	1.52	0.694	2.5288	0.9233
1.17	0.821	1.4304	0.9953	1.53	0.691	2.5644	0.9200
1.18	0.825	1.4578	0.9946	1.54	0.687	2.6002	0.9166
1.19	0.828	1.4854	0.9937	1.55	0.684	2.6362	0.9132
1.20	0.832	1.5133	0.9929	1.55	0.681	2.6725	0.9097
1.21	0.836	1.5414	0.9919	1.57	0.678	2.7090	0.9062
1.22	0.840	1.5698	0.9907	1.58	0.675	2.7458	0.9026
1.23	0.824	1.5984	0.9896	1.59	0.671	2.7828	0.8989
1.24	0.819	1.6272	0.9884	1.60	0.669	2.8200	0.8952
1.25	0.814	1.6562	0.9871	1.61	0.665	2.8574	0.8915
1.26	0.807	1.6855	0.9857	1.62	0.663	2.8951	0.8877
1.27	0.802	1.7150	0.9842	1.63	0.660	2.9330	0.8838
1.28	0.796	1.7449	0.9827	1.64	0.657	2.9712	0.8799
1.29	0.791	1.7748	0.9811	1.65	0.654	3.0096	0.8760
1.30	0.786	1.8050	0.9794	1.66	0.651	3.0482	0.8720
1.31	0.781	1.8354	0.9776	1.67	0.648	3.0870	0.8680
1.32	0.776	1.8661	0.9759	1.69	0.646	3.1261	0.8639
1.33	0.771	1.8970	0.9739	1.69	0.643	3.1654	0.8599
1.34	0.766	1.9282	0.9719	1.70	0.641	3.2050	0.8557
1.35	0.762	1.9596	0.9697	1.71	0.639	3.2448	0.8516
1.36	0.757	1.9912	0.9676	1.72	0.635	3.2848	0.8474

NORMAL SHOCK WAVE PARAMETERS

M1	M2	P2/P1	PT2/PT1	M1	M2	P2/P1	PT2/PT1
1.73	0.633	3.5250	0.8431	2.09	0.563	4.9294	0.6789
1.74	0.631	3.3655	0.8389	2.10	0.561	4.9783	0.6742
1.75	0.628	3.4062	0.8346	2.11	0.560	5.0274	0.6696
1.76	0.626	3.4472	0.8302	2.12	0.558	5.0768	0.6649
1.77	0.623	3.4884	0.8259	2.13	0.557	5.1264	0.6603
1.78	0.621	3.5298	0.8215	2.14	0.555	5.1762	0.6557
1.79	0.619	3.5714	0.8171	2.15	0.554	5.2262	0.6511
1.80	0.617	3.6133	0.8127	2.16	0.553	5.2765	0.6464
1.81	0.614	3.6554	0.8082	2.17	0.551	5.3270	0.6419
1.82	0.612	3.6978	0.8038	2.18	0.550	5.3778	0.6373
1.83	0.610	3.7404	0.7993	2.19	0.548	5.4288	0.6327
1.84	0.608	3.7832	0.7948	2.20	0.547	5.4800	0.6281
1.85	0.606	3.8262	0.7902	2.21	0.546	5.5314	0.6236
1.86	0.604	3.8695	0.7857	2.22	0.544	5.5831	0.6191
1.87	0.602	3.9130	0.7811	2.23	0.543	5.6350	0.6145
1.88	0.600	3.9568	0.7765	2.24	0.542	5.6872	0.6100
1.89	0.598	4.0008	0.7720	2.25	0.541	5.7396	0.6055
1.90	0.596	4.0450	0.7674	2.26	0.539	5.7922	0.6011
1.91	0.594	4.0894	0.7627	2.27	0.538	5.8450	0.5966
1.92	0.592	4.1341	0.7581	2.28	0.537	5.8981	0.5921
1.93	0.590	4.1790	0.7535	2.29	0.536	5.9514	0.5877
1.94	0.588	4.2242	0.7489	2.30	0.534	6.0050	0.5833
1.95	0.586	4.2696	0.7443	2.31	0.533	6.0588	0.5789
1.96	0.584	4.3152	0.7395	2.32	0.532	6.1128	0.5745
1.97	0.582	4.3610	0.7349	2.33	0.531	6.1670	0.5702
1.98	0.581	4.4071	0.7302	2.34	0.530	6.2215	0.5658
1.99	0.579	4.4534	0.7255	2.35	0.529	6.2762	0.5615
2.00	0.577	4.5000	0.7209	2.36	0.527	6.3312	0.5572
2.01	0.576	4.5468	0.7162	2.37	0.526	6.3864	0.5529
2.02	0.574	4.5938	0.7115	2.38	0.525	6.4418	0.5486
2.03	0.572	4.6410	0.7069	2.39	0.524	6.4974	0.5444
2.04	0.571	4.6885	0.7022	2.40	0.523	6.5533	0.5401
2.05	0.569	4.7362	0.6975	2.41	0.522	6.6094	0.5359
2.06	0.567	4.7842	0.6928	2.42	0.521	6.6658	0.5317
2.07	0.566	4.8324	0.6882	2.43	0.520	6.7224	0.5274
2.08	0.564	4.8808	0.6835	2.44	0.519	6.7792	0.5234

NORMAL SHOCK WAVE PARAMETERS

M1	M2	P2/P1	P2/P1	M1	M2	P2/P1	P2/P1
2.65	0.518	6.8322	0.5183	2.81	0.487	9.0454	0.3862
2.66	0.517	6.8935	0.5152	2.82	0.487	9.1111	0.3820
2.67	0.516	6.9510	0.5111	2.83	0.486	9.1770	0.3797
2.68	0.515	7.0089	0.5071	2.84	0.485	9.2432	0.3765
2.69	0.514	7.0658	0.5030	2.85	0.485	9.3096	0.3733
2.70	0.513	7.1250	0.4990	2.86	0.484	9.3762	0.3701
2.71	0.512	7.1834	0.4950	2.87	0.483	9.4430	0.3670
2.72	0.511	7.2421	0.4911	2.88	0.483	9.5101	0.3639
2.73	0.510	7.3010	0.4871	2.89	0.482	9.5774	0.3609
2.74	0.509	7.3602	0.4832	2.90	0.481	9.6450	0.3577
2.75	0.508	7.4198	0.4793	2.91	0.481	9.7128	0.3547
2.76	0.507	7.4792	0.4754	2.92	0.480	9.7808	0.3517
2.77	0.506	7.5390	0.4715	2.93	0.479	9.8490	0.3487
2.78	0.505	7.5991	0.4677	2.94	0.479	9.9175	0.3457
2.79	0.504	7.6594	0.4639	2.95	0.478	9.9862	0.3428
2.80	0.503	7.7200	0.4601	2.96	0.478	10.0552	0.3398
2.81	0.502	7.7808	0.4564	2.97	0.477	10.1244	0.3368
2.82	0.501	7.8419	0.4526	2.98	0.476	10.1938	0.3340
2.83	0.500	7.9030	0.4489	2.99	0.476	10.2634	0.3312
2.84	0.500	7.9645	0.4452	3.00	0.475	10.3333	0.3283
2.85	0.500	8.0262	0.4415	3.01	0.475	10.4034	0.3255
2.86	0.499	8.0882	0.4379	3.02	0.474	10.4738	0.3227
2.87	0.498	8.1504	0.4343	3.03	0.473	10.5444	0.3200
2.88	0.497	8.2129	0.4307	3.04	0.473	10.6152	0.3172
2.89	0.496	8.2754	0.4271	3.05	0.472	10.6862	0.3145
2.90	0.495	8.3383	0.4236	3.06	0.472	10.7575	0.3118
2.91	0.495	8.4014	0.4201	3.07	0.471	10.8290	0.3091
2.92	0.494	8.4649	0.4166	3.08	0.471	10.9008	0.3065
2.93	0.493	8.5284	0.4131	3.09	0.470	10.9728	0.3038
2.94	0.493	8.5922	0.4097	3.10	0.470	11.0450	0.3012
2.95	0.492	8.6547	0.4063	3.11	0.469	11.1174	0.2986
2.96	0.491	8.7205	0.4029	3.12	0.468	11.1901	0.2960
2.97	0.490	8.7850	0.3994	3.13	0.468	11.2630	0.2935
2.98	0.490	8.8499	0.3959	3.14	0.467	11.3362	0.2910
2.99	0.489	8.9148	0.3924	3.15	0.467	11.4096	0.2885
2.90	0.488	8.9800	0.3889	3.16	0.466	11.4832	0.2860

NORMAL SHOCK WAVE PARAMETERS

M1	M2	P2/P1	PT2/PT1	M1	M2	P2/P1	PT2/PT1
3.17	0.466	11.557C	0.2835	3.34	0.458	12.8482	0.2446
3.18	0.465	11.6311	0.2811	3.15	0.457	12.9262	0.2425
3.19	0.465	11.7054	0.2786	3.16	0.457	13.0045	0.2404
3.20	0.464	11.7800	0.2762	3.37	0.456	13.0830	0.2383
3.21	0.464	11.8548	0.2738	3.38	0.456	13.1618	0.2363
3.22	0.463	11.9298	0.2715	3.39	0.456	13.2408	0.2342
3.23	0.463	12.0050	0.2691	3.40	0.455	13.3200	0.2322
3.24	0.462	12.0805	0.2668	3.41	0.455	13.3994	0.2302
3.25	0.462	12.1562	0.2645	3.42	0.454	13.4791	0.2282
3.26	0.461	12.2322	0.2622	3.43	0.454	13.5590	0.2263
3.27	0.461	12.3084	0.2600	3.44	0.454	13.6392	0.2243
3.28	0.461	12.3848	0.2577	3.45	0.453	13.7196	0.2224
3.29	0.460	12.4614	0.2555	3.46	0.453	13.8002	0.2205
3.30	0.460	12.5383	0.2533	3.47	0.452	13.8810	0.2186
3.31	0.459	12.6154	0.2511	3.48	0.452	13.9621	0.2167
3.32	0.459	12.6928	0.2489	3.49	0.452	14.0434	0.2148
3.33	0.458	12.7704	0.2469	3.50	0.451	14.1250	0.2129

NOT REPRODUCIBLE

Appendix C. Two-Dimensional Oblique Shock Wave Parameters

This appendix contains a tabulation of some of the more important two-dimensional oblique shock wave parameters.

Shock wave angle,  $\theta$ ; Downstream Mach number,  $M_2$ ; Static Pressure Ratio,  $P_2/P_1$ ; Total Pressure Ratio,  $P_{t2}/P_{t1}$  are tabulated versus Upstream Mach number,  $M_1$  and Flow Deflection Angle,  $\beta$ .

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.01	1.0	88.750	0.991	1.0229	1.0000	DETACHED
	2.0	89.052	0.991	1.0231	1.0000	DETACHED
	3.0	89.270	0.990	1.0232	1.0000	DETACHED
	4.0	89.354	0.990	1.0233	1.0000	DETACHED
	5.0	89.449	0.990	1.0233	1.0000	DETACHED
	6.0	89.525	0.990	1.0234	1.0000	DETACHED
	7.0	89.587	0.990	1.0234	1.0000	DETACHED
	8.0	89.639	0.990	1.0234	1.0000	DETACHED
	9.0	89.683	0.990	1.0234	1.0000	DETACHED
	10.0	89.721	0.990	1.0234	1.0000	DETACHED
1.02	1.0	89.188	0.982	1.0459	1.0000	DETACHED
	2.0	89.641	0.981	1.0465	1.0000	DETACHED
	3.0	89.900	0.981	1.0467	1.0000	DETACHED
	4.0	89.081	0.981	1.0468	1.0000	DETACHED
	5.0	89.217	0.981	1.0469	1.0000	DETACHED
	6.0	89.325	0.981	1.0470	1.0000	DETACHED
	7.0	89.414	0.981	1.0470	1.0000	DETACHED
	8.0	89.488	0.981	1.0470	1.0000	DETACHED
	9.0	89.550	0.981	1.0471	1.0000	DETACHED
	10.0	89.604	0.981	1.0471	1.0000	DETACHED
1.03	1.0	87.696	0.973	1.0690	1.0000	DETACHED
	2.0	89.301	0.972	1.0700	1.0000	DETACHED
	3.0	89.633	0.972	1.0703	1.0000	DETACHED
	4.0	89.861	0.972	1.0706	1.0000	DETACHED
	5.0	89.032	0.972	1.0707	1.0000	DETACHED
	6.0	89.166	0.972	1.0708	1.0000	DETACHED
	7.0	89.276	0.972	1.0709	1.0000	DETACHED
	8.0	89.369	0.971	1.0709	1.0000	DETACHED
	9.0	89.446	0.971	1.0709	1.0000	DETACHED
	10.0	89.512	0.971	1.0710	1.0000	DETACHED
1.04	1.0	87.200	0.965	1.0922	0.9999	DETACHED
	2.0	87.985	0.963	1.0936	0.9999	DETACHED
	3.0	88.301	0.963	1.0942	0.9999	DETACHED
	4.0	88.664	0.963	1.0945	0.9999	DETACHED

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.04	5.0	88.867	0.963	1.0947	0.9999	DETACHED
	6.0	89.027	0.963	1.0948	0.9999	DETACHED
	7.0	89.156	0.962	1.0949	0.9999	DETACHED
	8.0	89.264	0.962	1.0950	0.9999	DETACHED
	9.0	89.354	0.962	1.0950	0.9999	DETACHED
	10.0	89.432	0.962	1.0951	0.9999	DETACHED
	1.0	89.642	0.957	1.1152	0.9999	DETACHED
	2.0	87.673	0.955	1.1175	0.9999	DETACHED
	3.0	88.159	0.954	1.1183	0.9999	DETACHED
	4.0	88.479	0.954	1.1187	0.9999	DETACHED
1.05	5.0	88.713	0.954	1.1189	0.9999	DETACHED
	6.0	88.997	0.954	1.1191	0.9999	DETACHED
	7.0	89.045	0.954	1.1192	0.9999	DETACHED
	8.0	89.167	0.954	1.1193	0.9999	DETACHED
	9.0	89.270	0.953	1.1194	0.9999	DETACHED
	10.0	89.359	0.953	1.1194	0.9999	DETACHED
	1.0	89.929	0.950	1.1376	0.9999	DETACHED
	2.0	87.248	0.947	1.1414	0.9998	DETACHED
	3.0	87.978	0.946	1.1425	0.9998	DETACHED
	4.0	88.297	0.946	1.1430	0.9998	DETACHED
1.06	5.0	88.565	0.945	1.1434	0.9998	DETACHED
	6.0	88.772	0.945	1.1436	0.9998	DETACHED
	7.0	88.939	0.945	1.1437	0.9998	DETACHED
	8.0	89.075	0.945	1.1439	0.9998	DETACHED
	9.0	89.191	0.945	1.1439	0.9998	DETACHED
	10.0	89.289	0.945	1.1440	0.9998	DETACHED
	1.0	84.606	0.945	1.1576	0.9997	DETACHED
	2.0	84.008	0.939	1.1654	0.9996	DETACHED
	3.0	87.691	0.938	1.1669	0.9995	DETACHED
	4.0	88.115	0.937	1.1676	0.9995	DETACHED
1.07	5.0	88.417	0.937	1.1680	0.9996	DETACHED
	6.0	88.649	0.937	1.1682	0.9996	DETACHED
	7.0	88.814	0.937	1.1685	0.9996	DETACHED
	8.0	88.986	0.937	1.1686	0.9996	DETACHED



TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
1.07	5.0	89.113	0.936	1.1687	0.9996	DETACHED	
	10.0	89.222	0.936	1.1688	0.9996	DETACHED	
	1.09	1.0	74.640	1.003	1.0965	0.9999	DETACHED
		2.0	86.603	0.931	1.1894	0.9995	DETACHED
		3.0	87.442	0.930	1.1914	0.9995	DETACHED
		4.0	87.929	0.929	1.1924	0.9994	DETACHED
		5.0	89.258	0.929	1.1929	0.9994	DETACHED
		6.0	89.526	0.929	1.1932	0.9994	DETACHED
		7.0	89.730	0.928	1.1935	0.9994	DETACHED
		8.0	89.907	0.928	1.1936	0.9994	DETACHED
1.09	9.0	89.037	0.928	1.1937	0.9994	DETACHED	
	10.0	89.156	0.928	1.1938	0.9994	DETACHED	
	1.10	1.0	71.762	1.023	1.0837	0.9999	DETACHED
		2.0	86.137	0.924	1.2132	0.9993	DETACHED
		3.0	87.174	0.922	1.2161	0.9992	DETACHED
		4.0	87.736	0.922	1.2171	0.9992	DETACHED
		5.0	89.116	0.921	1.2180	0.9992	DETACHED
		6.0	89.401	0.921	1.2184	0.9992	DETACHED
		7.0	89.626	0.921	1.2187	0.9992	DETACHED
		8.0	89.809	0.920	1.2189	0.9992	DETACHED
9.0		89.661	0.920	1.2190	0.9992	DETACHED	
10.0		89.990	0.920	1.2191	0.9992	DETACHED	
1.10	1.0	69.804	1.039	1.0767	1.0000	DETACHED	
	2.0	85.544	0.918	1.2365	0.9990	DETACHED	
	3.0	86.881	0.915	1.2408	0.9990	DETACHED	
	4.0	87.529	0.914	1.2424	0.9990	DETACHED	
	5.0	87.957	0.913	1.2432	0.9989	DETACHED	
	6.0	89.273	0.913	1.2437	0.9989	DETACHED	
	7.0	89.520	0.913	1.2441	0.9989	DETACHED	
	8.0	89.719	0.913	1.2443	0.9989	DETACHED	
	9.0	89.884	0.912	1.2445	0.9989	DETACHED	
	10.0	89.024	0.912	1.2446	0.9989	DETACHED	
1.11	1.0	68.171	1.053	1.0720	1.0000	DETACHED	
	2.0	84.679	0.913	1.2584	0.9988	DETACHED	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P12/P11	COMMENT	
1.11	3.0	86.550	0.908	1.2656	0.9987	DETACHED	
	4.0	87.310	0.907	1.2676	0.9986	DETACHED	
	5.0	87.797	0.906	1.2686	0.9986	DETACHED	
	6.0	88.141	0.905	1.2693	0.9986	DETACHED	
	7.0	88.412	0.905	1.2697	0.9986	DETACHED	
	8.0	88.628	0.905	1.2700	0.9986	DETACHED	
	9.0	88.807	0.905	1.2702	0.9986	DETACHED	
	10.0	88.957	0.905	1.2703	0.9986	DETACHED	
	1.12	1.0	64.738	1.066	1.0685	1.0000	DETACHED
		2.0	82.556	0.914	1.2722	0.9986	DETACHED
3.0		84.167	0.901	1.2903	0.9983	DETACHED	
4.0		87.071	0.900	1.2930	0.9983	DETACHED	
5.0		87.616	0.899	1.2943	0.9983	DETACHED	
6.0		88.003	0.898	1.2950	0.9982	DETACHED	
7.0		88.298	0.898	1.2955	0.9982	DETACHED	
8.0		88.534	0.898	1.2958	0.9982	DETACHED	
9.0		88.727	0.897	1.2961	0.9982	DETACHED	
10.0		88.889	0.897	1.2962	0.9982	DETACHED	
1.13	1.0	65.445	1.079	1.0658	1.0000	DETACHED	
	2.0	70.920	1.005	1.1640	0.9996	DETACHED	
	3.0	85.705	0.895	1.3147	0.9979	DETACHED	
	4.0	86.808	0.893	1.3184	0.9979	DETACHED	
	5.0	87.429	0.892	1.3201	0.9978	DETACHED	
	6.0	87.858	0.891	1.3210	0.9978	DETACHED	
	7.0	88.181	0.891	1.3215	0.9978	DETACHED	
	8.0	88.436	0.890	1.3219	0.9978	DETACHED	
	9.0	88.645	0.890	1.3222	0.9978	DETACHED	
	10.0	88.819	0.890	1.3224	0.9978	DETACHED	
1.14	1.0	64.260	1.091	1.0636	1.0000	DETACHED	
	2.0	69.710	1.026	1.1496	0.9997	DETACHED	
	3.0	85.111	0.890	1.3385	0.9975	DETACHED	
	4.0	86.513	0.886	1.3439	0.9974	DETACHED	
	5.0	87.227	0.885	1.3460	0.9973	DETACHED	
	6.0	87.704	0.884	1.3471	0.9973	DETACHED	

TWO-DIMENSIONAL CALIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.14	7.0	88.058	0.884	1.3478	0.9973	DETACHED
	8.0	88.315	0.883	1.3481	0.9973	DETACHED
	9.0	88.560	0.883	1.3486	0.9973	DETACHED
1.15	10.0	88.747	0.883	1.3488	0.9973	DETACHED
	1.0	63.161	1.102	1.0618	1.0000	
	2.0	67.005	1.043	1.1408	0.9998	
1.16	3.0	84.249	0.885	1.3608	0.9970	DETACHED
	4.0	84.174	0.880	1.3694	0.9968	DETACHED
	5.0	87.006	0.878	1.3720	0.9968	DETACHED
	6.0	87.540	0.877	1.3734	0.9968	DETACHED
	7.0	87.929	0.877	1.3742	0.9967	DETACHED
	8.0	88.230	0.876	1.3748	0.9967	DETACHED
	9.0	88.477	0.876	1.3752	0.9967	DETACHED
	10.0	88.672	0.876	1.3754	0.9967	DETACHED
	1.0	62.133	1.114	1.0602	1.0000	
	2.0	65.558	1.059	1.1344	0.9998	
1.17	3.0	82.413	0.886	1.3758	0.9967	DETACHED
	4.0	85.775	0.874	1.3947	0.9963	DETACHED
	5.0	86.762	0.872	1.3982	0.9962	DETACHED
	6.0	87.364	0.871	1.3990	0.9961	DETACHED
	7.0	87.792	0.870	1.4000	0.9961	DETACHED
	8.0	88.120	0.870	1.4015	0.9961	DETACHED
	9.0	88.381	0.869	1.4019	0.9961	DETACHED
	10.0	88.505	0.869	1.4023	0.9961	DETACHED
	1.0	61.165	1.125	1.0589	1.0000	
	2.0	64.276	1.073	1.1295	0.9998	
1.17	3.0	69.654	0.906	1.2373	0.9990	DETACHED
	4.0	85.285	0.869	1.4196	0.9956	DETACHED
	5.0	84.490	0.866	1.4244	0.9955	DETACHED
	6.0	87.173	0.864	1.4265	0.9955	DETACHED
	7.0	87.646	0.864	1.4277	0.9954	DETACHED
	8.0	88.003	0.863	1.4284	0.9954	DETACHED
	9.0	88.285	0.863	1.4290	0.9954	DETACHED
	10.0	88.515	0.862	1.4293	0.9954	DETACHED

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.18	1.0	60.248	1.136	1.0578	1.0000	
	2.0	63.115	1.086	1.1256	0.9999	
	3.0	67.409	1.020	1.2181	0.9992	
	4.0	84.641	0.864	1.4436	0.9950	DETACHED
	5.0	85.180	0.860	1.4506	0.9948	DETACHED
	6.0	86.965	0.858	1.4532	0.9947	DETACHED
	7.0	87.491	0.857	1.4547	0.9947	DETACHED
	8.0	87.880	0.857	1.4556	0.9946	DETACHED
	9.0	88.185	0.856	1.4562	0.9946	DETACHED
	10.0	88.432	0.856	1.4566	0.9946	DETACHED
1.19	1.0	59.278	1.147	1.0568	1.0000	
	2.0	62.046	1.089	1.1224	0.9998	
	3.0	65.740	1.029	1.2065	0.9993	
	4.0	83.675	0.861	1.4654	0.9943	DETACHED
	5.0	85.820	0.854	1.4767	0.9940	DETACHED
	6.0	86.736	0.852	1.4801	0.9939	DETACHED
	7.0	87.323	0.851	1.4818	0.9938	DETACHED
	8.0	87.749	0.850	1.4829	0.9938	DETACHED
	9.0	88.079	0.850	1.4826	0.9938	DETACHED
	10.0	88.244	0.850	1.4841	0.9938	DETACHED
1.20	1.0	59.548	1.158	1.0559	1.0000	
	2.0	61.051	1.111	1.1197	0.9999	
	3.0	64.320	1.056	1.1982	0.9994	
	4.0	81.311	0.866	1.4750	0.9940	DETACHED
	5.0	85.389	0.849	1.5025	0.9932	DETACHED
	6.0	86.481	0.846	1.5070	0.9930	DETACHED
	7.0	87.141	0.845	1.5092	0.9929	DETACHED
	8.0	87.610	0.844	1.5104	0.9929	DETACHED
	9.0	87.967	0.844	1.5112	0.9929	DETACHED
	10.0	88.252	0.843	1.5118	0.9929	DETACHED
1.21	1.0	57.755	1.169	1.0552	1.0000	
	2.0	60.117	1.121	1.1174	0.9999	
	3.0	63.107	1.071	1.1920	0.9994	
	4.0	68.098	0.995	1.3026	0.9981	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.21	5.0	84.848	0.845	1.5277	0.9923	DETACHED
	6.0	86.107	0.841	1.5339	0.9921	DETACHED
	7.0	86.947	0.839	1.5366	0.9920	DETACHED
	8.0	87.460	0.838	1.5381	0.9919	DETACHED
	9.0	87.849	0.838	1.5390	0.9919	DETACHED
1.22	10.0	89.156	0.837	1.5397	0.9919	DETACHED
	1.0	56.994	1.179	1.0545	1.0000	
	2.0	59.236	1.135	1.1155	0.9999	
	3.0	61.664	1.085	1.1869	0.9995	
	4.0	66.030	1.020	1.2832	0.9984	
1.23	5.0	84.116	0.841	1.5515	0.9914	DETACHED
	6.0	85.860	0.836	1.5607	0.9911	DETACHED
	7.0	86.724	0.834	1.5641	0.9910	DETACHED
	8.0	87.300	0.833	1.5659	0.9909	DETACHED
	9.0	87.723	0.832	1.5671	0.9908	DETACHED
	10.0	89.054	0.822	1.5678	0.9908	DETACHED
	1.0	56.263	1.190	1.0540	1.0000	
	2.0	58.400	1.147	1.1128	0.9999	
	3.0	60.971	1.099	1.1828	0.9995	
	4.0	64.468	1.039	1.2705	0.9986	
	5.0	82.937	0.840	1.5717	0.9907	DETACHED
	6.0	85.469	0.831	1.5874	0.9900	DETACHED
	7.0	86.484	0.828	1.5917	0.9899	DETACHED
	8.0	87.126	0.827	1.5939	0.9898	DETACHED
	9.0	87.589	0.826	1.5953	0.9897	DETACHED
10.0	87.947	0.826	1.5961	0.9897	DETACHED	
1.24	1.0	55.540	1.200	1.0514	1.0000	
	2.0	57.605	1.158	1.1123	0.9999	
	3.0	60.070	1.112	1.1793	0.9995	
	4.0	63.151	1.056	1.2613	0.9987	
	5.0	69.908	0.855	1.4155	0.9957	
6.0	84.993	0.826	1.6135	0.9889	DETACHED	
7.0	86.272	0.823	1.6194	0.9887	DETACHED	
8.0	86.926	0.822	1.6221	0.9886	DETACHED	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
1.24	0.0	87.446	0.821	1.5236	0.9885	DETACHED
	10.0	87.833	0.820	1.5246	0.9885	DETACHED
1.25	1.0	54.881	1.211	1.0530	1.0000	
	2.0	55.845	1.170	1.1110	0.9999	
	3.0	59.129	1.124	1.1763	0.9996	
	4.0	61.988	1.072	1.2541	0.9989	
1.26	5.0	66.503	0.999	1.3665	0.9960	
	6.0	69.381	0.923	1.6388	0.9878	DETACHED
	7.0	85.903	0.818	1.5469	0.9875	DETACHED
	8.0	86.729	0.816	1.6503	0.9873	DETACHED
	9.0	87.291	0.815	1.6522	0.9872	DETACHED
	10.0	87.711	0.815	1.6533	0.9872	DETACHED
	1.0	54.227	1.221	1.0526	1.0000	
	2.0	56.118	1.181	1.1099	0.9999	
	3.0	58.289	1.137	1.1738	0.9996	
	4.0	60.834	1.087	1.2484	0.9989	
5.0	64.680	1.022	1.3470	0.9973		
6.0	69.512	0.820	1.6619	0.9869	DETACHED	
7.0	85.543	0.814	1.5743	0.9862	DETACHED	
8.0	86.489	0.811	1.6786	0.9850	DETACHED	
9.0	87.124	0.810	1.6800	0.9859	DETACHED	
10.0	87.592	0.809	1.6822	0.9858	DETACHED	
1.27	1.0	53.584	1.232	1.0522	1.0000	
	2.0	55.619	1.192	1.1089	0.9999	
	3.0	57.603	1.149	1.1716	0.9996	
	4.0	59.666	1.101	1.2437	0.9989	
5.0	63.261	1.042	1.3341	0.9976		
6.0	67.930	0.822	1.6779	0.9860	DETACHED	
7.0	85.114	0.810	1.7014	0.9849	DETACHED	
8.0	86.242	0.807	1.7070	0.9846	DETACHED	
9.0	86.842	0.805	1.7097	0.9845	DETACHED	
10.0	87.443	0.804	1.7113	0.9844	DETACHED	
1.28	1.0	52.981	1.242	1.0519	1.0000	
	2.0	54.767	1.203	1.1080	0.9999	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.29	3.0	56.735	1.161	1.1697	0.9996	
	4.0	59.045	1.114	1.2397	0.9990	
	5.0	62.037	1.050	1.3245	0.9977	
	6.0	67.386	0.973	1.4621	0.9944	
	7.0	84.580	0.806	1.7277	0.9835	DETACHED
	8.0	85.052	0.802	1.7352	0.9832	DETACHED
	9.0	85.766	0.800	1.7386	0.9830	DETACHED
	10.0	87.295	0.799	1.7405	0.9829	DETACHED
	1.0	52.387	1.253	1.0516	1.0000	
	2.0	54.099	1.214	1.1072	0.9999	
1.31	3.0	56.011	1.172	1.1680	0.9996	
	4.0	58.220	1.127	1.2363	0.9990	
	5.0	60.950	1.075	1.3170	0.9979	
	6.0	65.051	1.005	1.4294	0.9954	
	7.0	83.871	0.803	1.7527	0.9823	DETACHED
	8.0	85.619	0.798	1.7625	0.9817	DETACHED
	9.0	86.525	0.795	1.7677	0.9815	DETACHED
	10.0	87.124	0.794	1.7699	0.9813	DETACHED
	1.0	51.812	1.263	1.0514	1.0000	
	2.0	53.474	1.224	1.1065	0.9999	
1.33	3.0	55.317	1.184	1.1666	0.9996	
	4.0	57.423	1.140	1.2334	0.9991	
	5.0	59.962	1.090	1.3110	0.9980	
	6.0	63.459	1.027	1.4112	0.9958	
	7.0	82.745	0.803	1.7740	0.9811	DETACHED
	8.0	85.227	0.794	1.7912	0.9801	DETACHED
	9.0	86.283	0.791	1.7967	0.9798	DETACHED
	10.0	86.961	0.789	1.7995	0.9797	DETACHED
	1.0	51.253	1.273	1.0511	1.0000	
	2.0	52.869	1.235	1.1059	0.9999	
3.0	54.651	1.195	1.1652	0.9996		
4.0	56.667	1.152	1.2309	0.9991		
5.0	59.050	1.104	1.3059	0.9981		
6.0	62.159	1.047	1.4088	0.9962		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.31	7.0	80.134	0.812	1.7767	0.9910	DETACHED
	8.0	84.752	0.790	1.8187	0.9786	DETACHED
	9.0	86.010	0.786	1.8258	0.9782	DETACHED
	10.0	85.771	0.785	1.8291	0.9790	DETACHED
1.32	1.0	50.700	1.283	1.0510	1.0000	
	2.0	52.284	1.246	1.1054	0.9999	
	3.0	54.011	1.206	1.1642	0.9995	
	4.0	55.947	1.164	1.2287	0.9991	
1.33	5.0	59.200	1.118	1.3017	0.9991	
	6.0	61.020	1.064	1.3892	0.9964	
	7.0	65.654	0.984	1.5207	0.9925	
	8.0	84.148	0.787	1.9450	0.9770	DETACHED
1.34	9.0	85.700	0.782	1.8547	0.9764	DETACHED
	10.0	86.564	0.780	1.8588	0.9752	DETACHED
	1.0	50.181	1.294	1.0508	1.0000	
	2.0	51.717	1.256	1.1049	0.9999	
1.35	3.0	53.393	1.217	1.1672	0.9996	
	4.0	55.258	1.176	1.2268	0.9991	
	5.0	57.401	1.131	1.2980	0.9982	
	6.0	60.016	1.080	1.3816	0.9966	
1.36	7.0	63.781	1.012	1.4942	0.9934	
	8.0	67.311	0.786	1.8490	0.9756	DETACHED
	9.0	85.340	0.778	1.8834	0.9747	DETACHED
	10.0	85.374	0.776	1.8886	0.9744	DETACHED
1.37	1.0	49.667	1.304	1.0506	1.0000	
	2.0	51.147	1.267	1.1045	0.9999	
	3.0	52.797	1.228	1.1623	0.9997	
	4.0	54.509	1.188	1.2252	0.9991	
1.38	5.0	56.646	1.144	1.2960	0.9982	
	6.0	59.090	1.095	1.3754	0.9967	
	7.0	62.369	1.033	1.4776	0.9940	
	8.0	81.899	0.788	1.8866	0.9745	DETACHED
1.39	9.0	84.913	0.775	1.9117	0.9729	DETACHED
	10.0	85.078	0.772	1.9184	0.9725	DETACHED



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.35	1.0	49.166	1.314	1.0505	1.0000	
	2.0	50.633	1.277	1.1042	0.9999	
	3.0	52.221	1.239	1.1616	0.9997	
	4.0	53.966	1.199	1.2238	0.9992	
	5.0	55.920	1.156	1.2923	0.9993	
	6.0	58.233	1.109	1.3702	0.9998	
	7.0	61.183	1.052	1.4656	0.9993	
	8.0	65.019	0.954	1.6328	0.9991	
	9.0	69.386	0.772	1.9392	0.9711	DETACHED
	10.0	75.790	0.768	1.9481	0.9705	DETACHED
1.36	1.0	48.678	1.324	1.0504	1.0000	
	2.0	50.114	1.288	1.1039	0.9999	
	3.0	51.663	1.250	1.1610	0.9997	
	4.0	53.356	1.211	1.2225	0.9992	
	5.0	55.246	1.169	1.2900	0.9993	
	6.0	57.421	1.123	1.3659	0.9969	
	7.0	60.138	1.069	1.4562	0.9946	
	8.0	64.288	0.994	1.5850	0.9901	
	9.0	69.688	0.770	1.9652	0.9694	DETACHED
	10.0	75.459	0.764	1.9777	0.9695	DETACHED
1.37	1.0	48.397	1.335	1.0503	1.0000	
	2.0	49.610	1.298	1.1036	0.9999	
	3.0	51.122	1.261	1.1604	0.9997	
	4.0	52.767	1.222	1.2214	0.9992	
	5.0	54.592	1.181	1.2890	0.9996	
	6.0	56.676	1.136	1.3622	0.9970	
	7.0	59.193	1.085	1.4487	0.9948	
	8.0	62.656	1.019	1.5623	0.9910	
	9.0	67.692	0.770	1.9976	0.9478	DETACHED
	10.0	74.692	0.760	1.9854	0.9680	DETACHED

TWO-DIMENSIONAL COLLISION SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT	
1.37	10.0	85.073	0.761	2.0069	0.9665	DETACHED	
	11.0	86.157	0.758	2.0132	0.9660	DETACHED	
	12.0	86.840	0.756	2.0165	0.9658	DETACHED	
	13.0	87.372	0.755	2.0184	0.9657	DETACHED	
	14.0	87.760	0.755	2.0197	0.9655	DETACHED	
	15.0	89.097	0.754	2.0206	0.9655	DETACHED	
	1.39	1.0	47.738	1.145	1.0502	1.0000	
		2.0	49.110	1.109	1.1036	0.9999	
		3.0	50.507	1.272	1.1500	0.9997	
		4.0	52.109	1.233	1.2205	0.9997	
5.0		53.945	1.103	1.2842	0.9987		
6.0		55.962	1.140	1.3500	0.9971		
7.0		58.325	1.100	1.4425	0.9950		
8.0		61.428	1.040	1.5660	0.9916		
9.0		65.458	0.777	1.9066	0.9572	DETACHED	
10.0		64.608	0.758	2.0355	0.9645	DETACHED	
1.39	11.0	65.800	0.754	2.0437	0.9639	DETACHED	
	12.0	66.674	0.752	2.0477	0.9636	DETACHED	
	13.0	67.233	0.751	2.0500	0.9634	DETACHED	
	14.0	67.650	0.750	2.0514	0.9633	DETACHED	
	15.0	67.900	0.750	2.0524	0.9632	DETACHED	
	1.0	47.285	1.355	1.0502	1.0000		
	2.0	48.640	1.310	1.1032	0.9999		
	3.0	50.097	1.282	1.1505	0.9997		
	4.0	51.650	1.244	1.2107	0.9997		
	5.0	53.262	1.204	1.2847	0.9984		
6.0	55.282	1.161	1.3563	0.9971			
7.0	57.510	1.114	1.4376	0.9952			
8.0	60.328	1.058	1.5354	0.9920			
9.0	65.146	0.971	1.6893	0.9855			
10.0	64.025	0.754	2.0230	0.9675	DETACHED		
11.0	65.585	0.751	2.0741	0.9616	DETACHED		
12.0	66.671	0.748	2.0780	0.9613	DETACHED		
13.0	67.093	0.747	2.0816	0.9611	DETACHED		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
1.30	14.0	87.542	0.746	2.0833	0.9610	DETACHED
	15.0	87.905	0.746	2.0844	0.9609	DETACHED
1.40	1.0	46.842	1.365	1.0501	1.0000	
	2.0	48.174	1.329	1.1031	0.9999	
	3.0	49.507	1.293	1.1501	0.9997	
	4.0	51.119	1.255	1.2100	0.9992	
	5.0	52.782	1.216	1.2834	0.9984	
	6.0	54.633	1.174	1.3539	0.9972	
	7.0	56.762	1.128	1.4320	0.9953	
	8.0	59.268	1.074	1.5263	0.9923	
	9.0	62.189	1.002	1.6548	0.9871	
	10.0	65.740	0.755	2.0882	0.9606	DETACHED
	11.0	69.935	0.748	2.1042	0.9594	DETACHED
	12.0	74.247	0.745	2.1102	0.9589	DETACHED
	13.0	78.921	0.743	2.1134	0.9587	DETACHED
	14.0	83.418	0.742	2.1154	0.9585	DETACHED
	15.0	87.806	0.742	2.1164	0.9584	DETACHED
1.41	1.0	46.410	1.375	1.0501	1.0000	
	2.0	47.719	1.340	1.1029	0.9999	
	3.0	49.109	1.304	1.1588	0.9997	
	4.0	50.601	1.266	1.2184	0.9992	
	5.0	52.227	1.227	1.2823	0.9984	
	6.0	54.013	1.186	1.3519	0.9972	
	7.0	56.048	1.141	1.4292	0.9954	
	8.0	58.485	1.090	1.5190	0.9926	
	9.0	61.789	1.026	1.6345	0.9880	
	10.0	65.909	0.757	2.1080	0.9591	DETACHED
	11.0	70.822	0.745	2.1339	0.9571	DETACHED
	12.0	75.098	0.741	2.1415	0.9565	DETACHED
	13.0	79.746	0.739	2.1453	0.9562	DETACHED
	14.0	84.285	0.738	2.1476	0.9561	DETACHED
	15.0	89.701	0.738	2.1491	0.9560	DETACHED
1.42	1.0	45.987	1.385	1.0501	1.0000	
	2.0	47.275	1.350	1.1029	0.9999	

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

P1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
1.42	3.0	48.640	1.314	1.1586	0.9097	
	4.0	50.100	1.277	1.2179	0.9092	
	5.0	51.600	1.238	1.2814	0.9084	
	6.0	53.416	1.198	1.3502	0.9072	
	7.0	55.372	1.154	1.4242	0.9055	
	8.0	57.669	1.105	1.5130	0.9028	
	9.0	60.634	1.045	1.6201	0.9087	
	10.0	78.194	0.778	2.0873	0.9607	DETACHED
	11.0	84.321	0.742	2.1628	0.9549	DETACHED
	12.0	85.719	0.738	2.1727	0.9541	DETACHED
	13.0	86.555	0.736	2.1771	0.9537	DETACHED
	14.0	87.144	0.735	2.1800	0.9535	DETACHED
	15.0	87.501	0.734	2.1816	0.9534	DETACHED
	1.43	3.0	45.574	1.305	1.0501	1.0000
4.0		46.841	1.360	1.1078	0.9099	
5.0		48.182	1.325	1.1584	0.9097	
6.0		49.614	1.288	1.2175	0.9092	
7.0		51.156	1.250	1.2806	0.9085	
8.0		52.843	1.209	1.3487	0.9073	
9.0		54.727	1.166	1.4235	0.9055	
10.0		56.908	1.119	1.5079	0.9030	
11.0		59.626	1.063	1.6001	0.9001	
12.0		63.051	0.982	1.7590	0.9810	
13.0		68.682	0.741	2.1902	0.9527	DETACHED
14.0		75.402	0.735	2.2037	0.9516	DETACHED
15.0		76.347	0.732	2.2084	0.9512	DETACHED
1.44		3.0	46.991	0.731	2.2125	0.9509
	4.0	47.473	0.730	2.2144	0.9509	DETACHED
	5.0	48.170	1.406	1.0501	1.0000	
	6.0	46.418	1.371	1.1028	0.9099	
	7.0	47.736	1.335	1.1583	0.9097	
	8.0	49.140	1.298	1.2171	0.9092	
	9.0	50.648	1.261	1.2799	0.9085	
	10.0	52.200	1.221	1.3474	0.9073	
	11.0	54.902	1.174	1.4200	0.9055	
	12.0	58.747	1.119	1.5079	0.9030	
	13.0	63.851	1.063	1.6001	0.9001	
	14.0	70.402	0.982	1.7590	0.9810	
	15.0	78.682	0.741	2.1902	0.9527	DETACHED

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.44	7.0	54.110	1.179	1.4211	0.9956	
	8.0	56.104	1.133	1.5036	0.9931	
	9.0	58.720	1.090	1.6003	0.9895	
	10.0	62.308	1.010	1.7301	0.9835	
	11.0	67.791	0.741	2.2144	0.9508	DETACHED
	12.0	75.034	0.732	2.2344	0.9491	DETACHED
	13.0	86.117	0.729	2.2414	0.9486	DETACHED
	14.0	96.827	0.727	2.2451	0.9483	DETACHED
	15.0	107.368	0.726	2.2474	0.9481	DETACHED
	1.45	1.0	44.774	1.416	1.0501	1.0000
1.46	2.0	46.004	1.381	1.1027	0.9999	
	3.0	47.301	1.345	1.1582	0.9997	
	4.0	48.680	1.309	1.2169	0.9992	
	5.0	50.154	1.272	1.2792	0.9985	
	6.0	51.756	1.232	1.3463	0.9973	
	7.0	53.520	1.191	1.4192	0.9956	
	8.0	55.517	1.146	1.5000	0.9932	
	9.0	57.800	1.095	1.5932	0.9898	
	10.0	61.047	1.032	1.7114	0.9844	
	11.0	65.270	0.745	2.2207	0.9495	DETACHED
1.46	12.0	70.599	0.730	2.2645	0.9457	DETACHED
	13.0	78.861	0.726	2.2735	0.9459	DETACHED
	14.0	86.649	0.724	2.2770	0.9455	DETACHED
	15.0	97.214	0.723	2.2805	0.9453	DETACHED
	1.0	44.386	1.426	1.0501	1.0000	
	2.0	45.599	1.391	1.1028	0.9999	
	3.0	46.876	1.356	1.1581	0.9997	
	4.0	48.231	1.320	1.2167	0.9992	
	5.0	49.677	1.282	1.2780	0.9985	
	6.0	51.239	1.244	1.3454	0.9973	
7.0	52.852	1.203	1.4175	0.9957		
8.0	54.875	1.159	1.4960	0.9933		
9.0	57.122	1.110	1.5873	0.9900		
10.0	59.982	1.051	1.6978	0.9851		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/PI	PT2/PT1	COMMENT
1.46	11.0	65.440	0.949	1.8906	0.9742	
	12.0	84.066	0.728	2.2936	0.9442	DETACHED
	13.0	85.574	0.723	2.3054	0.9432	DETACHED
	14.0	86.456	0.720	2.3107	0.9428	DETACHED
	15.0	87.071	0.719	2.3137	0.9425	DETACHED
1.47	1.0	44.007	1.436	1.0502	1.0000	
	2.0	45.203	1.401	1.1028	0.9999	
	3.0	46.461	1.366	1.1581	0.9997	
	4.0	47.793	1.330	1.2166	0.9992	
	5.0	49.212	1.293	1.2785	0.9985	
	6.0	50.739	1.255	1.3447	0.9974	
	7.0	52.406	1.215	1.4161	0.9957	
	8.0	54.262	1.172	1.4943	0.9934	
	9.0	56.402	1.124	1.5874	0.9902	
	10.0	59.041	1.068	1.6872	0.9856	
1.48	1.0	63.069	0.990	1.8372	0.9775	
	2.0	83.374	0.727	2.3208	0.9419	DETACHED
	3.0	85.247	0.720	2.3371	0.9405	DETACHED
	4.0	86.244	0.717	2.3436	0.9399	DETACHED
	5.0	86.918	0.716	2.3471	0.9395	DETACHED
	6.0	87.635	0.716	2.3471	0.9395	
	7.0	88.416	0.716	2.3471	0.9395	
	8.0	89.256	0.716	2.3471	0.9395	
	9.0	90.154	0.716	2.3471	0.9395	
	10.0	91.112	0.716	2.3471	0.9395	
1.49	1.0	51.879	1.226	1.4149	0.9958	
	2.0	53.676	1.184	1.4921	0.9935	
	3.0	55.724	1.138	1.5783	0.9904	
	4.0	58.190	1.085	1.6788	0.9860	
	5.0	61.617	1.015	1.8112	0.9790	
	6.0	62.379	0.728	2.3439	0.9399	DETACHED
	7.0	64.867	0.717	2.3682	0.9378	DETACHED
	8.0	66.011	0.714	2.3764	0.9371	DETACHED
	9.0					
	10.0					

THREE-DIMENSIONAL ORLIOUF SHOCK WAVE PARAMETERS

W1	DELTA	THETA	W2	P2/P1	PT2/PT1	COMMENT
1.48	15.0	85.753	0.712	2.3806	0.9367	DETACHED
	1.0	43.271	1.456	1.0503	1.0000	
	2.0	44.436	1.421	1.1070	0.9999	
	3.0	45.660	1.387	1.1582	0.9997	
	4.0	46.950	1.351	1.2165	0.9999	
	5.0	48.310	1.315	1.2781	0.9985	
	6.0	49.786	1.277	1.3437	0.9974	
	7.0	51.360	1.238	1.4130	0.9958	
	8.0	53.113	1.196	1.4803	0.9934	
	9.0	55.092	1.151	1.5748	0.9905	
1.50	10.0	57.409	1.100	1.6710	0.9863	DETACHED
	11.0	60.450	1.037	1.7938	0.9801	
	12.0	60.506	0.925	2.3530	0.9151	
	13.0	64.415	0.715	2.3990	0.8152	
	14.0	65.781	0.711	2.4002	0.8152	
	15.0	66.574	0.709	2.4142	0.8133	
	1.0	42.013	1.464	1.0503	1.0000	
	2.0	44.065	1.422	1.1070	0.9999	
	3.0	45.272	1.397	1.1582	0.9997	
	4.0	46.543	1.362	1.2165	0.9992	
5.0	47.880	1.325	1.2780	0.9985		
6.0	49.327	1.298	1.3433	0.9974		
7.0	50.876	1.240	1.4132	0.9958		
8.0	52.572	1.208	1.4887	0.9934		
9.0	54.470	1.164	1.5710	0.9907		
10.0	56.670	1.114	1.6662	0.9866		
11.0	59.466	1.055	1.7808	0.9807		
12.0	64.342	0.961	1.9660	0.9609		
13.0	83.856	0.714	2.4283	0.9325	DETACHED	
14.0	85.459	0.708	2.4419	0.9313	DETACHED	
1.51	15.0	86.380	0.706	2.4470	0.9307	DETACHED
	1.0	42.563	1.476	1.0504	1.0000	
	2.0	43.701	1.462	1.1071	0.9999	
	3.0	44.902	1.407	1.1584	0.9997	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.51	4.0	46.146	1.372	1.2166	0.9992	
	5.0	47.471	1.336	1.2780	0.9985	
	6.0	48.822	1.289	1.3431	0.9974	
	7.0	50.198	1.260	1.4125	0.9958	
	8.0	52.050	1.220	1.4874	0.9937	
	9.0	53.887	1.176	1.5684	0.9907	
	10.0	55.896	1.128	1.6615	0.9868	
	11.0	58.581	1.073	1.7706	0.9813	
	12.0	62.425	0.995	1.9234	0.9721	
	13.0	67.174	0.714	2.4553	0.9301	DETACHED
	14.0	75.127	0.706	2.4743	0.9283	DETACHED
	15.0	86.167	0.703	2.4816	0.9277	DETACHED
	16.0	86.864	0.701	2.4855	0.9271	DETACHED
	17.0	87.379	0.700	2.4879	0.9271	DETACHED
	18.0	87.781	0.700	2.4895	0.9270	DETACHED
	19.0	88.104	0.699	2.4905	0.9269	DETACHED
	20.0	88.371	0.699	2.4913	0.9268	DETACHED
1.52	1.0	42.210	1.486	1.0504	1.0000	
	2.0	43.344	1.452	1.1032	0.9999	
	3.0	44.521	1.417	1.1585	0.9997	
	4.0	45.757	1.382	1.2167	0.9992	
	5.0	47.052	1.346	1.2780	0.9985	
	6.0	48.460	1.309	1.3429	0.9974	
	7.0	49.924	1.271	1.4121	0.9958	
	8.0	51.547	1.231	1.4864	0.9937	
	9.0	53.327	1.189	1.5673	0.9908	
	10.0	55.351	1.142	1.6575	0.9870	
	11.0	57.777	1.089	1.7624	0.9817	
	12.0	61.009	1.020	1.8907	0.9737	
	13.0	65.047	0.716	2.4772	0.9281	DETACHED
	14.0	84.740	0.704	2.5061	0.9254	DETACHED
	15.0	85.973	0.700	2.5152	0.9246	DETACHED
	16.0	86.700	0.698	2.5199	0.9242	DETACHED
	17.0	87.255	0.697	2.5226	0.9239	DETACHED



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.52	19.0	87.683	0.696	2.5244	0.9237	DETACHED
	19.0	88.074	0.696	2.5256	0.9236	DETACHED
	20.0	88.306	0.695	2.5264	0.9235	DETACHED
1.53	1.0	41.882	1.496	1.0505	0.0000	
	2.0	42.904	1.462	1.1033	0.9999	
	3.0	44.157	1.427	1.1587	0.9997	
	4.0	45.277	1.392	1.2169	0.9992	
	5.0	46.663	1.357	1.2781	0.9985	
	6.0	48.027	1.320	1.3429	0.9974	
	7.0	49.484	1.282	1.4117	0.9958	
	8.0	51.060	1.243	1.4856	0.9937	
	9.0	52.701	1.201	1.5656	0.9909	
	10.0	54.739	1.155	1.6542	0.9872	
1.54	11.0	57.034	1.104	1.7557	0.9821	
	12.0	60.019	1.040	1.8824	0.9747	
	13.0	79.827	0.724	2.4702	0.9279	DETACHED
	14.0	84.279	0.702	2.5372	0.9225	DETACHED
	15.0	85.673	0.698	2.5488	0.9215	DETACHED
	16.0	86.522	0.695	2.5543	0.9209	DETACHED
	17.0	87.174	0.694	2.5575	0.9206	DETACHED
	18.0	87.581	0.693	2.5595	0.9205	DETACHED
	19.0	87.943	0.693	2.5609	0.9203	DETACHED
	20.0	88.239	0.692	2.5618	0.9202	DETACHED
1.54	1.0	41.551	1.506	1.0506	1.0000	
	2.0	42.652	1.472	1.1035	0.9999	
	3.0	43.801	1.438	1.1589	0.9997	
	4.0	45.006	1.403	1.2170	0.9992	
	5.0	46.273	1.367	1.2782	0.9985	
	6.0	47.616	1.321	1.3429	0.9974	
	7.0	49.047	1.273	1.4115	0.9958	
	8.0	50.589	1.254	1.4849	0.9937	
	9.0	52.273	1.213	1.5642	0.9909	
	10.0	54.156	1.168	1.6514	0.9872	
11.0	56.341	1.118	1.7502	0.9824		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.54	12.0	59.081	1.059	1.8697	0.9755	
	13.0	63.721	0.966	2.0578	0.9628	
	14.0	68.709	0.701	2.5670	0.9198	DETACHED
	15.0	85.381	0.695	2.5823	0.9183	DETACHED
	16.0	86.320	0.692	2.5889	0.9177	DETACHED
	17.0	84.983	0.691	2.5925	0.9174	DETACHED
	18.0	87.472	0.690	2.5949	0.9171	DETACHED
	19.0	87.857	0.689	2.5963	0.9170	DETACHED
	20.0	89.160	0.689	2.5974	0.9169	DETACHED
	1.0	41.276	1.516	1.9507	1.0000	
1.55	2.0	42.315	1.482	1.1036	0.9999	
	3.0	43.452	1.448	1.1591	0.9997	
	4.0	44.642	1.413	1.2173	0.9992	
	5.0	45.893	1.378	1.2785	0.9985	
	6.0	47.214	1.341	1.3430	0.9974	
	7.0	48.621	1.304	1.4114	0.9958	
	8.0	50.131	1.265	1.4845	0.9938	
	9.0	51.775	1.224	1.5631	0.9910	
	10.0	53.599	1.180	1.6492	0.9874	
	11.0	55.689	1.132	1.7457	0.9826	
1.56	12.0	58.241	1.076	1.8507	0.9761	
	13.0	61.984	0.999	2.0178	0.9657	
	14.0	62.958	0.701	2.5961	0.9172	DETACHED
	15.0	65.048	0.693	2.6154	0.9152	DETACHED
	16.0	66.119	0.690	2.6234	0.9144	DETACHED
	17.0	66.832	0.688	2.6277	0.9140	DETACHED
	18.0	67.359	0.687	2.6303	0.9138	DETACHED
	19.0	67.767	0.686	2.6320	0.9136	DETACHED
	20.0	68.095	0.686	2.6332	0.9135	DETACHED
	1.0	40.906	1.526	1.0509	1.0000	
1.56	2.0	41.985	1.492	1.1038	0.9999	
	3.0	43.110	1.458	1.1593	0.9997	
	4.0	44.286	1.423	1.2175	0.9992	
	5.0	45.521	1.388	1.2787	0.9985	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.56	6.0	46.823	1.352	1.3432	0.9974	
	7.0	48.206	1.315	1.4115	0.9958	
	8.0	49.687	1.276	1.4842	0.9938	
	9.0	51.203	1.236	1.5623	0.9910	
	10.0	52.764	1.193	1.6473	0.9875	
	11.0	55.074	1.146	1.7419	0.9829	
	12.0	57.475	1.092	1.8518	0.9766	
	13.0	60.741	1.022	1.9943	0.9674	
	14.0	64.843	0.704	2.6154	0.9152	DETACHED
	15.0	69.662	0.691	2.6480	0.9121	DETACHED
1.57	16.0	75.087	0.687	2.6579	0.9111	DETACHED
	17.0	81.670	0.685	2.6620	0.9106	DETACHED
	18.0	87.736	0.684	2.6659	0.9103	DETACHED
	19.0	93.671	0.683	2.6678	0.9101	DETACHED
	20.0	99.019	0.683	2.6691	0.9100	DETACHED
	1.0	40.593	1.526	1.0509	1.0000	
	2.0	41.661	1.502	1.1040	0.9999	
	3.0	42.774	1.468	1.1596	0.9997	
	4.0	43.937	1.433	1.2178	0.9992	
	5.0	45.156	1.398	1.2790	0.9985	
6.0	46.440	1.362	1.3435	0.9974		
7.0	47.802	1.325	1.4116	0.9958		
8.0	49.256	1.287	1.4840	0.9938		
9.0	50.807	1.247	1.5616	0.9910		
10.0	52.550	1.205	1.6458	0.9875		
11.0	54.489	1.159	1.7388	0.9830		
12.0	56.766	1.107	1.8453	0.9770		
13.0	59.716	1.043	1.9777	0.9685		
14.0	79.450	0.717	2.6127	0.9154	DETACHED	
15.0	84.204	0.690	2.6797	0.9090	DETACHED	
16.0	89.630	0.685	2.6924	0.9078	DETACHED	
17.0	95.496	0.682	2.6983	0.9072	DETACHED	
18.0	101.107	0.681	2.7017	0.9069	DETACHED	
19.0	107.571	0.680	2.7039	0.9067	DETACHED	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.57	20.0	87.039	0.679	2.7053	0.9065	
1.58	1.0	40.285	1.546	1.0510	1.0000	DETACHED
	2.0	41.343	1.512	1.1042	0.9999	
	3.0	42.445	1.478	1.1599	0.9997	
	4.0	43.595	1.444	1.2182	0.9992	
	5.0	44.800	1.408	1.2794	0.9985	
	6.0	46.067	1.373	1.3438	0.9974	
	7.0	47.408	1.336	1.4118	0.9958	
	8.0	48.827	1.298	1.4840	0.9938	
	9.0	50.325	1.258	1.5612	0.9911	
	10.0	52.056	1.217	1.6446	0.9876	
	11.0	53.921	1.171	1.7362	0.9831	
	12.0	55.904	1.121	1.8400	0.9773	
	13.0	58.022	1.061	1.9652	0.9694	
	14.0	62.378	0.968	2.1410	0.9550	
	15.0	69.627	0.680	2.7100	0.9061	
	16.0	85.343	0.682	2.7266	0.9044	DETACHED
	17.0	86.306	0.680	2.7327	0.9037	DETACHED
	18.0	86.949	0.678	2.7377	0.9034	DETACHED
	19.0	87.465	0.677	2.7401	0.9031	DETACHED
	20.0	87.855	0.676	2.7417	0.9030	DETACHED
1.59	1.0	39.982	1.556	1.0511	1.0000	DETACHED
	2.0	41.031	1.522	1.1044	0.9999	
	3.0	42.122	1.488	1.1602	0.9997	
	4.0	43.260	1.454	1.2185	0.9992	
	5.0	44.450	1.419	1.2798	0.9985	
	6.0	45.701	1.383	1.3442	0.9974	
	7.0	47.023	1.347	1.4121	0.9958	
	8.0	48.428	1.309	1.4841	0.9938	
	9.0	49.937	1.270	1.5610	0.9911	
	10.0	51.578	1.228	1.6437	0.9876	
	11.0	53.397	1.184	1.7341	0.9832	
	12.0	55.400	1.135	1.8356	0.9776	
	13.0	58.019	1.078	1.9554	0.9700	

TWO-DIMENSIONAL ORLONIE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.59	14.0	61.731	0.999	2.1212	0.9591	
	15.0	82.805	0.689	2.7377	0.9034	DETACHED
	16.0	85.016	0.680	2.7605	0.9011	DETACHED
	17.0	86.101	0.677	2.7691	0.9003	DETACHED
	18.0	86.822	0.675	2.7737	0.8998	DETACHED
	19.0	87.354	0.674	2.7765	0.8995	DETACHED
	20.0	87.767	0.674	2.7783	0.8993	DETACHED
	1.0	39.685	1.566	1.0512	1.0000	
	2.0	40.724	1.532	1.1046	0.9999	
	3.0	41.805	1.498	1.1605	0.9997	
1.60	4.0	42.921	1.464	1.2189	0.9993	
	5.0	44.108	1.429	1.2802	0.9985	
	6.0	45.344	1.393	1.3446	0.9974	
	7.0	46.627	1.357	1.4125	0.9958	
	8.0	48.030	1.320	1.4843	0.9928	
	9.0	49.512	1.281	1.5609	0.9881	
	10.0	51.116	1.240	1.6430	0.9827	
	11.0	52.844	1.196	1.7325	0.9763	
	12.0	54.800	1.148	1.8320	0.9778	
	13.0	57.283	1.094	1.9475	0.9705	
1.61	14.0	60.538	1.023	2.0875	0.9599	DETACHED
	15.0	81.804	0.692	2.7593	0.9012	DETACHED
	16.0	84.639	0.679	2.7939	0.8978	DETACHED
	17.0	85.875	0.675	2.8045	0.8967	DETACHED
	18.0	86.665	0.673	2.8099	0.8962	DETACHED
	19.0	87.236	0.671	2.8131	0.8959	DETACHED
	20.0	87.674	0.671	2.8151	0.8957	DETACHED
	1.0	39.302	1.576	1.0513	1.0000	
	2.0	40.423	1.542	1.1048	0.9999	
	3.0	41.494	1.508	1.1608	0.9997	
1.61	4.0	42.608	1.474	1.2193	0.9992	
	5.0	43.772	1.439	1.2807	0.9985	
	6.0	44.964	1.404	1.3451	0.9974	
	7.0	46.280	1.367	1.4129	0.9958	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	PT2/PT1	COMMENT
1.61	8.0	47.643	1.330	1.4847		0.9937	
	9.0	49.098	1.297	1.5609		0.9911	
	10.0	50.668	1.251	1.6426		0.9877	
	11.0	52.391	1.208	1.7312		0.9836	
	12.0	54.328	1.161	1.8291		0.9780	
	13.0	56.602	1.108	1.9412		0.9710	
	14.0	59.550	1.043	2.0808		0.9611	
	15.0	79.563	0.704	2.7582		0.9013	DETACHED
	16.0	84.193	0.677	2.8265		0.8965	DETACHED
	17.0	85.625	0.673	2.8399		0.8932	DETACHED
	18.0	86.495	0.670	2.8461		0.8926	DETACHED
	19.0	87.110	0.669	2.8498		0.8922	DETACHED
	20.0	87.577	0.668	2.8520		0.8920	DETACHED
	1.62	1.0	39.105	1.586	1.0514		1.0000
2.0		40.126	1.552	1.1051		0.9999	
3.0		41.189	1.518	1.1611		0.9997	
4.0		42.292	1.484	1.2197		0.9992	
5.0		43.445	1.449	1.2812		0.9985	
6.0		44.652	1.414	1.3456		0.9973	
7.0		45.921	1.378	1.4135		0.9958	
8.0		47.264	1.341	1.4851		0.9937	
9.0		48.695	1.302	1.5611		0.9911	
10.0		50.235	1.262	1.6424		0.9877	
11.0		51.916	1.220	1.7302		0.9836	
12.0		53.702	1.174	1.8267		0.9781	
13.0		55.956	1.123	1.9360		0.9713	
14.0		58.687	1.062	2.0691		0.9621	
15.0	63.314	0.965	2.2776		0.9456		
16.0	83.647	0.677	2.8576		0.8914	DETACHED	
17.0	85.347	0.670	2.8750		0.8897	DETACHED	
18.0	86.312	0.668	2.8825		0.8889	DETACHED	
19.0	86.977	0.666	2.8866		0.8885	DETACHED	
20.0	87.475	0.665	2.8892		0.8883	DETACHED	
1.63	1.0	39.822	1.596	1.0515		1.0000	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P12/P11	COMMENT
1.63	2.0	29.815	1.562	1.1053	0.9999	
	3.0	40.888	1.528	1.1615	0.9997	
	4.0	41.982	1.494	1.2202	0.9992	
	5.0	43.123	1.459	1.2817	0.9986	
	6.0	44.316	1.424	1.3462	0.9973	
	7.0	45.570	1.388	1.4141	0.9958	
	8.0	46.895	1.351	1.4856	0.9937	
	9.0	48.293	1.313	1.5615	0.9911	
	10.0	49.814	1.273	1.6424	0.9877	
	11.0	51.458	1.231	1.7296	0.9835	
	12.0	53.279	1.186	1.8249	0.9782	
	13.0	55.365	1.137	1.9318	0.9716	
	14.0	57.911	1.078	2.0583	0.9629	
	15.0	61.665	0.997	2.2348	0.9491	
1.64	16.0	62.942	0.677	2.9862	0.8886	DETACHED
	17.0	65.032	0.649	2.9098	0.8862	DETACHED
	18.0	66.114	0.665	2.9188	0.8853	DETACHED
	19.0	66.836	0.664	2.9236	0.8848	DETACHED
	20.0	67.358	0.662	2.9265	0.8845	DETACHED
	1.0	38.544	1.606	1.0517	1.0000	
	2.0	39.549	1.572	1.1055	0.9999	
	3.0	40.593	1.538	1.1618	0.9997	
	4.0	41.677	1.504	1.2207	0.9992	
	5.0	42.807	1.469	1.2822	0.9984	
	6.0	43.988	1.434	1.3468	0.9973	
	7.0	45.227	1.398	1.4147	0.9958	
	8.0	46.534	1.362	1.4863	0.9937	
	9.0	47.921	1.324	1.5620	0.9910	
10.0	49.405	1.284	1.6426	0.9877		
11.0	51.014	1.243	1.7292	0.9835		
12.0	52.786	1.198	1.8235	0.9783		
13.0	54.797	1.150	1.9284	0.9718		
14.0	57.201	1.094	2.0504	0.9634		
15.0	60.490	1.022	2.2098	0.9511		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT	
1.64	16.0	81.935	0.680	2.9094	0.8862	DETACHED	
	17.0	84.672	0.667	2.9441	0.8827	DETACHED	
	18.0	85.897	0.662	2.9551	0.8816	DETACHED	
	19.0	86.684	0.661	2.9607	0.8810	DETACHED	
	20.0	87.254	0.660	2.9640	0.8807	DETACHED	
	1.65	1.0	88.270	1.616	1.0518	1.0000	
	2.0	89.268	1.582	1.1058	0.9999		
	3.0	40.703	1.548	1.1622	0.9997		
	4.0	41.377	1.514	1.2212	0.9992		
	5.0	42.407	1.479	1.2820	0.9984		
1.66	6.0	43.665	1.444	1.3475	0.9973		
	7.0	44.891	1.409	1.4154	0.9957		
	8.0	46.181	1.372	1.4860	0.9937		
	9.0	47.548	1.334	1.5625	0.9910		
	10.0	49.008	1.295	1.6429	0.9877		
	11.0	50.584	1.254	1.7290	0.9835		
	12.0	52.312	1.210	1.8224	0.9784		
	13.0	54.256	1.163	1.9257	0.9720		
	14.0	56.542	1.109	2.0461	0.9638		
	15.0	59.521	1.042	2.1924	0.9525		
1.66	16.0	60.076	0.689	2.9152	0.8856	DETACHED	
	17.0	64.249	0.666	2.9777	0.8793	DETACHED	
	18.0	65.658	0.661	2.9914	0.8779	DETACHED	
	19.0	66.522	0.659	2.9979	0.8772	DETACHED	
	20.0	67.134	0.657	3.0016	0.8768	DETACHED	
	1.0	38.000	1.626	1.0519	1.0000		
	2.0	39.991	1.592	1.1061	0.9999		
	3.0	40.018	1.558	1.1626	0.9997		
	4.0	41.083	1.524	1.2217	0.9992		
	5.0	42.192	1.489	1.2835	0.9984		
6.0	43.350	1.454	1.3492	0.9973			
7.0	44.567	1.419	1.4162	0.9957			
8.0	45.837	1.382	1.4877	0.9936			
9.0	47.184	1.345	1.5632	0.9910			



TWO-DIMENSIONAL COLLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.66	10.0	48.621	1.306	1.6434	0.9876	
	11.0	50.167	1.265	1.7201	0.9835	
	12.0	51.854	1.222	1.8217	0.9784	
	13.0	53.730	1.175	1.9236	0.9721	
	14.0	55.926	1.123	2.0301	0.9642	
	15.0	58.677	1.060	2.1704	0.9526	
	16.0	63.586	0.956	2.4120	0.9339	
	17.0	81.738	0.665	3.0100	0.9759	DETACHED
	18.0	85.393	0.659	3.0275	0.9742	DETACHED
	19.0	85.347	0.656	3.0351	0.9734	DETACHED
1.67	20.0	87.007	0.655	3.0394	0.9729	DETACHED
	1.0	37.735	1.636	1.0520	1.0000	
	2.0	39.710	1.602	1.1063	0.9999	
	3.0	39.737	1.568	1.1630	0.9996	
	4.0	40.704	1.534	1.2222	0.9992	
	5.0	41.854	1.499	1.2841	0.9984	
	6.0	43.060	1.465	1.3490	0.9973	
	7.0	44.230	1.429	1.4170	0.9957	
	8.0	45.409	1.393	1.4885	0.9936	
	9.0	46.829	1.355	1.5640	0.9910	
1.68	10.0	48.244	1.317	1.6440	0.9876	
	11.0	49.762	1.276	1.7204	0.9835	
	12.0	51.413	1.234	1.8212	0.9784	
	13.0	53.264	1.188	1.9219	0.9722	
	14.0	55.345	1.137	2.0350	0.9645	
	15.0	57.920	1.077	2.1693	0.9544	
	16.0	61.800	0.992	2.3605	0.9385	
	17.0	81.003	0.666	3.0400	0.9729	DETACHED
	18.0	85.096	0.657	3.0633	0.9705	DETACHED
	19.0	86.158	0.654	3.0724	0.9595	DETACHED
1.69	20.0	86.872	0.652	3.0774	0.9590	DETACHED
	1.0	37.474	1.646	1.0522	1.0000	
	2.0	39.451	1.612	1.1066	0.9999	
3.0	39.462	1.578	1.1624	0.9996		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P22/P1	COMMENT	
1.68	4.0	40.510	1.544	1.2228	0.9992		
	5.0	41.600	1.509	1.2848	0.9984		
	6.0	42.756	1.475	1.3498	0.9973		
	7.0	43.923	1.439	1.4170	0.9957		
	8.0	45.169	1.403	1.4894	0.9936		
	9.0	46.482	1.368	1.5669	0.9909		
	10.0	47.876	1.327	1.6447	0.9876		
	11.0	49.368	1.287	1.7298	0.9835		
	12.0	50.985	1.245	1.8212	0.9784		
	13.0	52.769	1.200	1.9207	0.9723		
	14.0	54.795	1.150	2.0317	0.9647		
	15.0	57.227	1.093	2.1613	0.9550		
	16.0	60.604	1.017	2.3328	0.9409		
	17.0	82.200	0.668	3.0656	0.8702	DETACHED	
	1.69	18.0	84.778	0.656	3.0987	0.8669	DETACHED
		19.0	85.952	0.652	3.1007	0.8656	DETACHED
		20.0	86.728	0.650	3.1154	0.8651	DETACHED
1.0		37.217	1.656	1.0523	1.0000		
2.0		38.187	1.622	1.1069	0.9999		
3.0		39.101	1.588	1.1630	0.9996		
4.0		40.231	1.554	1.2233	0.9992		
5.0		41.312	1.519	1.2855	0.9984		
6.0		42.438	1.485	1.3506	0.9972		
7.0		43.613	1.449	1.4188	0.9957		
8.0		44.845	1.413	1.4904	0.9936		
9.0		46.143	1.376	1.5658	0.9909		
10.0		47.517	1.338	1.6456	0.9875		
11.0		48.984	1.298	1.7304	0.9834		
12.0		50.571	1.256	1.8213	0.9784		
13.0		52.311	1.212	1.9200	0.9724		
14.0		54.271	1.163	2.0292	0.9649		
15.0	56.585	1.108	2.1540	0.9555			
16.0	59.633	1.038	2.3130	0.9425			
17.0	80.764	0.674	3.0796	0.8688	DETACHED		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/PI	PT2/PT1	COMMENT
1.69	18.0	84.367	0.655	3.1333	0.8632	DETACHED
	19.0	85.728	0.650	3.1470	0.8618	DETACHED
	20.0	86.574	0.648	3.1535	0.8611	DETACHED
1.70	1.0	36.964	1.666	1.0525	1.0000	
	2.0	37.927	1.632	1.1072	0.9999	
	3.0	38.924	1.598	1.1643	0.9996	
	4.0	39.957	1.564	1.2239	0.9992	
	5.0	41.029	1.529	1.2862	0.9984	
	6.0	42.145	1.495	1.3514	0.9972	
	7.0	43.309	1.459	1.4197	0.9956	
	8.0	44.529	1.423	1.4914	0.9935	
	9.0	45.811	1.386	1.5669	0.9908	
	10.0	47.167	1.348	1.6466	0.9875	
	11.0	48.612	1.309	1.7312	0.9834	
1.71	12.0	50.169	1.267	1.8217	0.9784	
	13.0	51.870	1.223	1.9196	0.9724	
	14.0	53.771	1.176	2.0273	0.9650	
	15.0	55.985	1.122	2.1499	0.9559	
	16.0	58.795	1.057	2.3000	0.9437	
	17.0	64.642	0.932	2.5866	0.9179	
	18.0	83.903	0.654	3.1670	0.8597	DETACHED
	19.0	85.480	0.648	3.1841	0.8579	DETACHED
	20.0	86.409	0.646	3.1918	0.8571	DETACHED
	1.0	36.715	1.676	1.0526	1.0000	
	1.71	2.0	37.672	1.642	1.1075	0.9999
3.0		38.662	1.608	1.1648	0.9996	
4.0		39.687	1.574	1.2245	0.9992	
5.0		40.751	1.539	1.2870	0.9984	
6.0		41.858	1.505	1.3523	0.9972	
7.0		43.011	1.469	1.4207	0.9956	
8.0		44.218	1.433	1.4925	0.9935	
9.0		45.486	1.396	1.5680	0.9908	
10.0		46.825	1.359	1.6476	0.9874	
11.0		48.249	1.319	1.7321	0.9833	

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TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
1.71	12.0	49.778	1.278	1.8223	0.9784	
	13.0	51.443	1.235	1.9194	0.9724	
	14.0	53.202	1.188	2.0259	0.9651	
	15.0	55.419	1.136	2.1458	0.9562	
	16.0	58.046	1.074	2.2802	0.9446	
	17.0	62.181	0.982	2.5018	0.9258	
	18.0	68.330	0.854	3.1088	0.8564	DETACHED
	19.0	85.204	0.647	3.2200	0.8541	DETACHED
	20.0	86.232	0.643	3.2300	0.8531	DETACHED
	1.72	1.0	26.470	1.686	1.0528	1.0000
1.72	2.0	37.420	1.652	1.1078	0.9999	
	3.0	38.404	1.618	1.1652	0.9996	
	4.0	39.421	1.584	1.2251	0.9991	
	5.0	40.477	1.549	1.2878	0.9984	
	6.0	41.575	1.514	1.3532	0.9972	
	7.0	42.718	1.479	1.4218	0.9956	
	8.0	43.914	1.443	1.4936	0.9935	
	9.0	45.168	1.407	1.5692	0.9908	
	10.0	46.491	1.369	1.6488	0.9874	
	11.0	47.895	1.330	1.7332	0.9833	
1.73	12.0	49.399	1.289	1.8230	0.9783	
	13.0	51.030	1.246	1.9195	0.9724	
	14.0	52.831	1.200	2.0250	0.9652	
	15.0	54.884	1.149	2.1427	0.9564	
	16.0	57.364	1.090	2.2809	0.9453	
	17.0	60.900	1.010	2.4484	0.9289	
	18.0	67.581	0.855	3.2273	0.8534	DETACHED
	19.0	84.894	0.645	3.2575	0.8502	DETACHED
	20.0	86.040	0.641	3.2683	0.8491	DETACHED
	1.73	1.0	25.228	1.686	1.0529	1.0000
1.73	2.0	37.173	1.662	1.1081	0.9999	
	3.0	38.150	1.628	1.1657	0.9996	
	4.0	39.160	1.594	1.2258	0.9991	
	5.0	40.208	1.559	1.2885	0.9983	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT	
1.73	6.0	41.797	1.524	1.3542	0.9972		
	7.0	42.431	1.489	1.4228	0.9955		
	8.0	43.615	1.453	1.4048	0.9934		
	9.0	44.857	1.417	1.5705	0.9907		
	10.0	46.164	1.379	1.6501	0.9873		
	11.0	47.540	1.340	1.7343	0.9832		
	12.0	49.029	1.300	1.8229	0.9783		
	13.0	50.620	1.257	1.9200	0.9723		
	14.0	52.318	1.212	2.0245	0.9652		
	15.0	54.135	1.162	2.1404	0.9566		
	16.0	56.073	1.105	2.2744	0.9458		
	17.0	59.000	1.032	2.4468	0.9308		
	18.0	81.482	0.659	3.2485	0.8512	DETACHED	
	19.0	84.540	0.544	3.2934	0.8454	DETACHED	
	20.0	85.831	0.640	3.3066	0.8451	DETACHED	
	1.74	1.0	35.990	1.704	1.0531	1.0000	
		2.0	36.929	1.672	1.1084	0.9999	
3.0		37.899	1.638	1.1662	0.9996		
4.0		38.903	1.603	1.2264	0.9991		
5.0		39.944	1.569	1.2894	0.9983		
6.0		41.025	1.534	1.3551	0.9971		
7.0		42.149	1.499	1.4239	0.9955		
8.0		43.322	1.463	1.4961	0.9934		
9.0		44.551	1.427	1.5718	0.9907		
10.0		45.844	1.389	1.6514	0.9873		
11.0		47.212	1.351	1.7356	0.9832		
12.0		48.670	1.311	1.8250	0.9782		
13.0		50.241	1.268	1.9207	0.9723		
14.0		51.961	1.223	2.0243	0.9653		
15.0		53.838	1.174	2.1386	0.9568		
16.0		56.143	1.119	2.2602	0.9463		
17.0		59.050	1.051	2.4313	0.9322		
18.0	79.248	0.673	3.2426	0.8518	DETACHED		
19.0	84.126	0.643	3.3285	0.8428	DETACHED		

THIN-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.74	20.0	85.603	0.638	3.3448	0.8410	DETACHED
	1.0	35.755	1.716	1.0532	1.0000	
1.75	2.0	35.688	1.682	1.1087	0.9999	
	3.0	37.653	1.648	1.1666	0.9996	
	4.0	38.650	1.613	1.2271	0.9991	
	5.0	39.684	1.579	1.2902	0.9983	
	6.0	40.756	1.544	1.3561	0.9971	
	7.0	41.872	1.509	1.4251	0.9955	
	8.0	43.035	1.473	1.4973	0.9933	
	9.0	44.252	1.437	1.5732	0.9906	
	10.0	45.530	1.399	1.6529	0.9872	
	11.0	46.882	1.361	1.7370	0.9831	
	12.0	48.319	1.321	1.8263	0.9781	
	13.0	49.864	1.279	1.9216	0.9722	
	14.0	51.547	1.235	2.0245	0.9652	
	15.0	53.422	1.187	2.1375	0.9569	
	16.0	55.589	1.133	2.2652	0.9466	
	17.0	58.208	1.068	2.4196	0.9333	
	18.0	62.048	0.964	2.6672	0.9102	
19.0	67.630	0.643	3.3623	0.8392	DETACHED	
1.76	20.0	85.351	0.636	3.3828	0.8370	DETACHED
	1.0	35.523	1.726	1.0534	1.0000	
	2.0	35.452	1.692	1.1091	0.9999	
	3.0	37.410	1.657	1.1671	0.9996	
	4.0	38.601	1.623	1.2277	0.9991	
	5.0	39.678	1.589	1.2910	0.9983	
	6.0	40.603	1.554	1.3572	0.9971	
	7.0	41.599	1.519	1.4263	0.9955	
	8.0	42.753	1.483	1.4987	0.9933	
	9.0	43.950	1.447	1.5746	0.9905	
	10.0	45.274	1.410	1.6544	0.9871	
	11.0	46.559	1.371	1.7385	0.9830	
	12.0	47.977	1.331	1.8277	0.9781	
	13.0	49.497	1.290	1.9227	0.9722	

TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
1.76	14.0	51.147	1.246	2.0250	0.9652		
	15.0	52.974	1.199	2.1368	0.9569		
	16.0	55.065	1.146	2.2621	0.9469		
	17.0	57.617	1.084	2.4106	0.9361		
	18.0	61.425	0.997	2.6204	0.9147		
	19.0	63.010	0.646	3.3037	0.8350	DETACHED	
	20.0	65.071	0.635	3.6205	0.8331	DETACHED	
	1.77	1.0	35.295	1.736	1.0535	1.0000	
	2.0	36.218	1.701	1.1094	0.9099		
	3.0	37.171	1.667	1.1676	0.9996		
4.0	39.156	1.633	1.2284	0.9991			
5.0	39.176	1.599	1.2910	0.9993			
6.0	40.234	1.564	1.3582	0.9971			
7.0	41.232	1.529	1.4275	0.9954			
8.0	42.476	1.493	1.5000	0.9932			
9.0	43.671	1.457	1.5761	0.9905			
10.0	44.923	1.420	1.6560	0.9871			
11.0	46.243	1.381	1.7402	0.9829			
12.0	47.643	1.342	1.8292	0.9780			
13.0	49.140	1.301	1.9240	0.9721			
14.0	50.759	1.257	2.0258	0.9652			
15.0	52.543	1.210	2.1365	0.9569			
16.0	54.567	1.159	2.2599	0.9470			
17.0	56.989	1.100	2.4036	0.9347			
18.0	60.346	1.021	2.5937	0.9172			
19.0	62.175	0.646	3.4206	0.8330	DETACHED		
20.0	64.755	0.634	3.6578	0.8291	DETACHED		
1.78	1.0	25.070	1.746	1.0537	1.0000		
	2.0	25.988	1.711	1.1002	0.9999		
	3.0	26.936	1.677	1.1682	0.9996		
	4.0	27.915	1.643	1.2291	0.9991		
	5.0	28.928	1.608	1.2928	0.9983		
	6.0	29.979	1.574	1.3592	0.9971		
	7.0	41.069	1.539	1.4287	0.9954		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.78	8.0	42.204	1.503	1.5014	0.9932	
	9.0	43.388	1.467	1.5776	0.9904	
	10.0	44.629	1.430	1.6576	0.9870	
	11.0	45.935	1.392	1.7419	0.9828	
	12.0	47.317	1.352	1.8300	0.9779	
	13.0	48.792	1.311	1.9255	0.9720	
	14.0	50.382	1.268	2.0268	0.9651	
	15.0	52.127	1.222	2.1367	0.9569	
	16.0	54.091	1.172	2.2583	0.9472	
	17.0	56.406	1.114	2.3981	0.9352	
1.79	18.0	59.459	1.042	2.5753	0.9190	DETACHED
	19.0	60.871	0.952	3.4368	0.8313	DETACHED
	20.0	64.394	0.633	3.4045	0.8252	DETACHED
	1.0	34.849	1.756	1.0539	1.0000	
	2.0	35.762	1.721	1.1101	0.9999	
	3.0	36.704	1.687	1.1687	0.9996	
	4.0	37.677	1.653	1.2298	0.9991	
	5.0	38.684	1.618	1.2937	0.9983	
	6.0	39.728	1.583	1.3603	0.9970	
	7.0	40.810	1.548	1.4300	0.9954	
1.80	8.0	41.936	1.513	1.5019	0.9932	
	9.0	43.111	1.477	1.5792	0.9904	
	10.0	44.340	1.440	1.6593	0.9869	
	11.0	45.632	1.402	1.7436	0.9827	
	12.0	46.998	1.362	1.8327	0.9778	
	13.0	48.452	1.322	1.9271	0.9719	
	14.0	50.017	1.279	2.0280	0.9650	
	15.0	51.726	1.233	2.1372	0.9569	
	16.0	53.635	1.184	2.2573	0.9474	
	17.0	55.858	1.128	2.3939	0.9355	
1.80	18.0	59.697	1.060	2.5618	0.9202	DETACHED
	19.0	77.075	0.683	3.3830	0.8370	DETACHED
	20.0	83.972	0.632	3.5302	0.8215	DETACHED
	1.0	34.630	1.765	1.0540	1.0000	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.80	2.0	35.538	1.731	1.1104	0.9999	
	3.0	36.475	1.697	1.1492	0.9996	
	4.0	37.443	1.662	1.2305	0.9991	
	5.0	38.444	1.628	1.2966	0.9982	
	6.0	39.481	1.593	1.3615	0.9970	
	7.0	40.556	1.558	1.4313	0.9953	
	8.0	41.674	1.523	1.5044	0.9931	
	9.0	42.830	1.486	1.5809	0.9903	
	10.0	44.057	1.449	1.6611	0.9868	
	11.0	45.336	1.412	1.7455	0.9826	
	12.0	46.686	1.373	1.8345	0.9777	
	13.0	48.121	1.332	1.9289	0.9718	
	14.0	49.662	1.290	2.0295	0.9649	
	15.0	51.327	1.246	2.1380	0.9568	
	16.0	53.109	1.196	2.2569	0.9473	
	17.0	55.041	1.141	2.3908	0.9358	
	18.0	57.096	1.077	2.5516	0.9212	
	19.0	62.310	0.977	2.7971	0.8975	
	20.0	83.463	0.632	3.5643	0.8179	DETACHED
	1.81	1.0	34.414	1.775	1.0542	1.0000
2.0		35.318	1.741	1.1107	0.9999	
3.0		36.250	1.707	1.1697	0.9996	
4.0		37.212	1.672	1.2312	0.9991	
5.0		38.208	1.638	1.2955	0.9982	
6.0		39.238	1.603	1.3626	0.9970	
7.0		40.306	1.568	1.4326	0.9953	
8.0		41.415	1.532	1.5059	0.9931	
9.0		42.571	1.496	1.5826	0.9902	
10.0		43.779	1.459	1.6630	0.9867	
11.0		45.046	1.422	1.7474	0.9825	
12.0		46.381	1.383	1.8365	0.9775	
13.0		47.798	1.342	1.9308	0.9717	
14.0		49.315	1.300	2.0312	0.9648	
15.0		50.960	1.256	2.1391	0.9567	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.81	15.0	52.777	1.208	2.2569	0.9473	
	17.0	54.849	1.154	2.3886	0.9260	
	18.0	57.366	1.092	2.5438	0.9219	
	19.0	61.028	1.006	2.7587	0.9011	
	20.0	82.823	0.633	3.5058	0.8145	DETACHED
1.82	1.0	34.202	1.785	1.0544	1.0000	
	2.0	35.101	1.751	1.1111	0.9999	
	3.0	36.028	1.716	1.1703	0.9996	
	4.0	36.985	1.682	1.2320	0.9991	
	5.0	37.975	1.647	1.2965	0.9982	
	6.0	38.998	1.613	1.3637	0.9970	
	7.0	40.059	1.578	1.4340	0.9952	
	8.0	41.161	1.542	1.5074	0.9930	
	9.0	42.300	1.506	1.5843	0.9902	
	10.0	43.507	1.469	1.6649	0.9867	
1.83	1.0	44.761	1.431	1.7495	0.9824	
	2.0	46.083	1.393	1.8386	0.9774	
	3.0	47.483	1.352	1.9328	0.9715	
	4.0	48.978	1.311	2.0320	0.9646	
	5.0	50.594	1.266	2.1405	0.9566	
	6.0	52.371	1.219	2.2573	0.9473	
	7.0	54.322	1.167	2.3871	0.9362	
	8.0	56.778	1.107	2.5378	0.9225	
	9.0	60.055	1.028	2.7140	0.9026	
	10.0	81.952	0.626	3.6221	0.8118	DETACHED
1.83	1.0	33.992	1.795	1.0546	1.0000	
	2.0	34.887	1.761	1.1114	0.9999	
	3.0	35.800	1.726	1.1708	0.9996	
	4.0	36.761	1.692	1.2328	0.9991	
	5.0	37.745	1.657	1.2974	0.9982	
	6.0	38.763	1.622	1.3649	0.9969	
	7.0	39.818	1.587	1.4354	0.9952	
	8.0	40.912	1.552	1.5090	0.9929	
	9.0	42.051	1.516	1.5861	0.9901	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.83	10.0	43.239	1.470	1.5668	0.9966	
	11.0	44.482	1.441	1.7516	0.9923	
	12.0	45.701	1.403	1.8408	0.9773	
	13.0	47.174	1.363	1.9350	0.9714	
	14.0	48.649	1.321	2.0350	0.9645	
	15.0	50.229	1.277	2.1421	0.9565	
	16.0	51.970	1.230	2.2581	0.9473	
	17.0	53.924	1.179	2.3862	0.9362	
	18.0	56.231	1.121	2.5332	0.9229	
	19.0	59.236	1.048	2.7182	0.9053	
1.84	20.0	80.552	0.643	3.6351	0.8104	DETACHED
	1.0	33.785	1.805	1.0547	1.0000	
	2.0	34.675	1.771	1.1118	0.9999	
	3.0	35.593	1.736	1.1716	0.9996	
	4.0	36.540	1.702	1.2335	0.9991	
	5.0	37.519	1.667	1.2984	0.9982	
	6.0	38.531	1.632	1.3661	0.9969	
	7.0	39.579	1.597	1.4368	0.9952	
	8.0	40.664	1.561	1.5106	0.9929	
	9.0	41.797	1.525	1.5870	0.9900	
1.85	10.0	42.976	1.489	1.6688	0.9865	
	11.0	44.209	1.451	1.7537	0.9822	
	12.0	45.504	1.413	1.8430	0.9772	
	13.0	46.872	1.373	1.9372	0.9712	
	14.0	48.328	1.331	2.0372	0.9644	
	15.0	49.883	1.288	2.1429	0.9564	
	16.0	51.600	1.241	2.2592	0.9471	
	17.0	53.506	1.191	2.3860	0.9363	
	18.0	55.715	1.135	2.5209	0.9232	
	19.0	59.517	1.065	2.7050	0.9065	
1.85	20.0	72.955	0.727	3.4438	0.8306	DETACHED
	1.0	33.581	1.815	1.0549	1.0000	
	2.0	34.467	1.781	1.1122	0.9999	
	3.0	35.390	1.746	1.1719	0.9996	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.85	4.0	36.323	1.711	1.2143	0.9990	
	5.0	37.206	1.677	1.2004	0.9982	
	6.0	38.302	1.647	1.1873	0.9969	
	7.0	39.244	1.607	1.1732	0.9951	
	8.0	40.425	1.571	1.1522	0.9928	
	9.0	41.547	1.535	1.1508	0.9900	
	10.0	42.718	1.498	1.1709	0.9864	
	11.0	43.960	1.461	1.1759	0.9821	
	12.0	45.223	1.422	1.1854	0.9770	
	13.0	46.577	1.383	1.1906	0.9711	
	14.0	49.015	1.341	2.0105	0.9542	
	15.0	49.557	1.298	2.1460	0.9562	
	16.0	51.232	1.252	2.2607	0.9470	
	17.0	53.002	1.203	2.3862	0.9362	
	18.0	55.228	1.148	2.5275	0.9234	
	19.0	57.867	1.082	2.6967	0.9074	
	20.0	62.101	0.982	2.9520	0.8919	
1.86	1.0	33.370	1.825	1.0551	1.0000	
	2.0	34.261	1.790	1.1125	0.9999	
	3.0	35.171	1.756	1.1725	0.9996	
	4.0	36.109	1.721	1.2351	0.9990	
	5.0	37.077	1.686	1.3004	0.9982	
	6.0	38.077	1.651	1.3685	0.9969	
	7.0	39.113	1.616	1.4397	0.9951	
	8.0	40.197	1.581	1.5140	0.9928	
	9.0	41.302	1.545	1.5917	0.9899	
	10.0	42.464	1.509	1.6730	0.9863	
	11.0	43.676	1.471	1.7582	0.9820	
	12.0	44.948	1.432	1.8478	0.9769	
	13.0	46.288	1.393	1.9422	0.9709	
	14.0	47.709	1.352	2.0420	0.9640	
	15.0	49.229	1.309	2.1483	0.9560	
	16.0	50.876	1.263	2.2624	0.9468	
	17.0	52.603	1.214	2.3869	0.9362	

TWO-DIMENSIONAL CALIQUEF SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
1.86	18.0	56.763	1.160	2.5260	0.9236	
	19.0	57.270	1.097	2.6896	0.9080	
	20.0	60.910	1.009	2.9155	0.8856	
1.87	1.0	33.180	1.826	1.0553	1.0000	
	2.0	34.058	1.800	1.1129	0.9999	
	3.0	34.963	1.766	1.1731	0.9996	
	4.0	35.807	1.731	1.2359	0.9990	
	5.0	36.860	1.696	1.3014	0.9981	
	6.0	37.856	1.661	1.3697	0.9968	
	7.0	38.886	1.626	1.4411	0.9950	
	8.0	39.953	1.590	1.5157	0.9927	
	9.0	41.061	1.554	1.5926	0.9898	
	10.0	42.214	1.518	1.6751	0.9862	
	11.0	43.418	1.480	1.7606	0.9818	
	12.0	44.678	1.442	1.8503	0.9767	
	13.0	46.005	1.402	1.9447	0.9707	
	14.0	47.410	1.362	2.0446	0.9638	
	15.0	48.900	1.319	2.1507	0.9558	
	16.0	50.529	1.274	2.2644	0.9467	
	17.0	52.309	1.226	2.3880	0.9361	
	18.0	54.221	1.172	2.5252	0.9237	
	19.0	56.276	1.111	2.6844	0.9085	
1.89	20.0	59.990	1.021	2.8825	0.8879	
	1.0	22.984	1.845	1.0554	1.0000	
	2.0	33.858	1.810	1.1133	0.9999	
	3.0	34.759	1.775	1.1737	0.9996	
	4.0	35.688	1.741	1.2366	0.9990	
	5.0	36.647	1.706	1.3024	0.9981	
	6.0	37.637	1.671	1.3710	0.9968	
	7.0	38.662	1.636	1.4426	0.9950	
	8.0	39.722	1.600	1.5174	0.9927	
	9.0	40.824	1.564	1.5956	0.9897	
	10.0	41.969	1.527	1.6773	0.9861	
	11.0	43.163	1.490	1.7630	0.9817	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
1.98	12.0	44.413	1.452	1.8529	0.9765	
	13.0	45.728	1.412	1.9474	0.9706	
	14.0	47.117	1.372	2.0473	0.9636	
	15.0	48.598	1.329	2.1533	0.9556	
	16.0	50.192	1.284	2.2667	0.9465	
	17.0	51.927	1.237	2.3895	0.9359	
	18.0	53.806	1.184	2.5251	0.9237	
	19.0	55.817	1.125	2.6806	0.9089	
	20.0	57.911	1.050	2.8764	0.8995	
	1.89	1.0	32.790	1.855	1.0556	1.0000
2.0		33.661	1.820	1.1137	0.9999	
3.0		34.558	1.785	1.1742	0.9996	
4.0		35.482	1.750	1.2374	0.9990	
5.0		36.436	1.715	1.3034	0.9981	
6.0		37.422	1.680	1.3723	0.9968	
7.0		38.441	1.645	1.4441	0.9950	
8.0		39.496	1.610	1.5192	0.9926	
9.0		40.590	1.573	1.5976	0.9896	
10.0		41.728	1.537	1.6796	0.9859	
1.80	1.0	42.913	1.500	1.7654	0.9815	
	2.0	44.153	1.461	1.8555	0.9764	
	3.0	45.452	1.422	1.9502	0.9704	
	4.0	46.820	1.381	2.0501	0.9634	
	5.0	48.263	1.339	2.1560	0.9554	
	6.0	49.784	1.295	2.2692	0.9463	
	7.0	51.377	1.248	2.3913	0.9358	
	8.0	53.048	1.196	2.5255	0.9236	
	9.0	54.797	1.138	2.6779	0.9092	
	10.0	56.624	1.068	2.8646	0.8907	
1.80	1.0	32.509	1.865	1.0558	1.0000	
	2.0	33.466	1.830	1.1140	0.9999	
	3.0	34.459	1.795	1.1748	0.9996	
	4.0	35.479	1.760	1.2381	0.9990	
	5.0	36.529	1.725	1.3044	0.9981	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT	
1.00	6.0	37.209	1.690	1.3725	0.9968		
	7.0	38.223	1.655	1.4457	0.9949		
	8.0	39.272	1.619	1.5209	0.9925		
	9.0	40.360	1.583	1.5906	0.9895		
	10.0	41.491	1.547	1.6589	0.9859		
	11.0	42.668	1.509	1.7279	0.9814		
	12.0	43.898	1.471	1.7982	0.9762		
	13.0	45.189	1.432	1.8531	0.9702		
	14.0	46.550	1.391	1.9030	0.9632		
	15.0	47.995	1.349	1.9480	0.9552		
	16.0	49.545	1.305	1.9878	0.9460		
	17.0	51.228	1.258	2.0234	0.9356		
	18.0	53.096	1.208	2.0564	0.9236		
	19.0	55.243	1.151	2.0862	0.9093		
	20.0	57.902	1.083	2.1128	0.8916		
	1.01	2.0	32.410	1.875	1.0540	1.0000	
		3.0	33.273	1.840	1.1144	0.9999	
		4.0	34.163	1.805	1.1754	0.9996	
		5.0	35.079	1.770	1.2301	0.9990	
6.0		36.024	1.735	1.3055	0.9981		
7.0		37.000	1.700	1.3748	0.9967		
8.0		38.009	1.664	1.4472	0.9949		
9.0		39.052	1.629	1.5227	0.9925		
10.0		40.134	1.593	1.6017	0.9894		
11.0		41.257	1.556	1.6842	0.9857		
12.0		42.427	1.519	1.7705	0.9813		
13.0		43.648	1.481	1.8610	0.9761		
14.0		44.928	1.441	1.9560	0.9700		
15.0		46.275	1.401	2.0561	0.9630		
16.0		47.705	1.359	2.1620	0.9549		
17.0		49.233	1.315	2.2747	0.9458		
18.0		50.899	1.269	2.3959	0.9354		
19.0		52.717	1.219	2.5278	0.9234		
20.0		54.801	1.163	2.6753	0.9094		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
1.01	20.0	57.330	1.008	2.8493	0.8923	
1.02	1.0	22.274	1.885	1.0562	1.0000	
	2.0	32.083	1.849	1.1148	0.9990	
	3.0	33.969	1.814	1.1760	0.9996	
	4.0	34.881	1.779	1.2399	0.9990	
	5.0	35.822	1.744	1.3066	0.9981	
	6.0	36.794	1.709	1.3761	0.9967	
	7.0	37.798	1.674	1.4488	0.9948	
	8.0	38.826	1.638	1.5246	0.9924	
	9.0	39.881	1.602	1.6038	0.9894	
	10.0	41.078	1.565	1.6865	0.9856	
	11.0	42.400	1.528	1.7731	0.9812	
	12.0	43.841	1.490	1.8638	0.9759	
	13.0	44.671	1.451	1.9590	0.9698	
	14.0	45.006	1.411	2.0592	0.9627	
	15.0	47.420	1.369	2.1652	0.9547	
	16.0	48.979	1.325	2.2777	0.9456	
	17.0	50.560	1.279	2.3984	0.9352	
	18.0	52.351	1.230	2.5295	0.9231	
	19.0	54.378	1.176	2.6751	0.9094	
	20.0	56.708	1.113	2.8445	0.8927	
1.03	1.0	32.039	1.895	1.0564	1.0000	
	2.0	32.896	1.850	1.1152	0.9999	
	3.0	33.778	1.824	1.1766	0.9996	
	4.0	34.686	1.790	1.2407	0.9990	
	5.0	35.623	1.754	1.3076	0.9980	
	6.0	36.590	1.719	1.3775	0.9967	
	7.0	37.589	1.683	1.4504	0.9949	
	8.0	38.622	1.648	1.5264	0.9923	
	9.0	39.692	1.612	1.6059	0.9893	
	10.0	40.802	1.575	1.6889	0.9855	
	11.0	41.956	1.538	1.7759	0.9810	
	12.0	43.160	1.500	1.8667	0.9757	
	13.0	44.410	1.461	1.9621	0.9696	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
1.93	14.0	45.743	1.420	2.0625	0.9625		
	15.0	47.142	1.379	2.1695	0.9544		
	16.0	48.633	1.335	2.2810	0.9453		
	17.0	50.239	1.290	2.4013	0.9369		
	18.0	51.907	1.241	2.5316	0.9281		
	19.0	53.072	1.187	2.6757	0.9094		
	20.0	55.300	1.126	2.8432	0.9031		
	1.04	1.0	31.857	1.904	1.0565	1.0000	
	2.0	32.711	1.869	1.1156	0.9999		
	3.0	33.589	1.834	1.1772	0.9996		
4.0	34.494	1.799	1.2416	0.9990			
5.0	35.427	1.764	1.3087	0.9980			
6.0	36.390	1.728	1.3788	0.9966			
7.0	37.384	1.693	1.4520	0.9947			
8.0	38.412	1.657	1.5283	0.9923			
9.0	39.476	1.621	1.6080	0.9892			
10.0	40.579	1.584	1.6913	0.9854			
11.0	41.727	1.547	1.7785	0.9809			
12.0	42.922	1.509	1.8696	0.9755			
13.0	44.172	1.470	1.9653	0.9694			
14.0	45.484	1.430	2.0659	0.9623			
15.0	46.869	1.389	2.1719	0.9542			
16.0	48.343	1.345	2.2844	0.9450			
17.0	49.926	1.300	2.4044	0.9346			
18.0	51.654	1.252	2.5341	0.9228			
19.0	53.583	1.199	2.6767	0.9093			
20.0	55.829	1.139	2.8390	0.8933			
1.95	1.0	31.678	1.914	1.0567	1.0000		
	2.0	32.578	1.879	1.1160	0.9999		
	3.0	33.403	1.844	1.1778	0.9996		
	4.0	34.304	1.809	1.2424	0.9990		
	5.0	35.233	1.773	1.3098	0.9980		
	6.0	36.192	1.738	1.3802	0.9965		
	7.0	37.182	1.702	1.4536	0.9947		

TWO-DIMENSIONAL ORLIOQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.95	8.0	39.204	1.667	1.5302	0.9922	
	9.0	39.265	1.630	1.6102	0.9991	
	10.0	40.361	1.594	1.6938	0.9853	
	11.0	41.501	1.556	1.7912	0.9807	
	12.0	42.688	1.518	1.8726	0.9754	
	13.0	43.929	1.480	1.9485	0.9691	
	14.0	45.230	1.440	2.0693	0.9620	
	15.0	46.602	1.398	2.1754	0.9539	
	16.0	48.060	1.355	2.2879	0.9447	
	17.0	49.622	1.310	2.4078	0.9343	
1.96	18.0	51.320	1.262	2.5369	0.9226	
	19.0	53.207	1.210	2.6783	0.9091	
	20.0	55.382	1.152	2.8379	0.8934	
	1.0	31.500	1.924	1.0569	1.0000	
	2.0	32.347	1.889	1.1164	0.9999	
	3.0	33.219	1.853	1.1785	0.9995	
	4.0	34.117	1.818	1.2433	0.9989	
	5.0	35.042	1.783	1.3109	0.9980	
	6.0	35.997	1.748	1.3815	0.9966	
	7.0	36.997	1.712	1.4552	0.9946	
1.97	8.0	38.000	1.676	1.5321	0.9921	
	9.0	39.053	1.640	1.6124	0.9890	
	10.0	40.145	1.603	1.6963	0.9852	
	11.0	41.279	1.566	1.7840	0.9806	
	12.0	42.458	1.528	1.8757	0.9752	
	13.0	43.690	1.490	1.9719	0.9689	
	14.0	44.981	1.449	2.0728	0.9617	
	15.0	46.341	1.408	2.1791	0.9536	
	16.0	47.782	1.365	2.2916	0.9444	
	17.0	49.325	1.320	2.4112	0.9340	
1.97	18.0	50.997	1.273	2.5399	0.9223	
	19.0	52.845	1.221	2.6803	0.9089	
	20.0	54.957	1.164	2.8376	0.8934	
	1.0	31.325	1.924	1.0571	1.0000	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.97	2.0	32.169	1.809	1.1168	0.9989	
	3.0	33.037	1.863	1.1791	0.9905	
	4.0	33.932	1.878	1.2441	0.9989	
	5.0	34.853	1.793	1.3120	0.9980	
	6.0	35.804	1.757	1.3829	0.9965	
	7.0	36.785	1.721	1.4560	0.9946	
	8.0	37.798	1.686	1.5321	0.9921	
	9.0	38.846	1.649	1.6116	0.9889	
	10.0	39.923	1.613	1.6948	0.9850	
	11.0	41.030	1.575	1.7818	0.9804	
	12.0	42.162	1.537	1.8728	0.9750	
	13.0	43.325	1.498	1.9677	0.9687	
	14.0	44.517	1.459	2.0664	0.9615	
	15.0	45.736	1.417	2.1688	0.9533	
	1.99	16.0	47.011	1.375	2.2754	0.9441
17.0		48.315	1.330	2.3859	0.9337	
18.0		49.682	1.283	2.5002	0.9220	
19.0		51.115	1.232	2.6182	0.9087	
20.0		52.615	1.176	2.7408	0.8934	
1.0		31.152	1.944	1.0573	1.0000	
2.0		31.602	1.908	1.1172	0.9999	
3.0		32.058	1.873	1.1797	0.9995	
4.0		32.520	1.837	1.2450	0.9989	
5.0		32.987	1.802	1.3131	0.9979	
6.0		33.459	1.767	1.3843	0.9965	
7.0		33.936	1.731	1.4585	0.9945	
8.0		34.418	1.695	1.5360	0.9920	
9.0		34.905	1.659	1.6169	0.9888	
10.0		35.397	1.622	1.7014	0.9849	
11.0	35.894	1.585	1.7897	0.9802		
12.0	36.396	1.547	1.8819	0.9748		
13.0	36.903	1.508	1.9786	0.9684		
14.0	37.415	1.468	2.0800	0.9512		
15.0	37.932	1.427	2.1867	0.9330		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
1.98	16.0	47.246	1.384	2.2003	0.9437	
	17.0	48.752	1.340	2.4189	0.9333	
	18.0	50.376	1.293	2.5468	0.9216	
	19.0	52.155	1.243	2.6855	0.9084	
	20.0	54.140	1.189	2.8301	0.8933	
	1.00	30.981	1.954	1.0575	1.0000	
	2.0	31.918	1.918	1.1176	0.9999	
	3.0	32.691	1.883	1.1803	0.9995	
	4.0	33.569	1.847	1.2450	0.9989	
	5.0	34.482	1.812	1.3143	0.9979	
1.99	6.0	35.426	1.776	1.3857	0.9965	
	7.0	36.399	1.740	1.4602	0.9945	
	8.0	37.403	1.704	1.5380	0.9919	
	9.0	38.442	1.668	1.6192	0.9887	
	10.0	39.517	1.631	1.7040	0.9848	
	11.0	40.632	1.594	1.7926	0.9801	
	12.0	41.791	1.556	1.8851	0.9746	
	13.0	42.998	1.517	1.9821	0.9682	
	14.0	44.261	1.477	2.0838	0.9609	
	15.0	45.586	1.436	2.1906	0.9527	
2.00	16.0	46.986	1.394	2.3034	0.9434	
	17.0	48.475	1.350	2.4229	0.9330	
	18.0	50.077	1.303	2.5506	0.9213	
	19.0	51.826	1.252	2.6886	0.9081	
	20.0	53.785	1.199	2.8407	0.8931	
	1.0	30.812	1.964	1.0577	1.0000	
	2.0	31.646	1.928	1.1180	0.9999	
	3.0	32.506	1.892	1.1810	0.9995	
	4.0	33.391	1.857	1.2468	0.9989	
	5.0	34.302	1.821	1.3156	0.9979	
2.00	6.0	35.241	1.786	1.3871	0.9964	
	7.0	36.210	1.750	1.4619	0.9944	
	8.0	37.210	1.714	1.5400	0.9919	
	9.0	38.244	1.677	1.6215	0.9886	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M <sub>1</sub>	DELTA	THETA	M <sub>2</sub>	P <sub>2</sub> /P <sub>1</sub>	PT <sub>2</sub> /PT <sub>1</sub>	COMMENT
2.00	10.0	39.314	1.641	1.7066	0.9846	
	11.0	40.423	1.603	1.7055	0.9799	
	12.0	41.575	1.565	1.9884	0.9744	
	13.0	42.775	1.526	1.9856	0.9680	
	14.0	44.020	1.487	2.0876	0.9605	
	15.0	45.344	1.446	2.1947	0.9524	
	16.0	46.733	1.403	2.3076	0.9430	
	17.0	48.205	1.350	2.4271	0.9326	
	18.0	49.786	1.313	2.5546	0.9209	
	19.0	51.507	1.266	2.6921	0.9078	
2.01	20.0	53.423	1.210	2.8420	0.8929	
	1.0	20.644	1.974	1.0570	1.0000	
	2.0	31.476	1.938	1.1124	0.9999	
	3.0	32.233	1.902	1.1816	0.9995	
	4.0	33.215	1.866	1.2476	0.9989	
	5.0	34.122	1.831	1.3166	0.9979	
	6.0	35.058	1.795	1.3885	0.9964	
	7.0	36.024	1.759	1.4636	0.9944	
	8.0	37.020	1.723	1.5420	0.9918	
	9.0	38.040	1.687	1.6238	0.9885	
2.02	10.0	39.114	1.650	1.7092	0.9845	
	11.0	40.219	1.612	1.7085	0.9797	
	12.0	41.363	1.574	1.8317	0.9742	
	13.0	42.557	1.536	1.9802	0.9677	
	14.0	43.801	1.498	2.0915	0.9604	
	15.0	45.106	1.455	2.1988	0.9520	
	16.0	46.481	1.413	2.3118	0.9427	
	17.0	47.960	1.369	2.4315	0.9322	
	18.0	49.501	1.323	2.5589	0.9205	
	19.0	51.106	1.274	2.6950	0.9074	
2.03	20.0	52.776	1.221	2.8455	0.8926	
	1.0	20.644	1.974	1.0570	1.0000	
	2.0	31.476	1.938	1.1124	0.9999	
	3.0	32.233	1.902	1.1816	0.9995	
	4.0	33.215	1.866	1.2476	0.9989	
	5.0	34.122	1.831	1.3166	0.9979	
	6.0	35.058	1.795	1.3885	0.9964	
	7.0	36.024	1.759	1.4636	0.9944	
	8.0	37.020	1.723	1.5420	0.9918	
	9.0	38.040	1.687	1.6238	0.9885	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

MI	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.01	24.0	33.612	0.502	4.4884	0.7770	DETACHED
	25.0	35.403	0.584	4.5165	0.7192	DETACHED
2.02	1.0	20.479	1.084	1.0581	1.0000	
	2.0	31.308	1.048	1.1188	0.9099	
	3.0	37.162	1.012	1.1823	0.9095	
	4.0	33.041	1.876	1.2485	0.9089	
	5.0	33.925	1.840	1.3177	0.9079	
	6.0	34.878	1.805	1.3899	0.9064	
	7.0	35.829	1.769	1.4654	0.9043	
	8.0	36.821	1.732	1.5440	0.9017	
	9.0	37.856	1.696	1.6262	0.9984	
	10.0	38.917	1.659	1.7110	0.9944	
	11.0	40.015	1.622	1.8015	0.9796	
	12.0	41.154	1.584	1.8950	0.9740	
	13.0	42.340	1.545	1.9929	0.9675	
	14.0	43.577	1.505	2.0954	0.9601	
	15.0	44.873	1.464	2.2030	0.9517	
	16.0	45.236	1.422	2.3162	0.9423	
17.0	47.681	1.378	2.4360	0.9318		
18.0	49.274	1.333	2.5632	0.9201		
19.0	50.894	1.284	2.6988	0.9070		
20.0	52.737	1.232	2.8486	0.8923		
21.0	54.837	1.174	3.0140	0.8754		
22.0	57.300	1.105	3.2112	0.8551		
23.0	61.204	1.008	3.4492	0.8258		
24.0	63.119	0.903	4.5255	0.7183	DETACHED	
25.0	65.183	0.583	4.5602	0.7149	DETACHED	
2.03	1.0	20.316	1.094	1.0583	1.0000	
	2.0	31.143	1.057	1.1192	0.9099	
	3.0	31.003	1.972	1.1820	0.9095	
	4.0	32.969	1.986	1.2494	0.9089	
	5.0	33.771	1.850	1.3199	0.9078	
	6.0	34.700	1.814	1.3914	0.9063	
	7.0	35.658	1.778	1.4671	0.9043	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
2.03	8.0	35.646	1.742	1.5461	0.9915	
	9.0	37.667	1.705	1.6295	0.9882	
	10.0	39.722	1.668	1.7146	0.9847	
	11.0	40.815	1.631	1.8045	0.9794	
	12.0	40.949	1.593	1.8984	0.9737	
	13.0	42.129	1.554	1.9966	0.9672	
	14.0	43.357	1.514	2.0994	0.9598	
	15.0	44.644	1.474	2.2073	0.9513	
	16.0	45.996	1.432	2.3207	0.9419	
	17.0	47.427	1.388	2.4406	0.9316	
	18.0	48.953	1.342	2.5678	0.9197	
	19.0	50.600	1.294	2.7041	0.9066	
	20.0	52.410	1.242	2.8521	0.8920	
	21.0	54.458	1.185	3.0165	0.8752	
	22.0	56.911	1.119	3.2081	0.8554	
	23.0	60.348	1.030	3.4663	0.8284	
	24.0	62.505	0.904	4.5503	0.7150	DETACHED
25.0	64.262	0.583	4.6027	0.7105	DETACHED	
2.04	1.0	30.155	2.003	1.0585	1.0000	
	2.0	30.079	1.967	1.1196	0.9999	
	3.0	31.827	1.931	1.1826	0.9995	
	4.0	32.700	1.895	1.2503	0.9989	
	5.0	33.598	1.859	1.3200	0.9978	
	6.0	34.524	1.824	1.3928	0.9962	
	7.0	35.478	1.787	1.4688	0.9942	
	8.0	36.463	1.751	1.5481	0.9916	
	9.0	37.479	1.715	1.6309	0.9882	
	10.0	38.530	1.678	1.7173	0.9841	
	11.0	39.618	1.640	1.8076	0.9792	
	12.0	40.747	1.602	1.9018	0.9735	
	13.0	41.919	1.563	2.0003	0.9669	
	14.0	43.141	1.523	2.1035	0.9594	
	15.0	44.419	1.483	2.2116	0.9510	
	16.0	45.760	1.441	2.3253	0.9415	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
2.04	17.0	47.178	1.397	2.4453	0.9310	
	18.0	48.687	1.352	2.5725	0.9192	
	19.0	50.313	1.304	2.7086	0.9062	
	20.0	52.093	1.253	2.8550	0.8916	
	21.0	54.094	1.196	3.0187	0.8751	
	22.0	56.450	1.132	3.2063	0.8556	
	23.0	59.631	1.049	3.4475	0.8302	
	24.0	61.682	0.908	4.5869	0.7122	
	25.0	64.676	0.582	4.6467	0.7063	DETACHED
	1.0	29.995	2.013	1.0587	1.0000	DETACHED
2.05	2.0	30.916	1.977	1.1201	0.9999	
	3.0	31.662	1.941	1.1842	0.9995	
	4.0	32.532	1.905	1.2512	0.9989	
	5.0	33.427	1.869	1.3212	0.9978	
	6.0	34.350	1.833	1.3943	0.9963	
	7.0	35.301	1.797	1.4706	0.9942	
	8.0	36.282	1.760	1.5502	0.9915	
	9.0	37.295	1.724	1.6333	0.9881	
	10.0	38.341	1.687	1.7201	0.9840	
	11.0	39.424	1.649	1.8107	0.9790	
12.0	40.547	1.611	1.9053	0.9733		
13.0	41.713	1.572	2.0041	0.9667		
14.0	42.928	1.533	2.1076	0.9591		
15.0	44.197	1.492	2.2161	0.9506		
16.0	45.528	1.450	2.3300	0.9411		
17.0	46.924	1.407	2.4502	0.9305		
18.0	48.428	1.361	2.5774	0.9188		
19.0	50.024	1.314	2.7133	0.9057		
20.0	51.785	1.263	2.8600	0.8912		
21.0	53.744	1.207	3.0215	0.8748		
22.0	56.033	1.144	3.2057	0.8556		
23.0	59.002	1.066	3.4358	0.8314		
24.0	60.405	0.606	4.6000	0.7109	DETACHED	
25.0	64.379	0.582	4.6892	0.7021	DETACHED	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.05	1.0	29.837	2.023	1.0589	1.0000	
	2.0	20.656	1.987	1.1205	0.9998	
	3.0	31.409	1.951	1.1849	0.9995	
	4.0	32.266	1.915	1.2522	0.9988	
	5.0	33.259	1.879	1.3224	0.9978	
	6.0	34.179	1.842	1.3958	0.9962	
	7.0	35.126	1.806	1.4724	0.9941	
	8.0	36.104	1.770	1.5524	0.9914	
	9.0	37.112	1.733	1.6358	0.9880	
	10.0	38.155	1.696	1.7220	0.9838	
	11.0	39.233	1.658	1.8118	0.9780	
	12.0	40.351	1.620	1.9048	0.9713	
	13.0	41.510	1.581	2.0010	0.9644	
	14.0	42.718	1.542	2.1110	0.9588	
	15.0	43.970	1.501	2.2206	0.9533	
	16.0	45.261	1.459	2.3348	0.9477	
	17.0	46.605	1.416	2.4551	0.9430	
	18.0	48.115	1.371	2.5825	0.9383	
19.0	49.761	1.323	2.7182	0.9353		
20.0	51.486	1.273	2.8644	0.9307		
21.0	53.405	1.218	3.0227	0.9244		
22.0	55.627	1.157	3.2061	0.9156		
23.0	59.434	1.091	3.4275	0.9033		
24.0	76.805	0.640	4.5262	0.7183	DETACHED	
25.0	86.062	0.582	4.7300	0.6980	DETACHED	
2.07	1.0	29.681	2.033	1.0501	1.0000	
	2.0	20.498	1.997	1.1209	0.9998	
	3.0	31.338	1.960	1.1855	0.9995	
	4.0	32.203	1.924	1.2531	0.9988	
	5.0	33.093	1.888	1.3236	0.9978	
	6.0	34.009	1.852	1.3973	0.9962	
	7.0	34.954	1.816	1.4742	0.9941	
	8.0	35.928	1.779	1.5545	0.9913	
9.0	36.932	1.742	1.6382	0.9879		

NOT REPRODUCIBLE

DETACHED  
DETACHED

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.07	10.0	37.971	1.705	1.7257	0.9817	
	11.0	39.044	1.667	1.8170	0.9787	
	12.0	40.157	1.629	1.9123	0.9729	
	13.0	41.311	1.590	2.0110	0.9651	
	14.0	42.512	1.551	2.1160	0.9585	
	15.0	43.765	1.510	2.2252	0.9490	
	16.0	45.078	1.468	2.3397	0.9401	
	17.0	46.460	1.425	2.4602	0.9296	
	18.0	47.926	1.380	2.5877	0.9178	
	19.0	49.484	1.333	2.7233	0.9048	
	20.0	51.145	1.283	2.8661	0.8903	
	21.0	53.078	1.220	3.0283	0.8741	
	22.0	55.230	1.168	3.2073	0.8555	
	23.0	57.614	1.096	3.4218	0.8320	
2.08	24.0	62.372	0.981	3.7576	0.7975	
	25.0	68.655	0.882	4.7713	0.6941	DETACHED
	1.0	29.527	2.043	1.0502	1.0000	
	2.0	30.341	2.006	1.1212	0.9999	
	3.0	31.170	1.970	1.1862	0.9995	
	4.0	32.041	1.934	1.2540	0.9989	
	5.0	32.979	1.898	1.3248	0.9977	
	6.0	33.882	1.861	1.3989	0.9962	
	7.0	34.783	1.825	1.4760	0.9940	
	8.0	35.754	1.788	1.5566	0.9912	
	9.0	36.755	1.751	1.6407	0.9878	
	10.0	37.789	1.714	1.7285	0.9835	
	11.0	38.858	1.677	1.8202	0.9785	
	12.0	39.966	1.638	1.9150	0.9726	
13.0	41.114	1.590	2.0158	0.9659		
14.0	42.300	1.540	2.1203	0.9582		
15.0	43.555	1.519	2.2298	0.9495		
16.0	44.859	1.477	2.3446	0.9399		
17.0	46.230	1.434	2.4656	0.9291		
18.0	47.683	1.389	2.5930	0.9173		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.00	19.0	49.232	1.343	2.7286	0.0042	
	20.0	50.911	1.293	2.8741	0.0098	
	21.0	52.761	1.239	3.0324	0.0173	
	22.0	54.668	1.180	3.2092	0.0253	
	23.0	57.431	1.110	3.4181	0.0333	
	24.0	61.282	1.009	3.7154	0.0419	
	25.0	83.126	0.583	4.9100	0.0903	DETACHED
	1.0	29.375	2.053	1.0595	1.0000	
	2.0	30.186	2.016	1.1218	0.0009	
	3.0	31.022	1.980	1.1869	0.0095	
	4.0	31.881	1.943	1.2549	0.0098	
	5.0	32.766	1.907	1.3260	0.0077	
	6.0	33.676	1.871	1.4002	0.0061	
	7.0	34.615	1.834	1.4778	0.0040	
	8.0	35.582	1.798	1.5589	0.0012	
9.0	36.580	1.761	1.6432	0.0076		
10.0	37.610	1.723	1.7314	0.0034		
11.0	38.675	1.686	1.8236	0.0083		
12.0	39.778	1.647	1.9195	0.0024		
13.0	40.921	1.608	2.0198	0.0056		
14.0	42.109	1.569	2.1247	0.0078		
15.0	43.348	1.528	2.2345	0.0091		
16.0	44.643	1.486	2.3497	0.0064		
17.0	46.004	1.443	2.4707	0.0087		
18.0	47.444	1.399	2.5985	0.0168		
19.0	48.970	1.352	2.7341	0.0037		
20.0	50.635	1.303	2.8794	0.0092		
21.0	52.454	1.249	3.0369	0.0032		
22.0	54.512	1.191	3.2120	0.0050		
23.0	56.979	1.123	3.4161	0.0035		
24.0	60.658	1.031	3.6506	0.0045		
25.0	82.634	0.584	4.8457	0.0069	DETACHED	
2.10	1.0	29.274	2.063	1.0507	1.0000	
	2.0	30.023	2.076	1.1222	0.0008	

NOT REPRODUCIBLE

TWO-DIMENSIONAL CALIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.10	3.0	30.866	1.980	1.1875	0.9995	
	4.0	31.723	1.953	1.2558	0.9988	
	5.0	32.605	1.917	1.3272	0.9977	
	6.0	33.513	1.880	1.4018	0.9961	
	7.0	34.440	1.844	1.4796	0.9930	
	8.0	35.412	1.807	1.5609	0.9911	
	9.0	36.407	1.770	1.6457	0.9875	
	10.0	37.433	1.732	1.7342	0.9832	
	11.0	38.496	1.695	1.8266	0.9781	
	12.0	39.592	1.656	1.9231	0.9722	
	13.0	40.730	1.617	2.0239	0.9653	
	14.0	41.912	1.578	2.1291	0.9575	
	15.0	43.144	1.537	2.2393	0.9487	
	16.0	44.421	1.495	2.3548	0.9390	
2.11	17.0	45.742	1.452	2.4761	0.9282	
	18.0	47.210	1.408	2.6041	0.9163	
	19.0	48.729	1.361	2.7398	0.9031	
	20.0	50.295	1.312	2.8848	0.8887	
	21.0	52.156	1.260	3.0417	0.8727	
	22.0	54.169	1.202	3.2152	0.8547	
	23.0	56.552	1.135	3.4153	0.8336	
	24.0	59.769	1.049	3.6741	0.8063	
	25.0	61.905	0.987	4.0763	0.6939	DETACHED
	1.0	29.075	2.073	1.0500	1.0000	
	2.0	29.882	2.036	1.1226	0.9999	
	3.0	30.712	1.999	1.1882	0.9995	
	4.0	31.567	1.952	1.2568	0.9989	
	5.0	32.646	1.926	1.3284	0.9977	
6.0	33.352	1.890	1.4033	0.9960		
7.0	34.294	1.852	1.4815	0.9939		
8.0	35.245	1.816	1.5631	0.9910		
9.0	36.236	1.779	1.6482	0.9874		
10.0	37.259	1.742	1.7371	0.9831		
11.0	38.316	1.704	1.8299	0.9779		

NOT REPRODUCIBLE

DETACHED

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P12/P11	COMMENT
2.11	12.0	39.409	1.665	1.9248	0.0719	
	13.0	40.542	1.676	2.0270	0.0650	
	14.0	41.719	1.587	2.1335	0.0572	
	15.0	42.943	1.546	2.2441	0.0483	
	16.0	44.223	1.504	2.3500	0.0385	
	17.0	45.565	1.461	2.4616	0.0277	
	18.0	46.980	1.417	2.5808	0.0157	
	19.0	48.485	1.371	2.7456	0.0076	
	20.0	50.102	1.322	2.9905	0.0031	
	21.0	51.865	1.270	3.0468	0.0022	
	22.0	53.830	1.213	3.2100	0.0014	
	23.0	56.148	1.148	3.4157	0.0008	
	24.0	59.164	1.066	3.6627	0.0005	
	25.0	60.847	0.960	4.0960	0.0003	
2.12	1.0	29.927	2.083	1.0601	1.0000	DETACHED
	2.0	29.732	2.046	1.1230	0.9938	
	3.0	30.561	2.000	1.1889	0.9895	
	4.0	31.413	1.972	1.2577	0.9888	
	5.0	32.289	1.936	1.3296	0.9976	
	6.0	33.192	1.899	1.4048	0.9960	
	7.0	34.122	1.862	1.4833	0.9938	
	8.0	35.080	1.825	1.5653	0.9909	
	9.0	36.068	1.788	1.6508	0.9873	
	10.0	37.087	1.751	1.7401	0.9829	
	11.0	38.140	1.713	1.8332	0.9777	
	12.0	39.229	1.674	1.9305	0.9717	
	13.0	40.356	1.635	2.0320	0.9647	
	14.0	41.527	1.596	2.1380	0.9568	
15.0	42.746	1.555	2.2490	0.9479		
16.0	44.018	1.513	2.3652	0.9381		
17.0	45.350	1.470	2.4871	0.9272		
18.0	46.755	1.426	2.6156	0.9152		
19.0	48.246	1.380	2.7515	0.9020		
20.0	49.845	1.331	2.8963	0.8875		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
2.12	21.0	51.583	1.279	3.0522	0.8716		
	22.0	53.510	1.223	3.2237	0.8538		
	23.0	55.763	1.159	3.4171	0.8334		
	24.0	58.618	1.081	3.6540	0.8083		
	25.0	78.777	0.610	4.8782	0.6828	DETACHED	
	2.13	1.0	28.781	2.092	1.0603	1.0000	
	2.0	26.584	2.045	1.1735	0.8998		
	3.0	30.410	2.019	1.1896	0.8895		
	4.0	31.260	1.982	1.2587	0.8889		
	5.0	32.134	1.945	1.3300	0.8876		
6.0	33.035	1.908	1.4063	0.8860			
7.0	33.962	1.871	1.4852	0.8837			
8.0	34.917	1.835	1.5675	0.8808			
9.0	35.901	1.797	1.6533	0.8772			
10.0	36.917	1.760	1.7430	0.8728			
11.0	37.966	1.722	1.8365	0.8675			
12.0	39.051	1.683	1.9342	0.8614			
13.0	40.174	1.644	2.0361	0.8544			
14.0	41.339	1.604	2.1426	0.8465			
15.0	42.551	1.564	2.2539	0.8375			
16.0	43.816	1.522	2.3705	0.8276			
17.0	45.140	1.479	2.4928	0.8166			
18.0	46.524	1.435	2.6215	0.8046			
19.0	48.017	1.389	2.7576	0.7914			
20.0	49.503	1.340	2.9024	0.7769			
21.0	51.308	1.289	3.0570	0.7610			
22.0	53.209	1.233	3.2270	0.7433			
23.0	55.305	1.171	3.4193	0.7232			
24.0	59.118	1.096	3.6408	0.6988			
25.0	62.963	0.969	4.0327	0.7486			
2.14	1.0	28.637	2.102	1.0605	1.0000		
2.0	29.438	2.065	1.1230	0.9998			
3.0	30.262	2.028	1.1902	0.9885			
4.0	31.100	1.991	1.2596	0.987			

NOT REPRODUCIBLE

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
2.14	5.0	31.981	1.954	1.3321	0.9976		
	6.0	32.879	1.918	1.4079	0.9959		
	7.0	33.803	1.881	1.4870	0.9937		
	8.0	34.756	1.844	1.5697	0.9907		
	9.0	35.737	1.806	1.6559	0.9871		
	10.0	36.740	1.769	1.7460	0.9824		
	11.0	37.764	1.731	1.8409	0.9773		
	12.0	38.815	1.692	1.9400	0.9712		
	13.0	39.893	1.652	2.0437	0.9641		
	14.0	41.004	1.613	2.1522	0.9561		
	15.0	42.140	1.573	2.2659	0.9471		
	16.0	43.317	1.531	2.3850	0.9371		
	17.0	44.533	1.488	2.5095	0.9261		
	18.0	45.787	1.444	2.6396	0.9140		
	19.0	47.078	1.398	2.7758	0.9008		
	20.0	48.407	1.350	2.9185	0.8863		
	21.0	51.041	1.299	3.0680	0.8704		
22.0	52.909	1.243	3.2240	0.8528			
23.0	55.043	1.182	3.4222	0.8339			
24.0	57.453	1.119	3.6667	0.8132			
25.0	61.723	1.051	3.9771	0.7764			
2.15	1.0	28.404	2.112	1.0608	1.0000		
	2.0	29.203	2.075	1.1243	0.9998		
	3.0	30.115	2.039	1.1909	0.9995		
	4.0	30.960	2.001	1.2606	0.9997		
	5.0	31.830	1.964	1.3334	0.9974		
	6.0	32.725	1.927	1.4094	0.9959		
	7.0	33.647	1.890	1.4890	0.9934		
	8.0	34.596	1.853	1.5719	0.9906		
	9.0	35.574	1.816	1.6585	0.9870		
	10.0	36.583	1.778	1.7489	0.9825		
	11.0	37.625	1.740	1.8433	0.9771		
	12.0	38.702	1.701	1.9417	0.9709		
	13.0	39.815	1.662	2.0445	0.9639		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DDELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
2.15	14.0	40.971	1.522	2.1518	0.9557	
	15.0	42.171	1.581	2.2640	0.9467	
	16.0	43.422	1.640	2.3813	0.9367	
	17.0	44.720	1.697	2.5066	0.9256	
	18.0	46.104	1.753	2.6337	0.9124	
	19.0	47.558	1.807	2.7702	0.9001	
	20.0	49.107	1.859	2.9150	0.8856	
	21.0	50.779	1.908	3.0701	0.8698	
	22.0	52.518	1.953	3.2384	0.8522	
	23.0	54.304	1.993	3.4258	0.8325	
2.16	24.0	57.218	1.122	3.6453	0.8093	
	25.0	60.963	1.024	3.9477	0.7775	
	1.0	28.353	2.122	1.0610	1.0000	
	2.0	29.150	2.085	1.1248	0.9998	
	3.0	29.969	2.047	1.1916	0.9995	
	4.0	30.813	2.010	1.2615	0.9987	
	5.0	31.680	1.973	1.3346	0.9975	
	6.0	32.573	1.936	1.4110	0.9959	
	7.0	33.492	1.899	1.4908	0.9935	
	8.0	34.430	1.862	1.5742	0.9905	
2.17	9.0	35.414	1.825	1.6611	0.9868	
	10.0	36.420	1.787	1.7519	0.9823	
	11.0	37.458	1.749	1.8467	0.9769	
	12.0	38.521	1.710	1.9456	0.9707	
	13.0	39.641	1.671	2.0488	0.9635	
	14.0	40.791	1.631	2.1565	0.9554	
	15.0	41.995	1.590	2.2691	0.9463	
	16.0	43.230	1.548	2.3860	0.9363	
	17.0	44.530	1.506	2.5083	0.9253	
	18.0	45.895	1.462	2.6360	0.9124	
2.18	19.0	47.337	1.416	2.7747	0.8985	
	20.0	48.871	1.368	2.9216	0.8850	
	21.0	50.525	1.317	3.0765	0.8701	
	22.0	52.326	1.263	3.2443	0.8516	

NOT REPRODUCIBLE



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
2.16	23.0	56.378	1.704	3.4300	0.8371	
	24.0	55.809	1.125	3.6452	0.8093	
	25.0	60.161	1.043	3.9290	0.7795	
2.17	1.0	28.213	2.132	1.0612	1.0000	
	2.0	29.008	2.004	1.1252	0.9999	
	3.0	29.925	2.057	1.1923	0.9994	
2.18	4.0	30.667	2.020	1.2625	0.9987	
	5.0	31.532	1.983	1.3350	0.9975	
	6.0	32.422	1.946	1.4126	0.9959	
	7.0	33.330	1.909	1.4927	0.9935	
	8.0	34.282	1.871	1.5764	0.9905	
	9.0	35.255	1.834	1.6639	0.9867	
	10.0	36.258	1.796	1.7550	0.9821	
	11.0	37.293	1.758	1.8501	0.9767	
	12.0	38.362	1.719	1.9494	0.9704	
	13.0	39.468	1.680	2.0531	0.9632	
	14.0	40.613	1.640	2.1612	0.9550	
	15.0	41.802	1.599	2.2742	0.9458	
	16.0	43.040	1.557	2.3924	0.9357	
	17.0	44.332	1.514	2.5163	0.9245	
	18.0	45.680	1.470	2.6463	0.9122	
	19.0	47.120	1.425	2.7833	0.8989	
	20.0	48.641	1.377	2.9283	0.8843	
21.0	50.275	1.327	3.0812	0.8684		
22.0	52.041	1.273	3.2504	0.8510		
23.0	54.063	1.214	3.4348	0.8316		
24.0	56.419	1.147	3.6463	0.8092		
25.0	59.554	1.060	3.9164	0.7809		
2.19	1.0	28.075	2.142	1.0614	1.0000	
	2.0	28.868	2.104	1.1257	0.9999	
	3.0	29.683	2.067	1.1920	0.9994	
	4.0	30.522	2.029	1.2625	0.9987	
	5.0	31.385	1.992	1.3371	0.9975	
6.0	32.273	1.955	1.4141	0.9958		

NOT REPRODUCIBLE

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.19	7.0	33.188	1.918	1.4966	0.9934	
	8.0	34.120	1.890	1.5787	0.9904	
	9.0	35.099	1.863	1.6664	0.9866	
	10.0	36.099	1.805	1.7580	0.9820	
	11.0	37.120	1.767	1.8536	0.9765	
	12.0	38.166	1.728	1.9522	0.9702	
	13.0	39.207	1.688	2.0574	0.9629	
	14.0	40.428	1.648	2.1660	0.9546	
	15.0	41.622	1.608	2.2796	0.9454	
	16.0	42.854	1.566	2.3981	0.9352	
	17.0	44.140	1.523	2.5223	0.9239	
	18.0	45.487	1.479	2.6527	0.9116	
	19.0	46.907	1.433	2.7900	0.8982	
	20.0	48.415	1.386	2.9352	0.8836	
	21.0	50.022	1.336	3.0900	0.8677	
22.0	51.703	1.282	3.2568	0.8503		
23.0	53.459	1.224	3.4400	0.8310		
24.0	55.069	1.158	3.6485	0.8090		
25.0	59.010	1.076	3.9079	0.7817		
2.19	1.0	27.929	2.152	1.0616	1.0000	
	2.0	29.729	2.114	1.1261	0.9999	
	3.0	29.543	2.076	1.1927	0.9996	
	4.0	30.390	2.039	1.2644	0.9987	
	5.0	31.240	2.002	1.3384	0.9975	
	6.0	32.126	1.964	1.4157	0.9957	
	7.0	33.039	1.927	1.4965	0.9934	
	8.0	33.977	1.890	1.5810	0.9903	
	9.0	34.944	1.852	1.6691	0.9865	
	10.0	35.941	1.814	1.7611	0.9819	
	11.0	36.970	1.775	1.8570	0.9763	
	12.0	39.031	1.737	1.9572	0.9699	
	13.0	39.179	1.697	2.0617	0.9626	
	14.0	40.265	1.657	2.1709	0.9543	
	15.0	41.444	1.616	2.2847	0.9450	

NOT REPRODUCIBLE

TWO-DIMENSIONAL CALIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/PI	P12/P11	COMMENT
2.19	16.0	42.670	1.574	2.4039	0.9347	
	17.0	43.949	1.532	2.5285	0.9234	
	18.0	45.289	1.488	2.6502	0.9110	
	19.0	46.598	1.442	2.7968	0.8975	
	20.0	48.193	1.395	2.9422	0.8929	
	21.0	49.794	1.345	3.0970	0.8670	
	22.0	51.532	1.292	3.2635	0.8496	
	23.0	53.463	1.234	3.4456	0.8304	
	24.0	55.695	1.170	3.6515	0.8087	
	25.0	58.515	1.090	3.9025	0.7822	
2.20	1.0	27.803	2.162	1.0619	1.0000	
	2.0	28.592	2.124	1.1266	0.9998	
	3.0	29.607	2.096	1.1944	0.9994	
	4.0	30.228	2.069	1.2654	0.9987	
	5.0	31.007	2.011	1.3307	0.9975	
	6.0	31.981	1.974	1.4173	0.9957	
	7.0	32.991	1.936	1.4985	0.9933	
	8.0	32.927	1.899	1.5823	0.9902	
	9.0	34.702	1.861	1.6717	0.9863	
	10.0	35.786	1.823	1.7641	0.9816	
2.21	11.0	36.911	1.784	1.8605	0.9761	
	12.0	37.869	1.745	1.9611	0.9696	
	13.0	38.963	1.706	2.0661	0.9622	
	14.0	40.095	1.666	2.1756	0.9539	
	15.0	41.269	1.625	2.2900	0.9445	
	16.0	42.489	1.583	2.4095	0.9342	
	17.0	43.762	1.540	2.5347	0.9229	
	18.0	45.093	1.496	2.6658	0.9103	
	19.0	46.493	1.451	2.8037	0.8968	
	20.0	47.976	1.403	2.9484	0.8821	
2.22	21.0	49.551	1.354	3.1042	0.8662	
	22.0	51.278	1.301	3.2704	0.8489	
	23.0	53.177	1.244	3.4517	0.8309	
	24.0	55.256	1.191	3.6552	0.8083	

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.20	25.0	59.057	1.104	3.9904	0.7826	
	1.0	27.669	2.172	1.0620	1.0000	
	2.0	28.456	2.133	1.1270	0.9998	
	3.0	29.266	2.066	1.1951	0.9996	
	4.0	30.099	2.058	1.2664	0.9997	
	5.0	30.955	2.021	1.3409	0.9974	
	6.0	31.837	1.983	1.4180	0.9957	
	7.0	32.745	1.946	1.5004	0.9932	
	8.0	33.679	1.909	1.5856	0.9901	
	9.0	34.641	1.870	1.6744	0.9862	
2.21	10.0	35.632	1.832	1.7672	0.9815	
	11.0	36.654	1.793	1.8641	0.9750	
	12.0	37.709	1.754	1.9651	0.9696	
	13.0	38.799	1.715	2.0705	0.9619	
	14.0	39.927	1.676	2.1805	0.9525	
	15.0	41.096	1.633	2.2954	0.9411	
	16.0	42.311	1.592	2.4154	0.9276	
	17.0	43.577	1.549	2.5409	0.9122	
	18.0	44.900	1.505	2.6725	0.8997	
	19.0	46.291	1.459	2.8108	0.8961	
2.22	20.0	47.763	1.412	2.9567	0.8914	
	21.0	49.323	1.363	3.1114	0.8854	
	22.0	51.079	1.310	3.2776	0.8781	
	23.0	52.999	1.254	3.4581	0.8701	
	24.0	55.031	1.191	3.6507	0.8608	
	25.0	57.630	1.117	3.8981	0.7927	
	1.0	27.526	2.181	1.0622	1.0000	
	2.0	28.321	2.143	1.1275	0.9999	
	3.0	29.120	2.105	1.1958	0.9994	
	4.0	29.961	2.068	1.2674	0.9985	
5.0	30.815	2.030	1.3422	0.9974		
6.0	31.695	1.992	1.4205	0.9955		
7.0	32.600	1.955	1.5024	0.9932		
8.0	33.532	1.917	1.5873	0.9900		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.23	9.0	34.491	1.879	1.6771	0.9861	
	10.0	35.480	1.841	1.7703	0.9813	
	11.0	36.490	1.802	1.8676	0.9757	
	12.0	37.551	1.763	1.9691	0.9691	
	13.0	38.638	1.723	2.0750	0.9616	
	14.0	39.761	1.683	2.1854	0.9531	
	15.0	40.926	1.642	2.3008	0.9436	
	16.0	42.135	1.600	2.4212	0.9331	
	17.0	43.395	1.557	2.5472	0.9216	
	18.0	44.711	1.513	2.6792	0.9090	
	19.0	46.093	1.468	2.8170	0.8954	
	20.0	47.554	1.421	2.9642	0.8806	
	21.0	49.109	1.372	3.1192	0.8647	
	22.0	50.787	1.320	3.2850	0.8473	
	23.0	52.630	1.264	3.4649	0.8284	
	24.0	54.717	1.202	3.6647	0.8073	
	25.0	57.227	1.129	3.8983	0.7837	
2.23	1.0	27.405	2.191	1.0624	1.0000	
	2.0	28.183	2.153	1.1270	0.9999	
	3.0	28.905	2.115	1.1965	0.9994	
	4.0	29.574	2.077	1.2683	0.9986	
	5.0	30.197	2.039	1.3435	0.9974	
	6.0	31.554	2.002	1.4221	0.9956	
	7.0	32.457	1.964	1.5043	0.9931	
	8.0	33.397	1.926	1.5902	0.9899	
	9.0	34.344	1.888	1.6799	0.9859	
	10.0	35.310	1.850	1.7725	0.9811	
	11.0	36.346	1.811	1.8712	0.9754	
	12.0	37.305	1.772	1.9731	0.9688	
	13.0	38.478	1.732	2.0795	0.9612	
	14.0	39.598	1.692	2.1904	0.9527	
	15.0	40.758	1.651	2.3062	0.9432	
	16.0	41.962	1.609	2.4272	0.9326	
	17.0	43.216	1.566	2.5536	0.9210	

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT	
2.23	18.0	44.525	1.522	2.6861	0.9084		
	19.0	45.800	1.477	2.9252	0.8947		
	20.0	47.348	1.430	2.9717	0.8799		
	21.0	48.800	1.380	3.1260	0.8639		
	22.0	50.550	1.329	3.2027	0.8465		
	23.0	52.367	1.273	3.4720	0.8276		
	24.0	54.413	1.212	3.6703	0.8067		
	25.0	56.847	1.141	3.8909	0.7825		
	2.24	1.0	27.275	2.201	1.0627	1.0000	
		2.0	28.057	2.163	1.1284	0.9998	
3.0		28.863	2.125	1.1972	0.9994		
4.0		29.689	2.087	1.2693	0.9986		
5.0		30.539	2.049	1.3448	0.9974		
6.0		31.415	2.011	1.4227	0.9955		
7.0		32.316	1.972	1.5063	0.9930		
8.0		33.244	1.935	1.5925	0.9898		
9.0		34.198	1.897	1.6826	0.9858		
10.0		35.181	1.859	1.7766	0.9810		
2.25	11.0	36.195	1.820	1.8748	0.9752		
	12.0	37.241	1.780	1.9772	0.9685		
	13.0	38.320	1.741	2.0840	0.9609		
	14.0	39.436	1.700	2.1954	0.9523		
	15.0	40.592	1.659	2.3117	0.9427		
	16.0	41.791	1.617	2.4331	0.9321		
	17.0	43.039	1.574	2.5601	0.9204		
	18.0	44.342	1.530	2.6920	0.9077		
	19.0	45.707	1.485	2.8325	0.8940		
	20.0	47.147	1.438	2.9794	0.8791		
2.25	21.0	48.676	1.389	3.1348	0.8630		
	22.0	50.319	1.337	3.3005	0.8457		
	23.0	52.112	1.282	3.4794	0.8268		
	24.0	54.121	1.222	3.6765	0.8060		
	25.0	56.485	1.153	3.9025	0.7822		
	1.0	27.146	2.211	1.0629	1.0000		

NOT REPRODUCIBLE

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.25	2.0	27.926	2.172	1.1288	0.9998	
	3.0	29.729	2.136	1.1070	0.9994	
	4.0	29.555	2.096	1.2703	0.9986	
	5.0	30.404	2.057	1.3461	0.9973	
	6.0	31.277	2.020	1.4254	0.9955	
	7.0	32.176	1.982	1.5083	0.9930	
	8.0	33.102	1.944	1.5940	0.9907	
	9.0	34.054	1.906	1.6823	0.9887	
	10.0	35.035	1.867	1.7729	0.9868	
	11.0	36.046	1.828	1.8784	0.9750	
	12.0	37.088	1.789	1.9912	0.9683	
	13.0	38.165	1.749	2.0985	0.9604	
	14.0	39.277	1.709	2.2004	0.9519	
	15.0	40.428	1.668	2.3172	0.9422	
	16.0	41.623	1.626	2.4392	0.9315	
17.0	42.865	1.583	2.5666	0.9198		
18.0	44.161	1.539	2.7000	0.9070		
19.0	45.510	1.494	2.8399	0.8932		
20.0	46.948	1.447	2.9872	0.8783		
21.0	48.465	1.398	3.1428	0.8622		
22.0	50.062	1.346	3.3084	0.8449		
23.0	51.862	1.292	3.4871	0.8260		
24.0	53.817	1.232	3.6830	0.8053		
25.0	55.140	1.164	3.9061	0.7819		
2.25	1.0	27.019	2.221	1.0631	1.0000	
	2.0	27.797	2.182	1.1203	0.9998	
	3.0	28.598	2.144	1.1984	0.9994	
	4.0	29.422	2.106	1.2713	0.9986	
	5.0	30.270	2.068	1.3474	0.9973	
	6.0	31.141	2.030	1.4270	0.9954	
	7.0	32.038	1.992	1.5103	0.9929	
	8.0	32.961	1.953	1.5972	0.9894	
	9.0	33.911	1.915	1.6981	0.9856	
	10.0	34.890	1.876	1.7830	0.9804	

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.26	11.0	35.808	1.837	1.9820	0.9748	
	12.0	36.938	1.708	1.9857	0.9580	
	13.0	38.011	1.758	2.0931	0.9502	
	14.0	39.120	1.717	2.2055	0.9515	
	15.0	40.267	1.676	2.3228	0.9417	
	16.0	41.457	1.634	2.4452	0.9310	
	17.0	42.694	1.591	2.5732	0.9192	
	18.0	43.984	1.547	2.7071	0.9063	
	19.0	45.333	1.502	2.8474	0.8925	
	20.0	46.754	1.455	2.9950	0.8775	
	21.0	48.259	1.406	3.1510	0.8614	
	22.0	49.870	1.355	3.3168	0.8440	
	23.0	51.619	1.301	3.4950	0.8252	
	24.0	53.562	1.241	3.6900	0.8044	
2.27	25.0	55.809	1.175	3.9104	0.7814	
	1.0	26.893	2.221	1.0633	1.0000	
	2.0	27.670	2.192	1.1297	0.9992	
	3.0	28.469	2.153	1.1994	0.9994	
	4.0	29.291	2.115	1.2723	0.9986	
	5.0	30.137	2.077	1.3487	0.9972	
	6.0	31.007	2.039	1.4286	0.9954	
	7.0	31.902	2.001	1.5122	0.9928	
	8.0	32.823	1.962	1.5996	0.9895	
	9.0	33.770	1.924	1.6909	0.9854	
	10.0	34.747	1.885	1.7862	0.9804	
	11.0	35.752	1.846	1.8856	0.9745	
	12.0	36.789	1.807	1.9894	0.9677	
	13.0	37.859	1.765	2.0977	0.9600	
14.0	38.964	1.726	2.2106	0.9511		
15.0	40.108	1.685	2.3284	0.9412		
16.0	41.293	1.643	2.4514	0.9304		
17.0	42.525	1.600	2.5798	0.9185		
18.0	43.809	1.556	2.7142	0.9056		
19.0	45.151	1.510	2.8550	0.8917		

NOT REPRODUCIBLE



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M <sub>1</sub>	DELTA	THETA	M <sub>2</sub>	P2/P1	PT2/PT1	COMMENT	
2.27	20.0	46.562	1.463	3.0070	0.8767		
	21.0	48.057	1.415	3.1503	0.8605		
	22.0	49.653	1.364	3.3252	0.8431		
	23.0	51.382	1.310	3.5033	0.8243		
	24.0	53.205	1.251	3.6974	0.8038		
	25.0	55.401	1.185	3.9155	0.7800		
	2.28	1.0	26.768	2.241	1.0635	1.0000	
		2.0	27.543	2.202	1.1302	0.9998	
		3.0	28.341	2.163	1.2001	0.9994	
		4.0	29.162	2.125	1.2733	0.9986	
5.0		30.005	2.086	1.3500	0.9971		
6.0		30.873	2.048	1.4303	0.9953		
7.0		31.766	2.010	1.5142	0.9929		
8.0		32.684	1.971	1.6020	0.9894		
9.0		33.631	1.932	1.6937	0.9852		
10.0		34.605	1.894	1.7894	0.9803		
2.29	1.0	35.608	1.855	1.8893	0.9743		
	2.0	36.642	1.815	1.9936	0.9674		
	3.0	37.709	1.775	2.1023	0.9595		
	4.0	38.811	1.734	2.2157	0.9507		
	5.0	39.951	1.693	2.3340	0.9408		
	6.0	41.132	1.651	2.4575	0.9298		
	7.0	42.359	1.608	2.5865	0.9179		
	8.0	43.636	1.564	2.7214	0.9049		
	9.0	44.971	1.519	2.8627	0.8909		
	10.0	46.374	1.472	3.0111	0.8758		
2.29	21.0	47.958	1.423	3.1677	0.8596		
	22.0	49.440	1.372	3.3339	0.8422		
	23.0	51.150	1.319	3.5117	0.8236		
	24.0	53.035	1.260	3.7051	0.8030		
	25.0	55.186	1.196	3.9214	0.7803		
	1.0	26.644	2.250	1.0637	1.0000		
	2.0	27.618	2.211	1.1306	0.9998		
	3.0	28.714	2.173	1.2008	0.9994		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
2.29	4.0	29.073	2.134	1.2743	0.9985	
	5.0	29.875	2.096	1.3512	0.9972	
	6.0	30.741	2.057	1.4319	0.9952	
	7.0	31.632	2.019	1.5162	0.9927	
	8.0	32.550	1.980	1.6044	0.9892	
	9.0	33.492	1.942	1.6965	0.9851	
	10.0	34.465	1.903	1.7926	0.9801	
	11.0	35.466	1.864	1.8930	0.9741	
	12.0	36.497	1.824	1.9977	0.9671	
	13.0	37.561	1.784	2.1070	0.9592	
	14.0	38.660	1.743	2.2209	0.9502	
	15.0	39.796	1.701	2.3407	0.9402	
	16.0	40.972	1.659	2.4668	0.9292	
	17.0	42.195	1.616	2.5992	0.9172	
	2.30	18.0	43.466	1.572	2.7287	0.9042
19.0		44.795	1.527	2.8705	0.8901	
20.0		46.189	1.480	3.0104	0.8750	
21.0		47.662	1.432	3.1762	0.8587	
22.0		49.231	1.381	3.3476	0.8413	
23.0		50.923	1.327	3.5204	0.8225	
24.0		52.782	1.270	3.7132	0.8021	
25.0		54.891	1.206	3.9277	0.7795	
26.0		57.222	2.260	1.0640	1.0000	
27.0		59.899	2.221	1.1311	0.9998	
28.0		62.906	2.182	1.2015	0.9994	
29.0		66.246	2.144	1.2752	0.9985	
30.0		69.911	2.105	1.3526	0.9972	
31.0		73.906	2.067	1.4336	0.9952	
32.0		78.237	2.028	1.5182	0.9926	
33.0	82.916	1.990	1.6068	0.9892		
34.0	87.957	1.951	1.6992	0.9850		
35.0	93.377	1.912	1.7959	0.9799		
36.0	99.185	1.872	1.8967	0.9738		
37.0	105.386	1.832	2.0019	0.9668		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1*	COMMENT
2.30	13.0	37.615	1.792	2.1117	0.9588	
	14.0	39.511	1.751	2.2261	0.9498	
	15.0	39.643	1.710	2.3455	0.9369	
	16.0	40.816	1.668	2.4700	0.9287	
	17.0	42.033	1.625	2.6001	0.9166	
	18.0	43.299	1.580	2.7360	0.9035	
	19.0	44.621	1.535	2.8793	0.8904	
	20.0	45.007	1.488	3.0277	0.8771	
	21.0	47.671	1.440	3.1849	0.8578	
	22.0	49.027	1.389	3.3515	0.8403	
2.31	23.0	50.702	1.336	3.5293	0.8216	
	24.0	52.537	1.279	3.7217	0.8012	
	25.0	54.606	1.216	3.9346	0.7789	
	1.0	26.601	2.270	1.0642	1.0000	
	2.0	27.171	2.231	1.1316	0.9998	
	3.0	27.964	2.192	1.2022	0.9984	
	4.0	28.790	2.153	1.2764	0.9955	
	5.0	29.619	2.115	1.3540	0.9912	
	6.0	30.492	2.076	1.4353	0.9852	
	7.0	31.370	2.037	1.5203	0.9826	
2.32	8.0	32.293	1.999	1.6092	0.9801	
	9.0	33.232	1.960	1.7021	0.9840	
	10.0	34.190	1.921	1.7991	0.9797	
	11.0	35.196	1.881	1.9004	0.9734	
	12.0	36.212	1.841	2.0061	0.9665	
	13.0	37.271	1.801	2.1164	0.9585	
	14.0	38.363	1.760	2.2314	0.9494	
	15.0	39.602	1.718	2.3512	0.9393	
	16.0	40.661	1.676	2.4764	0.9281	
	17.0	41.833	1.633	2.6070	0.9160	
2.33	18.0	43.134	1.589	2.7434	0.9028	
	19.0	44.460	1.543	2.8862	0.8886	
	20.0	45.819	1.497	3.0360	0.8733	
	21.0	47.292	1.448	3.1937	0.8563	

NOT REPRODUCIBLE

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.31	22.0	48.826	1.398	3.3605	0.9394	
	23.0	50.485	1.345	3.5384	0.8706	
	24.0	52.297	1.298	3.7304	0.8003	
	25.0	54.231	1.225	3.9420	0.7781	
	1.0	26.281	2.280	1.0644	1.0000	
2.32	2.0	27.050	2.241	1.1320	0.9998	
	3.0	27.841	2.201	1.2020	0.9994	
	4.0	28.656	2.163	1.2774	0.9985	
	5.0	29.493	2.124	1.3553	0.9971	
	6.0	30.354	2.085	1.4369	0.9952	
2.33	7.0	31.240	2.046	1.5223	0.9925	
	8.0	32.152	2.008	1.6116	0.9890	
	9.0	33.089	1.969	1.7049	0.9847	
	10.0	34.054	1.929	1.8024	0.9795	
	11.0	35.048	1.889	1.9042	0.9744	
2.34	12.0	35.072	1.850	2.0103	0.9682	
	13.0	37.128	1.809	2.1211	0.9621	
	14.0	39.217	1.768	2.2366	0.9560	
	15.0	39.343	1.727	2.3571	0.9498	
	16.0	40.508	1.684	2.4827	0.9436	
2.35	17.0	41.716	1.641	2.6139	0.9374	
	18.0	42.971	1.597	2.7509	0.9313	
	19.0	44.281	1.552	2.8942	0.9251	
	20.0	45.652	1.505	3.0445	0.9189	
	21.0	47.097	1.457	3.2026	0.9127	
2.36	22.0	48.629	1.406	3.3697	0.9065	
	23.0	50.273	1.353	3.5477	0.9003	
	24.0	52.063	1.297	3.7393	0.8941	
	25.0	54.054	1.235	3.9500	0.8879	
	1.0	26.162	2.290	1.0644	1.0000	
2.37	2.0	26.930	2.250	1.1325	0.9998	
	3.0	27.720	2.211	1.2037	0.9994	
	4.0	28.532	2.172	1.2784	0.9985	
	5.0	29.368	2.133	1.3566	0.9971	

NOT REPRODUCIBLE

TWO-DIMENSIONAL ORALIQUE SHOCK WAVE PARAMETERS

WT	DELTA	THETA	M2	P2/P1	P2/P1)	COMMENT
2.33	6.0	30.228	2.094	1.4386	0.9951	
	7.0	31.112	2.056	1.5266	0.9924	
	8.0	32.022	2.017	1.6141	0.9899	
	9.0	32.957	1.977	1.7078	0.9866	
	10.0	33.920	1.938	1.8057	0.9793	
	11.0	34.912	1.898	1.9079	0.9731	
	12.0	35.934	1.859	2.0146	0.9659	
	13.0	36.987	1.818	2.1259	0.9577	
	14.0	38.073	1.777	2.2419	0.9485	
	15.0	39.195	1.735	2.3629	0.9383	
	16.0	40.357	1.692	2.4891	0.9270	
	17.0	41.560	1.649	2.6209	0.9147	
	18.0	42.811	1.605	2.7594	0.9013	
	19.0	44.115	1.560	2.9026	0.8869	
2.34	20.0	45.470	1.513	3.0531	0.8715	
	21.0	46.884	1.465	3.2117	0.8550	
	22.0	48.356	1.414	3.3791	0.8374	
	23.0	50.065	1.362	3.5571	0.8186	
	24.0	51.825	1.305	3.7486	0.7984	
	25.0	53.804	1.244	3.9582	0.7764	
	1.0	26.064	2.300	1.0648	1.0000	
	2.0	26.811	2.260	1.1329	0.9998	
	3.0	27.599	2.221	1.2044	0.9993	
	4.0	28.410	2.182	1.2794	0.9985	
	5.0	29.244	2.143	1.3580	0.9971	
	6.0	30.102	2.104	1.4403	0.9951	
	7.0	30.985	2.065	1.5266	0.9923	
	8.0	31.893	2.026	1.6165	0.9888	
9.0	32.827	1.986	1.7107	0.9844		
10.0	33.788	1.947	1.8090	0.9791		
11.0	34.778	1.907	1.9117	0.9729		
12.0	35.797	1.867	2.0190	0.9655		
13.0	36.847	1.826	2.1307	0.9574		
14.0	37.931	1.785	2.2472	0.9481		

NOT REPRODUCIBLE

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P01	COMMENT
2.34	15.0	39.050	1.743	2.3688	0.9378	
	16.0	40.207	1.701	2.4956	0.9256	
	17.0	41.407	1.657	2.6279	0.9140	
	18.0	42.653	1.613	2.7660	0.9006	
	19.0	43.951	1.568	2.9105	0.8861	
	20.0	45.308	1.521	3.0618	0.8706	
	21.0	46.735	1.473	3.2208	0.8541	
	22.0	48.246	1.423	3.3885	0.8364	
	23.0	49.861	1.370	3.5668	0.8176	
	24.0	51.611	1.314	3.7581	0.7974	
2.35	25.0	53.552	1.253	3.9660	0.7755	
	1.0	25.928	2.310	1.0651	1.0000	
	2.0	26.693	2.270	1.1334	0.9998	
	3.0	27.480	2.230	1.2052	0.9993	
	4.0	28.289	2.191	1.2804	0.9985	
	5.0	29.122	2.152	1.3593	0.9975	
	6.0	29.978	2.113	1.4420	0.9959	
	7.0	30.860	2.074	1.5285	0.9923	
	8.0	31.766	2.035	1.6190	0.9887	
	9.0	32.698	1.995	1.7135	0.9843	
	10.0	33.657	1.956	1.8123	0.9790	
	11.0	34.645	1.916	1.9155	0.9726	
	12.0	35.662	1.875	2.0232	0.9653	
	13.0	36.710	1.835	2.1355	0.9570	
	14.0	37.790	1.793	2.2526	0.9474	
	15.0	38.906	1.752	2.3747	0.9372	
	16.0	40.060	1.709	2.5021	0.9258	
	17.0	41.256	1.666	2.6349	0.9133	
	18.0	42.497	1.621	2.7737	0.8998	
	19.0	43.789	1.576	2.9187	0.8853	
	20.0	45.140	1.529	3.0705	0.8697	
	21.0	46.559	1.481	3.2300	0.8531	
	22.0	48.060	1.431	3.3987	0.8354	
	23.0	49.661	1.378	3.5766	0.8166	

NOT REPRODUCIBLE

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P12/P11	COMMENT
2.35	24.0	51.393	1.323	3.7678	0.7964	
	25.0	53.307	1.263	3.9750	0.7745	
2.36	1.0	25.912	2.320	1.0653	1.0000	
	2.0	26.575	2.280	1.1320	0.9908	
2.37	3.0	27.361	2.240	1.2059	0.9993	
	4.0	29.170	2.200	1.2815	0.9924	
2.38	5.0	29.001	2.161	1.3607	0.9970	
	6.0	29.856	2.122	1.4437	0.9950	
2.39	7.0	30.735	2.083	1.5305	0.9922	
	8.0	31.640	2.044	1.6214	0.9896	
2.40	9.0	32.570	2.004	1.7164	0.9841	
	10.0	33.528	1.964	1.8157	0.9788	
2.41	11.0	34.513	1.924	1.9193	0.9724	
	12.0	35.528	1.884	2.0275	0.9650	
2.42	13.0	36.573	1.843	2.1403	0.9566	
	14.0	37.652	1.802	2.2580	0.9472	
2.43	15.0	38.764	1.760	2.3907	0.9367	
	16.0	39.915	1.717	2.5086	0.9252	
2.44	17.0	41.107	1.674	2.6421	0.9126	
	18.0	42.343	1.629	2.7814	0.8990	
2.45	19.0	43.620	1.584	2.9270	0.8844	
	20.0	44.974	1.537	3.0704	0.8688	
2.46	21.0	46.386	1.489	3.2393	0.8521	
	22.0	47.877	1.439	3.4079	0.8344	
2.47	23.0	49.465	1.387	3.5866	0.8155	
	24.0	51.180	1.331	3.7777	0.7953	
2.48	25.0	53.069	1.271	3.9853	0.7736	
	1.0	25.608	2.329	1.0655	1.0000	
2.49	2.0	26.460	2.289	1.1343	0.9908	
	3.0	27.244	2.249	1.2066	0.9903	
2.50	4.0	28.051	2.210	1.2825	0.9984	
	5.0	28.881	2.171	1.3620	0.9970	
2.51	6.0	29.734	2.131	1.4454	0.9949	
	7.0	30.612	2.092	1.5326	0.9921	

NOT REPRODUCIBLE

TWO-DIMENSIONAL COLLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.37	8.0	31.515	2.053	1.6239	0.9885	
	9.0	32.444	2.013	1.7193	0.9840	
	10.0	33.399	1.973	1.8190	0.9786	
	11.0	34.383	1.933	1.9232	0.9721	
	12.0	35.396	1.893	2.0318	0.9647	
	13.0	36.439	1.852	2.1452	0.9563	
	14.0	37.514	1.810	2.2634	0.9467	
	15.0	38.624	1.768	2.3866	0.9362	
	16.0	39.771	1.725	2.5152	0.9246	
	17.0	40.959	1.682	2.6492	0.9119	
	18.0	42.191	1.637	2.7892	0.8983	
	19.0	43.473	1.592	2.9353	0.8836	
	20.0	44.811	1.545	3.0883	0.8679	
	21.0	46.215	1.497	3.2498	0.8511	
	22.0	47.696	1.447	3.4178	0.8333	
	23.0	49.273	1.395	3.5967	0.8144	
	24.0	50.971	1.340	3.7879	0.7943	
25.0	52.837	1.280	3.9950	0.7726		
2.38	1.0	25.585	2.339	1.0657	1.0000	
	2.0	26.345	2.290	1.1348	0.9908	
	3.0	27.128	2.259	1.2076	0.9803	
	4.0	27.934	2.219	1.2835	0.9684	
	5.0	28.762	2.180	1.3634	0.9570	
	6.0	29.614	2.141	1.4471	0.9469	
	7.0	30.491	2.101	1.5347	0.9370	
	8.0	31.392	2.062	1.6264	0.9284	
	9.0	32.319	2.022	1.7222	0.9209	
	10.0	33.273	1.982	1.8224	0.9144	
	11.0	34.254	1.942	1.9270	0.9079	
	12.0	35.265	1.901	2.0362	0.9014	
	13.0	36.306	1.860	2.1501	0.8959	
	14.0	37.379	1.818	2.2680	0.8903	
	15.0	38.486	1.776	2.3927	0.8847	
	16.0	39.630	1.733	2.5218	0.8790	

NOT REPRODUCIBLE



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DFLTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.38	17.0	40.814	1.690	2.6565	0.9112	
	18.0	42.042	1.645	2.7070	0.8975	
	19.0	43.319	1.600	2.9438	0.8827	
	20.0	44.651	1.553	3.0973	0.8669	
	21.0	46.047	1.505	3.2583	0.8501	
	22.0	47.519	1.455	3.4278	0.8321	
	23.0	49.084	1.403	3.6070	0.8133	
	24.0	50.768	1.348	3.7983	0.7932	
	25.0	52.610	1.289	4.0050	0.7715	
	1.0	25.472	2.349	1.0660	1.0000	
2.39	2.0	26.232	2.309	1.1163	0.9998	
	3.0	27.013	2.269	1.2081	0.9993	
	4.0	27.818	2.229	1.2866	0.9986	
	5.0	28.644	2.189	1.3647	0.9969	
	6.0	29.495	2.150	1.4488	0.9948	
	7.0	30.370	2.110	1.5368	0.9920	
	8.0	31.270	2.070	1.6289	0.9883	
	9.0	32.195	2.031	1.7252	0.9837	
	10.0	33.147	1.991	1.8258	0.9782	
	11.0	34.127	1.950	1.9309	0.9716	
	12.0	35.125	1.910	2.0406	0.9641	
	13.0	36.174	1.868	2.1550	0.9555	
	14.0	37.245	1.827	2.2743	0.9458	
	15.0	38.349	1.784	2.3987	0.9351	
	16.0	39.490	1.742	2.5286	0.9234	
	17.0	40.670	1.698	2.6637	0.9105	
	18.0	41.894	1.653	2.8049	0.8967	
	19.0	43.166	1.608	2.9522	0.8819	
	20.0	44.492	1.561	3.1064	0.8660	
	21.0	45.882	1.513	3.2679	0.8491	
	22.0	47.345	1.463	3.4379	0.8312	
	23.0	48.899	1.411	3.6175	0.8122	
	24.0	50.567	1.356	3.8089	0.7921	
	25.0	52.389	1.298	4.0153	0.7705	

3D-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.40	1.0	25.361	2.350	1.0662	1.0000	
	2.0	26.119	2.318	1.1157	0.9998	
	3.0	26.900	2.278	1.2089	0.9993	
	4.0	27.702	2.238	1.2856	0.9984	
	5.0	28.528	2.190	1.3661	0.9969	
	6.0	29.377	2.159	1.4505	0.9948	
	7.0	30.251	2.119	1.5389	0.9919	
	8.0	31.149	2.070	1.6314	0.9882	
	9.0	32.073	2.040	1.7281	0.9836	
	10.0	33.023	1.999	1.8292	0.9780	
2.41	11.0	34.001	1.959	1.9348	0.9714	
	12.0	35.008	1.918	2.0450	0.9638	
	13.0	36.044	1.877	2.1599	0.9551	
	14.0	37.112	1.835	2.2799	0.9454	
	15.0	38.214	1.793	2.4048	0.9346	
	16.0	39.352	1.750	2.5351	0.9227	
	17.0	40.529	1.706	2.6710	0.9098	
	18.0	41.748	1.661	2.8128	0.8950	
	19.0	43.016	1.616	2.9608	0.8791	
	20.0	44.336	1.569	3.1155	0.8650	
2.42	21.0	45.719	1.521	3.2776	0.8481	
	22.0	47.174	1.471	3.4481	0.8301	
	23.0	48.717	1.419	3.6281	0.8111	
	24.0	50.371	1.364	3.8196	0.7909	
	25.0	52.172	1.306	4.0258	0.7694	
	1.0	25.251	2.369	1.0664	1.0000	
	2.0	26.008	2.328	1.1362	0.9998	
	3.0	26.787	2.298	1.2096	0.9993	
	4.0	27.588	2.248	1.2867	0.9984	
	5.0	28.413	2.208	1.3675	0.9969	
6.0	29.261	2.168	1.4522	0.9947		
7.0	30.133	2.128	1.5410	0.9918		
8.0	31.030	2.088	1.6339	0.9881		
9.0	31.952	2.048	1.7310	0.9834		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
2.41	10.0	32.900	2.008	1.8376	0.9778	
	11.0	33.876	1.967	1.9387	0.9711	
	12.0	34.881	1.927	2.0494	0.9635	
	13.0	35.915	1.885	2.1649	0.9547	
	14.0	36.981	1.843	2.2854	0.9449	
	15.0	38.080	1.801	2.4109	0.9340	
	16.0	39.215	1.758	2.5419	0.9221	
	17.0	40.389	1.714	2.6784	0.9091	
	18.0	41.605	1.669	2.8208	0.8951	
	19.0	42.867	1.623	2.9694	0.8801	
	20.0	44.183	1.577	3.1247	0.8641	
	21.0	45.559	1.529	3.2874	0.8471	
	22.0	47.006	1.479	3.4584	0.8291	
	23.0	48.538	1.427	3.6388	0.8100	
	24.0	50.179	1.372	3.8306	0.7898	
	25.0	51.961	1.315	4.0366	0.7682	
	2.42	1.0	25.142	2.379	1.0666	1.0000
2.0		25.807	2.338	1.1367	0.9998	
3.0		26.675	2.297	1.2103	0.9993	
4.0		27.476	2.257	1.2877	0.9984	
5.0		28.298	2.217	1.3688	0.9969	
6.0		29.145	2.177	1.4539	0.9947	
7.0		30.016	2.137	1.5431	0.9917	
8.0		30.911	2.097	1.6364	0.9880	
9.0		31.832	2.057	1.7340	0.9832	
10.0		32.779	2.017	1.8360	0.9776	
11.0		33.753	1.976	1.9426	0.9709	
12.0		34.756	1.935	2.0538	0.9631	
13.0		35.788	1.893	2.1699	0.9543	
14.0		36.857	1.851	2.2909	0.9444	
15.0		37.948	1.809	2.4171	0.9335	
16.0		39.080	1.766	2.5486	0.9215	
17.0		40.251	1.722	2.6858	0.9084	
18.0	41.463	1.677	2.8288	0.8943		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

$\alpha$	$\Delta$	$\theta$	M <sub>2</sub>	$\beta/\beta_1$	$P_2/P_1$	$\rho_2/\rho_1$	COMMENT
2.42	19.0	42.721	1.631	2.9781	0.8792		
	20.0	44.031	1.584	3.1341	0.8631		
	21.0	45.401	1.536	3.2973	0.8460		
	22.0	46.840	1.487	3.4688	0.8280		
	23.0	48.363	1.435	3.6487	0.8089		
	24.0	49.990	1.380	3.8417	0.7886		
	25.0	51.755	1.323	4.0476	0.7671		
	1.0	25.034	2.389	1.0669	1.0000		
	2.0	25.788	2.349	1.1372	0.9998		
	3.0	26.565	2.307	1.2111	0.9993		
2.43	4.0	27.364	2.267	1.2888	0.9983		
	5.0	28.185	2.227	1.3702	0.9968		
	6.0	29.031	2.186	1.4557	0.9946		
	7.0	29.900	2.146	1.5452	0.9917		
	8.0	30.794	2.106	1.6389	0.9878		
	9.0	31.713	2.066	1.7370	0.9831		
	10.0	32.659	2.025	1.8395	0.9774		
	11.0	33.631	1.985	1.9465	0.9706		
	12.0	34.632	1.943	2.0583	0.9628		
	13.0	35.662	1.902	2.1749	0.9539		
2.44	14.0	36.724	1.860	2.2965	0.9440		
	15.0	37.819	1.817	2.4233	0.9329		
	16.0	38.947	1.774	2.5555	0.9208		
	17.0	40.114	1.730	2.6932	0.9077		
	18.0	41.322	1.685	2.8369	0.8935		
	19.0	42.577	1.639	2.9868	0.8783		
	20.0	43.882	1.592	3.1434	0.8621		
	21.0	45.245	1.544	3.3073	0.8450		
	22.0	46.677	1.494	3.4794	0.8268		
	23.0	48.191	1.443	3.6607	0.8077		
2.44	24.0	49.805	1.388	3.8529	0.7874		
	25.0	51.552	1.331	4.0589	0.7659		
	1.0	24.926	2.398	1.0671	1.0000		
	2.0	25.640	2.357	1.1376	0.9998		

TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.44	3.0	26.455	2.317	1.2118	0.9993	
	4.0	27.253	2.276	1.2498	0.9993	
	5.0	29.073	2.236	1.3716	0.9968	
	6.0	29.917	2.196	1.4574	0.9946	
	7.0	29.785	2.155	1.5473	0.9916	
	8.0	30.678	2.115	1.6415	0.9877	
	9.0	31.596	2.075	1.7399	0.9829	
	10.0	32.540	2.034	1.8429	0.9772	
	11.0	33.511	1.993	1.9505	0.9703	
	12.0	34.510	1.952	2.0628	0.9625	
	13.0	35.538	1.910	2.1800	0.9535	
	14.0	36.597	1.868	2.3022	0.9435	
	15.0	37.689	1.825	2.4295	0.9324	
	16.0	38.815	1.782	2.5623	0.9202	
2.45	17.0	39.979	1.738	2.7007	0.9070	
	18.0	41.184	1.693	2.8450	0.8927	
	19.0	42.434	1.647	2.9956	0.8774	
	20.0	43.734	1.600	3.1529	0.8612	
	21.0	45.092	1.552	3.3174	0.8439	
	22.0	46.516	1.502	3.4900	0.8257	
	23.0	48.021	1.450	3.6718	0.8065	
	24.0	49.624	1.396	3.8644	0.7862	
	25.0	51.355	1.339	4.0703	0.7647	
	1.0	24.820	2.408	1.0573	1.0000	
	2.0	25.572	2.367	1.1381	0.9998	
	3.0	26.346	2.326	1.2126	0.9993	
	4.0	27.143	2.285	1.2909	0.9983	
	5.0	27.962	2.245	1.3730	0.9968	
6.0	28.805	2.205	1.4591	0.9945		
7.0	29.672	2.164	1.5494	0.9915		
8.0	30.563	2.124	1.6440	0.9876		
9.0	31.479	2.084	1.7429	0.9828		
10.0	32.422	2.043	1.8464	0.9770		
11.0	33.391	2.002	1.9544	0.9701		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.45	12.0	34.389	1.960	2.0673	0.9621	
	13.0	35.415	1.918	2.1850	0.9531	
	14.0	36.472	1.876	2.3078	0.9430	
	15.0	37.562	1.833	2.4358	0.9318	
	16.0	38.685	1.790	2.5692	0.9196	
	17.0	39.846	1.746	2.7083	0.9062	
	18.0	41.047	1.701	2.8532	0.8919	
	19.0	42.293	1.655	3.0045	0.8765	
	20.0	43.589	1.608	3.1624	0.8602	
	21.0	44.941	1.559	3.3275	0.8429	
2.46	22.0	46.259	1.510	3.5007	0.8246	
	23.0	47.654	1.458	3.6830	0.8053	
	24.0	49.126	1.404	3.8760	0.7850	
	25.0	51.161	1.347	4.0820	0.7635	
	1.0	24.715	2.618	1.0675	1.0000	
	2.0	25.466	2.377	1.1386	0.9998	
	3.0	26.239	2.336	1.2134	0.9993	
	4.0	27.034	2.295	1.2919	0.9983	
	5.0	27.852	2.254	1.3744	0.9967	
	6.0	28.694	2.214	1.4609	0.9945	
2.47	7.0	29.559	2.173	1.5516	0.9914	
	8.0	30.449	2.133	1.6466	0.9875	
	9.0	31.364	2.092	1.7459	0.9826	
	10.0	32.305	2.051	1.8498	0.9767	
	11.0	33.273	2.010	1.9584	0.9698	
	12.0	34.269	1.969	2.0719	0.9618	
	13.0	35.293	1.927	2.1901	0.9527	
	14.0	36.348	1.884	2.3135	0.9425	
	15.0	37.436	1.841	2.4421	0.9313	
	16.0	38.556	1.798	2.5761	0.9189	
2.48	17.0	39.715	1.754	2.7158	0.9055	
	18.0	40.913	1.708	2.8615	0.8910	
	19.0	42.155	1.662	3.0134	0.8756	
	20.0	43.446	1.615	3.1720	0.8592	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

MT	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.45	21.0	44.792	1.567	3.3378	0.8418	
	22.0	46.202	1.517	3.5116	0.8234	
	23.0	47.690	1.466	3.6944	0.8041	
	24.0	49.270	1.412	3.8877	0.7838	
	25.0	50.972	1.355	4.0940	0.7623	
	1.0	24.611	2.428	1.0678	1.0000	
	2.0	25.360	2.386	1.1391	0.9998	
	3.0	26.132	2.345	1.2141	0.9993	
	4.0	26.927	2.304	1.2930	0.9983	
	5.0	27.743	2.264	1.3758	0.9967	
2.47	6.0	28.584	2.223	1.4626	0.9944	
	7.0	29.448	2.183	1.5537	0.9913	
	8.0	30.337	2.142	1.6491	0.9874	
	9.0	31.250	2.101	1.7489	0.9825	
	10.0	32.190	2.060	1.8533	0.9765	
	11.0	33.156	2.019	1.9624	0.9695	
	12.0	34.150	1.977	2.0763	0.9615	
	13.0	35.173	1.935	2.1952	0.9523	
	14.0	36.226	1.892	2.3192	0.9420	
	15.0	37.311	1.849	2.4484	0.9307	
2.48	16.0	38.429	1.806	2.5831	0.9182	
	17.0	39.585	1.761	2.7234	0.9047	
	18.0	40.779	1.716	2.8698	0.8902	
	19.0	42.017	1.670	3.0223	0.8747	
	20.0	43.304	1.623	3.1816	0.8582	
	21.0	44.645	1.575	3.3481	0.8407	
	22.0	46.049	1.525	3.5225	0.8223	
	23.0	47.528	1.473	3.7059	0.8029	
	24.0	49.098	1.420	3.8996	0.7825	
	25.0	50.785	1.363	4.1060	0.7610	
2.48	1.0	24.507	2.428	1.0680	1.0000	
	2.0	25.256	2.396	1.1396	0.9998	
	3.0	26.027	2.355	1.2149	0.9992	
	4.0	26.820	2.314	1.2940	0.9983	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.49	5.0	27.636	2.273	1.3772	0.9967	
	6.0	28.475	2.232	1.4644	0.9944	
	7.0	29.338	2.192	1.5559	0.9913	
	8.0	30.225	2.151	1.6517	0.9873	
	9.0	31.138	2.110	1.7520	0.9823	
	10.0	32.076	2.069	1.8568	0.9763	
	11.0	33.040	2.027	1.9664	0.9693	
	12.0	34.033	1.985	2.0809	0.9611	
	13.0	35.054	1.943	2.2003	0.9519	
	14.0	36.105	1.901	2.3240	0.9416	
	15.0	37.188	1.857	2.4548	0.9301	
	16.0	38.304	1.814	2.5901	0.9176	
	17.0	39.456	1.769	2.7311	0.9040	
	18.0	40.648	1.724	2.8781	0.8894	
2.49	19.0	41.882	1.678	3.0314	0.8737	
	20.0	43.164	1.631	3.1913	0.8571	
	21.0	44.500	1.582	3.3584	0.8396	
	22.0	45.898	1.533	3.5335	0.8211	
	23.0	47.360	1.481	3.7174	0.8017	
	24.0	48.879	1.427	3.9116	0.7813	
	25.0	50.463	1.371	4.1183	0.7598	
	1.0	24.405	2.448	1.0682	1.0000	
	2.0	25.152	2.406	1.1400	0.9998	
	3.0	25.922	2.364	1.2156	0.9992	
	4.0	26.714	2.323	1.2951	0.9982	
	5.0	27.529	2.282	1.3785	0.9966	
	6.0	28.367	2.241	1.4662	0.9943	
	7.0	29.229	2.201	1.5580	0.9912	
8.0	30.115	2.160	1.6543	0.9871		
9.0	31.026	2.119	1.7550	0.9821		
10.0	31.963	2.077	1.8604	0.9761		
11.0	32.926	2.036	1.9705	0.9690		
12.0	33.917	1.994	2.0855	0.9608		
13.0	34.936	1.952	2.2055	0.9515		



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

MY	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.40	14.0	35.985	1.909	2.3306	0.9411	
	15.0	37.066	1.865	2.4611	0.9295	
	16.0	38.179	1.822	2.6071	0.9169	
	17.0	39.329	1.777	2.7388	0.9032	
	18.0	40.518	1.732	2.8865	0.8885	
	19.0	41.749	1.685	3.0405	0.8728	
	20.0	43.027	1.638	3.2011	0.8561	
	21.0	44.357	1.590	3.3689	0.8385	
	22.0	45.749	1.540	3.5446	0.8199	
	23.0	47.213	1.489	3.7291	0.8005	
2.50	24.0	48.743	1.435	3.9238	0.7800	
	25.0	50.426	1.379	4.1307	0.7585	
	1.0	24.303	2.457	1.0684	1.0000	
	2.0	25.050	2.415	1.1405	0.9998	
	3.0	25.818	2.374	1.2164	0.9992	
	4.0	26.609	2.333	1.2962	0.9987	
	5.0	27.423	2.292	1.3800	0.9984	
	6.0	28.260	2.251	1.4679	0.9983	
	7.0	29.120	2.210	1.5602	0.9981	
	8.0	30.006	2.168	1.6569	0.9980	
2.50	9.0	30.915	2.127	1.7580	0.9980	
	10.0	31.851	2.086	1.8639	0.9759	
	11.0	32.813	2.044	1.9745	0.9687	
	12.0	33.802	2.002	2.0901	0.9605	
	13.0	34.819	1.960	2.2106	0.9511	
	14.0	35.867	1.917	2.3364	0.9406	
	15.0	36.945	1.873	2.4675	0.9290	
	16.0	38.057	1.830	2.6042	0.9162	
	17.0	39.204	1.785	2.7465	0.9025	
	18.0	40.389	1.739	2.8949	0.8877	
2.50	19.0	41.617	1.693	3.0496	0.8719	
	20.0	42.891	1.646	3.2110	0.8551	
	21.0	44.216	1.597	3.3794	0.8374	
	22.0	45.602	1.548	3.5558	0.8188	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.50	23.0	47.059	1.496	3.7409	0.7992	
	24.0	48.600	1.443	3.9361	0.7787	
	25.0	50.248	1.386	4.1433	0.7572	
	1.0	24.203	2.467	1.0687	1.0000	
	2.0	24.948	2.425	1.1410	0.9998	
	3.0	25.715	2.383	1.2171	0.9992	
2.52	4.0	26.505	2.342	1.2972	0.9987	
	5.0	27.318	2.301	1.3814	0.9966	
	6.0	28.154	2.260	1.4697	0.9942	
	7.0	29.013	2.219	1.5624	0.9910	
	8.0	29.897	2.177	1.6595	0.9869	
	9.0	30.806	2.136	1.7611	0.9819	
	10.0	31.740	2.095	1.8674	0.9757	
	11.0	32.700	2.053	1.9786	0.9684	
	12.0	33.688	2.011	2.0947	0.9601	
	13.0	34.704	1.968	2.2158	0.9507	
	14.0	35.750	1.925	2.3422	0.9401	
	15.0	36.826	1.881	2.4740	0.9284	
	16.0	37.935	1.837	2.6113	0.9156	
	17.0	39.080	1.793	2.7543	0.9017	
	18.0	40.262	1.747	2.9034	0.8868	
	19.0	41.486	1.701	3.0588	0.8709	
	20.0	42.756	1.653	3.2209	0.8541	
	21.0	44.078	1.605	3.3901	0.8363	
22.0	45.458	1.555	3.5671	0.8176		
23.0	46.907	1.504	3.7529	0.7980		
24.0	48.439	1.450	3.9485	0.7774		
25.0	50.076	1.394	4.1561	0.7558		
2.52	1.0	24.103	2.477	1.0689	1.0000	
	2.0	24.847	2.435	1.1415	0.9998	
	3.0	25.614	2.393	1.2179	0.9992	
	4.0	26.402	2.351	1.2983	0.9982	
	5.0	27.214	2.310	1.3828	0.9965	
	6.0	28.049	2.269	1.4715	0.9942	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.52	7.0	28.007	2.228	1.5645	0.9909	
	8.0	29.790	2.186	1.6621	0.9858	
	9.0	30.697	2.145	1.7641	0.9816	
	10.0	31.630	2.103	1.8710	0.9755	
	11.0	32.589	2.061	1.9826	0.9682	
	12.0	33.575	2.019	2.0993	0.9598	
	13.0	34.590	1.976	2.2210	0.9502	
	14.0	35.634	1.933	2.3480	0.9396	
	15.0	36.708	1.889	2.4805	0.9278	
	16.0	37.815	1.845	2.6184	0.9140	
	17.0	38.957	1.800	2.7621	0.9009	
	18.0	40.137	1.755	2.9119	0.8860	
	19.0	41.358	1.708	3.0680	0.8700	
	20.0	42.624	1.661	3.2308	0.8530	
	2.53	21.0	43.941	1.612	3.4008	0.8351
22.0		45.315	1.562	3.5785	0.8164	
23.0		46.758	1.511	3.7649	0.7967	
24.0		48.282	1.458	3.9612	0.7761	
25.0		49.906	1.402	4.1691	0.7545	
1.0		24.004	2.487	1.0691	1.0000	
2.0		24.747	2.445	1.1420	0.9998	
3.0		25.513	2.403	1.2187	0.9992	
4.0		26.300	2.361	1.2994	0.9982	
5.0		27.111	2.319	1.3842	0.9965	
6.0		27.945	2.278	1.4733	0.9941	
7.0		28.802	2.237	1.5667	0.9909	
8.0		29.684	2.195	1.6647	0.9867	
9.0		30.590	2.153	1.7672	0.9815	
10.0		31.521	2.112	1.8745	0.9752	
11.0	32.479	2.070	1.9867	0.9679		
12.0	33.464	2.027	2.1030	0.9594		
13.0	34.477	1.984	2.2263	0.9498		
14.0	35.519	1.941	2.3539	0.9391		
15.0	36.592	1.897	2.4869	0.9272		

3-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.53	16.0	37.696	1.853	2.6256	0.9142	
	17.0	38.836	1.808	2.7700	0.9702	
	18.0	40.013	1.762	2.9205	0.9981	
	19.0	41.231	1.716	3.0773	0.9690	
	20.0	42.493	1.668	3.2409	0.8520	
	21.0	43.805	1.620	3.4115	0.8140	
	22.0	45.174	1.570	3.5899	0.8152	
	23.0	46.610	1.518	3.7770	0.7954	
	24.0	48.126	1.465	3.9738	0.7748	
	25.0	49.740	1.409	4.1822	0.7532	
2.54	1.0	23.906	2.497	1.0694	1.0000	
	2.0	24.648	2.454	1.1424	0.9998	
	3.0	25.413	2.412	1.2194	0.9992	
	4.0	26.199	2.370	1.3004	0.9982	
	5.0	27.009	2.329	1.3856	0.9965	
	6.0	27.841	2.287	1.4750	0.9940	
	7.0	28.698	2.245	1.5689	0.9908	
	8.0	29.578	2.204	1.6673	0.9865	
	9.0	30.483	2.162	1.7703	0.9813	
	10.0	31.414	2.120	1.8781	0.9750	
2.55	11.0	32.370	2.078	1.9908	0.9676	
	12.0	33.354	2.036	2.1086	0.9501	
	13.0	34.365	1.993	2.2315	0.9494	
	14.0	35.405	1.949	2.3598	0.9385	
	15.0	36.476	1.905	2.4935	0.9266	
	16.0	37.579	1.861	2.6328	0.9135	
	17.0	38.716	1.816	2.7770	0.8994	
	18.0	39.891	1.770	2.9291	0.8842	
	19.0	41.105	1.723	3.0867	0.8580	
	20.0	42.364	1.674	3.2509	0.8500	
2.56	21.0	43.672	1.627	3.4224	0.8329	
	22.0	45.026	1.577	3.6015	0.8130	
	23.0	46.425	1.526	3.7892	0.7941	
	24.0	47.873	1.472	3.9866	0.7734	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.54	25.0	49.576	1.417	4.1954	0.7519	
2.55	1.0	23.809	2.507	1.0696	1.0000	
	2.0	24.550	2.464	1.1429	0.9999	
	3.0	25.313	2.472	1.2202	0.9992	
	4.0	26.099	2.380	1.3015	0.9991	
	5.0	26.907	2.338	1.3870	0.9964	
	6.0	27.739	2.296	1.4768	0.9940	
	7.0	28.595	2.254	1.5711	0.9907	
	8.0	29.474	2.213	1.6699	0.9864	
	9.0	30.378	2.171	1.7724	0.9811	
	10.0	31.307	2.129	1.8817	0.9748	
	11.0	32.252	2.086	1.9950	0.9673	
	12.0	33.244	2.044	2.1133	0.9587	
	13.0	34.254	2.001	2.2368	0.9489	
	14.0	35.293	1.957	2.3657	0.9390	
	15.0	36.362	1.913	2.5000	0.9260	
	16.0	37.463	1.869	2.6400	0.9128	
	17.0	38.598	1.824	2.7859	0.8986	
	18.0	39.770	1.778	2.9378	0.8833	
	19.0	40.981	1.731	3.0961	0.8671	
	20.0	42.236	1.683	3.2611	0.8499	
	21.0	43.540	1.634	3.4332	0.8317	
	22.0	44.899	1.584	3.6131	0.8127	
	23.0	46.322	1.533	3.8015	0.7928	
	24.0	47.822	1.480	3.9995	0.7721	
	25.0	49.416	1.424	4.2088	0.7504	
2.56	1.0	23.712	2.516	1.0698	1.0000	
	2.0	24.453	2.474	1.1434	0.9999	
	3.0	25.215	2.431	1.2210	0.9992	
	4.0	26.000	2.389	1.3026	0.9991	
	5.0	26.807	2.347	1.3884	0.9964	
	6.0	27.638	2.305	1.4786	0.9939	
	7.0	28.492	2.263	1.5733	0.9904	
	8.0	29.371	2.222	1.6725	0.9853	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.56	9.0	30.273	2.180	1.7765	0.9810	
	10.0	31.202	2.137	1.8853	0.9746	
	11.0	32.156	2.095	1.9991	0.9670	
	12.0	33.136	2.052	2.1180	0.9593	
	13.0	34.145	2.009	2.2421	0.9485	
	14.0	35.182	1.965	2.3716	0.9375	
	15.0	36.249	1.921	2.5066	0.9254	
	16.0	37.348	1.877	2.6473	0.9121	
	17.0	38.481	1.831	2.7938	0.8978	
	18.0	39.650	1.785	2.9465	0.8824	
	19.0	40.859	1.738	3.1055	0.8661	
	20.0	42.110	1.691	3.2713	0.8488	
	21.0	43.410	1.642	3.4447	0.8306	
	22.0	44.764	1.592	3.6248	0.8115	
	23.0	46.182	1.540	3.8130	0.7915	
24.0	47.674	1.487	4.0126	0.7707		
25.0	49.258	1.431	4.2224	0.7490		
2.57	1.0	23.617	2.526	1.0700	1.0000	
	2.0	24.356	2.483	1.1439	0.9998	
	3.0	25.118	2.441	1.2217	0.9992	
	4.0	25.901	2.398	1.3037	0.9981	
	5.0	26.708	2.356	1.3899	0.9964	
	6.0	27.538	2.314	1.4804	0.9939	
	7.0	28.391	2.272	1.5755	0.9905	
	8.0	29.268	2.230	1.6752	0.9862	
	9.0	30.170	2.188	1.7796	0.9808	
	10.0	31.097	2.146	1.8889	0.9743	
	11.0	32.050	2.103	2.0032	0.9667	
	12.0	33.029	2.060	2.1227	0.9580	
	13.0	34.036	2.017	2.2474	0.9481	
	14.0	35.072	1.973	2.3775	0.9370	
	15.0	36.138	1.929	2.5132	0.9248	
16.0	37.235	1.884	2.6546	0.9114		
17.0	38.365	1.839	2.8018	0.8970		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
2.57	18.0	39.532	1.793	2.9552	0.8916		
	19.0	40.737	1.746	3.1150	0.8651		
	20.0	41.986	1.698	3.2816	0.8477		
	21.0	43.287	1.649	3.4552	0.8294		
	22.0	44.631	1.599	3.6366	0.8102		
	23.0	46.023	1.547	3.8264	0.7902		
	24.0	47.578	1.494	4.0257	0.7694		
	25.0	49.102	1.439	4.2360	0.7476		
	2.59	1.0	23.522	2.536	1.0703	1.0000	
		2.0	24.260	2.493	1.1464	0.9997	
3.0		25.071	2.450	1.2225	0.9992		
4.0		25.804	2.408	1.3048	0.9981		
5.0		26.609	2.366	1.3913	0.9963		
6.0		27.438	2.323	1.4822	0.9938		
7.0		28.290	2.281	1.5777	0.9904		
8.0		29.167	2.239	1.6778	0.9860		
9.0		30.068	2.197	1.7827	0.9806		
10.0		30.993	2.154	1.8925	0.9741		
2.60	11.0	31.945	2.112	2.0074	0.9664		
	12.0	32.923	2.069	2.1274	0.9576		
	13.0	33.920	2.025	2.2528	0.9476		
	14.0	34.963	1.981	2.3835	0.9365		
	15.0	36.027	1.937	2.5199	0.9242		
	16.0	37.122	1.892	2.6619	0.9107		
	17.0	38.251	1.846	2.8099	0.8962		
	18.0	39.415	1.800	2.9640	0.8807		
	19.0	40.618	1.753	3.1246	0.8641		
	20.0	41.863	1.705	3.2919	0.8466		
2.60	21.0	43.155	1.656	3.4663	0.8282		
	22.0	44.500	1.606	3.6484	0.8090		
	23.0	45.906	1.555	3.8390	0.7889		
	24.0	47.384	1.501	4.0390	0.7680		
	25.0	48.950	1.446	4.2499	0.7462		
	1.0	23.428	2.546	1.0705	1.0000		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.59	2.0	24.165	2.503	1.1449	0.9997	
	3.0	24.925	2.460	1.2233	0.9992	
	4.0	25.707	2.417	1.3059	0.9981	
	5.0	26.512	2.375	1.3927	0.9963	
	6.0	27.340	2.333	1.4840	0.9939	
	7.0	28.191	2.290	1.5799	0.9903	
	8.0	29.066	2.248	1.6805	0.9859	
	9.0	29.966	2.206	1.7858	0.9805	
	10.0	30.891	2.163	1.8962	0.9739	
	11.0	31.841	2.120	2.0116	0.9662	
	12.0	32.818	2.077	2.1322	0.9572	
	13.0	33.823	2.033	2.2581	0.9472	
	14.0	34.855	1.989	2.3895	0.9359	
	15.0	35.918	1.945	2.5265	0.9235	
	16.0	37.011	1.900	2.6692	0.9100	
	17.0	38.138	1.854	2.8180	0.8954	
	18.0	39.299	1.808	2.9729	0.8798	
19.0	40.500	1.761	3.1342	0.8631		
20.0	41.741	1.713	3.3022	0.8455		
21.0	43.030	1.664	3.4775	0.8270		
22.0	44.370	1.613	3.6604	0.8077		
23.0	45.771	1.562	3.8517	0.7876		
24.0	47.242	1.509	4.0524	0.7666		
25.0	48.789	1.453	4.2638	0.7448		
2.60	1.0	23.335	2.556	1.0707	1.0000	
	2.0	24.071	2.512	1.1454	0.9997	
	3.0	24.830	2.469	1.2241	0.9992	
	4.0	25.611	2.427	1.3069	0.9980	
	5.0	26.415	2.384	1.3942	0.9963	
	6.0	27.242	2.342	1.4858	0.9937	
	7.0	28.092	2.299	1.5821	0.9902	
	8.0	28.967	2.257	1.6831	0.9858	
	9.0	29.865	2.214	1.7890	0.9803	
	10.0	30.789	2.171	1.8998	0.9736	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
2.60	11.0	31.730	2.128	2.0158	0.9659		
	12.0	32.714	2.085	2.1369	0.9569		
	13.0	33.718	2.041	2.2635	0.9467		
	14.0	34.749	1.997	2.3055	0.9354		
	15.0	35.810	1.953	2.5332	0.9229		
	16.0	36.901	1.907	2.6766	0.9093		
	17.0	38.026	1.862	2.8261	0.8946		
	18.0	39.185	1.815	2.9817	0.8788		
	19.0	40.383	1.768	3.1438	0.8621		
	20.0	41.622	1.720	3.3127	0.8444		
	21.0	42.906	1.671	3.4887	0.8259		
	22.0	44.243	1.620	3.6724	0.8064		
	23.0	45.638	1.569	3.8644	0.7862		
	24.0	47.103	1.516	4.0658	0.7652		
	25.0	48.652	1.460	4.2780	0.7433		
	2.61	1.0	23.243	2.566	1.0710	1.0000	
		2.0	23.978	2.522	1.1459	0.9997	
3.0		24.736	2.479	1.2248	0.9991		
4.0		25.516	2.436	1.3080	0.9980		
5.0		26.319	2.393	1.3956	0.9962		
6.0		27.145	2.351	1.4877	0.9936		
7.0		27.995	2.308	1.5844	0.9902		
8.0		28.868	2.266	1.6858	0.9857		
9.0		29.766	2.223	1.7921	0.9801		
10.0		30.689	2.180	1.9035	0.9734		
11.0		31.637	2.137	2.0200	0.9656		
12.0		32.612	2.093	2.1417	0.9565		
13.0		33.613	2.050	2.2689	0.9463		
14.0		34.643	2.005	2.4016	0.9349		
15.0		35.702	1.960	2.5399	0.9223		
16.0		36.792	1.915	2.6841	0.9086		
17.0		37.915	1.869	2.8343	0.8938		
18.0	39.072	1.823	2.9907	0.8779			
19.0	40.267	1.775	3.1535	0.8611			

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P12/P11	COMMENT	
2.61	20.0	41.503	1.727	3.3232	0.8433		
	21.0	42.784	1.678	3.5000	0.8247		
	22.0	44.116	1.628	3.6845	0.8052		
	23.0	45.506	1.576	3.8773	0.7849		
	24.0	46.965	1.523	4.0794	0.7638		
	25.0	48.506	1.467	4.2922	0.7419		
	2.62	1.0	23.151	2.576	1.0712	1.0000	
		2.0	23.886	2.527	1.1464	0.9997	
		3.0	24.643	2.488	1.2256	0.9991	
		4.0	25.422	2.445	1.3091	0.9980	
5.0		26.224	2.402	1.3970	0.9967		
6.0		27.049	2.360	1.4895	0.9935		
7.0		27.898	2.317	1.5866	0.9901		
8.0		28.770	2.274	1.6885	0.9855		
9.0		29.667	2.232	1.7953	0.9799		
10.0		30.589	2.188	1.9071	0.9732		
2.63	11.0	31.536	2.145	2.0242	0.9653		
	12.0	32.510	2.102	2.1465	0.9562		
	13.0	33.510	2.058	2.2743	0.9458		
	14.0	34.529	2.013	2.4076	0.9341		
	15.0	35.566	1.968	2.5467	0.9217		
	16.0	36.625	1.923	2.6915	0.9079		
	17.0	37.805	1.877	2.8425	0.8930		
	18.0	39.060	1.830	2.9996	0.8770		
	19.0	40.153	1.783	3.1633	0.8601		
	20.0	41.386	1.734	3.3337	0.8422		
2.63	21.0	42.664	1.685	3.5114	0.8235		
	22.0	43.992	1.625	3.6967	0.8039		
	23.0	45.377	1.583	3.8902	0.7835		
	24.0	46.829	1.520	4.0931	0.7624		
	25.0	48.363	1.475	4.3065	0.7404		
	1.0	23.060	2.585	1.0714	1.0000		
	2.0	23.794	2.541	1.1468	0.9997		
	3.0	24.550	2.498	1.2264	0.9991		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.63	4.0	25.328	2.455	1.3102	0.9980	
	5.0	26.130	2.412	1.3085	0.9962	
	6.0	26.954	2.369	1.4913	0.9935	
	7.0	27.802	2.326	1.6912	0.9900	
	8.0	28.673	2.283	1.7985	0.9854	
	9.0	29.559	2.240	1.9108	0.9797	
	10.0	30.490	2.197	2.0284	0.9729	
	11.0	31.436	2.154	2.1513	0.9650	
	12.0	32.409	2.110	2.2797	0.9558	
	13.0	33.408	2.066	2.4137	0.9454	
	14.0	34.435	2.021	2.5534	0.9339	
	15.0	35.492	1.976	2.6991	0.9210	
	16.0	36.578	1.931	2.8507	0.9071	
	17.0	37.697	1.884	3.0086	0.8921	
	18.0	38.850	1.838	3.1731	0.8761	
	19.0	40.040	1.790	3.3443	0.8591	
	20.0	41.270	1.742	3.5228	0.8411	
21.0	42.545	1.692	3.7089	0.8223		
22.0	43.869	1.642	3.9032	0.8026		
23.0	45.249	1.590	4.1068	0.7822		
24.0	46.695	1.537	4.3209	0.7609		
25.0	48.221	1.482	4.5473	0.7390		
2.64	1.0	22.970	2.595	1.0717	1.0000	
	2.0	23.703	2.551	1.1473	0.9997	
	3.0	24.458	2.507	1.2272	0.9991	
	4.0	25.236	2.464	1.3113	0.9980	
	5.0	26.036	2.421	1.3999	0.9961	
	6.0	26.860	2.378	1.4931	0.9935	
	7.0	27.707	2.335	1.5911	0.9899	
	8.0	28.577	2.292	1.6939	0.9853	
	9.0	29.472	2.249	1.8016	0.9796	
	10.0	30.392	2.205	1.9145	0.9727	
	11.0	31.337	2.162	2.0327	0.9647	
	12.0	32.309	2.118	2.1562	0.9554	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT	
2.64	13.0	33.307	2.074	2.2852	0.9449		
	14.0	34.233	2.029	2.4198	0.9332		
	15.0	35.388	1.984	2.5602	0.9204		
	16.0	36.473	1.938	2.7066	0.9064		
	17.0	37.590	1.892	2.8590	0.8913		
	18.0	38.741	1.845	3.0177	0.8752		
	19.0	39.928	1.797	3.1829	0.8580		
	20.0	41.156	1.749	3.3550	0.8400		
	21.0	42.427	1.699	3.5343	0.8210		
	22.0	43.747	1.649	3.7212	0.8013		
	23.0	45.123	1.597	3.9164	0.7809		
	24.0	46.564	1.544	4.1207	0.7595		
	25.0	48.082	1.489	4.3355	0.7375		
	2.65	1.0	22.881	2.605	1.0719	1.0000	
		2.0	23.613	2.561	1.1478	0.9997	
3.0		24.367	2.517	1.2280	0.9991		
4.0		25.144	2.473	1.3124	0.9980		
5.0		25.943	2.430	1.4014	0.9961		
6.0		26.766	2.387	1.4950	0.9934		
7.0		27.612	2.344	1.5933	0.9899		
8.0		28.482	2.301	1.6966	0.9851		
9.0		29.376	2.257	1.8048	0.9794		
10.0		30.295	2.214	1.9182	0.9725		
11.0		31.240	2.170	2.0369	0.9644		
12.0		32.210	2.126	2.1610	0.9550		
13.0		33.207	2.082	2.2907	0.9445		
14.0		34.231	2.037	2.4260	0.9327		
15.0		35.285	1.992	2.5671	0.9198		
16.0	36.369	1.946	2.7141	0.9057			
17.0	37.483	1.899	2.8673	0.8905			
18.0	38.633	1.852	3.0269	0.8742			
19.0	39.818	1.805	3.1929	0.8570			
20.0	41.043	1.756	3.3657	0.8388			
21.0	42.311	1.706	3.5458	0.8198			

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	PT2/PT1	COMMENT
2.65	22.0	43.627	1.656	3.7326	0.8000		
	23.0	44.908	1.604	3.9205	0.7794		
	24.0	46.434	1.551	4.1347	0.7581		
	25.0	47.945	1.495	4.3502	0.7360		
	1.0	22.792	2.615	1.0721	1.0000		
	2.0	23.523	2.570	1.1483	0.9997		
	3.0	24.277	2.526	1.2288	0.9991		
	4.0	25.053	2.483	1.3135	0.9979		
	5.0	25.852	2.439	1.4028	0.9961		
	6.0	26.673	2.396	1.4968	0.9934		
2.66	7.0	27.519	2.353	1.5956	0.9997		
	8.0	28.389	2.309	1.6993	0.9950		
	9.0	29.281	2.266	1.8080	0.9792		
	10.0	30.199	2.222	1.9210	0.9722		
	11.0	31.142	2.179	2.0412	0.9640		
	12.0	32.112	2.136	2.1659	0.9546		
	13.0	33.108	2.090	2.2962	0.9440		
	14.0	34.131	2.045	2.4321	0.9321		
	15.0	35.183	1.999	2.5739	0.9191		
	16.0	36.265	1.953	2.7217	0.9049		
2.67	17.0	37.378	1.907	2.8756	0.8906		
	18.0	38.526	1.860	3.0359	0.8733		
	19.0	39.709	1.812	3.2027	0.8560		
	20.0	40.931	1.763	3.3765	0.8377		
	21.0	42.196	1.713	3.5574	0.8186		
	22.0	43.509	1.663	3.7460	0.7987		
	23.0	44.875	1.611	3.9428	0.7780		
	24.0	46.295	1.558	4.1488	0.7566		
	25.0	47.810	1.502	4.3650	0.7345		
	1.0	22.704	2.625	1.0724	1.0000		
2.0	23.435	2.580	1.1488	0.9997			
3.0	24.187	2.536	1.2295	0.9991			
4.0	24.962	2.492	1.3146	0.9979			
5.0	25.760	2.448	1.4043	0.9960			

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.67	6.0	26.582	2.405	1.4987	0.9932	
	7.0	27.426	2.362	1.5978	0.9906	
	8.0	28.294	2.318	1.7020	0.9849	
	9.0	29.187	2.275	1.8112	0.9790	
	10.0	30.104	2.231	1.9257	0.9720	
	11.0	31.046	2.187	2.0455	0.9637	
	12.0	32.015	2.143	2.1708	0.9543	
	13.0	33.009	2.098	2.3017	0.9425	
	14.0	34.032	2.053	2.4383	0.9286	
	15.0	35.082	2.007	2.5808	0.9125	
	16.0	36.163	1.961	2.7293	0.8942	
	17.0	37.275	1.914	2.8840	0.8738	
	18.0	38.420	1.867	3.0451	0.8513	
	19.0	39.601	1.819	3.2127	0.8259	
	20.0	40.820	1.770	3.3873	0.7976	
	21.0	42.082	1.721	3.5691	0.7666	
	22.0	43.392	1.670	3.7585	0.7320	
23.0	44.754	1.618	3.9562	0.7551		
24.0	46.179	1.564	4.1629	0.7220		
25.0	47.677	1.509	4.3799	1.0000		
2.68	1.0	22.617	2.635	1.0726	0.9997	
	2.0	23.347	2.590	1.1493	0.9991	
	3.0	24.099	2.545	1.2303	0.9979	
	4.0	24.873	2.501	1.3157	0.9960	
	5.0	25.670	2.458	1.4058	0.9932	
	6.0	26.490	2.414	1.5005	0.9895	
	7.0	27.334	2.370	1.6001	0.9847	
	8.0	28.202	2.327	1.7047	0.9788	
	9.0	29.093	2.283	1.8144	0.9717	
	10.0	30.010	2.239	1.9294	0.9624	
	11.0	30.951	2.195	2.0498	0.9529	
	12.0	31.918	2.151	2.1757	0.9421	
	13.0	32.912	2.106	2.3072	0.9290	
	14.0	33.933	2.061	2.4445	0.9130	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.68	15.0	34.0R3	2.015	2.5877	0.9178	
	16.0	36.062	1.969	2.7370	0.9034	
	17.0	37.172	1.922	2.8924	0.8870	
	18.0	38.315	1.876	3.0543	0.8714	
	19.0	39.494	1.826	3.2228	0.8530	
	20.0	40.711	1.777	3.3981	0.8354	
	21.0	41.970	1.728	3.5808	0.8161	
	22.0	43.276	1.677	3.7711	0.7960	
	23.0	44.634	1.625	3.9696	0.7752	
	24.0	46.054	1.571	4.1772	0.7527	
2.69	25.0	47.546	1.516	4.3949	0.7315	
	1.0	22.531	2.644	1.0728	1.0000	
	2.0	23.259	2.599	1.1408	0.9997	
	3.0	24.011	2.555	1.2311	0.9991	
	4.0	24.784	2.511	1.3169	0.9979	
	5.0	25.581	2.467	1.4072	0.9960	
	6.0	26.400	2.423	1.5024	0.9932	
	7.0	27.243	2.379	1.6024	0.9894	
	8.0	28.110	2.336	1.7074	0.9846	
	9.0	29.001	2.292	1.8176	0.9786	
10.0	10.0	29.916	2.248	1.9332	0.9715	
	11.0	30.857	2.203	2.0541	0.9631	
	12.0	31.823	2.159	2.1906	0.9535	
	13.0	32.816	2.114	2.3128	0.9426	
	14.0	33.836	2.068	2.4507	0.9305	
	15.0	34.884	2.023	2.5946	0.9172	
	16.0	35.962	1.976	2.7446	0.9027	
	17.0	37.070	1.929	2.9008	0.8871	
	18.0	38.212	1.882	3.0635	0.8704	
	19.0	39.388	1.833	3.2328	0.8528	
20.0	20.0	40.603	1.784	3.4091	0.8343	
	21.0	41.850	1.735	3.5976	0.8149	
	22.0	43.162	1.684	3.7837	0.7947	
	23.0	44.517	1.631	3.9832	0.7738	

TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
2.69	24.0	45.931	1.578	4.1015	0.7522	
	25.0	47.416	1.523	4.4100	0.7299	
2.79	1.0	27.445	2.654	1.0721	1.0000	
	2.0	23.173	2.600	1.1503	0.9997	
3.0	3.0	23.023	2.564	1.2310	0.9991	
	4.0	24.696	2.520	1.3180	0.9970	
5.0	5.0	25.402	2.476	1.4087	0.9959	
	6.0	26.311	2.432	1.5042	0.9931	
7.0	7.0	27.153	2.389	1.6047	0.9893	
	8.0	28.019	2.344	1.7102	0.9845	
9.0	9.0	28.909	2.300	1.8209	0.9785	
	10.0	29.823	2.256	1.9360	0.9712	
11.0	11.0	30.762	2.212	2.0584	0.9629	
	12.0	31.728	2.167	2.1855	0.9531	
13.0	13.0	32.720	2.122	2.3183	0.9421	
	14.0	33.739	2.076	2.4570	0.9299	
15.0	15.0	34.786	2.030	2.6016	0.9165	
	16.0	35.863	1.984	2.7523	0.9019	
17.0	17.0	36.969	1.937	2.9093	0.8862	
	18.0	38.109	1.889	3.0728	0.8695	
19.0	19.0	39.284	1.841	3.2429	0.8517	
	20.0	40.496	1.791	3.4200	0.8331	
21.0	21.0	41.750	1.741	3.6044	0.8136	
	22.0	43.049	1.690	3.7965	0.7934	
23.0	23.0	44.400	1.638	3.9968	0.7724	
	24.0	45.809	1.585	4.2060	0.7507	
25.0	25.0	47.289	1.530	4.4252	0.7284	
	26.0	48.836	2.664	1.0733	1.0000	
2.71	1.0	23.097	2.619	1.1508	0.9997	
	3.0	23.827	2.574	1.2327	0.9991	
4.0	4.0	24.609	2.529	1.3191	0.9978	
	5.0	25.404	2.485	1.4102	0.9959	
6.0	6.0	26.222	2.441	1.5061	0.9930	
	7.0	27.063	2.397	1.6060	0.9897	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.71	8.0	27.929	2.353	1.7129	0.9843	
	9.0	28.818	2.309	1.8241	0.9783	
	10.0	29.732	2.265	1.9407	0.9710	
	11.0	30.670	2.220	2.0628	0.9625	
	12.0	31.635	2.175	2.1905	0.9527	
	13.0	32.626	2.130	2.3239	0.9416	
	14.0	33.643	2.084	2.4632	0.9293	
	15.0	34.689	2.038	2.6086	0.9158	
	16.0	35.764	1.991	2.7601	0.9011	
	17.0	36.870	1.944	2.9178	0.8854	
	18.0	38.008	1.896	3.0821	0.8685	
	19.0	39.180	1.848	3.2531	0.8507	
	20.0	40.391	1.799	3.4311	0.8319	
	21.0	41.641	1.748	3.6163	0.8124	
	22.0	42.938	1.697	3.8092	0.7920	
	23.0	44.285	1.645	4.0104	0.7710	
24.0	45.689	1.591	4.2205	0.7492		
25.0	47.163	1.536	4.4406	0.7268		
2.72	1.0	22.275	2.674	1.0735	1.0000	
	2.0	23.002	2.628	1.1513	0.9997	
	3.0	23.751	2.583	1.2335	0.9991	
	4.0	24.522	2.539	1.3202	0.9978	
	5.0	25.316	2.494	1.4116	0.9958	
	6.0	26.134	2.450	1.5079	0.9930	
	7.0	26.974	2.406	1.6092	0.9891	
	8.0	27.839	2.362	1.7157	0.9842	
	9.0	28.727	2.317	1.8274	0.9781	
	10.0	29.640	2.273	1.9445	0.9707	
	11.0	30.579	2.228	2.0671	0.9622	
	12.0	31.542	2.183	2.1954	0.9523	
	13.0	32.532	2.138	2.3295	0.9412	
	14.0	33.549	2.092	2.4685	0.9288	
	15.0	34.593	2.046	2.6156	0.9152	
	16.0	35.667	1.999	2.7678	0.9004	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M <sub>1</sub>	DELTA	THETA	M <sub>2</sub>	P <sub>2</sub> /P <sub>1</sub>	P <sub>T2</sub> /P <sub>T1</sub>	COMMENT
2.72	17.0	36.771	1.952	2.9264	0.9985	
	18.0	37.907	1.904	3.0915	0.9875	
	19.0	39.078	1.855	3.2633	0.9806	
	20.0	40.286	1.806	3.4421	0.9709	
	21.0	41.534	1.755	3.6283	0.9611	
	22.0	42.827	1.704	3.8221	0.9507	
	23.0	44.171	1.652	4.0241	0.9405	
	24.0	45.571	1.598	4.2351	0.9307	
	25.0	47.030	1.543	4.4560	0.9213	
	1.0	22.192	2.684	1.0738	1.0000	
2.73	2.0	22.917	2.638	1.1518	0.9997	
	3.0	23.666	2.592	1.2343	0.9990	
	4.0	24.434	2.548	1.3213	0.9978	
	5.0	25.220	2.504	1.4131	0.9958	
	6.0	26.046	2.459	1.5098	0.9929	
	7.0	26.906	2.415	1.6115	0.9890	
	8.0	27.750	2.370	1.7184	0.9840	
	9.0	28.628	2.326	1.8306	0.9779	
	10.0	29.550	2.281	1.9483	0.9705	
	11.0	30.498	2.236	2.0715	0.9618	
2.74	12.0	31.450	2.191	2.2004	0.9519	
	13.0	32.430	2.146	2.3351	0.9407	
	14.0	33.455	2.100	2.4758	0.9282	
	15.0	34.498	2.053	2.6226	0.9145	
	16.0	35.571	2.006	2.7756	0.8996	
	17.0	36.673	1.959	2.9349	0.8835	
	18.0	37.808	1.911	3.1009	0.8666	
	19.0	38.977	1.862	3.2736	0.8485	
	20.0	40.183	1.813	3.4532	0.8295	
	21.0	41.429	1.762	3.6403	0.8090	
2.75	22.0	42.719	1.711	3.8350	0.7870	
	23.0	44.058	1.659	4.0380	0.7640	
	24.0	45.454	1.605	4.2498	0.7402	
	25.0	46.917	1.550	4.4716	0.7157	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.74	1.0	22.109	2.693	1.0740	1.0000	
	2.0	22.834	2.648	1.1523	0.9907	
	3.0	23.581	2.602	1.2351	0.9990	
	4.0	24.351	2.557	1.3224	0.9978	
	5.0	25.144	2.513	1.4146	0.9958	
	6.0	25.960	2.468	1.5117	0.9929	
	7.0	26.799	2.424	1.6138	0.9889	
	8.0	27.662	2.379	1.7212	0.9839	
	9.0	28.549	2.335	1.8330	0.9777	
	10.0	29.461	2.290	1.9521	0.9702	
	11.0	30.397	2.245	2.0759	0.9615	
	12.0	31.359	2.199	2.2054	0.9515	
	13.0	32.347	2.154	2.3408	0.9402	
	14.0	33.362	2.107	2.4822	0.9275	
	15.0	34.404	2.061	2.6297	0.9138	
	16.0	35.476	2.014	2.7834	0.8988	
	17.0	36.577	1.966	2.9436	0.8827	
18.0	37.710	1.918	3.1103	0.8656		
19.0	38.877	1.869	3.2828	0.8475		
20.0	40.081	1.820	3.4614	0.8284		
21.0	41.324	1.769	3.6453	0.8086		
22.0	42.611	1.718	3.8348	0.7880		
23.0	43.947	1.665	4.0298	0.7666		
24.0	45.339	1.611	4.2306	0.7447		
25.0	46.796	1.556	4.4372	0.7222		
2.75	1.0	27.026	2.703	1.0743	1.0000	
	2.0	27.750	2.657	1.1528	0.9997	
	3.0	28.497	2.612	1.2359	0.9990	
	4.0	29.266	2.567	1.3236	0.9978	
	5.0	29.059	2.522	1.4161	0.9957	
	6.0	29.874	2.477	1.5135	0.9928	
	7.0	30.713	2.433	1.6161	0.9888	
	8.0	31.575	2.388	1.7240	0.9838	
	9.0	32.461	2.343	1.8371	0.9775	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.75	10.0	29.372	2.298	1.9559	0.9700	
	11.0	30.308	2.253	2.0802	0.9612	
	12.0	31.269	2.207	2.2104	0.9511	
	13.0	32.256	2.162	2.3464	0.9407	
	14.0	33.270	2.115	2.4885	0.9270	
	15.0	34.311	2.069	2.6368	0.9131	
	16.0	35.381	2.021	2.7913	0.8991	
	17.0	36.481	1.974	2.9522	0.8819	
	18.0	37.613	1.925	3.1108	0.8646	
	19.0	38.778	1.876	3.2662	0.8466	
2.76	20.0	39.979	1.826	3.4284	0.8272	
	21.0	41.220	1.776	3.5965	0.8073	
	22.0	42.505	1.724	3.7610	0.7866	
	23.0	43.837	1.672	3.9258	0.7652	
	24.0	45.225	1.618	4.0904	0.7432	
	25.0	46.677	1.563	4.2529	0.7206	
	1.0	21.044	2.713	1.0745	1.0000	
	2.0	22.658	2.667	1.1533	0.9997	
	3.0	23.414	2.621	1.2367	0.9990	
	4.0	24.183	2.576	1.3247	0.9977	
5.0	24.974	2.531	1.4176	0.9957		
6.0	25.789	2.486	1.5154	0.9927		
7.0	26.627	2.441	1.6184	0.9897		
8.0	27.489	2.397	1.7267	0.9835		
9.0	28.374	2.352	1.8404	0.9773		
10.0	29.284	2.307	1.9597	0.9697		
11.0	30.219	2.261	2.0847	0.9609		
12.0	31.180	2.215	2.2154	0.9507		
13.0	32.166	2.169	2.3521	0.9392		
14.0	33.179	2.123	2.4949	0.9265		
15.0	34.219	2.076	2.6439	0.9125		
16.0	35.288	2.029	2.7992	0.8973		
17.0	36.386	1.981	2.9609	0.8810		
18.0	37.516	1.932	3.1293	0.8635		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.76	19.0	38.680	1.893	3.3046	0.8453	
	20.0	39.879	1.833	3.4869	0.8260	
	21.0	41.118	1.783	3.6766	0.8060	
	22.0	42.300	1.731	3.8741	0.7852	
	23.0	43.729	1.678	4.0798	0.7637	
	24.0	45.112	1.625	4.2944	0.7417	
	25.0	46.560	1.569	4.5188	0.7190	
	1.0	21.863	2.723	1.0747	1.0000	
	2.0	22.596	2.677	1.1538	0.9997	
	3.0	23.332	2.631	1.2375	0.9990	
2.77	4.0	24.099	2.585	1.3258	0.9977	
	5.0	24.890	2.540	1.4190	0.9956	
	6.0	25.704	2.495	1.5173	0.9927	
	7.0	26.542	2.450	1.6208	0.9886	
	8.0	27.403	2.405	1.7295	0.9835	
	9.0	28.288	2.360	1.8437	0.9771	
	10.0	29.197	2.315	1.9635	0.9695	
	11.0	30.131	2.269	2.0891	0.9605	
	12.0	31.091	2.224	2.2205	0.9503	
	13.0	32.076	2.177	2.3578	0.9387	
2.78	14.0	33.088	2.131	2.5013	0.9259	
	15.0	34.128	2.084	2.6510	0.9118	
	16.0	35.195	2.036	2.8071	0.8965	
	17.0	36.292	1.988	2.9696	0.8801	
	18.0	37.421	1.940	3.1388	0.8626	
	19.0	38.583	1.890	3.3150	0.8442	
	20.0	39.781	1.840	3.4982	0.8249	
	21.0	41.017	1.790	3.6889	0.8047	
	22.0	42.295	1.738	3.8873	0.7838	
	23.0	43.622	1.685	4.0939	0.7623	
2.78	24.0	45.001	1.631	4.3004	0.7401	
	25.0	46.444	1.576	4.5247	0.7174	
	1.0	21.783	2.733	1.0750	1.0000	
	2.0	22.505	2.686	1.1543	0.9997	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.78	3.0	23.250	2.640	1.7383	0.9900	
	4.0	24.017	2.595	1.7260	0.9977	
	5.0	24.807	2.549	1.4205	0.9956	
	6.0	25.620	2.504	1.5102	0.9926	
	7.0	26.457	2.459	1.6231	0.9985	
	8.0	27.318	2.414	1.7323	0.9933	
	9.0	28.202	2.369	1.8470	0.9769	
	10.0	29.111	2.323	1.9674	0.9692	
	11.0	30.044	2.278	2.0935	0.9602	
	12.0	31.003	2.232	2.2255	0.9499	
	13.0	31.988	2.185	2.3635	0.9382	
	14.0	32.999	2.138	2.5077	0.9253	
	15.0	34.037	2.091	2.6582	0.9111	
	16.0	35.104	2.044	2.8150	0.8957	
	17.0	36.200	1.996	2.9783	0.8792	
18.0	37.327	1.947	3.1484	0.8616		
19.0	38.487	1.897	3.3254	0.8431		
20.0	39.683	1.847	3.5096	0.8237		
21.0	40.917	1.796	3.7012	0.8034		
22.0	42.193	1.745	3.9005	0.7824		
23.0	43.516	1.692	4.1081	0.7608		
24.0	44.892	1.638	4.3246	0.7386		
25.0	46.329	1.582	4.5507	0.7158		
2.79	1.0	21.703	2.743	1.0752	1.0000	
	2.0	22.424	2.696	1.1548	0.9997	
	3.0	23.168	2.650	1.2391	0.9990	
	4.0	23.935	2.604	1.3281	0.9977	
	5.0	24.725	2.559	1.4220	0.9956	
	6.0	25.537	2.513	1.5211	0.9925	
	7.0	26.374	2.468	1.6254	0.9884	
	8.0	27.233	2.423	1.7351	0.9832	
	9.0	28.117	2.377	1.8503	0.9767	
	10.0	29.025	2.332	1.9712	0.9689	
	11.0	29.958	2.286	2.0979	0.9599	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.79	12.0	30.916	2.240	2.2306	0.9495	
	13.0	31.900	2.193	2.3693	0.9377	
	14.0	32.910	2.146	2.5142	0.9247	
	15.0	33.947	2.099	2.6653	0.9104	
	16.0	35.013	2.051	2.8230	0.8949	
	17.0	36.108	2.003	2.9871	0.8783	
	18.0	37.233	1.954	3.1581	0.8606	
	19.0	38.392	1.904	3.3359	0.8420	
	20.0	39.586	1.854	3.5210	0.8224	
	21.0	40.818	1.803	3.7135	0.8021	
2.80	22.0	42.091	1.751	3.9138	0.7810	
	23.0	43.411	1.698	4.1223	0.7593	
	24.0	44.784	1.644	4.3398	0.7370	
	25.0	46.217	1.589	4.5668	0.7142	
	1.0	21.674	2.752	1.0754	1.0000	
	2.0	22.344	2.706	1.1553	0.9997	
	3.0	23.088	2.659	1.2390	0.9990	
	4.0	23.854	2.613	1.3292	0.9977	
	5.0	24.643	2.568	1.4235	0.9955	
	6.0	25.455	2.522	1.5230	0.9925	
2.80	7.0	26.290	2.477	1.6277	0.9883	
	8.0	27.150	2.431	1.7379	0.9830	
	9.0	28.033	2.386	1.8536	0.9765	
	10.0	28.940	2.340	1.9751	0.9687	
	11.0	29.872	2.294	2.1024	0.9595	
	12.0	30.830	2.248	2.2357	0.9490	
	13.0	31.813	2.201	2.3750	0.9372	
	14.0	32.822	2.154	2.5206	0.9241	
	15.0	33.858	2.106	2.6725	0.9097	
	16.0	34.923	2.058	2.8300	0.8941	
2.80	17.0	36.016	2.010	2.9950	0.8774	
	18.0	37.141	1.961	3.1677	0.8596	
	19.0	38.298	1.911	3.3445	0.8409	
	20.0	39.490	1.861	3.5325	0.8212	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT	
2.80	21.0	40.720	1.810	3.7259	0.8008		
	22.0	41.001	1.758	3.9271	0.7797		
	23.0	43.308	1.705	4.1367	0.7579		
	24.0	44.677	1.651	4.3550	0.7355		
	25.0	46.105	1.595	4.5830	0.7125		
	2.81	1.0	21.545	2.762	1.0757	1.0000	
		2.0	22.265	2.715	1.1558	0.9997	
		3.0	23.009	2.669	1.2407	0.9990	
		4.0	23.772	2.623	1.3303	0.9976	
		5.0	24.562	2.577	1.4250	0.9955	
6.0		25.373	2.531	1.5249	0.9924		
7.0		26.208	2.486	1.6301	0.9882		
8.0		27.067	2.440	1.7407	0.9829		
9.0		27.949	2.394	1.8570	0.9763		
10.0		28.856	2.348	1.9790	0.9684		
2.82	11.0	29.788	2.302	2.1069	0.9592		
	12.0	30.744	2.256	2.2408	0.9484		
	13.0	31.726	2.209	2.3808	0.9367		
	14.0	32.735	2.162	2.5271	0.9235		
	15.0	33.770	2.114	2.6798	0.9090		
	16.0	34.834	2.066	2.8390	0.8933		
	17.0	35.926	2.017	3.0048	0.8765		
	18.0	37.049	1.968	3.1774	0.8586		
	19.0	38.205	1.918	3.3571	0.8398		
	20.0	39.395	1.868	3.5440	0.8200		
2.82	21.0	40.623	1.817	3.7383	0.7995		
	22.0	41.891	1.764	3.9405	0.7782		
	23.0	43.205	1.711	4.1510	0.7564		
	24.0	44.571	1.657	4.3704	0.7339		
	25.0	45.995	1.603	4.5992	0.7110		
	1.0	21.467	2.772	1.0750	1.0000		
	2.0	22.186	2.725	1.1563	0.9997		
	3.0	22.929	2.678	1.2415	0.9990		
	4.0	23.693	2.632	1.3315	0.9976		



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.87	5.0	24.481	2.586	1.4265	0.9954	
	6.0	25.292	2.540	1.5268	0.9923	
	7.0	26.126	2.494	1.6324	0.9881	
	8.0	26.985	2.449	1.7435	0.9827	
	9.0	27.866	2.403	1.8603	0.9761	
	10.0	28.773	2.357	1.9829	0.9682	
	11.0	29.704	2.310	2.1113	0.9589	
	12.0	30.660	2.264	2.2459	0.9482	
	13.0	31.641	2.217	2.3865	0.9362	
	14.0	32.649	2.169	2.5336	0.9229	
	15.0	33.683	2.122	2.6870	0.9083	
	16.0	34.746	2.073	2.8470	0.8925	
	17.0	35.837	2.024	3.0137	0.8756	
	18.0	36.959	1.975	3.1872	0.8576	
	2.83	19.0	38.113	1.925	3.3677	0.8386
20.0		39.301	1.875	3.5555	0.8188	
21.0		40.527	1.823	3.7508	0.7982	
22.0		41.793	1.771	3.9540	0.7768	
23.0		43.104	1.718	4.1655	0.7549	
24.0		44.466	1.663	4.3858	0.7324	
25.0		45.886	1.608	4.6157	0.7094	
1.0		21.390	2.782	1.0762	1.0000	
2.0		22.108	2.734	1.1568	0.9997	
3.0		22.850	2.688	1.2423	0.9990	
4.0		23.614	2.641	1.3326	0.9976	
5.0		24.401	2.595	1.4280	0.9954	
6.0		25.212	2.549	1.5287	0.9923	
7.0		26.045	2.503	1.6347	0.9880	
8.0		26.903	2.457	1.7464	0.9826	
9.0	27.784	2.411	1.8636	0.9759		
10.0	28.690	2.365	1.9867	0.9679		
11.0	29.620	2.318	2.1158	0.9585		
12.0	30.575	2.272	2.2510	0.9478		
13.0	31.556	2.224	2.3924	0.9357		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
2.83	14.0	32.563	2.177	2.5401	0.9223	
	15.0	33.507	2.129	2.6941	0.9076	
	16.0	34.658	2.081	2.8551	0.8917	
	17.0	35.749	2.032	3.0226	0.8747	
	18.0	36.969	1.982	3.1969	0.8566	
	19.0	38.022	1.932	3.3784	0.8375	
	20.0	39.208	1.881	3.5671	0.8176	
	21.0	40.432	1.830	3.7634	0.7968	
	22.0	41.696	1.778	3.9675	0.7754	
	23.0	43.004	1.724	4.1800	0.7534	
2.84	24.0	44.363	1.670	4.4013	0.7308	
	25.0	45.779	1.614	4.6322	0.7077	
	1.0	21.313	2.792	1.0764	1.0000	
	2.0	22.031	2.744	1.1573	0.9907	
	3.0	22.772	2.697	1.2431	0.9900	
	4.0	23.535	2.651	1.3337	0.9976	
	5.0	24.322	2.604	1.4295	0.9954	
	6.0	25.132	2.558	1.5306	0.9922	
	7.0	25.965	2.512	1.6371	0.9879	
	8.0	26.822	2.466	1.7492	0.9824	
2.85	9.0	27.703	2.420	1.8670	0.9757	
	10.0	28.608	2.373	1.9907	0.9676	
	11.0	29.538	2.327	2.1203	0.9582	
	12.0	30.492	2.280	2.2561	0.9473	
	13.0	31.472	2.232	2.3982	0.9352	
	14.0	32.478	2.185	2.5467	0.9217	
	15.0	33.511	2.137	2.7016	0.9069	
	16.0	34.572	2.088	2.8632	0.8909	
	17.0	35.661	2.039	3.0315	0.8737	
	18.0	36.780	1.989	3.2067	0.8555	
2.86	19.0	37.931	1.939	3.3891	0.8364	
	20.0	39.116	1.888	3.5788	0.8163	
	21.0	40.338	1.837	3.7760	0.7955	
	22.0	41.600	1.784	3.9811	0.7740	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.84	23.0	42.905	1.731	4.1946	0.7519	
	24.0	44.261	1.676	4.4169	0.7292	
2.85	25.0	45.673	1.620	4.6487	0.7061	
	1.0	21.236	2.801	1.0766	1.0000	
	2.0	21.954	2.754	1.1578	0.9997	
	3.0	22.694	2.707	1.2439	0.9989	
	4.0	23.457	2.660	1.3349	0.9975	
	5.0	24.243	2.613	1.4310	0.9953	
	6.0	25.053	2.567	1.5325	0.9921	
	7.0	25.885	2.521	1.6395	0.9878	
	8.0	26.742	2.474	1.7520	0.9823	
	9.0	27.622	2.428	1.8703	0.9755	
	10.0	28.527	2.381	1.9946	0.9673	
	11.0	29.456	2.335	2.1248	0.9578	
12.0	30.410	2.288	2.2613	0.9469		
13.0	31.389	2.240	2.4040	0.9347		
14.0	32.394	2.192	2.5532	0.9210		
15.0	33.426	2.144	2.7089	0.9062		
16.0	34.486	2.095	2.8713	0.8901		
17.0	35.574	2.046	3.0405	0.8728		
18.0	36.692	1.996	3.2166	0.8545		
19.0	37.842	1.946	3.3999	0.8352		
20.0	39.025	1.895	3.5905	0.8151		
21.0	40.245	1.843	3.7887	0.7942		
22.0	41.505	1.791	3.9948	0.7726		
23.0	42.808	1.737	4.2092	0.7504		
24.0	44.160	1.682	4.4325	0.7276		
25.0	45.568	1.627	4.6654	0.7045		
2.86	1.0	21.161	2.811	1.0769	1.0000	
	2.0	21.878	2.763	1.1584	0.9997	
	3.0	22.617	2.716	1.2447	0.9989	
	4.0	23.380	2.669	1.3360	0.9975	
	5.0	24.165	2.622	1.4326	0.9953	
	6.0	24.974	2.576	1.5344	0.9921	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.86	7.0	25.806	2.529	1.6418	0.9877	
	8.0	26.662	2.481	1.7549	0.9821	
	9.0	27.542	2.437	1.8737	0.9753	
	10.0	28.446	2.390	1.9985	0.9671	
	11.0	29.374	2.343	2.1294	0.9575	
	12.0	30.328	2.296	2.2665	0.9465	
	13.0	31.306	2.248	2.4099	0.9341	
	14.0	32.311	2.200	2.5598	0.9204	
	15.0	33.342	2.151	2.7162	0.9054	
	16.0	34.401	2.103	2.8795	0.8902	
	17.0	35.488	2.053	3.0495	0.8719	
	18.0	36.605	2.003	3.2265	0.8535	
	19.0	37.752	1.952	3.4106	0.8341	
	20.0	38.935	1.902	3.6022	0.8139	
	2.87	21.0	40.153	1.850	3.8014	0.7924
22.0		41.411	1.797	4.0085	0.7712	
23.0		42.711	1.743	4.2239	0.7489	
24.0		44.060	1.689	4.4483	0.7261	
25.0		45.465	1.633	4.6821	0.7028	
1.0		21.086	2.821	1.0771	1.0000	
2.0		21.902	2.773	1.1589	0.9997	
3.0		22.541	2.725	1.2455	0.9989	
4.0		23.303	2.678	1.3372	0.9975	
5.0		24.088	2.632	1.4341	0.9952	
6.0		24.896	2.585	1.5363	0.9920	
7.0		25.728	2.538	1.6442	0.9876	
8.0		26.583	2.492	1.7577	0.9820	
9.0		27.462	2.445	1.8771	0.9751	
10.0		28.366	2.398	2.0024	0.9668	
11.0	29.294	2.351	2.1339	0.9571		
12.0	30.247	2.303	2.2717	0.9461		
13.0	31.225	2.256	2.4158	0.9336		
14.0	32.229	2.208	2.5664	0.9198		
15.0	33.259	2.159	2.7236	0.9047		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.87	16.0	34.317	2.110	2.8876	0.8984	
	17.0	35.403	2.060	3.0585	0.8709	
	18.0	36.519	2.010	3.2364	0.8524	
	19.0	37.666	1.960	3.4215	0.8330	
	20.0	38.846	1.908	3.6140	0.8126	
	21.0	40.062	1.856	3.8141	0.7915	
	22.0	41.318	1.804	4.0223	0.7697	
	23.0	42.616	1.750	4.2387	0.7474	
	24.0	43.962	1.695	4.4641	0.7245	
	25.0	45.362	1.639	4.6989	0.7012	
2.88	1.0	21.011	2.831	1.0773	1.0000	
	2.0	21.727	2.783	1.1504	0.9997	
	3.0	22.465	2.735	1.2263	0.9989	
	4.0	23.226	2.688	1.3043	0.9975	
	5.0	24.011	2.641	1.3856	0.9952	
	6.0	24.819	2.594	1.4703	0.9919	
	7.0	25.650	2.547	1.5583	0.9875	
	8.0	26.505	2.500	1.6496	0.9818	
	9.0	27.383	2.453	1.7444	0.9749	
	10.0	28.296	2.406	1.8426	0.9665	
	11.0	29.214	2.359	1.9444	0.9568	
	12.0	30.166	2.311	2.0499	0.9456	
	13.0	31.144	2.263	2.1593	0.9331	
	14.0	32.147	2.215	2.2727	0.9192	
	15.0	33.176	2.166	2.3902	0.9040	
	16.0	34.233	2.117	2.5119	0.8876	
	17.0	35.319	2.068	2.6379	0.8700	
	18.0	36.433	2.017	2.7683	0.8514	
	19.0	37.579	1.967	2.9032	0.8318	
	20.0	38.759	1.915	3.0426	0.8114	
	21.0	39.972	1.863	3.1865	0.7902	
	22.0	41.225	1.810	3.3348	0.7683	
	23.0	42.521	1.756	3.4874	0.7458	
	24.0	43.864	1.701	3.6443	0.7229	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.88	25.0	45.262	1.645	4.7159	0.6995	
	1.0	20.937	2.841	1.0776	1.0000	
2.89	2.0	21.652	2.792	1.1599	0.9997	
	3.0	22.390	2.744	1.2471	0.9989	
3.0	4.0	23.151	2.697	1.3395	0.9975	
	5.0	23.935	2.650	1.4371	0.9952	
3.0	6.0	24.742	2.603	1.5402	0.9918	
	7.0	25.573	2.556	1.6489	0.9874	
3.0	8.0	26.427	2.509	1.7634	0.9817	
	9.0	27.305	2.462	1.8838	0.9747	
3.0	10.0	28.208	2.415	2.0103	0.9667	
	11.0	29.135	2.367	2.1430	0.9564	
3.0	12.0	30.086	2.319	2.2821	0.9452	
	13.0	31.063	2.271	2.4276	0.9326	
3.0	14.0	32.066	2.223	2.5797	0.9186	
	15.0	33.095	2.174	2.7385	0.9033	
3.0	16.0	34.151	2.124	2.9041	0.8867	
	17.0	35.235	2.075	3.0767	0.8691	
3.0	18.0	36.348	2.024	3.2563	0.8503	
	19.0	37.493	1.973	3.4433	0.8307	
3.0	20.0	38.671	1.922	3.6377	0.8101	
	21.0	39.883	1.869	3.8398	0.7888	
3.0	22.0	41.134	1.816	4.0500	0.7668	
	23.0	42.428	1.762	4.2685	0.7443	
3.0	24.0	43.769	1.708	4.4959	0.7213	
	25.0	45.162	1.651	4.7329	0.6978	
2.90	1.0	20.864	2.851	1.0778	1.0000	
	2.0	21.578	2.802	1.1604	0.9997	
3.0	3.0	22.315	2.754	1.2479	0.9989	
	4.0	23.076	2.706	1.3406	0.9974	
3.0	5.0	23.859	2.659	1.4386	0.9951	
	6.0	24.666	2.612	1.5421	0.9918	
3.0	7.0	25.496	2.565	1.6513	0.9873	
	8.0	26.350	2.517	1.7663	0.9815	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.90	9.0	27.278	2.470	1.8872	0.9744	
	10.0	29.130	2.423	2.0143	0.9660	
	11.0	29.056	2.375	2.1476	0.9561	
	12.0	30.007	2.327	2.2873	0.9447	
	13.0	30.983	2.279	2.4335	0.9320	
	14.0	31.995	2.230	2.5863	0.9179	
	15.0	33.014	2.181	2.7459	0.9025	
	16.0	34.049	2.132	2.9124	0.8854	
	17.0	35.152	2.082	3.0858	0.8681	
	18.0	36.265	2.031	3.2563	0.8493	
	19.0	37.408	1.980	3.4542	0.8295	
	20.0	38.584	1.928	3.6496	0.8089	
	21.0	39.795	1.876	3.8527	0.7874	
	22.0	41.044	1.823	4.0639	0.7654	
	23.0	42.325	1.769	4.2835	0.7428	
	24.0	43.673	1.714	4.5110	0.7197	
	25.0	45.063	1.657	4.7500	0.6962	
2.91	1.0	20.791	2.860	1.0781	1.0000	
	2.0	21.505	2.812	1.1609	0.9997	
	3.0	22.241	2.763	1.2488	0.9989	
	4.0	23.001	2.715	1.3418	0.9974	
	5.0	23.784	2.668	1.4402	0.9951	
	6.0	24.590	2.621	1.5441	0.9917	
	7.0	25.420	2.573	1.6537	0.9872	
	8.0	26.274	2.526	1.7692	0.9814	
	9.0	27.151	2.479	1.8906	0.9742	
	10.0	28.052	2.431	2.0183	0.9657	
	11.0	28.978	2.383	2.1522	0.9557	
	12.0	29.929	2.325	2.2926	0.9443	
	13.0	30.904	2.287	2.4304	0.9315	
	14.0	31.906	2.238	2.5930	0.9173	
	15.0	32.933	2.190	2.7534	0.9019	
	16.0	33.988	2.139	2.9206	0.8851	
	17.0	35.070	2.089	3.0950	0.8672	

TWO-DIMENSIONAL ORLONIF SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT	
2.91	18.0	36.181	2.038	3.2764	0.8482		
	19.0	37.324	1.987	3.4652	0.8283		
	20.0	38.498	1.935	3.6616	0.8076		
	21.0	39.708	1.883	3.8657	0.7851		
	22.0	40.955	1.829	4.0779	0.7619		
	23.0	42.244	1.775	4.2985	0.7412		
	24.0	43.578	1.720	4.5280	0.7191		
	25.0	44.966	1.664	4.7671	0.6945		
	2.92	1.0	20.718	2.870	1.0783	1.0000	
		2.0	21.432	2.821	1.1614	0.9997	
3.0		22.168	2.773	1.2406	0.9989		
4.0		22.927	2.725	1.3129	0.9974		
5.0		23.709	2.677	1.3787	0.9950		
6.0		24.515	2.630	1.4460	0.9916		
7.0		25.345	2.582	1.5151	0.9871		
8.0		26.198	2.535	1.5721	0.9812		
9.0		27.074	2.487	1.6290	0.9740		
10.0		27.975	2.439	1.6823	0.9654		
2.93	11.0	28.901	2.391	1.7368	0.9554		
	12.0	29.851	2.343	1.7978	0.9439		
	13.0	30.826	2.294	1.8454	0.9310		
	14.0	31.827	2.245	1.8997	0.9167		
	15.0	32.854	2.196	1.9600	0.9011		
	16.0	33.907	2.146	1.9290	0.8842		
	17.0	34.989	2.096	1.9041	0.8652		
	18.0	36.099	2.045	1.8845	0.8472		
	19.0	37.240	1.994	1.8763	0.8272		
	20.0	38.414	1.942	1.8736	0.8063		
2.93	21.0	39.621	1.889	1.8787	0.7847		
	22.0	40.867	1.836	1.8920	0.7625		
	23.0	42.153	1.781	1.9136	0.7397		
	24.0	43.485	1.726	1.9442	0.7165		
	25.0	44.869	1.670	1.9844	0.6928		
	1.0	20.646	2.980	1.0785	1.0000		



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.93	2.0	21.350	2.831	1.1619	0.9997	
	3.0	22.095	2.782	1.2504	0.9989	
	4.0	22.854	2.734	1.3441	0.9974	
	5.0	23.626	2.686	1.4432	0.9950	
	6.0	24.441	2.638	1.5480	0.9916	
	7.0	25.270	2.591	1.6585	0.9870	
	8.0	26.122	2.543	1.7760	0.9811	
	9.0	26.999	2.495	1.8975	0.9738	
	10.0	27.899	2.448	2.0262	0.9651	
	11.0	28.824	2.399	2.1614	0.9550	
	12.0	29.774	2.351	2.3031	0.9434	
	13.0	30.749	2.302	2.4514	0.9304	
	14.0	31.748	2.253	2.6064	0.9150	
	15.0	32.775	2.203	2.7684	0.9003	
2.94	16.0	33.828	2.153	2.9373	0.8834	
	17.0	34.908	2.103	3.1134	0.8653	
	18.0	36.018	2.052	3.2966	0.8461	
	19.0	37.158	2.000	3.4873	0.8260	
	20.0	38.330	1.948	3.6857	0.8050	
	21.0	39.535	1.896	3.8918	0.7834	
	22.0	40.779	1.842	4.1061	0.7610	
	23.0	42.064	1.788	4.3288	0.7382	
	24.0	43.393	1.732	4.5604	0.7148	
	25.0	44.774	1.676	4.8017	0.6911	
	1.0	20.575	2.890	1.0788	1.0000	
	2.0	21.287	2.940	1.1624	0.9997	
	3.0	22.023	2.792	1.2512	0.9989	
	4.0	22.781	2.743	1.3452	0.9973	
5.0	23.562	2.695	1.4447	0.9949		
6.0	24.367	2.647	1.5499	0.9915		
7.0	25.196	2.600	1.6609	0.9868		
8.0	26.048	2.552	1.7778	0.9809		
9.0	26.924	2.504	1.9009	0.9736		
10.0	27.824	2.456	2.0303	0.9648		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT	
2.04	11.0	29.748	2.407	2.1660	0.9546		
	12.0	29.697	2.359	2.3084	0.9430		
	13.0	30.671	2.310	2.4574	0.9299		
	14.0	31.671	2.261	2.6132	0.9154		
	15.0	32.696	2.211	2.7759	0.9006		
	16.0	33.749	2.161	2.9457	0.8825		
	17.0	34.828	2.110	3.1226	0.8643		
	18.0	35.937	2.059	3.3068	0.8450		
	19.0	37.076	2.007	3.4984	0.8248		
	20.0	38.246	1.955	3.6978	0.8038		
	21.0	39.451	1.902	3.9049	0.7820		
	22.0	40.693	1.848	4.1202	0.7596		
	23.0	41.975	1.794	4.3440	0.7366		
	24.0	43.302	1.738	4.5768	0.7132		
	25.0	44.680	1.682	4.8191	0.6895		
	2.05	1.0	20.504	2.900	1.0790	1.0000	
		2.0	21.216	2.850	1.1630	0.9996	
3.0		21.951	2.801	1.2520	0.9988		
4.0		22.708	2.753	1.3464	0.9973		
5.0		23.489	2.704	1.4463	0.9949		
6.0		24.294	2.656	1.5518	0.9914		
7.0		25.122	2.608	1.6633	0.9867		
8.0		25.974	2.560	1.7807	0.9807		
9.0		26.849	2.512	1.9043	0.9734		
10.0		27.749	2.464	2.0343	0.9645		
11.0		28.673	2.416	2.1707	0.9543		
12.0		29.621	2.367	2.3137	0.9425		
13.0		30.595	2.318	2.4634	0.9293		
14.0		31.594	2.268	2.6199	0.9147		
15.0		32.619	2.218	2.7835	0.8988		
16.0		33.670	2.168	2.9541	0.8817		
17.0		34.740	2.117	3.1319	0.8633		
18.0	35.857	2.066	3.3170	0.8440			
19.0	36.994	2.014	3.5096	0.8236			

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
2.95	20.0	38.164	1.961	3.7099	0.8025	
	21.0	39.367	1.908	3.9181	0.7806	
	22.0	40.607	1.855	4.1344	0.7581	
	23.0	41.887	1.800	4.3503	0.7351	
	24.0	43.212	1.744	4.5621	0.7116	
	25.0	44.587	1.688	4.8365	0.6878	
	1.0	20.434	2.909	1.0793	1.0000	
	2.0	21.145	2.860	1.1635	0.9996	
	3.0	21.879	2.910	1.2528	0.9988	
	4.0	22.637	2.762	1.3476	0.9973	
2.96	5.0	23.417	2.713	1.4478	0.9949	
	6.0	24.221	2.665	1.5538	0.9913	
	7.0	25.049	2.617	1.6657	0.9865	
	8.0	25.900	2.569	1.7836	0.9806	
	9.0	26.775	2.521	1.9078	0.9721	
	10.0	27.674	2.472	2.0383	0.9643	
	11.0	28.598	2.424	2.1753	0.9579	
	12.0	29.546	2.375	2.3190	0.9521	
	13.0	30.519	2.325	2.4694	0.9469	
	14.0	31.517	2.276	2.6267	0.9414	
2.97	15.0	32.542	2.226	2.7910	0.9361	
	16.0	33.593	2.175	2.9625	0.9308	
	17.0	34.671	2.124	3.1412	0.9254	
	18.0	35.777	2.073	3.3272	0.9200	
	19.0	36.914	2.021	3.5208	0.9145	
	20.0	38.082	1.968	3.7221	0.9091	
	21.0	39.284	1.915	3.9313	0.9037	
	22.0	40.523	1.861	4.1487	0.8982	
	23.0	41.801	1.806	4.3747	0.8928	
	24.0	43.123	1.750	4.6096	0.8874	
2.97	25.0	44.495	1.694	4.8541	0.8820	
	1.0	20.364	2.919	1.0795	1.0000	
	2.0	21.075	2.869	1.1640	0.9996	
	3.0	21.808	2.820	1.2537	0.9988	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT	
2.97	4.0	22.565	2.771	1.3487	0.9973		
	5.0	23.345	2.722	1.4494	0.9948		
	6.0	24.149	2.674	1.5558	0.9913		
	7.0	24.976	2.626	1.6681	0.9865		
	8.0	25.827	2.577	1.7866	0.9804		
	9.0	26.702	2.529	1.9112	0.9729		
	10.0	27.601	2.480	2.0423	0.9640		
	11.0	28.524	2.432	2.1800	0.9535		
	12.0	29.471	2.382	2.3243	0.9416		
	13.0	30.444	2.332	2.4755	0.9282		
	14.0	31.442	2.283	2.6335	0.9134		
	15.0	32.466	2.233	2.7987	0.8973		
2.98	16.0	33.516	2.182	2.9709	0.8799		
	17.0	34.593	2.131	3.1505	0.8614		
	18.0	35.699	2.080	3.3375	0.8419		
	19.0	36.835	2.027	3.5320	0.8213		
	20.0	38.002	1.975	3.7343	0.7999		
	21.0	39.202	1.921	3.9446	0.7778		
	22.0	40.439	1.867	4.1631	0.7551		
	23.0	41.715	1.812	4.3901	0.7319		
	24.0	43.035	1.756	4.6261	0.7083		
	25.0	44.403	1.700	4.8717	0.6844		
	2.08	1.0	20.295	2.929	1.0798	1.0000	
	2.0	2.0	21.005	2.879	1.1645	0.9996	
3.0	3.0	21.738	2.829	1.2545	0.9989		
4.0	4.0	22.494	2.780	1.3499	0.9973		
5.0	5.0	23.274	2.732	1.4509	0.9948		
6.0	6.0	24.077	2.683	1.5577	0.9912		
7.0	7.0	24.904	2.634	1.6705	0.9864		
8.0	8.0	25.755	2.586	1.7895	0.9803		
9.0	9.0	26.629	2.537	1.9147	0.9727		
10.0	10.0	27.527	2.489	2.0464	0.9637		
11.0	11.0	28.450	2.440	2.1847	0.9532		
12.0	12.0	29.397	2.390	2.3297	0.9411		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.98	13.0	30.369	2.341	2.4815	0.9277	
	14.0	31.367	2.291	2.6404	0.9128	
	15.0	32.290	2.240	2.8063	0.8966	
	16.0	33.439	2.189	2.9794	0.8791	
	17.0	34.516	2.138	3.1599	0.8604	
	18.0	35.621	2.086	3.3477	0.8407	
	19.0	36.756	2.034	3.5433	0.8201	
	20.0	37.922	1.981	3.7466	0.7985	
	21.0	39.121	1.928	3.9579	0.7764	
	22.0	40.356	1.873	4.1774	0.7537	
2.99	23.0	41.630	1.818	4.4056	0.7304	
	24.0	42.947	1.762	4.6427	0.7067	
	25.0	44.313	1.705	4.8894	0.6827	
	1.0	20.276	2.939	1.0200	1.0000	
	2.0	20.936	2.889	1.1650	0.9995	
	3.0	21.468	2.839	1.2553	0.9988	
	4.0	22.424	2.790	1.3510	0.9972	
	5.0	23.203	2.741	1.4524	0.9947	
	6.0	24.006	2.692	1.5697	0.9911	
	7.0	24.833	2.643	1.6729	0.9863	
3.00	8.0	25.683	2.595	1.7924	0.9801	
	9.0	26.557	2.546	1.9181	0.9725	
	10.0	27.455	2.497	2.0504	0.9634	
	11.0	28.377	2.448	2.1893	0.9528	
	12.0	29.324	2.398	2.3350	0.9407	
	13.0	30.296	2.348	2.4876	0.9271	
	14.0	31.292	2.298	2.6472	0.9121	
	15.0	32.315	2.248	2.8139	0.8958	
	16.0	33.364	2.197	2.9879	0.8782	
	17.0	34.440	2.145	3.1693	0.8595	
3.01	18.0	35.544	2.093	3.3591	0.8396	
	19.0	36.678	2.041	3.5546	0.8189	
	20.0	37.842	1.988	3.7589	0.7973	
	21.0	39.040	1.934	3.9713	0.7750	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
2.99	22.0	40.274	1.880	4.1919	0.7522	
	23.0	41.546	1.824	4.4211	0.7288	
	24.0	42.861	1.768	4.6504	0.7050	
	25.0	44.224	1.711	4.9072	0.6810	
	3.00	1.0	20.158	2.949	1.0802	1.0000
3.00	2.0	20.867	2.898	1.1655	0.9996	
	3.0	21.599	2.848	1.2561	0.9988	
	4.0	22.354	2.799	1.3522	0.9972	
	5.0	23.133	2.750	1.4540	0.9947	
	6.0	23.936	2.701	1.5617	0.9910	
	7.0	24.762	2.652	1.6754	0.9862	
	8.0	25.612	2.603	1.7953	0.9799	
	9.0	26.485	2.554	1.9216	0.9722	
	10.0	27.383	2.505	2.0545	0.9631	
	11.0	28.305	2.456	2.1940	0.9524	
	12.0	29.251	2.406	2.3404	0.9402	
	13.0	30.222	2.356	2.4937	0.9266	
	14.0	31.219	2.306	2.6541	0.9115	
	15.0	32.241	2.255	2.8216	0.8950	
	16.0	33.289	2.204	2.9964	0.8773	
	17.0	34.364	2.152	3.1787	0.8585	
	18.0	35.467	2.100	3.3684	0.8386	
	19.0	36.600	2.047	3.5659	0.8177	
	20.0	37.764	1.994	3.7713	0.7960	
	21.0	38.960	1.940	3.9847	0.7736	
22.0	40.192	1.886	4.2064	0.7507		
23.0	41.463	1.831	4.4367	0.7272		
24.0	42.776	1.774	4.6761	0.7034		
25.0	44.136	1.717	4.9251	0.6793		
3.01	1.0	20.090	2.958	1.0805	1.0000	
	2.0	20.799	2.908	1.1660	0.9996	
	3.0	21.530	2.858	1.2570	0.9988	
	4.0	22.285	2.808	1.3534	0.9977	
	5.0	23.064	2.759	1.4555	0.9966	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.01	6.0	23.866	2.710	1.5636	0.9910	
	7.0	24.601	2.661	1.6778	0.9960	
	8.0	25.541	2.612	1.7093	0.9799	
	9.0	26.414	2.562	1.9251	0.9720	
	10.0	27.311	2.513	2.0586	0.9628	
	11.0	28.233	2.464	2.1987	0.9520	
	12.0	29.179	2.414	2.3458	0.9398	
	13.0	30.150	2.364	2.4998	0.9260	
	14.0	31.146	2.313	2.6609	0.9108	
	15.0	32.167	2.262	2.8293	0.8943	
	16.0	33.215	2.211	3.0050	0.8765	
	17.0	34.289	2.159	3.1882	0.8575	
	18.0	35.392	2.107	3.3789	0.8374	
	19.0	36.523	2.054	3.5773	0.8165	
	20.0	37.686	2.001	3.7837	0.7947	
	21.0	38.881	1.947	3.9981	0.7722	
	22.0	40.112	1.892	4.2209	0.7492	
23.0	41.380	1.837	4.4524	0.7257		
24.0	42.681	1.780	4.6929	0.7018		
25.0	44.049	1.723	4.9430	0.6776		
3.02	1.0	20.073	2.968	1.0907	1.0000	
	2.0	20.731	2.917	1.1666	0.9996	
	3.0	21.462	2.867	1.2578	0.9988	
	4.0	22.216	2.817	1.3545	0.9972	
	5.0	22.995	2.768	1.4571	0.9946	
	6.0	23.796	2.719	1.5656	0.9909	
	7.0	24.622	2.669	1.6802	0.9859	
	8.0	25.470	2.620	1.8012	0.9796	
	9.0	26.343	2.571	1.9286	0.9718	
	10.0	27.240	2.521	2.0626	0.9625	
	11.0	28.162	2.472	2.2035	0.9517	
	12.0	29.107	2.422	2.3512	0.9393	
	13.0	30.078	2.371	2.5059	0.9254	
	14.0	31.073	2.321	2.6678	0.9102	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.02	15.0	32.094	2.269	2.8370	0.8935	
	16.0	33.141	2.218	3.0136	0.8756	
	17.0	34.215	2.166	3.1976	0.8565	
	18.0	35.317	2.113	3.3892	0.8363	
	19.0	36.447	2.061	3.5887	0.8153	
	20.0	37.609	2.007	3.7961	0.7934	
	21.0	38.803	1.953	4.0116	0.7709	
	22.0	40.032	1.899	4.2355	0.7477	
	23.0	41.298	1.843	4.4681	0.7241	
	24.0	42.607	1.786	4.7097	0.7001	
3.03	25.0	43.963	1.729	4.9610	0.6758	
	1.0	19.956	2.978	1.0810	1.0000	
	2.0	20.663	2.927	1.1671	0.9996	
	3.0	21.394	2.876	1.2586	0.9988	
	4.0	22.148	2.827	1.3557	0.9971	
	5.0	22.926	2.777	1.4586	0.9945	
	6.0	23.727	2.727	1.5676	0.9908	
	7.0	24.552	2.678	1.6827	0.9859	
	8.0	25.401	2.629	1.8041	0.9794	
	9.0	26.273	2.579	1.9321	0.9716	
	10.0	27.170	2.529	2.0661	0.9622	
	11.0	28.091	2.480	2.2082	0.9513	
	12.0	29.036	2.429	2.3566	0.9389	
	13.0	30.006	2.379	2.5121	0.9249	
	14.0	31.001	2.328	2.6748	0.9095	
	15.0	32.021	2.277	2.8448	0.8927	
	16.0	33.068	2.225	3.0222	0.8747	
	17.0	34.141	2.173	3.2072	0.8555	
	18.0	35.242	2.120	3.3998	0.8352	
	19.0	36.372	2.067	3.6002	0.8141	
	20.0	37.533	2.013	3.8086	0.7921	
	21.0	38.725	1.959	4.0252	0.7694	
	22.0	39.953	1.904	4.2502	0.7462	
	23.0	41.218	1.849	4.4830	0.7225	



TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

MI	DELTA	THETA	M2	P2/P1	PT?/PT1	COMMENT
3.03	24.0	42.525	1.792	4.7267	0.6984	
	25.0	43.878	1.735	4.9791	0.6741	
3.04	1.0	19.889	2.988	1.0812	1.0000	
	2.0	20.596	2.937	1.1676	0.9996	
	3.0	21.327	2.886	1.2594	0.9987	
	4.0	22.081	2.836	1.3569	0.9971	
	5.0	22.858	2.786	1.4602	0.9945	
	6.0	23.659	2.736	1.5696	0.9907	
	7.0	24.483	2.687	1.6851	0.9857	
	8.0	25.332	2.637	1.8071	0.9793	
	9.0	26.204	2.587	1.9356	0.9713	
	10.0	27.100	2.538	2.0708	0.9619	
	11.0	28.021	2.488	2.2129	0.9509	
	12.0	28.966	2.437	2.3620	0.9383	
	13.0	29.935	2.386	2.5182	0.9243	
	14.0	30.930	2.335	2.6817	0.9088	
15.0	31.950	2.284	2.8525	0.8919		
16.0	32.996	2.232	3.0309	0.8738		
17.0	34.068	2.180	3.2167	0.8545		
18.0	35.169	2.127	3.4103	0.8341		
19.0	36.297	2.074	3.6117	0.8129		
20.0	37.457	2.020	3.8212	0.7908		
21.0	38.648	1.965	4.0388	0.7680		
22.0	39.875	1.910	4.2649	0.7447		
23.0	41.138	1.855	4.4997	0.7209		
24.0	42.443	1.798	4.7437	0.6968		
25.0	43.793	1.740	4.9973	0.6724		
3.05	1.0	19.823	2.998	1.0814	1.0000	
	2.0	20.530	2.946	1.1681	0.9996	
	3.0	21.260	2.895	1.2603	0.9987	
	4.0	22.013	2.845	1.3581	0.9971	
	5.0	22.790	2.795	1.4618	0.9945	
	6.0	23.591	2.745	1.5715	0.9907	
	7.0	24.415	2.695	1.6876	0.9855	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

MY	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
3.05	8.0	25.263	2.646	1.8100	0.9791	
	9.0	26.135	2.596	1.9391	0.9711	
	10.0	27.031	2.546	2.0749	0.9616	
	11.0	27.951	2.495	2.2177	0.9505	
	12.0	28.896	2.445	2.3675	0.9379	
	13.0	29.865	2.394	2.5244	0.9237	
	14.0	30.859	2.343	2.6887	0.9081	
	15.0	31.878	2.291	2.8603	0.8912	
	16.0	32.924	2.239	3.0395	0.8729	
	17.0	33.996	2.187	3.2263	0.8535	
	18.0	35.096	2.134	3.4208	0.8330	
	19.0	36.223	2.080	3.6232	0.8116	
	20.0	37.382	2.026	3.8337	0.7894	
	21.0	38.572	1.972	4.0525	0.7666	
	22.0	39.797	1.917	4.2797	0.7432	
	23.0	41.059	1.861	4.5156	0.7193	
24.0	42.362	1.804	4.7607	0.6951		
25.0	43.710	1.746	5.0155	0.6707		
3.06	1.0	19.758	3.007	1.0817	1.0000	
	2.0	20.464	2.956	1.1686	0.9996	
	3.0	21.194	2.905	1.2611	0.9987	
	4.0	21.946	2.854	1.3592	0.9971	
	5.0	22.723	2.804	1.4632	0.9944	
	6.0	23.523	2.754	1.5735	0.9906	
	7.0	24.347	2.704	1.6900	0.9855	
	8.0	25.195	2.654	1.8130	0.9789	
	9.0	26.066	2.604	1.9426	0.9709	
	10.0	26.962	2.554	2.0791	0.9613	
	11.0	27.882	2.503	2.2224	0.9501	
	12.0	28.826	2.453	2.3729	0.9374	
	13.0	29.795	2.402	2.5306	0.9232	
	14.0	30.789	2.350	2.6956	0.9075	
	15.0	31.808	2.298	2.8681	0.8904	
	16.0	32.853	2.246	3.0482	0.8720	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.06	17.0	33.924	2.194	3.2359	0.8525	
	18.0	35.023	2.140	3.4314	0.8319	
	19.0	36.150	2.087	3.6348	0.8104	
	20.0	37.308	2.033	3.8462	0.7881	
	21.0	38.497	1.978	4.0662	0.7652	
	22.0	39.720	1.923	4.2945	0.7417	
	23.0	40.981	1.867	4.5316	0.7177	
	24.0	42.281	1.810	4.7779	0.6935	
	25.0	43.627	1.752	5.0338	0.6690	
	3.07	1.0	19.693	3.017	1.0819	1.0000
3.07	2.0	20.399	2.965	1.1692	0.9994	
	3.0	21.128	2.914	1.2619	0.9987	
	4.0	21.880	2.863	1.3606	0.9970	
	5.0	22.655	2.813	1.4649	0.9944	
	6.0	23.456	2.763	1.5755	0.9905	
	7.0	24.280	2.713	1.6925	0.9853	
	8.0	25.127	2.663	1.8160	0.9787	
	9.0	25.999	2.612	1.9461	0.9704	
	10.0	26.894	2.562	2.0832	0.9610	
	11.0	27.813	2.511	2.2272	0.9497	
	12.0	28.757	2.460	2.3784	0.9369	
	13.0	29.726	2.409	2.5368	0.9226	
	14.0	30.719	2.358	2.7026	0.9068	
	15.0	31.738	2.306	2.8759	0.8894	
	16.0	32.782	2.253	3.0569	0.8711	
	17.0	33.853	2.200	3.2455	0.8515	
	18.0	34.951	2.147	3.4420	0.8308	
	19.0	36.078	2.093	3.6464	0.8092	
	20.0	37.234	2.039	3.8590	0.7868	
	21.0	38.422	1.984	4.0799	0.7637	
	22.0	39.644	1.929	4.3092	0.7401	
	23.0	40.903	1.873	4.5476	0.7161	
	24.0	42.202	1.816	4.7951	0.6918	
	25.0	43.546	1.758	5.0522	0.6672	

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TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/PI	PT2/PT1	COMMENT
3.09	1.0	19.628	3.027	1.0822	0.9999	
	2.0	20.333	2.975	1.1697	0.9996	
	3.0	21.062	2.924	1.2628	0.9987	
	4.0	21.814	2.873	1.3616	0.9970	
	5.0	22.590	2.822	1.4665	0.9943	
	6.0	23.390	2.772	1.5775	0.9904	
	7.0	24.213	2.721	1.6950	0.9852	
	8.0	25.060	2.671	1.8199	0.9786	
	9.0	25.931	2.621	1.9497	0.9704	
	10.0	26.826	2.570	2.0873	0.9607	
	11.0	27.745	2.519	2.2320	0.9493	
	12.0	28.689	2.468	2.3839	0.9364	
	13.0	29.657	2.417	2.5430	0.9220	
	14.0	30.650	2.365	2.7096	0.9061	
3.09	15.0	31.668	2.313	2.8838	0.8888	
	16.0	32.712	2.260	3.0656	0.8702	
	17.0	33.782	2.207	3.2552	0.8505	
	18.0	34.880	2.154	3.4526	0.8297	
	19.0	36.006	2.100	3.6581	0.8080	
	20.0	37.161	2.045	3.8717	0.7855	
	21.0	38.348	1.990	4.0937	0.7623	
	22.0	39.569	1.935	4.3243	0.7386	
	23.0	40.926	1.878	4.5637	0.7145	
	24.0	42.323	1.821	4.8123	0.6901	
	25.0	43.765	1.763	5.0707	0.6655	
	1.0	19.564	3.037	1.0824	0.9999	
	2.0	20.269	2.985	1.1702	0.9996	
	3.0	20.997	2.933	1.2636	0.9987	
4.0	21.749	2.882	1.3628	0.9970		
5.0	22.524	2.831	1.4680	0.9943		
6.0	23.324	2.781	1.5795	0.9903		
7.0	24.147	2.730	1.6976	0.9851		
8.0	24.993	2.680	1.8219	0.9784		
9.0	25.864	2.629	1.9532	0.9702		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PY2/PY1	COMMENT	
3.00	10.0	26.759	2.578	2.0915	0.0604		
	11.0	27.678	2.527	2.2368	0.0688		
	12.0	28.621	2.476	2.3894	0.0760		
	13.0	29.589	2.424	2.5493	0.0814		
	14.0	30.582	2.372	2.7167	0.0854		
	15.0	31.599	2.320	2.8917	0.0880		
	16.0	32.643	2.267	3.0744	0.0893		
	17.0	33.712	2.214	3.2649	0.0894		
	18.0	34.809	2.160	3.4633	0.0885		
	19.0	35.934	2.104	3.6697	0.0867		
	20.0	37.089	2.052	3.8845	0.0831		
	21.0	38.275	1.997	4.1076	0.0769		
	22.0	39.494	1.941	4.3392	0.0737		
	23.0	40.750	1.884	4.5798	0.0712		
	24.0	42.045	1.827	4.8297	0.0684		
	25.0	43.385	1.769	5.0892	0.0638		
	3.10	1.0	19.500	3.047	1.0827	0.0000	
		2.0	20.205	2.904	1.1707	0.0006	
3.0		20.933	2.762	1.2644	0.0087		
4.0		21.684	2.601	1.3640	0.0370		
5.0		22.459	2.440	1.4696	0.0947		
6.0		23.258	2.289	1.5815	0.0903		
7.0		24.081	2.139	1.6999	0.0950		
8.0		24.927	2.088	1.8248	0.0982		
9.0		25.798	2.037	1.9568	0.0999		
10.0		26.692	2.086	2.0956	0.0980		
11.0		27.611	2.035	2.2416	0.0985		
12.0		28.554	2.084	2.3949	0.0955		
13.0		29.521	2.032	2.5555	0.0909		
14.0		30.514	2.080	2.7237	0.0947		
15.0		31.531	2.027	2.8996	0.0972		
16.0		32.574	2.074	3.0831	0.0984		
17.0		33.643	2.021	3.2746	0.0984		
18.0		34.739	2.067	3.4740	0.0974		

TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

W1	DELTA	THETA	W2	P7/P1	P7/P01	COMMENT
3.10	19.0	35.863	2.113	3.6815	0.8055	
	20.0	37.017	2.058	3.8072	0.7828	
	21.0	38.202	2.003	4.1216	0.7594	
	22.0	39.421	1.947	4.3543	0.7356	
	23.0	40.675	1.890	4.5960	0.7113	
	24.0	41.968	1.833	4.8470	0.6868	
	25.0	43.306	1.775	5.1078	0.6620	
	1.0	19.437	3.056	1.0820	0.0090	
	2.0	20.141	3.004	1.1712	0.0096	
	3.0	20.869	2.952	1.2653	0.0097	
3.11	4.0	21.620	2.900	1.3652	0.0069	
	5.0	22.304	2.840	1.4712	0.0042	
	6.0	23.103	2.798	1.5835	0.0002	
	7.0	24.015	2.747	1.7024	0.0049	
	8.0	24.962	2.697	1.8279	0.0780	
	9.0	25.732	2.646	1.9603	0.0697	
	10.0	26.626	2.594	2.0998	0.0507	
	11.0	27.545	2.543	2.2464	0.0482	
	12.0	28.487	2.491	2.4004	0.0350	
	13.0	29.454	2.430	2.5618	0.0202	
3.12	14.0	30.446	2.387	2.7308	0.0040	
	15.0	31.463	2.334	2.9075	0.0064	
	16.0	32.506	2.281	3.0920	0.0675	
	17.0	33.574	2.228	3.2843	0.0674	
	18.0	34.670	2.176	3.4847	0.0263	
	19.0	35.793	2.119	3.6932	0.0042	
	20.0	36.946	2.064	3.9101	0.7914	
	21.0	38.120	2.000	4.1354	0.7580	
	22.0	39.327	1.953	4.3694	0.7340	
	23.0	40.600	1.906	4.6123	0.7097	
3.13	24.0	41.992	1.839	4.8645	0.6951	
	25.0	43.227	1.780	5.1265	0.6603	
	1.0	19.374	3.066	1.0832	0.0000	
	2.0	20.078	3.013	1.1718	0.0304	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.12	3.0	20.805	2.961	1.2661	0.9987	
	4.0	21.556	2.910	1.3663	0.9969	
	5.0	22.330	2.858	1.4728	0.9941	
	6.0	23.128	2.807	1.5855	0.9901	
	7.0	23.951	2.756	1.7049	0.9847	
	8.0	24.796	2.705	1.8309	0.9779	
	9.0	25.666	2.654	1.9639	0.9694	
	10.0	26.560	2.603	2.1040	0.9594	
	11.0	27.470	2.551	2.2513	0.9478	
	12.0	28.421	2.499	2.4059	0.9345	
	13.0	29.428	2.447	2.5681	0.9197	
	14.0	30.479	2.394	2.7379	0.9033	
	15.0	31.576	2.342	2.9154	0.8856	
	16.0	32.718	2.288	3.1008	0.8666	
3.13	17.0	33.906	2.235	3.2941	0.8464	
	18.0	35.141	2.180	3.4955	0.8251	
	19.0	36.424	2.126	3.7050	0.8030	
	20.0	37.756	2.071	3.9229	0.7801	
	21.0	39.139	2.015	4.1494	0.7565	
	22.0	40.575	1.959	4.3845	0.7325	
	23.0	42.066	1.902	4.6286	0.7081	
	24.0	43.617	1.844	4.8920	0.6834	
	25.0	45.235	1.786	5.1652	0.6585	
	1.0	19.312	3.076	1.0824	0.9999	
	2.0	20.015	3.023	1.1723	0.9996	
	3.0	20.742	2.971	1.2669	0.9987	
	4.0	21.492	2.919	1.3675	0.9969	
	5.0	22.266	2.867	1.4743	0.9941	
6.0	23.064	2.816	1.5875	0.9900		
7.0	23.886	2.765	1.7073	0.9846		
8.0	24.732	2.713	1.8339	0.9777		
9.0	25.601	2.662	1.9675	0.9692		
10.0	26.495	2.611	2.1081	0.9591		
11.0	27.413	2.559	2.2561	0.9474		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P7/P1	P72/P71	COMMENT
3.13	12.0	29.355	2.507	2.4115	0.9340	
	13.0	29.322	2.454	2.5744	0.9191	
	14.0	30.313	2.402	2.7450	0.9076	
	15.0	31.329	2.349	2.9234	0.8949	
	16.0	32.371	2.295	3.1096	0.8857	
	17.0	33.438	2.241	3.3039	0.8793	
	18.0	34.534	2.187	3.5063	0.8740	
	19.0	35.655	2.132	3.7169	0.8698	
	20.0	36.806	2.077	3.9359	0.8667	
	21.0	37.988	2.021	4.1634	0.8645	
	22.0	39.203	1.965	4.4007	0.8630	
	23.0	40.453	1.908	4.6450	0.8621	
	24.0	41.742	1.850	4.8964	0.8617	
	25.0	43.073	1.791	5.1640	0.8618	
3.14	1.0	19.250	3.084	1.0824	0.9999	
	2.0	19.953	3.033	1.1728	0.9994	
	3.0	20.679	2.980	1.2678	0.9984	
	4.0	21.429	2.928	1.3687	0.9969	
	5.0	22.203	2.876	1.4759	0.9940	
	6.0	23.000	2.825	1.5896	0.9899	
	7.0	23.822	2.773	1.7098	0.9845	
	8.0	24.667	2.722	1.8369	0.9775	
	9.0	25.537	2.670	1.9710	0.9690	
	10.0	26.431	2.619	2.1123	0.9598	
	11.0	27.348	2.567	2.2610	0.9460	
	12.0	28.290	2.515	2.4170	0.9275	
	13.0	29.256	2.462	2.5807	0.9145	
	14.0	30.247	2.409	2.7521	0.9019	
15.0	31.263	2.356	2.9314	0.8890		
16.0	32.304	2.302	3.1185	0.8747		
17.0	33.371	2.248	3.3138	0.8583		
18.0	34.465	2.194	3.5171	0.8400		
19.0	35.587	2.139	3.7287	0.8205		
20.0	36.737	2.083	3.9488	0.7994		



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.14	21.0	27.918	2.027	4.1775	0.7536	
	22.0	29.132	1.971	4.4149	0.7224	
	23.0	40.391	1.914	4.6614	0.7048	
	24.0	41.668	1.856	4.9172	0.6900	
	25.0	42.997	1.797	5.1829	0.6550	
3.15	1.0	19.188	3.096	1.0830	0.9999	
	2.0	19.991	3.042	1.1733	0.9996	
	3.0	20.617	2.989	1.2686	0.9986	
	4.0	21.366	2.937	1.3699	0.9969	
	5.0	22.140	2.885	1.4775	0.9940	
	6.0	22.937	2.834	1.5916	0.9899	
	7.0	23.759	2.782	1.7123	0.9844	
	8.0	24.604	2.730	1.8399	0.9773	
	9.0	25.473	2.679	1.9746	0.9687	
	10.0	26.366	2.627	2.1165	0.9585	
	11.0	27.284	2.575	2.2658	0.9465	
	12.0	28.225	2.522	2.4226	0.9330	
	13.0	29.191	2.469	2.5871	0.9179	
	14.0	30.182	2.416	2.7593	0.9012	
	15.0	31.197	2.363	2.9394	0.8832	
16.0	32.238	2.309	3.1274	0.8638		
17.0	33.305	2.255	3.3236	0.8433		
18.0	34.398	2.200	3.5280	0.8217		
19.0	35.519	2.145	3.7406	0.7992		
20.0	36.669	2.089	3.9618	0.7760		
21.0	37.849	2.033	4.1916	0.7522		
22.0	39.062	1.977	4.4302	0.7279		
23.0	40.309	1.919	4.6779	0.7032		
24.0	41.594	1.861	4.9350	0.6782		
25.0	42.922	1.802	5.2019	0.6533		
3.16	1.0	19.127	3.105	1.0841	0.9999	
	2.0	19.829	3.052	1.1739	0.9996	
	3.0	20.555	2.999	1.2694	0.9986	
	4.0	21.294	2.946	1.3711	0.9968	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.16	5.0	22.077	2.894	1.4791	0.9939	
	6.0	22.874	2.842	1.5936	0.9898	
	7.0	23.696	2.791	1.7148	0.9842	
	8.0	24.540	2.739	1.8430	0.9772	
	9.0	25.409	2.687	1.9782	0.9685	
	10.0	26.303	2.635	2.1208	0.9581	
	11.0	27.220	2.582	2.2707	0.9461	
	12.0	28.161	2.530	2.4282	0.9325	
	13.0	29.127	2.477	2.5934	0.9173	
	14.0	30.117	2.424	2.7664	0.9005	
	15.0	31.132	2.370	2.9474	0.8823	
	16.0	32.173	2.316	3.1364	0.8629	
	17.0	33.230	2.262	3.3335	0.8422	
	18.0	34.312	2.207	3.5399	0.8206	
3.17	19.0	35.422	2.151	3.7527	0.7980	
	20.0	36.601	2.096	3.9748	0.7747	
	21.0	37.780	2.039	4.2058	0.7507	
	22.0	38.992	1.983	4.4455	0.7263	
	23.0	40.238	1.925	4.6944	0.7016	
	24.0	41.522	1.867	4.9527	0.6766	
	25.0	42.847	1.808	5.2209	0.6515	
	1.0	19.067	3.115	1.0844	0.9999	
	2.0	19.768	3.061	1.1744	0.9996	
	3.0	20.493	3.008	1.2703	0.9986	
	4.0	21.242	2.956	1.3723	0.9968	
	5.0	22.015	2.903	1.4807	0.9939	
	6.0	22.812	2.851	1.5956	0.9897	
	7.0	23.633	2.799	1.7172	0.9841	
8.0	24.478	2.747	1.8460	0.9770		
9.0	25.346	2.695	1.9818	0.9682		
10.0	26.239	2.643	2.1250	0.9578		
11.0	27.156	2.590	2.2756	0.9457		
12.0	28.097	2.538	2.4338	0.9320		
13.0	29.063	2.486	2.5998	0.9167		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.17	14.0	30.053	2.431	2.7736	0.8909	
	15.0	31.068	2.377	2.9554	0.9815	
	16.0	32.108	2.323	3.1453	0.8419	
	17.0	33.174	2.268	3.3424	0.9412	
	18.0	34.266	2.213	3.5408	0.8194	
	19.0	35.386	2.158	3.7646	0.7967	
	20.0	36.534	2.102	3.9879	0.7733	
	21.0	37.712	2.045	4.2200	0.7493	
	22.0	38.922	1.988	4.4609	0.7249	
	23.0	40.167	1.931	4.7110	0.7000	
3.18	24.0	41.450	1.873	4.9706	0.6749	
	25.0	42.773	1.813	5.2400	0.6498	
	1.0	19.006	3.125	1.0846	0.9999	
	2.0	19.707	3.071	1.1749	0.9996	
	3.0	20.432	3.018	1.2711	0.9986	
	4.0	21.181	2.965	1.3735	0.9968	
	5.0	21.953	2.912	1.4822	0.9938	
	6.0	22.750	2.860	1.5976	0.9896	
	7.0	23.571	2.808	1.7199	0.9840	
	8.0	24.415	2.756	1.8490	0.9768	
3.19	9.0	25.284	2.703	1.9854	0.9680	
	10.0	26.176	2.651	2.1292	0.9575	
	11.0	27.093	2.598	2.2805	0.9453	
	12.0	28.034	2.545	2.4304	0.9315	
	13.0	28.999	2.492	2.6062	0.9161	
	14.0	29.989	2.438	2.7808	0.8991	
	15.0	31.004	2.384	2.9635	0.8807	
	16.0	32.043	2.330	3.1543	0.8610	
	17.0	33.109	2.275	3.3524	0.8401	
	18.0	34.200	2.220	3.5608	0.8182	
3.20	19.0	35.320	2.164	3.7767	0.7954	
	20.0	36.467	2.108	4.0010	0.7719	
	21.0	37.644	2.051	4.2342	0.7478	
	22.0	38.854	1.994	4.4764	0.7232	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
3.19	23.0	40.098	1.977	4.7277	0.6983	
	24.0	41.378	1.878	4.0985	0.6732	
	25.0	42.700	1.819	5.2592	0.6480	
3.19	1.0	18.946	3.135	1.0949	0.9000	
	2.0	19.647	3.080	1.1754	0.9096	
	3.0	20.372	3.027	1.2720	0.9086	
3.19	4.0	21.120	2.974	1.3747	0.9067	
	5.0	21.892	2.921	1.4839	0.9038	
	6.0	22.689	2.869	1.5997	0.9005	
3.19	7.0	23.509	2.816	1.7224	0.9839	
	8.0	24.353	2.764	1.8521	0.9765	
	9.0	25.222	2.712	1.9891	0.9677	
3.19	10.0	26.114	2.659	2.1334	0.9572	
	11.0	27.031	2.606	2.2854	0.9449	
	12.0	27.971	2.552	2.4451	0.9310	
3.19	13.0	28.936	2.499	2.6126	0.9154	
	14.0	29.926	2.446	2.7881	0.8984	
	15.0	30.940	2.391	2.9716	0.8799	
3.19	16.0	31.979	2.337	3.1622	0.8601	
	17.0	33.044	2.282	3.3634	0.8391	
	18.0	34.136	2.226	3.5718	0.8171	
3.19	19.0	35.254	2.171	3.7887	0.7942	
	20.0	36.401	2.114	4.0142	0.7706	
	21.0	37.578	2.058	4.2485	0.7463	
3.19	22.0	38.786	2.000	4.4919	0.7217	
	23.0	40.028	1.942	4.7444	0.6967	
	24.0	41.308	1.884	5.0065	0.6715	
3.19	25.0	42.628	1.824	5.2785	0.6463	
	1.0	19.887	3.145	1.0851	0.9099	
	2.0	19.587	3.090	1.1760	0.9096	
3.20	3.0	20.311	3.026	1.2728	0.9086	
	4.0	21.059	2.983	1.3750	0.9067	
	5.0	21.831	2.930	1.4854	0.9037	
3.20	6.0	22.627	2.878	1.6017	0.8994	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.20	7.0	23.448	2.825	1.7249	0.9837	
	8.0	24.202	2.772	1.8551	0.9764	
	9.0	25.160	2.720	1.9927	0.9675	
	10.0	26.052	2.667	2.1377	0.9568	
	11.0	26.969	2.614	2.2903	0.9445	
	12.0	27.909	2.560	2.4507	0.9305	
	13.0	28.874	2.507	2.6190	0.9148	
	14.0	29.863	2.453	2.7953	0.8977	
	15.0	30.877	2.398	2.9797	0.8790	
	16.0	31.916	2.344	3.1724	0.8591	
	17.0	32.980	2.298	3.3734	0.8380	
	18.0	34.071	2.233	3.5828	0.8159	
	19.0	35.189	2.177	3.8008	0.7929	
	20.0	36.325	2.120	4.0274	0.7692	
	3.21	21.0	37.511	2.064	4.2629	0.7449
22.0		38.719	2.006	4.5074	0.7201	
23.0		39.960	1.948	4.7612	0.6951	
24.0		41.238	1.889	5.0245	0.6698	
25.0		42.556	1.830	5.2978	0.6445	
1.0		19.828	3.154	1.0854	0.9999	
2.0		19.528	3.100	1.1765	0.9995	
3.0		20.251	3.046	1.2737	0.9985	
4.0		20.999	2.992	1.3771	0.9967	
5.0		21.771	2.939	1.4870	0.9937	
6.0		22.567	2.886	1.6037	0.9894	
7.0		23.397	2.834	1.7274	0.9836	
8.0		24.271	2.781	1.8582	0.9762	
9.0		25.099	2.728	1.9963	0.9672	
10.0		25.991	2.675	2.1419	0.9565	
11.0	26.907	2.622	2.2953	0.9441		
12.0	27.847	2.568	2.4564	0.9300		
13.0	28.812	2.514	2.6254	0.9142		
14.0	29.801	2.460	2.8026	0.8969		
15.0	30.814	2.405	2.9879	0.8782		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.21	16.0	31.852	2.351	3.1814	0.8582	
	17.0	32.917	2.205	3.3824	0.8370	
	18.0	34.008	2.239	3.5020	0.8147	
	19.0	35.125	2.183	3.8129	0.7916	
	20.0	36.270	2.127	4.0406	0.7678	
	21.0	37.445	2.069	4.2773	0.7434	
	22.0	38.652	2.012	4.5220	0.7196	
	23.0	39.892	1.954	4.7780	0.6934	
	24.0	41.169	1.895	5.0426	0.6681	
	25.0	42.485	1.835	5.3171	0.6428	
3.22	1.0	18.769	3.164	1.0856	0.9009	
	2.0	19.468	3.109	1.1770	0.8994	
	3.0	20.192	3.055	1.2745	0.8985	
	4.0	20.939	3.001	1.3782	0.8966	
	5.0	21.711	2.948	1.4886	0.8936	
	6.0	22.506	2.895	1.6058	0.8893	
	7.0	23.326	2.842	1.7299	0.8835	
	8.0	24.170	2.789	1.8612	0.8761	
	9.0	25.039	2.736	1.9999	0.8670	
	10.0	25.930	2.683	2.1462	0.8562	
3.23	11.0	26.846	2.630	2.3002	0.8437	
	12.0	27.786	2.576	2.4620	0.8294	
	13.0	28.750	2.522	2.6319	0.8136	
	14.0	29.739	2.467	2.8099	0.8062	
	15.0	30.752	2.413	2.9960	0.8774	
	16.0	31.791	2.357	3.1905	0.8572	
	17.0	32.854	2.302	3.3935	0.8359	
	18.0	33.944	2.246	3.6050	0.8136	
	19.0	35.061	2.190	3.8251	0.7904	
	20.0	36.206	2.133	4.0520	0.7664	
3.24	21.0	37.380	2.075	4.2917	0.7419	
	22.0	38.586	2.018	4.5396	0.7170	
	23.0	39.825	1.960	4.7949	0.6918	
	24.0	41.100	1.900	5.0607	0.6664	

TWO-DIMENSIONAL ORBITAL SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.22	25.0	42.615	1.841	5.3366	0.6410	
	1.0	18.711	3.174	1.0859	0.9999	
3.23	2.0	19.410	3.119	1.1775	0.9996	
	3.0	20.133	3.064	1.2753	0.9985	
4.0	4.0	20.880	3.011	1.3795	0.9966	
	5.0	21.651	2.957	1.4902	0.9936	
5.0	6.0	22.447	2.904	1.6078	0.9892	
	7.0	23.266	2.851	1.7325	0.9833	
8.0	8.0	24.110	2.798	1.8643	0.9759	
	9.0	24.977	2.744	2.0036	0.9667	
10.0	10.0	25.869	2.691	2.1505	0.9558	
	11.0	26.785	2.637	2.3052	0.9432	
12.0	12.0	27.725	2.583	2.4677	0.9289	
	13.0	28.689	2.529	2.6384	0.9130	
14.0	14.0	29.678	2.474	2.8171	0.8955	
	15.0	30.691	2.420	3.0042	0.8765	
16.0	16.0	31.729	2.364	3.1986	0.8563	
	17.0	32.792	2.308	3.4024	0.8348	
18.0	18.0	33.882	2.252	3.6161	0.8124	
	19.0	34.998	2.196	3.8373	0.7891	
20.0	20.0	36.142	2.139	4.0672	0.7650	
	21.0	37.316	2.081	4.3062	0.7405	
22.0	22.0	38.520	2.023	4.5543	0.7154	
	23.0	39.759	1.965	4.8118	0.6902	
24.0	24.0	41.032	1.906	5.0789	0.6647	
	25.0	42.346	1.846	5.3561	0.6392	
3.24	1.0	18.653	3.184	1.0961	0.9999	
	2.0	19.351	3.128	1.1781	0.9996	
3.0	3.0	20.074	3.074	1.2762	0.9985	
	4.0	20.821	3.020	1.3807	0.9966	
5.0	5.0	21.592	2.966	1.4918	0.9935	
	6.0	22.387	2.913	1.6099	0.9891	
7.0	7.0	23.207	2.859	1.7350	0.9832	
	8.0	24.050	2.806	1.8674	0.9757	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.24	9.0	24.917	2.753	2.0072	0.9665	
	10.0	25.809	2.609	2.1548	0.9555	
	11.0	26.725	2.645	2.3101	0.9428	
	12.0	27.664	2.591	2.4734	0.9284	
	13.0	28.628	2.537	2.6448	0.9124	
	14.0	29.617	2.482	2.8245	0.8948	
	15.0	30.630	2.427	3.0124	0.8757	
	16.0	31.667	2.371	3.2088	0.8553	
	17.0	32.730	2.315	3.4137	0.8338	
	18.0	33.819	2.259	3.6272	0.8112	
	19.0	34.935	2.202	3.8485	0.7878	
	20.0	36.070	2.145	4.0806	0.7637	
	21.0	37.251	2.087	4.3208	0.7390	
	22.0	38.455	2.029	4.5701	0.7139	
3.25	23.0	39.682	1.971	4.8288	0.6885	
	24.0	40.965	1.911	5.0972	0.6630	
	25.0	42.277	1.851	5.3757	0.6375	
	1.0	18.595	3.193	1.0864	0.9009	
	2.0	19.293	3.138	1.1786	0.8995	
	3.0	20.016	3.083	1.2770	0.8985	
	4.0	20.762	3.029	1.3810	0.8966	
	5.0	21.533	2.975	1.4935	0.8935	
	6.0	22.328	2.921	1.6119	0.8890	
	7.0	23.147	2.868	1.7375	0.8831	
	8.0	23.990	2.814	1.8704	0.8755	
	9.0	24.858	2.761	2.0109	0.8662	
	10.0	25.749	2.707	2.1591	0.8552	
	11.0	26.665	2.653	2.3151	0.8424	
12.0	27.604	2.599	2.4791	0.8279		
13.0	28.568	2.544	2.6513	0.8117		
14.0	29.556	2.489	2.8318	0.7940		
15.0	30.569	2.434	3.0206	0.7749		
16.0	31.606	2.378	3.2179	0.7544		
17.0	32.669	2.322	3.4238	0.7327		



TWO-DIMENSIONAL LIQUID SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT	
3.25	18.0	33.758	2.265	3.6384	0.8100		
	19.0	34.873	2.208	3.8618	0.7865		
	20.0	36.016	2.151	4.0940	0.7623		
	21.0	37.188	2.092	4.3353	0.7375		
	22.0	38.391	2.035	4.5859	0.7123		
	23.0	39.627	1.976	4.8459	0.6869		
	24.0	40.898	1.917	5.1155	0.6613		
	25.0	42.209	1.857	5.3954	0.6357		
	3.26	1.0	18.538	3.203	1.0866	0.9999	
		2.0	19.236	3.148	1.1791	0.9995	
3.0		19.958	3.092	1.2779	0.9985		
4.0		20.704	3.038	1.3831	0.9965		
5.0		21.475	2.984	1.4951	0.9934		
6.0		22.270	2.930	1.6140	0.9889		
7.0		23.089	2.877	1.7401	0.9829		
8.0		23.931	2.823	1.8735	0.9753		
9.0		24.799	2.769	2.0146	0.9659		
10.0		25.690	2.715	2.1634	0.9548		
3.27	11.0	26.605	2.661	2.3201	0.9420		
	12.0	27.545	2.606	2.4849	0.9274		
	13.0	28.508	2.551	2.6578	0.9111		
	14.0	29.496	2.496	2.8391	0.8933		
	15.0	30.509	2.441	3.0289	0.8740		
	16.0	31.546	2.385	3.2271	0.8534		
	17.0	32.608	2.328	3.4340	0.8316		
	18.0	33.696	2.272	3.6496	0.8088		
	19.0	34.811	2.215	3.8741	0.7852		
	20.0	35.953	2.157	4.1075	0.7609		
3.27	21.0	37.125	2.099	4.3500	0.7360		
	22.0	38.327	2.041	4.6017	0.7107		
	23.0	39.562	1.982	4.8630	0.6852		
	24.0	40.832	1.922	5.1340	0.6596		
	25.0	42.141	1.862	5.4151	0.6339		
	1.0	18.481	3.213	1.0868	0.9999		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.27	2.0	19.179	3.157	1.1706	0.9995	
	3.0	19.901	3.102	1.2787	0.9985	
	4.0	20.646	3.047	1.3943	0.9965	
	5.0	21.417	2.993	1.4967	0.9934	
	6.0	22.211	2.939	1.6160	0.9888	
	7.0	23.030	2.885	1.7426	0.9829	
	8.0	23.873	2.831	1.8766	0.9751	
	9.0	24.740	2.777	2.0182	0.9657	
	10.0	25.631	2.723	2.1677	0.9545	
	11.0	26.546	2.668	2.3251	0.9415	
3.28	12.0	27.486	2.614	2.4906	0.9268	
	13.0	28.449	2.559	2.6644	0.9105	
	14.0	29.437	2.503	2.8465	0.8925	
	15.0	30.449	2.448	3.0371	0.8732	
	16.0	31.486	2.391	3.2363	0.8524	
	17.0	32.548	2.335	3.4442	0.8306	
	18.0	33.636	2.278	3.6609	0.8077	
	19.0	34.750	2.221	3.8865	0.7839	
	20.0	35.892	2.163	4.1209	0.7595	
	21.0	37.062	2.105	4.3646	0.7345	
3.29	22.0	38.264	2.046	4.6176	0.7092	
	23.0	39.497	1.987	4.8801	0.6836	
	24.0	40.766	1.928	5.1524	0.6579	
	25.0	42.074	1.867	5.4340	0.6322	
	1.0	18.424	3.223	1.0971	0.9999	
	2.0	19.122	3.167	1.1802	0.9995	
	3.0	19.843	3.111	1.2796	0.9985	
	4.0	20.589	3.056	1.3855	0.9965	
	5.0	21.359	3.002	1.4983	0.9933	
	6.0	22.153	2.948	1.6191	0.9888	
3.30	7.0	22.972	2.894	1.7452	0.9827	
	8.0	23.815	2.840	1.8797	0.9740	
	9.0	24.682	2.785	2.0219	0.9654	
	10.0	25.573	2.731	2.1720	0.9542	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.29	11.0	25.488	2.676	2.3301	0.9411	
	12.0	27.427	2.621	2.4964	0.9263	
	13.0	28.390	2.566	2.6709	0.9099	
	14.0	29.378	2.510	2.8530	0.8918	
	15.0	30.390	2.455	3.0454	0.8723	
	16.0	31.426	2.398	3.2456	0.8515	
	17.0	32.488	2.342	3.4545	0.8295	
	18.0	33.576	2.285	3.6722	0.8065	
	19.0	34.689	2.227	3.8998	0.7826	
	20.0	35.831	2.169	4.1346	0.7581	
	21.0	37.001	2.111	4.3764	0.7330	
	22.0	38.201	2.052	4.6236	0.7076	
	23.0	39.434	1.993	4.8774	0.6819	
	24.0	40.702	1.933	5.1370	0.6567	
25.0	42.008	1.873	5.4027	0.6304		
3.20	1.0	18.368	3.233	1.0873	0.9999	
	2.0	19.065	3.176	1.1807	0.9995	
	3.0	19.797	3.121	1.2804	0.9985	
	4.0	20.532	3.066	1.3867	0.9964	
	5.0	21.302	3.011	1.4999	0.9933	
	6.0	22.096	2.957	1.6202	0.9887	
	7.0	22.914	2.902	1.7477	0.9825	
	8.0	23.757	2.848	1.8828	0.9747	
	9.0	24.624	2.793	2.0256	0.9652	
	10.0	25.515	2.739	2.1763	0.9538	
	11.0	26.430	2.684	2.3351	0.9407	
	12.0	27.369	2.629	2.5021	0.9258	
	13.0	28.332	2.573	2.6775	0.9092	
	14.0	29.319	2.518	2.8613	0.8911	
15.0	30.331	2.461	3.0537	0.8714		
16.0	31.367	2.405	3.2548	0.8505		
17.0	32.429	2.348	3.4647	0.8284		
18.0	33.516	2.291	3.6835	0.8053		
19.0	34.629	2.233	3.9113	0.7813		

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.20	20.0	35.770	2.175	4.1481	0.7567	
	21.0	36.939	2.117	4.3941	0.7315	
	22.0	38.139	2.058	4.6496	0.7060	
	23.0	39.371	1.998	4.9146	0.6803	
	24.0	40.637	1.938	5.1895	0.6544	
	25.0	41.942	1.878	5.4747	0.6286	
	1.0	18.312	3.242	1.0876	0.9999	
	2.0	19.009	3.186	1.1812	0.9995	
	3.0	19.720	3.130	1.2813	0.9984	
	4.0	20.475	3.075	1.3879	0.9964	
3.30	5.0	21.265	3.020	1.5015	0.9922	
	6.0	22.039	2.965	1.6272	0.9884	
	7.0	22.857	2.911	1.7503	0.9824	
	8.0	23.700	2.856	1.8859	0.9745	
	9.0	24.566	2.802	2.0293	0.9649	
	10.0	25.457	2.747	2.1807	0.9535	
	11.0	26.372	2.692	2.3402	0.9402	
	12.0	27.311	2.636	2.5079	0.9253	
	13.0	28.274	2.581	2.6841	0.9086	
	14.0	29.261	2.525	2.8687	0.8903	
3.40	15.0	30.273	2.468	3.0621	0.8706	
	16.0	31.309	2.412	3.2641	0.8495	
	17.0	32.370	2.355	3.4750	0.8273	
	18.0	33.457	2.297	3.6948	0.8041	
	19.0	34.570	2.239	3.9237	0.7800	
	20.0	35.710	2.181	4.1617	0.7552	
	21.0	36.878	2.123	4.4089	0.7300	
	22.0	38.077	2.064	4.6656	0.7044	
	23.0	39.308	2.004	4.9320	0.6786	
	24.0	40.574	1.944	5.2082	0.6527	
3.50	25.0	41.877	1.883	5.4947	0.6268	
	1.0	18.257	3.252	1.0878	0.9999	
	2.0	18.953	3.195	1.1818	0.9995	
	3.0	19.674	3.139	1.2821	0.9984	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.31	4.0	20.419	3.084	1.3892	0.9964	
	5.0	21.188	3.029	1.5031	0.9931	
	6.0	21.982	2.974	1.6243	0.9885	
	7.0	22.800	2.919	1.7529	0.9823	
	8.0	23.643	2.865	1.8890	0.9743	
	9.0	24.509	2.810	2.0330	0.9646	
	10.0	25.400	2.755	2.1850	0.9531	
	11.0	26.315	2.699	2.3452	0.9398	
	12.0	27.253	2.644	2.5137	0.9247	
	13.0	28.216	2.588	2.6906	0.9079	
	14.0	29.203	2.532	2.8762	0.8896	
	15.0	30.215	2.475	3.0704	0.8697	
	16.0	31.251	2.419	3.2736	0.8486	
	17.0	32.311	2.361	3.4853	0.8262	
	18.0	33.398	2.304	3.7062	0.8029	
19.0	34.510	2.246	3.9362	0.7787		
20.0	35.650	2.187	4.1756	0.7539		
21.0	36.818	2.128	4.4238	0.7285		
22.0	38.016	2.069	4.6817	0.7028		
23.0	39.246	2.009	4.9493	0.6770		
24.0	40.510	1.949	5.2269	0.6510		
25.0	41.812	1.888	5.5147	0.6251		
3.32	1.0	18.202	3.262	1.0881	0.9999	
	2.0	18.898	3.205	1.1823	0.9995	
	3.0	19.619	3.149	1.2830	0.9984	
	4.0	20.363	3.093	1.3904	0.9964	
	5.0	21.132	3.038	1.5048	0.9931	
	6.0	21.926	2.983	1.6264	0.9884	
	7.0	22.744	2.928	1.7554	0.9821	
	8.0	23.586	2.873	1.8921	0.9741	
	9.0	24.452	2.818	2.0367	0.9644	
	10.0	25.343	2.763	2.1894	0.9528	
	11.0	26.258	2.707	2.3502	0.9394	
	12.0	27.196	2.651	2.5195	0.9242	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.32	13.0	28.159	2.595	2.6973	0.9073	
	14.0	29.146	2.539	2.8836	0.8888	
	15.0	30.157	2.487	3.0788	0.8689	
	16.0	31.193	2.425	3.2828	0.8476	
	17.0	32.253	2.368	3.4957	0.8251	
	18.0	33.339	2.310	3.7176	0.8017	
	19.0	34.452	2.252	3.9487	0.7774	
	20.0	35.591	2.193	4.1891	0.7525	
	21.0	36.758	2.134	4.4387	0.7270	
	22.0	37.955	2.075	4.6979	0.7013	
3.33	23.0	39.185	2.015	4.9668	0.6753	
	24.0	40.448	1.955	5.2457	0.6493	
	25.0	41.748	1.893	5.5348	0.6233	
	1.0	19.147	3.272	1.0883	0.9999	
	2.0	19.843	3.215	1.1828	0.9995	
	3.0	19.563	3.158	1.2839	0.9984	
	4.0	20.308	3.102	1.3916	0.9963	
	5.0	21.077	3.047	1.5064	0.9930	
	6.0	21.870	2.992	1.6284	0.9883	
	7.0	22.688	2.936	1.7580	0.9820	
	8.0	23.530	2.881	1.8952	0.9739	
	9.0	24.396	2.826	2.0404	0.9641	
	10.0	25.287	2.771	2.1937	0.9524	
	11.0	26.201	2.715	2.3553	0.9389	
	12.0	27.140	2.659	2.5253	0.9236	
	13.0	28.102	2.603	2.7039	0.9067	
	14.0	29.089	2.546	2.8911	0.8891	
	15.0	30.100	2.489	3.0872	0.8680	
	16.0	31.136	2.432	3.2921	0.8466	
	17.0	32.196	2.374	3.5061	0.8240	
	18.0	33.282	2.316	3.7291	0.8005	
	19.0	34.393	2.259	3.9613	0.7761	
	20.0	35.532	2.199	4.2028	0.7510	
	21.0	36.699	2.140	4.4536	0.7255	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.33	22.0	37.805	2.081	4.7141	0.6907	
	23.0	39.124	2.020	4.9843	0.6736	
	24.0	40.386	1.960	5.2645	0.6475	
	25.0	41.685	1.899	5.5550	0.6215	
	1.0	19.093	3.231	1.0886	0.9999	
3.34	2.0	19.788	3.224	1.1834	0.9995	
	3.0	19.508	3.167	1.2847	0.9984	
	4.0	20.252	3.111	1.3928	0.9963	
	5.0	21.021	3.056	1.5080	0.9930	
	6.0	21.814	3.000	1.6305	0.9882	
	7.0	22.632	2.945	1.7606	0.9818	
	8.0	23.474	2.890	1.8984	0.9737	
	9.0	24.340	2.834	2.0442	0.9639	
	10.0	25.231	2.779	2.1981	0.9521	
	11.0	26.145	2.723	2.3604	0.9385	
	12.0	27.083	2.667	2.5311	0.9231	
	13.0	28.046	2.610	2.7105	0.9060	
	14.0	29.033	2.553	2.8986	0.8877	
	15.0	30.043	2.496	3.0956	0.8671	
	16.0	31.079	2.439	3.3015	0.8456	
17.0	32.139	2.381	3.5165	0.8229		
18.0	33.224	2.323	3.7406	0.7993		
19.0	34.336	2.264	3.9739	0.7748		
20.0	35.474	2.205	4.2165	0.7496		
21.0	36.640	2.146	4.4686	0.7240		
22.0	37.836	2.086	4.7303	0.6981		
23.0	39.063	2.026	5.0018	0.6720		
24.0	40.324	1.965	5.2834	0.6458		
25.0	41.622	1.904	5.5753	0.6197		
3.35	1.0	18.030	3.201	1.0888	0.9999	
	2.0	18.734	3.234	1.1830	0.9995	
	3.0	19.454	3.177	1.2856	0.9984	
	4.0	20.187	3.121	1.3940	0.9963	
	5.0	20.966	3.065	1.5096	0.9920	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P3/P1	COMMENT
3.35	6.0	21.759	3.009	1.6326	0.9881	
	7.0	22.577	2.953	1.7632	0.9817	
	8.0	23.418	2.898	1.9015	0.9735	
	9.0	24.285	2.842	2.0479	0.9636	
	10.0	25.175	2.786	2.2025	0.9517	
	11.0	26.089	2.730	2.3655	0.9380	
	12.0	27.028	2.674	2.5370	0.9226	
	13.0	27.990	2.617	2.7172	0.9054	
	14.0	28.977	2.560	2.9061	0.8865	
	15.0	29.987	2.503	3.1040	C.8562	
	16.0	31.022	2.445	3.3109	0.8446	
	17.0	32.082	2.387	3.5269	0.8218	
	18.0	33.167	2.329	3.7521	0.7980	
	19.0	34.278	2.270	3.9865	0.7734	
	20.0	35.416	2.211	4.2304	0.7482	
21.0	36.582	2.152	4.4836	0.7225		
22.0	37.777	2.092	4.7466	0.6965		
23.0	39.003	2.031	5.0194	0.6703		
24.0	40.263	1.970	5.3023	0.6441		
25.0	41.560	1.909	5.5956	0.6180		
3.36	1.0	17.985	3.301	1.0801	0.9999	
	2.0	18.680	3.243	1.1844	0.9995	
	3.0	19.399	3.186	1.2864	0.9984	
	4.0	20.143	3.129	1.3953	0.9962	
	5.0	20.911	3.074	1.5113	0.9929	
	6.0	21.704	3.018	1.6347	0.9880	
	7.0	22.522	2.962	1.7658	0.9816	
	8.0	23.363	2.906	1.9046	0.9733	
	9.0	24.229	2.850	2.0516	0.9633	
	10.0	25.120	2.794	2.2069	0.9514	
	11.0	26.034	2.738	2.3706	0.9376	
	12.0	26.972	2.682	2.5428	0.9220	
	13.0	27.935	2.625	2.7238	0.9047	
	14.0	28.921	2.567	2.9137	0.8859	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.36	15.0	29.931	2.510	3.1125	0.8454	
	16.0	30.966	2.452	3.3203	0.8436	
	17.0	32.026	2.394	3.5374	0.8207	
	18.0	33.111	2.335	3.7636	0.7968	
	19.0	34.221	2.276	3.9992	0.7721	
	20.0	35.359	2.217	4.2442	0.7468	
	21.0	36.524	2.157	4.4988	0.7210	
	22.0	37.718	2.097	4.7629	0.6949	
	23.0	38.944	2.037	5.0371	0.6687	
	24.0	40.203	1.976	5.3213	0.6424	
3.37	25.0	41.499	1.914	5.6160	0.6162	
	1.0	17.932	3.311	1.0893	0.9999	
	2.0	18.626	3.253	1.1850	0.9995	
	3.0	19.345	3.195	1.2873	0.9984	
	4.0	20.089	3.139	1.3965	0.9962	
	5.0	20.857	3.083	1.5129	0.9928	
	6.0	21.650	3.026	1.6368	0.9870	
	7.0	22.467	2.971	1.7683	0.9814	
	8.0	23.309	2.915	1.9078	0.9731	
	9.0	24.175	2.859	2.0554	0.9630	
10.0	10.0	25.065	2.802	2.2113	0.9510	
	11.0	25.979	2.746	2.3757	0.9372	
	12.0	26.917	2.689	2.5487	0.9215	
	13.0	27.879	2.632	2.7305	0.9041	
	14.0	28.866	2.575	2.9212	0.8850	
	15.0	29.876	2.517	3.1210	0.8645	
	16.0	30.911	2.459	3.3298	0.8426	
	17.0	31.970	2.400	3.5478	0.8196	
	18.0	33.055	2.342	3.7752	0.7956	
	19.0	34.165	2.282	4.0119	0.7708	
20.0	20.0	35.302	2.223	4.2581	0.7454	
	21.0	36.467	2.163	4.5139	0.7195	
	22.0	37.660	2.103	4.7793	0.6933	
	23.0	38.885	2.042	5.0548	0.6670	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.37	24.0	40.143	1.981	5.3404	0.6406	
	25.0	41.438	1.910	5.6365	0.6144	
3.38	1.0	17.879	3.371	1.0806	0.9999	
	2.0	18.573	3.252	1.1855	0.9905	
3.0	3.0	19.292	3.205	1.2881	0.9983	
	4.0	20.035	3.148	1.3977	0.9962	
5.0	5.0	20.803	3.091	1.5145	0.9928	
	6.0	21.596	3.035	1.6389	0.9878	
7.0	7.0	22.413	2.979	1.7709	0.9813	
	8.0	23.254	2.923	1.9109	0.9729	
9.0	9.0	24.120	2.867	2.0591	0.9627	
	10.0	25.010	2.810	2.2157	0.9507	
11.0	11.0	25.924	2.753	2.3808	0.9367	
	12.0	26.863	2.697	2.5546	0.9209	
13.0	13.0	27.825	2.639	2.7372	0.9034	
	14.0	28.811	2.582	2.9288	0.8842	
15.0	15.0	29.821	2.524	3.1295	0.8635	
	16.0	30.856	2.465	3.3393	0.8416	
17.0	17.0	31.915	2.407	3.5584	0.8185	
	18.0	32.999	2.348	3.7868	0.7944	
19.0	19.0	34.109	2.289	4.0246	0.7695	
	20.0	35.246	2.229	4.2720	0.7439	
21.0	21.0	36.410	2.169	4.5290	0.7180	
	22.0	37.603	2.108	4.7959	0.6917	
23.0	23.0	38.827	2.048	5.0726	0.6653	
	24.0	40.084	1.986	5.3605	0.6389	
25.0	25.0	41.377	1.924	5.6570	0.6126	
	1.0	17.826	3.320	1.0898	0.9999	
3.39	2.0	18.520	3.272	1.1860	0.9995	
	3.0	19.239	3.214	1.2800	0.9983	
6.0	4.0	19.983	3.157	1.3809	0.9962	
	5.0	20.749	3.100	1.4882	0.9927	
6.0	6.0	21.542	3.044	1.6010	0.9878	
	7.0	22.359	2.988	1.7195	0.9811	

TWO-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.30	8.0	23.200	2.931	1.9141	0.9727	
	9.0	24.046	2.875	2.0629	0.9625	
	10.0	24.956	2.818	2.2201	0.9503	
	11.0	25.870	2.761	2.3859	0.9363	
	12.0	26.808	2.704	2.5605	0.9204	
	13.0	27.770	2.646	2.7439	0.9027	
	14.0	28.756	2.589	2.9364	0.8835	
	15.0	29.767	2.531	3.1380	0.8627	
	16.0	30.801	2.472	3.3488	0.8406	
	17.0	31.860	2.413	3.5680	0.8174	
	18.0	32.944	2.354	3.7984	0.7932	
	19.0	34.053	2.295	4.0374	0.7681	
	20.0	35.190	2.235	4.2960	0.7425	
	21.0	36.353	2.175	4.5643	0.7165	
	22.0	37.545	2.114	4.8423	0.6901	
	23.0	38.769	2.053	5.0904	0.6636	
24.0	40.025	1.991	5.3787	0.6372		
25.0	41.317	1.929	5.6776	0.6109		
3.40	1.0	17.774	3.340	1.0901	0.9999	
	2.0	18.467	3.281	1.1866	0.9995	
	3.0	19.186	3.223	1.2809	0.9983	
	4.0	19.928	3.166	1.4002	0.9961	
	5.0	20.696	3.109	1.5178	0.9926	
	6.0	21.489	3.053	1.6431	0.9877	
	7.0	22.305	2.996	1.7761	0.9810	
	8.0	23.147	2.940	1.9172	0.9725	
	9.0	24.012	2.883	2.0667	0.9622	
	10.0	24.902	2.826	2.2245	0.9509	
	11.0	25.816	2.769	2.3911	0.9358	
	12.0	26.754	2.711	2.5664	0.9198	
	13.0	27.716	2.654	2.7507	0.9021	
	14.0	28.702	2.596	2.9440	0.8827	
	15.0	29.712	2.537	3.1465	0.8618	
	16.0	30.747	2.479	3.3583	0.8396	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.60	17.0	31.805	2.420	3.5795	0.8163	
	18.0	32.889	2.360	3.8101	0.7919	
3.61	19.0	33.998	2.301	4.0502	0.7668	
	20.0	35.134	2.241	4.3000	0.7411	
	21.0	36.297	2.180	4.5505	0.7149	
	22.0	37.489	2.119	4.8228	0.6885	
	23.0	38.711	2.058	5.1083	0.6620	
	24.0	39.967	1.997	5.3980	0.6355	
	25.0	41.258	1.934	5.6923	0.6091	
	1.0	17.722	3.350	1.0903	0.9999	
	2.0	18.415	3.201	1.1871	0.9995	
	3.0	19.133	3.233	1.2907	0.9983	
3.61	4.0	19.876	3.175	1.4014	0.9961	
	5.0	20.642	3.118	1.5195	0.9926	
	6.0	21.435	3.061	1.6452	0.9876	
	7.0	22.252	3.005	1.7788	0.9809	
	8.0	23.092	2.948	1.9204	0.9723	
	9.0	23.959	2.891	2.0704	0.9619	
	10.0	24.849	2.834	2.2290	0.9496	
	11.0	25.763	2.776	2.3962	0.9353	
	12.0	26.701	2.719	2.5723	0.9193	
	13.0	27.663	2.661	2.7574	0.9014	
3.61	14.0	28.649	2.603	2.9516	0.8819	
	15.0	29.659	2.544	3.1551	0.8609	
	16.0	30.693	2.485	3.3679	0.8386	
	17.0	31.751	2.426	3.5901	0.8151	
	18.0	32.835	2.367	3.8219	0.7907	
	19.0	33.944	2.307	4.0631	0.7655	
	20.0	35.079	2.246	4.3140	0.7397	
	21.0	36.242	2.186	4.5748	0.7134	
	22.0	37.433	2.125	4.8454	0.6869	
	23.0	38.654	2.064	5.1262	0.6603	
3.61	24.0	39.909	2.002	5.4173	0.6337	
	25.0	41.199	1.939	5.7190	0.6073	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.42	1.0	17.670	3.360	1.0906	0.9999	
	2.0	19.363	3.301	1.1876	0.9995	
	3.0	19.081	3.242	1.2016	0.9993	
	4.0	19.823	3.186	1.4076	0.9961	
	5.0	20.591	3.127	1.5211	0.9975	
	6.0	21.383	3.070	1.6673	0.9875	
	7.0	22.100	3.013	1.7814	0.9807	
	8.0	23.040	2.956	1.9236	0.9721	
	9.0	23.906	2.899	2.0742	0.9616	
	10.0	24.796	2.842	2.2374	0.9492	
	11.0	25.710	2.784	2.4014	0.9349	
	12.0	26.648	2.726	2.5783	0.9187	
	13.0	27.610	2.668	2.7662	0.9007	
	14.0	28.595	2.610	2.9593	0.8811	
	15.0	29.605	2.551	3.1637	0.8600	
3.43	16.0	30.639	2.492	3.3774	0.8376	
	17.0	31.699	2.433	3.6007	0.8140	
	18.0	32.781	2.373	3.8335	0.7895	
	19.0	33.889	2.313	4.0759	0.7641	
	20.0	35.024	2.252	4.3281	0.7382	
	21.0	36.187	2.192	4.5901	0.7119	
	22.0	37.377	2.130	4.8620	0.6853	
	23.0	38.598	2.069	5.1442	0.6586	
	24.0	39.852	2.007	5.4366	0.6320	
	25.0	41.140	1.944	5.7398	0.6055	
	1.0	17.619	3.369	1.0908	0.9999	
	2.0	19.311	3.310	1.1882	0.9995	
	3.0	19.070	3.251	1.2924	0.9983	
	4.0	19.771	3.194	1.4039	0.9960	
	5.0	20.538	3.136	1.5227	0.9925	
6.0	21.370	3.079	1.6494	0.9874		
7.0	22.167	3.022	1.7840	0.9806		
8.0	22.988	2.964	1.9268	0.9719		
9.0	23.853	2.907	2.0780	0.9614		

THREE-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/P1	COMMENT
3.43	10.0	24.743	2.850	2.2379	0.9489	
	11.0	25.657	2.792	2.4066	0.9266	
	12.0	26.595	2.734	2.5842	0.9181	
	13.0	27.557	2.675	2.7710	0.9001	
	14.0	28.543	2.617	2.9670	0.8904	
	15.0	29.552	2.558	3.1723	0.8801	
	16.0	30.584	2.499	3.3871	0.8766	
	17.0	31.644	2.439	3.6113	0.8729	
	18.0	32.727	2.379	3.8453	0.8782	
	19.0	33.826	2.319	4.0889	0.7628	
	20.0	34.970	2.258	4.3422	0.7368	
	21.0	36.132	2.197	4.6055	0.7104	
	22.0	37.322	2.136	4.8788	0.6827	
	23.0	38.542	2.074	5.1622	0.6570	
	24.0	39.795	2.012	5.4561	0.6303	
25.0	41.082	1.949	5.7606	0.6037		
3.44	1.0	17.568	3.379	1.0911	0.9999	
	2.0	18.260	3.320	1.1887	0.9995	
	3.0	18.977	3.261	1.2933	0.9981	
	4.0	19.719	3.203	1.4051	0.9960	
	5.0	20.486	3.145	1.5244	0.9924	
	6.0	21.278	3.087	1.6515	0.9873	
	7.0	22.095	3.030	1.7866	0.9804	
	8.0	22.936	2.973	1.9299	0.9717	
	9.0	23.801	2.915	2.0818	0.9611	
	10.0	24.691	2.857	2.2423	0.9495	
	11.0	25.605	2.799	2.4117	0.9360	
	12.0	26.543	2.741	2.5902	0.9216	
	13.0	27.504	2.683	2.7778	0.9064	
	14.0	28.490	2.624	2.9746	0.8906	
	15.0	29.500	2.565	3.1809	0.8782	
16.0	30.533	2.505	3.3967	0.8656		
17.0	31.591	2.445	3.6220	0.8518		
18.0	32.674	2.385	3.8570	0.8370		

1D-DIMENSIONAL ORLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	P2/PT1	COMMENT
3.44	19.0	33.792	2.325	4.1018	0.7615	
	20.0	34.916	2.264	4.3564	0.7354	
	21.0	36.078	2.203	4.6209	0.7088	
	22.0	37.267	2.141	4.8956	0.6821	
	23.0	38.487	2.080	5.1803	0.6553	
	24.0	39.738	2.017	5.4756	0.6285	
	25.0	41.025	1.954	5.7815	0.6020	
	1.0	17.517	2.380	1.0013	0.9909	
	2.0	19.209	3.329	1.1892	0.9095	
	3.0	18.926	3.270	1.2962	0.9983	
3.45	4.0	19.668	3.212	1.4063	0.9960	
	5.0	20.435	3.154	1.5260	0.9924	
	6.0	21.225	3.096	1.6526	0.9872	
	7.0	22.043	3.038	1.7802	0.9803	
	8.0	22.884	2.981	1.9331	0.9715	
	9.0	23.749	2.923	2.0856	0.9608	
	10.0	24.639	2.865	2.2468	0.9481	
	11.0	25.553	2.807	2.4169	0.9335	
	12.0	26.491	2.749	2.5961	0.9170	
	13.0	27.452	2.690	2.7846	0.8987	
3.46	14.0	28.439	2.631	2.9823	0.8788	
	15.0	29.447	2.571	3.1896	0.8573	
	16.0	30.481	2.512	3.4063	0.8345	
	17.0	31.539	2.452	3.6327	0.8106	
	18.0	32.621	2.391	3.8680	0.7858	
	19.0	33.729	2.331	4.1148	0.7601	
	20.0	34.863	2.270	4.3706	0.7339	
	21.0	36.024	2.208	4.6364	0.7073	
	22.0	37.213	2.147	4.9123	0.6805	
	23.0	38.432	2.085	5.1984	0.6536	
3.46	24.0	39.683	2.022	5.4951	0.6268	
	25.0	40.968	1.959	5.8025	0.6002	
	1.0	17.466	3.399	1.0916	0.9999	
	2.0	18.158	3.330	1.1808	0.9995	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.46	3.0	18.875	3.279	1.2950	0.9982	
	4.0	19.617	3.221	1.4076	0.9959	
	5.0	20.383	3.163	1.5277	0.9923	
	6.0	21.175	3.105	1.6557	0.9871	
	7.0	21.991	3.047	1.7919	0.9801	
	8.0	22.832	2.989	1.9363	0.9713	
	9.0	23.698	2.931	2.0894	0.9605	
	10.0	24.587	2.873	2.2513	0.9478	
	11.0	25.501	2.815	2.4221	0.9330	
	12.0	26.439	2.756	2.6021	0.9164	
	13.0	27.401	2.697	2.7914	0.8980	
	14.0	28.386	2.638	2.9901	0.8780	
	15.0	29.396	2.578	3.1992	0.8564	
	16.0	30.429	2.518	3.4160	0.8335	
17.0	31.487	2.458	3.6435	0.8095		
18.0	32.569	2.398	3.8807	0.7845		
19.0	33.677	2.337	4.1278	0.7588		
20.0	34.810	2.276	4.3848	0.7325		
21.0	35.971	2.214	4.6519	0.7058		
22.0	37.159	2.152	4.9292	0.6789		
23.0	38.377	2.090	5.2166	0.6519		
24.0	39.627	2.027	5.5147	0.6251		
25.0	40.912	1.964	5.8236	0.5984		
3.47	1.0	17.416	3.408	1.0918	0.9999	
	2.0	19.108	3.348	1.1903	0.9995	
	3.0	19.874	3.289	1.2959	0.9987	
	4.0	19.566	3.230	1.4088	0.9950	
	5.0	20.222	3.172	1.5293	0.9922	
	6.0	21.124	3.113	1.6578	0.9870	
	7.0	21.960	3.055	1.7945	0.9800	
	8.0	22.781	2.997	1.9395	0.9711	
	9.0	23.646	2.939	2.0932	0.9602	
	10.0	24.536	2.881	2.2558	0.9474	
	11.0	25.450	2.822	2.4274	0.9326	



TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/P1	PT2/PT1	COMMENT
3.47	12.0	26.388	2.762	2.6081	0.9159	
	13.0	27.349	2.704	2.7082	0.8974	
	14.0	28.315	2.645	2.9978	0.8772	
	15.0	29.344	2.585	3.2069	0.8555	
	16.0	30.377	2.525	3.4257	0.8325	
	17.0	31.435	2.464	3.5542	0.8084	
	18.0	32.517	2.404	3.8926	0.7833	
	19.0	33.624	2.343	4.1409	0.7574	
	20.0	34.758	2.281	4.3991	0.7310	
	21.0	35.918	2.220	4.6575	0.7042	
3.48	22.0	37.106	2.158	4.9440	0.6773	
	23.0	38.323	2.095	5.2349	0.6505	
	24.0	39.572	2.033	5.5344	0.6233	
	25.0	40.856	1.969	5.8447	0.5966	
	1.0	17.366	3.418	1.0921	0.9999	
	2.0	18.058	3.358	1.1009	0.9995	
	3.0	18.774	3.298	1.2068	0.9982	
	4.0	19.515	3.239	1.4100	0.9959	
	5.0	20.282	3.181	1.5310	0.9922	
	6.0	21.073	3.122	1.6599	0.9869	
3.49	7.0	21.889	3.064	1.7971	0.9798	
	8.0	22.730	3.006	1.9427	0.9709	
	9.0	23.595	2.947	2.0970	0.9599	
	10.0	24.485	2.889	2.2603	0.9470	
	11.0	25.399	2.830	2.4326	0.9321	
	12.0	26.337	2.771	2.6141	0.9153	
	13.0	27.298	2.711	2.8051	0.8967	
	14.0	28.284	2.652	3.0056	0.8764	
	15.0	29.293	2.592	3.2156	0.8546	
	16.0	30.326	2.531	3.4354	0.8315	
3.50	17.0	31.384	2.471	3.6650	0.8072	
	18.0	32.466	2.410	3.9045	0.7820	
	19.0	33.573	2.349	4.1540	0.7561	
	20.0	34.706	2.287	4.4135	0.7296	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	P2/PI	PT2/PT1	COMMENT
3.48	21.0	35.865	2.225	4.6831	0.7027	
	22.0	37.053	2.163	4.9630	0.6757	
	23.0	38.270	2.101	5.2533	0.6486	
	24.0	39.518	2.038	5.5541	0.6216	
	25.0	40.801	1.974	5.8659	0.5948	
3.60	1.0	17.317	3.428	1.0923	0.9000	
	2.0	18.008	3.367	1.1914	0.8995	
	3.0	18.724	3.307	1.2976	0.8982	
	4.0	19.465	3.248	1.4113	0.8958	
	5.0	20.231	3.189	1.5327	0.8921	
	6.0	21.023	3.131	1.6621	0.8868	
	7.0	21.839	3.072	1.7998	0.8797	
	8.0	22.679	3.014	1.9450	0.8707	
	9.0	23.545	2.955	2.1000	0.8595	
	10.0	24.434	2.897	2.2648	0.8466	
	11.0	25.348	2.838	2.4378	0.8316	
	12.0	26.286	2.778	2.6202	0.8147	
	13.0	27.248	2.719	2.8120	0.7960	
	14.0	28.233	2.659	3.0133	0.7755	
	15.0	29.242	2.599	3.2244	0.7537	
16.0	30.275	2.538	3.4452	0.7305		
17.0	31.333	2.477	3.6758	0.7061		
18.0	32.415	2.416	3.9165	0.7808		
19.0	33.521	2.355	4.1671	0.7547		
20.0	34.654	2.293	4.4278	0.7281		
21.0	35.813	2.231	4.6987	0.7012		
22.0	37.000	2.168	4.9800	0.6740		
23.0	38.216	2.106	5.2716	0.6469		
24.0	39.464	2.043	5.5730	0.6199		
25.0	40.746	1.979	5.8871	0.5931		
3.50	1.0	17.268	3.438	1.0925	0.9000	
	2.0	17.958	3.377	1.1919	0.8994	
	3.0	18.674	3.317	1.2985	0.8982	
	4.0	19.415	3.257	1.4125	0.8958	

TWO-DIMENSIONAL OBLIQUE SHOCK WAVE PARAMETERS

M1	DELTA	THETA	M2	Ø2/P1	P2/P1	COMMENT
3.50	5.0	20.181	3.198	1.5343	0.9921	
	6.0	20.973	3.140	1.6642	0.9867	
	7.0	21.789	3.081	1.8074	0.9795	
	8.0	22.629	3.022	1.9491	0.9704	
	9.0	23.495	2.963	2.1047	0.9594	
	10.0	24.384	2.904	2.2693	0.9463	
	11.0	25.298	2.845	2.4431	0.9312	
	12.0	26.236	2.786	2.6262	0.9141	
	13.0	27.197	2.726	2.8189	0.8953	
	14.0	28.183	2.666	3.0211	0.8749	
	15.0	29.192	2.605	3.2331	0.8528	
	16.0	30.225	2.545	3.4549	0.8294	
	17.0	31.282	2.483	3.6867	0.8049	
	18.0	32.364	2.422	3.9284	0.7795	
	19.0	33.470	2.360	4.1802	0.7534	
	20.0	34.603	2.299	4.4422	0.7267	
	21.0	35.761	2.236	4.7144	0.6996	
	22.0	36.948	2.174	4.9970	0.6724	
	23.0	38.164	2.111	5.2900	0.6452	
	24.0	39.410	2.048	5.5937	0.6181	
	25.0	40.691	1.984	5.9084	0.5913	

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Appendix D. Three-Dimensional Oblique Shock Wave Analysis

This appendix contains some tabulated conical flow parameters, a source program listing, and a sample solution of the listed program.

## Appendix D (Continued)

Tabulation of:  
Conical Flow Parameters

This appendix contains some of the more important conical flow parameters.

Shock wave angle,  $\phi_s$ ; ray angle,  $\phi$ ; downstream Mach number,  $M_2$ ; flow direction; static pressure ratio,  $P_2/P_1$  and total pressure ratio  $P_{T2}/P_{T1}$  are tabulated versus upstream Mach number,  $M_1$  and cone semi-vertex angle,  $\delta$ . All angles are measured in degrees. In the tabulation;  $\phi_s$  is labeled PHI S,  $\phi$  is labeled PHI and flow direction is labeled DEL.

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	4.0	65.379	4.000	1.070	4.000	1.038	1.000
			5.000	1.070	3.333	1.038	
			6.000	1.070	2.855	1.037	
			7.000	1.071	2.497	1.036	
			8.000	1.072	2.217	1.036	
			9.000	1.072	1.993	1.035	
			10.000	1.073	1.810	1.034	
			11.000	1.073	1.657	1.033	
			12.000	1.074	1.527	1.033	
			13.000	1.074	1.416	1.032	
			14.000	1.075	1.319	1.032	
			15.000	1.075	1.234	1.031	
			16.000	1.076	1.159	1.030	
			17.000	1.076	1.093	1.030	
			18.000	1.077	1.033	1.029	
			19.000	1.077	0.979	1.029	
			20.000	1.077	0.930	1.028	
			21.000	1.078	0.886	1.028	
			22.000	1.078	0.846	1.027	
			23.000	1.078	0.808	1.027	
			24.000	1.079	0.774	1.027	
			25.000	1.079	0.742	1.026	
			26.000	1.079	0.713	1.026	
			27.000	1.080	0.686	1.025	
			28.000	1.080	0.660	1.025	
			29.000	1.080	0.636	1.025	
			30.000	1.081	0.614	1.024	
			31.000	1.081	0.593	1.024	
			32.000	1.081	0.573	1.024	
			33.000	1.081	0.554	1.023	
			34.000	1.082	0.536	1.023	
			35.000	1.082	0.519	1.023	
			36.000	1.082	0.503	1.022	
			37.000	1.082	0.488	1.022	
			38.000	1.083	0.473	1.022	
			39.000	1.083	0.459	1.021	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PIC/PTI
1.10	4.0	65.379	40.000	1.083	0.445	1.021	1.000
			41.000	1.083	0.432	1.021	
			42.000	1.084	0.420	1.020	
			43.000	1.084	0.407	1.020	
			44.000	1.084	0.395	1.020	
			45.000	1.085	0.383	1.019	
			46.000	1.085	0.372	1.019	
			47.000	1.085	0.360	1.019	
			48.000	1.085	0.349	1.018	
			49.000	1.086	0.338	1.018	
			50.000	1.086	0.327	1.018	
			51.000	1.086	0.316	1.017	
			52.000	1.087	0.304	1.017	
			53.000	1.087	0.293	1.016	
			54.000	1.087	0.282	1.016	
			55.000	1.088	0.270	1.015	
			56.000	1.088	0.258	1.015	
			57.000	1.089	0.245	1.014	
			58.000	1.089	0.232	1.014	
			59.000	1.090	0.218	1.013	
			60.000	1.090	0.204	1.012	
			61.000	1.091	0.188	1.011	
			62.000	1.092	0.169	1.010	
			63.000	1.093	0.149	1.009	
			64.000	1.094	0.122	1.008	
			65.000	1.096	0.081	1.005	
			65.379	1.100	0.000	1.000	
1.10	6.0	65.913	6.000	1.044	6.000	1.070	1.000
			7.000	1.045	5.249	1.070	
			8.000	1.045	4.663	1.069	
			9.000	1.046	4.194	1.068	
			10.000	1.047	3.809	1.067	
			11.000	1.048	3.487	1.066	
			12.000	1.048	3.215	1.065	
			13.000	1.049	2.980	1.064	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	6.0	65.913	14.000	1.050	2.776	1.063	1.000
			15.000	1.051	2.597	1.062	
			16.000	1.052	2.439	1.061	
			17.000	1.053	2.296	1.060	
			18.000	1.053	2.171	1.059	
			19.000	1.054	2.057	1.058	
			20.000	1.055	1.953	1.057	
			21.000	1.056	1.858	1.056	
			22.000	1.056	1.771	1.055	
			23.000	1.057	1.691	1.054	
			24.000	1.058	1.617	1.053	
			25.000	1.058	1.549	1.052	
			26.000	1.059	1.485	1.052	
			27.000	1.060	1.426	1.051	
			28.000	1.060	1.370	1.050	
			29.000	1.061	1.318	1.049	
			30.000	1.061	1.269	1.048	
			31.000	1.062	1.223	1.048	
			32.000	1.063	1.179	1.047	
			33.000	1.063	1.137	1.046	
			34.000	1.064	1.098	1.046	
			35.000	1.064	1.060	1.045	
			36.000	1.065	1.024	1.044	
			37.000	1.065	0.990	1.043	
			38.000	1.066	0.957	1.043	
			39.000	1.067	0.925	1.042	
			40.000	1.067	0.895	1.041	
			41.000	1.068	0.866	1.041	
			42.000	1.068	0.837	1.040	
			43.000	1.069	0.810	1.039	
			44.000	1.069	0.783	1.038	
			45.000	1.070	0.757	1.038	
			46.000	1.070	0.731	1.037	
			47.000	1.071	0.706	1.036	
			48.000	1.072	0.682	1.035	
			49.000	1.072	0.658	1.035	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	6.0	65.913	50.000	1.073	0.634	1.034	1.000
			51.000	1.074	0.610	1.033	
			52.000	1.074	0.587	1.032	
			53.000	1.075	0.563	1.031	
			54.000	1.076	0.540	1.030	
			55.000	1.076	0.516	1.029	
			56.000	1.077	0.492	1.029	
			57.000	1.078	0.468	1.027	
			58.000	1.079	0.443	1.026	
			59.000	1.080	0.417	1.025	
			60.000	1.081	0.390	1.024	
			61.000	1.082	0.361	1.022	
			62.000	1.083	0.330	1.021	
			63.000	1.085	0.295	1.019	
			64.000	1.087	0.254	1.016	
			65.000	1.090	0.198	1.013	
			65.913	1.092	0.150	1.010	
1.10	8.0	66.443	8.000	1.012	8.000	1.112	1.000
			9.000	1.013	7.198	1.111	
			10.000	1.013	6.541	1.111	
			11.000	1.014	5.992	1.109	
			12.000	1.015	5.525	1.108	
			13.000	1.016	5.125	1.107	
			14.000	1.017	4.776	1.105	
			15.000	1.018	4.470	1.104	
			16.000	1.020	4.199	1.102	
			17.000	1.021	3.958	1.101	
			18.000	1.022	3.740	1.099	
			19.000	1.023	3.544	1.098	
			20.000	1.024	3.366	1.096	
			21.000	1.025	3.203	1.095	
			22.000	1.026	3.054	1.094	
			23.000	1.027	2.917	1.092	
			24.000	1.028	2.789	1.091	
			25.000	1.029	2.672	1.090	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PT1	PTC/PT1
1.10	8.0	66.443	26.000	1.030	2.562	1.088	1.000
			27.000	1.031	2.459	1.087	
			28.000	1.032	2.363	1.086	
			29.000	1.033	2.273	1.084	
			30.000	1.034	2.188	1.083	
			31.000	1.035	2.108	1.082	
			32.000	1.036	2.032	1.081	
			33.000	1.037	1.960	1.080	
			34.000	1.038	1.892	1.078	
			35.000	1.039	1.826	1.077	
			36.000	1.040	1.764	1.076	
			37.000	1.041	1.705	1.075	
			38.000	1.042	1.648	1.074	
			39.000	1.043	1.593	1.072	
			40.000	1.044	1.540	1.071	
			41.000	1.044	1.489	1.070	
			42.000	1.045	1.440	1.069	
			43.000	1.046	1.393	1.068	
			44.000	1.047	1.346	1.067	
			45.000	1.048	1.301	1.065	
			46.000	1.049	1.258	1.064	
			47.000	1.050	1.215	1.063	
			48.000	1.051	1.173	1.062	
			49.000	1.052	1.132	1.060	
			50.000	1.053	1.092	1.059	
			51.000	1.054	1.052	1.058	
			52.000	1.055	1.013	1.056	
			53.000	1.056	0.974	1.055	
			54.000	1.057	0.935	1.054	
			55.000	1.059	0.897	1.052	
			56.000	1.060	0.858	1.050	
			57.000	1.061	0.819	1.049	
			58.000	1.063	0.779	1.047	
			59.000	1.064	0.739	1.045	
			60.000	1.066	0.697	1.043	
			61.000	1.067	0.654	1.041	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.10	8.0	66.443	62.000	1.069	0.609	1.039	1.000
			63.000	1.071	0.560	1.036	
			64.000	1.074	0.505	1.033	
			65.000	1.077	0.440	1.029	
			66.000	1.081	0.348	1.023	
		66.443	1.084	0.292	1.020		
1.10	10.0	67.521	10.000	0.973	10.000	1.164	1.000
			11.000	0.973	9.165	1.163	
			12.000	0.974	8.456	1.162	
			13.000	0.975	7.847	1.161	
			14.000	0.976	7.317	1.160	
			15.000	0.977	6.852	1.158	
			16.000	0.979	6.440	1.156	
			17.000	0.980	6.072	1.154	
			18.000	0.981	5.742	1.153	
			19.000	0.983	5.444	1.151	
			20.000	0.984	5.173	1.149	
			21.000	0.986	4.926	1.147	
			22.000	0.987	4.699	1.145	
			23.000	0.988	4.490	1.143	
			24.000	0.990	4.297	1.142	
			25.000	0.991	4.117	1.140	
			26.000	0.992	3.950	1.139	
			27.000	0.994	3.795	1.136	
			28.000	0.995	3.649	1.134	
			29.000	0.996	3.511	1.133	
30.000	0.998	3.382	1.131				
31.000	0.999	3.261	1.129				
32.000	1.000	3.145	1.127				
33.000	1.002	3.036	1.126				
34.000	1.003	2.932	1.124				
35.000	1.004	2.833	1.122				
36.000	1.006	2.739	1.121				
37.000	1.007	2.649	1.119				
38.000	1.008	2.562	1.117				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	10.0	67.521	39.000	1.009	2.479	1.116	1.000
			40.000	1.011	2.400	1.114	
			41.000	1.012	2.323	1.112	
			42.000	1.013	2.249	1.111	
			43.000	1.014	2.177	1.109	
			44.000	1.016	2.108	1.107	
			45.000	1.017	2.041	1.106	
			46.000	1.018	1.976	1.104	
			47.000	1.020	1.912	1.102	
			48.000	1.021	1.850	1.100	
			49.000	1.023	1.789	1.098	
			50.000	1.024	1.730	1.097	
			51.000	1.025	1.672	1.095	
			52.000	1.027	1.614	1.093	
			53.000	1.028	1.558	1.091	
			54.000	1.030	1.502	1.089	
			55.000	1.032	1.447	1.087	
			55.000	1.033	1.392	1.085	
			57.000	1.035	1.337	1.082	
			58.000	1.037	1.282	1.080	
			59.000	1.039	1.227	1.078	
			60.000	1.041	1.171	1.075	
			61.000	1.043	1.114	1.072	
			62.000	1.045	1.055	1.069	
			63.000	1.048	0.994	1.066	
			64.000	1.050	0.930	1.063	
			65.000	1.053	0.861	1.059	
			66.000	1.057	0.783	1.054	
			67.000	1.062	0.688	1.048	
			67.521	1.069	0.547	1.038	
1.10	12.0	70.210	12.000	0.922	12.000	1.233	1.000
			13.000	0.922	11.141	1.233	
			14.000	0.922	10.393	1.232	
			15.000	0.923	9.738	1.230	
			16.000	0.925	9.157	1.229	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	12.0	70.210	17.000	0.926	8.639	1.227	1.000
			18.000	0.927	8.174	1.225	
			19.000	0.929	7.754	1.223	
			20.000	0.930	7.373	1.221	
			21.000	0.932	7.025	1.219	
			22.000	0.934	6.706	1.217	
			23.000	0.935	6.412	1.215	
			24.000	0.937	6.140	1.212	
			25.000	0.938	5.889	1.210	
			26.000	0.940	5.654	1.208	
			27.000	0.942	5.436	1.206	
			28.000	0.943	5.231	1.204	
			29.000	0.945	5.039	1.201	
			30.000	0.946	4.859	1.199	
			31.000	0.948	4.688	1.197	
			32.000	0.950	4.527	1.195	
			33.000	0.951	4.375	1.193	
			34.000	0.953	4.230	1.191	
			35.000	0.954	4.093	1.189	
			36.000	0.956	3.962	1.186	
			37.000	0.958	3.836	1.184	
			38.000	0.959	3.717	1.182	
			39.000	0.961	3.602	1.180	
			40.000	0.962	3.492	1.178	
			41.000	0.964	3.386	1.176	
			42.000	0.965	3.285	1.174	
			43.000	0.967	3.186	1.172	
			44.000	0.969	3.092	1.169	
			45.000	0.970	3.000	1.167	
			46.000	0.972	2.911	1.165	
			47.000	0.974	2.825	1.163	
			48.000	0.975	2.742	1.161	
			49.000	0.977	2.660	1.158	
			50.000	0.979	2.581	1.156	
			51.000	0.980	2.504	1.154	
			52.000	0.982	2.428	1.151	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.10	12.0	70.210	53.000	0.984	2.354	1.149	1.000
			54.000	0.986	2.281	1.146	
			55.000	0.988	2.210	1.144	
			56.000	0.990	2.139	1.141	
			57.000	0.992	2.070	1.139	
			58.000	0.994	2.001	1.136	
			59.000	0.996	1.933	1.133	
			60.000	0.998	1.866	1.130	
			61.000	1.001	1.798	1.127	
			62.000	1.003	1.730	1.124	
			63.000	1.006	1.662	1.121	
			64.000	1.008	1.594	1.117	
			65.000	1.011	1.524	1.113	
			66.000	1.014	1.451	1.109	
			67.000	1.018	1.377	1.105	
			68.000	1.022	1.297	1.100	
			69.000	1.026	1.210	1.094	
			70.000	1.032	1.110	1.087	
			70.210	1.035	1.059	1.083	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	4.0	56.456	4.000	1.170	4.000	1.039	1.000
			5.000	1.171	3.332	1.039	
			6.000	1.171	2.855	1.038	
			7.000	1.172	2.496	1.037	
			8.000	1.172	2.216	1.036	
			9.000	1.173	1.991	1.035	
			10.000	1.174	1.807	1.035	
			11.000	1.174	1.654	1.034	
			12.000	1.175	1.523	1.033	
			13.000	1.176	1.411	1.032	
			14.000	1.176	1.314	1.032	
			15.000	1.177	1.228	1.031	
			16.000	1.177	1.152	1.030	
			17.000	1.178	1.085	1.029	
			18.000	1.178	1.024	1.029	
			19.000	1.179	0.970	1.028	
			20.000	1.179	0.920	1.028	
			21.000	1.179	0.875	1.027	
			22.000	1.180	0.833	1.027	
			23.000	1.180	0.795	1.026	
			24.000	1.181	0.760	1.026	
			25.000	1.181	0.727	1.025	
			26.000	1.181	0.697	1.025	
			27.000	1.182	0.668	1.024	
			28.000	1.182	0.642	1.024	
			29.000	1.182	0.617	1.023	
			30.000	1.183	0.593	1.023	
			31.000	1.183	0.571	1.022	
			32.000	1.183	0.549	1.022	
			33.000	1.184	0.529	1.021	
			34.000	1.184	0.510	1.021	
			35.000	1.184	0.491	1.020	
			36.000	1.185	0.474	1.020	
			37.000	1.185	0.456	1.020	
			38.000	1.185	0.440	1.019	
			39.000	1.186	0.424	1.019	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.20	4.0	56.456	40.000	1.186	0.408	1.018	1.000
			41.000	1.186	0.392	1.016	
			42.000	1.187	0.377	1.017	
			43.000	1.187	0.362	1.017	
			44.000	1.188	0.347	1.016	
			45.000	1.188	0.332	1.016	
			46.000	1.188	0.317	1.015	
			47.000	1.189	0.301	1.015	
			48.000	1.189	0.286	1.014	
			49.000	1.190	0.269	1.013	
			50.000	1.190	0.252	1.013	
			51.000	1.191	0.234	1.012	
			52.000	1.191	0.214	1.011	
			53.000	1.192	0.192	1.010	
			54.000	1.193	0.167	1.009	
			55.000	1.194	0.135	1.007	
			55.000	1.196	0.084	1.005	
			56.456	1.200	0.003	1.001	
1.20	6.0	56.703	6.000	1.146	6.000	1.072	1.000
			7.000	1.146	5.249	1.072	
			8.000	1.147	4.663	1.071	
			9.000	1.148	4.193	1.070	
			10.000	1.149	3.807	1.068	
			11.000	1.150	3.484	1.067	
			12.000	1.151	3.210	1.066	
			13.000	1.152	2.975	1.064	
			14.000	1.153	2.769	1.063	
			15.000	1.154	2.589	1.062	
			16.000	1.155	2.429	1.060	
			17.000	1.156	2.287	1.059	
			18.000	1.156	2.158	1.058	
			19.000	1.157	2.042	1.057	
			20.000	1.158	1.936	1.056	
			21.000	1.159	1.840	1.054	
			22.000	1.160	1.751	1.053	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	6.0	56.703	23.000	1.161	1.669	1.052	1.000
			24.000	1.161	1.593	1.051	
			25.000	1.162	1.523	1.050	
			26.000	1.163	1.457	1.049	
			27.000	1.164	1.395	1.048	
			28.000	1.164	1.337	1.047	
			29.000	1.165	1.283	1.046	
			30.000	1.166	1.231	1.045	
			31.000	1.167	1.182	1.044	
			32.000	1.167	1.136	1.043	
			33.000	1.168	1.091	1.042	
			34.000	1.169	1.049	1.041	
			35.000	1.169	1.008	1.041	
			36.000	1.170	0.969	1.040	
			37.000	1.171	0.931	1.039	
			38.000	1.171	0.895	1.038	
			39.000	1.172	0.860	1.037	
			40.000	1.173	0.825	1.036	
			41.000	1.174	0.791	1.035	
			42.000	1.174	0.758	1.034	
			43.000	1.175	0.726	1.033	
			44.000	1.176	0.693	1.032	
			45.000	1.177	0.661	1.031	
			46.000	1.178	0.629	1.030	
			47.000	1.178	0.597	1.028	
			48.000	1.179	0.565	1.027	
			49.000	1.180	0.532	1.026	
			50.000	1.181	0.497	1.025	
			51.000	1.182	0.462	1.023	
			52.000	1.184	0.424	1.021	
			53.000	1.185	0.383	1.020	
			54.000	1.187	0.336	1.017	
			55.000	1.189	0.280	1.015	
			56.000	1.192	0.200	1.011	
			56.703	1.195	0.128	1.007	
1.20	8.0	56.888	8.000	1.116	8.000	1.113	1.000

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	8.0	56.888	9.000	1.116	7.198	1.113	1.000
			10.000	1.117	6.540	1.112	
			11.000	1.118	5.990	1.110	
			12.000	1.119	5.523	1.109	
			13.000	1.121	5.121	1.107	
			14.000	1.122	4.770	1.105	
			15.000	1.123	4.463	1.103	
			16.000	1.125	4.190	1.102	
			17.000	1.126	3.946	1.100	
			18.000	1.127	3.726	1.098	
			19.000	1.128	3.527	1.096	
			20.000	1.130	3.346	1.094	
			21.000	1.131	3.181	1.093	
			22.000	1.132	3.029	1.091	
			23.000	1.134	2.888	1.089	
			24.000	1.135	2.758	1.087	
			25.000	1.136	2.636	1.086	
			26.000	1.137	2.523	1.084	
			27.000	1.138	2.417	1.082	
			28.000	1.140	2.317	1.081	
			29.000	1.141	2.223	1.079	
			30.000	1.142	2.134	1.078	
			31.000	1.143	2.050	1.076	
			32.000	1.144	1.970	1.073	
			33.000	1.145	1.893	1.073	
			34.000	1.146	1.820	1.071	
			35.000	1.148	1.750	1.070	
			36.000	1.149	1.682	1.068	
			37.000	1.150	1.617	1.067	
			38.000	1.151	1.554	1.065	
			39.000	1.152	1.493	1.064	
			40.000	1.153	1.434	1.062	
			41.000	1.155	1.376	1.060	
			42.000	1.156	1.320	1.059	
			43.000	1.157	1.264	1.057	
			44.000	1.158	1.210	1.055	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.20	8.0	56.888	45.000	1.160	1.155	1.054	1.000
			46.000	1.161	1.102	1.052	
			47.000	1.162	1.048	1.050	
			48.000	1.164	0.994	1.048	
			49.000	1.165	0.939	1.046	
			50.000	1.167	0.883	1.044	
			51.000	1.169	0.826	1.041	
			52.000	1.171	0.766	1.039	
			53.000	1.173	0.702	1.036	
			54.000	1.175	0.632	1.033	
			55.000	1.178	0.551	1.029	
			56.000	1.182	0.446	1.024	
			56.888	1.191	0.221	1.012	
1.20	10.0	57.542	10.000	1.081	10.000	1.162	1.000
			11.000	1.082	9.164	1.162	
			12.000	1.083	8.455	1.160	
			13.000	1.084	7.845	1.159	
			14.000	1.085	7.314	1.157	
			15.000	1.086	6.847	1.155	
			16.000	1.088	6.433	1.153	
			17.000	1.089	6.063	1.151	
			18.000	1.091	5.730	1.148	
			19.000	1.093	5.428	1.146	
			20.000	1.094	5.154	1.144	
			21.000	1.096	4.903	1.141	
			22.000	1.098	4.672	1.139	
			23.000	1.099	4.459	1.137	
			24.000	1.101	4.261	1.134	
			25.000	1.103	4.077	1.132	
			26.000	1.104	3.905	1.130	
			27.000	1.106	3.744	1.128	
			28.000	1.107	3.593	1.125	
			29.000	1.109	3.451	1.123	
			30.000	1.111	3.316	1.121	
			31.000	1.112	3.188	1.119	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.20	10.0	57.542	32.000	1.114	3.066	1.116	1.000
			33.000	1.115	2.950	1.114	
			34.000	1.117	2.840	1.112	
			35.000	1.119	2.734	1.110	
			36.000	1.120	2.632	1.108	
			37.000	1.122	2.534	1.105	
			38.000	1.123	2.439	1.103	
			39.000	1.125	2.347	1.101	
			40.000	1.127	2.258	1.098	
			41.000	1.128	2.172	1.096	
			42.000	1.130	2.087	1.094	
			43.000	1.132	2.005	1.091	
			44.000	1.134	1.923	1.089	
			45.000	1.135	1.843	1.086	
			46.000	1.137	1.764	1.084	
			47.000	1.139	1.686	1.081	
			48.000	1.141	1.607	1.078	
			49.000	1.143	1.528	1.075	
			50.000	1.146	1.448	1.072	
			51.000	1.148	1.367	1.069	
			52.000	1.151	1.283	1.066	
			53.000	1.153	1.196	1.062	
			54.000	1.156	1.103	1.058	
			55.000	1.160	1.000	1.053	
			56.000	1.164	0.882	1.047	
			57.000	1.170	0.724	1.039	
			57.542	1.178	0.539	1.029	
1.20	12.0	58.450	12.000	1.042	12.000	1.219	1.000
			13.000	1.043	11.140	1.218	
			14.000	1.043	10.393	1.217	
			15.000	1.044	9.736	1.215	
			16.000	1.046	9.153	1.213	
			17.000	1.047	8.633	1.211	
			18.000	1.049	8.165	1.209	
			19.000	1.051	7.742	1.206	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	12.0	58.450	20.000	1.053	7.357	1.203	1.000
			21.000	1.055	7.004	1.201	
			22.000	1.056	6.680	1.198	
			23.000	1.058	6.381	1.195	
			24.000	1.060	6.104	1.192	
			25.000	1.062	5.847	1.190	
			26.000	1.064	5.606	1.187	
			27.000	1.066	5.381	1.184	
			28.000	1.068	5.169	1.181	
			29.000	1.070	4.970	1.178	
			30.000	1.072	4.782	1.175	
			31.000	1.074	4.603	1.172	
			32.000	1.076	4.434	1.170	
			33.000	1.078	4.272	1.167	
			34.000	1.080	4.118	1.164	
			35.000	1.082	3.971	1.161	
			36.000	1.084	3.830	1.158	
			37.000	1.086	3.694	1.155	
			38.000	1.088	3.563	1.152	
			39.000	1.090	3.436	1.149	
			40.000	1.092	3.314	1.146	
			41.000	1.095	3.195	1.143	
			42.000	1.097	3.079	1.140	
			43.000	1.099	2.967	1.137	
			44.000	1.101	2.856	1.134	
			45.000	1.104	2.748	1.131	
			46.000	1.106	2.641	1.127	
			47.000	1.108	2.536	1.124	
			48.000	1.111	2.431	1.120	
			49.000	1.114	2.327	1.117	
			50.000	1.116	2.223	1.113	
			51.000	1.119	2.118	1.109	
			52.000	1.122	2.011	1.105	
			53.000	1.125	1.902	1.100	
			54.000	1.129	1.788	1.095	
			55.000	1.133	1.669	1.090	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	F2/P1	PTC/PT1
1.20	12.0	58.450	56.000	1.137	1.540	1.024	1.000
			57.000	1.143	1.394	1.077	
			58.000	1.149	1.214	1.067	
			58.450	1.160	0.937	1.053	
1.20	14.0	59.907	14.000	0.998	14.000	1.284	1.000
			15.000	0.998	13.122	1.283	
			16.000	0.999	12.344	1.282	
			17.000	1.000	11.650	1.280	
			18.000	1.002	11.026	1.278	
			19.000	1.003	10.462	1.276	
			20.000	1.005	9.949	1.273	
			21.000	1.007	9.479	1.270	
			22.000	1.009	9.049	1.267	
			23.000	1.011	8.651	1.264	
			24.000	1.013	8.283	1.261	
			25.000	1.015	7.941	1.258	
			26.000	1.018	7.622	1.255	
			27.000	1.020	7.324	1.252	
			28.000	1.022	7.043	1.248	
			29.000	1.024	6.780	1.245	
			30.000	1.026	6.531	1.242	
			31.000	1.029	6.296	1.238	
			32.000	1.031	6.072	1.235	
			33.000	1.033	5.860	1.232	
			34.000	1.036	5.658	1.228	
			35.000	1.038	5.464	1.225	
			36.000	1.040	5.279	1.221	
			37.000	1.043	5.102	1.218	
			38.000	1.045	4.931	1.214	
			39.000	1.048	4.767	1.211	
			40.000	1.050	4.608	1.207	
			41.000	1.053	4.454	1.203	
			42.000	1.055	4.305	1.200	
			43.000	1.058	4.160	1.196	
			44.000	1.060	4.018	1.192	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.20	14.0	59.907	45.000	1.063	3.880	1.188	1.000
			46.000	1.066	3.745	1.184	
			47.000	1.069	3.612	1.180	
			48.000	1.072	3.482	1.176	
			49.000	1.075	3.352	1.172	
			50.000	1.078	3.224	1.167	
			51.000	1.081	3.096	1.163	
			52.000	1.084	2.968	1.158	
			53.000	1.088	2.839	1.153	
			54.000	1.092	2.709	1.148	
			55.000	1.096	2.575	1.142	
			55.000	1.100	2.437	1.136	
			57.000	1.105	2.291	1.129	
			58.000	1.110	2.135	1.121	
			59.000	1.117	1.958	1.112	
			60.000	1.125	1.739	1.101	
			59.907	1.132	1.566	1.091	
1.20	16.0	62.454	16.000	0.946	16.000	1.363	1.000
			17.000	0.946	15.108	1.362	
			18.000	0.947	14.306	1.361	
			19.000	0.948	13.582	1.359	
			20.000	0.949	12.923	1.357	
			21.000	0.951	12.322	1.355	
			22.000	0.953	11.770	1.352	
			23.000	0.955	11.261	1.349	
			24.000	0.957	10.791	1.346	
			25.000	0.959	10.354	1.342	
			26.000	0.961	9.947	1.339	
			27.000	0.964	9.567	1.336	
			28.000	0.966	9.210	1.332	
			29.000	0.968	8.875	1.328	
			30.000	0.971	8.559	1.325	
			31.000	0.973	8.261	1.321	
			32.000	0.976	7.978	1.317	
33.000	0.978	7.710	1.314				

D20

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	F2/PI	PTC/PT1
1.20	16.0	62.454	34.000	0.981	7.455	1.310	1.000
			35.000	0.983	7.212	1.306	
			36.000	0.986	6.980	1.302	
			37.000	0.988	6.757	1.298	
			38.000	0.991	6.544	1.294	
			39.000	0.994	6.339	1.290	
			40.000	0.996	6.142	1.286	
			41.000	0.999	5.951	1.282	
			42.000	1.002	5.767	1.278	
			43.000	1.005	5.589	1.274	
			44.000	1.007	5.416	1.270	
			45.000	1.010	5.248	1.265	
			46.000	1.013	5.084	1.261	
			47.000	1.016	4.925	1.256	
			48.000	1.019	4.768	1.252	
			49.000	1.023	4.615	1.247	
			50.000	1.026	4.464	1.242	
			51.000	1.029	4.315	1.237	
			52.000	1.033	4.168	1.232	
			53.000	1.036	4.023	1.227	
			54.000	1.040	3.877	1.221	
			55.000	1.044	3.732	1.216	
			56.000	1.048	3.586	1.210	
			57.000	1.053	3.438	1.203	
			58.000	1.057	3.286	1.196	
			59.000	1.062	3.130	1.189	
			60.000	1.068	2.966	1.181	
			61.000	1.074	2.790	1.172	
			62.000	1.082	2.594	1.161	
			62.454	1.087	2.470	1.154	
1.20	18.0	66.103	18.000	0.880	18.000	1.464	0.999
			19.000	0.880	17.096	1.464	
			20.000	0.881	16.276	1.462	
			21.000	0.882	15.526	1.461	
			22.000	0.883	14.839	1.459	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	18.0	66.103	23.000	0.885	14.206	1.456	0.999
			24.000	0.886	13.621	1.453	
			25.000	0.888	13.079	1.450	
			26.000	0.890	12.574	1.447	
			27.000	0.893	12.103	1.444	
			28.000	0.895	11.662	1.440	
			29.000	0.897	11.248	1.437	
			30.000	0.899	10.859	1.433	
			31.000	0.902	10.492	1.429	
			32.000	0.904	10.145	1.426	
			33.000	0.907	9.816	1.422	
			34.000	0.909	9.504	1.418	
			35.000	0.912	9.207	1.414	
			36.000	0.915	8.925	1.410	
			37.000	0.917	8.655	1.406	
			38.000	0.920	8.397	1.402	
			39.000	0.923	8.150	1.397	
			40.000	0.925	7.912	1.393	
			41.000	0.928	7.684	1.389	
			42.000	0.931	7.465	1.384	
			43.000	0.934	7.253	1.380	
			44.000	0.937	7.049	1.376	
			45.000	0.940	6.851	1.371	
			46.000	0.943	6.659	1.367	
			47.000	0.946	6.474	1.362	
			48.000	0.949	6.293	1.357	
			49.000	0.952	6.117	1.353	
			50.000	0.955	5.946	1.348	
			51.000	0.958	5.778	1.343	
			52.000	0.962	5.615	1.338	
			53.000	0.965	5.454	1.332	
			54.000	0.969	5.296	1.327	
			55.000	0.972	5.141	1.322	
			56.000	0.976	4.988	1.316	
			57.000	0.980	4.836	1.310	
			58.000	0.984	4.685	1.304	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.20	18.0	66.103	59.000	0.988	4.535	1.298	0.999
			60.000	0.993	4.385	1.291	
			61.000	0.997	4.235	1.284	
			62.000	1.002	4.082	1.276	
			63.000	1.008	3.927	1.269	
			64.000	1.013	3.767	1.260	
			65.000	1.020	3.600	1.250	
			66.000	1.027	3.422	1.240	
			66.103	1.028	3.385	1.237	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	5.0	50.286	5.000	1.258	5.000	1.058	1.000
			6.000	1.258	4.284	1.058	
			7.000	1.259	3.746	1.057	
			8.000	1.260	3.327	1.056	
			9.000	1.261	2.989	1.054	
			10.000	1.262	2.713	1.053	
			11.000	1.263	2.481	1.052	
			12.000	1.263	2.284	1.051	
			13.000	1.264	2.114	1.049	
			14.000	1.265	1.967	1.048	
			15.000	1.266	1.837	1.047	
			16.000	1.267	1.721	1.046	
			17.000	1.268	1.618	1.045	
			18.000	1.268	1.525	1.044	
			19.000	1.269	1.441	1.042	
			20.000	1.270	1.365	1.041	
			21.000	1.271	1.294	1.040	
			22.000	1.271	1.230	1.039	
			23.000	1.272	1.170	1.038	
			24.000	1.273	1.115	1.038	
			25.000	1.273	1.063	1.037	
			26.000	1.274	1.014	1.036	
			27.000	1.275	0.969	1.035	
			28.000	1.275	0.926	1.034	
			29.000	1.276	0.885	1.033	
			30.000	1.277	0.847	1.032	
			31.000	1.277	0.810	1.031	
			32.000	1.278	0.775	1.030	
			33.000	1.278	0.741	1.030	
			34.000	1.279	0.708	1.029	
			35.000	1.280	0.677	1.028	
			36.000	1.280	0.646	1.027	
			37.000	1.281	0.616	1.026	
			38.000	1.282	0.586	1.025	
			39.000	1.282	0.557	1.024	
			40.000	1.283	0.528	1.023	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	5.0	50.286	41.000	1.284	0.499	1.022	1.000
			42.000	1.284	0.470	1.021	
			43.000	1.285	0.440	1.020	
			44.000	1.286	0.409	1.019	
			45.000	1.287	0.377	1.018	
			46.000	1.288	0.342	1.016	
			47.000	1.289	0.305	1.015	
			48.000	1.291	0.261	1.013	
			49.000	1.293	0.207	1.010	
			50.000	1.296	0.116	1.006	
			50.286	1.300	0.000	1.000	
			1.30	7.5	50.896	7.500	1.223
8.500	1.223	6.709				1.109	
9.500	1.224	6.066				1.108	
10.500	1.225	5.533				1.106	
11.500	1.226	5.083				1.104	
12.500	1.227	4.698				1.102	
13.500	1.229	4.364				1.100	
14.500	1.230	4.071				1.098	
15.500	1.232	3.812				1.096	
16.500	1.233	3.581				1.094	
17.500	1.234	3.374				1.092	
18.500	1.236	3.186				1.090	
19.500	1.237	3.016				1.088	
20.500	1.238	2.860				1.086	
21.500	1.240	2.716				1.084	
22.500	1.241	2.584				1.082	
23.500	1.242	2.461				1.081	
24.500	1.244	2.346				1.079	
25.500	1.245	2.239	1.077				
26.500	1.246	2.138	1.075				
27.500	1.248	2.043	1.073				
28.500	1.249	1.953	1.071				
29.500	1.250	1.868	1.070				
30.500	1.251	1.787	1.068				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	7.5	50.896	31.500	1.253	1.709	1.066	1.000
			32.500	1.254	1.635	1.064	
			33.500	1.255	1.563	1.063	
			34.500	1.256	1.494	1.061	
			35.500	1.258	1.427	1.059	
			36.500	1.259	1.362	1.057	
			37.500	1.260	1.298	1.055	
			38.500	1.262	1.236	1.053	
			39.500	1.263	1.174	1.051	
			40.500	1.264	1.113	1.049	
			41.500	1.266	1.052	1.047	
			42.500	1.267	0.991	1.045	
			43.500	1.269	0.929	1.043	
			44.500	1.271	0.865	1.040	
			45.500	1.273	0.799	1.038	
			46.500	1.275	0.728	1.035	
			47.500	1.277	0.652	1.031	
			48.500	1.280	0.565	1.028	
			49.500	1.284	0.454	1.022	
			50.500	1.291	0.234	1.012	
			50.896	1.285	0.411	1.021	
1.30	10.0	51.320	10.000	1.180	10.000	1.172	1.000
			11.000	1.181	9.164	1.172	
			12.000	1.181	8.454	1.171	
			13.000	1.183	7.843	1.169	
			14.000	1.184	7.310	1.166	
			15.000	1.186	6.842	1.164	
			16.000	1.187	6.425	1.161	
			17.000	1.189	6.053	1.159	
			18.000	1.191	5.717	1.156	
			19.000	1.193	5.412	1.153	
			20.000	1.195	5.134	1.150	
			21.000	1.197	4.879	1.148	
			22.000	1.199	4.644	1.145	
			23.000	1.201	4.427	1.142	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	10.0	51.320	24.000	1.202	4.224	1.139	1.000
			25.000	1.204	4.035	1.136	
			26.000	1.206	3.858	1.133	
			27.000	1.208	3.692	1.131	
			28.000	1.210	3.535	1.128	
			29.000	1.212	3.386	1.125	
			30.000	1.214	3.244	1.122	
			31.000	1.216	3.110	1.119	
			32.000	1.218	2.981	1.116	
			33.000	1.220	2.857	1.114	
			34.000	1.222	2.738	1.111	
			35.000	1.224	2.623	1.108	
			36.000	1.226	2.512	1.105	
			37.000	1.228	2.403	1.102	
			38.000	1.230	2.298	1.099	
			39.000	1.232	2.194	1.096	
			40.000	1.234	2.092	1.093	
			41.000	1.236	1.991	1.089	
			42.000	1.239	1.891	1.086	
			43.000	1.241	1.790	1.083	
44.000	1.244	1.689	1.079				
45.000	1.246	1.585	1.075				
46.000	1.249	1.479	1.071				
47.000	1.252	1.367	1.066				
48.000	1.256	1.247	1.061				
49.000	1.260	1.113	1.055				
50.000	1.266	0.950	1.048				
51.000	1.275	0.690	1.035				
51.320	1.275	0.686	1.035				
1.30	12.5	52.172	12.500	1.132	12.500	1.246	1.000
			13.500	1.133	11.635	1.246	
			14.500	1.134	10.879	1.244	
			15.500	1.135	10.210	1.242	
			16.500	1.136	9.615	1.240	
17.500	1.138	9.081	1.237				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.30	12.5	52.172	18.500	1.140	8.598	1.234	1.000
			19.500	1.142	8.159	1.231	
			20.500	1.144	7.758	1.227	
			21.500	1.147	7.390	1.224	
			22.500	1.149	7.050	1.220	
			23.500	1.151	6.734	1.217	
			24.500	1.154	6.440	1.213	
			25.500	1.156	6.166	1.209	
			26.500	1.158	5.909	1.206	
			27.500	1.161	5.666	1.202	
			28.500	1.163	5.438	1.198	
			29.500	1.166	5.221	1.195	
			30.500	1.168	5.015	1.191	
			31.500	1.171	4.819	1.187	
			32.500	1.173	4.631	1.183	
			33.500	1.176	4.452	1.179	
			34.500	1.178	4.279	1.175	
			35.500	1.181	4.112	1.171	
			36.500	1.183	3.950	1.167	
			37.500	1.186	3.794	1.163	
			38.500	1.189	3.641	1.159	
			39.500	1.192	3.492	1.155	
			40.500	1.195	3.345	1.150	
			41.500	1.198	3.201	1.146	
			42.500	1.201	3.058	1.141	
			43.500	1.204	2.916	1.137	
			44.500	1.207	2.773	1.132	
			45.500	1.211	2.629	1.126	
			46.500	1.215	2.483	1.121	
			47.500	1.219	2.331	1.115	
			48.500	1.223	2.173	1.108	
			49.500	1.228	2.002	1.101	
			50.500	1.234	1.811	1.092	
			51.500	1.242	1.577	1.081	
			52.172	1.254	1.221	1.063	
1.30	15.0	53.959	15.000	1.078	15.000	1.333	1.000

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	15.0	53.959	16.000	1.079	14.114	1.332	1.000
			17.000	1.079	13.324	1.331	
			18.000	1.081	12.612	1.329	
			19.000	1.082	11.968	1.326	
			20.000	1.084	11.382	1.323	
			21.000	1.086	10.845	1.319	
			22.000	1.089	10.352	1.316	
			23.000	1.091	9.895	1.312	
			24.000	1.093	9.472	1.308	
			25.000	1.096	9.078	1.304	
			26.000	1.099	8.710	1.300	
			27.000	1.101	8.364	1.295	
			28.000	1.104	8.039	1.291	
			29.000	1.107	7.732	1.287	
			30.000	1.110	7.441	1.282	
			31.000	1.112	7.165	1.278	
			32.000	1.115	6.902	1.273	
			33.000	1.118	6.651	1.268	
			34.000	1.121	6.411	1.264	
			35.000	1.124	6.180	1.259	
			36.000	1.127	5.958	1.254	
			37.000	1.131	5.743	1.249	
			38.000	1.134	5.536	1.244	
			39.000	1.137	5.334	1.239	
			40.000	1.140	5.138	1.233	
			41.000	1.144	4.946	1.228	
			42.000	1.147	4.758	1.223	
			43.000	1.151	4.573	1.217	
			44.000	1.155	4.390	1.211	
			45.000	1.159	4.208	1.205	
			46.000	1.163	4.027	1.199	
			47.000	1.167	3.845	1.192	
			48.000	1.172	3.661	1.185	
			49.000	1.177	3.472	1.178	
			50.000	1.182	3.277	1.170	
			51.000	1.188	3.071	1.161	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.30	15.0	53.959	52.000	1.195	2.847	1.150	1.000
			53.000	1.203	2.591	1.138	
			53.959	1.214	2.273	1.122	
1.30	17.5	56.252	17.500	1.018	17.500	1.432	0.999
			18.500	1.018	16.599	1.432	
			19.500	1.019	15.782	1.430	
			20.500	1.020	15.037	1.428	
			21.500	1.022	14.354	1.426	
			22.500	1.024	13.725	1.422	
			23.500	1.026	13.144	1.419	
			24.500	1.028	12.605	1.415	
			25.500	1.031	12.102	1.411	
			26.500	1.033	11.632	1.406	
			27.500	1.036	11.192	1.402	
			28.500	1.039	10.777	1.397	
			29.500	1.042	10.387	1.392	
			30.500	1.045	10.017	1.388	
			31.500	1.048	9.666	1.382	
			32.500	1.051	9.332	1.377	
			33.500	1.054	9.014	1.372	
			34.500	1.057	8.710	1.367	
			35.500	1.060	8.419	1.361	
			36.500	1.064	8.139	1.356	
			37.500	1.067	7.870	1.350	
			38.500	1.071	7.610	1.345	
			39.500	1.074	7.359	1.339	
			40.500	1.078	7.115	1.333	
41.500	1.082	6.878	1.327				
42.500	1.085	6.647	1.321				
43.500	1.089	6.421	1.314				
44.500	1.093	6.200	1.308				
45.500	1.097	5.982	1.301				
46.500	1.102	5.767	1.294				
47.500	1.106	5.553	1.287				
48.500	1.111	5.341	1.279				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	17.5	56.252	49.500	1.116	5.127	1.271	0.999
			50.500	1.121	4.912	1.263	
			51.500	1.127	4.694	1.254	
			52.500	1.133	4.469	1.245	
			53.500	1.140	4.234	1.234	
			54.500	1.147	3.984	1.223	
			55.500	1.156	3.707	1.209	
			56.252	1.164	3.453	1.196	
1.30	20.0	59.354	20.000	0.949	20.000	1.550	0.998
			21.000	0.949	19.087	1.550	
			22.000	0.950	18.249	1.548	
			23.000	0.951	17.477	1.546	
			24.000	0.952	16.762	1.543	
			25.000	0.954	16.099	1.540	
			26.000	0.956	15.481	1.536	
			27.000	0.959	14.903	1.532	
			28.000	0.961	14.361	1.528	
			29.000	0.964	13.852	1.524	
			30.000	0.966	13.372	1.519	
			31.000	0.969	12.919	1.514	
			32.000	0.972	12.489	1.509	
			33.000	0.975	12.081	1.504	
			34.000	0.978	11.693	1.498	
			35.000	0.982	11.322	1.493	
			36.000	0.985	10.968	1.487	
			37.000	0.988	10.629	1.481	
			38.000	0.992	10.304	1.475	
			39.000	0.995	9.991	1.469	
			40.000	0.999	9.689	1.463	
			41.000	1.002	9.397	1.457	
			42.000	1.006	9.116	1.451	
			43.000	1.010	8.842	1.444	
			44.000	1.014	8.577	1.438	
			45.000	1.018	8.318	1.431	
			46.000	1.022	8.065	1.424	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.30	20.0	59.354	47.000	1.026	7.818	1.417	0.998
			48.000	1.031	7.576	1.409	
			49.000	1.035	7.337	1.402	
			50.000	1.040	7.102	1.394	
			51.000	1.045	6.869	1.386	
			52.000	1.050	6.637	1.377	
			53.000	1.055	6.405	1.368	
			54.000	1.061	6.172	1.359	
			55.000	1.067	5.937	1.349	
			56.000	1.074	5.697	1.338	
			57.000	1.081	5.449	1.327	
			58.000	1.089	5.189	1.314	
			59.000	1.097	4.909	1.300	
			59.354	1.102	4.780	1.293	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	5.0	45.585	5.000	1.356	5.000	1.063	1.000
			6.000	1.356	4.284	1.063	
			7.000	1.357	3.746	1.062	
			8.000	1.358	3.325	1.060	
			9.000	1.359	2.988	1.059	
			10.000	1.360	2.710	1.057	
			11.000	1.361	2.477	1.056	
			12.000	1.362	2.279	1.054	
			13.000	1.363	2.108	1.053	
			14.000	1.364	1.959	1.051	
			15.000	1.365	1.828	1.050	
			16.000	1.366	1.711	1.049	
			17.000	1.367	1.607	1.047	
			18.000	1.368	1.512	1.046	
			19.000	1.369	1.427	1.045	
			20.000	1.370	1.348	1.043	
			21.000	1.370	1.276	1.042	
			22.000	1.371	1.210	1.041	
			23.000	1.372	1.148	1.040	
			24.000	1.373	1.091	1.039	
			25.000	1.374	1.037	1.038	
			26.000	1.374	0.986	1.037	
			27.000	1.375	0.938	1.035	
			28.000	1.376	0.893	1.034	
			29.000	1.377	0.850	1.033	
			30.000	1.377	0.808	1.032	
			31.000	1.378	0.768	1.031	
			32.000	1.379	0.730	1.030	
			33.000	1.380	0.692	1.029	
			34.000	1.380	0.656	1.028	
			35.000	1.381	0.620	1.027	
			36.000	1.382	0.584	1.025	
			37.000	1.383	0.549	1.024	
			38.000	1.384	0.513	1.023	
			39.000	1.385	0.477	1.022	
			40.000	1.386	0.439	1.020	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	5.0	45.585	41.000	1.387	0.400	1.019	1.000
			42.000	1.388	0.357	1.017	
			43.000	1.390	0.309	1.015	
			44.000	1.391	0.251	1.012	
			45.000	1.394	0.168	1.008	
			45.585	1.400	0.000	1.000	
1.40	7.5	46.043	7.500	1.319	7.500	1.119	1.000
			8.500	1.320	6.709	1.118	
			9.500	1.321	6.065	1.117	
			10.500	1.322	5.531	1.115	
			11.500	1.323	5.080	1.113	
			12.500	1.325	4.693	1.110	
			13.500	1.326	4.358	1.108	
			14.500	1.328	4.063	1.106	
			15.500	1.329	3.802	1.103	
			16.500	1.331	3.569	1.101	
			17.500	1.333	3.359	1.098	
			18.500	1.334	3.169	1.096	
			19.500	1.336	2.995	1.094	
			20.500	1.337	2.836	1.091	
			21.500	1.339	2.689	1.089	
			22.500	1.340	2.553	1.087	
			23.500	1.342	2.426	1.084	
			24.500	1.343	2.307	1.082	
			25.500	1.345	2.196	1.080	
			26.500	1.346	2.091	1.078	
			27.500	1.348	1.991	1.076	
			28.500	1.349	1.897	1.073	
			29.500	1.351	1.806	1.071	
			30.500	1.352	1.719	1.069	
			31.500	1.354	1.636	1.067	
			32.500	1.355	1.555	1.064	
			33.500	1.357	1.476	1.062	
			34.500	1.359	1.399	1.060	
			35.500	1.360	1.324	1.057	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.40	7.5	46.043	36.500	1.362	1.249	1.055	1.000
			37.500	1.364	1.175	1.052	
			38.500	1.365	1.100	1.050	
			39.500	1.367	1.024	1.047	
			40.500	1.369	0.946	1.044	
			41.500	1.372	0.864	1.040	
			42.500	1.374	0.776	1.037	
			43.500	1.377	0.677	1.032	
			44.500	1.381	0.558	1.027	
			45.500	1.387	0.369	1.018	
			46.043	1.387	0.370	1.018	
1.40	10.0	46.532	10.000	1.276	10.000	1.186	1.000
			11.000	1.276	9.164	1.186	
			12.000	1.277	8.454	1.184	
			13.000	1.279	7.841	1.182	
			14.000	1.280	7.307	1.179	
			15.000	1.282	6.836	1.177	
			16.000	1.284	6.410	1.173	
			17.000	1.286	6.042	1.170	
			18.000	1.289	5.703	1.167	
			19.000	1.290	5.395	1.164	
			20.000	1.293	5.113	1.160	
			21.000	1.295	4.854	1.157	
			22.000	1.297	4.614	1.153	
			23.000	1.299	4.391	1.150	
			24.000	1.301	4.184	1.146	
			25.000	1.304	3.989	1.143	
			26.000	1.306	3.806	1.140	
			27.000	1.309	3.633	1.136	
			28.000	1.310	3.469	1.133	
			29.000	1.312	3.313	1.129	
			30.000	1.315	3.163	1.126	
			31.000	1.317	3.020	1.122	
			22.000	1.319	2.882	1.119	
			33.000	1.322	2.748	1.115	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	10.0	46.532	34.000	1.324	2.618	1.111	1.000
			35.000	1.327	2.491	1.108	
			36.000	1.329	2.366	1.104	
			37.000	1.332	2.243	1.100	
			38.000	1.335	2.121	1.096	
			39.000	1.337	1.999	1.091	
			40.000	1.340	1.875	1.087	
			41.000	1.344	1.748	1.082	
			42.000	1.347	1.616	1.077	
			43.000	1.351	1.476	1.071	
			44.000	1.356	1.322	1.064	
			45.000	1.361	1.141	1.056	
			46.000	1.369	0.984	1.044	
			46.532	1.374	0.755	1.038	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PTI
1.40	12.5	47.432	12.500	1.228	12.500	1.265	1.000
			13.500	1.228	11.635	1.265	
			14.500	1.229	10.878	1.263	
			15.500	1.231	10.208	1.261	
			16.500	1.232	9.611	1.258	
			17.500	1.234	9.075	1.254	
			18.500	1.237	8.589	1.251	
			19.500	1.239	8.147	1.247	
			20.500	1.241	7.742	1.243	
			21.500	1.244	7.368	1.239	
			22.500	1.246	7.023	1.234	
			23.500	1.249	6.702	1.230	
			24.500	1.252	6.402	1.226	
			25.500	1.255	6.121	1.221	
			26.500	1.257	5.856	1.217	
			27.500	1.260	5.606	1.212	
			28.500	1.263	5.368	1.207	
			29.500	1.266	5.142	1.203	
			30.500	1.269	4.926	1.198	
			31.500	1.272	4.719	1.193	
			32.500	1.275	4.520	1.188	
			33.500	1.278	4.327	1.183	
			34.500	1.281	4.140	1.178	
			35.500	1.284	3.958	1.173	
			36.500	1.288	3.780	1.168	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	12.5	47.432	37.500	1.291	3.605	1.162	1.000
			38.500	1.295	3.431	1.157	
			39.500	1.299	3.258	1.151	
			40.500	1.302	3.085	1.145	
			41.500	1.307	2.909	1.138	
			42.500	1.311	2.729	1.131	
			43.500	1.316	2.541	1.124	
			44.500	1.322	2.340	1.115	
			45.500	1.328	2.118	1.105	
			46.500	1.336	1.851	1.093	
			47.432	1.349	1.446	1.073	
1.40	15.0	48.938	15.000	1.174	15.000	1.356	1.000
			16.000	1.175	14.114	1.356	
			17.000	1.176	13.323	1.354	
			18.000	1.177	12.610	1.351	
			19.000	1.179	11.964	1.348	
			20.000	1.181	11.375	1.344	
			21.000	1.184	10.835	1.340	
			22.000	1.186	10.337	1.336	
			23.000	1.189	9.876	1.331	
			24.000	1.192	9.448	1.326	
			25.000	1.195	9.047	1.321	
			26.000	1.198	8.672	1.316	
			27.000	1.201	8.318	1.311	
			28.000	1.204	7.984	1.305	
			29.000	1.207	7.668	1.300	
			30.000	1.210	7.367	1.294	
			31.000	1.214	7.080	1.289	
			32.000	1.217	6.805	1.283	
			33.000	1.221	6.541	1.277	
			34.000	1.224	6.286	1.271	
			35.000	1.228	6.039	1.264	
			36.000	1.232	5.800	1.258	
			37.000	1.236	5.567	1.252	
			38.000	1.240	5.339	1.245	

CONICAL FLCM PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	15.0	48.938	39.000	1.244	5.114	1.238	1.000
			40.000	1.248	4.892	1.231	
			41.000	1.253	4.672	1.223	
			42.000	1.258	4.451	1.216	
			43.000	1.263	4.228	1.207	
			44.000	1.268	4.000	1.199	
			45.000	1.274	3.765	1.189	
			46.000	1.281	3.517	1.179	
			47.000	1.288	3.247	1.167	
			48.000	1.297	2.935	1.152	
			48.938	1.310	2.544	1.133	
1.40	17.5	50.832	17.500	1.117	17.500	1.459	0.999
			18.500	1.117	16.599	1.458	
			19.500	1.118	15.781	1.456	
			20.500	1.120	15.034	1.454	
			21.500	1.121	14.349	1.450	
			22.500	1.124	13.718	1.446	
			23.500	1.126	13.133	1.442	
			24.500	1.129	12.589	1.437	
			25.500	1.131	12.081	1.432	
			26.500	1.134	11.605	1.427	
			27.500	1.138	11.157	1.421	
			28.500	1.141	10.734	1.415	
			29.500	1.144	10.334	1.409	
			30.500	1.148	9.954	1.403	
			31.500	1.151	9.592	1.397	
			32.500	1.155	9.246	1.390	
			33.500	1.159	8.915	1.383	
			34.500	1.163	8.596	1.377	
			35.500	1.166	8.289	1.370	
			36.500	1.171	7.992	1.362	
			37.500	1.175	7.703	1.355	
			38.500	1.179	7.422	1.347	
			39.500	1.184	7.148	1.340	
			40.500	1.188	6.879	1.332	

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.40	17.5	50.832	41.500	1.193	6.614	1.323	0.999
			42.500	1.198	6.351	1.315	
			43.500	1.203	6.090	1.306	
			44.500	1.209	5.828	1.296	
			45.500	1.215	5.563	1.286	
			46.500	1.221	5.293	1.275	
			47.500	1.228	5.014	1.264	
			48.500	1.236	4.719	1.251	
			49.500	1.245	4.399	1.236	
			50.500	1.256	4.032	1.219	
			50.832	1.262	3.810	1.207	
1.40	20.0	53.319	20.000	1.053	20.000	1.575	0.998
			21.000	1.054	19.087	1.574	
			22.000	1.055	18.248	1.572	
			23.000	1.056	17.474	1.570	
			24.000	1.058	16.758	1.566	
			25.000	1.060	16.091	1.562	
			26.000	1.062	15.469	1.558	
			27.000	1.065	14.886	1.553	
			28.000	1.068	14.338	1.547	
			29.000	1.071	13.822	1.541	
			30.000	1.074	13.333	1.535	
			31.000	1.078	12.870	1.529	
			32.000	1.081	12.430	1.523	
			33.000	1.085	12.010	1.516	
			34.000	1.088	11.609	1.509	
			35.000	1.092	11.224	1.502	
			36.000	1.096	10.854	1.494	
			37.000	1.100	10.498	1.487	
			38.000	1.105	10.154	1.479	
			39.000	1.109	9.821	1.471	
			40.000	1.113	9.497	1.463	
			41.000	1.118	9.181	1.454	
			42.000	1.123	8.873	1.446	
			43.000	1.128	8.570	1.437	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	P TC/PTI
1.40	20.0	53.319	44.000	1.133	8.272	1.427	0.998
			45.000	1.139	7.97E	1.417	
			46.000	1.144	7.685	1.407	
			47.000	1.150	7.393	1.397	
			48.000	1.157	7.099	1.385	
			49.000	1.163	6.801	1.373	
			50.000	1.171	6.496	1.361	
			51.000	1.179	6.179	1.347	
			52.000	1.188	5.842	1.331	
			53.000	1.198	5.472	1.313	
			53.319	1.203	5.299	1.304	
1.40	22.5	56.454	22.500	0.982	22.500	1.708	0.996
			23.500	0.983	21.577	1.708	
			24.500	0.983	20.721	1.706	
			25.500	0.985	19.925	1.704	
			26.500	0.987	19.182	1.700	
			27.500	0.989	18.487	1.696	
			28.500	0.991	17.833	1.691	
			29.500	0.994	17.218	1.686	
			30.500	0.996	16.636	1.681	
			31.500	0.999	16.086	1.675	
			32.500	1.002	15.563	1.669	
			33.500	1.006	15.066	1.662	
			34.500	1.009	14.591	1.656	
			35.500	1.013	14.138	1.648	
			36.500	1.017	13.704	1.641	
			37.500	1.021	13.286	1.634	
			38.500	1.025	12.885	1.626	
			39.500	1.029	12.498	1.618	
			40.500	1.033	12.123	1.610	
			41.500	1.037	11.761	1.601	
			42.500	1.042	11.408	1.592	
			43.500	1.047	11.066	1.583	
			44.500	1.052	10.731	1.574	
			45.500	1.057	10.403	1.565	

CONICAL FLCW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PIC/PT1
1.4C	22.5	56.454	46.500	1.062	10.082	1.555	0.996
			47.500	1.067	9.765	1.544	
			48.500	1.073	9.452	1.534	
			49.500	1.079	9.142	1.523	
			50.500	1.085	8.832	1.511	
			51.500	1.092	8.522	1.499	
			52.500	1.099	8.208	1.486	
			53.500	1.107	7.889	1.472	
			54.500	1.115	7.561	1.450	
			55.500	1.124	7.216	1.440	
			56.454	1.134	6.864	1.422	
1.40	25.0	60.578	25.000	0.897	25.000	1.870	0.991
			26.000	0.898	24.069	1.869	
			27.000	0.898	23.199	1.867	
			28.000	0.900	22.385	1.865	
			29.000	0.901	21.620	1.862	
			30.000	0.903	20.900	1.858	
			31.000	0.905	20.220	1.853	
			32.000	0.908	19.577	1.849	
			33.000	0.910	18.968	1.843	
			34.000	0.913	18.389	1.837	
			35.000	0.916	17.838	1.831	
			36.000	0.919	17.312	1.825	
			37.000	0.923	16.810	1.818	
			38.000	0.926	16.329	1.811	
			39.000	0.930	15.868	1.804	
			40.000	0.934	15.424	1.797	
			41.000	0.938	14.998	1.789	
			42.000	0.941	14.587	1.781	
			43.000	0.946	14.190	1.773	
			44.000	0.950	13.805	1.764	
			45.000	0.954	13.433	1.756	
			46.000	0.959	13.071	1.747	
			47.000	0.963	12.719	1.737	
			48.000	0.968	12.376	1.728	

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CONICAL FLOW PARAMETERS

NI	DELTA	PHI S	PHI	M2	DEL	P2/P1	P TC/PT1
1.40	25.0	60.578	49.000	0.973	12.040	1.718	0.991
			50.000	0.978	11.712	1.708	
			51.000	0.984	11.390	1.698	
			52.000	0.989	11.073	1.687	
			53.000	0.995	10.760	1.676	
			54.000	1.001	10.451	1.664	
			55.000	1.007	10.143	1.652	
			56.000	1.014	9.836	1.639	
			57.000	1.021	9.529	1.625	
			58.000	1.028	9.218	1.611	
			59.000	1.036	8.902	1.596	
			60.000	1.045	8.578	1.579	
			60.578	1.051	8.378	1.568	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.50	5.0	41.828	5.000	1.454	5.000	1.069	1.000
			6.000	1.454	4.284	1.069	
			7.000	1.455	3.745	1.067	
			8.000	1.455	3.324	1.066	
			9.000	1.457	2.986	1.064	
			10.000	1.458	2.707	1.062	
			11.000	1.459	2.473	1.060	
			12.000	1.460	2.274	1.059	
			13.000	1.462	2.102	1.057	
			14.000	1.463	1.951	1.055	
			15.000	1.464	1.818	1.054	
			16.000	1.465	1.700	1.052	
			17.000	1.466	1.594	1.050	
			18.000	1.467	1.498	1.049	
			19.000	1.468	1.410	1.047	
			20.000	1.469	1.330	1.046	
			21.000	1.470	1.256	1.045	
			22.000	1.471	1.188	1.043	
			23.000	1.472	1.124	1.042	
			24.000	1.473	1.064	1.040	
			25.000	1.473	1.008	1.039	
			26.000	1.474	0.954	1.038	
			27.000	1.475	0.903	1.036	
			28.000	1.476	0.855	1.035	
			29.000	1.477	0.808	1.034	
			30.000	1.478	0.763	1.032	
			31.000	1.479	0.719	1.031	
			32.000	1.480	0.676	1.030	
			33.000	1.481	0.634	1.028	
			34.000	1.482	0.591	1.027	
			35.000	1.483	0.549	1.025	
			36.000	1.484	0.505	1.023	
			37.000	1.485	0.460	1.022	
			38.000	1.487	0.412	1.020	
			39.000	1.488	0.359	1.017	
			40.000	1.490	0.296	1.014	

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.50	5.0	41.828	41.000	1.493	0.213	1.011	1.000
			41.828	1.500	-0.009	1.000	
1.50	10.0	42.655	10.000	1.370	10.000	1.202	1.000
			11.000	1.371	9.164	1.202	
			12.000	1.372	8.453	1.200	
			13.000	1.374	7.839	1.197	
			14.000	1.375	7.304	1.194	
			15.000	1.377	6.831	1.191	
			16.000	1.380	6.409	1.187	
			17.000	1.382	6.031	1.183	
			18.000	1.384	5.688	1.179	
			19.000	1.387	5.376	1.175	
			20.000	1.389	5.090	1.171	
			21.000	1.392	4.826	1.167	
			22.000	1.394	4.581	1.163	
			23.000	1.397	4.353	1.159	
			24.000	1.399	4.139	1.155	
			25.000	1.402	3.938	1.151	
			26.000	1.404	3.747	1.147	
			27.000	1.407	3.566	1.142	
			28.000	1.410	3.394	1.138	
			29.000	1.412	3.228	1.134	
			30.000	1.415	3.069	1.130	
			31.000	1.418	2.915	1.125	
			32.000	1.421	2.764	1.121	
			33.000	1.424	2.617	1.116	
			34.000	1.427	2.472	1.111	
			35.000	1.430	2.327	1.106	
			36.000	1.433	2.182	1.101	
			37.000	1.437	2.035	1.095	
			38.000	1.441	1.883	1.089	
			39.000	1.445	1.724	1.083	
			40.000	1.450	1.551	1.075	
			41.000	1.455	1.352	1.066	
			42.000	1.463	1.089	1.054	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.50	10.0	42.695	42.695	1.473	0.810	1.040	1.000
1.50	15.0	44.941	15.000	1.267	15.000	1.385	1.000
			16.000	1.268	14.114	1.384	
			17.000	1.269	13.322	1.382	
			18.000	1.270	12.608	1.379	
			19.000	1.272	11.960	1.375	
			20.000	1.275	11.368	1.370	
			21.000	1.278	10.824	1.366	
			22.000	1.280	10.322	1.360	
			23.000	1.283	9.856	1.355	
			24.000	1.287	9.421	1.349	
			25.000	1.290	9.014	1.343	
			26.000	1.293	8.630	1.336	
			27.000	1.297	8.268	1.330	
			28.000	1.301	7.925	1.323	
			29.000	1.304	7.597	1.317	
			30.000	1.308	7.285	1.310	
			31.000	1.312	6.984	1.303	
			32.000	1.316	6.695	1.295	
			33.000	1.321	6.414	1.288	
			34.000	1.325	6.142	1.280	
			35.000	1.330	5.875	1.272	
			36.000	1.334	5.613	1.264	
			37.000	1.339	5.354	1.255	
			38.000	1.344	5.097	1.246	
			39.000	1.350	4.838	1.237	
			40.000	1.356	4.575	1.227	
			41.000	1.362	4.305	1.216	
			42.000	1.369	4.021	1.204	
			43.000	1.377	3.715	1.191	
			44.000	1.387	3.366	1.174	
			45.000	1.400	2.915	1.153	
			46.941	1.406	2.729	1.143	
1.50	20.0	49.110	20.000	1.147	20.000	1.617	0.998

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.50	20.0	49.110	21.000	1.147	19.086	1.616	0.998
			22.000	1.148	18.247	1.614	
			23.000	1.150	17.472	1.611	
			24.000	1.152	16.753	1.606	
			25.000	1.155	16.083	1.601	
			26.000	1.157	15.457	1.596	
			27.000	1.160	14.869	1.590	
			28.000	1.164	14.315	1.583	
			29.000	1.167	13.791	1.576	
			30.000	1.171	13.294	1.569	
			31.000	1.175	12.821	1.561	
			32.000	1.179	12.369	1.553	
			33.000	1.183	11.937	1.544	
			34.000	1.187	11.522	1.535	
			35.000	1.192	11.121	1.526	
			36.000	1.197	10.734	1.517	
			37.000	1.202	10.359	1.507	
			38.000	1.207	9.993	1.497	
			39.000	1.212	9.635	1.487	
			40.000	1.218	9.284	1.476	
			41.000	1.223	8.938	1.465	
			42.000	1.230	8.594	1.453	
			43.000	1.236	8.252	1.440	
			44.000	1.243	7.907	1.427	
			45.000	1.250	7.557	1.413	
			46.000	1.259	7.198	1.398	
			47.000	1.268	6.823	1.381	
			48.000	1.278	6.421	1.362	
			49.000	1.290	5.971	1.340	
			49.110	1.294	5.825	1.332	
1.50	25.0	54.976	25.000	1.006	25.000	1.907	0.990
			26.000	1.006	24.069	1.906	
			27.000	1.007	23.198	1.904	
			28.000	1.008	22.382	1.901	
			29.000	1.010	21.615	1.897	

CONICAL FLOW PARAMETERS

HI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.50	25.0	54.976	30.000	1.012	20.891	1.892	0.990
			31.000	1.015	20.207	1.886	
			32.000	1.018	19.558	1.880	
			33.000	1.021	18.941	1.873	
			34.000	1.024	18.353	1.865	
			35.000	1.028	17.792	1.858	
			36.000	1.032	17.254	1.851	
			37.000	1.036	16.738	1.840	
			38.000	1.040	16.242	1.831	
			39.000	1.044	15.764	1.822	
			40.000	1.049	15.302	1.812	
			41.000	1.054	14.855	1.801	
			42.000	1.059	14.421	1.790	
			43.000	1.064	13.998	1.779	
			44.000	1.069	13.586	1.768	
			45.000	1.075	13.182	1.756	
			46.000	1.081	12.786	1.743	
			47.000	1.087	12.396	1.730	
			48.000	1.093	12.010	1.716	
			49.000	1.100	11.627	1.702	
			50.000	1.107	11.244	1.687	
			51.000	1.115	10.860	1.671	
			52.000	1.123	10.472	1.654	
			53.000	1.132	10.076	1.635	
			54.000	1.142	9.666	1.615	
			54.976	1.152	9.244	1.594	
1.50	30.0	65.541	30.000	0.790	30.000	2.349	0.966
			31.000	0.791	29.057	2.348	
			32.000	0.791	28.165	2.347	
			33.000	0.793	27.320	2.344	
			34.000	0.794	26.519	2.341	
			35.000	0.796	25.757	2.337	
			36.000	0.798	25.032	2.332	
			37.000	0.800	24.342	2.327	
			38.000	0.801	23.682	2.321	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.50	30.0	65.641	39.000	0.805	23.052	2.315	0.966
			40.000	0.808	22.449	2.308	
			41.000	0.811	21.871	2.301	
			42.000	0.814	21.316	2.293	
			43.000	0.818	20.782	2.286	
			44.000	0.821	20.269	2.278	
			45.000	0.825	19.774	2.269	
			46.000	0.829	19.297	2.260	
			47.000	0.833	18.837	2.251	
			48.000	0.837	18.391	2.242	
			49.000	0.841	17.960	2.232	
			50.000	0.845	17.541	2.222	
			51.000	0.850	17.135	2.212	
			52.000	0.855	16.741	2.201	
			53.000	0.859	16.356	2.190	
			54.000	0.864	15.982	2.179	
			55.000	0.869	15.617	2.167	
			56.000	0.875	15.260	2.155	
			57.000	0.880	14.910	2.143	
			58.000	0.886	14.568	2.130	
			59.000	0.892	14.231	2.116	
			60.000	0.898	13.900	2.102	
			61.000	0.904	13.573	2.088	
			62.000	0.911	13.250	2.073	
			63.000	0.918	12.930	2.057	
			64.000	0.925	12.611	2.041	
			65.000	0.933	12.293	2.023	
			65.641	0.938	12.087	2.011	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
1.60	5.0	38.855	5.000	1.551	5.000	1.075	1.000
			6.000	1.551	4.284	1.075	
			7.000	1.552	3.745	1.073	
			8.000	1.553	3.323	1.071	
			9.000	1.555	2.983	1.069	
			10.000	1.555	2.704	1.067	
			11.000	1.557	2.460	1.065	
			12.000	1.558	2.268	1.063	
			13.000	1.560	2.094	1.061	
			14.000	1.561	1.942	1.059	
			15.000	1.562	1.808	1.057	
			16.000	1.563	1.688	1.055	
			17.000	1.565	1.580	1.054	
			18.000	1.566	1.482	1.052	
			19.000	1.567	1.392	1.050	
			20.000	1.568	1.310	1.048	
			21.000	1.569	1.234	1.047	
			22.000	1.570	1.163	1.045	
			23.000	1.571	1.096	1.044	
			24.000	1.572	1.034	1.042	
			25.000	1.573	0.974	1.040	
			26.000	1.574	0.918	1.039	
			27.000	1.575	0.863	1.037	
			28.000	1.577	0.811	1.035	
			29.000	1.578	0.760	1.034	
			30.000	1.579	0.710	1.032	
			31.000	1.580	0.660	1.030	
			32.000	1.581	0.610	1.028	
			33.000	1.582	0.560	1.026	
			34.000	1.584	0.507	1.024	
			35.000	1.585	0.452	1.022	
			36.000	1.587	0.391	1.019	
			37.000	1.589	0.319	1.016	
			38.000	1.593	0.220	1.011	
			38.855	1.594	0.168	1.009	
1.60	10.0	39.612	10.000	1.464	10.000	1.220	1.000

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.60	10.0	39.612	11.000	1.464	9.164	1.219	1.000
			12.000	1.466	8.452	1.217	
			13.000	1.467	7.837	1.214	
			14.000	1.469	7.300	1.210	
			15.000	1.472	6.825	1.206	
			16.000	1.474	6.400	1.202	
			17.000	1.477	6.019	1.198	
			18.000	1.479	5.672	1.193	
			19.000	1.482	5.356	1.188	
			20.000	1.485	5.065	1.184	
			21.000	1.488	4.795	1.179	
			22.000	1.490	4.544	1.174	
			23.000	1.493	4.310	1.169	
			24.000	1.496	4.089	1.164	
			25.000	1.499	3.880	1.159	
			26.000	1.502	3.681	1.154	
			27.000	1.505	3.491	1.149	
			28.000	1.508	3.308	1.144	
			29.000	1.512	3.131	1.139	
			30.000	1.515	2.959	1.133	
			31.000	1.518	2.799	1.127	
			32.000	1.522	2.622	1.122	
			33.000	1.526	2.455	1.115	
			34.000	1.530	2.286	1.109	
			35.000	1.534	2.112	1.102	
			36.000	1.539	1.930	1.094	
			37.000	1.544	1.733	1.086	
			38.000	1.551	1.505	1.075	
			39.000	1.560	1.200	1.061	
			39.612	1.568	0.936	1.048	
1.60	15.0	42.008	15.000	1.357	15.000	1.418	1.000
			16.000	1.357	14.114	1.417	
			17.000	1.359	13.321	1.415	
			18.000	1.361	12.605	1.411	
			19.000	1.363	11.955	1.406	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.60	15.0	42.008	20.000	1.365	11.361	1.401	1.000
			21.000	1.368	10.813	1.395	
			22.000	1.372	10.306	1.389	
			23.000	1.375	9.834	1.382	
			24.000	1.379	9.393	1.376	
			25.000	1.383	8.978	1.368	
			26.000	1.386	8.586	1.361	
			27.000	1.391	8.214	1.353	
			28.000	1.395	7.859	1.345	
			29.000	1.399	7.520	1.337	
			30.000	1.404	7.193	1.328	
			31.000	1.408	6.877	1.319	
			32.000	1.413	6.570	1.310	
			33.000	1.418	6.269	1.301	
			34.000	1.424	5.973	1.291	
			35.000	1.429	5.680	1.281	
			36.000	1.435	5.386	1.270	
			37.000	1.442	5.089	1.259	
			38.000	1.449	4.784	1.246	
			39.000	1.456	4.465	1.232	
			40.000	1.465	4.120	1.217	
			41.000	1.476	3.728	1.198	
			42.000	1.491	3.214	1.173	
			42.008	1.494	3.124	1.168	
1.60	20.0	45.939	20.000	1.235	20.000	1.667	0.997
			21.000	1.236	19.086	1.666	
			22.000	1.237	18.246	1.664	
			23.000	1.239	17.470	1.660	
			24.000	1.241	16.748	1.655	
			25.000	1.244	16.075	1.649	
			26.000	1.247	15.444	1.642	
			27.000	1.250	14.851	1.635	
			28.000	1.254	14.290	1.627	
			29.000	1.258	13.758	1.618	
			30.000	1.262	13.252	1.609	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.60	20.0	45.939	31.000	1.267	12.768	1.599	0.997
			32.000	1.271	12.305	1.589	
			33.000	1.276	11.858	1.579	
			34.000	1.281	11.427	1.568	
			35.000	1.287	11.008	1.557	
			36.000	1.292	10.601	1.545	
			37.000	1.298	10.201	1.533	
			38.000	1.304	9.809	1.520	
			39.000	1.311	9.420	1.506	
			40.000	1.318	9.032	1.492	
			41.000	1.325	8.643	1.477	
			42.000	1.334	8.248	1.460	
			43.000	1.342	7.841	1.443	
			44.000	1.352	7.414	1.423	
			45.000	1.364	6.953	1.401	
			45.939	1.377	6.460	1.375	
1.60	25.0	51.177	25.000	1.098	25.000	1.971	0.988
			26.000	1.098	24.069	1.970	
			27.000	1.099	23.198	1.968	
			28.000	1.101	22.380	1.964	
			29.000	1.103	21.610	1.959	
			30.000	1.105	20.883	1.953	
			31.000	1.108	20.194	1.946	
			32.000	1.112	19.539	1.938	
			33.000	1.115	18.915	1.929	
			34.000	1.119	18.318	1.920	
			35.000	1.123	17.747	1.910	
			36.000	1.128	17.197	1.899	
			37.000	1.132	16.668	1.888	
			38.000	1.137	16.156	1.876	
			39.000	1.142	15.661	1.864	
			40.000	1.148	15.179	1.851	
			41.000	1.153	14.709	1.838	
			42.000	1.159	14.249	1.824	
			43.000	1.166	13.797	1.809	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
1.60	25.0	51.177	44.000	1.172	13.352	1.794	0.986
			45.000	1.179	12.910	1.778	
			46.000	1.187	12.471	1.760	
			47.000	1.195	12.030	1.742	
			48.000	1.204	11.585	1.723	
			49.000	1.213	11.130	1.702	
			50.000	1.223	10.659	1.679	
			51.000	1.235	10.162	1.653	
			51.177	1.238	10.031	1.646	
1.60	30.0	58.549	30.000	0.928	30.000	2.356	0.966
			31.000	0.928	29.056	2.355	
			32.000	0.929	28.163	2.353	
			33.000	0.930	27.317	2.350	
			34.000	0.932	26.512	2.345	
			35.000	0.934	25.746	2.339	
			36.000	0.937	25.015	2.333	
			37.000	0.940	24.317	2.325	
			38.000	0.943	23.648	2.317	
			39.000	0.946	23.006	2.309	
			40.000	0.950	22.389	2.299	
			41.000	0.954	21.795	2.289	
			42.000	0.958	21.222	2.279	
			43.000	0.962	20.669	2.267	
			44.000	0.967	20.133	2.256	
			45.000	0.971	19.613	2.243	
			46.000	0.976	19.108	2.230	
			47.000	0.982	18.616	2.217	
			48.000	0.987	18.136	2.203	
			49.000	0.993	17.667	2.188	
			50.000	0.999	17.207	2.173	
			51.000	1.005	16.756	2.157	
			52.000	1.012	16.310	2.141	
			53.000	1.019	15.870	2.123	
			54.000	1.026	15.434	2.105	
			55.000	1.034	14.999	2.086	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.60	30.0	58.549	56.000	1.042	14.563	2.065	0.966
			57.000	1.051	14.125	2.043	
			58.000	1.060	13.680	2.020	
			58.549	1.066	13.425	2.006	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.70	5.0	36.062	5.000	1.648	5.000	1.081	1.000
			6.000	1.649	6.284	1.080	
			7.000	1.650	3.744	1.079	
			8.000	1.651	3.377	1.077	
			9.000	1.652	2.981	1.074	
			10.000	1.654	2.700	1.072	
			11.000	1.655	2.464	1.070	
			12.000	1.657	2.262	1.067	
			13.000	1.658	2.087	1.065	
			14.000	1.659	1.933	1.063	
			15.000	1.661	1.797	1.061	
			16.000	1.662	1.675	1.058	
			17.000	1.664	1.565	1.056	
			18.000	1.665	1.465	1.054	
			19.000	1.666	1.373	1.052	
			20.000	1.667	1.288	1.050	
			21.000	1.669	1.209	1.048	
			22.000	1.670	1.135	1.046	
			23.000	1.671	1.065	1.044	
			24.000	1.672	0.999	1.042	
			25.000	1.674	0.936	1.041	
			26.000	1.675	0.875	1.039	
			27.000	1.676	0.816	1.037	
			28.000	1.677	0.759	1.034	
			29.000	1.679	0.701	1.032	
			30.000	1.680	0.644	1.030	
			31.000	1.682	0.585	1.028	
			32.000	1.684	0.524	1.025	
			33.000	1.685	0.458	1.022	
			34.000	1.688	0.383	1.019	
			35.000	1.691	0.298	1.014	
			36.000	1.698	0.064	1.003	
			36.062	1.700	0.010	1.000	
1.70	10.0	36.928	10.000	1.556	10.000	1.238	1.000
			11.000	1.557	9.163	1.237	

CONICAL FLOW PARAMETERS

M1	DELTA	PHT S	PHI	M2	DEL	P2/PI	PTC/PTI
1.70	10.0	36.928	12.000	1.558	8.451	1.235	1.000
			13.000	1.560	7.835	1.231	
			14.000	1.563	7.296	1.227	
			15.000	1.565	6.818	1.223	
			16.000	1.568	6.391	1.218	
			17.000	1.571	6.005	1.213	
			18.000	1.574	5.655	1.207	
			19.000	1.577	5.334	1.202	
			20.000	1.580	5.037	1.197	
			21.000	1.583	4.762	1.191	
			22.000	1.586	4.504	1.185	
			23.000	1.590	4.262	1.179	
			24.000	1.593	4.033	1.174	
			25.000	1.596	3.815	1.168	
			26.000	1.600	3.606	1.162	
			27.000	1.603	3.404	1.155	
			28.000	1.607	3.208	1.149	
			29.000	1.611	3.016	1.142	
			30.000	1.615	2.826	1.135	
			31.000	1.619	2.636	1.128	
			32.000	1.624	2.443	1.120	
			33.000	1.629	2.243	1.112	
			34.000	1.635	2.031	1.103	
			35.000	1.641	1.795	1.092	
			36.000	1.650	1.506	1.078	
			36.928	1.668	0.953	1.050	
1.70	15.0	39.341	15.000	1.446	15.000	1.453	0.999
			16.000	1.446	14.114	1.452	
			17.000	1.448	13.320	1.449	
			18.000	1.450	12.603	1.445	
			19.000	1.452	11.951	1.440	
			20.000	1.455	11.353	1.434	
			21.000	1.458	10.801	1.427	
			22.000	1.462	10.289	1.419	
			23.000	1.466	9.811	1.412	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.70	15.0	39.341	24.000	1.470	9.362	1.403	0.999
			25.000	1.474	8.939	1.395	
			26.000	1.479	8.537	1.386	
			27.000	1.483	8.154	1.376	
			28.000	1.488	7.786	1.367	
			29.000	1.493	7.432	1.357	
			30.000	1.499	7.088	1.346	
			31.000	1.504	6.753	1.336	
			32.000	1.510	6.423	1.324	
			33.000	1.516	6.095	1.312	
			34.000	1.523	5.767	1.300	
			35.000	1.530	5.434	1.286	
			36.000	1.538	5.090	1.271	
			37.000	1.547	4.726	1.255	
			38.000	1.557	4.325	1.236	
			39.000	1.571	3.845	1.212	
			39.341	1.585	3.360	1.186	
1.70	20.0	43.293	20.000	1.321	20.000	1.723	0.996
			21.000	1.322	19.086	1.722	
			22.000	1.323	18.245	1.719	
			23.000	1.325	17.467	1.714	
			24.000	1.328	16.743	1.708	
			25.000	1.331	16.067	1.701	
			26.000	1.334	15.431	1.693	
			27.000	1.338	14.832	1.684	
			28.000	1.342	14.264	1.674	
			29.000	1.346	13.723	1.664	
			30.000	1.351	13.207	1.653	
			31.000	1.356	12.711	1.642	
			32.000	1.362	12.234	1.630	
			33.000	1.367	11.771	1.617	
			34.000	1.373	11.321	1.603	
			35.000	1.380	10.881	1.588	
			36.000	1.386	10.448	1.574	
			37.000	1.393	10.019	1.559	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.70	20.0	43.293	38.000	1.401	9.590	1.542	0.996
			39.000	1.409	9.158	1.524	
			40.000	1.418	8.718	1.505	
			41.000	1.428	8.260	1.484	
			42.000	1.440	7.773	1.460	
			43.000	1.453	7.233	1.432	
			43.293	1.460	6.977	1.418	
1.70	25.0	48.323	25.000	1.193	25.000	2.049	0.984
			26.000	1.183	24.068	2.048	
			27.000	1.184	23.137	2.045	
			28.000	1.186	22.378	2.040	
			29.000	1.188	21.605	2.034	
			30.000	1.191	20.875	2.027	
			31.000	1.194	20.181	2.018	
			32.000	1.198	19.520	2.008	
			33.000	1.202	18.888	1.998	
			34.000	1.206	18.283	1.987	
			35.000	1.211	17.700	1.974	
			36.000	1.216	17.138	1.961	
			37.000	1.222	16.594	1.948	
			38.000	1.227	16.065	1.933	
			39.000	1.233	15.550	1.918	
			40.000	1.240	15.045	1.901	
			41.000	1.246	14.549	1.884	
			42.000	1.254	14.058	1.866	
			43.000	1.261	13.571	1.847	
			44.000	1.270	13.083	1.827	
			45.000	1.279	12.591	1.805	
46.000	1.288	12.089	1.781				
47.000	1.299	11.571	1.755				
48.000	1.311	11.023	1.726				
48.323	1.317	10.803	1.714				
1.70	30.0	54.778	30.000	1.021	30.000	2.443	0.961
			31.000	1.022	29.056	2.442	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.70	30.0	54.778	37.000	1.023	26.163	2.440	0.961
			31.000	1.024	27.314	2.435	
			34.000	1.026	26.507	2.429	
			35.000	1.029	25.738	2.422	
			36.000	1.032	25.002	2.414	
			37.000	1.035	24.297	2.405	
			38.000	1.038	23.621	2.394	
			39.000	1.042	22.969	2.383	
			40.000	1.047	22.341	2.371	
			41.000	1.051	21.734	2.358	
			42.000	1.056	21.146	2.345	
			43.000	1.061	20.575	2.330	
			44.000	1.067	20.020	2.315	
			45.000	1.072	19.478	2.299	
			46.000	1.078	18.947	2.282	
			47.000	1.085	18.426	2.264	
			48.000	1.091	17.914	2.245	
			49.000	1.099	17.407	2.225	
			50.000	1.106	16.905	2.204	
			51.000	1.114	16.404	2.182	
			52.000	1.123	15.907	2.159	
			53.000	1.132	15.396	2.133	
			54.000	1.143	14.880	2.106	
			54.778	1.151	14.465	2.083	
1.70	35.0	65.891	35.000	0.775	35.000	3.027	0.913
			36.000	0.776	34.047	3.026	
			37.000	0.776	33.137	3.024	
			38.000	0.778	32.268	3.021	
			39.000	0.779	31.437	3.017	
			40.000	0.781	30.640	3.011	
			41.000	0.783	29.876	3.005	
			42.000	0.785	29.143	2.998	
			43.000	0.788	28.438	2.990	
			44.000	0.791	27.759	2.982	
			45.000	0.794	27.106	2.973	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
1.70	35.0	55.891	46.000	0.797	26.475	2.963	0.913
			47.000	0.801	25.867	2.952	
			48.000	0.805	25.278	2.941	
			49.000	0.809	24.709	2.930	
			50.000	0.813	24.158	2.918	
			51.000	0.817	23.624	2.905	
			52.000	0.822	23.105	2.892	
			53.000	0.826	22.600	2.878	
			54.000	0.831	22.110	2.864	
			55.000	0.836	21.632	2.849	
			56.000	0.841	21.166	2.834	
			57.000	0.847	20.710	2.818	
			58.000	0.853	20.265	2.801	
			59.000	0.859	19.829	2.784	
			60.000	0.865	19.401	2.766	
			61.000	0.871	18.981	2.747	
			62.000	0.878	18.567	2.727	
			63.000	0.885	18.159	2.707	
			64.000	0.892	17.756	2.686	
			65.000	0.900	17.356	2.663	
			65.891	0.907	17.001	2.642	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.80	5.0	33.756	5.000	1.744	5.000	1.088	1.000
			6.000	1.745	4.284	1.087	
			7.000	1.746	3.743	1.086	
			8.000	1.748	3.370	1.083	
			9.000	1.749	2.979	1.081	
			10.000	1.751	2.697	1.078	
			11.000	1.752	2.459	1.075	
			12.000	1.754	2.255	1.073	
			13.000	1.756	2.078	1.070	
			14.000	1.757	1.923	1.067	
			15.000	1.759	1.785	1.065	
			16.000	1.760	1.661	1.063	
			17.000	1.762	1.548	1.060	
			18.000	1.763	1.446	1.058	
			19.000	1.765	1.351	1.055	
			20.000	1.766	1.263	1.053	
			21.000	1.768	1.181	1.051	
			22.000	1.769	1.104	1.049	
			23.000	1.770	1.031	1.046	
			24.000	1.772	0.961	1.044	
			25.000	1.773	0.893	1.042	
			26.000	1.775	0.826	1.039	
			27.000	1.776	0.761	1.037	
			28.000	1.778	0.696	1.034	
			29.000	1.780	0.629	1.031	
			30.000	1.782	0.559	1.028	
			31.000	1.784	0.484	1.025	
			32.000	1.787	0.397	1.020	
			33.000	1.791	0.281	1.015	
			33.756	1.800	0.001	1.000	
1.80	10.0	34.796	10.000	1.648	10.000	1.258	1.000
			11.000	1.649	9.143	1.257	
			12.000	1.650	8.450	1.254	
			13.000	1.652	7.833	1.250	
			14.000	1.655	7.291	1.246	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
1.80	10.0	34.796	15.000	1.658	6.811	1.240	1.000
			16.000	1.661	6.381	1.235	
			17.000	1.664	5.991	1.229	
			18.000	1.667	5.636	1.223	
			19.000	1.671	5.310	1.217	
			20.000	1.674	5.007	1.210	
			21.000	1.678	4.725	1.204	
			22.000	1.682	4.460	1.197	
			23.000	1.685	4.210	1.190	
			24.000	1.689	3.971	1.183	
			25.000	1.693	3.742	1.176	
			26.000	1.697	3.520	1.169	
			27.000	1.702	3.304	1.161	
			28.000	1.706	3.090	1.153	
			29.000	1.711	2.877	1.145	
			30.000	1.716	2.662	1.136	
			31.000	1.722	2.439	1.126	
			32.000	1.728	2.201	1.116	
			33.000	1.736	1.934	1.103	
			34.000	1.746	1.598	1.086	
			34.796	1.759	1.154	1.064	
1.80	15.0	37.200	15.000	1.532	15.000	1.492	0.999
			16.000	1.533	14.113	1.491	
			17.000	1.535	13.319	1.487	
			18.000	1.537	12.600	1.482	
			19.000	1.540	11.946	1.476	
			20.000	1.543	11.344	1.469	
			21.000	1.547	10.788	1.461	
			22.000	1.551	10.270	1.453	
			23.000	1.555	9.786	1.444	
			24.000	1.559	9.329	1.434	
			25.000	1.564	8.906	1.424	
			26.000	1.569	8.484	1.413	
			27.000	1.575	8.088	1.402	
			28.000	1.580	7.705	1.390	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/PI	PTC/PTI
1.80	15.0	37.200	29.000	1.586	7.334	1.378	0.999
			30.000	1.593	6.969	1.366	
			31.000	1.599	6.609	1.352	
			32.000	1.606	6.250	1.338	
			33.000	1.614	5.885	1.323	
			34.000	1.623	5.509	1.306	
			35.000	1.632	5.112	1.288	
			36.000	1.644	4.672	1.266	
			37.000	1.658	4.140	1.238	
			37.200	1.674	3.624	1.210	
1.80	20.0	41.141	20.000	1.605	20.000	1.784	0.994
			21.000	1.405	19.086	1.782	
			22.000	1.406	18.244	1.779	
			23.000	1.409	17.464	1.773	
			24.000	1.411	16.738	1.766	
			25.000	1.415	16.058	1.758	
			26.000	1.419	15.418	1.749	
			27.000	1.423	14.812	1.738	
			28.000	1.427	14.236	1.727	
			29.000	1.432	13.686	1.714	
			30.000	1.438	13.159	1.701	
			31.000	1.444	12.650	1.688	
			32.000	1.450	12.156	1.673	
			33.000	1.456	11.675	1.657	
			34.000	1.463	11.203	1.641	
			35.000	1.471	10.736	1.623	
			36.000	1.479	10.271	1.605	
			37.000	1.487	9.803	1.585	
			38.000	1.497	9.325	1.563	
			39.000	1.508	8.829	1.539	
			40.000	1.520	8.299	1.512	
			41.000	1.534	7.709	1.480	
			41.141	1.540	7.496	1.468	
1.80	25.0	46.035	25.000	1.263	25.000	2.136	0.980

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.80	25.0	46.035	26.000	1.264	24.068	2.135	0.980
			27.000	1.265	23.196	2.131	
			28.000	1.267	22.375	2.126	
			29.000	1.269	21.601	2.118	
			30.000	1.273	20.866	2.109	
			31.000	1.276	20.167	2.099	
			32.000	1.280	19.500	2.087	
			33.000	1.285	18.861	2.075	
			34.000	1.290	18.245	2.061	
			35.000	1.295	17.651	2.046	
			36.000	1.301	17.076	2.030	
			37.000	1.307	16.515	2.014	
			38.000	1.313	15.967	1.996	
			39.000	1.320	15.429	1.977	
			40.000	1.328	14.897	1.956	
			41.000	1.336	14.369	1.935	
			42.000	1.345	13.840	1.912	
			43.000	1.354	13.305	1.887	
			44.000	1.365	12.758	1.859	
			45.000	1.376	12.190	1.829	
			46.000	1.390	11.585	1.795	
			46.035	1.392	11.495	1.790	
1.80	30.0	52.018	30.000	1.104	30.000	2.553	0.953
			31.000	1.104	29.056	2.552	
			32.000	1.106	28.162	2.548	
			33.000	1.107	27.312	2.543	
			34.000	1.109	26.503	2.536	
			35.000	1.112	25.730	2.527	
			36.000	1.115	24.989	2.517	
			37.000	1.119	24.278	2.505	
			38.000	1.123	23.594	2.493	
			39.000	1.128	22.933	2.479	
			40.000	1.132	22.294	2.464	
			41.000	1.138	21.673	2.448	
			42.000	1.143	21.070	2.431	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
1.80	30.0	52.018	43.000	1.149	20.481	2.412	0.953
			44.000	1.155	19.904	2.393	
			45.000	1.162	19.337	2.372	
			46.000	1.169	18.778	2.351	
			47.000	1.177	18.224	2.327	
			48.000	1.185	17.672	2.303	
			49.000	1.194	17.120	2.276	
			50.000	1.204	16.563	2.248	
			51.000	1.214	15.996	2.217	
			52.000	1.226	15.411	2.184	
			52.018	1.227	15.365	2.181	
1.80	35.0	60.141	35.000	0.905	35.000	3.073	0.909
			36.000	0.905	34.047	3.072	
			37.000	0.906	33.136	3.069	
			38.000	0.907	32.265	3.065	
			39.000	0.909	31.431	3.059	
			40.000	0.911	30.630	3.051	
			41.000	0.914	29.859	3.043	
			42.000	0.917	29.118	3.033	
			43.000	0.920	28.403	3.022	
			44.000	0.924	27.712	3.010	
			45.000	0.928	27.044	2.997	
			46.000	0.932	26.397	2.983	
			47.000	0.936	25.769	2.968	
			48.000	0.941	25.159	2.952	
			49.000	0.946	24.565	2.936	
			50.000	0.951	23.986	2.918	
			51.000	0.957	23.420	2.900	
			52.000	0.963	22.866	2.880	
			52.000	0.969	22.323	2.860	
			54.000	0.976	21.788	2.838	
			55.000	0.983	21.262	2.816	
			56.000	0.990	20.741	2.792	
			57.000	0.998	20.225	2.767	
			58.000	1.006	19.712	2.740	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.80	35.0	60.141	59.000	1.015	19.199	2.712	0.909
			60.000	1.025	18.683	2.681	
			60.141	1.026	18.590	2.676	

CONICAL FLOW PARAMETERS

W1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.90	5.0	31.851	5.000	1.841	5.000	1.096	1.000
			6.000	1.841	4.283	1.095	
			7.000	1.843	3.743	1.092	
			8.000	1.844	3.319	1.090	
			9.000	1.846	2.976	1.087	
			10.000	1.848	2.693	1.084	
			11.000	1.850	2.453	1.081	
			12.000	1.851	2.248	1.078	
			13.000	1.853	2.070	1.075	
			14.000	1.855	1.912	1.072	
			15.000	1.857	1.772	1.069	
			16.000	1.858	1.645	1.066	
			17.000	1.860	1.530	1.064	
			18.000	1.862	1.425	1.061	
			19.000	1.863	1.327	1.058	
			20.000	1.865	1.236	1.056	
			21.000	1.867	1.151	1.053	
			22.000	1.868	1.069	1.050	
			23.000	1.870	0.991	1.047	
			24.000	1.872	0.916	1.045	
			25.000	1.874	0.842	1.042	
			26.000	1.875	0.768	1.039	
			27.000	1.877	0.693	1.035	
			28.000	1.880	0.616	1.032	
			29.000	1.882	0.533	1.028	
			30.000	1.885	0.438	1.023	
			31.000	1.889	0.312	1.017	
			31.851	1.896	0.110	1.006	
1.90	10.0	32.844	10.000	1.739	10.000	1.279	1.000
			11.000	1.740	9.163	1.278	
			12.000	1.742	8.449	1.274	
			13.000	1.744	7.830	1.270	
			14.000	1.747	7.287	1.265	
			15.000	1.750	6.804	1.259	
			16.000	1.753	6.270	1.252	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.90	10.0	32.944	17.000	1.757	5.976	1.245	1.000
			18.000	1.761	5.616	1.238	
			19.000	1.764	5.284	1.231	
			20.000	1.768	4.975	1.224	
			21.000	1.772	4.685	1.216	
			22.000	1.777	4.411	1.208	
			23.000	1.781	4.151	1.201	
			24.000	1.785	3.900	1.192	
			25.000	1.790	3.658	1.184	
			26.000	1.795	3.420	1.175	
			27.000	1.800	3.185	1.166	
			28.000	1.806	2.948	1.156	
			29.000	1.812	2.704	1.145	
			30.000	1.819	2.447	1.133	
			31.000	1.827	2.161	1.119	
			32.000	1.838	1.809	1.101	
			32.944	1.855	1.269	1.071	
1.90	15.0	35.422	15.000	1.619	15.000	1.530	0.999
			16.000	1.620	14.113	1.529	
			17.000	1.621	13.318	1.525	
			18.000	1.624	12.598	1.520	
			19.000	1.627	11.940	1.513	
			20.000	1.631	11.335	1.504	
			21.000	1.635	10.774	1.495	
			22.000	1.639	10.251	1.485	
			23.000	1.644	9.759	1.475	
			24.000	1.649	9.293	1.464	
			25.000	1.655	8.850	1.452	
			26.000	1.660	8.424	1.439	
			27.000	1.667	8.014	1.426	
			28.000	1.673	7.613	1.412	
			29.000	1.680	7.220	1.398	
			30.000	1.687	6.830	1.382	
			31.000	1.695	6.437	1.365	
			32.000	1.704	6.035	1.347	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
1.90	15.0	35.422	33.000	1.714	5.613	1.327	0.999
			34.000	1.726	5.154	1.304	
			35.000	1.741	4.613	1.274	
			35.422	1.755	4.131	1.247	
1.90	20.0	39.348	20.000	1.486	20.000	1.869	0.992
			21.000	1.487	19.086	1.847	
			22.000	1.488	18.243	1.843	
			23.000	1.490	17.462	1.836	
			24.000	1.494	16.733	1.828	
			25.000	1.497	16.049	1.819	
			26.000	1.501	15.403	1.808	
			27.000	1.506	14.791	1.795	
			28.000	1.511	14.207	1.782	
			29.000	1.517	13.647	1.767	
			30.000	1.523	13.106	1.752	
			31.000	1.529	12.582	1.735	
			32.000	1.536	12.071	1.718	
			33.000	1.544	11.568	1.699	
			34.000	1.552	11.068	1.679	
			35.000	1.561	10.569	1.657	
			36.000	1.571	10.062	1.634	
37.000	1.582	9.538	1.608				
38.000	1.594	8.985	1.579				
39.000	1.609	8.376	1.544				
39.348	1.617	8.063	1.526				
1.90	25.0	44.146	25.000	1.341	25.000	2.230	0.975
			26.000	1.341	24.068	2.229	
			27.000	1.343	23.195	2.224	
			28.000	1.345	22.373	2.218	
			29.000	1.348	21.595	2.209	
			30.000	1.351	20.857	2.198	
			31.000	1.355	20.153	2.186	
32.000	1.360	19.480	2.173				
33.000	1.365	18.832	2.158				

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CONICAL FLOW PARAMETERS

MJ	DELTA	PHI S	PHI	M2	DEL	P2/PI	P1C/PT1
1.90	25.0	44.146	34.000	1.370	18.206	2.141	0.975
			35.000	1.376	17.599	2.123	
			36.000	1.383	17.008	2.104	
			37.000	1.390	16.429	2.084	
			38.000	1.397	15.859	2.062	
			39.000	1.405	15.294	2.038	
			40.000	1.414	14.730	2.013	
			41.000	1.424	14.161	1.986	
			42.000	1.434	13.591	1.956	
			43.000	1.446	12.980	1.923	
			44.000	1.460	12.342	1.885	
			44.146	1.464	12.185	1.876	
1.90	30.0	49.906	30.000	1.180	30.000	2.678	0.944
			31.000	1.180	29.056	2.675	
			32.000	1.181	28.161	2.672	
			33.000	1.183	27.310	2.666	
			34.000	1.186	26.498	2.657	
			35.000	1.189	25.722	2.647	
			36.000	1.192	24.976	2.635	
			37.000	1.196	24.259	2.621	
			38.000	1.201	23.567	2.605	
			39.000	1.206	22.897	2.589	
			40.000	1.211	22.245	2.570	
			41.000	1.217	21.611	2.551	
			42.000	1.223	20.991	2.530	
			43.000	1.230	20.382	2.507	
			44.000	1.237	19.781	2.483	
			45.000	1.245	19.187	2.457	
			46.000	1.254	18.594	2.429	
			47.000	1.263	18.001	2.400	
			48.000	1.273	17.401	2.368	
			49.000	1.284	16.798	2.332	
			49.906	1.295	16.213	2.297	
1.90	35.0	57.071	35.000	0.991	35.000	3.208	0.897

CONICAL FLOW PARAMETERS

MI	DELTA	PHT S	PHT	M2	DEL	P2/P1	PTC/PT1
1.90	15.0	57.071	36.000	0.992	34.047	3.207	0.897
			37.000	0.993	33.136	3.204	
			38.000	0.994	32.263	3.198	
			39.000	0.996	31.426	3.190	
			40.000	0.999	30.622	3.181	
			41.000	1.002	29.847	3.170	
			42.000	1.005	29.099	3.158	
			43.000	1.009	28.376	3.144	
			44.000	1.013	27.676	3.129	
			45.000	1.017	26.997	3.112	
			46.000	1.022	26.336	3.094	
			47.000	1.027	25.692	3.075	
			48.000	1.033	25.064	3.055	
			49.000	1.039	24.449	3.034	
			50.000	1.045	23.845	3.011	
			51.000	1.052	23.252	2.986	
			52.000	1.059	22.666	2.961	
			53.000	1.067	22.086	2.933	
			54.000	1.075	21.510	2.904	
			55.000	1.084	20.935	2.873	
			56.000	1.093	20.357	2.840	
			57.000	1.103	19.774	2.804	
			57.071	1.104	19.715	2.800	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.00	5.0	30.001	5.000	1.937	5.000	1.103	1.000
			6.000	1.938	4.283	1.102	1.000
			7.000	1.939	3.742	1.009	1.000
			8.000	1.941	3.317	1.006	1.000
			9.000	1.943	2.973	1.003	1.000
			10.000	1.945	2.689	1.000	1.000
			11.000	1.947	2.448	1.000	1.000
			12.000	1.949	2.241	1.000	1.000
			13.000	1.951	2.060	1.000	1.000
			14.000	1.953	1.900	1.000	1.000
			15.000	1.955	1.758	1.000	1.000
			16.000	1.956	1.629	1.000	1.000
			17.000	1.958	1.511	1.000	1.000
			18.000	1.960	1.402	1.000	1.000
			19.000	1.962	1.301	1.000	1.000
			20.000	1.964	1.206	1.000	1.000
			21.000	1.966	1.116	1.000	1.000
			22.000	1.968	1.030	1.000	1.000
			23.000	1.970	0.946	1.000	1.000
24.000	1.972	0.864	1.000	1.000			
25.000	1.974	0.781	1.000	1.000			
26.000	1.977	0.696	1.000	1.000			
27.000	1.979	0.607	1.000	1.000			
28.000	1.982	0.507	1.000	1.000			
29.000	1.987	0.382	1.000	1.000			
30.000	1.997	0.071	1.000	1.000			
30.001	2.000	0.000	1.000	1.000			
2.00	10.0	31.370	10.000	1.829	10.000	1.302	1.000
			11.000	1.830	9.163	1.300	1.000
			12.000	1.832	8.448	1.297	1.000
			13.000	1.834	7.828	1.292	1.000
			14.000	1.837	7.282	1.286	1.000
			15.000	1.841	6.796	1.279	1.000
			16.000	1.845	6.358	1.272	1.000
17.000	1.848	5.960	1.264	1.000			

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.00	10.0	31.370	18.000	1.853	5.595	1.256	1.000
			19.000	1.857	5.236	1.248	
			20.000	1.861	4.940	1.239	
			21.000	1.866	4.642	1.230	
			22.000	1.871	4.358	1.221	
			23.000	1.876	4.086	1.212	
			24.000	1.881	3.821	1.202	
			25.000	1.887	3.562	1.192	
			26.000	1.892	3.304	1.181	
			27.000	1.899	3.042	1.170	
			28.000	1.906	2.770	1.157	
			29.000	1.914	2.475	1.142	
			30.000	1.925	2.131	1.124	
			31.000	1.941	1.616	1.096	
			31.370	1.942	1.599	1.095	
2.00	15.0	33.944	15.000	1.704	15.000	1.573	0.998
			16.000	1.705	14.113	1.572	
			17.000	1.706	13.317	1.567	
			18.000	1.709	12.595	1.561	
			19.000	1.713	11.935	1.553	
			20.000	1.717	11.326	1.543	
			21.000	1.721	10.760	1.533	
			22.000	1.726	10.230	1.522	
			23.000	1.731	9.730	1.509	
			24.000	1.737	9.254	1.496	
			25.000	1.743	8.799	1.482	
			26.000	1.750	8.360	1.468	
			27.000	1.757	7.932	1.452	
			28.000	1.764	7.510	1.435	
			29.000	1.773	7.091	1.418	
			30.000	1.781	6.667	1.399	
			31.000	1.791	6.228	1.377	
			32.000	1.803	5.762	1.353	
			33.000	1.817	5.238	1.325	
			33.944	1.835	4.603	1.288	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.00	20.0	37.854	20.000	1.565	20.000	1.918	0.990
			21.000	1.566	19.085	1.916	
			22.000	1.568	18.242	1.912	
			23.000	1.570	17.459	1.904	
			24.000	1.574	16.727	1.895	
			25.000	1.578	16.039	1.884	
			26.000	1.582	15.388	1.871	
			27.000	1.587	14.769	1.856	
			28.000	1.593	14.175	1.841	
			29.000	1.599	13.604	1.824	
			30.000	1.606	13.050	1.806	
			31.000	1.614	12.509	1.786	
			32.000	1.622	11.977	1.765	
			33.000	1.630	11.447	1.742	
			34.000	1.640	10.915	1.717	
			35.000	1.651	10.373	1.690	
			36.000	1.663	9.808	1.660	
			37.000	1.677	9.200	1.626	
			37.854	1.691	8.607	1.590	
2.00	25.0	42.612	25.000	1.415	25.000	2.332	0.969
			26.000	1.416	24.068	2.330	
			27.000	1.417	23.194	2.325	
			28.000	1.419	22.370	2.317	
			29.000	1.423	21.590	2.307	
			30.000	1.426	20.848	2.295	
			31.000	1.431	20.139	2.281	
			32.000	1.436	19.458	2.264	
			33.000	1.441	18.801	2.247	
			34.000	1.447	18.165	2.227	
			35.000	1.454	17.544	2.206	
			36.000	1.461	16.936	2.183	
			37.000	1.469	16.337	2.159	
			38.000	1.478	15.741	2.132	
			39.000	1.487	15.145	2.103	
			40.000	1.498	14.540	2.071	

CONTICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.00	25.0	42.612	41.000	1.509	13.919	2.037	0.969
			42.000	1.523	13.268	1.998	
			42.612	1.533	12.825	1.969	
2.00	30.0	48.135	30.000	1.252	30.000	2.812	0.933
			31.000	1.252	29.056	2.811	
			32.000	1.253	28.160	2.906	
			33.000	1.255	27.308	2.798	
			34.000	1.258	26.493	2.788	
			35.000	1.262	25.713	2.776	
			36.000	1.265	24.963	2.761	
			37.000	1.270	24.239	2.745	
			38.000	1.275	23.539	2.726	
			39.000	1.280	22.858	2.706	
			40.000	1.286	22.195	2.684	
			41.000	1.293	21.545	2.660	
			42.000	1.300	20.906	2.635	
			43.000	1.308	20.275	2.607	
			44.000	1.316	19.647	2.577	
			45.000	1.325	19.020	2.545	
			46.000	1.335	18.387	2.510	
			47.000	1.347	17.742	2.472	
			48.000	1.359	17.077	2.430	
			48.135	1.362	16.949	2.421	
2.00	35.0	54.871	35.000	1.065	35.000	3.373	0.882
			36.000	1.065	34.046	3.371	
			37.000	1.065	33.135	3.367	
			38.000	1.068	32.261	3.360	
			39.000	1.070	31.422	3.351	
			40.000	1.073	30.614	3.339	
			41.000	1.076	29.835	3.326	
			42.000	1.080	29.081	3.311	
			43.000	1.084	28.351	3.294	
			44.000	1.089	27.641	3.275	
			45.000	1.094	26.951	3.255	

CONICAL FLOW PARAMETERS

MI	DELTA	PHT S	PHT	M2	DEL	P2/P1	PTC/PTI
2.00	35.0	54.871	46.000	1.099	26.277	3.233	0.892
			47.000	1.105	25.619	3.210	
			48.000	1.112	24.971	3.194	
			49.000	1.119	24.334	3.157	
			50.000	1.126	23.705	3.128	
			51.000	1.134	23.082	3.097	
			52.000	1.142	22.461	3.064	
			53.000	1.151	21.840	3.028	
			54.000	1.161	21.214	2.990	
			54.871	1.171	20.659	2.954	
2.00	40.0	65.276	40.000	0.800	40.000	4.132	0.805
			41.000	0.800	39.039	4.131	
			42.000	0.801	38.116	4.128	
			43.000	0.802	37.226	4.123	
			44.000	0.804	36.369	4.117	
			45.000	0.806	35.542	4.109	
			46.000	0.809	34.743	4.099	
			47.000	0.811	33.971	4.088	
			48.000	0.814	33.224	4.076	
			49.000	0.817	32.500	4.063	
			50.000	0.821	31.799	4.048	
			51.000	0.825	31.118	4.032	
			52.000	0.829	30.456	4.016	
			53.000	0.833	29.813	3.998	
			54.000	0.838	29.186	3.979	
			55.000	0.843	28.576	3.959	
			56.000	0.848	27.979	3.938	
			57.000	0.853	27.397	3.915	
			58.000	0.859	26.827	3.892	
			59.000	0.865	26.269	3.867	
			60.000	0.871	25.720	3.842	
			61.000	0.878	25.182	3.815	
			62.000	0.885	24.651	3.786	
			63.000	0.892	24.128	3.756	
			64.000	0.900	23.610	3.725	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PTI
2.00	40.0	65.276	65.000	0.908	23.097	3.692	0.805
			65.276	0.911	22.952	3.682	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
2.10	5.0	28.727	5.000	2.032	5.000	1.111	1.000
			6.000	2.033	4.283	1.110	
			7.000	2.035	3.741	1.107	
			8.000	2.037	3.315	1.104	
			9.000	2.039	2.970	1.100	
			10.000	2.041	2.684	1.097	
			11.000	2.043	2.442	1.093	
			12.000	2.045	2.233	1.089	
			13.000	2.047	2.050	1.085	
			14.000	2.050	1.988	1.082	
			15.000	2.052	1.743	1.078	
			16.000	2.054	1.611	1.075	
			17.000	2.056	1.490	1.071	
			18.000	2.058	1.378	1.067	
			19.000	2.060	1.273	1.064	
			20.000	2.063	1.173	1.060	
			21.000	2.065	1.078	1.057	
			22.000	2.067	0.985	1.053	
			23.000	2.069	0.894	1.049	
			24.000	2.072	0.802	1.045	
			25.000	2.075	0.707	1.040	
			26.000	2.078	0.604	1.035	
			27.000	2.082	0.484	1.028	
			28.000	2.088	0.312	1.019	
			28.727	2.087	0.335	1.020	
2.10	10.0	29.734	10.000	1.920	10.000	1.323	1.000
			11.000	1.921	9.162	1.321	
			12.000	1.923	8.447	1.317	
			13.000	1.926	7.825	1.312	
			14.000	1.929	7.277	1.305	
			15.000	1.933	6.788	1.297	
			16.000	1.937	6.346	1.289	
			17.000	1.941	5.943	1.280	
			18.000	1.946	5.571	1.271	
			19.000	1.951	5.226	1.262	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.10	10.0	29.734	20.000	1.956	4.901	1.252	1.000
			21.000	1.961	4.593	1.242	
			22.000	1.966	4.297	1.231	
			23.000	1.972	4.011	1.220	
			24.000	1.978	3.729	1.209	
			25.000	1.985	3.448	1.196	
			26.000	1.992	3.161	1.183	
			27.000	2.000	2.860	1.168	
			28.000	2.010	2.525	1.150	
			29.000	2.023	2.109	1.127	
			29.734	2.040	1.605	1.098	
2.10	15.0	32.498	15.000	1.788	15.000	1.616	0.998
			16.000	1.789	14.113	1.615	
			17.000	1.791	13.315	1.610	
			18.000	1.794	12.592	1.602	
			19.000	1.798	11.929	1.593	
			20.000	1.802	11.316	1.583	
			21.000	1.807	10.744	1.571	
			22.000	1.813	10.207	1.558	
			23.000	1.819	9.699	1.543	
			24.000	1.825	9.212	1.528	
			25.000	1.832	8.744	1.512	
			26.000	1.839	8.288	1.495	
			27.000	1.848	7.839	1.475	
			28.000	1.856	7.392	1.457	
			29.000	1.865	6.938	1.435	
			30.000	1.877	6.466	1.411	
			31.000	1.890	5.958	1.383	
			32.000	1.906	5.371	1.349	
			32.498	1.921	4.870	1.318	
2.10	20.0	36.483	20.000	1.644	20.000	1.990	0.987
			21.000	1.645	19.085	1.988	
			22.000	1.646	18.241	1.992	
			23.000	1.649	17.456	1.974	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.10	20.0	36.483	24.000	1.653	16.721	1.963	0.987
			25.000	1.657	16.029	1.950	
			26.000	1.662	15.372	1.935	
			27.000	1.668	14.745	1.919	
			28.000	1.675	14.142	1.900	
			29.000	1.682	13.558	1.881	
			30.000	1.689	12.989	1.859	
			31.000	1.695	12.428	1.836	
			32.000	1.707	11.871	1.811	
			33.000	1.717	11.310	1.783	
			34.000	1.728	10.735	1.753	
			35.000	1.741	10.133	1.718	
			36.000	1.757	9.478	1.678	
			36.483	1.767	9.072	1.652	
2.10	25.0	41.214	25.000	1.488	25.000	2.438	0.962
			26.000	1.489	24.068	2.436	
			27.000	1.491	23.193	2.430	
			28.000	1.493	22.367	2.421	
			29.000	1.497	21.585	2.409	
			30.000	1.501	20.839	2.395	
			31.000	1.505	20.124	2.378	
			32.000	1.511	19.436	2.359	
			33.000	1.517	18.769	2.338	
			34.000	1.524	18.120	2.315	
			35.000	1.531	17.485	2.290	
			36.000	1.539	16.858	2.263	
			37.000	1.549	16.234	2.233	
			38.000	1.558	15.608	2.201	
			39.000	1.569	14.972	2.166	
			40.000	1.582	14.315	2.126	
			41.000	1.597	13.620	2.081	
			41.214	1.601	13.407	2.066	
2.10	30.0	46.724	30.000	1.319	30.000	2.959	0.920
			31.000	1.320	29.055	2.957	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.10	30.0	46.724	32.000	1.321	28.159	2.951	0.920
			33.000	1.323	27.305	2.942	
			34.000	1.326	26.489	2.930	
			35.000	1.330	25.705	2.915	
			36.000	1.334	24.950	2.898	
			37.000	1.339	24.220	2.879	
			38.000	1.345	23.510	2.857	
			39.000	1.351	22.819	2.833	
			40.000	1.357	22.142	2.807	
			41.000	1.365	21.476	2.779	
			42.000	1.373	20.817	2.748	
			43.000	1.382	20.161	2.714	
			44.000	1.391	19.503	2.678	
			45.000	1.402	18.837	2.638	
			46.000	1.414	18.154	2.594	
			46.724	1.424	17.634	2.558	
2.10	35.0	53.092	35.000	1.133	35.000	3.553	0.864
			36.000	1.133	34.046	3.552	
			37.000	1.134	33.134	3.546	
			38.000	1.136	32.259	3.538	
			39.000	1.139	31.418	3.527	
			40.000	1.142	30.607	3.514	
			41.000	1.145	29.822	3.498	
			42.000	1.149	29.063	3.480	
			43.000	1.154	28.325	3.459	
			44.000	1.159	27.607	3.437	
			45.000	1.165	26.905	3.412	
			46.000	1.171	26.217	3.385	
			47.000	1.177	25.541	3.356	
			48.000	1.185	24.874	3.325	
			49.000	1.192	24.213	3.292	
			50.000	1.201	23.556	3.255	
			51.000	1.210	22.899	3.217	
			52.000	1.220	22.237	3.175	
			53.000	1.231	21.564	3.129	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.10	35.0	53.092	53.092	1.233	21.478	3.122	0.864
2.10	40.0	61.699	40.000	0.898	40.000	4.283	0.791
			41.000	0.899	39.039	4.281	
			42.000	0.900	38.115	4.277	
			43.000	0.901	37.224	4.271	
			44.000	0.903	36.364	4.262	
			45.000	0.905	35.533	4.252	
			46.000	0.908	34.729	4.239	
			47.000	0.911	33.951	4.225	
			48.000	0.914	33.195	4.209	
			49.000	0.918	32.461	4.191	
			50.000	0.922	31.747	4.172	
			51.000	0.927	31.052	4.151	
			52.000	0.932	30.373	4.128	
			53.000	0.937	29.710	4.104	
			54.000	0.943	29.060	4.078	
			55.000	0.949	28.424	4.051	
			56.000	0.955	27.798	4.022	
			57.000	0.962	27.183	3.991	
			58.000	0.969	26.575	3.959	
			59.000	0.977	25.974	3.924	
			60.000	0.985	25.377	3.888	
			61.000	0.994	24.783	3.848	
			61.699	1.000	24.346	3.819	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.20	5.0	27.098	5.000	2.129	5.000	1.117	1.000
			6.000	2.130	4.283	1.115	
			7.000	2.132	3.740	1.113	
			8.000	2.134	3.314	1.109	
			9.000	2.136	2.967	1.105	
			10.000	2.139	2.680	1.101	
			11.000	2.141	2.435	1.097	
			12.000	2.143	2.224	1.092	
			13.000	2.146	2.039	1.088	
			14.000	2.148	1.874	1.084	
			15.000	2.151	1.726	1.080	
			16.000	2.153	1.591	1.076	
			17.000	2.156	1.466	1.072	
			18.000	2.158	1.350	1.068	
			19.000	2.160	1.240	1.064	
			20.000	2.163	1.135	1.059	
			21.000	2.166	1.033	1.055	
			22.000	2.168	0.932	1.051	
			23.000	2.171	0.830	1.046	
			24.000	2.175	0.724	1.040	
			25.000	2.178	0.607	1.034	
			26.000	2.183	0.463	1.026	
			27.000	2.195	0.162	1.008	
			27.098	2.200	0.023	1.000	
2.20	10.0	28.472	10.000	2.010	10.000	1.346	1.000
			11.000	2.011	9.162	1.344	
			12.000	2.013	8.446	1.340	
			13.000	2.016	7.822	1.333	
			14.000	2.019	7.272	1.326	
			15.000	2.024	6.779	1.317	
			16.000	2.028	6.333	1.308	
			17.000	2.033	5.925	1.298	
			18.000	2.038	5.547	1.288	
			19.000	2.043	5.193	1.277	
			20.000	2.049	4.859	1.266	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI			
2.20	10.0	28.472	21.000	2.055	4.539	1.254	1.000			
			22.000	2.061	4.230	1.242				
			23.000	2.068	3.927	1.229				
			24.000	2.075	3.623	1.215				
			25.000	2.083	3.312	1.200				
			26.000	2.093	2.983	1.182				
			27.000	2.104	2.611	1.162				
			28.000	2.120	2.116	1.133				
			28.472	2.129	1.852	1.117				
			2.20	15.0	31.238	15.000	1.872	15.000	1.663	0.997
16.000	1.872	14.112				1.661				
17.000	1.874	13.314				1.655				
18.000	1.878	12.589				1.647				
19.000	1.882	11.923				1.637				
20.000	1.887	11.305				1.625				
21.000	1.892	10.728				1.611				
22.000	1.898	10.184				1.596				
23.000	1.905	9.665				1.580				
24.000	1.912	9.167				1.562				
25.000	1.920	8.684				1.544				
26.000	1.928	8.209				1.523				
27.000	1.938	7.735				1.501				
28.000	1.948	7.255				1.477				
29.000	1.960	6.755				1.450				
30.000	1.974	6.213				1.419				
31.000	1.992	5.577				1.380				
31.238	2.007	5.081				1.348				
2.20	20.0	35.306				20.000	1.721	20.000	2.066	0.984
						21.000	1.722	19.085	2.063	
			22.000	1.724	18.240	2.057				
			23.000	1.727	17.453	2.047				
			24.000	1.731	16.715	2.035				
			25.000	1.735	16.019	2.020				
26.000	1.741	15.355	2.003							



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1			
2.20	20.0	35.306	27.000	1.747	14.720	1.984	0.984			
			28.000	1.754	14.106	1.963				
			29.000	1.762	13.509	1.940				
			30.000	1.771	12.922	1.915				
			31.000	1.780	12.339	1.887				
			32.000	1.791	11.752	1.857				
			33.000	1.803	11.151	1.823				
			34.000	1.817	10.520	1.785				
			35.000	1.833	9.830	1.741				
			35.306	1.841	9.510	1.719				
			2.20	25.0	40.049	25.000	1.559	25.000	2.550	0.954
						26.000	1.560	24.067	2.548	
						27.000	1.561	23.192	2.541	
						28.000	1.564	22.365	2.531	
						29.000	1.568	21.579	2.517	
30.000	1.572	20.829				2.501				
31.000	1.578	20.108				2.489				
32.000	1.584	19.412				2.460				
33.000	1.590	18.735				2.435				
34.000	1.598	18.074				2.408				
35.000	1.606	17.421				2.379				
36.000	1.615	16.773				2.347				
37.000	1.626	16.122				2.311				
38.000	1.637	15.460				2.272				
39.000	1.650	14.775				2.228				
40.000	1.665	14.046	2.178							
40.049	1.668	13.929	2.169							
2.20	30.0	45.460	30.000	1.385	30.000	3.112	0.907			
			31.000	1.386	29.055	3.109				
			32.000	1.387	28.158	3.103				
			33.000	1.389	27.303	3.092				
			34.000	1.393	26.484	3.079				
			35.000	1.397	25.696	3.062				
			36.000	1.401	24.936	3.042				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.20	30.0	45.460	37.000	1.407	24.199	3.019	0.907
			38.000	1.413	23.481	2.993	
			39.000	1.419	22.778	2.965	
			40.000	1.427	22.087	2.934	
			41.000	1.435	21.402	2.900	
			42.000	1.444	20.721	2.863	
			43.000	1.454	20.036	2.823	
			44.000	1.465	19.341	2.778	
			45.000	1.478	18.626	2.728	
			45.460	1.484	18.267	2.702	
2.20	35.0	51.702	35.000	1.195	35.000	3.750	0.845
			36.000	1.195	34.046	3.748	
			37.000	1.196	33.133	3.742	
			38.000	1.198	32.257	3.732	
			39.000	1.201	31.414	3.720	
			40.000	1.204	30.599	3.704	
			41.000	1.208	29.811	3.685	
			42.000	1.213	29.045	3.663	
			43.000	1.218	28.300	3.639	
			44.000	1.223	27.572	3.612	
			45.000	1.229	26.858	3.583	
			46.000	1.236	26.156	3.551	
			47.000	1.244	25.463	3.516	
			48.000	1.252	24.775	3.479	
			49.000	1.261	24.089	3.438	
			50.000	1.270	23.400	3.391	
			51.000	1.281	22.703	3.345	
			51.702	1.289	22.200	3.308	
2.20	40.0	59.488	40.000	0.970	40.000	4.497	0.770
			41.000	0.971	39.039	4.496	
			42.000	0.972	38.114	4.491	
			43.000	0.973	37.222	4.483	
			44.000	0.975	36.360	4.472	
			45.000	0.978	35.526	4.459	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.20	40.0	59.488	46.000	0.981	34.718	4.444	0.770
			47.000	0.984	31.034	4.426	
			48.000	0.988	33.171	4.406	
			49.000	0.993	32.429	4.384	
			50.000	0.997	31.704	4.360	
			51.000	1.002	30.996	4.334	
			52.000	1.008	30.302	4.306	
			53.000	1.014	29.622	4.276	
			54.000	1.020	28.952	4.243	
			55.000	1.027	28.292	4.209	
			56.000	1.035	27.640	4.172	
			57.000	1.043	26.992	4.132	
			58.000	1.051	26.348	4.090	
			59.000	1.061	25.704	4.044	
			59.488	1.065	25.383	4.070	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/PI	PTC/PTI
2.30	5.0	25.884	5.000	2.224	5.000	1.126	1.000
			6.000	2.225	4.283	1.125	
			7.000	2.227	3.740	1.122	
			8.000	2.229	3.312	1.118	
			9.000	2.231	2.964	1.113	
			10.000	2.234	2.675	1.109	
			11.000	2.237	2.428	1.104	
			12.000	2.240	2.215	1.099	
			13.000	2.242	2.028	1.095	
			14.000	2.245	1.860	1.090	
			15.000	2.249	1.709	1.085	
			16.000	2.250	1.570	1.081	
			17.000	2.253	1.441	1.076	
			18.000	2.256	1.320	1.072	
			19.000	2.259	1.205	1.067	
			20.000	2.262	1.093	1.062	
			21.000	2.265	0.983	1.057	
			22.000	2.268	0.871	1.051	
			23.000	2.272	0.754	1.045	
			24.000	2.276	0.623	1.038	
			25.000	2.282	0.456	1.028	
			25.884	2.294	0.150	1.009	
2.30	10.0	27.397	10.000	2.098	10.000	1.371	1.000
			11.000	2.099	9.162	1.369	
			12.000	2.101	8.444	1.364	
			13.000	2.105	7.819	1.357	
			14.000	2.109	7.266	1.348	
			15.000	2.113	6.770	1.339	
			16.000	2.118	6.310	1.329	
			17.000	2.124	5.905	1.318	
			18.000	2.129	5.520	1.306	
			19.000	2.135	5.158	1.294	
			20.000	2.142	4.813	1.281	
			21.000	2.148	4.481	1.267	
			22.000	2.156	4.155	1.253	

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.30	10.0	27.397	23.000	2.164	3.830	1.238	1.000
			24.000	2.172	3.497	1.221	
			25.000	2.183	3.144	1.201	
			26.000	2.195	2.741	1.178	
			27.000	2.214	2.181	1.144	
			27.397	2.217	2.102	1.139	
2.30	15.0	30.163	15.000	1.954	15.000	1.711	0.996
			16.000	1.954	14.112	1.709	
			17.000	1.957	13.313	1.703	
			18.000	1.960	12.585	1.693	
			19.000	1.965	11.916	1.682	
			20.000	1.970	11.294	1.668	
			21.000	1.976	10.711	1.653	
			22.000	1.983	10.159	1.636	
			23.000	1.990	9.630	1.617	
			24.000	1.998	9.119	1.597	
			25.000	2.007	8.618	1.575	
			26.000	2.017	8.120	1.552	
			27.000	2.027	7.617	1.526	
			28.000	2.040	7.093	1.496	
			29.000	2.055	6.527	1.462	
30.000	2.074	5.860	1.419				
		30.163	2.090	5.343	1.384		
2.30	20.0	34.282	20.000	1.796	20.000	2.145	0.980
			21.000	1.797	19.085	2.142	
			22.000	1.799	18.238	2.135	
			23.000	1.803	17.450	2.124	
			24.000	1.807	16.709	2.110	
			25.000	1.812	16.007	2.093	
			26.000	1.818	15.338	2.074	
			27.000	1.825	14.694	2.052	
			28.000	1.833	14.069	2.028	
			29.000	1.842	13.456	2.001	
			30.000	1.851	12.850	1.972	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
2.30	20.0	34.282	31.000	1.862	12.241	1.939	0.980
			32.000	1.874	11.618	1.903	
			33.000	1.889	10.966	1.862	
			34.000	1.906	10.254	1.813	
			34.282	1.914	9.941	1.791	
2.30	25.0	39.035	25.000	1.628	25.000	2.668	0.945
			26.000	1.628	24.067	2.666	
			27.000	1.630	23.191	2.658	
			28.000	1.633	22.362	2.646	
			29.000	1.637	21.574	2.631	
			30.000	1.642	20.819	2.612	
			31.000	1.648	20.092	2.590	
			32.000	1.654	19.388	2.564	
			33.000	1.662	18.700	2.536	
			34.000	1.670	18.024	2.505	
			35.000	1.679	17.353	2.470	
			36.000	1.690	16.681	2.432	
			37.000	1.701	15.998	2.390	
			38.000	1.715	15.292	2.342	
39.000	1.730	14.542	2.287				
			39.035	1.733	14.430	2.278	
2.30	30.0	44.399	30.000	1.448	30.000	3.274	0.892
			31.000	1.448	29.055	3.271	
			32.000	1.450	28.157	3.264	
			33.000	1.453	27.300	3.252	
			34.000	1.456	26.479	3.236	
			35.000	1.460	25.688	3.216	
			36.000	1.465	24.922	3.193	
			37.000	1.471	24.177	3.167	
			38.000	1.478	23.450	3.137	
			39.000	1.485	22.735	3.104	
			40.000	1.493	22.028	3.068	
			41.000	1.502	21.325	3.028	
			42.000	1.512	20.618	2.983	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.30	30.0	44.399	43.000	1.524	19.900	2.935	0.892
			44.000	1.537	19.161	2.880	
			44.399	1.543	18.834	2.854	
2.30	35.0	50.472	35.000	1.254	35.000	3.959	0.824
			36.000	1.254	34.046	3.956	
			37.000	1.256	33.132	3.949	
			38.000	1.258	32.255	3.938	
			39.000	1.261	31.409	3.923	
			40.000	1.264	30.592	3.904	
			41.000	1.268	29.799	3.887	
			42.000	1.273	29.028	3.857	
			43.000	1.279	28.274	3.829	
			44.000	1.285	27.536	3.797	
			45.000	1.292	26.810	3.762	
			46.000	1.299	26.093	3.724	
			47.000	1.307	25.381	3.683	
			48.000	1.316	24.669	3.638	
			49.000	1.326	23.954	3.588	
50.000	1.337	23.228	3.534				
50.472	1.343	22.468	3.505				
2.30	40.0	57.823	40.000	1.032	40.000	4.742	0.746
			41.000	1.033	39.039	4.740	
			42.000	1.034	38.113	4.734	
			43.000	1.035	37.220	4.725	
			44.000	1.038	36.356	4.712	
			45.000	1.040	35.520	4.697	
			46.000	1.044	34.708	4.678	
			47.000	1.047	33.918	4.657	
			48.000	1.052	33.149	4.633	
			49.000	1.056	32.398	4.606	
			50.000	1.062	31.663	4.577	
			51.000	1.067	30.943	4.546	
			52.000	1.074	30.235	4.511	
			53.000	1.080	29.537	4.474	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.30	40.0	57.823	54.000	1.088	28.847	4.435	0.746
			55.000	1.095	28.163	4.392	
			56.000	1.104	27.482	4.346	
			57.000	1.113	26.801	4.296	
			57.923	1.121	26.236	4.252	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
2.40	5.0	24.817	5.000	2.319	5.000	1.125	1.000
			6.000	2.320	4.282	1.133	
			7.000	2.322	3.739	1.130	
			8.000	2.324	3.310	1.125	
			9.000	2.327	2.961	1.120	
			10.000	2.330	2.670	1.115	
			11.000	2.333	2.421	1.110	
			12.000	2.336	2.206	1.105	
			13.000	2.339	2.015	1.100	
			14.000	2.342	1.845	1.095	
			15.000	2.345	1.690	1.090	
			16.000	2.348	1.547	1.085	
			17.000	2.351	1.413	1.079	
			18.000	2.354	1.287	1.074	
			19.000	2.358	1.165	1.068	
			20.000	2.361	1.045	1.063	
			21.000	2.365	0.923	1.056	
22.000	2.369	0.795	1.049				
23.000	2.374	0.652	1.041				
24.000	2.381	0.464	1.030				
24.817	2.389	0.259	1.017				
2.40	10.0	26.316	10.000	2.187	10.000	1.395	1.000
			11.000	2.188	9.162	1.393	
			12.000	2.190	8.443	1.388	
			13.000	2.194	7.816	1.380	
			14.000	2.198	7.260	1.370	
			15.000	2.203	6.760	1.360	
			16.000	2.209	6.305	1.348	
			17.000	2.215	5.884	1.336	
			18.000	2.221	5.491	1.323	
			19.000	2.228	5.119	1.309	
			20.000	2.235	4.763	1.294	
			21.000	2.243	4.415	1.279	
			22.000	2.251	4.069	1.262	
			23.000	2.261	3.715	1.243	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.40	10.0	26.316	24.000	2.271	3.342	1.222	1.000
			25.000	2.285	2.916	1.197	
			26.000	2.306	2.321	1.159	
			26.316	2.309	2.236	1.153	
2.40	15.0	29.224	15.000	2.035	15.000	1.760	0.995
			16.000	2.036	14.112	1.757	
			17.000	2.039	13.312	1.751	
			18.000	2.043	12.582	1.740	
			19.000	2.047	11.910	1.727	
			20.000	2.053	11.283	1.712	
			21.000	2.060	10.693	1.694	
			22.000	2.067	10.132	1.675	
			23.000	2.075	9.591	1.654	
			24.000	2.084	9.065	1.631	
			25.000	2.094	8.545	1.606	
			26.000	2.105	8.020	1.578	
			27.000	2.118	7.478	1.546	
28.000	2.133	6.895	1.510				
29.000	2.153	6.216	1.464				
29.224	2.168	5.744	1.431				
2.40	20.0	33.384	20.000	1.870	20.000	2.228	0.976
			21.000	1.871	19.084	2.225	
			22.000	1.874	18.237	2.217	
			23.000	1.877	17.447	2.205	
			24.000	1.882	16.702	2.189	
			25.000	1.888	15.996	2.170	
			26.000	1.894	15.319	2.148	
			27.000	1.902	14.666	2.123	
			28.000	1.910	14.028	2.095	
			29.000	1.920	13.399	2.064	
			30.000	1.931	12.771	2.029	
			31.000	1.943	12.131	1.991	
			32.000	1.958	11.464	1.947	
33.000	1.975	10.742	1.896				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.40	20.0	33.384	33.384	1.984	10.366	1.868	0.976
2.40	25.0	38.138	25.000	1.695	25.000	2.792	0.935
			26.000	1.696	24.067	2.789	
			27.000	1.698	23.190	2.780	
			28.000	1.701	22.359	2.767	
			29.000	1.705	21.568	2.749	
			30.000	1.710	20.808	2.727	
			31.000	1.717	20.075	2.702	
			32.000	1.724	19.362	2.673	
			33.000	1.732	18.663	2.641	
			34.000	1.741	17.972	2.604	
			35.000	1.751	17.281	2.564	
			36.000	1.763	16.581	2.519	
			37.000	1.776	15.860	2.468	
			38.000	1.792	15.097	2.410	
			38.138	1.796	14.917	2.395	
2.40	30.0	43.481	30.000	1.508	30.000	3.445	0.875
			31.000	1.509	29.055	3.441	
			32.000	1.511	28.156	3.433	
			33.000	1.513	27.298	3.419	
			34.000	1.517	26.474	3.401	
			35.000	1.522	25.679	3.378	
			36.000	1.527	24.908	3.352	
			37.000	1.533	24.156	3.321	
			38.000	1.540	23.418	3.287	
			39.000	1.548	22.691	3.249	
			40.000	1.557	21.968	3.206	
			41.000	1.568	21.242	3.159	
			42.000	1.579	20.507	3.107	
			43.000	1.592	19.751	3.048	
			43.481	1.599	19.356	3.015	
2.40	35.0	49.452	35.000	1.309	35.000	4.179	0.802
			36.000	1.310	34.046	4.176	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.40	35.0	49.452	37.000	1.311	33.132	4.168	0.802
			38.000	1.314	32.253	4.155	
			39.000	1.317	31.405	4.138	
			40.000	1.320	30.585	4.116	
			41.000	1.325	29.787	4.091	
			42.000	1.330	29.010	4.061	
			43.000	1.336	28.249	4.028	
			44.000	1.343	27.500	3.992	
			45.000	1.350	26.762	3.951	
			46.000	1.358	26.028	3.906	
			47.000	1.367	25.296	3.857	
			48.000	1.378	24.559	3.803	
			49.000	1.389	23.811	3.744	
			49.452	1.395	23.453	3.713	
2.40	40.0	56.473	40.000	1.088	40.000	5.007	0.721
			41.000	1.088	39.039	5.005	
			42.000	1.090	38.113	4.998	
			43.000	1.091	37.218	4.987	
			44.000	1.094	36.353	4.972	
			45.000	1.097	35.513	4.954	
			46.000	1.100	34.698	4.932	
			47.000	1.104	33.903	4.907	
			48.000	1.109	33.127	4.879	
			49.000	1.114	32.368	4.847	
			50.000	1.120	31.624	4.813	
			51.000	1.126	30.891	4.775	
			52.000	1.133	30.168	4.734	
			53.000	1.141	29.453	4.689	
			54.000	1.149	28.741	4.641	
			55.000	1.158	28.032	4.589	
			56.000	1.167	27.319	4.532	
			56.473	1.172	26.973	4.503	
2.40	45.0	68.171	45.000	0.754	45.000	6.173	0.615
			46.000	0.754	44.033	6.171	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
2.40	45.0	68.171	47.000	0.755	43.098	6.167	0.615
			48.000	0.756	42.192	6.161	
			49.000	0.758	41.315	6.152	
			50.000	0.759	40.464	6.141	
			51.000	0.762	39.639	6.127	
			52.000	0.764	38.837	6.112	
			53.000	0.767	38.059	6.095	
			54.000	0.770	37.302	6.076	
			55.000	0.774	36.566	6.056	
			56.000	0.778	35.848	6.033	
			57.000	0.782	35.150	6.009	
			58.000	0.786	34.468	5.984	
			59.000	0.791	33.803	5.956	
			60.000	0.796	33.153	5.927	
			61.000	0.801	32.517	5.897	
			62.000	0.807	31.895	5.864	
			63.000	0.812	31.285	5.830	
			64.000	0.819	30.687	5.794	
			65.000	0.825	30.100	5.756	
			66.000	0.832	29.522	5.716	
			67.000	0.839	28.953	5.674	
			68.000	0.847	28.391	5.630	
			68.171	0.848	28.294	5.622	

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.50	5.0	23.794	5.000	2.414	5.000	1.143	1.000
			6.000	2.415	4.282	1.142	
			7.000	2.417	3.738	1.138	
			8.000	2.420	3.308	1.133	
			9.000	2.423	2.957	1.128	
			10.000	2.426	2.664	1.122	
			11.000	2.429	2.414	1.116	
			12.000	2.433	2.195	1.111	
			13.000	2.436	2.002	1.105	
			14.000	2.439	1.828	1.099	
			15.000	2.443	1.665	1.094	
			16.000	2.446	1.522	1.088	
			17.000	2.449	1.383	1.082	
			18.000	2.453	1.250	1.076	
			19.000	2.457	1.119	1.069	
			20.000	2.461	0.988	1.062	
			21.000	2.466	0.851	1.055	
			22.000	2.471	0.697	1.046	
			23.000	2.479	0.494	1.033	
			23.794	2.487	0.294	1.020	
2.50	7.5	24.305	7.500	2.348	7.500	1.267	1.000
			8.500	2.350	6.706	1.264	
			9.500	2.352	6.055	1.259	
			10.500	2.356	5.507	1.252	
			11.500	2.360	5.036	1.244	
			12.500	2.364	4.624	1.236	
			13.500	2.369	4.258	1.226	
			14.500	2.374	3.927	1.217	
			15.500	2.379	3.623	1.207	
			16.500	2.385	3.341	1.196	
			17.500	2.391	3.074	1.185	
			18.500	2.397	2.818	1.174	
			19.500	2.404	2.568	1.162	
			20.500	2.411	2.317	1.149	
			21.500	2.419	2.056	1.134	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.50	7.5	24.305	22.500	2.429	1.768	1.117	1.000
			23.500	2.442	1.405	1.095	
			24.305	2.457	1.072	1.069	
2.50	10.0	25.365	10.000	2.275	10.000	1.421	1.000
			11.000	2.276	9.161	1.418	
			12.000	2.279	8.442	1.412	
			13.000	2.283	7.813	1.404	
			14.000	2.287	7.254	1.393	
			15.000	2.293	6.750	1.382	
			16.000	2.299	6.289	1.369	
			17.000	2.305	5.862	1.355	
			18.000	2.312	5.460	1.340	
			19.000	2.320	5.078	1.324	
			20.000	2.328	4.707	1.307	
			21.000	2.337	4.341	1.289	
			22.000	2.347	3.969	1.270	
			23.000	2.358	3.579	1.247	
			24.000	2.372	3.140	1.220	
			25.000	2.393	2.547	1.181	
			25.365	2.398	2.406	1.171	
2.50	12.5	26.663	12.500	2.197	12.500	1.602	0.998
			13.500	2.198	11.632	1.600	
			14.500	2.201	10.865	1.593	
			15.500	2.205	10.178	1.583	
			16.500	2.210	9.553	1.570	
			17.500	2.216	8.977	1.555	
			18.500	2.223	8.441	1.539	
			19.500	2.230	7.934	1.521	
			20.500	2.239	7.450	1.502	
			21.500	2.248	6.979	1.480	
			22.500	2.258	6.515	1.457	
			23.500	2.269	6.046	1.432	
			24.500	2.282	5.556	1.403	
			25.500	2.298	5.017	1.369	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.50	12.5	26.663	26.500	2.320	4.345	1.323	0.998
		26.663	26.663	2.332	4.005	1.298	
2.50	15.0	28.403	15.000	2.116	15.000	1.811	0.994
			16.000	2.117	14.111	1.808	
			17.000	2.120	13.310	1.800	
			18.000	2.124	12.579	1.789	
			19.000	2.129	11.903	1.774	
			20.000	2.135	11.271	1.757	
			21.000	2.142	10.674	1.737	
			22.000	2.151	10.103	1.716	
			23.000	2.160	9.550	1.692	
			24.000	2.170	9.007	1.665	
			25.000	2.181	8.463	1.636	
			26.000	2.194	7.906	1.603	
			27.000	2.209	7.313	1.565	
			28.000	2.220	6.638	1.518	
			29.000	2.244	6.151	1.482	
2.50	17.5	30.457	17.500	2.031	17.500	2.050	0.985
			18.500	2.031	16.596	2.047	
			19.500	2.034	15.769	2.039	
			20.500	2.038	15.003	2.026	
			21.500	2.043	14.287	2.010	
			22.500	2.050	13.611	1.990	
			23.500	2.057	12.966	1.968	
			24.500	2.065	12.344	1.942	
			25.500	2.075	11.736	1.914	
			26.500	2.085	11.134	1.883	
			27.500	2.097	10.528	1.848	
			28.500	2.111	9.902	1.808	
			29.500	2.128	9.230	1.762	
			30.457	2.148	8.491	1.706	
2.50	20.0	32.593	20.000	1.943	20.000	2.315	0.970
			21.000	1.943	19.084	2.311	



CONICAL FLOW PARAMETERS

MI	DELTA	PHT S	PHT	M7	DEL	P2/P1	PTC/PT1				
2.50	20.0	32.593	22.000	1.947	18.236	2.302	0.970				
			23.000	1.950	17.443	2.289					
			24.000	1.956	16.696	2.271					
			25.000	1.962	15.984	2.249					
			26.000	1.969	15.300	2.224					
			27.000	1.977	14.637	2.195					
			28.000	1.987	13.986	2.164					
			29.000	1.997	13.338	2.128					
			30.000	2.010	12.684	2.088					
			31.000	2.024	12.008	2.042					
32.000	2.041	11.284	1.989								
32.593	2.054	10.773	1.949								
2.50	22.5	34.902	22.500	1.853	22.500	2.605	0.950				
			23.500	1.854	21.574	2.602					
			24.500	1.856	20.710	2.592					
			25.500	1.860	19.895	2.578					
			26.500	1.865	19.122	2.559					
			27.500	1.871	18.382	2.535					
			28.500	1.878	17.667	2.508					
			29.500	1.886	16.971	2.477					
			30.500	1.895	16.286	2.442					
			31.500	1.905	15.604	2.403					
32.500	1.917	14.914	2.359								
33.500	1.931	14.204	2.309								
34.500	1.948	13.450	2.251								
34.902	1.957	13.076	2.220								
2.50	25.0	37.358	25.000	1.760	25.000	2.921	0.924				
			26.000	1.761	24.067	2.918					
			27.000	1.763	23.188	2.908					
			28.000	1.767	22.356	2.893					
			29.000	1.771	21.562	2.873					
			30.000	1.777	20.798	2.848					
			31.000	1.783	20.058	2.819					
			32.000	1.791	19.336	2.786					

CONICAL FLOW PARAMETERS

HI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.50	25.0	37.358	33.000	1.800	18.624	2.749	0.924
			34.000	1.810	17.916	2.707	
			35.000	1.821	17.203	2.660	
			36.000	1.835	16.471	2.607	
			37.000	1.850	15.704	2.546	
			37.358	1.857	15.371	2.518	
			27.500	1.665	27.500	3.261	
2.50	27.5	39.951	28.500	1.665	26.560	3.257	
			29.500	1.667	25.671	3.247	
			30.500	1.671	24.823	3.232	
			31.500	1.675	24.011	3.211	
			32.500	1.680	23.228	3.186	
			33.500	1.686	22.468	3.156	
			34.500	1.694	21.725	3.122	
			35.500	1.702	20.993	3.083	
			36.500	1.711	20.266	3.039	
			37.500	1.722	19.536	2.991	
			38.500	1.734	18.793	2.936	
			39.500	1.748	18.022	2.873	
			39.951	1.756	17.633	2.840	
			2.50	30.0	42.714	30.000	1.566
31.000	1.567	29.055				3.620	
32.000	1.569	28.155				3.610	
33.000	1.572	27.296				3.594	
34.000	1.576	26.469				3.573	
35.000	1.580	25.670				3.548	
36.000	1.586	24.893				3.517	
37.000	1.593	24.134				3.482	
38.000	1.601	23.386				3.443	
39.000	1.609	22.645				3.399	
40.000	1.619	21.904				3.349	
41.000	1.630	21.155				3.294	
42.000	1.643	20.388				3.232	
42.714	1.654	19.811				3.182	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PY1
2.50	32.5	45.530	32.500	1.466	32.500	4.005	0.820
			33.500	1.467	31.550	4.002	
			34.500	1.469	30.642	3.992	
			35.500	1.471	29.772	3.977	
			36.500	1.475	28.933	3.956	
			37.500	1.479	28.120	3.931	
			38.500	1.485	27.320	3.901	
			39.500	1.491	26.557	3.866	
			40.500	1.499	25.797	3.827	
			41.500	1.506	25.045	3.783	
			42.500	1.515	24.297	3.734	
			43.500	1.525	23.546	3.680	
			44.500	1.536	22.784	3.619	
			45.500	1.549	22.001	3.551	
			45.530	1.550	21.934	3.545	
2.50	35.0	48.575	35.000	1.362	35.000	4.411	0.779
			36.000	1.363	34.046	4.407	
			37.000	1.364	33.131	4.398	
			38.000	1.367	32.251	4.383	
			39.000	1.370	31.401	4.363	
			40.000	1.374	30.577	4.339	
			41.000	1.379	29.775	4.310	
			42.000	1.384	28.992	4.276	
			43.000	1.391	28.222	4.238	
			44.000	1.398	27.464	4.195	
			45.000	1.406	26.712	4.148	
			46.000	1.415	25.961	4.096	
			47.000	1.425	25.207	4.038	
			48.000	1.436	24.442	3.974	
			48.575	1.443	23.984	3.933	
2.50	37.5	51.818	37.500	1.254	37.500	4.837	0.737
			38.500	1.254	36.542	4.834	
			39.500	1.256	35.621	4.825	
			40.500	1.258	34.733	4.811	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.50	37.5	51.818	41.500	1.261	33.874	4.792	0.737
			42.500	1.264	33.040	4.769	
			43.500	1.269	32.228	4.741	
			44.500	1.274	31.436	4.710	
			45.500	1.280	30.659	4.673	
			46.500	1.286	29.896	4.633	
			47.500	1.293	29.141	4.589	
			48.500	1.301	28.393	4.540	
			49.500	1.310	27.647	4.486	
			50.500	1.319	26.898	4.427	
			51.500	1.330	26.140	4.362	
			51.818	1.334	25.881	4.338	
2.50	40.0	55.377	40.000	1.139	40.000	5.290	0.694
			41.000	1.139	39.039	5.287	
			42.000	1.141	38.112	5.279	
			43.000	1.142	37.217	5.267	
			44.000	1.145	36.349	5.249	
			45.000	1.148	35.507	5.228	
			46.000	1.152	34.688	5.203	
			47.000	1.156	33.888	5.174	
			48.000	1.161	33.106	5.140	
			49.000	1.167	32.339	5.104	
			50.000	1.173	31.584	5.063	
			51.000	1.180	30.839	5.019	
			52.000	1.188	30.101	4.970	
			53.000	1.196	29.367	4.917	
			54.000	1.205	28.634	4.860	
			55.000	1.215	27.896	4.797	
			55.377	1.219	27.607	4.771	
2.50	42.5	59.475	42.500	1.011	42.500	5.784	0.649
			43.500	1.012	41.536	5.781	
			44.500	1.013	40.604	5.775	
			45.500	1.014	39.702	5.763	
			46.500	1.017	38.828	5.749	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DFL	P2/P1	PTC/PTI
2.50	42.5	59.475	47.500	1.019	37.979	5.730	0.649
			48.500	1.023	37.153	5.708	
			49.500	1.026	36.348	5.682	
			50.500	1.031	35.562	5.653	
			51.500	1.036	34.793	5.621	
			52.500	1.041	34.040	5.586	
			53.500	1.047	33.300	5.548	
			54.500	1.053	32.571	5.506	
			55.500	1.060	31.852	5.461	
			56.500	1.067	31.140	5.412	
			57.500	1.075	30.433	5.359	
			58.500	1.084	29.728	5.303	
			59.475	1.093	29.040	5.243	
2.50	45.0	64.944	45.000	0.850	45.000	6.381	0.599
			46.000	0.850	44.033	6.379	
			47.000	0.851	43.097	6.374	
			48.000	0.852	42.190	6.365	
			49.000	0.854	41.310	6.353	
			50.000	0.856	40.456	6.339	
			51.000	0.859	39.626	6.321	
			52.000	0.862	38.818	6.301	
			53.000	0.865	38.031	6.279	
			54.000	0.869	37.264	6.254	
			55.000	0.873	36.515	6.226	
			56.000	0.878	35.783	6.196	
			57.000	0.883	35.067	6.164	
58.000	0.888	34.366	6.129				
59.000	0.894	33.678	6.092				
60.000	0.900	32.002	6.052				
61.000	0.906	32.336	6.010				
62.000	0.913	31.681	5.965				
63.000	0.920	31.033	5.918				
64.000	0.928	30.392	5.867				
64.944	0.936	29.761	5.816				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.60	5.0	22.866	5.000	2.509	5.000	1.152	1.000
			6.000	2.510	4.282	1.150	
			7.000	2.512	3.737	1.146	
			8.000	2.515	3.306	1.141	
			9.000	2.518	2.954	1.135	
			10.000	2.522	2.659	1.129	
			11.000	2.525	2.406	1.123	
			12.000	2.529	2.185	1.116	
			13.000	2.533	1.988	1.110	
			14.000	2.536	1.811	1.104	
			15.000	2.540	1.647	1.097	
			16.000	2.544	1.495	1.091	
			17.000	2.548	1.349	1.084	
			18.000	2.552	1.208	1.077	
19.000	2.557	1.067	1.069				
20.000	2.562	0.921	1.061				
21.000	2.568	0.758	1.051				
22.000	2.576	0.549	1.038				
22.866	2.585	0.365	1.024				
2.60	7.5	23.331	7.500	2.439	7.500	1.284	1.000
			8.500	2.440	6.706	1.281	
			9.500	2.443	6.053	1.276	
			10.500	2.447	5.504	1.268	
			11.500	2.452	5.031	1.259	
			12.500	2.456	4.616	1.250	
			13.500	2.462	4.245	1.239	
			14.500	2.467	3.909	1.229	
			15.500	2.473	3.599	1.217	
			16.500	2.479	3.309	1.206	
			17.500	2.486	3.033	1.193	
			18.500	2.493	2.764	1.180	
			19.500	2.501	2.497	1.166	
			20.500	2.509	2.223	1.151	
21.500	2.520	1.923	1.133				
22.500	2.533	1.556	1.109				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.60	7.5	23.331	23.331	2.557	0.976	1.069	1.000
2.60	10.0	24.477	10.000	2.362	10.000	1.448	0.999
			11.000	2.363	9.161	1.445	
			12.000	2.366	8.440	1.438	
			13.000	2.370	7.810	1.429	
			14.000	2.376	7.248	1.417	
			15.000	2.381	6.739	1.404	
			16.000	2.388	6.273	1.390	
			17.000	2.395	5.838	1.374	
			18.000	2.403	5.427	1.358	
			19.000	2.411	5.032	1.340	
			20.000	2.421	4.645	1.321	
			21.000	2.431	4.257	1.300	
			22.000	2.443	3.853	1.276	
			23.000	2.457	3.406	1.248	
			24.000	2.477	2.838	1.209	
			24.477	2.490	2.509	1.186	
2.60	12.5	25.785	12.500	2.281	12.500	1.640	0.998
			13.500	2.282	11.632	1.637	
			14.500	2.285	10.866	1.630	
			15.500	2.289	10.174	1.618	
			16.500	2.295	9.546	1.604	
			17.500	2.302	8.965	1.588	
			18.500	2.309	8.422	1.570	
			19.500	2.317	7.906	1.550	
			20.500	2.326	7.410	1.528	
			21.500	2.337	6.923	1.504	
			22.500	2.348	6.436	1.477	
			23.500	2.361	5.933	1.447	
			24.500	2.377	5.300	1.412	
			25.500	2.398	4.742	1.366	
			25.785	2.420	4.132	1.321	
2.60	15.0	27.676	15.000	2.195	15.000	1.865	0.992

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
2.60	15.0	27.676	16.000	2.196	14.111	1.862	0.992
			17.000	2.199	13.309	1.953	
			18.000	2.204	12.575	1.940	
			19.000	2.209	11.805	1.824	
			20.000	2.216	11.258	1.805	
			21.000	2.224	10.654	1.783	
			22.000	2.233	10.073	1.758	
			23.000	2.243	9.506	1.731	
			24.000	2.254	8.944	1.701	
			25.000	2.267	8.373	1.667	
			26.000	2.282	7.775	1.627	
			27.000	2.301	7.110	1.580	
			27.676	2.320	6.513	1.535	
			2.60	17.5	29.646	17.500	
18.500	2.108	16.596				2.116	
19.500	2.111	15.767				2.107	
20.500	2.115	14.999				2.093	
21.500	2.121	14.280				2.074	
22.500	2.127	13.598				2.052	
23.500	2.135	12.945				2.027	
24.500	2.144	12.312				1.998	
25.500	2.155	11.690				1.966	
26.500	2.167	11.068				1.930	
27.500	2.180	10.431				1.889	
28.500	2.197	9.750				1.842	
29.500	2.217	9.007				1.784	
29.646	2.226	8.702				1.759	
2.60	20.0	31.901	20.000	2.014	20.000	2.405	0.964
			21.000	2.015	19.084	2.402	
			22.000	2.018	18.235	2.302	
			23.000	2.022	17.440	2.376	
			24.000	2.028	16.689	2.356	
			25.000	2.034	15.972	2.332	
26.000	2.042	15.280	2.303				



CONICAL FLOW PARAMETERS

MI	DELTA	PHT S	PHT	M2	DEL	P2/P1	PTC/PT1
2.60	20.0	31.901	27.000	2.051	14.606	2.271	0.964
			28.000	2.061	13.941	2.235	
			30.000	2.073	13.273	2.194	
			31.000	2.087	12.589	2.147	
			31.901	2.104	11.868	2.093	
				2.122	11.144	2.034	
2.60	22.5	34.241	22.500	1.920	22.500	3.717	0.941
			23.500	1.921	21.574	2.714	
			24.500	1.923	20.709	2.703	
			25.500	1.927	19.892	2.687	
			26.500	1.932	19.116	2.665	
			27.500	1.939	18.370	2.639	
			28.500	1.946	17.648	2.608	
			29.500	1.955	16.942	2.573	
			30.500	1.965	16.243	2.533	
			31.500	1.977	15.541	2.488	
			32.500	1.990	14.824	2.436	
			33.500	2.006	14.072	2.377	
			34.241	2.020	13.456	2.325	
2.60	25.0	36.705	25.000	1.873	25.000	3.056	0.912
			26.000	1.874	24.066	3.057	
			27.000	1.826	23.187	3.041	
			28.000	1.830	22.353	3.024	
			29.000	1.835	21.556	3.002	
			30.000	1.841	20.797	2.974	
			31.000	1.849	20.040	2.941	
			32.000	1.856	19.309	2.904	
			33.000	1.866	18.584	2.861	
			34.000	1.877	17.858	2.813	
			35.000	1.890	17.120	2.758	
			36.000	1.905	16.352	2.696	
			36.705	1.917	15.763	2.644	
2.60	27.5	39.288	27.500	1.724	27.500	3.421	0.877

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.60	27.5	39.288	29.500	1.725	26.560	3.417	0.877
			29.500	1.727	25.670	3.406	
			30.500	1.730	24.82	3.388	
			31.500	1.735	24.006	3.265	
			32.500	1.740	23.218	3.336	
			33.500	1.747	22.452	3.302	
			34.500	1.755	21.700	3.263	
			35.500	1.764	20.957	3.210	
			36.500	1.774	20.213	3.169	
			37.500	1.786	19.461	3.112	
			38.500	1.800	18.686	3.048	
			39.288	1.812	18.040	2.990	
2.60	30.0	41.977	30.000	1.623	30.000	3.802	0.839
			31.000	1.623	29.054	3.806	
			32.000	1.625	28.155	3.794	
			33.000	1.629	27.293	3.777	
			34.000	1.633	26.464	3.753	
			35.000	1.638	25.661	3.724	
			36.000	1.644	24.878	3.690	
			37.000	1.651	24.111	3.650	
			38.000	1.660	23.353	3.605	
			39.000	1.669	22.597	3.554	
			40.000	1.680	21.837	3.497	
			41.000	1.692	21.061	3.432	
			41.977	1.706	20.275	3.361	
2.60	32.5	44.802	32.500	1.519	32.500	4.219	0.798
			33.500	1.520	31.550	4.216	
			34.500	1.522	30.542	4.205	
			35.500	1.525	29.770	4.187	
			36.500	1.528	28.928	4.164	
			37.500	1.533	28.112	4.135	
			38.500	1.539	27.316	4.101	
			39.500	1.545	26.536	4.061	
			40.500	1.553	25.767	4.016	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.60	32.5	44.802	41.500	1.562	25.003	3.966	0.798
			42.500	1.571	24.238	3.909	
			43.500	1.583	23.465	3.846	
			44.500	1.595	22.674	3.775	
			44.802	1.600	22.404	3.749	
2.60	35.0	47.838	35.000	1.412	35.000	4.653	0.755
			36.000	1.413	34.066	4.640	
			37.000	1.414	33.130	4.629	
			38.000	1.417	32.249	4.622	
			39.000	1.420	31.397	4.599	
			40.000	1.425	30.570	4.571	
			41.000	1.430	29.763	4.538	
			42.000	1.436	28.974	4.499	
			43.000	1.443	28.196	4.456	
			44.000	1.450	27.427	4.407	
			45.000	1.459	26.661	4.352	
			46.000	1.469	25.892	4.292	
			47.000	1.480	25.115	4.224	
			47.838	1.490	24.446	4.161	
			2.60	37.5	50.997	37.500	
38.500	1.303	36.542				5.105	
39.500	1.304	35.620				5.095	
40.500	1.306	34.731				5.079	
41.500	1.309	33.870				5.057	
42.500	1.313	33.033				5.031	
43.500	1.318	32.218				4.999	
44.500	1.323	31.420				4.962	
45.500	1.329	30.636				4.921	
46.500	1.336	29.863				4.875	
47.500	1.344	29.097				4.823	
48.500	1.352	28.334				4.766	
49.500	1.362	27.568				4.704	
50.500	1.373	26.795				4.634	
50.997	1.379	26.395				4.596	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.60	40.0	54.453	40.000	1.186	40.000	5.589	0.667
			41.000	1.187	39.039	5.585	
			42.000	1.188	38.111	5.576	
			43.000	1.190	37.215	5.562	
			44.000	1.193	36.346	5.542	
			45.000	1.196	35.502	5.517	
			46.000	1.200	34.678	5.488	
			47.000	1.205	33.874	5.455	
			48.000	1.210	33.085	5.416	
			49.000	1.216	32.310	5.374	
			50.000	1.223	31.545	5.327	
			51.000	1.230	30.788	5.275	
			52.000	1.238	30.034	5.219	
			53.000	1.247	29.281	5.156	
			54.000	1.257	28.524	5.088	
54.453	1.262	28.169	5.054				
2.60	42.5	58.366	42.500	1.060	42.500	6.104	0.622
			43.500	1.060	41.536	6.101	
			44.500	1.061	40.604	6.093	
			45.500	1.063	39.701	6.081	
			46.500	1.066	38.825	6.063	
			47.500	1.068	37.974	6.042	
			48.500	1.072	37.144	6.016	
			49.500	1.076	36.335	5.986	
			50.500	1.081	35.543	5.952	
			51.500	1.086	34.767	5.915	
			52.500	1.091	34.005	5.874	
			53.500	1.098	33.254	5.828	
			54.500	1.105	32.512	5.779	
			55.500	1.112	31.777	5.726	
			56.500	1.120	31.046	5.668	
57.500	1.129	30.316	5.605				
58.366	1.137	29.692	5.546				
2.60	45.0	63.149	45.000	0.912	45.000	6.694	0.575

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.60	45.0	63.149	46.000	0.912	44.033	6.691	0.575
			47.000	0.913	43.097	6.685	
			48.000	0.914	42.188	6.674	
			49.000	0.916	41.307	6.660	
			50.000	0.919	40.450	6.642	
			51.000	0.922	39.616	6.621	
			52.000	0.925	38.803	6.597	
			53.000	0.929	38.010	6.569	
			54.000	0.933	37.236	6.539	
			55.000	0.938	36.478	6.505	
			56.000	0.943	35.735	6.468	
			57.000	0.948	35.006	6.429	
			58.000	0.954	34.290	6.386	
			59.000	0.960	33.586	6.340	
			60.000	0.967	32.887	6.291	
			61.000	0.975	32.199	6.238	
			62.000	0.983	31.515	6.182	
			63.000	0.991	30.836	6.121	
			63.149	0.992	30.728	6.111	



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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.70	5.0	21.943	5.000	2.604	5.000	1.160	1.000
			5.000	2.605	4.282	1.158	
			7.000	2.607	3.736	1.154	
			8.000	2.611	3.303	1.148	
			9.000	2.614	2.950	1.141	
			10.000	2.618	2.653	1.135	
			11.000	2.622	2.397	1.128	
			12.000	2.626	2.173	1.121	
			13.000	2.630	1.973	1.114	
			14.000	2.634	1.791	1.107	
			15.000	2.638	1.623	1.100	
			16.000	2.642	1.465	1.092	
			17.000	2.647	1.312	1.085	
			18.000	2.652	1.161	1.077	
			19.000	2.657	1.005	1.068	
20.000	2.664	0.836	1.057				
21.000	2.672	0.626	1.044				
21.943	2.686	0.308	1.021				
2.70	7.5	22.430	7.500	2.530	7.500	1.300	1.000
			8.500	2.532	6.705	1.297	
			9.500	2.535	6.052	1.291	
			10.500	2.539	5.501	1.283	
			11.500	2.544	5.025	1.273	
			12.500	2.549	4.607	1.263	
			13.500	2.555	4.232	1.251	
			14.500	2.561	3.890	1.239	
			15.500	2.568	3.573	1.227	
			16.500	2.575	3.274	1.214	
			17.500	2.582	2.987	1.200	
			18.500	2.590	2.703	1.185	
			19.500	2.599	2.415	1.168	
			20.500	2.610	2.107	1.149	
			21.500	2.623	1.742	1.125	
22.430	2.656	0.959	1.070				
2.70	10.0	23.556	10.000	2.450	10.000	1.473	0.999

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.70	10.0	23.556	11.000	2.451	9.161	1.470	0.999
			12.000	2.454	8.439	1.463	
			13.000	2.459	7.806	1.452	
			14.000	2.464	7.241	1.439	
			15.000	2.471	6.728	1.425	
			16.000	2.478	6.255	1.409	
			17.000	2.486	5.813	1.392	
			18.000	2.495	5.391	1.373	
			19.000	2.504	4.982	1.353	
			20.000	2.515	4.576	1.331	
			21.000	2.527	4.159	1.306	
			22.000	2.541	3.709	1.278	
			23.000	2.560	3.166	1.240	
			23.556	2.586	2.499	1.101	
2.70	12.5	25.128	12.500	2.364	12.500	1.679	0.997
			13.500	2.365	11.631	1.676	
			14.500	2.368	10.862	1.668	
			15.500	2.373	10.170	1.655	
			16.500	2.379	9.538	1.640	
			17.500	2.386	8.953	1.622	
			18.500	2.394	8.402	1.601	
			19.500	2.404	7.876	1.579	
			20.500	2.414	7.366	1.554	
			21.500	2.425	6.861	1.527	
			22.500	2.439	6.367	1.496	
			23.500	2.454	5.882	1.460	
			24.500	2.474	5.178	1.415	
			25.128	2.496	4.560	1.367	
2.70	15.0	27.000	15.000	2.276	15.000	1.913	0.990
			16.000	2.277	14.111	1.910	
			17.000	2.281	13.307	1.900	
			18.000	2.285	12.571	1.885	
			19.000	2.291	11.888	1.868	
			20.000	2.299	11.245	1.847	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.70	15.0	27.000	21.000	2.307	10.632	1.922	0.990
			22.000	2.317	10.040	1.795	
			23.000	2.328	9.458	1.764	
			24.000	2.341	8.873	1.729	
			25.000	2.356	8.268	1.689	
			26.000	2.374	7.614	1.642	
			27.000	2.398	6.833	1.581	
2.70	17.5	29.008	17.500	2.181	17.500	2.193	0.978
			18.500	2.182	16.595	2.180	
			19.500	2.185	15.766	2.178	
			20.500	2.190	14.996	2.163	
			21.500	2.196	14.272	2.142	
			22.500	2.203	13.585	2.118	
			23.500	2.212	12.924	2.089	
			24.500	2.222	12.279	2.057	
			25.500	2.233	11.641	2.020	
			26.500	2.247	10.995	1.979	
			27.500	2.262	10.324	1.931	
			28.500	2.282	9.593	1.874	
			29.008	2.296	8.805	1.833	
2.70	20.0	31.195	20.000	2.086	20.000	2.496	0.959
			21.000	2.087	19.083	2.492	
			22.000	2.089	18.233	2.481	
			23.000	2.094	17.436	2.464	
			24.000	2.100	16.682	2.442	
			25.000	2.107	15.959	2.414	
			26.000	2.115	15.259	2.382	
			27.000	2.125	14.574	2.346	
			28.000	2.137	13.892	2.304	
			29.000	2.150	13.201	2.257	
			30.000	2.166	12.482	2.203	
			31.000	2.185	11.702	2.138	
			31.195	2.192	11.428	2.113	
2.70	22.5	33.549	22.500	1.987	22.500	2.831	0.932



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1				
2.70	22.5	33.549	23.500	1.988	21.574	2.827	0.932				
			24.500	1.991	20.707	2.815					
			25.500	1.995	19.849	2.797					
			26.500	2.000	19.109	2.773					
			27.500	2.007	18.358	2.743					
			28.500	2.015	17.628	2.708					
			29.500	2.025	16.911	2.669					
			30.500	2.036	16.196	2.623					
			31.500	2.049	15.472	2.571					
			32.500	2.064	14.723	2.511					
			33.500	2.082	13.919	2.441					
			33.549	2.086	13.767	2.426					
			2.70	25.0	36.026	25.000		1.886	25.000	3.195	0.900
						26.000		1.887	24.066	3.190	
						27.000		1.889	23.186	3.178	
28.000	1.893	22.350				3.159					
29.000	1.898	21.549				3.133					
30.000	1.905	20.776				3.102					
31.000	1.913	20.022				3.065					
32.000	1.922	19.280				3.023					
33.000	1.932	18.541				2.974					
34.000	1.944	17.795				2.919					
35.000	1.958	17.027				2.855					
36.000	1.975	16.215				2.781					
36.026	1.978	16.104				2.771					
2.70	27.5	38.610				27.500	1.783	27.500	3.585	0.862	
						28.500	1.784	26.560	3.581		
			29.500	1.786	25.569	3.568					
			30.500	1.790	24.818	3.549					
			31.500	1.795	24.000	3.522					
			32.500	1.801	23.208	3.490					
			33.500	1.808	22.425	3.452					
			34.500	1.816	21.674	3.407					
			35.500	1.826	20.917	3.357					

CONICAL FLOW PARAMETERS

M1	DELTA	PHT S	PHT	M2	DEL	P2/P1	PTC/PT1				
2.70	27.5	38.610	36.500	1.837	20.156	3.299	0.862				
			37.500	1.850	19.379	3.234					
			38.500	1.866	18.568	3.158					
			38.610	1.869	18.416	3.143					
2.70	30.0	41.324	30.000	1.678	30.000	4.002	0.820				
			31.000	1.678	29.054	3.997					
			32.000	1.680	28.154	3.985					
			33.000	1.684	27.291	3.965					
			34.000	1.688	26.459	3.930					
			35.000	1.694	25.652	3.906					
			36.000	1.700	24.863	3.867					
			37.000	1.708	24.087	3.822					
			38.000	1.717	23.318	3.770					
			39.000	1.727	22.547	3.712					
			40.000	1.739	21.766	3.646					
			41.000	1.753	20.960	3.571					
			41.324	1.758	20.661	3.541					
			2.70	32.5	44.164	32.500		1.570	32.500	4.443	0.776
						33.500		1.571	31.549	4.438	
						34.500		1.573	30.641	4.426	
35.500	1.576	29.767				4.406					
36.500	1.580	28.923				4.380					
37.500	1.585	28.104				4.348					
38.500	1.591	27.303				4.309					
39.500	1.598	26.516				4.264					
40.500	1.606	25.737				4.213					
41.500	1.615	24.960				4.155					
42.500	1.626	24.178				4.090					
43.500	1.638	23.381				4.017					
44.164	1.647	22.828				3.962					
2.70	35.0	47.122				35.000	1.461	35.000	4.905	0.731	
						36.000	1.461	34.045	4.900		
						37.000	1.463	33.130	4.899		

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.70	35.0	47.122	38.000	1.466	32.247	4.870	0.731
			39.000	1.469	31.393	4.844	
			40.000	1.474	30.563	4.812	
			41.000	1.480	29.751	4.774	
			42.000	1.486	28.955	4.731	
			43.000	1.493	28.169	4.681	
			44.000	1.502	27.388	4.625	
			45.000	1.511	26.608	4.562	
			46.000	1.522	25.820	4.492	
			47.000	1.534	25.016	4.413	
47.122	1.536	24.985	4.400				
2.70	37.5	50.314	37.500	1.347	37.500	5.390	0.685
			38.500	1.348	36.542	5.346	
			39.500	1.349	35.620	5.305	
			40.500	1.352	34.729	5.267	
			41.500	1.355	33.866	5.225	
			42.500	1.359	33.027	5.178	
			43.500	1.364	32.207	5.125	
			44.500	1.370	31.404	5.066	
			45.500	1.376	30.613	4.998	
			46.500	1.384	29.830	4.928	
47.500	1.392	29.052	4.862				
48.500	1.401	28.273					
49.500	1.411	27.488					
50.314	1.421	26.836					
2.70	40.0	53.661	40.000	1.230	40.000	5.902	0.640
			41.000	1.231	39.038	5.898	
			42.000	1.232	38.111	5.888	
			43.000	1.234	37.214	5.871	
			44.000	1.237	36.343	5.849	
			45.000	1.241	35.496	5.821	
			46.000	1.245	34.669	5.788	
			47.000	1.250	33.860	5.749	
			48.000	1.256	33.065	5.705	

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CONICAL FLOW PARAMETERS

MT	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
2.70	40.0	53.661	49.000	1.262	32.282	5.657	0.640
			50.000	1.269	31.506	5.602	
			51.000	1.277	30.736	5.543	
			52.000	1.286	29.966	5.477	
			53.000	1.296	29.193	5.404	
			53.661	1.303	28.672	5.352	
2.70	42.5	57.421	42.500	1.105	42.500	6.444	0.596
			43.500	1.105	41.536	6.441	
			44.500	1.106	40.603	6.432	
			45.500	1.108	39.700	6.417	
			46.500	1.110	38.822	6.397	
			47.500	1.114	37.968	6.372	
			48.500	1.117	37.136	6.342	
			49.500	1.122	36.322	6.309	
			50.500	1.127	35.525	6.269	
			51.500	1.132	34.742	6.226	
			52.500	1.138	33.970	6.178	
			53.500	1.145	33.209	6.126	
			54.500	1.152	32.452	6.068	
			55.500	1.160	31.702	6.005	
			56.500	1.169	30.952	5.937	
57.421	1.178	30.257	5.869				
2.70	45.0	61.874	45.000	0.962	45.000	7.045	0.548
			46.000	0.962	44.033	7.043	
			47.000	0.963	43.096	7.035	
			48.000	0.965	42.187	7.023	
			49.000	0.967	41.304	7.006	
			50.000	0.969	40.445	6.985	
			51.000	0.972	39.608	6.960	
			52.000	0.976	38.791	6.931	
			53.000	0.980	37.993	6.899	
			54.000	0.985	37.211	6.863	
			55.000	0.990	36.445	6.823	
			56.000	0.995	35.693	6.780	

CONICAL FLOW PARAMETERS

M1	DELTA	PHT S	PHT	M2	DEL	P2/P1	PTC/PT1
2.70	45.0	61.874	57.000	1.001	34.952	6.732	6.548
			58.000	1.009	34.222	6.681	
			59.000	1.015	33.500	6.626	
			60.000	1.022	32.784	6.567	
			61.000	1.031	32.072	6.503	
			61.874	1.039	31.452	6.443	

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CONICAL FLOW PARAMETERS

MJ	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1			
2.80	5.0	21.030	5.000	2.700	5.000	1.166	1.000			
			6.000	2.701	4.281	1.163				
			7.000	2.704	3.735	1.159				
			8.000	2.707	3.301	1.152				
			9.000	2.711	2.966	1.145				
			10.000	2.715	2.666	1.138				
			11.000	2.720	2.388	1.131				
			12.000	2.724	2.161	1.123				
			13.000	2.728	1.957	1.116				
			14.000	2.733	1.771	1.109				
			15.000	2.738	1.597	1.100				
			16.000	2.743	1.431	1.091				
			17.000	2.749	1.269	1.083				
			18.000	2.754	1.105	1.073				
			19.000	2.760	0.929	1.062				
			20.000	2.769	0.720	1.049				
			21.000	2.791	0.229	1.013				
			21.030	2.800	0.043	0.990				
			2.80	7.5	21.973	7.500	2.619	7.500	1.320	1.000
						8.500	2.621	6.705	1.317	
9.500	2.624	6.051				1.310				
10.500	2.628	5.498				1.301				
11.500	2.634	5.020				1.291				
12.500	2.640	4.597				1.279				
13.500	2.645	4.218				1.267				
14.500	2.653	3.870				1.253				
15.500	2.660	3.546				1.239				
16.500	2.668	3.237				1.225				
17.500	2.676	2.937				1.209				
18.500	2.685	2.646				1.192				
19.500	2.696	2.320				1.172				
20.500	2.710	1.961				1.149				
21.500	2.731	1.434				1.110				
21.973	2.732	1.419				1.110				
2.80	10.0	22.932				10.000	2.536	10.000	1.501	0.999

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.80	10.0	22.932	11.000	2.537	9.160	1.498	0.999
			12.000	2.540	8.438	1.490	
			13.000	2.545	7.802	1.479	
			14.000	2.552	7.224	1.465	
			15.000	2.559	6.716	1.449	
			16.000	2.566	6.237	1.431	
			17.000	2.575	5.786	1.412	
			18.000	2.585	5.353	1.391	
			19.000	2.595	4.928	1.369	
			20.000	2.608	4.499	1.343	
			21.000	2.622	4.066	1.314	
			22.000	2.640	3.526	1.278	
22.932	2.669	2.776	1.221				
2.80	12.5	24.438	12.500	2.446	12.500	1.720	0.996
			13.500	2.448	11.631	1.717	
			14.500	2.451	10.861	1.708	
			15.500	2.455	10.167	1.696	
			16.500	2.463	9.531	1.677	
			17.500	2.470	8.939	1.657	
			18.500	2.479	8.381	1.634	
			19.500	2.489	7.845	1.609	
			20.500	2.500	7.320	1.581	
			21.500	2.513	6.793	1.550	
			22.500	2.529	6.266	1.514	
			23.500	2.547	5.642	1.470	
24.500	2.574	4.875	1.410				
24.438	2.579	4.742	1.399				
2.80	15.0	26.299	15.000	2.352	15.000	1.976	0.988
			16.000	2.354	14.110	1.973	
			17.000	2.357	13.306	1.962	
			18.000	2.362	12.567	1.946	
			19.000	2.369	11.880	1.926	
			20.000	2.377	11.232	1.903	
21.000	2.385	10.611	1.875				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.80	15.0	26.299	22.000	2.397	10.007	1.844	0.988
			23.000	2.409	9.407	1.909	
			24.000	2.423	8.798	1.769	
			25.000	2.440	8.154	1.722	
			26.000	2.462	7.425	1.665	
			26.299	2.477	6.974	1.625	
2.80	17.5	28.441	17.500	2.254	17.500	2.269	0.973
			18.500	2.255	16.595	2.265	
			19.500	2.258	15.764	2.254	
			20.500	2.263	14.992	2.236	
			21.500	2.270	14.265	2.214	
			22.500	2.278	13.572	2.186	
			23.500	2.287	12.902	2.154	
			24.500	2.298	12.245	2.118	
			25.500	2.311	11.589	2.076	
			26.500	2.326	10.917	2.029	
			27.500	2.344	10.202	1.973	
			28.441	2.365	9.437	1.907	
2.80	20.0	30.638	20.000	2.154	20.000	2.594	0.951
			21.000	2.155	19.093	2.589	
			22.000	2.158	18.232	2.577	
			23.000	2.163	17.433	2.558	
			24.000	2.169	16.674	2.533	
			25.000	2.177	15.946	2.502	
			26.000	2.186	15.238	2.466	
			27.000	2.197	14.540	2.425	
			28.000	2.210	13.941	2.378	
			29.000	2.224	13.123	2.324	
			30.000	2.242	12.363	2.260	
			30.638	2.257	11.801	2.209	
2.80	22.5	32.990	22.500	2.051	22.500	2.951	0.922
			23.500	2.052	21.574	2.947	
			24.500	2.055	20.706	2.933	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
2.80	22.5	32.990	25.500	2.060	19.886	2.913	0.922
			26.500	2.066	19.102	2.886	
			27.500	2.073	18.346	2.853	
			28.500	2.082	17.608	2.814	
			29.500	2.092	16.879	2.769	
			30.500	2.104	16.148	2.717	
			31.500	2.119	15.400	2.658	
			32.500	2.136	14.612	2.588	
			32.990	2.146	14.161	2.545	
			2.80	25.0	35.469	25.000	
26.000	1.947	24.066				3.335	
27.000	1.950	23.185				3.322	
28.000	1.954	22.347				3.300	
29.000	1.960	21.543				3.272	
30.000	1.965	20.765				3.237	
31.000	1.975	20.003				3.195	
32.000	1.985	19.251				3.147	
33.000	1.996	18.497				3.092	
34.000	2.009	17.729				3.029	
2.80	27.5	38.065	27.500	1.839	27.500	3.758	0.845
			28.500	1.840	26.559	3.753	
			29.500	1.842	25.668	3.739	
			30.500	1.846	24.815	3.717	
			31.500	1.851	23.994	3.688	
			32.500	1.858	23.198	3.652	
			33.500	1.865	22.418	3.609	
			34.500	1.874	21.648	3.559	
			35.500	1.885	20.878	3.501	
			37.500	1.912	19.293	3.360	
2.80	30.0	40.805	38.065	1.921	18.799	3.310	0.799
			30.000	1.729	30.000	4.203	

CONICAL FLOW PARAMETERS

W1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.80	30.0	40.805	31.000	1.730	29.054	4.198	0.799
			32.000	1.732	28.153	4.184	
			33.000	1.736	27.288	4.167	
			34.000	1.741	26.454	4.132	
			35.000	1.747	25.642	4.095	
			36.000	1.754	24.848	4.052	
			37.000	1.762	24.064	4.001	
			38.000	1.772	23.283	3.943	
			39.000	1.783	22.496	3.876	
			40.000	1.796	21.692	3.801	
40.805	1.808	21.015	3.721				
2.80	32.5	43.573	32.500	1.620	32.500	4.673	0.753
			33.500	1.620	31.549	4.668	
			34.500	1.622	30.640	4.654	
			35.500	1.625	29.765	4.632	
			36.500	1.630	28.919	4.603	
			37.500	1.635	28.095	4.566	
			38.500	1.642	27.289	4.522	
			39.500	1.649	26.495	4.472	
			40.500	1.658	25.705	4.414	
			41.500	1.668	24.915	4.348	
42.500	1.679	24.114	4.273				
43.500	1.693	23.291	4.189				
43.573	1.694	23.186	4.177				
2.80	35.0	46.536	35.000	1.507	35.000	5.169	0.706
			36.000	1.507	34.045	5.164	
			37.000	1.509	33.129	5.151	
			38.000	1.512	32.245	5.129	
			39.000	1.516	31.389	5.100	
			40.000	1.520	30.555	5.065	
			41.000	1.526	29.740	5.022	
			42.000	1.533	28.937	4.971	
			43.000	1.541	28.142	4.916	
			44.000	1.550	27.350	4.853	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.80	35.0	46.536	45.000	1.560	26.554	4.781	0.706
			46.000	1.571	25.766	4.700	
			46.536	1.579	25.291	4.652	
2.80	37.5	49.637	37.500	1.301	37.500	5.685	0.659
			38.500	1.302	36.542	5.681	
			39.500	1.304	35.619	5.668	
			40.500	1.305	34.728	5.648	
			41.500	1.400	33.863	5.621	
			42.500	1.404	33.021	5.587	
			43.500	1.409	32.197	5.546	
			44.500	1.415	31.388	5.499	
			45.500	1.422	30.589	5.445	
			46.500	1.430	29.797	5.385	
			47.500	1.439	29.006	5.317	
			48.500	1.449	28.210	5.242	
49.500	1.460	27.403	5.158				
49.637	1.462	27.266	5.143				
2.80	40.0	52.978	40.000	1.272	40.000	6.229	0.612
			41.000	1.272	39.038	6.225	
			42.000	1.274	38.110	6.212	
			43.000	1.276	37.212	6.194	
			44.000	1.279	36.340	6.169	
			45.000	1.283	35.490	6.137	
			46.000	1.287	34.660	6.100	
			47.000	1.292	33.846	6.056	
			48.000	1.299	33.045	6.006	
			49.000	1.305	32.253	5.951	
			50.000	1.313	31.468	5.889	
			51.000	1.322	30.684	5.820	
52.000	1.331	29.908	5.744				
52.978	1.342	29.121	5.662				
2.80	42.5	56.595	42.500	1.146	42.500	6.900	0.567
			43.500	1.147	41.535	6.797	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.80	42.5	56.595	44.500	1.148	40.603	6.786	0.567
			45.500	1.150	39.698	6.770	
			46.500	1.152	38.819	6.747	
			47.500	1.156	37.963	6.718	
			48.500	1.160	37.128	6.685	
			49.500	1.164	36.310	6.645	
			50.500	1.169	35.507	6.601	
			51.500	1.175	34.716	6.551	
			52.500	1.182	33.936	6.496	
			53.500	1.189	33.163	6.436	
			54.500	1.197	32.395	6.369	
			55.500	1.206	31.627	6.297	
			56.500	1.216	30.856	6.217	
			56.595	1.217	30.766	6.207	
2.80	45.0	60.839	45.000	1.006	45.000	7.422	0.521
			46.000	1.006	44.033	7.419	
			47.000	1.007	43.096	7.411	
			48.000	1.009	42.186	7.396	
			49.000	1.011	41.301	7.377	
			50.000	1.014	40.440	7.353	
			51.000	1.017	39.600	7.324	
			52.000	1.021	38.779	7.291	
			53.000	1.025	37.976	7.253	
			54.000	1.030	37.188	7.211	
			55.000	1.036	36.414	7.165	
			56.000	1.042	35.652	7.114	
			57.000	1.048	34.901	7.059	
			58.000	1.055	34.157	6.990	
			59.000	1.063	33.418	6.916	
			60.000	1.071	32.683	6.834	
			60.839	1.079	32.066	6.801	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
2.90	5.0	20.598	5.000	2.791	5.000	1.180	1.000
			6.000	2.793	4.281	1.177	
			7.000	2.796	3.734	1.172	
			8.000	2.799	3.299	1.165	
			9.000	2.804	2.942	1.158	
			10.000	2.808	2.640	1.150	
			11.000	2.813	2.379	1.142	
			12.000	2.818	2.149	1.133	
			13.000	2.822	1.941	1.125	
			14.000	2.828	1.749	1.116	
			15.000	2.833	1.569	1.107	
			16.000	2.838	1.395	1.098	
			17.000	2.844	1.222	1.088	
			18.000	2.851	1.042	1.076	
			19.000	2.860	0.836	1.063	
			20.000	2.874	0.528	1.040	
			20.598	2.869	0.618	1.048	
2.90	7.5	21.185	7.500	2.710	7.500	1.336	1.000
			8.500	2.711	6.708	1.333	
			9.500	2.715	6.053	1.326	
			10.500	2.720	5.498	1.316	
			11.500	2.725	5.016	1.305	
			12.500	2.732	4.590	1.292	
			13.500	2.739	4.205	1.278	
			14.500	2.746	3.851	1.264	
			15.500	2.754	3.518	1.248	
			16.500	2.763	3.198	1.232	
			17.500	2.773	2.892	1.214	
			18.500	2.784	2.557	1.194	
			19.500	2.797	2.202	1.170	
			20.500	2.815	1.746	1.137	
			21.185	2.828	1.452	1.115	
2.90	10.0	22.354	10.000	2.620	10.000	1.532	0.999
			11.000	2.622	9.183	1.529	

CONICAL FLOW PARAMETERS

MI	DELTA	PHT S	PHT	MZ	DEL	P2/P1	PTC/PT1
2.90	10.0	22.354	12.000	2.625	8.458	1.520	0.999
			13.000	2.631	7.819	1.508	
			14.000	2.637	7.246	1.493	
			15.000	2.645	6.722	1.475	
			16.000	2.653	6.235	1.456	
			17.000	2.663	5.774	1.435	
			18.000	2.674	5.327	1.411	
			19.000	2.686	4.893	1.385	
			20.000	2.700	4.425	1.356	
			21.000	2.717	3.923	1.320	
			22.000	2.742	3.281	1.272	
			22.354	2.753	3.004	1.249	
2.90	12.5	23.746	12.500	2.527	12.500	1.765	0.996
			13.500	2.528	11.654	1.761	
			14.500	2.532	10.882	1.751	
			15.500	2.539	10.184	1.736	
			16.500	2.545	9.543	1.717	
			17.500	2.553	8.945	1.695	
			18.500	2.562	8.378	1.670	
			19.500	2.573	7.829	1.642	
			20.500	2.586	7.287	1.610	
			21.500	2.601	6.735	1.574	
			22.500	2.619	6.166	1.532	
			23.500	2.642	5.458	1.478	
			23.746	2.671	4.682	1.412	
2.90	15.0	25.918	15.000	2.428	15.000	2.038	0.985
			16.000	2.429	14.121	2.034	
			17.000	2.433	13.315	2.022	
			18.000	2.438	12.573	2.005	
			19.000	2.446	11.982	1.983	
			20.000	2.454	11.227	1.956	
			21.000	2.464	10.507	1.926	
			22.000	2.476	9.980	1.891	
			23.000	2.490	9.362	1.851	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PT1
2.90	15.0	25.818	24.000	2.506	8.723	1.805	0.985
			25.000	2.526	8.028	1.750	
			25.818	2.548	7.331	1.690	
2.90	17.5	27.830	17.500	2.328	17.500	2.345	0.969
			18.500	2.329	16.583	2.340	
			19.500	2.332	15.752	2.327	
			20.500	2.338	14.978	2.308	
			21.500	2.345	14.247	2.283	
			22.500	2.353	13.547	2.252	
			23.500	2.363	12.869	2.217	
			24.500	2.375	12.198	2.176	
			25.500	2.389	11.522	2.129	
			26.500	2.406	10.818	2.076	
			27.500	2.427	10.049	2.007	
			27.830	2.439	9.653	1.970	
2.90	20.0	30.078	20.000	2.222	20.000	2.693	0.944
			21.000	2.224	19.083	2.688	
			22.000	2.227	18.231	2.674	
			23.000	2.232	17.429	2.653	
			24.000	2.239	16.667	2.625	
			25.000	2.247	15.942	2.591	
			26.000	2.257	15.215	2.551	
			27.000	2.269	14.504	2.505	
			28.000	2.282	13.785	2.451	
			29.000	2.299	13.038	2.389	
			30.000	2.319	12.226	2.313	
			30.078	2.325	12.019	2.293	
2.90	22.5	32.493	22.500	2.114	22.500	3.076	0.910
			23.500	2.115	21.573	3.071	
			24.500	2.118	20.705	3.056	
			25.500	2.123	19.882	3.034	
			26.500	2.129	19.095	3.004	
			27.500	2.137	18.333	2.967	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DFL	P2/P1	PTC/PT1
2.90	22.5	32.493	28.500	2.147	17.587	2.923	0.910
			29.500	2.158	16.846	2.873	
			30.500	2.171	16.097	2.814	
			31.500	2.187	15.322	2.746	
			32.493	2.206	14.495	2.665	
2.90	25.0	34.981	25.000	2.005	21.000	3.491	0.871
			26.000	2.006	24.066	3.486	
			27.000	2.008	23.184	3.471	
			28.000	2.013	22.344	3.447	
			29.000	2.019	21.537	3.415	
			30.000	2.026	20.753	3.376	
			31.000	2.035	19.984	3.330	
			32.000	2.046	19.220	3.276	
			33.000	2.059	18.451	3.213	
			34.000	2.073	17.650	3.141	
		34.981	2.090	16.817	3.057		
2.90	27.5	37.545	27.500	1.894	27.500	3.935	0.827
			28.500	1.895	26.559	3.930	
			29.500	1.898	25.667	3.914	
			30.500	1.902	24.812	3.890	
			31.500	1.907	23.989	3.857	
			32.500	1.914	23.187	3.817	
			33.500	1.922	22.401	3.768	
			34.500	1.932	21.620	3.712	
			35.500	1.943	20.836	3.647	
			36.500	1.957	20.035	3.572	
		37.545	1.973	19.200	3.485		
			1.975	19.092	3.473		
2.90	30.0	40.250	30.000	1.781	30.000	4.411	0.779
			31.000	1.782	29.054	4.406	
			32.000	1.786	28.152	4.390	
			33.000	1.789	27.286	4.366	
			34.000	1.793	26.448	4.332	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
2.90	30.0	40.250	35.000	1.799	25.633	4.291	0.779
			36.000	1.807	26.832	4.242	
			37.000	1.816	24.040	4.185	
			38.000	1.826	23.246	4.119	
			39.000	1.838	22.442	4.044	
			40.000	1.852	21.613	3.957	
			40.250	1.857	21.362	3.929	
			37.500	1.666	32.500	4.914	0.730
			38.500	1.667	31.549	4.909	
			39.500	1.669	30.639	4.894	
40.500	1.673	29.763	4.869				
41.500	1.677	28.914	4.836				
42.500	1.683	28.087	4.795				
43.500	1.690	27.276	4.746				
44.500	1.698	26.474	4.689				
45.500	1.707	25.674	4.624				
46.500	1.718	24.869	4.549				
47.500	1.730	24.048	4.464				
48.500	1.738	23.254	4.409				
2.90	35.0	46.003	35.000	1.551	35.000	5.460	0.681
			36.000	1.551	34.045	5.435	
			37.000	1.553	33.128	5.420	
			38.000	1.556	32.243	5.396	
			39.000	1.560	31.385	5.364	
			40.000	1.565	30.548	5.324	
			41.000	1.572	29.728	5.276	
			42.000	1.579	28.918	5.220	
			43.000	1.587	28.115	5.157	
			44.000	1.597	27.311	5.085	
45.000	1.608	26.499	5.003				
46.000	1.620	25.668	4.911				
47.000	1.621	25.625	4.906				
37.500	1.432	37.500	5.993	0.632			

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CONICAL FLOW PARAMETERS

MT	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PTI				
2.90	37.5	49.087	38.500	1.433	36.541	5.988	0.632				
			39.500	1.435	35.618	5.974					
			40.500	1.437	34.726	5.951					
			41.500	1.441	33.859	5.921					
			42.500	1.445	33.014	5.883					
			43.500	1.451	32.187	5.837					
			44.500	1.457	31.372	5.784					
			45.500	1.465	30.566	5.724					
			46.500	1.473	29.764	5.655					
			47.500	1.482	28.960	5.579					
			48.500	1.493	28.147	5.493					
			49.087	1.500	27.654	5.436					
			2.90	40.0	52.357	40.000		1.311	40.000	6.569	0.585
						41.000		1.312	39.038	6.564	
42.000	1.313	38.110				6.551					
43.000	1.316	37.211				6.530					
44.000	1.319	36.337				6.502					
45.000	1.323	35.485				6.466					
46.000	1.328	34.651				6.424					
47.000	1.333	33.832				6.374					
48.000	1.340	33.024				6.318					
49.000	1.347	32.225				6.255					
50.000	1.355	31.428				6.185					
51.000	1.364	30.631				6.107					
52.000	1.374	29.827				6.020					
52.357	1.379	29.525				5.985					
2.90	42.5	55.911	42.500	1.184	42.500	7.174	0.539				
			43.500	1.185	41.535	7.170					
			44.500	1.186	40.602	7.158					
			45.500	1.188	39.697	7.130					
			46.500	1.191	38.817	7.113					
			47.500	1.194	37.959	7.081					
			48.500	1.198	37.120	7.043					
			49.500	1.203	36.297	6.999					

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
2.90	42.5	55.911	50.500	1.209	35.489	6.948	0.539
			51.500	1.215	34.692	6.892	
			52.500	1.222	33.903	6.829	
			53.500	1.230	33.119	6.760	
			54.500	1.238	32.337	6.684	
			55.500	1.248	31.552	6.600	
			55.911	1.252	31.220	6.563	
2.90	45.0	59.957	45.000	1.046	45.000	7.823	0.495
			46.000	1.046	44.033	7.820	
			47.000	1.047	43.095	7.810	
			48.000	1.049	42.185	7.794	
			49.000	1.051	41.299	7.777	
			50.000	1.054	40.436	7.744	
			51.000	1.058	39.593	7.711	
			52.000	1.062	38.768	7.673	
			53.000	1.067	37.960	7.630	
			54.000	1.072	37.166	7.582	
			55.000	1.077	36.385	7.529	
			56.000	1.084	35.614	7.470	
			57.000	1.091	34.850	7.406	
			58.000	1.099	34.093	7.337	
			59.000	1.107	33.338	7.261	
			59.957	1.115	32.616	7.183	

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C

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1			
3.00	5.0	19.794	5.000	2.885	5.000	1.189	1.000			
			6.000	2.887	4.281	1.186				
			7.000	2.890	3.732	1.181				
			8.000	2.894	3.296	1.173				
			9.000	2.898	2.937	1.165				
			10.000	2.903	2.633	1.157				
			11.000	2.908	2.369	1.148				
			12.000	2.914	2.135	1.139				
			13.000	2.919	1.923	1.130				
			14.000	2.925	1.726	1.120				
			15.000	2.931	1.538	1.110				
			16.000	2.937	1.355	1.099				
			17.000	2.944	1.167	1.088				
			18.000	2.953	0.962	1.074				
			19.000	2.965	0.697	1.055				
			19.794	2.976	0.469	1.037				
			3.00	7.5	20.407	7.500	2.799	7.500	1.356	1.000
8.500	2.800	6.769				1.353				
9.500	2.804	6.107				1.345				
10.500	2.809	5.545				1.335				
11.500	2.815	5.057				1.322				
12.500	2.822	4.624				1.308				
13.500	2.830	4.230				1.293				
14.500	2.838	3.866				1.277				
15.500	2.847	3.521				1.260				
16.500	2.857	3.186				1.241				
17.500	2.868	2.850				1.220				
18.500	2.881	2.493				1.197				
19.500	2.898	2.075				1.166				
20.407	2.932	1.331				1.108				
3.00	10.0	21.570				10.000	2.706	10.000	1.562	0.999
						11.000	2.707	9.245	1.559	
						12.000	2.711	8.514	1.549	
			13.000	2.717	7.870	1.536				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
3.00	10.0	21.570	14.000	2.724	7.290	1.519	0.999
			15.000	2.732	6.758	1.500	
			16.000	2.741	6.261	1.479	
			17.000	2.752	5.787	1.455	
			18.000	2.764	5.324	1.429	
			19.000	2.778	4.857	1.399	
			20.000	2.794	4.362	1.365	
			21.000	2.815	3.785	1.321	
			21.570	2.851	2.930	1.251	
			3.00	12.5	23.401	12.500	
13.500	2.607	11.717				1.810	
14.500	2.611	10.940				1.799	
15.500	2.617	10.217				1.782	
16.500	2.624	9.590				1.762	
17.500	2.633	8.924				1.738	
18.500	2.644	8.406				1.710	
19.500	2.656	7.843				1.679	
20.500	2.669	7.281				1.643	
21.500	2.686	6.699				1.602	
22.500	2.707	6.057	1.551				
23.401	2.734	5.309	1.487				
3.00	15.0	25.229	15.000	2.504	15.000	2.101	0.983
			16.000	2.505	14.186	2.097	
			17.000	2.509	13.376	2.085	
			18.000	2.515	12.629	2.066	
			19.000	2.522	11.931	2.042	
			20.000	2.531	11.268	2.013	
			21.000	2.542	10.627	1.979	
			22.000	2.555	9.995	1.940	
			23.000	2.570	9.254	1.895	
			24.000	2.588	8.681	1.842	
25.000	2.612	7.921	1.776				
25.229	2.627	7.408	1.737				
3.00	17.5	27.418	17.500	2.396	17.500	2.432	0.963

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.00	17.5	27.418	19.500	2.398	16.650	2.428	0.963
			19.500	2.401	15.815	2.414	
			20.500	2.407	15.036	2.393	
			21.500	2.414	14.299	2.365	
			22.500	2.424	13.592	2.332	
			23.500	2.434	12.902	2.292	
			24.500	2.447	12.217	2.246	
			25.500	2.463	11.510	2.193	
			26.500	2.482	10.780	2.120	
			27.418	2.504	10.013	2.057	
3.00	20.0	29.635	20.000	2.288	20.000	2.799	0.935
			21.000	2.289	19.109	2.793	
			22.000	2.293	18.254	2.778	
			23.000	2.298	17.450	2.755	
			24.000	2.305	16.683	2.724	
			25.000	2.314	15.942	2.687	
			26.000	2.325	15.215	2.642	
			27.000	2.337	14.490	2.590	
			28.000	2.353	13.750	2.530	
			29.000	2.371	12.969	2.458	
29.635	2.386	12.397	2.401				
3.00	22.5	31.996	22.500	2.177	22.500	3.202	0.899
			23.500	2.178	21.561	3.196	
			24.500	2.181	20.592	3.180	
			25.500	2.186	19.667	3.155	
			26.500	2.193	19.077	3.122	
			27.500	2.202	18.309	3.081	
			28.500	2.212	17.554	3.032	
			29.500	2.224	16.800	2.975	
			30.500	2.238	16.031	2.908	
			31.500	2.256	15.224	2.830	
31.996	2.267	14.760	2.781				
3.00	25.0	34.501	25.000	2.063	25.000	3.646	0.856

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.00	25.0	34.501	26.000	2.064	24.065	3.640	0.856
			27.000	2.067	23.183	3.623	
			28.000	2.071	22.341	3.597	
			29.000	2.077	21.530	3.562	
			30.000	2.085	20.741	3.518	
			31.000	2.095	19.964	3.466	
			32.000	2.106	19.189	3.406	
			33.000	2.120	18.401	3.335	
			34.000	2.136	17.583	3.252	
			34.501	2.146	17.122	3.202	
3.00	27.5	37.105	27.500	1.947	27.500	4.122	0.808
			28.500	1.948	26.559	4.116	
			29.500	1.950	25.666	4.099	
			30.500	1.955	24.810	4.071	
			31.500	1.960	23.983	4.035	
			32.500	1.968	23.177	3.990	
			33.500	1.976	22.383	3.936	
			34.500	1.987	21.502	3.873	
			35.500	1.999	20.792	3.800	
			36.500	2.014	19.971	3.715	
			37.105	2.024	19.435	3.654	
3.00	30.0	39.809	30.000	1.830	30.000	4.629	0.758
			31.000	1.831	29.054	4.623	
			32.000	1.833	28.151	4.605	
			33.000	1.837	27.283	4.578	
			34.000	1.842	26.443	4.541	
			35.000	1.849	25.624	4.495	
			36.000	1.857	24.817	4.440	
			37.000	1.866	24.015	4.376	
			38.000	1.877	23.209	4.302	
			39.000	1.890	22.387	4.217	
			39.809	1.903	21.692	4.137	
3.00	32.5	42.596	32.500	1.712	32.500	5.162	0.707

DLAC

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.00	32.5	42.596	33.500	1.713	31.549	5.156	0.707
			34.500	1.715	30.638	5.139	
			35.500	1.719	29.761	5.112	
			36.500	1.724	28.910	5.075	
			37.500	1.730	28.079	5.029	
			38.500	1.737	27.262	4.975	
			39.500	1.745	26.452	4.911	
			40.500	1.755	25.642	4.837	
			41.500	1.767	24.822	4.753	
			42.500	1.780	23.979	4.657	
			42.506	1.782	23.855	4.641	
3.00	35.0	45.529	35.000	1.593	35.000	5.725	0.655
			36.000	1.593	34.045	5.719	
			37.000	1.595	33.127	5.702	
			38.000	1.598	32.241	5.676	
			39.000	1.603	31.381	5.640	
			40.000	1.608	30.541	5.596	
			41.000	1.615	29.716	5.542	
			42.000	1.622	28.900	5.480	
			43.000	1.631	28.098	5.409	
			44.000	1.641	27.272	5.328	
			45.000	1.653	26.442	5.235	
			45.529	1.660	25.982	5.180	
3.00	37.5	48.578	37.500	1.472	37.500	6.310	0.606
			38.500	1.473	36.541	6.304	
			39.500	1.474	35.818	6.289	
			40.500	1.477	34.724	6.264	
			41.500	1.481	33.856	6.229	
			42.500	1.486	33.008	6.187	
			43.500	1.492	32.176	6.136	
			44.500	1.498	31.356	6.076	
			45.500	1.506	30.542	6.009	
						46.500	1.515
			47.500	1.525	28.913	5.845	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.00	37.5	48.578	48.500	1.536	28.082	5.748	0.606
		48.578	48.578	1.538	27.988	5.736	
3.00	40.0	51.827	40.000	1.348	40.000	6.923	0.558
			41.000	1.349	39.038	6.918	
			42.000	1.350	38.109	6.903	
			43.000	1.353	37.209	6.880	
			44.000	1.356	36.334	6.848	
			45.000	1.360	35.479	6.808	
			46.000	1.365	34.642	6.761	
			47.000	1.371	33.818	6.706	
			48.000	1.378	33.005	6.643	
			49.000	1.385	32.197	6.572	
			50.000	1.394	31.390	6.492	
			51.000	1.404	30.579	6.404	
			51.827	1.413	29.898	6.322	
3.00	42.5	55.313	42.500	1.220	42.500	7.563	0.512
			43.500	1.220	41.535	7.558	
			44.500	1.222	40.602	7.545	
			45.500	1.224	39.696	7.524	
			46.500	1.227	38.814	7.495	
			47.500	1.230	37.954	7.459	
			48.500	1.235	37.112	7.416	
			49.500	1.240	36.286	7.366	
			50.500	1.246	35.472	7.310	
			51.500	1.252	34.668	7.246	
			52.500	1.259	33.871	7.175	
			53.500	1.268	33.076	7.097	
			54.500	1.277	32.280	7.010	
			55.313	1.285	31.626	6.933	
3.00	45.0	59.205	45.000	1.083	45.000	8.242	0.469
			46.000	1.083	44.033	8.238	
			47.000	1.084	43.095	8.227	
			48.000	1.086	42.183	8.208	

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.00	45.0	59.205	49.000	1.000	41.296	8.184	0.469
			50.000	1.091	40.431	8.152	
			51.000	1.095	39.586	8.115	
			52.000	1.099	38.758	8.072	
			53.000	1.104	37.945	8.023	
			54.000	1.110	37.145	7.968	
			55.000	1.116	36.356	7.908	
			56.000	1.123	35.576	7.841	
			57.000	1.130	34.801	7.768	
			58.000	1.138	34.030	7.688	
			59.000	1.147	33.259	7.601	
			59.205	1.149	32.090	7.581	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI			
3.10	5.0	19.000	5.000	2.979	5.000	1.198	1.000			
			6.000	2.981	4.280	1.195				
			7.000	2.984	3.731	1.189				
			8.000	2.989	3.294	1.181				
			9.000	2.994	2.933	1.172				
			10.000	2.999	2.626	1.163				
			11.000	3.004	2.359	1.153				
			12.000	3.010	2.121	1.144				
			13.000	3.016	1.903	1.133				
			14.000	3.022	1.700	1.123				
			15.000	3.029	1.504	1.112				
			16.000	3.036	1.309	1.099				
			17.000	3.045	1.102	1.085				
			18.000	3.056	0.858	1.068				
			19.000	3.086	0.262	1.021				
			3.10	7.5	20.031	7.500	2.886	7.500	1.379	1.000
						8.500	2.887	6.825	1.376	
						9.500	2.891	6.157	1.368	
						10.500	2.897	5.589	1.356	
11.500	2.903	5.095				1.343				
12.500	2.911	4.654				1.328				
13.500	2.919	4.252				1.311				
14.500	2.928	3.878				1.293				
15.500	2.938	3.521				1.274				
16.500	2.949	3.169				1.253				
17.500	2.962	2.808				1.229				
18.500	2.978	2.410				1.200				
19.500	3.001	1.873				1.158				
20.031	3.008	1.739				1.148				
3.10	10.0	21.207				10.000	2.788	10.000	1.598	0.998
						11.000	2.789	9.303	1.594	
						12.000	2.793	8.566	1.584	
						13.000	2.799	7.916	1.570	
						14.000	2.807	7.330	1.552	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	P TC/PT1				
3.10	10.0	21.207	15.000	2.816	6.790	1.531	0.998				
			16.000	2.826	6.284	1.507					
			17.000	2.838	5.797	1.481					
			18.000	2.851	5.316	1.451					
			19.000	2.866	4.822	1.418					
			20.000	2.886	4.281	1.377					
			21.000	2.914	3.584	1.319					
			21.207	2.924	3.361	1.300					
			3.10	12.5	22.770	12.500		2.685	12.500	1.861	0.993
						13.500		2.686	11.777	1.857	
14.500	2.690	10.995				1.845					
15.500	2.697	10.286				1.828					
16.500	2.705	9.633				1.805					
17.500	2.714	9.018				1.779					
18.500	2.726	8.429				1.748					
19.500	2.739	7.851				1.713					
20.500	2.754	7.267				1.673					
21.500	2.773	6.649				1.625					
22.500	2.798	5.935	1.565								
22.770	2.824	5.282	1.504								
3.10	15.0	24.867	15.000	2.576	15.000	2.170	0.979				
			16.000	2.577	14.247	2.166					
			17.000	2.581	13.432	2.153					
			18.000	2.588	12.681	2.132					
			19.000	2.596	11.977	2.106					
			20.000	2.605	11.305	2.074					
			21.000	2.617	10.653	2.036					
			22.000	2.631	10.005	1.993					
			23.000	2.648	9.341	1.942					
			24.000	2.669	8.627	1.881					
24.867	2.693	7.889	1.812								
3.10	17.5	26.942	17.500	2.466	17.500	2.519	0.957				
			18.500	2.467	16.713	2.514					

CONICAL FLOW PARAMETERS

HI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
3.10	17.5	26.942	19.500	2.471	15.874	2.499	0.957
			20.500	2.477	15.090	2.476	
			21.500	2.485	14.347	2.446	
			22.500	2.495	13.632	2.409	
			23.500	2.506	12.932	2.365	
			24.500	2.520	12.230	2.314	
			25.500	2.537	11.508	2.254	
			26.500	2.559	10.728	2.181	
			26.942	2.573	10.266	2.134	
			3.10	20.0	25.199	20.000	
21.000	2.353	19.173				2.904	
22.000	2.357	18.316				2.888	
23.000	2.363	17.507				2.863	
24.000	2.370	16.735				2.829	
25.000	2.380	15.986				2.788	
26.000	2.391	15.249				2.738	
27.000	2.405	14.508				2.680	
28.000	2.421	13.745				2.612	
29.000	2.442	12.926				2.529	
29.199	2.450	12.646	2.499				
3.10	22.5	31.585	22.500	2.236	22.500	3.339	0.886
			23.500	2.237	21.628	3.334	
			24.500	2.241	20.755	3.316	
			25.500	2.246	19.927	3.289	
			26.500	2.253	19.131	3.252	
			27.500	2.262	18.357	3.207	
			28.500	2.273	17.592	3.153	
			29.500	2.286	16.824	3.089	
			30.500	2.302	16.034	3.015	
			31.500	2.321	15.194	2.925	
31.585	2.325	15.018	2.905				
3.1C	25.0	34.072	25.000	2.119	25.000	3.806	0.840
			26.000	2.120	24.075	3.799	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.1C	25.0	34.072	27.000	2.123	23.191	3.781	0.840
			28.000	2.128	22.347	3.752	
			29.000	2.134	21.533	3.713	
			30.000	2.143	20.738	3.665	
			31.000	2.153	19.953	3.607	
			32.000	2.165	19.165	3.540	
			33.000	2.180	18.359	3.460	
			34.000	2.197	17.511	3.366	
			34.072	2.201	17.366	3.348	
			3.1D	27.5	36.675	27.500	
28.500	2.000	26.559				4.305	
29.500	2.003	25.665				4.286	
30.500	2.007	24.807				4.256	
31.500	2.013	23.977				4.216	
32.500	2.021	23.166				4.166	
33.500	2.030	22.365				4.106	
34.500	2.041	21.563				4.035	
35.500	2.055	20.749				3.953	
36.500	2.070	19.902				3.857	
36.675	2.075	19.695	3.831				
3.1E	30.0	35.385	30.000	1.878	30.000	4.851	0.736
			31.000	1.878	29.053	4.845	
			32.000	1.881	28.150	4.826	
			33.000	1.885	27.281	4.795	
			34.000	1.891	26.438	4.754	
			35.000	1.898	25.614	4.704	
			36.000	1.906	24.801	4.643	
			37.000	1.916	23.990	4.571	
			38.000	1.928	23.171	4.488	
			39.000	1.942	22.329	4.392	
39.385	1.949	21.967	4.347				
3.1G	32.5	42.194	32.500	1.756	32.500	5.421	0.683
			33.500	1.756	31.549	5.415	

CONICAL FLCH PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	P TC/PT1
3.10	32.5	42.194	34.500	1.759	30.638	5.396	0.683
			35.500	1.762	29.759	5.366	
			36.500	1.767	28.905	5.325	
			37.500	1.774	28.071	5.275	
			38.500	1.781	27.248	5.214	
			39.500	1.790	26.431	5.143	
			40.500	1.801	25.610	5.061	
			41.500	1.813	24.774	4.966	
			42.194	1.823	24.170	4.891	
3.10	35.C	45.090	35.000	1.633	35.000	6.017	0.630
			36.000	1.634	34.045	6.010	
			37.000	1.636	33.127	5.992	
			38.000	1.639	32.240	5.963	
			39.000	1.644	31.377	5.923	
			40.000	1.650	30.534	5.873	
			41.000	1.656	29.704	5.814	
			42.000	1.664	28.882	5.745	
			43.000	1.674	28.060	5.665	
			44.000	1.684	27.231	5.574	
			45.000	1.697	26.384	5.470	
			45.090	1.699	26.271	5.455	
3.10	37.5	48.142	37.500	1.509	37.500	6.641	0.579
			38.500	1.510	36.541	6.635	
			39.500	1.512	35.617	6.618	
			40.500	1.515	34.723	6.590	
			41.500	1.519	33.853	6.552	
			42.500	1.524	33.002	6.504	
			43.500	1.530	32.166	6.448	
			44.500	1.537	31.340	6.382	
			45.500	1.545	30.519	6.306	
			46.500	1.554	29.697	6.220	
			47.500	1.565	28.866	6.123	
			48.142	1.573	28.316	6.052	
3.10	40.0	51.341	40.000	1.384	40.000	7.289	0.531

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.10	40.0	51.341	41.000	1.384	39.038	7.283	0.531
			42.000	1.386	38.109	7.267	
			43.000	1.388	37.208	7.241	
			44.000	1.392	36.331	7.206	
			45.000	1.396	35.474	7.161	
			46.000	1.401	34.633	7.108	
			47.000	1.408	33.805	7.047	
			48.000	1.415	32.985	6.977	
			49.000	1.423	32.168	6.897	
			50.000	1.432	31.351	6.808	
			51.000	1.442	30.525	6.708	
			51.341	1.446	30.227	6.669	
3.10	42.5	54.774	42.500	1.254	42.500	7.965	0.486
			43.500	1.254	41.535	7.960	
			44.500	1.256	40.601	7.945	
			45.500	1.258	39.694	7.922	
			46.500	1.261	38.811	7.890	
			47.500	1.265	37.949	7.849	
			48.500	1.269	37.104	7.802	
			49.500	1.275	36.274	7.746	
			50.500	1.281	35.455	7.682	
			51.500	1.288	34.644	7.611	
			52.500	1.295	33.838	7.531	
			53.500	1.304	33.032	7.443	
			54.500	1.314	32.222	7.345	
			54.774	1.317	31.986	7.314	
3.10	45.0	58.578	45.000	1.116	45.000	8.680	0.443
			46.000	1.116	44.033	8.675	
			47.000	1.117	43.094	8.663	
			48.000	1.119	42.182	8.642	
			49.000	1.122	41.294	8.614	
			50.000	1.125	40.427	8.579	
			51.000	1.129	39.579	8.537	
			52.000	1.134	38.748	8.489	



CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PTI
3.1C	45.0	58.578	53.000	1.139	37.930	8.434	0.443
			54.000	1.144	37.125	8.372	
			55.000	1.151	36.329	8.304	
			56.000	1.158	35.539	8.228	
			57.000	1.166	34.754	8.145	
			58.000	1.175	33.969	8.054	
			58.578	1.180	33.510	7.997	

CONICAL FLCH PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.20	5.0	18.692	5.000	3.071	5.000	1.210	1.000
			6.000	3.073	4.280	1.207	
			7.000	3.077	3.730	1.200	
			8.000	3.081	3.291	1.192	
			9.000	3.087	2.928	1.182	
			10.000	3.092	2.619	1.172	
			11.000	3.098	2.348	1.162	
			12.000	3.105	2.106	1.151	
			13.000	3.111	1.883	1.140	
			14.000	3.118	1.672	1.128	
			15.000	3.126	1.467	1.116	
			16.000	3.134	1.257	1.101	
			17.000	3.145	1.024	1.085	
			18.000	3.161	0.701	1.059	
			18.692	3.162	0.682	1.058	
3.20	7.5	19.329	7.500	2.974	7.500	1.399	1.000
			8.500	2.975	6.878	1.396	
			9.500	2.980	6.204	1.387	
			10.500	2.985	5.631	1.375	
			11.500	2.993	5.130	1.360	
			12.500	3.001	4.682	1.344	
			13.500	3.010	4.271	1.326	
			14.500	3.020	3.887	1.306	
			15.500	3.031	3.515	1.284	
			16.500	3.043	3.145	1.261	
			17.500	3.058	2.753	1.233	
			18.500	3.078	2.291	1.197	
			19.329	3.112	1.590	1.139	
3.20	10.0	20.607	10.000	2.872	10.000	1.630	0.998
			11.000	2.873	9.357	1.627	
			12.000	2.877	8.616	1.616	
			13.000	2.884	7.960	1.600	
			14.000	2.892	7.367	1.581	
			15.000	2.902	6.820	1.558	

CONICAL FLCH PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.20	10.0	20.607	16.000	2.913	6.302	1.532	0.998
			17.000	2.925	5.802	1.503	
			18.000	2.940	5.301	1.470	
			19.000	2.958	4.775	1.431	
			20.000	2.981	4.170	1.382	
			20.607	3.016	3.381	1.312	
3.20	12.5	22.468	12.500	2.762	12.500	1.912	0.990
			13.500	2.763	11.832	1.909	
			14.500	2.767	11.046	1.896	
			15.500	2.774	10.332	1.877	
			16.500	2.783	9.672	1.853	
			17.500	2.793	9.050	1.824	
			18.500	2.805	8.449	1.790	
			19.500	2.820	7.856	1.751	
			20.500	2.837	7.247	1.706	
			21.500	2.858	6.587	1.651	
			22.468	2.888	5.793	1.577	
			3.20	15.0	24.381	15.000	
16.000	2.651	14.304				2.233	
17.000	2.655	13.485				2.219	
18.000	2.662	12.729				2.197	
19.000	2.670	12.019				2.168	
20.000	2.681	11.339				2.133	
21.000	2.694	10.675				2.091	
22.000	2.709	10.010				2.043	
23.000	2.728	9.319				1.986	
24.000	2.751	8.556				1.915	
24.381	2.768	8.085				1.867	
3.20	17.5	26.539				17.500	2.534
			18.500	2.535	16.771	2.606	
			19.500	2.539	15.929	2.590	
			20.500	2.545	15.141	2.565	
			21.500	2.553	14.392	2.532	

CONICAL FLCW PARAMETERS

MI	DELTA	PHI S	PHI	MZ	DEL	P2/P1	PTC/PTI				
3.20	17.5	26.539	22.500	2.564	13.669	2.491	0.950				
			23.500	2.576	12.957	2.443					
			24.500	2.592	12.239	2.386					
			25.500	2.610	11.490	2.318					
			26.500	2.634	10.661	2.233					
			26.539	2.642	10.415	2.206					
			3.20	20.0	28.886	20.000		2.414	20.000	3.027	0.915
						21.000		2.415	19.233	3.022	
						22.000		2.418	18.372	3.005	
						23.000		2.424	17.560	2.977	
24.000	2.432	16.782				2.940					
25.000	2.442	16.026				2.895					
26.000	2.455	15.278				2.840					
27.000	2.469	14.523				2.776					
28.000	2.487	13.735				2.699					
28.886	2.508	12.970				2.615					
3.20	22.5	31.255	22.500	2.293	22.500	3.484	0.872				
			23.500	2.294	21.689	3.478					
			24.500	2.298	20.814	3.460					
			25.500	2.303	19.983	3.430					
			26.500	2.311	19.182	3.390					
			27.500	2.320	18.400	3.340					
			28.500	2.332	17.626	3.281					
			29.500	2.346	16.844	3.210					
			30.500	2.363	16.033	3.126					
			31.255	2.378	15.366	3.049					
3.20	25.0	33.748	25.000	2.171	25.000	3.981	0.823				
			26.000	2.172	24.139	3.974					
			27.000	2.175	23.252	3.954					
			28.000	2.180	22.405	3.923					
			29.000	2.187	21.586	3.880					
			30.000	2.196	20.785	3.827					
			31.000	2.207	19.991	3.764					

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/P1
3.20	25.0	33.748	32.000	2.219	19.191	3.689	0.823
			33.000	2.235	18.367	3.600	
			33.748	2.249	17.705	3.520	
3.20	27.5	36.332	27.500	2.048	27.500	4.513	0.769
			28.500	2.049	26.580	4.506	
			29.500	2.052	25.685	4.485	
			30.500	2.056	24.825	4.453	
			31.500	2.063	23.992	4.408	
			32.500	2.071	23.176	4.353	
			33.500	2.081	22.367	4.287	
			34.500	2.092	21.555	4.209	
			35.500	2.107	20.724	4.117	
			36.332	2.121	19.996	4.027	
3.20	30.0	39.009	30.000	1.924	30.000	5.080	0.714
			31.000	1.925	29.053	5.073	
			32.000	1.927	28.149	5.052	
			33.000	1.932	27.278	5.019	
			34.000	1.937	26.433	4.974	
			35.000	1.945	25.605	4.917	
			36.000	1.954	24.785	4.850	
			37.000	1.964	23.965	4.770	
			38.000	1.977	23.131	4.678	
			39.000	1.992	22.269	4.569	
39.009	1.993	22.199	4.559				
3.20	32.5	41.806	32.500	1.798	32.500	5.687	0.659
			33.500	1.799	31.549	5.679	
			34.500	1.801	30.637	5.659	
			35.500	1.805	29.757	5.625	
			36.500	1.810	28.901	5.581	
			37.500	1.817	28.063	5.525	
			38.500	1.825	27.235	5.457	
			39.500	1.834	26.409	5.378	
			40.500	1.845	25.577	5.287	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.20	32.5	41.806	41.500	1.859	24.724	5.181	0.659
			41.806	1.864	24.430	5.141	
3.20	35.0	44.718	35.000	1.672	35.000	6.321	0.605
			36.000	1.672	34.045	6.314	
			37.000	1.675	33.126	6.294	
			38.000	1.678	32.238	6.262	
			39.000	1.683	31.373	6.218	
			40.000	1.689	30.527	6.164	
			41.000	1.696	29.692	6.098	
			42.000	1.704	28.863	6.021	
			43.000	1.714	28.033	5.932	
			44.000	1.725	27.191	5.831	
			44.718	1.735	26.567	5.747	
3.20	37.5	47.732	37.500	1.545	37.500	6.981	0.554
			38.500	1.546	36.541	6.974	
			39.500	1.548	35.617	6.955	
			40.500	1.551	34.721	6.924	
			41.500	1.555	33.849	6.882	
			42.500	1.560	32.996	6.830	
			43.500	1.566	32.156	6.767	
			44.500	1.574	31.325	6.694	
			45.500	1.582	30.496	6.610	
			46.500	1.592	29.663	6.514	
			47.500	1.604	28.818	6.405	
47.732	1.607	28.597	6.374				

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.30	7.5	19.000	7.500	3.060	7.500	1.423	1.000
			8.500	3.061	6.927	1.420	
			9.500	3.066	6.248	1.411	
			10.500	3.072	5.569	1.398	
			11.500	3.080	5.162	1.382	
			12.500	3.089	4.707	1.364	
			13.500	3.098	4.298	1.344	
			14.500	3.109	3.992	1.322	
			15.500	3.122	3.506	1.298	
			16.500	3.136	3.113	1.271	
			17.500	3.154	2.683	1.238	
			18.500	3.180	2.110	1.191	
			19.000	3.187	1.970	1.179	
3.30	10.0	20.246	10.000	2.953	10.000	1.667	0.997

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.30	10.0	20.246	11.000	2.954	9.407	1.664	0.997
			12.000	2.959	8.662	1.653	
			13.000	2.965	8.001	1.636	
			14.000	2.974	7.402	1.615	
			15.000	2.985	6.846	1.590	
			16.000	2.997	6.318	1.561	
			17.000	3.011	5.803	1.529	
			18.000	3.027	5.280	1.492	
			19.000	3.047	4.716	1.447	
			20.000	3.076	4.017	1.386	
20.246	3.093		3.669	1.353			
3.30	12.5	21.983	12.500	2.849	12.500	1.962	0.989
			13.500	2.841	11.884	1.959	
			14.500	2.846	11.094	1.945	
			15.500	2.853	10.375	1.925	
			16.500	2.862	9.709	1.898	
			17.500	2.873	9.078	1.866	
			18.500	2.886	8.466	1.829	
			19.500	2.902	7.855	1.786	
			20.500	2.921	7.218	1.735	
			21.500	2.946	6.504	1.670	
21.983	2.970	5.913	1.612				
3.30	15.0	24.013	15.000	2.721	15.000	2.308	0.971
			16.000	2.722	14.357	2.304	
			17.000	2.727	13.535	2.289	
			18.000	2.733	12.774	2.265	
			19.000	2.743	12.058	2.233	
			20.000	2.754	11.370	2.195	
			21.000	2.768	10.694	2.149	
			22.000	2.784	10.011	2.096	
			23.000	2.805	9.290	2.031	
			24.000	2.832	8.666	1.948	
24.013	2.848	8.043	1.901				
3.30	17.5	26.251	17.500	2.599	17.500	2.702	0.942



CONICAL FLOW PARAMETERS

41	DELTA	PHI S	PHI	M2	NFL	P2/PI	PYC/PTI
3.30	17.5	26.251	19.500	2.600	16.925	2.698	0.942
			19.500	2.605	15.990	2.681	
			20.500	2.611	15.188	2.654	
			21.500	2.620	14.434	2.618	
			22.500	2.631	13.703	2.573	
			23.500	2.645	12.979	2.520	
			24.500	2.661	12.244	2.456	
			25.500	2.682	11.466	2.380	
			26.251	2.707	10.740	2.306	
3.30	20.0	28.503	20.000	2.476	20.000	3.145	0.904
			21.000	2.477	19.289	3.140	
			22.000	2.481	18.426	3.121	
			23.000	2.487	17.610	3.091	
			24.000	2.495	16.826	3.051	
			25.000	2.506	16.063	3.001	
			26.000	2.519	15.304	2.941	
			27.000	2.535	14.537	2.869	
			28.000	2.555	13.718	2.783	
			28.503	2.568	13.229	2.726	
3.30	22.5	30.912	22.500	2.350	22.500	3.631	0.858
			23.500	2.351	21.747	3.625	
			24.500	2.354	20.870	3.605	
			25.500	2.360	20.035	3.572	
			26.500	2.368	19.229	3.529	
			27.500	2.378	18.441	3.474	
			28.500	2.390	17.657	3.409	
			29.500	2.405	16.860	3.330	
			30.500	2.421	16.025	3.236	
			30.912	2.434	15.613	3.185	
3.30	25.0	33.419	25.000	2.223	25.000	4.158	0.805
			26.000	2.223	24.199	4.142	
			27.000	2.227	23.310	4.130	
			28.000	2.233	22.460	4.096	

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CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
3.30	25.0	33.419	29.000	2.239	21.637	4.050	0.805
			30.000	2.249	20.930	3.992	
			31.000	2.260	20.077	3.922	
			32.000	2.274	19.214	3.838	
			33.000	2.290	18.369	3.739	
			33.419	2.299	17.961	3.686	
3.30	27.5	36.014	27.500	2.095	27.500	4.724	0.749
			28.500	2.096	26.643	4.717	
			29.500	2.099	25.745	4.694	
			30.500	2.104	24.882	4.659	
			31.500	2.110	24.045	4.611	
			32.500	2.119	23.224	4.550	
			33.500	2.129	22.407	4.477	
			34.500	2.141	21.584	4.391	
			35.500	2.157	20.736	4.288	
			36.014	2.166	20.259	4.225	
3.30	30.0	39.691	30.000	1.967	30.000	5.325	0.691
			31.000	1.968	29.078	5.317	
			32.000	1.971	28.172	5.294	
			33.000	1.975	27.300	5.258	
			34.000	1.981	26.451	5.208	
			35.000	1.989	25.618	5.146	
			36.000	1.998	24.792	5.072	
			37.000	2.009	23.963	4.984	
			38.000	2.023	23.115	4.881	
			39.691	2.034	22.500	4.798	
3.30	32.5	41.482	32.500	1.818	32.500	5.963	0.635
			33.500	1.819	31.548	5.955	
			34.500	1.841	30.636	5.932	
			35.500	1.865	29.755	5.896	
			36.500	1.891	28.896	5.846	
			37.500	1.858	28.055	5.785	
			38.500	1.866	27.221	5.711	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
3.30	32.5	41.482	39.500	1.876	26.388	5.623	0.635
			40.500	1.888	25.544	5.521	
			41.482	1.902	24.690	5.405	
3.30	35.0	44.360	35.000	1.709	35.000	6.633	0.580
			36.000	1.719	34.044	6.626	
			37.000	1.712	33.125	6.604	
			38.000	1.716	32.236	6.568	
			39.000	1.720	31.369	6.520	
			40.000	1.727	30.520	6.460	
			41.000	1.734	29.681	6.387	
			42.000	1.743	28.845	6.303	
			43.000	1.753	28.005	6.204	
			44.000	1.765	27.149	6.091	
			45.000	1.771	26.281	6.043	
			3.30	37.5	46.988	37.500	
38.500	1.642	36.541				6.762	
39.500	1.644	35.615				6.741	
40.500	1.627	34.717				6.707	
41.500	1.652	33.840				6.661	
42.500	1.658	32.979				6.604	
43.500	1.665	32.128				6.534	
44.500	1.673	31.280				6.453	
45.500	1.683	30.429				6.358	
46.500	1.695	29.565				6.249	
46.988	1.701	29.121				6.188	
3.30	40.0	50.531				40.000	1.449
			41.000	1.449	39.038	8.054	
			42.000	1.451	38.108	8.034	
			43.000	1.454	37.205	8.003	
			44.000	1.457	36.325	7.960	
			45.000	1.462	35.464	7.906	
			46.000	1.468	34.616	7.841	
47.000	1.475	33.779	7.766				

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.30	40.0	50.531	48.000	1.482	32.946	7.679	0.480
			48.000	1.491	32.113	7.581	
			50.000	1.501	31.273	7.470	
			50.531	1.508	30.813	7.404	

CONICAL FLOW PARAMETERS

P7/P1 PTC/PT1

DEL

M2

PHI

PHI S

DELTA

W1

3.40	7.5	18.315	7.500	3.145	7.500	1.449	1.000
			8.500	3.146	7.126	1.448	
			9.500	3.150	6.429	1.438	
			10.500	3.157	5.834	1.424	
			11.500	3.165	5.311	1.407	
			12.500	3.175	4.841	1.388	
			13.500	3.185	4.405	1.366	
			14.500	3.198	3.992	1.342	
			15.500	3.211	3.594	1.315	
			16.500	3.228	3.160	1.284	
			17.500	3.249	2.674	1.244	
			18.315	3.294	1.780	1.165	

3.40	10.0	19.926	10.000	3.030	10.000	1.713	0.996
			11.000	3.031	9.609	1.711	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.40	10.0	19.926	12.000	3.036	8.849	1.700	0.996
			13.000	3.043	8.174	1.682	
			14.000	3.052	7.562	1.659	
			15.000	3.063	6.992	1.632	
			16.000	3.076	6.448	1.601	
			17.000	3.091	5.913	1.565	
			18.000	3.109	5.366	1.523	
			19.000	3.133	4.755	1.471	
			19.926	3.167	3.971	1.398	
			3.40	12.5	21.453	12.500	2.915
13.500	2.916	12.089				2.018	
14.500	2.920	11.287				2.005	
15.500	2.928	10.557				1.983	
16.500	2.937	9.878				1.955	
17.500	2.949	9.234				1.920	
18.500	2.963	8.606				1.879	
19.500	2.980	7.975				1.832	
20.500	3.002	7.307				1.774	
21.500	3.031	6.531				1.699	
3.40	15.0	23.704	15.000	2.787	15.000	2.395	0.965
			16.000	2.788	14.565	2.393	
			17.000	2.792	13.733	2.377	
			18.000	2.799	12.962	2.352	
			19.000	2.809	12.236	2.318	
			20.000	2.821	11.536	2.277	
			21.000	2.835	10.846	2.227	
			22.000	2.853	10.144	2.167	
			23.000	2.875	9.394	2.095	
			23.704	2.900	8.581	2.019	
3.40	17.5	25.037	17.500	2.661	17.500	2.815	0.934
			18.500	2.652	17.038	2.812	
			19.500	2.666	16.183	2.795	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.40	17.5	25.937	20.500	2.673	15.283	2.766	0.934
			21.500	2.682	14.620	2.728	
			22.500	2.693	13.878	2.679	
			23.500	2.709	13.142	2.621	
			24.500	2.725	12.389	2.551	
3.40	20.0	28.257	25.500	2.747	11.583	2.466	
			25.937	2.762	11.121	2.412	
			20.000	2.532	20.000	3.284	
			21.000	2.532	19.506	3.281	
			22.000	2.536	18.635	3.262	
3.40	22.5	30.689	23.000	2.542	17.911	3.230	
			24.000	2.551	17.020	3.187	
			25.000	2.562	16.247	3.133	
			26.000	2.576	15.477	3.068	
			27.000	2.592	14.689	2.989	
3.40	25.0	33.214	28.000	2.617	13.951	2.993	
			28.257	2.622	13.533	2.954	
			22.500	2.400	22.500	3.800	
			23.500	2.401	21.970	3.797	
			24.500	2.405	21.085	3.776	
3.40	27.5	35.739	25.500	2.410	20.243	3.742	
			26.500	2.419	19.430	3.696	
			27.500	2.429	18.634	3.637	
			28.500	2.441	17.839	3.566	
			29.500	2.457	17.029	3.480	
3.40	30.0	38.264	30.500	2.476	16.175	3.376	
			30.689	2.483	15.926	3.344	
			25.000	2.268	25.000	4.361	
			26.000	2.269	24.429	4.357	
			27.000	2.272	23.533	4.335	
3.40	32.5	40.789	28.000	2.277	22.676	4.300	
			29.000	2.285	21.846	4.250	
			30.000	2.294	21.032	4.189	
			30.714	2.299	20.323	4.144	
			31.429	2.305	19.618	4.094	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.40	25.0	33.214	31.000	2.206	20.220	4.112	0.785
			32.000	2.320	19.395	4.021	
			33.000	2.337	18.535	3.913	
			33.214	2.243	18.283	3.878	
3.40	27.5	35.874	27.500	2.125	27.500	4.963	0.726
			28.500	2.126	26.879	4.959	
			29.500	2.139	25.975	4.936	
			30.500	2.144	25.107	4.899	
			31.500	2.150	24.243	4.848	
			32.500	2.159	23.435	4.783	
			33.500	2.170	22.511	4.704	
			34.500	2.183	21.778	4.610	
			35.500	2.198	20.917	4.499	
			35.874	2.205	20.599	4.452	
3.40	30.0	38.514	30.000	2.003	30.000	5.603	0.666
			31.000	2.004	29.322	5.597	
			32.000	2.006	28.411	5.574	
			33.000	2.011	27.533	5.536	
			34.000	2.017	26.679	5.484	
			35.000	2.025	25.860	5.418	
			36.000	2.034	25.007	5.338	
			37.000	2.046	24.169	5.243	
			38.000	2.060	23.311	5.130	
			38.514	2.068	22.826	5.062	
3.40	32.5	41.282	32.500	1.971	32.500	6.275	0.509
			33.500	1.972	31.756	6.269	
			34.500	1.975	30.819	6.246	
			35.500	1.979	29.953	6.208	
			36.500	1.984	29.090	6.155	
			37.500	1.991	28.243	6.089	
			38.500	1.999	27.403	6.009	
			39.500	1.910	26.552	5.915	
			40.500	1.922	25.700	5.804	



CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/P1	PTC/PT1
3.40	32.5	41.282	41.282	1.933	25.017	5.703	0.609
3.40	35.0	44.115	35.000	1.741	35.000	6.978	0.554
			36.000	1.742	34.178	6.968	
			37.000	1.744	33.256	6.945	
			38.000	1.748	32.364	6.907	
			39.000	1.753	31.494	6.844	
			40.000	1.759	30.640	6.790	
			41.000	1.767	29.795	6.712	
			42.000	1.776	28.953	6.619	
			43.000	1.786	28.104	6.512	
			44.000	1.799	27.237	6.387	
			44.115	1.801	27.101	6.366	
3.40	37.5	47.074	37.500	1.611	37.500	7.704	0.503
			38.500	1.611	36.585	7.696	
			39.500	1.613	35.659	7.674	
			40.500	1.617	34.761	7.637	
			41.500	1.621	33.885	7.587	
			42.500	1.627	33.026	7.524	
			43.500	1.633	32.178	7.449	
			44.500	1.641	31.336	7.360	
			45.500	1.651	30.492	7.258	
			46.500	1.662	29.639	7.140	
			47.074	1.669	29.131	7.063	
3.40	40.0	50.175	40.000	1.479	40.000	8.464	0.456
			41.000	1.480	39.038	8.457	
			42.000	1.481	38.107	8.435	
			43.000	1.484	37.204	8.401	
			44.000	1.488	36.322	8.354	
			45.000	1.493	35.459	8.294	
			46.000	1.499	34.608	8.224	
			47.000	1.506	33.766	8.141	
			48.000	1.514	32.927	8.045	
			49.000	1.523	32.086	7.937	

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CONICAL FLOW PARAMETERS

MY	DELTA	PHI S	PHI	M?	DEL	P2/P1	PTC/PT1
3.40	40.0	50.175	50.000 50.175	1.534 1.526	31.234 31.063	7.817 7.787	0.456

CONICAL FLOW PARAMETERS

M1 DELTA PHI S PHI M7 DEL P2/P1 PTC/PT1

3.50	7.5	18.088	7.500	3.229	7.500	1.478	0.999
			8.500	3.230	7.166	1.476	
			9.500	3.234	6.464	1.466	
			10.500	3.241	5.866	1.451	
			11.500	3.250	5.336	1.433	
			12.500	3.260	4.858	1.411	
			13.500	3.272	4.414	1.388	
			14.500	3.285	3.988	1.361	
			15.500	3.301	3.562	1.331	
			16.500	3.320	3.104	1.295	
			17.500	3.346	2.547	1.246	
			18.088	3.366	2.160	1.210	
3.50	10.0	19.406	10.000	3.112	10.000	1.749	0.996
			11.000	3.113	9.649	1.747	

CONICAL FLOW PARAMETERS

M1	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PT1
3.50	10.0	19.406	12.000	3.118	8.885	1.735	0.996
			13.000	3.125	8.206	1.716	
			14.000	3.135	7.588	1.691	
			15.000	3.147	7.010	1.662	
			16.000	3.161	6.455	1.627	
			17.000	3.178	5.903	1.588	
			18.000	3.198	5.326	1.540	
			19.000	3.226	4.656	1.479	
			19.406	3.260	3.924	1.406	
			3.50	12.5	21.398	12.500	2.984
13.500	2.987	12.130				2.082	
14.500	2.992	11.324				2.067	
15.500	2.999	10.590				2.044	
16.500	3.009	9.906				2.013	
17.500	3.022	9.254				1.975	
18.500	3.037	8.615				1.931	
19.500	3.056	7.965				1.878	
20.500	3.080	7.264				1.812	
21.398	3.110	6.488				1.732	
3.50	15.0	23.397	15.000	2.858	15.000	2.470	0.961
			16.000	2.859	14.607	2.468	
			17.000	2.863	13.772	2.452	
			18.000	2.871	12.998	2.424	
			19.000	2.881	12.266	2.388	
			20.000	2.893	11.558	2.342	
			21.000	2.909	10.855	2.287	
			22.000	2.928	10.133	2.222	
			23.000	2.953	9.345	2.139	
			23.397	2.971	8.471	2.085	
3.50	17.5	25.610	17.500	2.726	17.500	2.914	0.926
			18.500	2.727	17.081	2.911	
			19.500	2.731	16.224	2.893	
			20.500	2.738	15.420	2.862	

CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M2	DEL	P2/PI	PTC/PTI
3.50	17.5	25.610	21.500	2.747	14.652	2.820	0.926
			22.500	2.760	13.902	2.768	
			23.500	2.775	13.154	2.704	
			24.500	2.794	12.382	2.626	
			25.500	2.819	11.540	2.530	
			25.610	2.827	11.274	2.496	
3.50	20.0	28.000	20.000	2.590	20.000	3.611	0.879
			21.000	2.591	19.551	3.408	
			22.000	2.594	18.677	3.388	
			23.000	2.601	17.850	3.354	
			24.000	2.610	17.054	3.307	
			25.000	2.622	16.274	3.248	
			26.000	2.636	15.493	3.177	
			27.000	2.654	14.689	3.090	
			28.000	2.677	13.820	2.982	
			28.000	2.682	13.659	2.960	
3.50	22.5	30.455	22.500	2.453	22.500	3.960	0.824
			23.500	2.453	22.016	3.956	
			24.500	2.457	21.129	3.934	
			25.500	2.463	20.284	3.898	
			26.500	2.471	19.467	3.847	
			27.500	2.482	18.664	3.783	
			28.500	2.495	17.860	3.705	
			29.500	2.512	17.035	3.610	
			30.455	2.532	16.195	3.500	
3.50	25.0	32.979	25.000	2.316	25.000	4.554	0.765
			26.000	2.316	24.475	4.549	
			27.000	2.319	23.879	4.526	
			28.000	2.325	22.719	4.487	
			29.000	2.333	21.885	4.434	
			30.000	2.342	21.065	4.366	
			31.000	2.355	20.245	4.283	
			32.000	2.370	19.409	4.193	

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CONICAL FLOW PARAMETERS

MI	DELTA	PHI S	PHI	M7	DEL	P2/P1	PTC/PT1
3.50	25.0	32.979	32.979	2.398	18.546	4.065	0.765
3.50	27.5	35.557	27.500	2.180	27.500	5.187	0.704
			28.500	2.180	26.929	5.182	
			29.500	2.183	26.023	5.158	
			30.500	2.188	25.152	5.118	
			31.500	2.195	24.305	5.062	
			32.500	2.204	23.472	4.992	
			33.500	2.215	22.641	4.906	
			34.500	2.229	21.796	4.803	
			35.500	2.246	20.919	4.679	
			35.557	2.248	20.799	4.661	
3.50	30.0	38.249	30.000	2.043	30.000	5.864	0.663
			31.000	2.044	29.374	5.859	
			32.000	2.046	28.461	5.834	
			33.000	2.051	27.581	5.793	
			34.000	2.057	26.724	5.736	
			35.000	2.065	25.880	5.664	
			36.000	2.075	25.041	5.577	
			37.000	2.087	24.194	5.473	
			38.000	2.102	23.322	5.349	
			38.249	2.107	23.061	5.309	
3.50	32.5	41.022	32.500	1.908	32.500	6.577	0.585
			33.500	1.908	31.810	6.571	
			34.500	1.911	30.891	6.546	
			35.500	1.915	30.003	6.504	
			36.500	1.920	29.138	6.448	
			37.500	1.928	28.287	6.376	
			38.500	1.936	27.442	6.289	
			39.500	1.947	26.593	6.185	
			40.500	1.960	25.729	6.062	
			41.022	1.968	25.249	5.980	

## Appendix D (Continued)

This appendix contains an Electronic Data Processing Machine logic listing for the calculation of a double-oblique conical flow solution. This is included in order that handbook users desiring to make such calculations may have it available. A sample input sheet and corresponding sample solution follow the logic listing.

The required input values are:

GAMMA	Ratio of specific heats
G	Acceleration due to gravity; non-positive input allows use of 32.17405
R	Gas constant
NRAYS	Maximum number of rays.
LØØP	Limit on the conical flow solution iteration loop
GØNE	Limit on conical flow solution iteration
VALC	Tolerance on solution of conical flow differential equation. The value must be large because of the very large terms in the equation - 1000 yields good results
VALD	Tolerance on the compatibility equation for the second oblique shock wave
MLØØP	Maximum number of iterations permitted on entire conical flow field to satisfy conditions for desired free-stream Mach number
TØLMAC	Tolerance on free-stream Mach number, $\frac{M_{oinput} - M_{ocalculated}}$
TIMES	Limit on the total conical flow field iteration
BETAR	Initial value for the wave angle of the second oblique shock wave
ØVER	Limit on the freestream Mach number iteration in the conical flow solution

DINCC	Second derivative $\frac{d^2v_r}{d\phi^2}$ increment size used in conical flow differential equation iteration.
TINC	Tolerance on shock wave angle in conical flow solution
VELMAC	Tolerance on tangential velocity component at shock wave of conical flow solution
DVINC	Increment size used in surface velocity iteration
DDVPHI	Initial guess for the second derivative on the first ray above the surface of the cone
VSURF	Initial guess for the surface velocity in the conical flow solution
FSMN	Free-stream Mach number
FSTOTT	Free-stream total temperature, degrees Rankin
FSTOTP	Free-stream total pressure
DELPHI	Angular displacement between rays
DELTA	Cone semi-vertex angle
DELTB	Second cone angle, measured from surface of the front cone.
XIN	Distance from vertex of front cone to vertex of DELTB, measured along the cone axis.
COCODE	Print indicator - if positive, conical field is printed
D3CODE	Print indicator - if positive, characteristics of second oblique shock wave are printed
NOCODE	Print indicator - if negative, a two line case description will be printed
ITEST	Input indicator - if zero, all angles input in radians - otherwise, all angles are in degrees



The output variables, as shown in the sample solution, are:

(A) Under the heading - "Solution of Conical Flow Differential Equations Using Finite Difference Substitution"

MACH NØ. INF.      Computed free-stream Mach number

GAMMA              Ratio of Specific heats

DELTA              Cone semi-vertex angle, degrees

DELPHI             Angular increment between rays, degrees

FREE-STREAM TOTAL TEMP. - Free-stream total temperature

I                   Ray number

PHI                 Ray angle, degrees, PHI at I=1 is equal to DELTA  
PHI at I=I<sub>max</sub> is equal to the shock wave angle,  $\phi_s$

$\ddot{V}_R$                 Second derivative,  $d^2V_R/d\phi^2$

$\dot{V}_R^{\text{@}}$               Value of first derivative,  $dV_R/d\phi_1$ , at I+1,  
calculated from assumed value of  $d^2V_R/d\phi^2$

$\dot{V}_R$                 Converged value of the first derivative on the  
ray I.

VR                  Velocity component along the ray, feet per second

V                   Flow velocity on the ray I, feet per second

THETA              Local flow direction, measured in degrees from  
the cone axis

MACH NØ.           Local Mach number

PI/PINF            Static pressure ratio

TS/TTØT            Static to total temperature ratio

J                    Number of iterations required to solve the conical  
flow differential equation on the ray I.

PTC/PTINF         Total pressure ratio

ITERATIONS REQUIRED - Number of complete iterations required to  
obtain the free-stream Mach number and satisfy  
all equations within the specified tolerances.

## (B) Under the heading - "3-Shock, 3-D, External Compression Inlet"

MACH NØ. INF.	Free-stream Mach number computed in conical flow solution
DELTA	Cone semi-vertex angle, degrees
DELTB	Second cone angle, degrees
RAY	Ray number
J	Number of iterations required to solve the shock wave compatibility equation
M1	Upstream average Mach number - conical field
M2	Downstream average Mach number - behind second oblique shock wave
DTHETA	Flow direction along each ray, upstream of the second oblique shock wave, degrees
THETA	Average flow direction between rays, up-stream of second shock wave, degrees
BETA	Average slope of the second shock wave segment between rays I and I+1, degrees
DEL	Average flow deflection angle downstream of the second shock wave between rays I and I+1, degrees
AREA1	Two dimensional area seen by local flow from front of second shock segment
AREA2	Two dimensional area seen by flow downstream of second shock segment - from continuity
RHØ2/RHØ1	Average density ratio across second shock wave segment bounded by rays I and I+1
V2/V1	Average velocity ratio across second shock segment
P1/PINF	Between ray static pressure ratio from conical flow solution
P2/PINF	Static pressure ratio downstream of second shock wave

DPHI	Ray angle from conical flow solution, degrees
PHI	Average ray angle, degrees
XPR	X coordinate of second shock wave, located on ray I.
RPR	R coordinate of second shock wave, located on ray I
PTIC/PTINF	Total pressure ratio - PTIC = front cone total pressure
PT2C/PTINF	Static pressure ratio - PT2C = total pressure on surface of second cone
PC1/PINF	Front cone surface static pressure ratio
PC2/PINF	Second cone surface static pressure ratio just downstream of second shock wave
TAS2	Three dimensional area of second shock wave between cone surface and initial shock wave intersection
CDA	Additive drag coefficient, $D_{ADD}/P_{T0} A_c$
ADTC1	Momentum drag term
ADTC2	Pressure - area drag term
ADTC3	Ramp drag term
ADTC4	Free-stream momentum term

The additive drag coefficient was calculated to determine the degree of accuracy of the solution. The total flow momentum term was assessed on the rear side of the second shock wave. The value of the additive drag coefficient demonstrates that the solution is very accurate. The value, which should be zero, is less than 4 parts out of 6000 when the magnitude of the positive or negative terms is considered.

LIBFTC INLET

MAIN0020

COLUMBUS DIVISION OF  
NORTH AMERICAN ROCKWELL CORPORATION  
EDPM DECK A1020

MAIN0022

MAIN0023

MAIN0024

MAIN0025

MAIN0026

MAIN0027

MAIN0030

MAIN0040

MAIN0050

MAIN0060

MAIN0110

MAIN0120

MAIN0130

MAIN0150

MAIN0160

MAIN0170

MAIN0180

MAIN0190

MAIN0200

MAIN0210

MAIN0240

MAIN0250

MAIN0270

MAIN0280

MAIN0290

MAIN0300

MAIN0310

MAIN0320

MAIN0330

MAIN0340

MAIN0350

MAIN0360

MAIN0370

MAIN0380

MAIN0390

MAIN0400

MAIN0410

MAIN0411

MAIN0412

MAIN0420

MAIN0430

MAIN0440

THERMODYNAMICS AND PROPULSION  
PROGRAM FOR DESIGN OF 3-SHOCK, 3-D, EXTERNAL COMPRESSION INLET.

THIS PROGRAM GENERATES. (1) AN INITIAL CONICAL FLOW FIELD,  
(2) A CURVED EXTERNAL (SECOND) SHOCK WAVE.

SUBROUTINES REQUIRED. (1) CONFLC, (2) D3S3S, (3) ITER,  
(4) SXXXX.

DIMENSION VR(50),VPHI(50),DMACH(50),DPHI(50),DVEL(50),DTHETA(50),  
2VPSAV(52),KOUNT(51),DUM(8),DUMM(8),SMART(8),DVPT(50),PRESS(50),TSM(50),  
3TTOT(50),ENTRO(50),VMACH(50),THETA(50),PHI(50),BETA(50),XPR(50),RPM(50),  
4R(50),DEL T(50),X(50),SRY(50),A1(50),A2(50),PIPF(50),P2PF(50),SMACH(50),  
5(50),ALAMDA(50),SUMSAV(50),PT2PTI(50),VEL(50),BARRAY(8),TITLE(24)

INTEGER D3CODE,C0CODE

NAMELIST/SET/ GAMMA,G,R,NRAYS,LOOP,GONE,VALC,VALD,ML00P,  
2TOLMAC,TIMES,BETAR,OVER,DINCC,DINCD,TINC,VELMAC,DVING,  
3DDVPHI,VSURF,LOST

NAMELIST/OATA/ FSMN,FSTOTT,FSTOTP,DELPHI,DELTA,DELTA,XIN,  
2C0CODE,D3CODE,N0CODE,ITEST

5 READ(5,SET)  
READ(5,DATA)

IF(N0CODE) 10,20,20

10 READ(5,15) TITLE

15 FORMAT(12A6/12A6)

IF(C0CODE) 20,20,16

16 WRITE(6,17) TITLE

17 FORMAT(1H1,2X,12A6/1H0,2X,12A6)

INITIALIZE

```

20 JAKE=-2 MAIN0430
KITE=-2 MAIN0460
KATE=-2 MAIN0470
MFRATE=-2 MAIN0480
MAIN0490
MAIN0500
MAIN0510
CALL CONFLO(GAMMA,G,R,ITES ,DDVPHI,FSMN,FSTOTT,DELPHI,DELTA,NRAYS,MAIN0520
2VSURF,LOOP,GONE,TIMES,OVER,ALC,TOLMAC,MLOOP,DINCC,DVINC,KITE,KATE,MAIN0530
3,JAKE,TINC,VELMAC,COCODE,DMACH,DTHETA,DPHI,PRESS,LL,ITER,CALM,TPR,MAIN0540
41,TSI101,ENTRO,S,FST0TP,DVEL,CONTES)
IF(CONTES-1.0) 3C,4C,35
30 WRITE(6,31) MAIN0560
MAIN0570
31 FORMAT(1H-,10X,52HERROR ENCOUNTERED IN CONFLO...COMPUTATION CONTINMAIN0580
2UES.)
GO TO 40
35 WRITE(6,36) MAIN0600
36 FORMAT(1H-,10X,53HERROR ENCOUNTERED IN CONFLO...COMPUTATION TERMINMAIN0620
2ATED.)
GO TO 5
40 JAKE=-2 MAIN0640
MAIN0650
MAIN0660
MAIN0670
MAIN0680
MAIN0683
CONSTRUCT CURVED, SECOND SHOCK WAVE.
IF(NOCODE) 45,47,47
45 IF(D3CODE) 47,47,46
46 WRITE(6,17) TITLE
47 CALL D3S3(DMACH,DTHETA,DPHI,PRESS,BETAR,DINGD,VALD,XIN,DELTA,DELT8MAIN0685
2,GONE,VALD,TPRI,LL,JAKE,LOOP,CALM,ALAMDA,P2PF,SMACH,X,SRY,XPR,RPRMAIN0690
3,BETA,VMACH,ITER,D3CODE,GAMMA,PT2PT1,DVEL,VEL,THETA,PIPF,C3STES,
4SPRC)
IF(D3STES-1.0) 50,5,55
50 WRITE(6,51) MAIN0720
51 FORMAT(1H-,10X,51HERROR ENCOUNTERED IN D3S3S...COMPUTATION CONTINMAIN0740
2ES.)
GO TO 5
55 WRITE(6,56) MAIN0760
56 FORMAT(1H-,10X,52HERROR ENCOUNTERED IN D3S3S...COMPUTATION TERMINMAIN0780
2TED.)
GO TO 5
END
MAIN0800
MAIN0810

```

```

$IBFTC CONFLS CONF0005
PROGRAM FOR SOLUTION OF CONICAL FLOW DIFFERENTIAL EQUATIONS CONF0010
CONFLO CONF0015
0020
CONF0025
SUBROUTINE CONFLO(GAMMA,G,R,I,TEST,DDVPHI,FSMN,FSTOTT,DELPHI,DELTA,
2NRAYS,VSURF,LOOP,GONE,TIMES,OVER,VAL,TOLMAC,MLCOP,DINC,DVING,KITE,
3KATE,JAKE,TINC,VELMAC,NOCODE,DMACH,DTHETA,DPHI,PRESS,LLL,ITER,CALM
4,IPR1,ISTTOT,ENTRO,S,FSTOTP,DVEL,CONTES) CONF0045
CONF0050
DIMENSION VR(50),VPHI(50),DMACH(50),DPHI(50),DVEL(50),DTHETA(50),
2VPSAV(52),KOUNT(51),DUM(8),DUMP(8),SMART(8),DVPOT(50),PRESS(50),
3STTOT(50),ENTRO(50) CONF0065
CONF0070
IF(G)10,1C,12 CONF0075
10 G=32.17405 CONF0080
12 A=(GAMMA+1.0)/2.0 CONF0085
B=(GAMMA-1.0)/2.0 CONF0090
C=GAMMA*G*R*FSTOTT CONF0095
POWER=-GAMMA/(GAMMA-1.0) CONF0100
VMAXSQ=C/R CONF0105
CONTES=1.C CONF0107
DO 2000 MM=1,MLCOP CONF0110
ICHECK=2 CONF0115
LLL=1 CONF0120
IF(ITER)20,25,2C CONF0125
FOR TEST=C.0,DELPHI AND DELTA IN RADIANS**OTHERWISE IN DEGREES. CONF0130
20 DELPHC=DELPHI CONF0135
DELTD=DELTA CONF0140
CONF0145
GO TO 3C CONF0150
25 DELPHR=DELPHI CONF0155
DELTR=DELTA CONF0160
DELPHD=DELPHI*57.295779513 CONF0165
DELTD=DELTA*57.295779513 CONF0170
30 RANGLC=DELTD CONF0175
RANGLR=DELTR CONF0185
DELD=DELPHD CONF0190
DELR=DELPHR CONF0195
XL=VSURF CONF0200
XXL=0.0 CONF0205
XXXU=CDVPHI CONF0210
CPHI(1)=DELTD CONF0215

```

```

VR(I)=VSURF                                CONF0220
DTHEA(I)=DELTD                             CONF0225
KOUNT(I)=1                                 CONF0230
VPHI(I)=0.0                                CONF0235
DVEL(I)=VSURF                              CONF0240
VSQI=VR(I)**2                              CONF0245
VMSQ=VSQI/(C*(1.0-(GAMMA-1.0)*(VSQI/(2.0*C)))) CONF0250
DMACH(I)=SQRT(VMSQ)
PRESS(I)=(1.0+8*DMACH(I)**2)**POWER
TSTTOT(I)=(1.0+C*8*DMACH(I)**2)**(-1)
CLLR=DELR
ANGLR=RANGLR+DELR
C
DO 500 I=2,NRAYS
DO 200 J=1,LOOP
XXUU=2.*DELR*XXU+XXL
XXU=(XXUU+XXL)/2.
VU=(XL+(XXU+XXL))/2.*DELR
VUSQ=VU**2
RAC=-XXU*(A*XXU**2-B*(VMAXSQ-VUSQ))-B*XXU**3+COTAN(ANGLR)-GAMMA*V
1U*XXU**2+B*(VMAXSQ-VUSQ)*XXU*COTAN(ANGLR)+2.0*8*VU*(VMAXSQ-VUSQ)
CALL ITER(XXU,RAC,DINC,VAL,GONE,DUM,JAKE)
IF(JAKE-1) GO,200,210
100 WRITE(6,IC00) FSMN,GAMMA,DELTA,DELPHI,FSTOTT
WRITE(6,IC06)
1006 FORMAT(1H,10X,45H ITERATION LIMIT ON SECOND DERIVATIVE EXCEEDED)
CONTE=10.0
JAKE=-2
GO TO 3000
200 CONTINUE
CONTE=-10.0
C
OBTAIN VALUES FOR PRINTOUT AND FOR D3S3
210 DPHI(I)=ANGLR*57.295779513
JAKE=-2
K=I+1
VPSAV(K)=XXUU
VR(I)=VU
SLOPE=XXU/VU
DEFL=ATAND(SLOPE)
DTHEA(I)=DPHI(I)+DEFL
KOUNT(I)=J
CVPOT(I)=XXUU
VPHI(I)=XXU
VSQ=VU**2+XXU**2

```

```

VMSQ=VSQ/(C*(1.-(GAMMA-1.)*(VSQ/(2.*C))))
DVEL(I)=SQRT(VSQ)
DMACH(I)=SQRT(VMSQ)
PRESS(I)=(1.0+8.*DMACH(I)**2)**POWER
TSTTOT(I)=(1.C+8.*DMACH(I)**2)**(-1)
CHECK FOR POSSIBILITY OF OBLIQUE SHOCK WAVE SOLUTION
TURNAN=-DEFL
DMN2=DMACH(I)*SIND(TURMAN)
DENOM=GAMMA*DMN2**2-B
IF(DENOM-.115)250,250,220
220 DMN1SQ=(B*DMN2**2+1.0)/DENOM
DMN1=SQRT(DMN1SQ)
FSMN1=FSMN*SIN(ANGLR)
DIFFMN=DMN1-FSMN1
ANGLR1=ANGLR
CALL ITER (ANGLR1,DIFFMN,DLR,TOLMAC,OVER ,DUPM,KATE)
IF(KATE-1)215,230,600
215 WRITE(6,1C00)FSMN,GAMMA,DELTA,DELPHI,FSTOTT
WRITE(6,1C07)
1007 FORMAT(1H ,10X,44HITERATION LIMIT ON SHOCK WAVE ANGLE EXCEEDED)
CONTE=10.0
KATE=-2
GO TO 3C0C
230 DELR=ANGLR1-ANGLR
IF(ICHECK)250,6C0,235
235 IF(ABS(DELR-DLLR)-TINC)250,250,240
240 IF(DELR-DLLR)245,250,250
245 ICHECK=-2
NN=I
KK=K
250 ANGLR=ANGLR +DELR
XL=XXU
XL=VU
DELD=CELR*57.295779513
LLL=LLL+1
XM2=DMACH(I)
500 CONTINUE
600 TM1=DMN1/SIN(ANGLR)
KATE=-2
VR(NN)=VR(LLL)
CPHI(NN)=CPHI(LLL)
CTHETA(NN)=OTHETA(LLL)
KOUNT(NN)=KOUNT(LLL)
CVPDT(NN)=DVPDT(LLL)
CONF0430
CONF0435
CONF0440
CONF0445
CONF0450
CONF0455
CONF0460
CONF0465
CONF0470
CONF0475
CONF0480
CONF0485
CONF0490
CONF0495
CONF0500
CONF0505
CONF0510
0515
0520
0525
CONF0527
0530
0535
CONF0540
CONF0545
CONF0550
CONF0555
CONF0560
CONF0565
CONF0570
CONF0575
CONF0580
CONF0585
CONF0590
CONF0595
CONF0600
CONF0605
CONF0610
CONF0615
CONF0620
CONF0625
CONF0630
CONF0635
CONF0640

```



```

VPHI(NN)=VPHI(LLL)
DVEL(NN)=DVEL(LLL)
DMACH(NN)=DMACH(LLL)
PRESS(NN)=PRESS(LLL)
TSTOT(NN)=TSTOT(LLL)
LL=LLL+1
VPSAV(KK)=VPSAV(LL)
LLL=NN
CALM=TM1
C CHECK FOR AGREEMENT OF TANGENTIAL VELOCITY COMPONENTS
C
TSTAT1=FSTOTT/(1.0+B*(TM1**2))
CSTAR1=SQRT(GAMMA*G*R*TSTAT1)
TSTAT2=FSTOTT/(1.0+B*(XM2**2))
CSTAR2=SQRT(GAMMA*G*R*TSTAT2)
DMT1=FSMN*COS(ANGLR)
DMT2=XM2*COSD(TURNAN)
VTAN1=DMT1*CSTAR1
VTAN2=DMT2*CSTAR2
DIFFVT=VTAN1-VTAN2
CALL ITER(VSURF,DIFFVT,OVING,VELMAC,IMES,SMART,KITE)
IF(KITE-1) 1500,2000,2100
1500 WRITE(6,100) FSMN,GAMMA,DELTA,DELPHI,FSTOTT
WRITE(6,100B)
1008 FORMAT(1H,10X,47HITERATION LIMIT ON TAN. VELOCITY COMP. EXCEEDED)
CONTE=10.0
KITE=-2
GC TO 3000
2000 CONTINUE
2100 WANGLE=DPHI(NN)
DMNORM=CALM*SIND(WANGLE)
TPR1=((GAMMA+1.0)*DMNORM**2)/((GAMMA-1.0)*DMNORM**2+2.0)**(-POWER)
2R)=((GAMMA+1.0)/(2.0*(GAMMA*DMNORM**2-(GAMMA-1.0))))*(1.0/(GAMMA-1.0*CONF0800
30))
FSTOPR=(1.0+B*CALM**2)**POWER
DO 2105 I=1,LLL
T=FSTOTT*TSTOTT(I)
P=TPR1*FSTOT*PRESS(I)
CALL S(T,P,O.C,ENTROP)
ENTRU(I)=FNTR0P
PRESS(I)=TPR1*PRESS(I)/FSTOPR
2105 CONTINUE
IF(NOCODE) 1020,1020,999
999 WRITE(6,100)CALM,GAMMA,DELTA,DELPHI,FSTOTT

```

CONF0645  
CONF0650  
CONF0655  
CONF0660  
CONF0665  
CONF0670  
CONF0675  
CONF0680  
CONF0685  
CONF0690  
CONF0695  
CONF0700  
CONF0705  
CONF0710  
CONF0715  
CONF0720  
CONF0725  
CONF0730  
CONF0735  
CONF0740  
CONF0745  
CONF0750  
0755  
0760  
0765  
CONF0767  
0770  
0775  
CONF0780  
0785  
0790  
CONF0795  
CONF0800  
0805  
0810  
0815  
0820  
0825  
0830  
0835  
CONF0837  
0840  
0860  
CONF0865

```

1000 FORMAT(1H-,27X,49H SOLUTION OF CONICAL FLOW DIFFERENTIAL EQUATIONS,CONF0870
1 /1H0,34X,36HUSING FINITE DIFFERENCE SURSTITUTION/1H0,39X,16H MACPCGNF0875
2 NO. INF. =,F9.5/1H0,39X,8H GAMMA =,F9.5/1H ,39X,8H DELTA =,F9.5/1CONF0880
3H ,39X,9H DELPHI =,F9.5/1H ,29X,26H FREE-STREAM TOTAL TEMP. =,F9.3CONF0885
4,10H DEGREES R//1H0,26X,2H.,.,8X,2H.,.,7X,1H.,41X,7HPI/PINF//1H+,6XCCONF0890
5,1H,9X,3PHI,4(7X,2HVR),8X,1HV,5X,5HTHETA,3X,8HMACH NO.,6X,7HTS/TCCONF0895
6TOT,1CX,1MJ)
WRITE(6,1C10) (I,DPHI(I),VPSAV(I),VR(I),DTHETA(I),PRESS(I),KOUNT(ICONF0905
2),OVPTDI(I),VPHI(I),DVEL(I),DMACH(I),ISITDI(I),I=1,LLL)
1010 FORMAT(1HC,3X,13,4X,F12.5,4F18.5,11X,I3//1H ,13X,4F18.5,F14.5)
WRITE(6,1C05)TPR1,MMM
1005 FORMAT(1H-,39X,12H PTC/PTINF =,F9.5//1H ,37X,22HITERATIONS REQUIRECONF0925
20 = ,13)
1020 KITE=-2
3000 RETURN
END
CONF0945

```

```

$IBFTC D3S3S
C PROGRAM FOR DESIGN OF 3-SHOCK, 3-D, EXTERNAL COMPRESSION INLET
C
C D3SP0010
C D3SP0015
C D3SP0020
C D3SP0025
C D3SP0030
C D3SP0035
C D3SP0040
C D3SP0042
C D3SP0045
C D3SP0050
C D3SP0055
C D3SP0060
C D3SP0065
C D3SP0070
C D3SP0075
C D3SP0080
C D3SP0085
C D3SP0090
C D3SP0095
C D3SP0100
C D3SP0105
C D3SP0110
C D3SP0115
C D3SP0120
C D3SP0125
C D3SP0130
C D3SP0135
C D3SP0140
C D3SP0145
C D3SP0150
C D3SP0155
C D3SP0160
C D3SP0165
C D3SP0170
C D3SP0175
C D3SP0190
C D3SP0195
C D3SP0200
C D3SP0205

```

SUBROUTINE D3S3(DMACH,DTHETA,DPHI,PRESS,BETAR,DINC,VAL,XIN,DELTA,DC3SP0030  
2ELTB,GONE,TAL,TPR1,N,JAKE,LOOP,FSMN,ALAMDA,P2PF,SMACH,X,SRY,XPR,RP03SP0035  
3R,BETA,VMACH,ITER,N0G0I,GAMMA,PT2PT1,DVEL,VEL,THETA,PIPF,C3SIES,  
4SPRC)  
DIMENSION DMACH(50),VMACH(50),DTHETA(50),DPHI(50),PRESS(50),DINC(50),VAL(50),XIN(50),DELTA(50),DC3SP0045  
1),BETA(50),XPR(50),RPR(50),DDELT(50),X(50),SRY(50),AL(50),DC3SP0050  
2,AZ(50),DUM(8),PRESS(50),PIPF(50),P2PF(50),SMACH(50),ALAMDA(50),SUD3SP0055  
3MSAV(50),PT2PT1(50),DVEL(50),VEL(50)

C3STES=1.C  
C CALCULATE AVERAGE FLOW CONDITIONS  
DO 40 I=1,N  
VMACH(I) = (DMACH(I)+DMACH(I+1))/2.0  
DTHETA(I) = (DTHETA(I)+DTHETA(I+1))/2.0  
DPHI(I) = (DPHI(I)+DPHI(I+1))/2.0  
PIPF(I) = (PRESS(I)+PRESS(I+1))/2.0  
VEL(I) = (DVEL(I)+DVEL(I+1))/2.0  
40 CONTINUE

C ASSUME SURFACE FLOW DEFLECTION EQUAL TO DELTB AND PROCEED W/ ITER  
DEL=DELTB  
BETAC=BETAR  
RIN = XIN\*SIND(DELTA)/COSD(DELTA)  
RN = RIN  
XN = XIN  
SUMA=C.0  
TOTAP=0.0  
C  
DO 225 I=1,N  
DO 16C J=1,LOOP  
8CE=-((VMACH(I)\*\*2+2.0)/(VMACH(I)\*\*2)+GAMMA\*SIND(DEL)\*\*2)  
CCE=(2.0\*VMACH(I)\*\*2+1.0)/VMACH(I)\*\*4+((GAMMA+1.0)\*\*2/4.0+((GAMMA-1  
2.0)/VMACH(I)\*\*2)\*SIND(DEL)\*\*2  
DCE=-COSD(DEL)\*\*2/VMACH(I)\*\*4  
CAR=SIND(RETAC)\*\*6+8CE\*SIND(BETAC)\*\*4+CCE\*SIND(BETAC)\*\*2+DCE  
1040 CALL ITER(BETAC,CAR,DINC,VAL,GONE,DUM,JAKE)  
IF(JAKE-1) 45,160,1050  
45 WRITE(6,180)FSMN,DELTA,DELTB,XIN,RIN  
WRITE(6,1000)

```

D3STES=10.0
GO TO 5
1050 BETA(I)=BETAC
XD=(6.0*(VMACH(I)*SIND(BETAC)**2)/((VMACH(I)*SIND(BETAC)**2+5.0))
YV=1.0-(5.0/36.0)*((VMACH(I)*SIND(BETAC)**2-1.0)*(VMACH(I)*SIND(BETAC)**2)
1SIND(BETAC)**2+5.0)*(VMACH(I)*SIND(BETAC)**2)
ANGLE=DPHI(I)
THETAX=BETAC+THETA(I)
C=XN*(SIND(ANGLE)/COSD(ANGLE))-SIND(THETAX)/COSD(THETAX)
ANGLE2=DPHI(I+1)
XNN=C/(SIND(ANGLE2)/COSD(ANGLE2)-SIND(THETAX)/COSD(THETAX))
RNN=XNN*SIND(ANGLE2)/COSD(ANGLE2)
DELX=XNN-XN
DELR=RNN-RN
DIAGSQ=DELX**2+DELR**2
DIAG=SQRT(DIAGSQ)
AREAL=DIAG*SIND(BETAC)
AREA2=AREAL/(SQRT(YV)*XD)
ARG=AREA2/DIAG
ANG=ARSIN(ARG)
ANG=57.295779513*ANG
DEL2=BETAC-ANG
DIFF=DEL2-DEL
ERR=ABS(DIFF)
IF(ERR-IAL) 170,170,50
50 DEL=DEL2
160 CONTINUE
C3STES=-1C.0
C
170 X(I)=XD
DELT(I)=DEL
SRY(I)=SORT(YV)
AL(I)=AREAL
A2(I)=AREA2
RN=RNN
XN=XNN
RPR(I)=RN
XPR(I)=XN
C
C START CALCULATING DOWNSTREAM FLOW CONDITIONS
VCM1=VMACH(I)*SIND(BETAC)
TCM1=VMACH(I)*COSD(BETAC)
TCM2=TCM1
TCM2SQ=TCM1**2

```

VCM2SQ = (VCM1\*\*2+5.0)/(7.0\*VCM1\*\*2-1.0) 03SP0430  
 VM2SQ=VCM2SQ/(SIND(BETAC-DEL)\*\*2) 03SP0435  
 SMACH(I)=SQRT(VM2SQ) 03SP0440  
 PRATIO=(7.0\*VCM1\*\*2-1.0)/6.0 03SP0445  
 P2PF(I)=P1PF(I)\*PRATIO 03SP0450  
 P2PT1(I)=[(GAMMA+1.0)\*VCM1\*\*2]/[(GAMMA-1.0)\*VCM1\*\*2+2.0]\*(GAMMA/(03SP0455  
 2GAMMA-1.0))\*(GAMMA+1.0)/(2.0\*GAMMA\*VCM1\*\*2-(GAMMA-1.0))]\*(1.0/(03SP0460  
 3AMMA-1.0)) 03SP0465  
 RSUM=RN-DELR/2.0 03SP0470  
 ATOT=6.2831853\*AREA2\*R SUM 03SP0475  
 SUMSAV(I)=ATOT 03SP0480  
 SUMA=SUMA+ATOT 03SP0485  
 TPR2=PT2PT1(I) 03SP0490  
 TOTAP = TPR2\*ATOT +TOTAP 03SP0495  
 IF(I-1) 175,175,185 03SP0500  
 175 SPRAT=(7.0\*(DMACH(I)\*SIND(BETAC)\*\*2-1.0)/6.0)\*PRESS(I) 03SP0505  
 IF(NOGOT)225,225,176 03SP0510  
 176 WRITE(6,120)FSM ,DELTA,DELTB,XIN,RIN 03SP0515  
 180 FORMAT(1H-,31X,41H 3-SHOCK, 3-D, EXTERNAL COMPRESSION INLET/1HO,4003SP0520  
 1X,16H MACH NO. INF. =,F9.5/1HO,32X,7H DELTA=,F9.5,6X,7H DELTB=,F9.03SP0525  
 25/1HO,4H RAY,8X,5H M1 ,7X,6HDTHEIA,7X,4HBETA,8X,5HAREAL,4X,9HRH0203SP0530  
 3/RH01,4X,7HP1/PINF,7X,4HDPHI,9X,3HXPR/1H ,5X,1HJ,7X,2HM2,10X,5HTHED03SP0535  
 4TA,7X,3HDEL,9X,5HAREA2,6X,5HV2/V1,6X,7HP2/PINF,5X,9H PHI ,6X,303SP0540  
 5HRPR/1H ,96X,F9.5/1H ,93X,F9.5) 03SP0545  
 185 IF(NOGOT) 225,225,186 03SP0547  
 186 WRITE(6,190)I,VMACH(I),DTHETA(I),BETA(I),AL(I),X(I),P1PF(I),DPHI(103SP0550  
 1),XPR(I),J,SMACH(I),THETA(I),DELT(I),A2(I),SRY(I),P2PF(I),PHI(I),RD3SP0555  
 2PR(I) 03SP0560  
 190 FORMAT(1H ,13,6X,8F12.5/1H ,16,8F12.5) 03SP0565  
 225 CONTINUE 03SP0570  
 SPRC=TOTAP/SUMA\*TPR1 03SP0575  
 IF(NUGOT)255,255,249 03SP0580  
 249 WRITE(6,250)TPR1,SPRC,PRESS(1) ,SPRAT,SUMA 03SP0585  
 250 FORMAT(1HO,42X,17HPRESSURE RECOVERY/1HO,21X,11HP1C/PTINF=,F9.5,1903SP0590  
 1X,11HP12C/PTINF=,F9.5/1HO,39X,23HSURFACE STATIC PRESSURE/1HO,21X,903SP0595  
 2HPC1/PINF=,F9.5,23X,9HPC2/PINF=,F9.5/1HO,42X,17HSECCNC SHOCK AREA/03SP0600  
 31HO,42X,5HTAS2=,F12.5) 03SP0605  
 C 03SP0610  
 C START CALCULATIONS FOR DUCT-LIP FLOW AREA AND ADDITIVE DRAG 03SP0615  
 255 ALPHA =270.+DELTA+DELTB 03SP0620  
 ALPHA = DELTA+DELTB 03SP0625  
 XC02 = XPR(N )-XIN 03SP0630  
 RC02 = RPR(N )-RIN 03SP0635  
 INDIC=C 03SP0640

```

275 SLOPE1 = SIND(ALPHA)/COSD(ALPHA)
CWINT = RC02-XC02*SLOPE1
SLOPE2 = SIND(ALPHB)/COSD(ALPHB)
IF(INCIC-1)300,325,300
300 XSURF1 = CWINT/(SLOPE2-SLOPE1)
RSURF1 = SLOPE2*XSURF1
INDIC=1
ALPHA = 270.+DELT(N )+THETA(N )
GO TO 275
325 XSURF2 = CWINT/(SLOPE2-SLOPE1)
RSURF2 = SLOPE2*XSURF2
RAV=(RSURF2+RSURF1)/2.0
XAV= RAV/SLOPE2
RRS = RIN+RAV
RXS = XIN+XAV
RCH= ABS(RPR(N )-RRS)
XCH= ABS(RXS-XPR(N ))
TDAI= SQR(XCH**2+RCH**2)
RAI= 6.28*1853*IDAI*(RRS+RCH/2.0)
CALCULATE CAPTURE AREA
ACAPT = 3.1415926*(RPR(N )**2)
AZERO = ACAPT
CALCULATE FREE-STREAM STATIC/TOTAL PRESSURE RATIO
POPTIN = (1.0+(FSMN **2/5.0))**(-3.5)
ASURC1= 3.1415926*(RRS**2-RIN**2)
ASURC2= 3.1415926*(RIN**2)
ADCT3 =(ASURC2/ACAPT)*((PRESS(1) *POPTIN)-POPTIN)
ADCT4 = 1.4*POPTIN*(FSMN **2)*AZERO/ACAPT
ADRAG1=0.C
ADRAG2=0.C
RSTART=RIN
ACCT2=0.0
CO 40C M=1,N
ALAMDA(M)= THETA(M)+DELT(M)
FLOW2 =ALAMDA(M)
ADCT1 = 1.4*P2PF(M)*POPTIN*(SMACH(M)**2)*SUMSAV(M)*COSD(FLOW2)
DELT SQ=RPR(M)**2-RSTART**2
ADCT2=3.1415926*DELT SQ *(P2PF(M)*POPTIN-POPTIN)
RSTART=RPR(M)
PSAD1=ADCT1
ADRAG1=ADRAG1+PSAD1
PSAD2=ADCT2
ADRAG2=ADRAG2+PSAD2
400 CONTINUE

```

```
ADRAG1=ADRAG1/ACAPT          03SP0865
ADRAG2=ADRAG2/ACAPT          03SP0870
ADRAG=ADRAG1+ADRAG2+ADC13-ADC14 03SP0875
IF(NOGOT)5,5,445            03SP0880
449 WRITE(6,450) ADRAG      03SP0885
450 FORMAT(1HC,44X,13HADDITIVE DRAG/1H0,44X,4HCDA=,F9.5) 03SP0895
WRITE(6,50)ADRAG1,ADRAG2,ADC13,ADC14 03SP0900
500 FORMAT(1HC,10X,6HADC1=,F9.5,5X,6HADC2=,F9.5,5X,6HADC3=,F9.5,5X,03SP0905
16HADC4=,F9.5)            03SP0910
1000 FORMAT(1H=,61HERROR-- A TWO-DIMENSIONAL SHOCK SOLUTION HAS NOT REED03SP0915
2N SPANNED)                03SP0920
IF(D3STES) 1001,5,5        03SP0925
1001 WRITE(6,1002)          03SP0930
1002 FORMAT(1H=,5X,88HNOTE-- TWO-DIMENSIONAL SHOCK SOLUTION HAS BEEN SP03SP0935
2ANNED. NO CONVERGENCE HAS BEEN REACHED./1H0,5X,25H,...COMPUTATION 03SP0940
3CONTINUES)                03SP0945
5 RETURN                    03SP0950
END                          03SP0955
```

```

$18FTC QITER IITER0001
C ITER IITER0002
SUBROUTINE ITER (X,Y,XINC,TOL,PASSES,XY,ISOLVE) IITER0003
C IITER0004
C DIMENSION XY(8) , XX(3) , YY(3) IITER0005
C IITER0006
C IITER0007
5 IF(ISOLVE)5,15,15 IITER0008
10 DO 10 I=1,8 IITER0009
15 XY(I)=0.0 IITER0010
X1=X IITER0011
Y1=Y IITER0012
DX=XINC IITER0013
C CHECK FOR SOLUTION AND NO. OF PASSES IITER0014
IF(TOL-ABS(Y1))50,20,20 IITER0015
C SOLUTION IITER0016
20 XY(5)=-PASS IITER0017
ISOLVE=2 IITER0018
GO TO 200 IITER0019
50 IF(PASS -PASSES)70,70,60 IITER0020
60 ISOLVE=0 IITER0021
GO TO 200 IITER0022
C STOP IITER0023
70 X2=XY(2) IITER0024
X3=XY(3) IITER0025
Y2=XY(6) IITER0026
Y3=XY(7) IITER0027
C HAS THIRD POINT BEEN SET UP IITER0028
IF(Y3)131,80,131 IITER0029
C HAS SOLUTION BEEN SPANED IITER0030
80 IF(Y1*Y2)130,120,90 IITER0031
C NO SPAN. SET UP NEW SECOND POINT IITER0032
90 IF(ABS(Y2)-ABS(Y1))100,95,95 IITER0033
95 CX=XY(1) IITER0034
GO TO 110 IITER0035
100 CX=-XY(1) IITER0036
X1=X2 IITER0037
Y1=Y2 IITER0038
110 X2=0 IITER0039
Y2=0 IITER0040
C SET UP FIRST POINTS IITER0041
120 XY(1)=DX IITER0042
XNEW=X1+DX+ABS(Y1)/Y1 IITER0043
GO TO 190 IITER0044

```



C	SPANEC, SET UP THIRD POINT	
130	XNEW = X2 + ((X1 - X2) / (Y2 - Y1)) * Y2	ITER0045
	GO TO 190	ITER0046
131	IF(Y2) 132, 132, 135	ITER0047
132	IF(Y1) 133, 133, 134	ITER0048
133	IF(Y1 - Y2) 138, 138, 140	ITER0049
134	IF(Y1 - Y3) 140, 130, 130	ITER0050
135	IF(Y1) 136, 136, 137	ITER0051
136	IF(Y1 - Y3) 130, 130, 140	ITER0052
137	IF(Y1 - Y2) 140, 138, 138	ITER0053
138	X2 = X3	ITER0054
	Y2 = Y3	ITER0055
	GO TO 130	ITER0056
C	SET UP NEXT POINT	ITER0057
140	XX(1) = X1	ITER0058
	YY(1) = Y1	ITER0059
	DD150 I=2,3	ITER0060
	XX(I) = XY(I)	ITER0061
150	YY(I) = XY(I+4)	ITER0062
	XX1 = YY(1)	ITER0063
	XX2 = (YY(2) - YY(1)) / (XX(2) - XX(1))	ITER0064
	XX3 = ((YY(3) - YY(1)) - XX2 * (XX(3) - XX(1))) / ((XX(3) - XX(2)) * (XX(3) - XX(1)) - XX(1)))	ITER0065
	AA = XK3	ITER0066
	BB = XK2 - XK3 * (XX(1) + XX(2))	ITER0067
	CC = XK1 + XX(1) * (XK3 * XX(2) - XK2)	ITER0068
	CD = 4 * AA * CC / (BB * BB)	ITER0069
	IF(DD - 1.) 160, 164, 130	ITER0070
160	EE = SQRT(1. - DD)	ITER0071
162	GO TO 166	ITER0072
164	EE = 0.	ITER0073
166	XNEW = (-BB / (2. * AA)) * (1. + EE)	ITER0074
167	IF(ABS(YY(3)) - ABS(YY(2))) 168, 130, 169	ITER0075
168	K = 2	ITER0076
	I = 3	ITER0077
	GO TO 170	ITER0078
169	K = 3	ITER0079
	I = 2	ITER0080
170	IF(ABS(YY(K)) - ABS(YY(I))) 171, 130, 172	ITER0081
171	J = K	ITER0082
	GO TO 173	ITER0083
172	J = 6 - I - K	ITER0084
173	IF(ABS(YY(I)) - ABS(YY(J))) 174, 130, 176	ITER0085
174	M = I	ITER0086
		ITER0087
		ITER0088

D190

```
175 GO TO 177
176 M=J
177 DEV=ABS(XX(M)-XNEW)
179 XNEWX=(-88/(2.*AA))*((1.-EE)
180 DEVX=ABS(XX(M)-XNEWX)
181 IF(DEV-DEVX)190,190,182
182 XNEW=XNEWX
190 ISOLVE=1
X = XNEW
XY(2)=X1
XY(3)=X2
XY(4)=X3
XY(5)=PASS
XY(6)=Y1
XY(7)=Y2
XY(8)=Y3
200 RETURN
END
ITER0089
ITER0090
ITER0091
ITER0092
ITER0093
ITER0094
ITER0095
ITER0096
ITER0097
ITER0098
ITER0099
ITER0100
ITER0101
ITER0102
ITER0103
ITER0104
ITER0105
ITER0106
```

SUBROUTINE S(TIN,PIN,FARIN,SOUT)

```

C KFUEL = 1 , AIR
C KFUEL = 2 , AIR - COMBUSTION PRODUCTS
C KTEMP = 1 , TEMP BETWEEN 300 AND 4000
C KTEMP = 2 , TEMP LESS THAN 300
C KTEMP = 3 , TEMP GREATER THAN 4000
30 KTEMP = 1
KFUEL = 1
T=TIN
FAR=FARIN
PX=PIN
42 IF(FAR)45,50,43
43 KFUEL=2
44 GOTO 50
45 FAR = 0.
50 IF(T-4000.180,180,60
60 KTEMP = 3
70 GOTO 160
80 IF(T-300.190,180,180
90 KTEMP=2
140 PHIA = 1.4559093 + 2.4034930E-01*ALOG(T/ 300.)
50 TO 190
160 PHIA = 2.1328596 + 3.0124804E-01*ALOG(T/4000.)
GO TO 190
180 PHIA = 2.5020C51E-01*ALOG(T)+(((1.4450767E-26*T-2.4211288E-22)
1*T+1.5243153E-18)*T-3.7820648E-15)*T-2.2392790E-12)*T+3.2759743E-0
28)*T-5.1576875E-5)*T+4.5432300E-C2
190 IF(KFUEL-1)230,330,200
200 IF(KTEMP-2)250,210,230
210 PHIF = 1.2833275 + 3.4137633E-01*ALOG(T/300.)
GO TO 270
230 PHIF = 3.0136416 + 9.5596077E-01*ALOG(T/4000.)
GO TO 270
250 PHIF= 7.3816638E-02*ALOG(T)+(((1.0382670E-25*T-2.2226118E-21)*T
1+2.0425826E-17)*T-1.0512776E-13)*T+3.3228928E-10)*T-6.8859505E-07)
2*T+1.225863CE-03)*T+6.483358E-01
270 PHI =(PHIA + PHIF * FAR)/(1. + FAR)
R =(53.349 + 55.088*FAR)/(1. + FAR)
GO TO 350
330 PHI = PHIA
R = 53.349
350 SY= PHI - (R/778.16) *ALOG (PX)
SOUT=SY/R

```

RETURN  
END

ENTR0045  
ENTR0046

FORTRAN CODE SHEET

DECK NO. A.1020 PROGRAMMER SAMPLE CASE DATE \_\_\_\_\_ PAGE 1 OF 1 JOB NO. \_\_\_\_\_

STATEMENT NUMBER	STATEMENT	SEQUENCE NUMBER
1		72
2		78
3		80
4		
5		
6		
7		
8		
9		
10		

```

SET
  GAMMA=1.4, G=-1.0, R=53.35, NRAYS=40, LOPP=40, GONE=50,
  VALC=1000.0, VALD=.00001, MLOPP=20, TPLMAC=.00005,
  TIMES=20.0, BETAR=45.0, PVER=30.0, DINCC=-100.0, DINCD=10,
  TINC=.005, VELMAC=.005, DIVINC=30, DDVPHI=-3600.0,
  VSURF=1850.0, LOST=10
  DAT A
    FSMN=2.2, FSTPTT=766.7, FSTPTP=788.52, DELPHI=0.5,
    DELTA=20.0, DELTB=12.0, XIN=1.0, CPCPDE=1, DPCPDE=1,
    NOPCDE=-1, ITEST=1
  
```

NOTE: If NOPCDE = -1, Cards 9 and 10 must follow the data.  
They may be blank or include an alphanumeric case description.

D194

SOLUTION OF CONICAL FLOW DIFFERENTIAL EQUATIONS

USING FINITE DIFFERENCE SUBSTITUTION

MACH NO. INF. = 2.19999

GAMMA = 1.40000

DELTA = 20.00000

DELPHI = 0.50000

FREE-STREAM TOTAL TEMP. = 766.700 DEGREES R

I	P1	VR	VR	VR	VR	V	THETA	MACH NO.	P1/PINF	J
1	20.00000	.....	.....	1851.46886	1851.46886	1.72138	20.00000	2.06353	0.62789	1
2	20.50000	.....	.....	1851.33102	1851.33102	1.72158	19.52250	2.06292	0.62784	4
3	21.00000	-3619.70261	-62.17573	-31.58786	1850.92039	1.72213	19.06537	2.06119	0.62769	4
4	21.50000	-3544.65235	-92.45442	-62.52114	1850.24240	1.72301	18.62677	2.05844	0.62745	5
5	22.00000	-3476.87344	-123.20403	-92.86258	1849.30197	1.72419	18.20503	2.05477	0.62713	4
6	22.50000	-3415.38669	-152.47232	-122.66745	1853.36588	1.72564	17.79868	2.05027	0.62674	4
		-3355.51770		-151.98478	1854.34250					

7	23.00000	-181.30210	1846.65125	17.40637	2.04500	4
		-3308.67200	-180.85839	1855.48662	1.72734	0.62628
8	23.50000	-209.73199	1844.94873	17.02691	2.03902	4
		-3262.34677	-205.32773	1856.78590	1.72927	0.62575
9	24.00000	-237.75708	1842.59937	16.65917	2.03238	4
		-3220.12390	-237.42861	1858.23009	1.73143	0.62517
10	24.50000	-265.52949	1840.80626	16.30215	2.02514	4
		-3181.64975	-265.19374	1859.81056	1.73378	0.62453
11	25.00000	-292.55887	1838.37219	15.95489	2.01731	4
		-3146.63147	-252.65327	1861.52042	1.73634	0.62384
12	25.50000	-320.11282	1835.69969	15.61653	2.00893	4
		-3114.82779	-315.83527	1863.35394	1.73908	0.62310
13	26.00000	-347.01727	1832.79109	15.28622	2.00002	4
		-3080.04175	-346.76607	1865.30690	1.74201	0.62231
14	26.50000	-373.65686	1829.64845	14.96318	1.99061	4
		-3060.12009	-373.47065	1867.37616	1.74512	0.62147
15	27.00000	-400.17524	1826.27367	14.64667	1.98070	4
		-3036.54873	-395.97303	1869.55981	1.74841	0.62058
16	27.50000	-426.47540	1822.66838	14.33595	1.97029	4
		-3016.45264	-426.29654	1871.85703	1.75187	0.61965
17	28.00000	-452.62005	1818.83406	14.03031	1.95940	4
		-2998.59650	-452.46423	1874.26817	1.75552	0.61867

18	28.50000	-478.63192	1814.77196	13.72905	1.94802	4
		-2583.38525	-478.45918	1876.79478	1.75935	0.61764
19	29.00000	-504.53412	1810.48314	13.43145	1.93614	4
		-2570.87027	-504.42491	1879.43971	1.76337	0.61656
20	29.50000	-530.35064	1805.96844	13.13678	1.92375	4
		-2561.15558	-530.26586	1882.20718	1.76758	0.61543
21	30.00000	-556.10682	1801.22850	12.84429	1.91083	4
		-2554.40567	-556.04790	1885.10301	1.77201	0.61425
22	30.50000	-581.82593	1796.26370	12.55317	1.89734	4
		-2550.86121	-581.79900	1888.13489	1.77666	0.61301
23	31.00000	-607.55011	1791.07419	12.26255	1.88325	3
		-2550.86121	-607.55011	1891.31273	1.78154	0.61170
24	31.50000	-633.30122	1785.65979	11.97147	1.86852	4
		-2554.87167	-633.33621	1894.64922	1.78669	0.61033
25	32.00000	-659.12231	1780.02003	11.67881	1.85308	4
		-2563.53467	-659.15791	1898.16048	1.79212	0.60889
26	32.50000	-685.05562	1774.15405	11.38329	1.83684	4
		-2577.74023	-685.18358	1901.86728	1.79788	0.60736
27	33.00000	-711.16925	1768.06052	11.08335	1.81971	4
		-2598.74072	-711.35251	1905.79651	1.80401	0.60573
28	33.50000	-737.52145	1761.73747	10.77705	1.80153	4
		-3028.34595	-737.77579	1909.98375	1.81057	0.60400



29	34.0000	-764.20708	1755.18225	10.46187	1.78214	4
		-3069.25867	1914.7720	1.81764	0.60213	
30	34.5000	-791.34843	1748.39114	10.13437	1.76124	4
		-3125.71296	1919.34464	1.82533	0.60011	
31	35.0000	-819.11806	1741.35899	9.78958	1.73845	4
		-2204.77103	1924.68600	1.83382	0.59788	
32	35.33497	-847.77485	1736.50945	9.53835	1.72135	4
		-3277.27438	1928.71689	1.84026	0.59619	

PTC/PTINF = 0.98386

ITERATIONS REQUIRED = 3

3-SHOCK, 3-D, EXTERNAL COMPRESSION INLET

MACH NO. INF. = 2.19999

DELTA = 2C.C03C0 DELTB = 12.00000

RAY	J	M1 M2	THETA THETA	BETA DEL	AREA1 AREA2	RHO2/RHO1 V2/V1	P1/PINF P2/PINF	DPHI PHI	XPR RPR
1		1.72148	2C.C0C00	49.34327	0.00939	1.52608	2.06323	20.00000	0.36397
5	5	1.29074	19.76125	12.C0C00	0.00751	0.81951	3.76151	20.25000	1.00442
2		1.72185	19.52250	49.32528	0.00961	1.52610	2.06206	20.50000	0.37554
4	4	1.29114	15.25394	12.C0C0C	0.00768	0.81959	3.75944	20.75000	1.00903
3		1.72257	19.06537	49.30264	0.00983	1.52614	2.05981	21.00000	0.38733
4	6	1.29192	18.64607	12.C0C0C	0.00786	0.81975	3.75550	21.25000	1.01386
5	5	1.72360	18.62677	49.26436	0.01007	1.52619	2.05661	21.50000	0.39937
5	5	1.29302	18.41590	12.00007	0.00805	0.81996	3.74984	21.75000	1.01891
3		1.72492	18.20503	49.21575	0.01032	1.52626	2.05252	22.00000	0.41167
6	3	1.29444	18.00185	12.C0C07	0.00824	0.82024	3.74264	22.25000	1.02419
5	5	1.72649	17.79869	49.15772	0.01058	1.52635	2.04763	22.50000	0.42423
7	5	1.29612	17.60252	12.C0C08	0.00845	0.82057	3.73404	22.75000	1.02970
5	5	1.72831	17.40637	49.C9100	0.00866	1.52645	2.04201	23.00000	0.43709
8	5	1.30025	16.54304	12.C0C07	0.00389	0.82138	3.71306	23.25000	1.03548
9	5	1.73035	17.02691	49.C1650	0.01115	1.52657	2.03570	23.50000	0.45024
5	5	1.30266	16.48066	12.C0C01	0.00913	0.82185	3.70086	24.00000	1.04152
10	5	1.73260	16.65917	48.53457	0.01145	1.52670	2.02876	24.25000	0.46371
10	4	1.30527	16.12852	12.C0C01	0.00938	0.82235	3.68765	24.50000	1.04784
11	4	1.73506	16.30215	48.84594	0.01178	1.52685	2.02122	24.75000	0.47753
4	4	1.30527	16.12852	12.C0C01	0.00938	0.82235	3.68765	24.75000	1.05445
11	4	1.73771	15.55489	48.75C90	0.01212	1.52702	2.01312	25.00000	0.49170
12	4	1.30809	15.78571	11.55995	0.00965	0.82289	3.67345	25.25000	1.06138
12	4	1.74055	15.61653	48.65C55	0.01248	1.52723	2.00448	25.50000	0.50625
13	4	1.31108	15.45137	12.C0C35	0.00993	0.82345	3.65842	25.75000	1.06865
13	5	1.74356	15.28622	48.54334	0.01287	1.52742	1.99532	26.00000	0.52121
14	5	1.2142E	15.1247C	11.95997	0.01023	0.82406	3.64236	26.25000	1.07626
14	3	1.74576	14.56318	48.43125	0.01328	1.52765	1.98565	26.50000	0.53661
3	3	1.21765	14.40493	11.55997	0.01054	0.82469	3.62551	26.75000	1.08426
15		1.75014	14.64667	48.31348	0.01372	1.52788	1.97549	27.00000	0.55246

5	1.32121	14.49131	11.55971	0.01088	0.82535	3.60779	27.25000	0.56880
16	1.75365	14.31555	48.9047	0.01419	1.52816	1.96485	27.50000	1.10149
5	1.22494	14.18213	11.99074	0.01124	0.82603	3.58930	27.75000	0.58567
17	1.75743	14.03031	48.06124	0.01469	1.52839	1.95371	28.00000	1.11078
4	1.22890	13.87968	11.55836	0.01163	0.82677	3.56973	28.25000	0.60310
18	1.76136	13.72905	47.52844	0.01523	1.52871	1.94208	28.50000	1.12057
4	1.33298	13.58025	11.55834	0.01204	0.82750	3.54959	28.75000	0.62114
19	1.76548	13.42145	47.74501	0.01582	1.52902	1.92995	29.00000	1.13090
5	1.33730	13.28411	11.55741	0.01249	0.82828	3.52844	29.25000	0.63983
20	1.76980	13.13679	47.64563	0.01644	1.52940	1.91729	29.50000	1.14181
3	1.34177	12.99053	11.59741	0.01257	0.82907	3.50659	29.75000	0.65922
21	1.77433	12.84429	47.45658	0.01712	1.52982	1.90408	30.00000	1.15335
6	1.34645	12.65873	11.59732	0.01349	0.82989	3.48182	30.25000	0.67938
22	1.77910	12.55317	47.34246	0.01786	1.53030	1.89030	30.50000	1.16559
5	1.35132	12.40746	11.59742	0.01405	0.83073	3.46019	30.75000	0.70035
23	1.78411	12.26255	47.18136	0.01866	1.53079	1.87589	31.00000	1.17858
4	1.35647	12.11701	11.59782	0.01466	0.83161	3.43544	31.25000	0.72223
24	1.78941	11.97147	47.01337	0.01954	1.53133	1.86080	31.50000	1.19240
5	1.36187	11.82514	11.59780	0.01533	0.83252	3.40956	31.75000	0.74510
25	1.79500	11.67881	46.83523	0.02051	1.53197	1.84496	32.00000	1.20715
5	1.36752	11.53105	11.59875	0.01607	0.83345	3.38261	32.25000	0.76904
26	1.80095	11.48329	46.65523	0.02158	1.53262	1.82827	32.50000	1.22293
5	1.37355	11.23332	11.59881	0.01688	0.83443	3.35410	32.75000	0.79418
27	1.80729	11.09335	46.46156	0.02278	1.53334	1.81062	33.00000	1.23986
5	1.37994	10.93020	11.59889	0.01778	0.83547	3.32400	33.25000	0.82064
28	1.81410	10.77705	46.25869	0.02411	1.53422	1.79184	33.50000	1.25809
5	1.38672	10.61546	12.00062	0.01879	0.83653	3.29228	33.75000	0.84859
29	1.82148	10.46137	46.03565	0.02563	1.53511	1.77169	34.00000	1.27783
5	1.39411	10.29812	12.00064	0.01993	0.83769	3.25802	34.25000	0.87823
30	1.82557	10.13437	45.80395	0.02736	1.53613	1.74985	34.50000	1.29930
5	1.40215	9.96197	12.00105	0.02123	0.83893	3.22101	34.75000	0.90978
31	1.83704	9.78958	45.58950	0.01944	1.53709	1.72990	35.00000	1.31481
5	1.40955	9.63396	12.00108	0.01506	0.84006	3.18720	35.16748	0.93214
32	1.84026	9.53835	45.49808	0.00000	1.53751	0.94249	35.33497	1.31481
5	1.41273	9.53835	12.00114	0.00000	0.84052	1.73716	35.33497	0.93214

PRESSURE RECOVERY

PT1C/PTINF= C.5828C      PT2C/PTINF= 0.96203

SURFACE STATIC PRESSURE

FC1/PINF= 2.06353      PC2/PINF= 3.76160

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SECOND SHOCK AREA

TAS2 = 54544

ADDITIVE DRAG

CDA = 0.00037

ACCT1 = 0.42433    ADC12 = 0.19458    ADC13 = 0.01516    ACCT4 = 0.63371

Appendix E. Corrected Weight Flow Parameters

This appendix contains corrected weight flow parameters. Included are:

- a. Corrected weight flow divided by area,  $\frac{W \sqrt{\theta_t}}{A \delta_t}$   
versus Mach No.
- b. Corrected weight flow divided by area,  $\frac{W \sqrt{\theta_t}}{A \delta_t}$   
versus the ratio of total to static  
pressure.
- c. Corrected weight flow divided by area,  $\frac{W \sqrt{T_t}}{A P_t}$   
versus Mach No.

## Appendix E (continued)

Tabulation of:

$$\frac{W \sqrt{\theta_t}}{A \delta_t}$$

where

W is weight flow (lbs/sec)

$\sqrt{\theta_t}$  is the square root of total temperature ( $^{\circ}\text{R}$ )  
divided by standard temperature (518.688 $^{\circ}\text{R}$ )

A is flow area ( $\text{in}^2$ )

$\delta_t$  is total pressure ( $\text{lbs}/\text{in}^2$ ) divided by standard  
pressure (14.696  $\text{lbs}/\text{in}^2$ )

The tabulation is versus Mach number.

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.	0.00059	0.00119	0.00178	0.00237	0.00297	0.00356	0.00415	0.00475	0.00534	0.00593	0.00652
0.010	0.00652	0.00712	0.00771	0.00830	0.00890	0.00949	0.01008	0.01067	0.01127	0.01186	0.01245
0.020	0.01186	0.01245	0.01305	0.01364	0.01423	0.01482	0.01542	0.01601	0.01660	0.01719	0.01779
0.030	0.01779	0.01838	0.01897	0.01956	0.02015	0.02075	0.02134	0.02193	0.02252	0.02311	0.02370
0.040	0.02370	0.02429	0.02489	0.02548	0.02607	0.02666	0.02725	0.02784	0.02843	0.02902	0.02961
0.050	0.02961	0.03020	0.03079	0.03138	0.03197	0.03256	0.03315	0.03374	0.03433	0.03492	0.03551
0.060	0.03551	0.03610	0.03669	0.03728	0.03787	0.03846	0.03905	0.03963	0.04022	0.04081	0.04140
0.070	0.04140	0.04199	0.04257	0.04316	0.04375	0.04434	0.04492	0.04551	0.04610	0.04668	0.04727
0.080	0.04727	0.04786	0.04844	0.04903	0.04961	0.05020	0.05079	0.05137	0.05196	0.05254	0.05313
0.090	0.05313	0.05371	0.05429	0.05488	0.05546	0.05605	0.05663	0.05721	0.05780	0.05838	0.05896
0.100	0.05896	0.05954	0.06013	0.06071	0.06129	0.06187	0.06245	0.06303	0.06361	0.06420	0.06478
0.110	0.06478	0.06536	0.06594	0.06652	0.06710	0.06767	0.06825	0.06883	0.06941	0.06999	0.07057
0.120	0.07057	0.07114	0.07172	0.07230	0.07288	0.07345	0.07403	0.07461	0.07518	0.07576	0.07633
0.130	0.07633	0.07691	0.07748	0.07806	0.07863	0.07921	0.07978	0.08035	0.08093	0.08150	0.08207
0.140	0.08207	0.08264	0.08322	0.08379	0.08436	0.08493	0.08550	0.08607	0.08664	0.08721	0.08778
0.150	0.08778	0.08835	0.08892	0.08949	0.09006	0.09063	0.09119	0.09175	0.09233	0.09290	0.09346
0.160	0.09346	0.09403	0.09459	0.09516	0.09572	0.09629	0.09685	0.09742	0.09798	0.09854	0.09911
0.170	0.09911	0.09967	0.10023	0.10079	0.10136	0.10192	0.10248	0.10304	0.10360	0.10416	0.10472
0.180	0.10472	0.10528	0.10584	0.10639	0.10695	0.10751	0.10807	0.10862	0.10918	0.10974	0.11029
0.190	0.11029	0.11085	0.11140	0.11196	0.11251	0.11307	0.11362	0.11417	0.11472	0.11528	0.11583
0.200	0.11583	0.11633	0.11693	0.11748	0.11803	0.11858	0.11913	0.11969	0.12023	0.12078	0.12132
0.210	0.12132	0.12187	0.12242	0.12296	0.12351	0.12405	0.12460	0.12514	0.12569	0.12623	0.12678
0.220	0.12678	0.12732	0.12786	0.12840	0.12894	0.12949	0.13003	0.13057	0.13111	0.13165	0.13218
0.230	0.13218	0.13272	0.13326	0.13380	0.13433	0.13487	0.13541	0.13594	0.13648	0.13701	0.13755
0.240	0.13755	0.13808	0.13861	0.13915	0.13968	0.14021	0.14074	0.14127	0.14180	0.14233	0.14286
0.250	0.14286	0.14339	0.14392	0.14445	0.14497	0.14550	0.14603	0.14655	0.14708	0.14760	0.14813
0.260	0.14813	0.14865	0.14918	0.14970	0.15022	0.15074	0.15126	0.15178	0.15230	0.15282	0.15334
0.270	0.15334	0.15386	0.15438	0.15490	0.15542	0.15593	0.15645	0.15696	0.15748	0.15799	0.15851
0.280	0.15851	0.15902	0.15953	0.16005	0.16056	0.16107	0.16158	0.16209	0.16260	0.16311	0.16362
0.290	0.16362	0.16412	0.16463	0.16514	0.16564	0.16615	0.16666	0.16716	0.16766	0.16817	0.16867

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.300	0.16867	0.16917	0.16967	0.17017	0.17068	0.17118	0.17167	0.17217	0.17267	0.17317	0.17367
0.310	0.17367	0.17416	0.17466	0.17515	0.17565	0.17614	0.17664	0.17713	0.17762	0.17811	0.17861
0.320	0.17861	0.17910	0.17959	0.18008	0.18056	0.18105	0.18154	0.18203	0.18251	0.18300	0.18348
0.330	0.18348	0.18397	0.18445	0.18494	0.18542	0.18590	0.18638	0.18686	0.18734	0.18782	0.18830
0.340	0.18830	0.18878	0.18926	0.18974	0.19021	0.19069	0.19116	0.19164	0.19211	0.19259	0.19306
0.350	0.19306	0.19353	0.19400	0.19447	0.19494	0.19541	0.19588	0.19635	0.19682	0.19728	0.19775
0.360	0.19775	0.19822	0.19868	0.19915	0.19961	0.20007	0.20053	0.20100	0.20146	0.20192	0.20238
0.370	0.20238	0.20284	0.20330	0.20375	0.20421	0.20467	0.20512	0.20558	0.20603	0.20649	0.20694
0.380	0.20694	0.20739	0.20784	0.20829	0.20875	0.20920	0.20964	0.21009	0.21054	0.21099	0.21143
0.390	0.21143	0.21189	0.21232	0.21277	0.21321	0.21366	0.21410	0.21454	0.21498	0.21542	0.21585
0.400	0.21586	0.21630	0.21674	0.21718	0.21761	0.21805	0.21848	0.21892	0.21935	0.21979	0.22022
0.410	0.22022	0.22065	0.22108	0.22151	0.22194	0.22237	0.22280	0.22323	0.22365	0.22408	0.22451
0.420	0.22451	0.22493	0.22535	0.22578	0.22620	0.22662	0.22704	0.22746	0.22788	0.22830	0.22872
0.430	0.22872	0.22914	0.22956	0.22997	0.23039	0.23080	0.23122	0.23163	0.23204	0.23246	0.23287
0.440	0.23287	0.23328	0.23369	0.23410	0.23450	0.23491	0.23532	0.23572	0.23613	0.23653	0.23694
0.450	0.23694	0.23734	0.23774	0.23815	0.23855	0.23895	0.23935	0.23974	0.24014	0.24054	0.24094
0.460	0.24094	0.24133	0.24173	0.24212	0.24251	0.24291	0.24330	0.24369	0.24408	0.24447	0.24486
0.470	0.24486	0.24525	0.24564	0.24602	0.24641	0.24679	0.24718	0.24756	0.24795	0.24833	0.24871
0.480	0.24871	0.24909	0.24947	0.24985	0.25023	0.25061	0.25098	0.25136	0.25173	0.25211	0.25248
0.490	0.25248	0.25286	0.25323	0.25360	0.25397	0.25434	0.25471	0.25508	0.25545	0.25581	0.25618
0.500	0.25618	0.25655	0.25691	0.25728	0.25764	0.25800	0.25836	0.25872	0.25908	0.25944	0.25980
0.510	0.25980	0.26016	0.26052	0.26087	0.26123	0.26158	0.26194	0.26229	0.26264	0.26299	0.26335
0.520	0.26335	0.26370	0.26404	0.26439	0.26474	0.26509	0.26543	0.26578	0.26612	0.26647	0.26681
0.530	0.26681	0.26715	0.26750	0.26784	0.26818	0.26852	0.26885	0.26919	0.26953	0.26986	0.27020
0.540	0.27020	0.27053	0.27087	0.27120	0.27153	0.27186	0.27219	0.27252	0.27285	0.27318	0.27351
0.550	0.27351	0.27384	0.27416	0.27449	0.27481	0.27513	0.27546	0.27578	0.27610	0.27642	0.27674
0.560	0.27674	0.27706	0.27738	0.27769	0.27801	0.27833	0.27864	0.27895	0.27927	0.27958	0.27989
0.570	0.27989	0.28020	0.28051	0.28082	0.28113	0.28144	0.28174	0.28205	0.28236	0.28266	0.28296
0.580	0.28296	0.28327	0.28357	0.28387	0.28417	0.28447	0.28477	0.28507	0.28536	0.28566	0.28596
0.590	0.28596	0.28625	0.28655	0.28684	0.28713	0.28742	0.28771	0.28800	0.28829	0.28858	0.28887



CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.600	0.28887	0.28915	0.28944	0.28973	0.29001	0.29030	0.29058	0.29086	0.29114	0.29142	0.29170
0.610	0.29170	0.29198	0.29226	0.29254	0.29282	0.29309	0.29337	0.29364	0.29391	0.29419	0.29446
0.620	0.29446	0.29473	0.29500	0.29527	0.29554	0.29581	0.29607	0.29634	0.29660	0.29687	0.29713
0.630	0.29713	0.29741	0.29766	0.29792	0.29818	0.29844	0.29870	0.29896	0.29922	0.29947	0.29973
0.640	0.29973	0.29998	0.30024	0.30049	0.30074	0.30100	0.30125	0.30150	0.30175	0.30200	0.30224
0.650	0.30224	0.30249	0.30274	0.30298	0.30323	0.30347	0.30371	0.30396	0.30420	0.30444	0.30468
0.660	0.30468	0.30492	0.30516	0.30539	0.30563	0.30587	0.30610	0.30634	0.30657	0.30680	0.30704
0.670	0.30704	0.30727	0.30750	0.30773	0.30796	0.30818	0.30841	0.30864	0.30886	0.30909	0.30931
0.680	0.30931	0.30954	0.30976	0.30998	0.31020	0.31042	0.31064	0.31086	0.31108	0.31130	0.31151
0.690	0.31151	0.31173	0.31194	0.31216	0.31237	0.31258	0.31279	0.31300	0.31321	0.31342	0.31363
0.700	0.31363	0.31384	0.31405	0.31425	0.31446	0.31466	0.31487	0.31507	0.31527	0.31547	0.31567
0.710	0.31567	0.31587	0.31607	0.31627	0.31647	0.31666	0.31686	0.31705	0.31725	0.31744	0.31764
0.720	0.31764	0.31783	0.31802	0.31821	0.31840	0.31859	0.31878	0.31896	0.31915	0.31934	0.31952
0.730	0.31952	0.31971	0.31989	0.32007	0.32025	0.32044	0.32062	0.32080	0.32098	0.32115	0.32133
0.740	0.32133	0.32151	0.32168	0.32186	0.32203	0.32221	0.32238	0.32255	0.32272	0.32289	0.32306
0.750	0.32306	0.32323	0.32340	0.32357	0.32373	0.32390	0.32406	0.32423	0.32439	0.32456	0.32472
0.760	0.32472	0.32488	0.32504	0.32520	0.32536	0.32552	0.32567	0.32583	0.32599	0.32614	0.32630
0.770	0.32630	0.32645	0.32660	0.32676	0.32691	0.32706	0.32721	0.32736	0.32751	0.32765	0.32780
0.780	0.32780	0.32795	0.32809	0.32824	0.32838	0.32853	0.32867	0.32881	0.32895	0.32909	0.32923
0.790	0.32923	0.32937	0.32951	0.32965	0.32978	0.32992	0.33005	0.33019	0.33032	0.33045	0.33059
0.800	0.33059	0.33072	0.33085	0.33098	0.33111	0.33124	0.33136	0.33149	0.33162	0.33174	0.33187
0.810	0.33187	0.33199	0.33212	0.33224	0.33236	0.33248	0.33260	0.33272	0.33284	0.33296	0.33308
0.820	0.33308	0.33319	0.33331	0.33343	0.33354	0.33365	0.33377	0.33388	0.33399	0.33410	0.33421
0.830	0.33421	0.33432	0.33443	0.33454	0.33465	0.33476	0.33486	0.33497	0.33507	0.33518	0.33528
0.840	0.33528	0.33538	0.33548	0.33558	0.33568	0.33578	0.33588	0.33598	0.33608	0.33618	0.33627
0.850	0.33627	0.33637	0.33646	0.33656	0.33665	0.33674	0.33684	0.33693	0.33702	0.33711	0.33720
0.860	0.33720	0.33729	0.33737	0.33746	0.33755	0.33763	0.33772	0.33780	0.33789	0.33797	0.33805
0.870	0.33805	0.33813	0.33821	0.33829	0.33837	0.33845	0.33853	0.33861	0.33869	0.33876	0.33884
0.880	0.33884	0.33891	0.33899	0.33906	0.33913	0.33920	0.33928	0.33935	0.33942	0.33949	0.33956
0.890	0.33956	0.33962	0.33969	0.33976	0.33982	0.33989	0.33995	0.34002	0.34008	0.34014	0.34021

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
0.900	0.34021	0.34027	0.34033	0.34039	0.34045	0.34051	0.34057	0.34062	0.34068	0.34074	0.34079
0.910	0.34079	0.34085	0.34090	0.34095	0.34101	0.34106	0.34111	0.34116	0.34121	0.34126	0.34131
0.920	0.34131	0.34136	0.34141	0.34145	0.34150	0.34155	0.34159	0.34164	0.34168	0.34172	0.34177
0.930	0.34177	0.34181	0.34185	0.34189	0.34193	0.34197	0.34201	0.34205	0.34208	0.34212	0.34216
0.940	0.34216	0.34219	0.34223	0.34226	0.34230	0.34233	0.34236	0.34239	0.34243	0.34246	0.34249
0.950	0.34249	0.34252	0.34254	0.34257	0.34260	0.34263	0.34265	0.34268	0.34270	0.34273	0.34275
0.960	0.34275	0.34278	0.34280	0.34282	0.34284	0.34286	0.34288	0.34290	0.34292	0.34294	0.34296
0.970	0.34296	0.34298	0.34299	0.34301	0.34302	0.34304	0.34305	0.34307	0.34308	0.34309	0.34310
0.980	0.34310	0.34312	0.34313	0.34314	0.34315	0.34316	0.34316	0.34317	0.34318	0.34319	0.34319
0.990	0.34319	0.34320	0.34320	0.34321	0.34321	0.34321	0.34322	0.34322	0.34322	0.34322	0.34322

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.000	0.34322	0.34322	0.34322	0.34322	0.34322	0.34321	0.34321	0.34321	0.34320	0.34320	0.34319
1.010	0.34319	0.34319	0.34318	0.34317	0.34316	0.34316	0.34315	0.34314	0.34313	0.34312	0.34311
1.020	0.34311	0.34310	0.34308	0.34307	0.34306	0.34304	0.34303	0.34302	0.34300	0.34298	0.34297
1.030	0.34297	0.34295	0.34293	0.34291	0.34290	0.34288	0.34286	0.34284	0.34282	0.34279	0.34277
1.040	0.34277	0.34275	0.34273	0.34270	0.34268	0.34266	0.34263	0.34261	0.34258	0.34255	0.34253
1.050	0.34253	0.34250	0.34247	0.34244	0.34241	0.34238	0.34235	0.34232	0.34229	0.34226	0.34223
1.060	0.34223	0.34219	0.34216	0.34213	0.34209	0.34206	0.34202	0.34199	0.34195	0.34191	0.34187
1.070	0.34187	0.34184	0.34180	0.34176	0.34172	0.34168	0.34164	0.34160	0.34156	0.34152	0.34147
1.080	0.34147	0.34143	0.34139	0.34134	0.34130	0.34125	0.34121	0.34115	0.34112	0.34107	0.34102
1.090	0.34102	0.34097	0.34093	0.34088	0.34083	0.34078	0.34073	0.34068	0.34063	0.34058	0.34052
1.100	0.34052	0.34047	0.34042	0.34036	0.34031	0.34026	0.34020	0.34015	0.34009	0.34003	0.33998
1.110	0.33998	0.33992	0.33986	0.33980	0.33974	0.33969	0.33963	0.33957	0.33951	0.33944	0.33938
1.120	0.33938	0.33932	0.33926	0.33920	0.33913	0.33907	0.33901	0.33894	0.33888	0.33881	0.33874
1.130	0.33874	0.33863	0.33861	0.33854	0.33848	0.33841	0.33834	0.33827	0.33820	0.33813	0.33806
1.140	0.33806	0.33799	0.33792	0.33785	0.33778	0.33770	0.33763	0.33756	0.33748	0.33741	0.33734
1.150	0.33734	0.33725	0.33719	0.33711	0.33703	0.33696	0.33688	0.33680	0.33672	0.33665	0.33657
1.160	0.33657	0.33649	0.33641	0.33633	0.33625	0.33617	0.33609	0.33600	0.33592	0.33584	0.33576
1.170	0.33576	0.33567	0.33559	0.33551	0.33542	0.33534	0.33525	0.33517	0.33508	0.33499	0.33491
1.180	0.33491	0.33482	0.33473	0.33464	0.33455	0.33447	0.33438	0.33429	0.33420	0.33411	0.33402
1.190	0.33402	0.33392	0.33383	0.33374	0.33365	0.33356	0.33346	0.33337	0.33328	0.33318	0.33309
1.200	0.33309	0.33299	0.33290	0.33280	0.33270	0.33261	0.33251	0.33241	0.33232	0.33222	0.33212
1.210	0.33212	0.33202	0.33192	0.33182	0.33172	0.33162	0.33152	0.33142	0.33132	0.33122	0.33112
1.220	0.33112	0.33102	0.33091	0.33081	0.33071	0.33060	0.33050	0.33039	0.33029	0.33018	0.33008
1.230	0.33008	0.32997	0.32987	0.32976	0.32965	0.32955	0.32944	0.32933	0.32922	0.32912	0.32901
1.240	0.32901	0.32890	0.32879	0.32868	0.32857	0.32846	0.32835	0.32823	0.32812	0.32801	0.32790
1.250	0.32790	0.32779	0.32767	0.32755	0.32745	0.32733	0.32722	0.32710	0.32699	0.32688	0.32676
1.260	0.32676	0.32664	0.32653	0.32641	0.32629	0.32618	0.32606	0.32594	0.32582	0.32571	0.32559
1.270	0.32559	0.32547	0.32535	0.32523	0.32511	0.32499	0.32487	0.32475	0.32463	0.32451	0.32439
1.280	0.32439	0.32426	0.32414	0.32402	0.32390	0.32377	0.32365	0.32353	0.32340	0.32328	0.32315
1.290	0.32315	0.32303	0.32290	0.32278	0.32265	0.32253	0.32240	0.32227	0.32215	0.32202	0.32189

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.300	0.32189	0.32176	0.32164	0.32151	0.32138	0.32125	0.32112	0.32099	0.32086	0.32073	0.32060
1.310	0.32060	0.32047	0.32034	0.32021	0.32008	0.31995	0.31981	0.31968	0.31955	0.31942	0.31928
1.320	0.31928	0.31915	0.31902	0.31888	0.31875	0.31862	0.31848	0.31835	0.31821	0.31808	0.31794
1.330	0.31794	0.31780	0.31767	0.31753	0.31740	0.31726	0.31712	0.31698	0.31685	0.31671	0.31657
1.340	0.31657	0.31643	0.31629	0.31615	0.31602	0.31588	0.31574	0.31560	0.31546	0.31532	0.31518
1.250	0.31518	0.31504	0.31489	0.31475	0.31461	0.31447	0.31433	0.31419	0.31404	0.31390	0.31376
1.360	0.31376	0.31362	0.31347	0.31333	0.31318	0.31304	0.31290	0.31275	0.31261	0.31246	0.31232
1.370	0.31232	0.31217	0.31203	0.31188	0.31173	0.31159	0.31144	0.31130	0.31115	0.31100	0.31085
1.380	0.31085	0.31071	0.31056	0.31041	0.31026	0.31011	0.30997	0.30982	0.30967	0.30952	0.30937
1.390	0.30937	0.30922	0.30907	0.30892	0.30877	0.30862	0.30847	0.30832	0.30817	0.30802	0.30786
1.400	0.30786	0.30771	0.30756	0.30741	0.30726	0.30710	0.30695	0.30680	0.30665	0.30649	0.30634
1.410	0.30634	0.30618	0.30603	0.30588	0.30572	0.30557	0.30541	0.30526	0.30510	0.30495	0.30479
1.420	0.30479	0.30464	0.30448	0.30433	0.30417	0.30402	0.30386	0.30370	0.30355	0.30339	0.30323
1.430	0.30323	0.30307	0.30292	0.30276	0.30260	0.30244	0.30229	0.30213	0.30197	0.30181	0.30165
1.440	0.30165	0.30149	0.30133	0.30117	0.30102	0.30086	0.30070	0.30054	0.30038	0.30022	0.30006
1.450	0.30006	0.29989	0.29973	0.29957	0.29941	0.29925	0.29909	0.29893	0.29877	0.29860	0.29844
1.460	0.29844	0.29828	0.29812	0.29796	0.29779	0.29763	0.29747	0.29730	0.29714	0.29698	0.29681
1.470	0.29681	0.29665	0.29649	0.29632	0.29616	0.29600	0.29583	0.29567	0.29550	0.29534	0.29517
1.480	0.29517	0.29501	0.29484	0.29468	0.29451	0.29435	0.29418	0.29401	0.29385	0.29368	0.29352
1.490	0.29352	0.29335	0.29318	0.29302	0.29285	0.29268	0.29252	0.29235	0.29218	0.29201	0.29185
1.500	0.29185	0.29168	0.29151	0.29134	0.29118	0.29101	0.29084	0.29067	0.29050	0.29033	0.29016
1.510	0.29016	0.29000	0.28983	0.28966	0.28949	0.28932	0.28915	0.28898	0.28881	0.28864	0.28847
1.520	0.28847	0.28830	0.28813	0.28796	0.28779	0.28762	0.28745	0.28728	0.28711	0.28694	0.28677
1.530	0.28677	0.28659	0.28642	0.28625	0.28608	0.28591	0.28574	0.28557	0.28539	0.28522	0.28505
1.540	0.28505	0.28488	0.28471	0.28453	0.28436	0.28419	0.28402	0.28384	0.28367	0.28350	0.28333
1.550	0.28332	0.28315	0.28298	0.28281	0.28263	0.28246	0.28229	0.28211	0.28194	0.28176	0.28159
1.560	0.28159	0.28142	0.28124	0.28107	0.28089	0.28072	0.28055	0.28037	0.28020	0.28002	0.27985
1.570	0.27985	0.27967	0.27950	0.27932	0.27915	0.27897	0.27880	0.27862	0.27845	0.27827	0.27810
1.580	0.27810	0.27792	0.27774	0.27757	0.27739	0.27722	0.27704	0.27687	0.27669	0.27651	0.27634
1.590	0.27634	0.27616	0.27598	0.27581	0.27563	0.27546	0.27528	0.27510	0.27493	0.27475	0.27457

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.600	0.27457	0.27431	0.27422	0.27404	0.27386	0.27369	0.27351	0.27333	0.27315	0.27298	0.27280
1.610	0.27280	0.27262	0.27244	0.27227	0.27209	0.27191	0.27173	0.27156	0.27138	0.27120	0.27102
1.620	0.27102	0.27084	0.27067	0.27049	0.27031	0.27013	0.26995	0.26977	0.26960	0.26942	0.26924
1.630	0.26924	0.26905	0.26888	0.26870	0.26852	0.26835	0.26817	0.26799	0.26781	0.26763	0.26745
1.640	0.26745	0.26727	0.26709	0.26691	0.26673	0.26656	0.26638	0.26620	0.26602	0.26584	0.26566
1.650	0.26566	0.26548	0.26530	0.26512	0.26494	0.26476	0.26458	0.26440	0.26422	0.26404	0.26386
1.660	0.26386	0.26368	0.26350	0.26332	0.26314	0.26296	0.26278	0.26260	0.26242	0.26224	0.26206
1.670	0.26206	0.26188	0.26170	0.26152	0.26134	0.26116	0.26098	0.26080	0.26062	0.26044	0.26026
1.680	0.26026	0.26008	0.25990	0.25972	0.25954	0.25936	0.25918	0.25900	0.25882	0.25864	0.25846
1.690	0.25846	0.25828	0.25810	0.25792	0.25774	0.25756	0.25738	0.25720	0.25701	0.25683	0.25665
1.700	0.25665	0.25647	0.25629	0.25611	0.25593	0.25575	0.25557	0.25539	0.25521	0.25503	0.25485
1.710	0.25485	0.25467	0.25448	0.25430	0.25412	0.25394	0.25376	0.25358	0.25340	0.25322	0.25304
1.720	0.25304	0.25286	0.25268	0.25250	0.25232	0.25213	0.25195	0.25177	0.25159	0.25141	0.25123
1.730	0.25123	0.25105	0.25087	0.25069	0.25051	0.25033	0.25014	0.24996	0.24978	0.24960	0.24942
1.740	0.24942	0.24924	0.24906	0.24888	0.24870	0.24852	0.24834	0.24816	0.24797	0.24779	0.24761
1.750	0.24761	0.24743	0.24725	0.24707	0.24689	0.24671	0.24653	0.24635	0.24617	0.24599	0.24581
1.760	0.24581	0.24563	0.24544	0.24526	0.24508	0.24490	0.24472	0.24454	0.24436	0.24418	0.24400
1.770	0.24400	0.24382	0.24364	0.24346	0.24328	0.24310	0.24292	0.24274	0.24256	0.24237	0.24219
1.780	0.24219	0.24201	0.24183	0.24165	0.24147	0.24129	0.24111	0.24093	0.24075	0.24057	0.24039
1.790	0.24039	0.24021	0.24003	0.23985	0.23967	0.23949	0.23931	0.23913	0.23895	0.23877	0.23859
1.800	0.23859	0.23841	0.23823	0.23805	0.23787	0.23769	0.23751	0.23733	0.23715	0.23697	0.23679
1.810	0.23679	0.23661	0.23643	0.23625	0.23607	0.23589	0.23571	0.23553	0.23536	0.23518	0.23500
1.820	0.23500	0.23482	0.23464	0.23446	0.23428	0.23410	0.23392	0.23374	0.23356	0.23338	0.23320
1.830	0.23320	0.23303	0.23285	0.23267	0.23249	0.23231	0.23213	0.23195	0.23177	0.23159	0.23142
1.840	0.23142	0.23124	0.23106	0.23088	0.23070	0.23052	0.23034	0.23017	0.22999	0.22981	0.22963
1.850	0.22963	0.22945	0.22927	0.22910	0.22892	0.22874	0.22856	0.22838	0.22821	0.22803	0.22785
1.860	0.22785	0.22767	0.22749	0.22732	0.22714	0.22696	0.22678	0.22661	0.22643	0.22625	0.22607
1.870	0.22607	0.22590	0.22572	0.22554	0.22536	0.22519	0.22501	0.22483	0.22465	0.22448	0.22430
1.880	0.22430	0.22412	0.22395	0.22377	0.22359	0.22342	0.22324	0.22306	0.22289	0.22271	0.22253
1.890	0.22253	0.22236	0.22218	0.22200	0.22183	0.22165	0.22148	0.22130	0.22112	0.22095	0.22077

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ. IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
1.900	0.22077	0.22060	0.22042	0.22024	0.22007	0.21989	0.21972	0.21954	0.21937	0.21919	0.21902
1.910	0.21902	0.21884	0.21867	0.21849	0.21831	0.21814	0.21796	0.21779	0.21761	0.21744	0.21726
1.920	0.21726	0.21709	0.21692	0.21674	0.21657	0.21639	0.21622	0.21604	0.21587	0.21569	0.21552
1.930	0.21552	0.21535	0.21517	0.21500	0.21482	0.21465	0.21448	0.21430	0.21413	0.21396	0.21378
1.940	0.21378	0.21361	0.21343	0.21326	0.21309	0.21291	0.21274	0.21257	0.21240	0.21222	0.21205
1.950	0.21205	0.21188	0.21170	0.21153	0.21136	0.21119	0.21101	0.21084	0.21067	0.21050	0.21032
1.960	0.21032	0.21015	0.20998	0.20981	0.20964	0.20946	0.20929	0.20912	0.20895	0.20878	0.20860
1.970	0.20860	0.20843	0.20826	0.20809	0.20792	0.20775	0.20758	0.20741	0.20723	0.20706	0.20689
1.980	0.20689	0.20672	0.20655	0.20638	0.20621	0.20604	0.20587	0.20570	0.20553	0.20536	0.20519
1.990	0.20519	0.20502	0.20485	0.20468	0.20451	0.20434	0.20417	0.20400	0.20383	0.20366	0.20349
2.000	0.20349	0.20332	0.20315	0.20298	0.20281	0.20264	0.20248	0.20231	0.20214	0.20197	0.20180
2.010	0.20180	0.20163	0.20146	0.20130	0.20113	0.20096	0.20079	0.20062	0.20045	0.20029	0.20012
2.020	0.20012	0.19995	0.19978	0.19962	0.19945	0.19928	0.19911	0.19895	0.19878	0.19861	0.19844
2.030	0.19844	0.19828	0.19811	0.19794	0.19778	0.19761	0.19744	0.19728	0.19711	0.19694	0.19678
2.040	0.19678	0.19661	0.19645	0.19628	0.19611	0.19595	0.19578	0.19562	0.19545	0.19529	0.19512
2.050	0.19512	0.19495	0.19479	0.19462	0.19446	0.19429	0.19413	0.19396	0.19380	0.19363	0.19347
2.060	0.19347	0.19331	0.19314	0.19298	0.19281	0.19265	0.19248	0.19232	0.19216	0.19199	0.19183
2.070	0.19183	0.19166	0.19150	0.19134	0.19117	0.19101	0.19085	0.19068	0.19052	0.19036	0.19020
2.080	0.19020	0.19007	0.18987	0.18971	0.18954	0.18938	0.18922	0.18906	0.18890	0.18873	0.18857
2.090	0.18857	0.18841	0.18825	0.18809	0.18792	0.18776	0.18760	0.18744	0.18728	0.18712	0.18696
2.100	0.18696	0.18679	0.18663	0.18647	0.18631	0.18615	0.18599	0.18583	0.18567	0.18551	0.18535
2.110	0.18535	0.18519	0.18503	0.18487	0.18471	0.18455	0.18439	0.18423	0.18407	0.18391	0.18375
2.120	0.18375	0.18359	0.18343	0.18327	0.18312	0.18296	0.18280	0.18264	0.18248	0.18232	0.18216
2.130	0.18216	0.18200	0.18185	0.18169	0.18153	0.18137	0.18121	0.18106	0.18090	0.18074	0.18058
2.140	0.18058	0.18043	0.18027	0.18011	0.17996	0.17980	0.17964	0.17948	0.17933	0.17917	0.17901
2.150	0.17901	0.17885	0.17870	0.17855	0.17839	0.17823	0.17808	0.17792	0.17777	0.17761	0.17745
2.160	0.17745	0.17730	0.17714	0.17699	0.17683	0.17668	0.17652	0.17637	0.17621	0.17606	0.17590
2.170	0.17590	0.17575	0.17559	0.17544	0.17528	0.17513	0.17498	0.17482	0.17467	0.17451	0.17436
2.180	0.17436	0.17421	0.17405	0.17390	0.17375	0.17359	0.17344	0.17329	0.17314	0.17298	0.17283
2.190	0.17283	0.17268	0.17252	0.17237	0.17222	0.17207	0.17191	0.17176	0.17161	0.17146	0.17131

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.200	0.17131	0.17116	0.17100	0.17085	0.17070	0.17055	0.17040	0.17025	0.17010	0.16995	0.16979
2.210	0.16979	0.16964	0.16949	0.16934	0.16919	0.16904	0.16889	0.16874	0.16859	0.16844	0.16829
2.220	0.16829	0.16814	0.16799	0.16784	0.16769	0.16754	0.16740	0.16725	0.16710	0.16695	0.16680
2.230	0.16680	0.16665	0.16650	0.16635	0.16621	0.16606	0.16591	0.16576	0.16561	0.16546	0.16532
2.240	0.16532	0.16517	0.16502	0.16487	0.16473	0.16458	0.16443	0.16428	0.16414	0.16399	0.16384
2.250	0.16384	0.16370	0.16355	0.16340	0.16326	0.16311	0.16296	0.16282	0.16267	0.16253	0.16238
2.260	0.16238	0.16223	0.16209	0.16194	0.16180	0.16165	0.16151	0.16136	0.16122	0.16107	0.16093
2.270	0.16093	0.16078	0.16064	0.16049	0.16035	0.16021	0.16006	0.15992	0.15977	0.15963	0.15948
2.280	0.15948	0.15934	0.15920	0.15905	0.15891	0.15877	0.15862	0.15848	0.15834	0.15820	0.15805
2.290	0.15805	0.15791	0.15777	0.15762	0.15748	0.15734	0.15720	0.15706	0.15691	0.15677	0.15663
2.300	0.15663	0.15649	0.15635	0.15620	0.15606	0.15592	0.15578	0.15564	0.15550	0.15536	0.15522
2.310	0.15522	0.15508	0.15494	0.15480	0.15465	0.15451	0.15437	0.15423	0.15409	0.15395	0.15381
2.320	0.15381	0.15368	0.15354	0.15340	0.15326	0.15312	0.15298	0.15284	0.15270	0.15255	0.15242
2.330	0.15242	0.15228	0.15215	0.15201	0.15187	0.15173	0.15159	0.15145	0.15132	0.15118	0.15104
2.340	0.15104	0.15090	0.15077	0.15063	0.15049	0.15035	0.15022	0.15008	0.14994	0.14981	0.14967
2.350	0.14967	0.14953	0.14940	0.14926	0.14912	0.14899	0.14885	0.14871	0.14858	0.14844	0.14831
2.360	0.14831	0.14817	0.14804	0.14790	0.14777	0.14763	0.14750	0.14736	0.14723	0.14709	0.14696
2.370	0.14696	0.14682	0.14669	0.14655	0.14642	0.14628	0.14615	0.14602	0.14588	0.14575	0.14561
2.380	0.14561	0.14548	0.14535	0.14521	0.14508	0.14495	0.14481	0.14468	0.14455	0.14442	0.14428
2.390	0.14428	0.14415	0.14402	0.14389	0.14375	0.14362	0.14349	0.14336	0.14323	0.14309	0.14296
2.400	0.14296	0.14283	0.14270	0.14257	0.14244	0.14231	0.14218	0.14204	0.14191	0.14178	0.14165
2.410	0.14165	0.14152	0.14139	0.14126	0.14113	0.14100	0.14087	0.14074	0.14061	0.14048	0.14035
2.420	0.14035	0.14022	0.14009	0.13996	0.13983	0.13971	0.13958	0.13945	0.13932	0.13919	0.13906
2.430	0.13906	0.13893	0.13881	0.13868	0.13855	0.13842	0.13829	0.13816	0.13804	0.13791	0.13778
2.440	0.13778	0.13765	0.13753	0.13740	0.13727	0.13715	0.13702	0.13689	0.13677	0.13664	0.13651
2.450	0.13651	0.13639	0.13626	0.13613	0.13601	0.13588	0.13576	0.13563	0.13550	0.13538	0.13525
2.460	0.13525	0.13513	0.13500	0.13488	0.13475	0.13463	0.13450	0.13438	0.13425	0.13413	0.13400
2.470	0.13400	0.13388	0.13375	0.13363	0.13351	0.13338	0.13326	0.13313	0.13301	0.13289	0.13276
2.480	0.13276	0.13264	0.13252	0.13239	0.13227	0.13215	0.13202	0.13190	0.13178	0.13166	0.13153
2.490	0.13153	0.13141	0.13129	0.13117	0.13104	0.13092	0.13080	0.13068	0.13056	0.13044	0.13031

CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.500	0.13031	0.13019	0.13007	0.12995	0.12983	0.12971	0.12959	0.12947	0.12935	0.12923	0.12910
2.510	0.12910	0.12898	0.12886	0.12874	0.12862	0.12850	0.12838	0.12826	0.12814	0.12802	0.12791
2.520	0.12791	0.12779	0.12767	0.12755	0.12743	0.12731	0.12719	0.12707	0.12695	0.12683	0.12672
2.530	0.12672	0.12660	0.12648	0.12636	0.12624	0.12612	0.12601	0.12589	0.12577	0.12565	0.12554
2.540	0.12554	0.12542	0.12530	0.12518	0.12507	0.12495	0.12483	0.12472	0.12460	0.12448	0.12437
2.550	0.12437	0.12425	0.12413	0.12402	0.12390	0.12379	0.12367	0.12355	0.12344	0.12332	0.12321
2.560	0.12321	0.12309	0.12298	0.12286	0.12275	0.12263	0.12252	0.12240	0.12229	0.12217	0.12206
2.570	0.12206	0.12194	0.12183	0.12171	0.12160	0.12149	0.12137	0.12126	0.12114	0.12103	0.12092
2.580	0.12092	0.12080	0.12069	0.12058	0.12046	0.12035	0.12024	0.12012	0.12001	0.11990	0.11979
2.590	0.11979	0.11967	0.11956	0.11945	0.11934	0.11922	0.11911	0.11900	0.11889	0.11878	0.11867
2.600	0.11867	0.11855	0.11844	0.11833	0.11822	0.11811	0.11800	0.11789	0.11778	0.11766	0.11755
2.610	0.11755	0.11744	0.11733	0.11722	0.11711	0.11700	0.11689	0.11678	0.11667	0.11656	0.11645
2.620	0.11645	0.11634	0.11623	0.11612	0.11601	0.11591	0.11580	0.11569	0.11558	0.11547	0.11536
2.630	0.11536	0.11525	0.11514	0.11504	0.11493	0.11482	0.11471	0.11460	0.11449	0.11439	0.11428
2.640	0.11428	0.11417	0.11406	0.11396	0.11385	0.11374	0.11363	0.11353	0.11342	0.11331	0.11321
2.650	0.11321	0.11310	0.11299	0.11289	0.11278	0.11267	0.11257	0.11246	0.11235	0.11225	0.11214
2.660	0.11214	0.11204	0.11193	0.11182	0.11172	0.11161	0.11151	0.11140	0.11130	0.11119	0.11109
2.670	0.11109	0.11098	0.11088	0.11077	0.11067	0.11056	0.11046	0.11036	0.11025	0.11015	0.11004
2.680	0.11004	0.10994	0.10983	0.10973	0.10963	0.10952	0.10942	0.10932	0.10921	0.10911	0.10901
2.690	0.10901	0.10890	0.10880	0.10870	0.10860	0.10849	0.10839	0.10829	0.10819	0.10808	0.10798
2.700	0.10798	0.10788	0.10778	0.10767	0.10757	0.10747	0.10737	0.10727	0.10717	0.10707	0.10696
2.710	0.10696	0.10686	0.10676	0.10666	0.10656	0.10646	0.10636	0.10626	0.10616	0.10606	0.10596
2.720	0.10596	0.10586	0.10576	0.10566	0.10556	0.10546	0.10536	0.10526	0.10516	0.10506	0.10496
2.730	0.10496	0.10486	0.10476	0.10466	0.10456	0.10446	0.10436	0.10426	0.10416	0.10407	0.10397
2.740	0.10397	0.10387	0.10377	0.10367	0.10357	0.10345	0.10338	0.10328	0.10318	0.10308	0.10299
2.750	0.10299	0.10289	0.10279	0.10269	0.10260	0.10250	0.10240	0.10230	0.10221	0.10211	0.10201
2.760	0.10201	0.10192	0.10182	0.10172	0.10163	0.10153	0.10143	0.10134	0.10124	0.10115	0.10105
2.770	0.10105	0.10095	0.10086	0.10076	0.10067	0.10057	0.10048	0.10038	0.10029	0.10019	0.10010
2.780	0.10010	0.10000	0.09991	0.09981	0.09972	0.09962	0.09953	0.09943	0.09934	0.09924	0.09915
2.790	0.09915	0.09906	0.09896	0.09887	0.09877	0.09868	0.09859	0.09849	0.09840	0.09831	0.09821



CORRECTED WEIGHT FLOW PARAMETER (WEIGHT FLOW LBS/SEC - AREA SQ.IN.)

MACH NO.	0	1	2	3	4	5	6	7	8	9	10
2.800	0.09821	0.09812	0.09803	0.09793	0.09784	0.09775	0.09766	0.09756	0.09747	0.09738	0.09728
2.810	0.09728	0.09719	0.09710	0.09701	0.09692	0.09682	0.09673	0.09664	0.09655	0.09646	0.09636
2.820	0.09636	0.09627	0.09618	0.09609	0.09600	0.09591	0.09582	0.09573	0.09564	0.09554	0.09545
2.830	0.09545	0.09536	0.09527	0.09518	0.09509	0.09500	0.09491	0.09482	0.09473	0.09464	0.09455
2.840	0.09455	0.09446	0.09437	0.09428	0.09419	0.09410	0.09401	0.09392	0.09383	0.09375	0.09366
2.850	0.09366	0.09357	0.09348	0.09339	0.09330	0.09321	0.09312	0.09304	0.09295	0.09286	0.09277
2.860	0.09277	0.09268	0.09259	0.09251	0.09242	0.09233	0.09224	0.09215	0.09207	0.09198	0.09189
2.870	0.09189	0.09180	0.09172	0.09163	0.09154	0.09146	0.09137	0.09128	0.09120	0.09111	0.09102
2.880	0.09102	0.09094	0.09085	0.09076	0.09068	0.09059	0.09050	0.09042	0.09033	0.09025	0.09016
2.890	0.09016	0.09008	0.08999	0.08990	0.08982	0.08973	0.08965	0.08956	0.08948	0.08939	0.08931
2.900	0.08931	0.08922	0.08914	0.08905	0.08897	0.08888	0.08880	0.08872	0.08863	0.08855	0.08846
2.910	0.08846	0.08838	0.08829	0.08821	0.08813	0.08804	0.08796	0.08788	0.08779	0.08771	0.08762
2.920	0.08762	0.08754	0.08746	0.08738	0.08729	0.08721	0.08713	0.08704	0.08696	0.08688	0.08680
2.930	0.08680	0.08671	0.08663	0.08655	0.08647	0.08638	0.08630	0.08622	0.08614	0.08606	0.08597
2.940	0.08597	0.08589	0.08581	0.08573	0.08565	0.08557	0.08548	0.08540	0.08532	0.08524	0.08516
2.950	0.08516	0.08508	0.08500	0.08492	0.08484	0.08476	0.08468	0.08459	0.08451	0.08443	0.08435
2.960	0.08435	0.08427	0.08419	0.08411	0.08403	0.08395	0.08387	0.08379	0.08371	0.08363	0.08356
2.970	0.08356	0.08348	0.08340	0.08332	0.08324	0.08316	0.08308	0.08300	0.08292	0.08284	0.08276
2.980	0.08276	0.08267	0.08261	0.08253	0.08245	0.08237	0.08229	0.08222	0.08214	0.08206	0.08198
2.990	0.08198	0.08190	0.08183	0.08175	0.08167	0.08159	0.08152	0.08144	0.08136	0.08128	0.08121
3.000	0.08121	0.08117	0.08105	0.08097	0.08090	0.08082	0.08074	0.08067	0.08059	0.08051	0.08044
3.010	0.08044	0.08036	0.08028	0.08021	0.08013	0.08006	0.07998	0.07990	0.07983	0.07975	0.07968
3.020	0.07968	0.07960	0.07953	0.07945	0.07937	0.07930	0.07922	0.07915	0.07907	0.07900	0.07892
3.030	0.07892	0.07885	0.07877	0.07870	0.07862	0.07855	0.07847	0.07840	0.07833	0.07825	0.07818
3.040	0.07818	0.07810	0.07803	0.07795	0.07788	0.07781	0.07773	0.07766	0.07758	0.07751	0.07744
3.050	0.07744	0.07736	0.07729	0.07722	0.07714	0.07707	0.07700	0.07692	0.07685	0.07678	0.07671
3.060	0.07671	0.07663	0.07656	0.07649	0.07641	0.07634	0.07627	0.07620	0.07612	0.07605	0.07598
3.070	0.07598	0.07591	0.07584	0.07576	0.07569	0.07562	0.07555	0.07548	0.07541	0.07533	0.07526
3.080	0.07526	0.07517	0.07512	0.07505	0.07498	0.07491	0.07483	0.07476	0.07469	0.07462	0.07455
3.090	0.07455	0.07446	0.07441	0.07434	0.07427	0.07420	0.07413	0.07406	0.07399	0.07392	0.07385

Appendix B (continued)

Tabulation of:

$$\frac{W \sqrt{\theta_t}}{A \sqrt{p_t}}$$

Refer to page E2 for definitions. The tabulation is versus the ratio of total to static pressure.

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
1.000	0.	0.02240	0.03164	0.03871	0.04465	0.04987	0.05458	0.05889	0.06289	0.06664	0.07017
1.010	0.07017	0.07352	0.07671	0.07976	0.08268	0.08550	0.08821	0.09084	0.09337	0.09583	0.09822
1.020	0.09822	0.10055	0.10281	0.10501	0.10716	0.10926	0.11131	0.11332	0.11528	0.11721	0.11909
1.030	0.11909	0.12094	0.12275	0.12453	0.12627	0.12799	0.12967	0.13133	0.13296	0.13456	0.13614
1.040	0.13614	0.13770	0.13923	0.14073	0.14222	0.14368	0.14513	0.14655	0.14796	0.14934	0.15071
1.050	0.15071	0.15206	0.15339	0.15470	0.15600	0.15729	0.15855	0.15981	0.16104	0.16227	0.16348
1.060	0.16348	0.16467	0.16585	0.16702	0.16818	0.16932	0.17045	0.17157	0.17268	0.17378	0.17486
1.070	0.17486	0.17594	0.17700	0.17805	0.17909	0.18012	0.18115	0.18216	0.18316	0.18415	0.18514
1.080	0.18514	0.18611	0.18708	0.18803	0.18898	0.18992	0.19085	0.19178	0.19269	0.19360	0.19450
1.090	0.19450	0.19539	0.19627	0.19715	0.19802	0.19888	0.19973	0.20058	0.20142	0.20225	0.20308
1.100	0.20308	0.20390	0.20472	0.20552	0.20632	0.20712	0.20791	0.20869	0.20946	0.21023	0.21100
1.110	0.21100	0.21176	0.21251	0.21326	0.21400	0.21474	0.21547	0.21619	0.21691	0.21763	0.21834
1.120	0.21834	0.21904	0.21974	0.22043	0.22112	0.22181	0.22249	0.22316	0.22383	0.22450	0.22516
1.130	0.22516	0.22582	0.22647	0.22712	0.22776	0.22840	0.22903	0.22966	0.23029	0.23091	0.23153
1.140	0.23153	0.23214	0.23275	0.23336	0.23396	0.23455	0.23515	0.23574	0.23632	0.23691	0.23748
1.150	0.23748	0.23806	0.23863	0.23920	0.23976	0.24032	0.24088	0.24143	0.24198	0.24253	0.24307
1.160	0.24307	0.24361	0.24415	0.24468	0.24521	0.24574	0.24626	0.24678	0.24730	0.24781	0.24832
1.170	0.24832	0.24883	0.24933	0.24984	0.25034	0.25083	0.25132	0.25181	0.25230	0.25278	0.25327
1.180	0.25327	0.25374	0.25422	0.25469	0.25516	0.25563	0.25610	0.25656	0.25702	0.25747	0.25793
1.190	0.25793	0.25833	0.25883	0.25927	0.25972	0.26016	0.26060	0.26103	0.26147	0.26190	0.26233
1.200	0.26233	0.26276	0.26318	0.26360	0.26402	0.26444	0.26485	0.26527	0.26568	0.26609	0.26649
1.210	0.26649	0.26689	0.26730	0.26770	0.26809	0.26849	0.26888	0.26927	0.26966	0.27005	0.27043
1.220	0.27043	0.27081	0.27119	0.27157	0.27195	0.27232	0.27269	0.27306	0.27343	0.27380	0.27416
1.230	0.27416	0.27453	0.27489	0.27524	0.27560	0.27596	0.27631	0.27666	0.27701	0.27736	0.27770
1.240	0.27770	0.27805	0.27839	0.27873	0.27907	0.27940	0.27974	0.28007	0.28040	0.28073	0.28106
1.250	0.28106	0.28139	0.28171	0.28204	0.28236	0.28268	0.28300	0.28331	0.28363	0.28394	0.28425
1.260	0.28425	0.28456	0.28487	0.28518	0.28548	0.28579	0.28609	0.28639	0.28669	0.28699	0.28729
1.270	0.28729	0.28758	0.28787	0.28817	0.28846	0.28875	0.28903	0.28932	0.28960	0.28989	0.29017
1.280	0.29017	0.29045	0.29073	0.29101	0.29128	0.29156	0.29183	0.29210	0.29237	0.29264	0.29291
1.290	0.29291	0.29318	0.29345	0.29371	0.29397	0.29423	0.29450	0.29475	0.29501	0.29527	0.29552

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PtO/PS	0	1	2	3	4	5	6	7	8	9	10
1.300	0.29552	0.29578	0.29603	0.29628	0.29653	0.29678	0.29703	0.29728	0.29752	0.29777	0.29801
1.310	0.29801	0.29825	0.29849	0.29873	0.29897	0.29921	0.29945	0.29968	0.29992	0.30015	0.30038
1.320	0.30038	0.30061	0.30084	0.30107	0.30130	0.30152	0.30175	0.30197	0.30220	0.30242	0.30264
1.330	0.30264	0.30286	0.30308	0.30329	0.30351	0.30373	0.30394	0.30416	0.30437	0.30458	0.30479
1.340	0.30479	0.30500	0.30521	0.30542	0.30562	0.30583	0.30603	0.30624	0.30644	0.30664	0.30684
1.350	0.30684	0.30704	0.30724	0.30744	0.30764	0.30783	0.30803	0.30822	0.30841	0.30861	0.30880
1.360	0.30880	0.30899	0.30918	0.30937	0.30956	0.30974	0.30993	0.31011	0.31030	0.31048	0.31066
1.370	0.31066	0.31085	0.31103	0.31121	0.31139	0.31157	0.31174	0.31192	0.31210	0.31227	0.31244
1.380	0.31244	0.31262	0.31279	0.31296	0.31313	0.31330	0.31347	0.31364	0.31381	0.31398	0.31414
1.390	0.31414	0.31431	0.31447	0.31464	0.31480	0.31496	0.31512	0.31528	0.31544	0.31560	0.31576
1.400	0.31576	0.31592	0.31608	0.31623	0.31639	0.31654	0.31670	0.31685	0.31700	0.31716	0.31731
1.410	0.31731	0.31746	0.31761	0.31776	0.31791	0.31805	0.31820	0.31835	0.31849	0.31864	0.31878
1.420	0.31878	0.31893	0.31907	0.31921	0.31935	0.31949	0.31963	0.31977	0.31991	0.32005	0.32019
1.430	0.32019	0.32033	0.32046	0.32060	0.32073	0.32087	0.32100	0.32113	0.32127	0.32140	0.32153
1.440	0.32153	0.32166	0.32179	0.32192	0.32205	0.32218	0.32231	0.32243	0.32256	0.32268	0.32281
1.450	0.32281	0.32293	0.32306	0.32318	0.32330	0.32343	0.32355	0.32367	0.32379	0.32391	0.32403
1.460	0.32403	0.32415	0.32427	0.32438	0.32450	0.32462	0.32473	0.32485	0.32497	0.32508	0.32519
1.470	0.32519	0.32531	0.32542	0.32553	0.32564	0.32575	0.32587	0.32598	0.32608	0.32619	0.32630
1.480	0.32630	0.32641	0.32652	0.32662	0.32673	0.32684	0.32694	0.32705	0.32715	0.32726	0.32736
1.490	0.32736	0.32746	0.32756	0.32767	0.32777	0.32787	0.32797	0.32807	0.32817	0.32827	0.32837
1.500	0.32837	0.32845	0.32856	0.32866	0.32876	0.32885	0.32895	0.32904	0.32914	0.32923	0.32932
1.510	0.32932	0.32942	0.32951	0.32960	0.32970	0.32979	0.32988	0.32997	0.33006	0.33015	0.33024
1.520	0.33024	0.33033	0.33041	0.33050	0.33059	0.33068	0.33076	0.33085	0.33094	0.33102	0.33111
1.530	0.33111	0.33119	0.33128	0.33136	0.33144	0.33152	0.33161	0.33169	0.33177	0.33185	0.33193
1.540	0.33193	0.33201	0.33209	0.33217	0.33225	0.33233	0.33241	0.33249	0.33256	0.33264	0.33272
1.550	0.33272	0.33279	0.33287	0.33295	0.33302	0.33310	0.33317	0.33324	0.33332	0.33339	0.33346
1.560	0.33346	0.33354	0.33361	0.33368	0.33375	0.33382	0.33389	0.33396	0.33403	0.33410	0.33417
1.570	0.33417	0.33424	0.33431	0.33438	0.33445	0.33451	0.33458	0.33465	0.33471	0.33478	0.33485
1.580	0.33485	0.33491	0.33498	0.33504	0.33510	0.33517	0.33523	0.33530	0.33536	0.33542	0.33548
1.590	0.33548	0.33554	0.33561	0.33567	0.33573	0.33579	0.33585	0.33591	0.33597	0.33603	0.33609

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

P <sub>T</sub> /P <sub>S</sub>	0	1	2	3	4	5	6	7	8	9	10
1.600	0.33609	0.33613	0.33620	0.33626	0.33632	0.33638	0.33643	0.33649	0.33655	0.33660	0.33666
1.610	0.33666	0.33671	0.33677	0.33682	0.33688	0.33693	0.33699	0.33704	0.33709	0.33715	0.33720
1.620	0.33720	0.33725	0.33730	0.33735	0.33741	0.33746	0.33751	0.33756	0.33761	0.33766	0.33771
1.630	0.33771	0.33775	0.33781	0.33786	0.33791	0.33795	0.33800	0.33805	0.33810	0.33814	0.33819
1.640	0.33819	0.33824	0.33828	0.33833	0.33838	0.33842	0.33847	0.33851	0.33856	0.33860	0.33864
1.650	0.33864	0.33869	0.33873	0.33878	0.33882	0.33886	0.33890	0.33895	0.33899	0.33903	0.33907
1.660	0.33907	0.33911	0.33915	0.33919	0.33923	0.33927	0.33931	0.33935	0.33939	0.33943	0.33947
1.670	0.33947	0.33951	0.33955	0.33959	0.33963	0.33966	0.33970	0.33974	0.33977	0.33981	0.33985
1.680	0.33985	0.33989	0.33992	0.33996	0.33999	0.34003	0.34006	0.34010	0.34013	0.34017	0.34020
1.690	0.34020	0.34023	0.34027	0.34030	0.34033	0.34037	0.34040	0.34043	0.34046	0.34050	0.34053
1.700	0.34053	0.34055	0.34059	0.34062	0.34065	0.34068	0.34072	0.34075	0.34078	0.34081	0.34083
1.710	0.34083	0.34086	0.34089	0.34092	0.34095	0.34098	0.34101	0.34104	0.34106	0.34109	0.34112
1.720	0.34112	0.34115	0.34117	0.34120	0.34123	0.34125	0.34128	0.34131	0.34133	0.34136	0.34138
1.730	0.34138	0.34141	0.34143	0.34146	0.34148	0.34151	0.34153	0.34156	0.34158	0.34160	0.34163
1.740	0.34163	0.34165	0.34167	0.34170	0.34172	0.34174	0.34176	0.34178	0.34181	0.34183	0.34185
1.750	0.34185	0.34187	0.34189	0.34191	0.34193	0.34195	0.34198	0.34200	0.34202	0.34204	0.34205
1.760	0.34205	0.34207	0.34209	0.34211	0.34213	0.34215	0.34217	0.34219	0.34221	0.34222	0.34224
1.770	0.34224	0.34226	0.34228	0.34229	0.34231	0.34233	0.34234	0.34236	0.34238	0.34239	0.34241
1.780	0.34241	0.34243	0.34244	0.34246	0.34247	0.34249	0.34250	0.34252	0.34253	0.34255	0.34256
1.790	0.34256	0.34258	0.34259	0.34260	0.34262	0.34263	0.34265	0.34266	0.34267	0.34269	0.34270
1.800	0.34270	0.34271	0.34272	0.34274	0.34275	0.34276	0.34277	0.34278	0.34279	0.34281	0.34282
1.810	0.34282	0.34283	0.34284	0.34285	0.34286	0.34287	0.34288	0.34289	0.34290	0.34291	0.34292
1.820	0.34292	0.34293	0.34294	0.34295	0.34296	0.34297	0.34298	0.34299	0.34299	0.34300	0.34301
1.830	0.34301	0.34302	0.34303	0.34303	0.34304	0.34305	0.34306	0.34306	0.34307	0.34308	0.34309
1.840	0.34309	0.34309	0.34310	0.34311	0.34311	0.34312	0.34312	0.34313	0.34314	0.34314	0.34315
1.850	0.34315	0.34315	0.34316	0.34316	0.34317	0.34317	0.34318	0.34318	0.34319	0.34319	0.34319
1.860	0.34319	0.34320	0.34320	0.34321	0.34321	0.34321	0.34322	0.34322	0.34322	0.34323	0.34323
1.870	0.34323	0.34323	0.34323	0.34324	0.34324	0.34324	0.34324	0.34324	0.34325	0.34325	0.34325
1.880	0.34325	0.34325	0.34325	0.34325	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326
1.890	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326	0.34326

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
1.900	0.34326	0.34325	0.34326	0.34325	0.34325	0.34325	0.34325	0.34325	0.34325	0.34324	0.34324
1.910	0.34324	0.34324	0.34324	0.34324	0.34323	0.34323	0.34323	0.34323	0.34322	0.34322	0.34322
1.920	0.34322	0.34321	0.34321	0.34321	0.34320	0.34320	0.34320	0.34319	0.34319	0.34319	0.34318
1.930	0.34318	0.34318	0.34317	0.34317	0.34317	0.34316	0.34316	0.34315	0.34315	0.34314	0.34314
1.940	0.34314	0.34313	0.34313	0.34312	0.34311	0.34311	0.34310	0.34310	0.34309	0.34309	0.34308
1.950	0.34308	0.34307	0.34307	0.34306	0.34305	0.34305	0.34304	0.34303	0.34303	0.34302	0.34301
1.960	0.34301	0.34301	0.34300	0.34299	0.34299	0.34298	0.34297	0.34296	0.34295	0.34295	0.34294
1.970	0.34294	0.34293	0.34292	0.34291	0.34291	0.34290	0.34289	0.34288	0.34287	0.34286	0.34285
1.980	0.34285	0.34285	0.34284	0.34283	0.34282	0.34281	0.34280	0.34279	0.34278	0.34277	0.34276
1.990	0.34276	0.34275	0.34274	0.34273	0.34272	0.34271	0.34270	0.34269	0.34268	0.34267	0.34266
2.000	0.34266	0.34265	0.34264	0.34263	0.34262	0.34260	0.34259	0.34258	0.34257	0.34256	0.34255
2.010	0.34255	0.34254	0.34253	0.34251	0.34250	0.34249	0.34248	0.34247	0.34245	0.34244	0.34243
2.020	0.34243	0.34242	0.34241	0.34239	0.34238	0.34237	0.34236	0.34234	0.34233	0.34232	0.34230
2.030	0.34230	0.34229	0.34228	0.34226	0.34225	0.34224	0.34222	0.34221	0.34220	0.34218	0.34217
2.040	0.34217	0.34216	0.34214	0.34213	0.34211	0.34210	0.34209	0.34207	0.34206	0.34204	0.34203
2.050	0.34203	0.34201	0.34200	0.34198	0.34197	0.34196	0.34194	0.34193	0.34191	0.34190	0.34188
2.060	0.34188	0.34187	0.34185	0.34183	0.34182	0.34180	0.34179	0.34177	0.34176	0.34174	0.34173
2.070	0.34173	0.34171	0.34169	0.34168	0.34166	0.34165	0.34163	0.34161	0.34160	0.34158	0.34156
2.080	0.34156	0.34155	0.34153	0.34151	0.34150	0.34148	0.34146	0.34145	0.34143	0.34141	0.34140
2.090	0.34140	0.34138	0.34136	0.34134	0.34133	0.34131	0.34129	0.34127	0.34126	0.34124	0.34122
2.100	0.34122	0.34120	0.34119	0.34117	0.34115	0.34113	0.34111	0.34110	0.34108	0.34106	0.34104
2.110	0.34104	0.34102	0.34100	0.34098	0.34097	0.34095	0.34093	0.34091	0.34089	0.34087	0.34085
2.120	0.34085	0.34083	0.34082	0.34080	0.34078	0.34076	0.34074	0.34072	0.34070	0.34068	0.34066
2.130	0.34066	0.34064	0.34062	0.34060	0.34058	0.34056	0.34054	0.34052	0.34050	0.34048	0.34046
2.140	0.34046	0.34044	0.34042	0.34040	0.34038	0.34036	0.34034	0.34032	0.34030	0.34028	0.34026
2.150	0.34026	0.34024	0.34022	0.34020	0.34018	0.34016	0.34014	0.34012	0.34009	0.34007	0.34005
2.160	0.34005	0.34003	0.34001	0.33999	0.33997	0.33995	0.33993	0.33990	0.33988	0.33986	0.33984
2.170	0.33984	0.33982	0.33980	0.33977	0.33975	0.33973	0.33971	0.33969	0.33967	0.33964	0.33962
2.180	0.33962	0.33960	0.33958	0.33956	0.33953	0.33951	0.33949	0.33947	0.33944	0.33942	0.33940
2.190	0.33940	0.33938	0.33935	0.33933	0.33931	0.33929	0.33926	0.33924	0.33922	0.33919	0.33917

## WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
2.200	0.33917	0.33915	0.33913	0.33910	0.33908	0.33906	0.33903	0.33901	0.33899	0.33895	0.33894
2.210	0.33894	0.33892	0.33889	0.33887	0.33885	0.33882	0.33880	0.33878	0.33875	0.33873	0.33870
2.220	0.33870	0.33868	0.33866	0.33863	0.33861	0.33858	0.33856	0.33854	0.33851	0.33849	0.33846
2.230	0.33846	0.33844	0.33842	0.33839	0.33837	0.33834	0.33832	0.33829	0.33827	0.33824	0.33822
2.240	0.33822	0.33820	0.33817	0.33815	0.33812	0.33810	0.33807	0.33805	0.33802	0.33800	0.33797
2.250	0.33797	0.33795	0.33792	0.33790	0.33787	0.33785	0.33782	0.33780	0.33777	0.33775	0.33772
2.260	0.33772	0.33769	0.33767	0.33764	0.33762	0.33759	0.33757	0.33754	0.33752	0.33749	0.33746
2.270	0.33746	0.33744	0.33741	0.33739	0.33736	0.33734	0.33731	0.33728	0.33726	0.33723	0.33721
2.280	0.33721	0.33718	0.33715	0.33713	0.33710	0.33707	0.33705	0.33702	0.33700	0.33697	0.33694
2.290	0.33694	0.33692	0.33689	0.33686	0.33684	0.33681	0.33678	0.33676	0.33673	0.33670	0.33668
2.300	0.33668	0.33665	0.33662	0.33660	0.33657	0.33654	0.33652	0.33649	0.33646	0.33644	0.33641
2.310	0.33641	0.33633	0.33635	0.33633	0.33630	0.33627	0.33625	0.33622	0.33619	0.33616	0.33614
2.320	0.33614	0.33611	0.33608	0.33605	0.33603	0.33600	0.33597	0.33594	0.33592	0.33589	0.33586
2.330	0.33586	0.33583	0.33581	0.33578	0.33575	0.33572	0.33570	0.33567	0.33564	0.33561	0.33558
2.340	0.33558	0.33556	0.33553	0.33550	0.33547	0.33544	0.33542	0.33539	0.33536	0.33533	0.33530
2.350	0.33530	0.33523	0.33525	0.33522	0.33519	0.33516	0.33513	0.33511	0.33508	0.33505	0.33502
2.360	0.33502	0.33499	0.33496	0.33493	0.33491	0.33488	0.33485	0.33482	0.33479	0.33476	0.33473
2.370	0.33473	0.33471	0.33468	0.33465	0.33462	0.33459	0.33456	0.33453	0.33450	0.33447	0.33445
2.380	0.33445	0.33442	0.33439	0.33436	0.33433	0.33430	0.33427	0.33424	0.33421	0.33418	0.33415
2.390	0.33415	0.33413	0.33410	0.33407	0.33404	0.33401	0.33398	0.33395	0.33392	0.33389	0.33386
2.400	0.33386	0.33381	0.33380	0.33377	0.33374	0.33371	0.33368	0.33366	0.33363	0.33360	0.33357
2.410	0.33357	0.33354	0.33351	0.33348	0.33345	0.33342	0.33339	0.33336	0.33333	0.33330	0.33327
2.420	0.33327	0.33324	0.33321	0.33318	0.33315	0.33312	0.33309	0.33306	0.33303	0.33300	0.33297
2.430	0.33297	0.33294	0.33291	0.33288	0.33285	0.33282	0.33279	0.33276	0.33273	0.33270	0.33267
2.440	0.33267	0.33264	0.33261	0.33258	0.33255	0.33252	0.33248	0.33245	0.33242	0.33239	0.33236
2.450	0.33236	0.33233	0.33230	0.33227	0.33224	0.33221	0.33218	0.33215	0.33212	0.33209	0.33206
2.460	0.33206	0.33203	0.33200	0.33197	0.33193	0.33190	0.33187	0.33184	0.33181	0.33178	0.33175
2.470	0.33175	0.33172	0.33169	0.33166	0.33163	0.33160	0.33156	0.33153	0.33150	0.33147	0.33144
2.480	0.33144	0.33141	0.33138	0.33135	0.33132	0.33128	0.33125	0.33122	0.33119	0.33116	0.33113
2.490	0.33113	0.33110	0.33107	0.33104	0.33100	0.33097	0.33094	0.33091	0.33088	0.33085	0.33082

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
2.500	0.33082	0.33079	0.33075	0.33072	0.33069	0.33066	0.33063	0.33060	0.33057	0.33053	0.33050
2.510	0.33050	0.33047	0.33044	0.33041	0.33038	0.33034	0.33031	0.33028	0.33025	0.33022	0.33019
2.520	0.33019	0.33015	0.33012	0.33009	0.33006	0.33003	0.33000	0.32997	0.32993	0.32990	0.32987
2.530	0.32987	0.32984	0.32981	0.32977	0.32974	0.32971	0.32968	0.32965	0.32961	0.32958	0.32955
2.540	0.32955	0.32952	0.32949	0.32945	0.32942	0.32939	0.32936	0.32933	0.32929	0.32926	0.32923
2.550	0.32923	0.32920	0.32917	0.32913	0.32910	0.32907	0.32904	0.32901	0.32897	0.32894	0.32891
2.560	0.32891	0.32888	0.32884	0.32881	0.32878	0.32875	0.32872	0.32868	0.32865	0.32862	0.32859
2.570	0.32859	0.32855	0.32852	0.32849	0.32846	0.32843	0.32839	0.32836	0.32833	0.32830	0.32826
2.580	0.32826	0.32823	0.32820	0.32817	0.32813	0.32810	0.32807	0.32804	0.32800	0.32797	0.32794
2.590	0.32794	0.32791	0.32787	0.32784	0.32781	0.32777	0.32774	0.32771	0.32768	0.32764	0.32761
2.600	0.32761	0.32758	0.32755	0.32751	0.32748	0.32745	0.32742	0.32738	0.32735	0.32732	0.32728
2.610	0.32728	0.32725	0.32722	0.32719	0.32715	0.32712	0.32709	0.32705	0.32702	0.32699	0.32696
2.620	0.32696	0.32692	0.32689	0.32686	0.32682	0.32679	0.32676	0.32673	0.32669	0.32666	0.32663
2.630	0.32663	0.32659	0.32656	0.32653	0.32650	0.32646	0.32643	0.32640	0.32636	0.32633	0.32630
2.640	0.32630	0.32626	0.32623	0.32620	0.32617	0.32613	0.32610	0.32607	0.32603	0.32600	0.32597
2.650	0.32597	0.32593	0.32590	0.32587	0.32583	0.32580	0.32577	0.32573	0.32570	0.32567	0.32563
2.660	0.32563	0.32560	0.32557	0.32554	0.32550	0.32547	0.32544	0.32540	0.32537	0.32534	0.32530
2.670	0.32530	0.32527	0.32524	0.32520	0.32517	0.32514	0.32510	0.32507	0.32504	0.32500	0.32497
2.680	0.32497	0.32494	0.32490	0.32487	0.32484	0.32480	0.32477	0.32474	0.32470	0.32467	0.32463
2.690	0.32463	0.32460	0.32457	0.32453	0.32450	0.32447	0.32443	0.32440	0.32437	0.32433	0.32430
2.700	0.32430	0.32427	0.32423	0.32420	0.32417	0.32413	0.32410	0.32407	0.32403	0.32400	0.32396
2.710	0.32396	0.32393	0.32390	0.32386	0.32383	0.32380	0.32376	0.32373	0.32370	0.32366	0.32363
2.720	0.32363	0.32360	0.32356	0.32353	0.32349	0.32346	0.32343	0.32339	0.32336	0.32333	0.32329
2.730	0.32329	0.32326	0.32322	0.32319	0.32316	0.32312	0.32309	0.32306	0.32302	0.32299	0.32296
2.740	0.32296	0.32292	0.32289	0.32285	0.32282	0.32279	0.32275	0.32272	0.32269	0.32265	0.32262
2.750	0.32262	0.32258	0.32255	0.32252	0.32248	0.32245	0.32241	0.32238	0.32235	0.32231	0.32228
2.760	0.32228	0.32225	0.32221	0.32218	0.32214	0.32211	0.32208	0.32204	0.32201	0.32197	0.32194
2.770	0.32194	0.32191	0.32187	0.32184	0.32181	0.32177	0.32174	0.32170	0.32167	0.32164	0.32160
2.780	0.32160	0.32157	0.32153	0.32150	0.32147	0.32143	0.32140	0.32136	0.32133	0.32130	0.32126
2.790	0.32126	0.32123	0.32119	0.32116	0.32113	0.32109	0.32106	0.32102	0.32099	0.32096	0.32092



WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
2.800	0.32092	0.32087	0.32085	0.32082	0.32079	0.32075	0.32072	0.32068	0.32061	0.32062	0.32058
2.810	0.32058	0.32055	0.32051	0.32048	0.32045	0.32041	0.32038	0.32034	0.32031	0.32028	0.32024
2.820	0.32024	0.32021	0.32017	0.32014	0.32011	0.32007	0.32004	0.32000	0.31997	0.31994	0.31990
2.830	0.31990	0.31987	0.31983	0.31980	0.31977	0.31973	0.31970	0.31966	0.31963	0.31959	0.31956
2.840	0.31956	0.31953	0.31949	0.31946	0.31942	0.31939	0.31936	0.31932	0.31929	0.31925	0.31922
2.850	0.31922	0.31919	0.31915	0.31912	0.31908	0.31905	0.31901	0.31898	0.31895	0.31891	0.31888
2.860	0.31888	0.31884	0.31881	0.31878	0.31874	0.31871	0.31867	0.31864	0.31860	0.31857	0.31854
2.870	0.31854	0.31850	0.31847	0.31843	0.31840	0.31837	0.31833	0.31830	0.31826	0.31823	0.31819
2.880	0.31819	0.31815	0.31813	0.31809	0.31806	0.31802	0.31799	0.31795	0.31792	0.31789	0.31785
2.890	0.31785	0.31782	0.31778	0.31775	0.31772	0.31768	0.31765	0.31761	0.31758	0.31754	0.31751
2.900	0.31751	0.31748	0.31744	0.31741	0.31737	0.31734	0.31730	0.31727	0.31724	0.31720	0.31717
2.910	0.31717	0.31713	0.31710	0.31707	0.31703	0.31700	0.31696	0.31693	0.31689	0.31686	0.31683
2.920	0.31683	0.31679	0.31676	0.31672	0.31669	0.31665	0.31662	0.31659	0.31655	0.31652	0.31648
2.930	0.31648	0.31645	0.31642	0.31638	0.31635	0.31631	0.31628	0.31624	0.31621	0.31618	0.31614
2.940	0.31614	0.31611	0.31607	0.31604	0.31600	0.31597	0.31594	0.31590	0.31587	0.31583	0.31580
2.950	0.31580	0.31576	0.31573	0.31570	0.31566	0.31563	0.31559	0.31556	0.31552	0.31549	0.31546
2.960	0.31546	0.31542	0.31539	0.31535	0.31532	0.31529	0.31525	0.31522	0.31518	0.31515	0.31511
2.970	0.31511	0.31508	0.31505	0.31501	0.31498	0.31494	0.31491	0.31487	0.31484	0.31481	0.31477
2.980	0.31477	0.31474	0.31470	0.31467	0.31463	0.31460	0.31457	0.31453	0.31450	0.31446	0.31443
2.990	0.31443	0.31440	0.31436	0.31433	0.31429	0.31426	0.31422	0.31419	0.31416	0.31412	0.31409
3.000	0.31409	0.31405	0.31402	0.31398	0.31395	0.31392	0.31388	0.31385	0.31381	0.31378	0.31374
3.010	0.31374	0.31371	0.31368	0.31364	0.31361	0.31357	0.31354	0.31351	0.31347	0.31344	0.31340
3.020	0.31340	0.31337	0.31333	0.31330	0.31327	0.31323	0.31320	0.31316	0.31313	0.31310	0.31306
3.030	0.31306	0.31303	0.31299	0.31296	0.31292	0.31289	0.31286	0.31282	0.31279	0.31275	0.31272
3.040	0.31272	0.31269	0.31265	0.31262	0.31258	0.31255	0.31251	0.31248	0.31245	0.31241	0.31238
3.050	0.31238	0.31234	0.31231	0.31227	0.31224	0.31221	0.31217	0.31214	0.31210	0.31207	0.31204
3.060	0.31204	0.31200	0.31197	0.31193	0.31190	0.31187	0.31183	0.31180	0.31176	0.31173	0.31169
3.070	0.31169	0.31166	0.31163	0.31159	0.31156	0.31152	0.31149	0.31146	0.31142	0.31139	0.31135
3.080	0.31135	0.31132	0.31128	0.31125	0.31122	0.31118	0.31115	0.31111	0.31108	0.31105	0.31101
3.090	0.31101	0.31098	0.31094	0.31091	0.31088	0.31084	0.31081	0.31077	0.31074	0.31071	0.31067

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

P <sub>T</sub> /P <sub>S</sub>	0	1	2	3	4	5	6	7	8	9	10
3.100	0.31067	0.31064	0.31060	0.31057	0.31054	0.31050	0.31047	0.31043	0.31040	0.31036	0.31033
3.110	0.31033	0.31030	0.31026	0.31023	0.31019	0.31016	0.31013	0.31009	0.31006	0.31002	0.30999
3.120	0.30999	0.30996	0.30992	0.30989	0.30985	0.30982	0.30979	0.30975	0.30972	0.30968	0.30965
3.130	0.30965	0.30962	0.30958	0.30955	0.30951	0.30948	0.30945	0.30941	0.30938	0.30934	0.30931
3.140	0.30931	0.30928	0.30924	0.30921	0.30917	0.30914	0.30911	0.30907	0.30904	0.30900	0.30897
3.150	0.30897	0.30894	0.30890	0.30887	0.30884	0.30880	0.30877	0.30873	0.30870	0.30867	0.30863
3.160	0.30863	0.30860	0.30856	0.30853	0.30850	0.30846	0.30843	0.30839	0.30836	0.30833	0.30829
3.170	0.30829	0.30826	0.30822	0.30819	0.30816	0.30812	0.30809	0.30806	0.30802	0.30799	0.30795
3.180	0.30795	0.30792	0.30789	0.30785	0.30782	0.30778	0.30775	0.30772	0.30768	0.30765	0.30762
3.190	0.30762	0.30758	0.30755	0.30751	0.30748	0.30745	0.30741	0.30738	0.30735	0.30731	0.30728
3.200	0.30728	0.30724	0.30721	0.30718	0.30714	0.30711	0.30707	0.30704	0.30701	0.30697	0.30694
3.210	0.30694	0.30691	0.30687	0.30684	0.30680	0.30677	0.30674	0.30670	0.30667	0.30664	0.30660
3.220	0.30660	0.30657	0.30654	0.30650	0.30647	0.30643	0.30640	0.30637	0.30633	0.30630	0.30627
3.230	0.30627	0.30623	0.30620	0.30616	0.30613	0.30610	0.30606	0.30603	0.30600	0.30596	0.30593
3.240	0.30593	0.30590	0.30586	0.30583	0.30579	0.30576	0.30573	0.30569	0.30566	0.30563	0.30559
3.250	0.30559	0.30556	0.30553	0.30549	0.30546	0.30542	0.30539	0.30536	0.30532	0.30529	0.30526
3.260	0.30526	0.30522	0.30519	0.30516	0.30512	0.30509	0.30506	0.30502	0.30499	0.30495	0.30492
3.270	0.30492	0.30489	0.30485	0.30482	0.30479	0.30475	0.30472	0.30469	0.30465	0.30462	0.30459
3.280	0.30459	0.30455	0.30452	0.30449	0.30445	0.30442	0.30438	0.30435	0.30432	0.30428	0.30425
3.290	0.30425	0.30422	0.30418	0.30415	0.30412	0.30408	0.30405	0.30402	0.30398	0.30395	0.30392
3.300	0.30392	0.30388	0.30385	0.30382	0.30378	0.30375	0.30372	0.30368	0.30365	0.30362	0.30358
3.310	0.30358	0.30355	0.30352	0.30348	0.30345	0.30342	0.30338	0.30335	0.30332	0.30328	0.30325
3.320	0.30325	0.30322	0.30318	0.30315	0.30312	0.30308	0.30305	0.30302	0.30298	0.30295	0.30292
3.330	0.30292	0.30289	0.30285	0.30282	0.30278	0.30275	0.30272	0.30268	0.30265	0.30262	0.30258
3.340	0.30258	0.30255	0.30252	0.30248	0.30245	0.30242	0.30238	0.30235	0.30232	0.30228	0.30225
3.350	0.30225	0.30222	0.30218	0.30215	0.30212	0.30208	0.30205	0.30202	0.30199	0.30195	0.30192
3.360	0.30192	0.30189	0.30185	0.30182	0.30179	0.30175	0.30172	0.30169	0.30165	0.30162	0.30159
3.370	0.30159	0.30155	0.30152	0.30149	0.30146	0.30142	0.30139	0.30136	0.30132	0.30129	0.30126
3.380	0.30126	0.30122	0.30119	0.30116	0.30112	0.30109	0.30106	0.30103	0.30099	0.30096	0.30093
3.390	0.30093	0.30089	0.30086	0.30083	0.30079	0.30076	0.30073	0.30070	0.30066	0.30063	0.30060

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

P <sub>T</sub> /P <sub>S</sub>	0	1	2	3	4	5	6	7	8	9	10
3.400	0.30060	0.30056	0.30053	0.30050	0.30046	0.30043	0.30040	0.30037	0.30033	0.30030	0.30027
3.410	0.30027	0.30023	0.30020	0.30017	0.30013	0.30010	0.30007	0.30004	0.30000	0.29997	0.29994
3.420	0.29994	0.29990	0.29987	0.29984	0.29981	0.29977	0.29974	0.29971	0.29967	0.29964	0.29961
3.430	0.29961	0.29958	0.29954	0.29951	0.29948	0.29944	0.29941	0.29938	0.29935	0.29931	0.29928
3.440	0.29928	0.29925	0.29922	0.29918	0.29915	0.29912	0.29908	0.29905	0.29902	0.29899	0.29895
3.450	0.29895	0.29892	0.29889	0.29886	0.29882	0.29879	0.29876	0.29872	0.29869	0.29866	0.29863
3.460	0.29863	0.29859	0.29856	0.29853	0.29850	0.29846	0.29843	0.29840	0.29836	0.29833	0.29830
3.470	0.29830	0.29827	0.29823	0.29820	0.29817	0.29814	0.29810	0.29807	0.29804	0.29801	0.29797
3.480	0.29797	0.29794	0.29791	0.29788	0.29784	0.29781	0.29778	0.29775	0.29771	0.29768	0.29765
3.490	0.29765	0.29762	0.29758	0.29755	0.29752	0.29749	0.29745	0.29742	0.29739	0.29736	0.29732
3.500	0.29732	0.29729	0.29726	0.29723	0.29719	0.29716	0.29713	0.29710	0.29706	0.29703	0.29700
3.510	0.29710	0.29697	0.29693	0.29690	0.29687	0.29684	0.29680	0.29677	0.29674	0.29671	0.29667
3.520	0.29667	0.29664	0.29661	0.29658	0.29654	0.29651	0.29648	0.29645	0.29642	0.29638	0.29635
3.530	0.29635	0.29631	0.29629	0.29625	0.29622	0.29619	0.29616	0.29612	0.29609	0.29606	0.29603
3.540	0.29603	0.29600	0.29596	0.29593	0.29590	0.29587	0.29583	0.29580	0.29577	0.29574	0.29571
3.550	0.29571	0.29567	0.29564	0.29561	0.29558	0.29554	0.29551	0.29548	0.29545	0.29542	0.29538
3.560	0.29538	0.29535	0.29532	0.29529	0.29526	0.29522	0.29519	0.29516	0.29513	0.29509	0.29506
3.570	0.29506	0.29503	0.29500	0.29497	0.29493	0.29490	0.29487	0.29484	0.29481	0.29477	0.29474
3.580	0.29474	0.29471	0.29468	0.29465	0.29461	0.29458	0.29455	0.29452	0.29449	0.29445	0.29442
3.590	0.29442	0.29439	0.29436	0.29433	0.29429	0.29426	0.29423	0.29420	0.29417	0.29413	0.29410
3.600	0.29410	0.29407	0.29404	0.29401	0.29397	0.29394	0.29391	0.29388	0.29385	0.29381	0.29378
3.610	0.29378	0.29375	0.29372	0.29369	0.29365	0.29362	0.29359	0.29356	0.29353	0.29350	0.29346
3.620	0.29346	0.29343	0.29340	0.29337	0.29334	0.29330	0.29327	0.29324	0.29321	0.29318	0.29315
3.630	0.29315	0.29311	0.29308	0.29305	0.29302	0.29299	0.29296	0.29292	0.29289	0.29286	0.29283
3.640	0.29283	0.29280	0.29276	0.29273	0.29270	0.29267	0.29264	0.29261	0.29257	0.29254	0.29251
3.650	0.29251	0.29248	0.29245	0.29242	0.29238	0.29235	0.29232	0.29229	0.29226	0.29223	0.29219
3.660	0.29219	0.29216	0.29213	0.29210	0.29207	0.29204	0.29201	0.29197	0.29194	0.29191	0.29188
3.670	0.29188	0.29185	0.29182	0.29178	0.29175	0.29172	0.29169	0.29166	0.29163	0.29160	0.29156
3.680	0.29156	0.29153	0.29150	0.29147	0.29144	0.29141	0.29137	0.29134	0.29131	0.29128	0.29125
3.690	0.29125	0.29122	0.29119	0.29115	0.29112	0.29109	0.29106	0.29103	0.29100	0.29097	0.29093

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
3.700	0.29093	0.29090	0.29087	0.29084	0.29081	0.29078	0.29075	0.29072	0.29068	0.29065	0.29062
3.710	0.29062	0.29059	0.29056	0.29053	0.29050	0.29046	0.29043	0.29040	0.29037	0.29034	0.29031
3.720	0.29031	0.29028	0.29025	0.29021	0.29018	0.29015	0.29012	0.29009	0.29006	0.29003	0.29000
3.730	0.29000	0.28993	0.28993	0.28990	0.28987	0.28984	0.28981	0.28978	0.28975	0.28972	0.28968
3.740	0.28968	0.28965	0.28962	0.28959	0.28956	0.28953	0.28950	0.28947	0.28944	0.28940	0.28937
3.750	0.28937	0.28934	0.28931	0.28928	0.28925	0.28922	0.28919	0.28916	0.28912	0.28909	0.28906
3.760	0.28906	0.28903	0.28900	0.28897	0.28894	0.28891	0.28888	0.28885	0.28881	0.28878	0.28875
3.770	0.28875	0.28872	0.28869	0.28866	0.28863	0.28860	0.28857	0.28854	0.28850	0.28847	0.28844
3.780	0.28844	0.28841	0.28838	0.28835	0.28832	0.28829	0.28826	0.28823	0.28820	0.28816	0.28813
3.790	0.28813	0.28810	0.28807	0.28804	0.28801	0.28798	0.28795	0.28792	0.28789	0.28786	0.28783
3.800	0.28783	0.28779	0.28776	0.28773	0.28770	0.28767	0.28764	0.28761	0.28758	0.28755	0.28752
3.810	0.28752	0.28749	0.28746	0.28743	0.28740	0.28736	0.28733	0.28730	0.28727	0.28724	0.28721
3.820	0.28721	0.28718	0.28715	0.28712	0.28709	0.28706	0.28703	0.28700	0.28697	0.28693	0.28690
3.830	0.28690	0.28687	0.28684	0.28681	0.28678	0.28675	0.28672	0.28669	0.28666	0.28663	0.28660
3.840	0.28660	0.28657	0.28654	0.28651	0.28648	0.28645	0.28642	0.28638	0.28635	0.28632	0.28629
3.850	0.28629	0.28626	0.28623	0.28620	0.28617	0.28614	0.28611	0.28608	0.28605	0.28602	0.28599
3.860	0.28595	0.28596	0.28593	0.28590	0.28587	0.28584	0.28581	0.28578	0.28574	0.28571	0.28568
3.870	0.28568	0.28565	0.28562	0.28559	0.28556	0.28553	0.28550	0.28547	0.28544	0.28541	0.28538
3.880	0.28538	0.28535	0.28532	0.28529	0.28526	0.28523	0.28520	0.28517	0.28514	0.28511	0.28508
3.890	0.28508	0.28505	0.28502	0.28499	0.28496	0.28493	0.28490	0.28487	0.28484	0.28481	0.28478
3.900	0.28478	0.28474	0.28471	0.28468	0.28465	0.28462	0.28459	0.28456	0.28453	0.28450	0.28447
3.910	0.28447	0.28444	0.28441	0.28438	0.28435	0.28432	0.28429	0.28426	0.28423	0.28420	0.28417
3.920	0.28417	0.28414	0.28411	0.28408	0.28405	0.28402	0.28399	0.28396	0.28393	0.28390	0.28387
3.930	0.28387	0.28384	0.28381	0.28378	0.28375	0.28372	0.28369	0.28366	0.28363	0.28360	0.28357
3.940	0.28357	0.28354	0.28351	0.28348	0.28345	0.28342	0.28339	0.28336	0.28333	0.28330	0.28327
3.950	0.28327	0.28324	0.28321	0.28318	0.28315	0.28312	0.28309	0.28306	0.28303	0.28300	0.28297
3.960	0.28297	0.28294	0.28291	0.28288	0.28285	0.28282	0.28279	0.28276	0.28273	0.28270	0.28266
3.970	0.28268	0.28265	0.28262	0.28259	0.28256	0.28253	0.28250	0.28247	0.28244	0.28241	0.28238
3.980	0.28238	0.28235	0.28232	0.28229	0.28226	0.28223	0.28220	0.28217	0.28214	0.28211	0.28208
3.990	0.28208	0.28205	0.28202	0.28199	0.28196	0.28193	0.28190	0.28187	0.28184	0.28181	0.28178

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
4.000	0.28178	0.28175	0.28172	0.28170	0.28167	0.28164	0.28161	0.28158	0.28155	0.28152	0.28149
4.010	0.28149	0.28146	0.28143	0.28140	0.28137	0.28134	0.28131	0.28128	0.28125	0.28122	0.28119
4.020	0.28119	0.28116	0.28113	0.28110	0.28108	0.28105	0.28102	0.28099	0.28096	0.28093	0.28090
4.030	0.28090	0.28087	0.28084	0.28081	0.28078	0.28075	0.28072	0.28069	0.28066	0.28063	0.28060
4.040	0.28060	0.28058	0.28055	0.28052	0.28049	0.28046	0.28043	0.28040	0.28037	0.28034	0.28031
4.050	0.28031	0.28028	0.28025	0.28022	0.28019	0.28016	0.28014	0.28011	0.28008	0.28005	0.28002
4.060	0.28002	0.27999	0.27996	0.27993	0.27990	0.27987	0.27984	0.27981	0.27978	0.27976	0.27973
4.070	0.27973	0.27970	0.27967	0.27964	0.27961	0.27958	0.27955	0.27952	0.27949	0.27946	0.27943
4.080	0.27943	0.27941	0.27938	0.27935	0.27932	0.27929	0.27926	0.27923	0.27920	0.27917	0.27914
4.090	0.27914	0.27911	0.27909	0.27906	0.27903	0.27900	0.27897	0.27894	0.27891	0.27888	0.27885
4.100	0.27885	0.27882	0.27879	0.27877	0.27874	0.27871	0.27868	0.27865	0.27862	0.27859	0.27856
4.110	0.27856	0.27853	0.27851	0.27848	0.27845	0.27842	0.27839	0.27836	0.27833	0.27830	0.27827
4.120	0.27827	0.27825	0.27822	0.27819	0.27816	0.27813	0.27810	0.27807	0.27804	0.27801	0.27799
4.130	0.27799	0.27796	0.27793	0.27790	0.27787	0.27784	0.27781	0.27778	0.27775	0.27773	0.27770
4.140	0.27770	0.27767	0.27764	0.27761	0.27758	0.27755	0.27752	0.27750	0.27747	0.27744	0.27741
4.150	0.27741	0.27738	0.27735	0.27732	0.27730	0.27727	0.27724	0.27721	0.27718	0.27715	0.27712
4.160	0.27712	0.27709	0.27707	0.27704	0.27701	0.27698	0.27695	0.27692	0.27689	0.27687	0.27684
4.170	0.27684	0.27681	0.27678	0.27675	0.27672	0.27669	0.27667	0.27664	0.27661	0.27658	0.27655
4.180	0.27655	0.27652	0.27649	0.27647	0.27644	0.27641	0.27638	0.27635	0.27632	0.27629	0.27627
4.190	0.27627	0.27624	0.27621	0.27618	0.27615	0.27612	0.27610	0.27607	0.27604	0.27601	0.27598
4.200	0.27598	0.27595	0.27592	0.27590	0.27587	0.27584	0.27581	0.27578	0.27575	0.27573	0.27570
4.210	0.27570	0.27567	0.27564	0.27561	0.27558	0.27556	0.27553	0.27550	0.27547	0.27544	0.27541
4.220	0.27541	0.27539	0.27536	0.27533	0.27530	0.27527	0.27524	0.27522	0.27519	0.27516	0.27513
4.230	0.27513	0.27510	0.27508	0.27505	0.27502	0.27499	0.27496	0.27493	0.27491	0.27488	0.27485
4.240	0.27485	0.27482	0.27479	0.27477	0.27474	0.27471	0.27468	0.27465	0.27462	0.27460	0.27457
4.250	0.27457	0.27454	0.27451	0.27448	0.27446	0.27443	0.27440	0.27437	0.27434	0.27432	0.27429
4.260	0.27429	0.27426	0.27423	0.27420	0.27418	0.27415	0.27412	0.27409	0.27406	0.27404	0.27401
4.270	0.27401	0.27398	0.27395	0.27392	0.27390	0.27387	0.27384	0.27381	0.27378	0.27376	0.27373
4.280	0.27373	0.27370	0.27367	0.27364	0.27362	0.27359	0.27356	0.27353	0.27350	0.27348	0.27345
4.290	0.27345	0.27342	0.27339	0.27336	0.27334	0.27331	0.27328	0.27325	0.27323	0.27320	0.27317

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
4.300	0.27317	0.27314	0.27311	0.27309	0.27306	0.27303	0.27300	0.27298	0.27295	0.27292	0.27289
4.310	0.27289	0.27286	0.27284	0.27281	0.27278	0.27275	0.27273	0.27270	0.27267	0.27264	0.27261
4.320	0.27261	0.27259	0.27256	0.27253	0.27250	0.27248	0.27245	0.27242	0.27239	0.27237	0.27234
4.330	0.27234	0.27231	0.27228	0.27225	0.27223	0.27220	0.27217	0.27214	0.27212	0.27209	0.27206
4.340	0.27206	0.27203	0.27201	0.27198	0.27195	0.27192	0.27190	0.27187	0.27184	0.27181	0.27179
4.350	0.27179	0.27176	0.27173	0.27170	0.27168	0.27165	0.27162	0.27159	0.27157	0.27154	0.27151
4.360	0.27151	0.27143	0.27146	0.27143	0.27140	0.27137	0.27135	0.27132	0.27129	0.27126	0.27124
4.370	0.27124	0.27121	0.27118	0.27115	0.27113	0.27110	0.27107	0.27104	0.27102	0.27099	0.27096
4.380	0.27096	0.27094	0.27091	0.27088	0.27085	0.27083	0.27080	0.27077	0.27074	0.27072	0.27069
4.390	0.27069	0.27066	0.27063	0.27061	0.27058	0.27055	0.27053	0.27050	0.27047	0.27044	0.27042
4.400	0.27042	0.27037	0.27036	0.27033	0.27031	0.27028	0.27025	0.27023	0.27020	0.27017	0.27014
4.410	0.27014	0.27012	0.27009	0.27006	0.27004	0.27001	0.26998	0.26995	0.26993	0.26990	0.26987
4.420	0.26987	0.26985	0.26982	0.26979	0.26976	0.26974	0.26971	0.26968	0.26966	0.26963	0.26960
4.430	0.26960	0.26958	0.26955	0.26952	0.26949	0.26947	0.26944	0.26941	0.26939	0.26936	0.26933
4.440	0.26933	0.26930	0.26928	0.26925	0.26922	0.26920	0.26917	0.26914	0.26912	0.26909	0.26906
4.450	0.26906	0.26901	0.26901	0.26898	0.26895	0.26893	0.26890	0.26887	0.26885	0.26882	0.26879
4.460	0.26879	0.26877	0.26874	0.26871	0.26869	0.26866	0.26863	0.26860	0.26858	0.26855	0.26852
4.470	0.26852	0.26850	0.26847	0.26844	0.26842	0.26839	0.26836	0.26834	0.26831	0.26828	0.26825
4.480	0.26826	0.26823	0.26820	0.26818	0.26815	0.26812	0.26810	0.26807	0.26804	0.26802	0.26799
4.490	0.26799	0.26796	0.26794	0.26791	0.26788	0.26785	0.26783	0.26780	0.26777	0.26775	0.26772
4.500	0.26772	0.26769	0.26767	0.26764	0.26761	0.26759	0.26756	0.26754	0.26751	0.26748	0.26746
4.510	0.26746	0.26743	0.26740	0.26738	0.26735	0.26732	0.26730	0.26727	0.26724	0.26722	0.26719
4.520	0.26719	0.26716	0.26714	0.26711	0.26708	0.26706	0.26703	0.26700	0.26698	0.26695	0.26692
4.530	0.26692	0.26690	0.26687	0.26684	0.26682	0.26679	0.26677	0.26674	0.26671	0.26669	0.26666
4.540	0.26666	0.26663	0.26661	0.26658	0.26655	0.26653	0.26650	0.26647	0.26645	0.26642	0.26640
4.550	0.26640	0.26637	0.26634	0.26632	0.26629	0.26626	0.26624	0.26621	0.26618	0.26616	0.26613
4.560	0.26613	0.26611	0.26608	0.26605	0.26603	0.26600	0.26597	0.26595	0.26592	0.26590	0.26587
4.570	0.26587	0.26584	0.26582	0.26579	0.26576	0.26574	0.26571	0.26569	0.26566	0.26563	0.26561
4.580	0.26561	0.26558	0.26555	0.26553	0.26550	0.26548	0.26545	0.26542	0.26540	0.26537	0.26534
4.590	0.26534	0.26532	0.26529	0.26527	0.26524	0.26521	0.26519	0.26516	0.26514	0.26511	0.26508

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

P/O/PS	0	1	2	3	4	5	6	7	8	9	10
4.600	0.26508	0.26505	0.26503	0.26501	0.26498	0.26495	0.26493	0.26490	0.26487	0.26485	0.26482
4.610	0.26482	0.26480	0.26477	0.26474	0.26472	0.26469	0.26467	0.26464	0.26461	0.26459	0.26456
4.620	0.26456	0.26454	0.26451	0.26448	0.26446	0.26443	0.26441	0.26438	0.26435	0.26433	0.26430
4.630	0.26430	0.26428	0.26425	0.26423	0.26420	0.26417	0.26415	0.26412	0.26410	0.26407	0.26404
4.640	0.26404	0.26402	0.26399	0.26397	0.26394	0.26391	0.26389	0.26386	0.26384	0.26381	0.26379
4.650	0.26379	0.26375	0.26373	0.26371	0.26368	0.26366	0.26363	0.26360	0.26358	0.26355	0.26353
4.660	0.26353	0.26350	0.26348	0.26345	0.26342	0.26340	0.26337	0.26335	0.26332	0.26330	0.26327
4.670	0.26327	0.26324	0.26322	0.26319	0.26317	0.26314	0.26312	0.26309	0.26306	0.26304	0.26301
4.680	0.26301	0.26299	0.26296	0.26294	0.26291	0.26289	0.26286	0.26283	0.26281	0.26278	0.26276
4.690	0.26276	0.26273	0.26271	0.26268	0.26265	0.26263	0.26260	0.26258	0.26255	0.26253	0.26250
4.700	0.26250	0.26248	0.26245	0.26242	0.26240	0.26237	0.26235	0.26232	0.26230	0.26227	0.26225
4.710	0.26225	0.26222	0.26220	0.26217	0.26214	0.26212	0.26209	0.26207	0.26204	0.26202	0.26199
4.720	0.26199	0.26197	0.26194	0.26192	0.26189	0.26186	0.26184	0.26181	0.26179	0.26176	0.26174
4.730	0.26174	0.26171	0.26169	0.26166	0.26164	0.26161	0.26159	0.26156	0.26153	0.26151	0.26148
4.740	0.26148	0.26146	0.26143	0.26141	0.26138	0.26136	0.26133	0.26131	0.26128	0.26126	0.26123
4.750	0.26123	0.26121	0.26118	0.26116	0.26113	0.26110	0.26108	0.26105	0.26103	0.26100	0.26098
4.760	0.26098	0.26095	0.26093	0.26090	0.26088	0.26085	0.26083	0.26080	0.26078	0.26075	0.26073
4.770	0.26073	0.26070	0.26068	0.26065	0.26063	0.26060	0.26058	0.26055	0.26053	0.26050	0.26048
4.780	0.26048	0.26045	0.26043	0.26040	0.26037	0.26035	0.26032	0.26030	0.26027	0.26025	0.26022
4.790	0.26022	0.26020	0.26017	0.26015	0.26012	0.26010	0.26007	0.26005	0.26002	0.26000	0.25997
4.800	0.25997	0.25995	0.25992	0.25990	0.25987	0.25985	0.25982	0.25980	0.25977	0.25975	0.25972
4.810	0.25972	0.25970	0.25967	0.25965	0.25962	0.25960	0.25957	0.25955	0.25952	0.25950	0.25948
4.820	0.25948	0.25945	0.25943	0.25940	0.25938	0.25935	0.25933	0.25930	0.25928	0.25925	0.25923
4.830	0.25923	0.25920	0.25918	0.25915	0.25913	0.25910	0.25908	0.25905	0.25903	0.25900	0.25898
4.840	0.25898	0.25895	0.25893	0.25890	0.25888	0.25885	0.25883	0.25880	0.25878	0.25876	0.25873
4.850	0.25873	0.25871	0.25868	0.25866	0.25863	0.25861	0.25858	0.25856	0.25853	0.25851	0.25848
4.860	0.25848	0.25846	0.25843	0.25841	0.25838	0.25836	0.25834	0.25831	0.25829	0.25826	0.25824
4.870	0.25824	0.25821	0.25819	0.25816	0.25814	0.25811	0.25809	0.25806	0.25804	0.25802	0.25799
4.880	0.25799	0.25797	0.25794	0.25792	0.25789	0.25787	0.25784	0.25782	0.25779	0.25777	0.25775
4.890	0.25775	0.25772	0.25770	0.25767	0.25765	0.25762	0.25760	0.25757	0.25755	0.25752	0.25750

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
4.900	0.25750	0.25748	0.25745	0.25743	0.25740	0.25738	0.25735	0.25733	0.25730	0.25729	0.25726
4.910	0.25726	0.25723	0.25721	0.25718	0.25716	0.25713	0.25711	0.25709	0.25706	0.25704	0.25701
4.920	0.25701	0.25699	0.25696	0.25694	0.25691	0.25689	0.25687	0.25684	0.25682	0.25679	0.25677
4.930	0.25677	0.25674	0.25672	0.25670	0.25667	0.25665	0.25662	0.25660	0.25657	0.25655	0.25653
4.940	0.25653	0.25650	0.25648	0.25645	0.25643	0.25640	0.25638	0.25636	0.25633	0.25631	0.25628
4.950	0.25628	0.25626	0.25623	0.25621	0.25619	0.25616	0.25614	0.25611	0.25609	0.25607	0.25604
4.960	0.25604	0.25602	0.25599	0.25597	0.25594	0.25592	0.25590	0.25587	0.25585	0.25582	0.25580
4.970	0.25580	0.25578	0.25575	0.25573	0.25570	0.25568	0.25566	0.25563	0.25561	0.25558	0.25556
4.980	0.25556	0.25554	0.25551	0.25549	0.25546	0.25544	0.25541	0.25539	0.25537	0.25534	0.25532
4.990	0.25532	0.25529	0.25527	0.25525	0.25522	0.25520	0.25517	0.25515	0.25513	0.25510	0.25508
5.000	0.25508	0.25506	0.25503	0.25501	0.25498	0.25496	0.25494	0.25491	0.25489	0.25486	0.25484
5.010	0.25484	0.25482	0.25479	0.25477	0.25474	0.25472	0.25470	0.25467	0.25465	0.25462	0.25460
5.020	0.25460	0.25458	0.25455	0.25453	0.25451	0.25448	0.25446	0.25443	0.25441	0.25439	0.25436
5.030	0.25436	0.25434	0.25431	0.25429	0.25427	0.25424	0.25422	0.25420	0.25417	0.25415	0.25412
5.040	0.25412	0.25410	0.25408	0.25405	0.25403	0.25401	0.25398	0.25396	0.25393	0.25391	0.25389
5.050	0.25389	0.25386	0.25384	0.25382	0.25379	0.25377	0.25375	0.25372	0.25370	0.25367	0.25365
5.060	0.25365	0.25363	0.25360	0.25358	0.25356	0.25353	0.25351	0.25349	0.25346	0.25344	0.25341
5.070	0.25341	0.25339	0.25337	0.25334	0.25332	0.25330	0.25327	0.25325	0.25323	0.25320	0.25318
5.080	0.25318	0.25316	0.25313	0.25311	0.25308	0.25306	0.25304	0.25301	0.25299	0.25297	0.25294
5.090	0.25294	0.25292	0.25290	0.25287	0.25285	0.25283	0.25280	0.25278	0.25276	0.25273	0.25271
5.100	0.25271	0.25269	0.25266	0.25264	0.25261	0.25259	0.25257	0.25254	0.25252	0.25250	0.25247
5.110	0.25247	0.25245	0.25243	0.25240	0.25238	0.25236	0.25233	0.25231	0.25229	0.25226	0.25224
5.120	0.25224	0.25222	0.25219	0.25217	0.25215	0.25212	0.25210	0.25208	0.25205	0.25203	0.25201
5.130	0.25201	0.25199	0.25196	0.25194	0.25191	0.25189	0.25187	0.25184	0.25182	0.25180	0.25177
5.140	0.25177	0.25175	0.25173	0.25170	0.25168	0.25166	0.25164	0.25161	0.25159	0.25157	0.25154
5.150	0.25154	0.25152	0.25150	0.25147	0.25145	0.25143	0.25140	0.25138	0.25136	0.25133	0.25131
5.160	0.25131	0.25129	0.25126	0.25124	0.25122	0.25119	0.25117	0.25115	0.25113	0.25110	0.25108
5.170	0.25108	0.25106	0.25103	0.25101	0.25099	0.25096	0.25094	0.25092	0.25089	0.25087	0.25085
5.180	0.25085	0.25083	0.25080	0.25078	0.25076	0.25073	0.25071	0.25069	0.25066	0.25064	0.25062
5.190	0.25062	0.25059	0.25057	0.25055	0.25053	0.25050	0.25048	0.25046	0.25043	0.25041	0.25039



WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
5.200	0.25039	0.25037	0.25034	0.25032	0.25030	0.25027	0.25025	0.25023	0.25020	0.25018	0.25016
5.210	0.25016	0.25014	0.25011	0.25009	0.25007	0.25004	0.25002	0.25000	0.24998	0.24995	0.24993
5.220	0.24993	0.24991	0.24988	0.24986	0.24984	0.24982	0.24979	0.24977	0.24975	0.24972	0.24970
5.230	0.24970	0.24968	0.24966	0.24963	0.24961	0.24959	0.24956	0.24954	0.24952	0.24950	0.24947
5.240	0.24947	0.24945	0.24943	0.24941	0.24938	0.24936	0.24934	0.24931	0.24929	0.24927	0.24925
5.250	0.24925	0.24922	0.24920	0.24918	0.24916	0.24913	0.24911	0.24909	0.24906	0.24904	0.24902
5.260	0.24902	0.24900	0.24897	0.24895	0.24893	0.24891	0.24888	0.24886	0.24884	0.24882	0.24879
5.270	0.24879	0.24877	0.24875	0.24872	0.24870	0.24868	0.24866	0.24863	0.24861	0.24859	0.24857
5.280	0.24857	0.24854	0.24852	0.24850	0.24848	0.24845	0.24843	0.24841	0.24839	0.24836	0.24834
5.290	0.24834	0.24832	0.24830	0.24827	0.24825	0.24823	0.24821	0.24818	0.24816	0.24814	0.24812
5.300	0.24812	0.24809	0.24807	0.24805	0.24803	0.24800	0.24798	0.24796	0.24794	0.24791	0.24789
5.310	0.24789	0.24787	0.24785	0.24782	0.24780	0.24778	0.24776	0.24773	0.24771	0.24769	0.24767
5.320	0.24767	0.24764	0.24762	0.24760	0.24758	0.24756	0.24753	0.24751	0.24749	0.24747	0.24744
5.330	0.24744	0.24742	0.24740	0.24738	0.24735	0.24733	0.24731	0.24729	0.24727	0.24724	0.24722
5.340	0.24722	0.24720	0.24718	0.24715	0.24713	0.24711	0.24709	0.24706	0.24704	0.24702	0.24700
5.350	0.24700	0.24698	0.24695	0.24693	0.24691	0.24689	0.24686	0.24684	0.24682	0.24680	0.24678
5.360	0.24678	0.24675	0.24673	0.24671	0.24669	0.24666	0.24664	0.24662	0.24660	0.24658	0.24655
5.370	0.24655	0.24653	0.24651	0.24649	0.24647	0.24644	0.24642	0.24640	0.24638	0.24635	0.24633
5.380	0.24633	0.24631	0.24629	0.24627	0.24624	0.24622	0.24620	0.24618	0.24616	0.24613	0.24611
5.390	0.24611	0.24609	0.24607	0.24605	0.24602	0.24600	0.24598	0.24596	0.24594	0.24591	0.24589
5.400	0.24589	0.24587	0.24585	0.24583	0.24580	0.24578	0.24576	0.24574	0.24572	0.24569	0.24567
5.410	0.24567	0.24565	0.24563	0.24561	0.24558	0.24556	0.24554	0.24552	0.24550	0.24547	0.24545
5.420	0.24545	0.24543	0.24541	0.24539	0.24536	0.24534	0.24532	0.24530	0.24528	0.24525	0.24523
5.430	0.24523	0.24521	0.24519	0.24517	0.24515	0.24512	0.24510	0.24508	0.24506	0.24504	0.24501
5.440	0.24501	0.24499	0.24497	0.24495	0.24493	0.24491	0.24488	0.24486	0.24484	0.24482	0.24480
5.450	0.24480	0.24477	0.24475	0.24473	0.24471	0.24469	0.24467	0.24464	0.24462	0.24460	0.24458
5.460	0.24458	0.24456	0.24453	0.24451	0.24449	0.24447	0.24445	0.24443	0.24440	0.24438	0.24436
5.470	0.24436	0.24434	0.24432	0.24430	0.24427	0.24425	0.24423	0.24421	0.24419	0.24417	0.24414
5.480	0.24414	0.24412	0.24410	0.24408	0.24406	0.24404	0.24401	0.24399	0.24397	0.24395	0.24393
5.490	0.24393	0.24391	0.24388	0.24386	0.24384	0.24382	0.24380	0.24378	0.24376	0.24373	0.24371

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
5.500	0.24371	0.24369	0.24367	0.24365	0.24363	0.24360	0.24358	0.24356	0.24354	0.24352	0.24350
5.510	0.24350	0.24348	0.24345	0.24343	0.24341	0.24339	0.24337	0.24335	0.24332	0.24330	0.24328
5.520	0.24328	0.24326	0.24324	0.24322	0.24320	0.24317	0.24315	0.24313	0.24311	0.24309	0.24307
5.530	0.24307	0.24305	0.24302	0.24300	0.24298	0.24296	0.24294	0.24292	0.24290	0.24287	0.24285
5.540	0.24285	0.24283	0.24281	0.24279	0.24277	0.24275	0.24273	0.24270	0.24268	0.24266	0.24264
5.550	0.24264	0.24262	0.24260	0.24258	0.24255	0.24253	0.24251	0.24249	0.24247	0.24245	0.24243
5.560	0.24243	0.24241	0.24238	0.24236	0.24234	0.24232	0.24230	0.24228	0.24226	0.24223	0.24221
5.570	0.24221	0.24219	0.24217	0.24215	0.24213	0.24211	0.24209	0.24206	0.24204	0.24202	0.24200
5.580	0.24200	0.24193	0.24196	0.24194	0.24192	0.24190	0.24187	0.24185	0.24183	0.24181	0.24179
5.590	0.24179	0.24177	0.24175	0.24173	0.24170	0.24168	0.24166	0.24164	0.24162	0.24160	0.24158
5.600	0.24158	0.24155	0.24154	0.24151	0.24149	0.24147	0.24145	0.24143	0.24141	0.24139	0.24137
5.610	0.24137	0.24135	0.24132	0.24130	0.24128	0.24126	0.24124	0.24122	0.24120	0.24118	0.24116
5.620	0.24116	0.24114	0.24111	0.24109	0.24107	0.24105	0.24103	0.24101	0.24099	0.24097	0.24095
5.630	0.24095	0.24093	0.24090	0.24088	0.24086	0.24084	0.24082	0.24080	0.24078	0.24076	0.24074
5.640	0.24074	0.24072	0.24069	0.24067	0.24065	0.24063	0.24061	0.24059	0.24057	0.24055	0.24053
5.650	0.24053	0.24051	0.24049	0.24046	0.24044	0.24042	0.24040	0.24038	0.24036	0.24034	0.24032
5.660	0.24032	0.24030	0.24028	0.24026	0.24024	0.24021	0.24019	0.24017	0.24015	0.24013	0.24011
5.670	0.24011	0.24009	0.24007	0.24005	0.24003	0.24001	0.23999	0.23996	0.23994	0.23992	0.23990
5.680	0.23990	0.23988	0.23986	0.23984	0.23982	0.23980	0.23978	0.23976	0.23974	0.23972	0.23969
5.690	0.23969	0.23967	0.23965	0.23963	0.23961	0.23959	0.23957	0.23955	0.23953	0.23951	0.23949
5.700	0.23949	0.23947	0.23945	0.23943	0.23940	0.23938	0.23936	0.23934	0.23932	0.23930	0.23928
5.710	0.23928	0.23926	0.23924	0.23922	0.23920	0.23918	0.23916	0.23914	0.23912	0.23909	0.23907
5.720	0.23907	0.23905	0.23903	0.23901	0.23899	0.23897	0.23895	0.23893	0.23891	0.23889	0.23887
5.730	0.23887	0.23885	0.23883	0.23881	0.23879	0.23877	0.23875	0.23872	0.23870	0.23868	0.23866
5.740	0.23866	0.23864	0.23862	0.23860	0.23858	0.23856	0.23854	0.23852	0.23850	0.23848	0.23846
5.750	0.23846	0.23844	0.23842	0.23840	0.23838	0.23836	0.23833	0.23831	0.23829	0.23827	0.23825
5.760	0.23825	0.23823	0.23821	0.23819	0.23817	0.23815	0.23813	0.23811	0.23809	0.23807	0.23805
5.770	0.23805	0.23803	0.23801	0.23799	0.23797	0.23795	0.23793	0.23791	0.23789	0.23787	0.23785
5.780	0.23785	0.23782	0.23780	0.23778	0.23776	0.23774	0.23772	0.23770	0.23768	0.23766	0.23764
5.790	0.23764	0.23762	0.23760	0.23758	0.23756	0.23754	0.23752	0.23750	0.23748	0.23746	0.23744

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
5.800	0.23744	0.23742	0.23740	0.23738	0.23736	0.23734	0.23732	0.23730	0.23728	0.23726	0.23724
5.810	0.23724	0.23722	0.23720	0.23718	0.23716	0.23714	0.23711	0.23709	0.23707	0.23705	0.23703
5.820	0.23703	0.23701	0.23699	0.23697	0.23695	0.23693	0.23691	0.23689	0.23687	0.23685	0.23683
5.830	0.23683	0.23681	0.23679	0.23677	0.23675	0.23673	0.23671	0.23669	0.23667	0.23665	0.23663
5.840	0.23663	0.23661	0.23659	0.23657	0.23655	0.23653	0.23651	0.23649	0.23647	0.23645	0.23643
5.850	0.23643	0.23641	0.23639	0.23637	0.23635	0.23633	0.23631	0.23629	0.23627	0.23625	0.23623
5.860	0.23623	0.23621	0.23619	0.23617	0.23615	0.23613	0.23611	0.23609	0.23607	0.23605	0.23603
5.870	0.23603	0.23601	0.23599	0.23597	0.23595	0.23593	0.23591	0.23589	0.23587	0.23585	0.23583
5.880	0.23583	0.23581	0.23579	0.23577	0.23575	0.23573	0.23571	0.23569	0.23567	0.23565	0.23563
5.890	0.23563	0.23561	0.23559	0.23557	0.23555	0.23553	0.23551	0.23549	0.23547	0.23545	0.23543
5.900	0.23543	0.23541	0.23539	0.23537	0.23535	0.23533	0.23531	0.23529	0.23527	0.23525	0.23523
5.910	0.23523	0.23521	0.23519	0.23517	0.23515	0.23513	0.23511	0.23509	0.23507	0.23505	0.23503
5.920	0.23503	0.23501	0.23500	0.23498	0.23496	0.23494	0.23492	0.23490	0.23488	0.23486	0.23484
5.930	0.23484	0.23482	0.23480	0.23478	0.23476	0.23474	0.23472	0.23470	0.23468	0.23466	0.23464
5.940	0.23464	0.23462	0.23460	0.23458	0.23456	0.23454	0.23452	0.23450	0.23448	0.23446	0.23444
5.950	0.23444	0.23442	0.23440	0.23438	0.23436	0.23434	0.23432	0.23431	0.23429	0.23427	0.23425
5.960	0.23425	0.23423	0.23421	0.23419	0.23417	0.23415	0.23413	0.23411	0.23409	0.23407	0.23405
5.970	0.23405	0.23403	0.23401	0.23399	0.23397	0.23395	0.23393	0.23391	0.23389	0.23387	0.23385
5.980	0.23385	0.23383	0.23382	0.23380	0.23378	0.23376	0.23374	0.23372	0.23370	0.23368	0.23366
5.990	0.23366	0.23364	0.23362	0.23360	0.23358	0.23356	0.23354	0.23352	0.23350	0.23348	0.23346
6.000	0.23346	0.23344	0.23343	0.23341	0.23339	0.23337	0.23335	0.23333	0.23331	0.23329	0.23327
6.010	0.23327	0.23325	0.23323	0.23321	0.23319	0.23317	0.23315	0.23313	0.23311	0.23309	0.23308
6.020	0.23308	0.23305	0.23304	0.23302	0.23300	0.23296	0.23296	0.23294	0.23292	0.23290	0.23288
6.030	0.23288	0.23286	0.23284	0.23282	0.23280	0.23278	0.23277	0.23275	0.23273	0.23271	0.23269
6.040	0.23269	0.23267	0.23265	0.23263	0.23261	0.23259	0.23257	0.23255	0.23253	0.23251	0.23249
6.050	0.23249	0.23243	0.23246	0.23244	0.23242	0.23240	0.23238	0.23236	0.23234	0.23232	0.23230
6.060	0.23230	0.23228	0.23226	0.23224	0.23223	0.23221	0.23219	0.23217	0.23215	0.23213	0.23211
6.070	0.23211	0.23209	0.23207	0.23205	0.23203	0.23201	0.23199	0.23198	0.23196	0.23194	0.23192
6.080	0.23192	0.23190	0.23188	0.23186	0.23184	0.23182	0.23180	0.23178	0.23176	0.23175	0.23173
6.090	0.23173	0.23171	0.23169	0.23167	0.23165	0.23163	0.23161	0.23159	0.23157	0.23155	0.23154

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
6.100	0.23154	0.23152	0.23150	0.23148	0.23146	0.23144	0.23142	0.23140	0.23138	0.23136	0.23124
6.110	0.23134	0.23133	0.23131	0.23129	0.23127	0.23125	0.23123	0.23121	0.23119	0.23117	0.23115
6.120	0.23115	0.23114	0.23112	0.23110	0.23108	0.23106	0.23104	0.23102	0.23100	0.23098	0.23096
6.130	0.23096	0.23095	0.23093	0.23091	0.23089	0.23087	0.23085	0.23083	0.23081	0.23079	0.23077
6.140	0.23077	0.23076	0.23074	0.23072	0.23070	0.23068	0.23066	0.23064	0.23062	0.23060	0.23059
6.150	0.23059	0.23057	0.23055	0.23053	0.23051	0.23049	0.23047	0.23045	0.23043	0.23042	0.23040
6.160	0.23040	0.23036	0.23036	0.23034	0.23032	0.23030	0.23028	0.23026	0.23025	0.23023	0.23021
6.170	0.23021	0.23019	0.23017	0.23015	0.23013	0.23011	0.23009	0.23008	0.23006	0.23004	0.23002
6.180	0.23002	0.23000	0.22998	0.22996	0.22994	0.22993	0.22991	0.22989	0.22987	0.22985	0.22983
6.190	0.22983	0.22981	0.22979	0.22978	0.22976	0.22974	0.22972	0.22970	0.22968	0.22966	0.22964
6.200	0.22964	0.22963	0.22961	0.22959	0.22957	0.22955	0.22953	0.22951	0.22949	0.22948	0.22946
6.210	0.22946	0.22944	0.22942	0.22940	0.22938	0.22936	0.22935	0.22933	0.22931	0.22929	0.22927
6.220	0.22927	0.22925	0.22923	0.22921	0.22920	0.22918	0.22916	0.22914	0.22912	0.22910	0.22908
6.230	0.22908	0.22907	0.22905	0.22903	0.22901	0.22899	0.22897	0.22895	0.22894	0.22892	0.22890
6.240	0.22890	0.22888	0.22886	0.22884	0.22882	0.22881	0.22879	0.22877	0.22875	0.22873	0.22871
6.250	0.22871	0.22867	0.22868	0.22866	0.22864	0.22862	0.22860	0.22858	0.22856	0.22855	0.22853
6.260	0.22853	0.22851	0.22849	0.22847	0.22845	0.22844	0.22842	0.22840	0.22838	0.22836	0.22834
6.270	0.22834	0.22832	0.22831	0.22829	0.22827	0.22825	0.22823	0.22821	0.22820	0.22818	0.22816
6.280	0.22816	0.22814	0.22812	0.22810	0.22808	0.22807	0.22805	0.22803	0.22801	0.22799	0.22797
6.290	0.22797	0.22796	0.22794	0.22792	0.22790	0.22788	0.22786	0.22785	0.22783	0.22781	0.22779
6.300	0.22779	0.22777	0.22775	0.22774	0.22772	0.22770	0.22768	0.22766	0.22764	0.22763	0.22761
6.310	0.22761	0.22759	0.22757	0.22755	0.22753	0.22752	0.22750	0.22748	0.22746	0.22744	0.22742
6.320	0.22742	0.22741	0.22739	0.22737	0.22735	0.22733	0.22731	0.22730	0.22728	0.22726	0.22724
6.330	0.22724	0.22722	0.22720	0.22719	0.22717	0.22715	0.22713	0.22711	0.22710	0.22708	0.22706
6.340	0.22706	0.22704	0.22702	0.22700	0.22699	0.22697	0.22695	0.22693	0.22691	0.22689	0.22688
6.350	0.22688	0.22686	0.22684	0.22682	0.22680	0.22679	0.22677	0.22675	0.22673	0.22671	0.22670
6.360	0.22670	0.22668	0.22666	0.22664	0.22662	0.22660	0.22659	0.22657	0.22655	0.22653	0.22651
6.370	0.22651	0.22650	0.22648	0.22646	0.22644	0.22642	0.22641	0.22639	0.22637	0.22635	0.22633
6.380	0.22633	0.22631	0.22630	0.22628	0.22626	0.22624	0.22622	0.22621	0.22619	0.22617	0.22615
6.390	0.22615	0.22613	0.22612	0.22610	0.22608	0.22606	0.22604	0.22603	0.22601	0.22599	0.22597

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
6.400	0.22597	0.22595	0.22594	0.22592	0.22590	0.22588	0.22586	0.22585	0.22583	0.22581	0.22579
6.410	0.22579	0.22577	0.22576	0.22574	0.22572	0.22570	0.22568	0.22567	0.22565	0.22563	0.22561
6.420	0.22561	0.22559	0.22558	0.22556	0.22554	0.22552	0.22550	0.22549	0.22547	0.22545	0.22543
6.430	0.22542	0.22542	0.22540	0.22538	0.22536	0.22534	0.22533	0.22531	0.22529	0.22527	0.22525
6.440	0.22525	0.22524	0.22522	0.22520	0.22518	0.22516	0.22515	0.22513	0.22511	0.22509	0.22508
6.450	0.22508	0.22505	0.22504	0.22502	0.22500	0.22499	0.22497	0.22495	0.22493	0.22492	0.22490
6.460	0.22490	0.22488	0.22486	0.22484	0.22483	0.22481	0.22479	0.22477	0.22476	0.22474	0.22472
6.470	0.22472	0.22470	0.22468	0.22467	0.22465	0.22463	0.22461	0.22460	0.22458	0.22456	0.22454
6.480	0.22454	0.22452	0.22451	0.22449	0.22447	0.22445	0.22444	0.22442	0.22440	0.22438	0.22436
6.490	0.22436	0.22435	0.22433	0.22431	0.22429	0.22428	0.22426	0.22424	0.22422	0.22421	0.22419
6.500	0.22419	0.22417	0.22415	0.22414	0.22412	0.22410	0.22408	0.22406	0.22405	0.22403	0.22401
6.510	0.22401	0.22399	0.22398	0.22396	0.22394	0.22392	0.22391	0.22389	0.22387	0.22385	0.22384
6.520	0.22384	0.22382	0.22380	0.22378	0.22377	0.22375	0.22373	0.22371	0.22369	0.22368	0.22366
6.530	0.22366	0.22364	0.22362	0.22361	0.22359	0.22357	0.22355	0.22354	0.22352	0.22350	0.22348
6.540	0.22348	0.22347	0.22345	0.22343	0.22341	0.22340	0.22338	0.22336	0.22334	0.22333	0.22331
6.550	0.22331	0.22329	0.22327	0.22326	0.22324	0.22322	0.22320	0.22319	0.22317	0.22315	0.22313
6.560	0.22313	0.22312	0.22310	0.22308	0.22306	0.22305	0.22303	0.22301	0.22299	0.22298	0.22296
6.570	0.22296	0.22294	0.22292	0.22291	0.22289	0.22287	0.22286	0.22284	0.22282	0.22280	0.22279
6.580	0.22279	0.22277	0.22275	0.22273	0.22272	0.22270	0.22268	0.22266	0.22265	0.22263	0.22261
6.590	0.22261	0.22259	0.22258	0.22256	0.22254	0.22252	0.22251	0.22249	0.22247	0.22246	0.22244
6.600	0.22244	0.22242	0.22240	0.22239	0.22237	0.22235	0.22233	0.22232	0.22230	0.22228	0.22226
6.610	0.22226	0.22225	0.22223	0.22221	0.22220	0.22218	0.22216	0.22214	0.22213	0.22211	0.22209
6.620	0.22209	0.22207	0.22206	0.22204	0.22202	0.22201	0.22199	0.22197	0.22195	0.22194	0.22192
6.630	0.22192	0.22190	0.22188	0.22187	0.22185	0.22183	0.22182	0.22180	0.22178	0.22176	0.22175
6.640	0.22175	0.22173	0.22171	0.22170	0.22168	0.22166	0.22164	0.22163	0.22161	0.22159	0.22158
6.650	0.22158	0.22156	0.22154	0.22152	0.22151	0.22149	0.22147	0.22146	0.22144	0.22142	0.22140
6.660	0.22140	0.22139	0.22137	0.22135	0.22134	0.22132	0.22130	0.22128	0.22127	0.22125	0.22123
6.670	0.22123	0.22122	0.22120	0.22118	0.22116	0.22115	0.22113	0.22111	0.22110	0.22108	0.22105
6.680	0.22106	0.22104	0.22103	0.22101	0.22099	0.22098	0.22096	0.22094	0.22093	0.22091	0.22089
6.690	0.22089	0.22087	0.22086	0.22084	0.22082	0.22081	0.22079	0.22077	0.22075	0.22074	0.22072

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
6.700	0.22072	0.22073	0.22069	0.22067	0.22065	0.22064	0.22062	0.22060	0.22058	0.22057	0.22055
6.710	0.22055	0.22053	0.22052	0.22050	0.22048	0.22047	0.22045	0.22043	0.22042	0.22040	0.22038
6.720	0.22038	0.22036	0.22035	0.22033	0.22031	0.22030	0.22028	0.22026	0.22025	0.22023	0.22021
6.730	0.22021	0.22019	0.22018	0.22016	0.22014	0.22013	0.22011	0.22009	0.22008	0.22006	0.22004
6.740	0.22004	0.22003	0.22001	0.21999	0.21998	0.21996	0.21994	0.21992	0.21991	0.21989	0.21987
6.750	0.21987	0.21986	0.21984	0.21982	0.21981	0.21979	0.21977	0.21976	0.21974	0.21972	0.21971
6.760	0.21971	0.21969	0.21967	0.21966	0.21964	0.21962	0.21960	0.21959	0.21957	0.21955	0.21954
6.770	0.21954	0.21952	0.21950	0.21949	0.21947	0.21945	0.21944	0.21942	0.21940	0.21939	0.21937
6.780	0.21937	0.21935	0.21934	0.21932	0.21930	0.21929	0.21927	0.21925	0.21924	0.21922	0.21920
6.790	0.21920	0.21919	0.21917	0.21915	0.21914	0.21912	0.21910	0.21909	0.21907	0.21905	0.21904
6.800	0.21904	0.21902	0.21900	0.21899	0.21897	0.21895	0.21894	0.21892	0.21890	0.21889	0.21887
6.810	0.21887	0.21885	0.21884	0.21882	0.21880	0.21879	0.21877	0.21875	0.21874	0.21872	0.21870
6.820	0.21870	0.21869	0.21867	0.21865	0.21864	0.21862	0.21860	0.21859	0.21857	0.21855	0.21854
6.830	0.21854	0.21852	0.21850	0.21849	0.21847	0.21845	0.21844	0.21842	0.21840	0.21839	0.21837
6.840	0.21837	0.21835	0.21834	0.21832	0.21830	0.21829	0.21827	0.21825	0.21824	0.21822	0.21820
6.850	0.21820	0.21819	0.21817	0.21815	0.21814	0.21812	0.21811	0.21809	0.21807	0.21806	0.21804
6.860	0.21804	0.21802	0.21801	0.21799	0.21797	0.21796	0.21794	0.21792	0.21791	0.21789	0.21787
6.870	0.21787	0.21786	0.21784	0.21782	0.21781	0.21779	0.21778	0.21776	0.21774	0.21773	0.21771
6.880	0.21771	0.21769	0.21768	0.21766	0.21764	0.21763	0.21761	0.21759	0.21758	0.21756	0.21754
6.890	0.21754	0.21753	0.21751	0.21750	0.21748	0.21746	0.21745	0.21743	0.21741	0.21740	0.21738
6.900	0.21738	0.21736	0.21735	0.21733	0.21732	0.21730	0.21728	0.21727	0.21725	0.21723	0.21722
6.910	0.21722	0.21720	0.21718	0.21717	0.21715	0.21714	0.21712	0.21710	0.21709	0.21707	0.21705
6.920	0.21705	0.21704	0.21702	0.21700	0.21699	0.21697	0.21696	0.21694	0.21692	0.21691	0.21689
6.930	0.21689	0.21687	0.21686	0.21684	0.21683	0.21681	0.21679	0.21678	0.21676	0.21674	0.21673
6.940	0.21673	0.21671	0.21670	0.21668	0.21666	0.21665	0.21663	0.21661	0.21660	0.21658	0.21656
6.950	0.21656	0.21655	0.21653	0.21652	0.21650	0.21648	0.21647	0.21645	0.21644	0.21642	0.21640
6.960	0.21640	0.21639	0.21637	0.21635	0.21634	0.21632	0.21631	0.21629	0.21627	0.21626	0.21624
6.970	0.21624	0.21622	0.21621	0.21619	0.21618	0.21616	0.21614	0.21613	0.21611	0.21610	0.21608
6.980	0.21608	0.21605	0.21605	0.21603	0.21601	0.21600	0.21598	0.21597	0.21595	0.21593	0.21592
6.990	0.21592	0.21590	0.21589	0.21587	0.21585	0.21584	0.21582	0.21580	0.21579	0.21577	0.21576



WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
7.000	0.21576	0.21574	0.21572	0.21571	0.21569	0.21568	0.21566	0.21564	0.21563	0.21561	0.21560
7.010	0.21560	0.21558	0.21556	0.21555	0.21553	0.21552	0.21550	0.21548	0.21547	0.21545	0.21544
7.020	0.21544	0.21542	0.21540	0.21539	0.21537	0.21536	0.21534	0.21532	0.21531	0.21529	0.21528
7.030	0.21528	0.21526	0.21524	0.21523	0.21521	0.21520	0.21518	0.21516	0.21515	0.21513	0.21512
7.040	0.21512	0.21510	0.21508	0.21507	0.21505	0.21504	0.21502	0.21500	0.21499	0.21497	0.21496
7.050	0.21496	0.21494	0.21492	0.21491	0.21489	0.21488	0.21486	0.21484	0.21483	0.21481	0.21480
7.060	0.21480	0.21478	0.21476	0.21475	0.21473	0.21472	0.21470	0.21468	0.21467	0.21465	0.21464
7.070	0.21464	0.21462	0.21461	0.21459	0.21457	0.21456	0.21454	0.21453	0.21451	0.21449	0.21448
7.080	0.21448	0.21446	0.21445	0.21443	0.21441	0.21440	0.21438	0.21437	0.21435	0.21434	0.21432
7.090	0.21432	0.21430	0.21429	0.21427	0.21426	0.21424	0.21422	0.21421	0.21419	0.21418	0.21416
7.100	0.21416	0.21415	0.21413	0.21411	0.21410	0.21408	0.21407	0.21405	0.21404	0.21402	0.21400
7.110	0.21400	0.21399	0.21397	0.21396	0.21394	0.21392	0.21391	0.21389	0.21388	0.21386	0.21385
7.120	0.21385	0.21383	0.21381	0.21380	0.21378	0.21377	0.21375	0.21374	0.21372	0.21370	0.21369
7.130	0.21369	0.21367	0.21366	0.21364	0.21363	0.21361	0.21359	0.21358	0.21356	0.21355	0.21353
7.140	0.21353	0.21352	0.21350	0.21348	0.21347	0.21345	0.21344	0.21342	0.21341	0.21339	0.21337
7.150	0.21337	0.21336	0.21334	0.21333	0.21331	0.21330	0.21328	0.21327	0.21325	0.21323	0.21322
7.160	0.21322	0.21320	0.21319	0.21317	0.21316	0.21314	0.21312	0.21311	0.21309	0.21308	0.21306
7.170	0.21306	0.21305	0.21303	0.21302	0.21300	0.21298	0.21297	0.21295	0.21294	0.21292	0.21291
7.180	0.21291	0.21289	0.21288	0.21286	0.21284	0.21283	0.21281	0.21280	0.21278	0.21277	0.21275
7.190	0.21275	0.21274	0.21272	0.21270	0.21269	0.21267	0.21266	0.21264	0.21263	0.21261	0.21260
7.200	0.21260	0.21258	0.21256	0.21255	0.21253	0.21252	0.21250	0.21249	0.21247	0.21246	0.21244
7.210	0.21244	0.21242	0.21241	0.21239	0.21238	0.21236	0.21235	0.21233	0.21232	0.21230	0.21229
7.220	0.21229	0.21227	0.21225	0.21224	0.21222	0.21221	0.21219	0.21218	0.21216	0.21215	0.21213
7.230	0.21213	0.21212	0.21210	0.21208	0.21207	0.21205	0.21204	0.21202	0.21201	0.21199	0.21198
7.240	0.21198	0.21196	0.21195	0.21193	0.21191	0.21190	0.21188	0.21187	0.21185	0.21184	0.21182
7.250	0.21182	0.21181	0.21179	0.21178	0.21176	0.21175	0.21173	0.21171	0.21170	0.21168	0.21167
7.260	0.21167	0.21165	0.21164	0.21162	0.21161	0.21159	0.21158	0.21156	0.21155	0.21153	0.21152
7.270	0.21152	0.21150	0.21148	0.21147	0.21145	0.21144	0.21142	0.21141	0.21139	0.21138	0.21136
7.280	0.21136	0.21135	0.21133	0.21132	0.21130	0.21129	0.21127	0.21126	0.21124	0.21122	0.21121
7.290	0.21121	0.21119	0.21118	0.21116	0.21115	0.21113	0.21112	0.21110	0.21109	0.21107	0.21106

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
7.300	0.21106	0.21104	0.21103	0.21101	0.21100	0.21098	0.21097	0.21093	0.21093	0.21092	0.21090
7.310	0.21090	0.21089	0.21087	0.21086	0.21084	0.21083	0.21081	0.21080	0.21078	0.21077	0.21075
7.320	0.21075	0.21074	0.21072	0.21071	0.21069	0.21068	0.21066	0.21065	0.21063	0.21062	0.21060
7.330	0.21060	0.21059	0.21057	0.21055	0.21054	0.21052	0.21051	0.21049	0.21048	0.21046	0.21045
7.340	0.21045	0.21043	0.21042	0.21040	0.21039	0.21037	0.21036	0.21034	0.21033	0.21031	0.21030
7.350	0.21030	0.21028	0.21027	0.21025	0.21024	0.21022	0.21021	0.21019	0.21018	0.21016	0.21015
7.360	0.21015	0.21013	0.21012	0.21010	0.21009	0.21007	0.21006	0.21004	0.21003	0.21001	0.21000
7.370	0.21000	0.20998	0.20997	0.20995	0.20994	0.20992	0.20991	0.20989	0.20988	0.20986	0.20985
7.380	0.20985	0.20983	0.20982	0.20980	0.20979	0.20977	0.20976	0.20974	0.20972	0.20971	0.20969
7.390	0.20969	0.20968	0.20966	0.20965	0.20963	0.20962	0.20960	0.20959	0.20957	0.20956	0.20954
7.400	0.20954	0.20953	0.20952	0.20950	0.20949	0.20947	0.20946	0.20944	0.20943	0.20941	0.20940
7.410	0.20940	0.20938	0.20937	0.20935	0.20934	0.20932	0.20931	0.20929	0.20928	0.20926	0.20925
7.420	0.20925	0.20923	0.20922	0.20920	0.20919	0.20917	0.20916	0.20914	0.20913	0.20911	0.20910
7.430	0.20910	0.20909	0.20907	0.20905	0.20904	0.20902	0.20901	0.20899	0.20898	0.20896	0.20895
7.440	0.20895	0.20893	0.20892	0.20890	0.20889	0.20887	0.20886	0.20884	0.20883	0.20881	0.20880
7.450	0.20880	0.20873	0.20877	0.20875	0.20874	0.20872	0.20871	0.20870	0.20868	0.20867	0.20865
7.460	0.20865	0.20864	0.20862	0.20861	0.20859	0.20858	0.20856	0.20855	0.20853	0.20852	0.20850
7.470	0.20850	0.20849	0.20847	0.20846	0.20844	0.20843	0.20841	0.20840	0.20838	0.20837	0.20835
7.480	0.20835	0.20834	0.20833	0.20831	0.20830	0.20828	0.20827	0.20825	0.20824	0.20822	0.20821
7.490	0.20821	0.20819	0.20818	0.20816	0.20815	0.20813	0.20812	0.20810	0.20809	0.20807	0.20806
7.500	0.20806	0.20804	0.20803	0.20802	0.20800	0.20799	0.20797	0.20796	0.20794	0.20793	0.20791
7.510	0.20791	0.20790	0.20788	0.20787	0.20785	0.20784	0.20782	0.20781	0.20780	0.20778	0.20777
7.520	0.20777	0.20775	0.20774	0.20772	0.20771	0.20769	0.20768	0.20766	0.20765	0.20763	0.20762
7.530	0.20762	0.20760	0.20759	0.20758	0.20756	0.20755	0.20753	0.20752	0.20750	0.20749	0.20747
7.540	0.20747	0.20746	0.20744	0.20743	0.20741	0.20740	0.20739	0.20737	0.20736	0.20734	0.20733
7.550	0.20733	0.20731	0.20730	0.20728	0.20727	0.20725	0.20724	0.20722	0.20721	0.20720	0.20718
7.560	0.20718	0.20717	0.20715	0.20714	0.20712	0.20711	0.20709	0.20708	0.20706	0.20705	0.20704
7.570	0.20704	0.20702	0.20701	0.20699	0.20698	0.20696	0.20695	0.20693	0.20692	0.20690	0.20689
7.580	0.20689	0.20688	0.20685	0.20685	0.20683	0.20682	0.20680	0.20679	0.20677	0.20676	0.20674
7.590	0.20674	0.20673	0.20672	0.20670	0.20669	0.20667	0.20666	0.20664	0.20663	0.20661	0.20660



WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
7.600	0.20660	0.20659	0.20657	0.20656	0.20654	0.20653	0.20651	0.20650	0.20648	0.20647	0.20646
7.610	0.20646	0.20644	0.20643	0.20641	0.20640	0.20638	0.20637	0.20635	0.20634	0.20633	0.20631
7.620	0.20631	0.20630	0.20628	0.20627	0.20625	0.20624	0.20622	0.20621	0.20620	0.20618	0.20617
7.630	0.20617	0.20615	0.20614	0.20612	0.20611	0.20610	0.20608	0.20607	0.20605	0.20604	0.20602
7.640	0.20602	0.20601	0.20599	0.20598	0.20597	0.20595	0.20594	0.20592	0.20591	0.20589	0.20588
7.650	0.20588	0.20587	0.20585	0.20584	0.20582	0.20581	0.20579	0.20578	0.20576	0.20575	0.20574
7.660	0.20574	0.20572	0.20571	0.20569	0.20568	0.20566	0.20565	0.20564	0.20562	0.20561	0.20559
7.670	0.20559	0.20558	0.20556	0.20555	0.20554	0.20552	0.20551	0.20549	0.20548	0.20546	0.20545
7.680	0.20545	0.20544	0.20542	0.20541	0.20539	0.20538	0.20536	0.20535	0.20534	0.20532	0.20531
7.690	0.20531	0.20529	0.20528	0.20526	0.20525	0.20524	0.20522	0.20521	0.20519	0.20518	0.20517
7.700	0.20517	0.20515	0.20514	0.20512	0.20511	0.20509	0.20508	0.20507	0.20505	0.20504	0.20502
7.710	0.20502	0.20501	0.20499	0.20498	0.20497	0.20495	0.20494	0.20492	0.20491	0.20490	0.20488
7.720	0.20488	0.20487	0.20485	0.20484	0.20482	0.20481	0.20480	0.20478	0.20477	0.20475	0.20474
7.730	0.20474	0.20473	0.20471	0.20470	0.20468	0.20467	0.20465	0.20464	0.20463	0.20461	0.20460
7.740	0.20460	0.20458	0.20457	0.20456	0.20454	0.20453	0.20451	0.20450	0.20449	0.20447	0.20446
7.750	0.20446	0.20444	0.20443	0.20441	0.20440	0.20439	0.20437	0.20436	0.20434	0.20433	0.20432
7.760	0.20432	0.20430	0.20429	0.20427	0.20426	0.20425	0.20423	0.20422	0.20420	0.20419	0.20418
7.770	0.20418	0.20416	0.20415	0.20413	0.20412	0.20411	0.20409	0.20408	0.20406	0.20405	0.20404
7.780	0.20404	0.20402	0.20401	0.20399	0.20398	0.20396	0.20395	0.20394	0.20392	0.20391	0.20389
7.790	0.20389	0.20388	0.20387	0.20385	0.20384	0.20382	0.20381	0.20380	0.20378	0.20377	0.20375
7.800	0.20375	0.20374	0.20373	0.20371	0.20370	0.20369	0.20367	0.20366	0.20364	0.20363	0.20362
7.810	0.20362	0.20360	0.20359	0.20357	0.20356	0.20355	0.20353	0.20352	0.20350	0.20349	0.20348
7.820	0.20348	0.20346	0.20345	0.20343	0.20342	0.20341	0.20339	0.20338	0.20336	0.20335	0.20334
7.830	0.20334	0.20332	0.20331	0.20329	0.20328	0.20327	0.20325	0.20324	0.20323	0.20321	0.20320
7.840	0.20320	0.20318	0.20317	0.20316	0.20314	0.20313	0.20311	0.20310	0.20309	0.20307	0.20306
7.850	0.20306	0.20304	0.20303	0.20302	0.20300	0.20299	0.20298	0.20296	0.20295	0.20293	0.20292
7.860	0.20292	0.20291	0.20289	0.20288	0.20286	0.20285	0.20284	0.20282	0.20281	0.20280	0.20278
7.870	0.20278	0.20277	0.20275	0.20274	0.20273	0.20271	0.20270	0.20269	0.20267	0.20266	0.20264
7.880	0.20264	0.20263	0.20262	0.20260	0.20259	0.20257	0.20256	0.20255	0.20253	0.20252	0.20251
7.890	0.20251	0.20249	0.20248	0.20246	0.20245	0.20244	0.20242	0.20241	0.20240	0.20238	0.20237

WEIGHT FLOW PARAMETER AS A FUNCTION OF TOTAL TO STATIC PRESSURE RATIO

PTO/PS	0	1	2	3	4	5	6	7	8	9	10
7.900	0.20237	0.20235	0.20234	0.20233	0.20231	0.20230	0.20229	0.20227	0.20226	0.20224	0.20223
7.910	0.20223	0.20222	0.20220	0.20219	0.20218	0.20216	0.20215	0.20213	0.20212	0.20211	0.20209
7.920	0.20209	0.20208	0.20207	0.20205	0.20204	0.20203	0.20201	0.20200	0.20198	0.20197	0.20196
7.930	0.20196	0.20194	0.20193	0.20192	0.20190	0.20189	0.20187	0.20186	0.20185	0.20183	0.20182
7.940	0.20182	0.20181	0.20179	0.20178	0.20177	0.20175	0.20174	0.20172	0.20171	0.20170	0.20168
7.950	0.20166	0.20167	0.20166	0.20164	0.20163	0.20162	0.20160	0.20159	0.20157	0.20156	0.20155
7.960	0.20155	0.20153	0.20152	0.20151	0.20149	0.20148	0.20147	0.20145	0.20144	0.20142	0.20141
7.970	0.20141	0.20140	0.20138	0.20137	0.20136	0.20134	0.20133	0.20132	0.20130	0.20129	0.20128
7.980	0.20128	0.20126	0.20125	0.20123	0.20122	0.20121	0.20119	0.20118	0.20117	0.20115	0.20114
7.990	0.20114	0.20113	0.20111	0.20110	0.20109	0.20107	0.20106	0.20105	0.20103	0.20102	0.20100
8.000	0.20100	0.20099	0.20098	0.20096	0.20095	0.20094	0.20092	0.20091	0.20090	0.20088	0.20087
8.010	0.20087	0.20086	0.20084	0.20083	0.20082	0.20080	0.20079	0.20077	0.20076	0.20075	0.20073
8.020	0.20073	0.20072	0.20071	0.20069	0.20068	0.20067	0.20065	0.20064	0.20063	0.20061	0.20060
8.030	0.20060	0.20059	0.20057	0.20056	0.20055	0.20053	0.20052	0.20051	0.20049	0.20048	0.20047
8.040	0.20047	0.20045	0.20044	0.20043	0.20041	0.20040	0.20038	0.20037	0.20036	0.20034	0.20033
8.050	0.20033	0.20032	0.20030	0.20029	0.20028	0.20026	0.20025	0.20024	0.20022	0.20021	0.20020
8.060	0.20020	0.20013	0.20017	0.20016	0.20014	0.20013	0.20012	0.20010	0.20009	0.20008	0.20006
8.070	0.20006	0.20005	0.20004	0.20002	0.20001	0.20000	0.19998	0.19997	0.19996	0.19994	0.19993
8.080	0.19993	0.19992	0.19990	0.19989	0.19988	0.19986	0.19985	0.19984	0.19982	0.19981	0.19980
8.090	0.19980	0.19978	0.19977	0.19976	0.19974	0.19973	0.19972	0.19970	0.19969	0.19968	0.19966
8.100	0.19966	0.19965	0.19964	0.19962	0.19961	0.19960	0.19958	0.19957	0.19956	0.19954	0.19953
8.110	0.19953	0.19952	0.19950	0.19949	0.19948	0.19946	0.19945	0.19944	0.19942	0.19941	0.19940
8.120	0.19940	0.19938	0.19937	0.19936	0.19934	0.19933	0.19932	0.19930	0.19929	0.19928	0.19927
8.130	0.19927	0.19925	0.19924	0.19923	0.19921	0.19920	0.19919	0.19917	0.19916	0.19915	0.19913
8.140	0.19913	0.19912	0.19911	0.19909	0.19908	0.19907	0.19905	0.19904	0.19903	0.19901	0.19900
8.150	0.19900	0.19899	0.19897	0.19896	0.19895	0.19894	0.19892	0.19891	0.19890	0.19888	0.19887
8.160	0.19887	0.19886	0.19884	0.19883	0.19882	0.19880	0.19879	0.19878	0.19876	0.19875	0.19874
8.170	0.19874	0.19872	0.19871	0.19870	0.19868	0.19867	0.19866	0.19865	0.19863	0.19862	0.19861
8.180	0.19861	0.19859	0.19858	0.19857	0.19855	0.19854	0.19853	0.19851	0.19850	0.19849	0.19847
8.190	0.19847	0.19846	0.19845	0.19844	0.19842	0.19841	0.19840	0.19838	0.19837	0.19836	0.19834

## Appendix E (continued)

Tabulation of:

$$\frac{W \sqrt{T_t}}{A P_t}$$

where

W is weight flow (lbs/sec)

 $\sqrt{T_t}$  is the square root of total temperature ( $\sqrt{OR}$ )A is flow area (in<sup>2</sup>)

The tabulation is versus Mach number.

WEIGHT FLOW PARAMETER (W) TTO/(A) (PTO)

UNITS W(LBS/SEC), A(SQ. IN.), TTO(DEG.K.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.00	0.000919	0.001838	0.002756	0.003675	0.004594	0.005513	0.006431	0.007350	0.008269	0.009187	
0.01	0.010106	0.020208	0.030301	0.040380	0.050442	0.060482	0.070496	0.080480	0.090428	0.100337	
0.02	0.019290	0.038549	0.057808	0.077067	0.096326	0.115585	0.134844	0.154103	0.173362	0.192621	
0.03	0.028466	0.056932	0.085398	0.113864	0.142330	0.170796	0.199262	0.227728	0.256194	0.284660	
0.04	0.037633	0.075266	0.112900	0.150534	0.188168	0.225802	0.263436	0.301070	0.338704	0.376338	
0.05	0.046786	0.093572	0.140358	0.187144	0.233930	0.280716	0.327502	0.374288	0.421074	0.467860	
0.06	0.055922	0.111844	0.169706	0.227568	0.285430	0.343292	0.401154	0.459016	0.516878	0.574740	
0.07	0.065038	0.131676	0.199344	0.267010	0.334674	0.402338	0.470002	0.537666	0.605330	0.672994	
0.08	0.073222	0.148130	0.225794	0.303358	0.380922	0.458486	0.536050	0.613614	0.691178	0.768742	
0.09	0.082291	0.166262	0.253826	0.341390	0.428954	0.516518	0.604082	0.691646	0.779210	0.866774	
0.10	0.091321	0.185332	0.282896	0.380460	0.478024	0.575588	0.673152	0.770716	0.868280	0.965844	
0.11	0.100337	0.204714	0.313090	0.421466	0.529842	0.638218	0.746594	0.854970	0.963346	1.071722	
0.12	0.109308	0.224200	0.337576	0.455952	0.574528	0.693104	0.811680	0.930256	1.048832	1.167378	
0.13	0.118240	0.244686	0.368062	0.491438	0.614814	0.738190	0.861566	0.984942	1.108318	1.231694	
0.14	0.127130	0.265172	0.394448	0.523824	0.647200	0.770576	0.893952	1.017328	1.140704	1.264080	
0.15	0.135975	0.286658	0.420934	0.555210	0.689486	0.823762	0.958038	1.092314	1.226590	1.360866	
0.16	0.144772	0.308144	0.447420	0.581696	0.715972	0.850248	0.984524	1.118800	1.253076	1.387352	
0.17	0.153517	0.330630	0.470906	0.605182	0.739458	0.878734	1.018010	1.157286	1.296562	1.435838	
0.18	0.162203	0.354116	0.495372	0.630668	0.769944	0.909220	1.048496	1.187772	1.327058	1.466324	
0.19	0.170843	0.378602	0.520858	0.656154	0.795430	0.934906	1.074182	1.213458	1.352744	1.496810	
0.20	0.179417	0.404086	0.547344	0.683040	0.818516	0.953992	1.089468	1.224944	1.361430	1.507296	
0.21	0.187929	0.430570	0.574830	0.711526	0.846992	0.982478	1.117954	1.250410	1.380882	1.517750	
0.22	0.196375	0.458054	0.602316	0.740012	0.875478	1.010964	1.140430	1.269892	1.391334	1.528204	
0.23	0.204753	0.486538	0.630802	0.768498	0.903964	1.039450	1.168912	1.299390	1.401788	1.538618	
0.24	0.213060	0.516022	0.660288	0.797984	0.932450	1.067936	1.198374	1.328866	1.412242	1.549032	

WEIGHT FLOW PARAMETER (W) T(TO/(A)) (PTO)

UNITS W(LBS/SEC), A(SQ.IN.), T(DEG.R.), P(TO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.25	0.221293	0.222113	0.222931	0.223749	0.224566	0.225382	0.226197	0.227012	0.227825	0.228638	0.229451
0.26	0.229451	0.230262	0.231073	0.231883	0.232692	0.233500	0.234307	0.235114	0.235920	0.236725	0.237529
0.27	0.237529	0.238333	0.239135	0.239937	0.240738	0.241538	0.242338	0.243136	0.243934	0.244731	0.245527
0.28	0.245527	0.246322	0.247116	0.247910	0.248703	0.249495	0.250285	0.251076	0.251865	0.252653	0.253441
0.29	0.253441	0.254228	0.255014	0.255799	0.256583	0.257366	0.258148	0.258930	0.259711	0.260490	0.261269
0.30	0.261269	0.262047	0.262824	0.263601	0.264376	0.265151	0.265924	0.266697	0.267469	0.268240	0.269010
0.31	0.269010	0.269779	0.270547	0.271314	0.272080	0.272846	0.273611	0.274374	0.275137	0.275899	0.276660
0.32	0.276660	0.277419	0.278179	0.278937	0.279694	0.280450	0.281205	0.281960	0.282713	0.283466	0.284217
0.33	0.284217	0.284968	0.285717	0.286466	0.287214	0.287961	0.288706	0.289451	0.290195	0.290938	0.291680
0.34	0.291680	0.292421	0.293161	0.293900	0.294639	0.295376	0.296112	0.296847	0.297581	0.298315	0.299047
0.35	0.299047	0.299778	0.300508	0.301238	0.301966	0.302693	0.303420	0.304145	0.304869	0.305593	0.306315
0.36	0.306315	0.307036	0.307757	0.308476	0.309194	0.309912	0.310628	0.311343	0.312058	0.312771	0.313483
0.37	0.313483	0.314194	0.314904	0.315614	0.316322	0.317029	0.317735	0.318440	0.319144	0.319847	0.320549
0.38	0.320549	0.321250	0.321950	0.322649	0.323346	0.324043	0.324739	0.325433	0.326127	0.326820	0.327511
0.39	0.327511	0.328202	0.328891	0.329579	0.330267	0.330953	0.331638	0.332322	0.333005	0.333687	0.334368
0.40	0.334368	0.335048	0.335726	0.336404	0.337081	0.337756	0.338430	0.339104	0.339776	0.340447	0.341117
0.41	0.341117	0.341786	0.342454	0.343121	0.343787	0.344452	0.345115	0.345778	0.346439	0.347099	0.347759
0.42	0.347759	0.348417	0.349074	0.349729	0.350384	0.351038	0.351691	0.352342	0.352992	0.353642	0.354290
0.43	0.354290	0.354937	0.355583	0.356227	0.356871	0.357514	0.358155	0.358795	0.359435	0.360073	0.360710
0.44	0.360710	0.361345	0.361980	0.362614	0.363246	0.363877	0.364507	0.365136	0.365764	0.366391	0.367017
0.45	0.367017	0.367641	0.368265	0.368887	0.369508	0.370128	0.370747	0.371364	0.371981	0.372596	0.373210
0.46	0.373210	0.373823	0.374435	0.375046	0.375655	0.376264	0.376871	0.377477	0.378082	0.378686	0.379289
0.47	0.379289	0.379890	0.380490	0.381090	0.381688	0.382284	0.382880	0.383475	0.384068	0.384660	0.385251
0.48	0.385251	0.385841	0.386429	0.387017	0.387603	0.388186	0.388772	0.389355	0.389937	0.390517	0.391096
0.49	0.391096	0.391674	0.392251	0.392827	0.393402	0.393975	0.394547	0.395118	0.395688	0.396256	0.396824

WEIGHT FLOW PARAMETER (W) (TTO/(A)(PTO)

UNITS W(LBS/SEC) \* A(SQ.IN.) \* TTO(DEGR.) \* PTO(P.SIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.50	0.396824	0.397390	0.397955	0.398519	0.399082	0.399643	0.400203	0.400762	0.401320	0.401877	0.402432
0.51	0.402432	0.402987	0.403540	0.404092	0.404642	0.405192	0.405740	0.406287	0.406833	0.407378	0.407922
0.52	0.407922	0.408464	0.409005	0.409545	0.410083	0.410621	0.411157	0.411692	0.412226	0.412759	0.413290
0.53	0.413290	0.413821	0.414350	0.414877	0.415404	0.415922	0.416454	0.416977	0.417498	0.418019	0.418538
0.54	0.418538	0.419056	0.419573	0.420089	0.420603	0.421117	0.421629	0.422139	0.422649	0.423157	0.423665
0.55	0.423665	0.424171	0.424675	0.425179	0.425681	0.426182	0.426682	0.427181	0.427678	0.428174	0.428669
0.56	0.428669	0.429163	0.429655	0.430147	0.430637	0.431125	0.431613	0.432099	0.432585	0.433068	0.433551
0.57	0.433551	0.434033	0.434513	0.434992	0.435470	0.435946	0.436422	0.436896	0.437368	0.437840	0.438311
0.58	0.438311	0.438780	0.439246	0.439714	0.440180	0.440644	0.441107	0.441569	0.442029	0.442489	0.442947
0.59	0.442947	0.443404	0.443859	0.444314	0.444767	0.445219	0.445670	0.446119	0.446567	0.447014	0.447460
0.60	0.447460	0.447905	0.448348	0.448790	0.449231	0.449670	0.450109	0.450546	0.450982	0.451416	0.451850
0.61	0.451850	0.452282	0.452713	0.453143	0.453571	0.453999	0.454425	0.454849	0.455273	0.455695	0.456116
0.62	0.456116	0.456536	0.456955	0.457372	0.457788	0.458203	0.458617	0.459029	0.459440	0.459850	0.460259
0.63	0.460259	0.460667	0.461073	0.461478	0.461882	0.462284	0.462686	0.463086	0.463485	0.463882	0.464279
0.64	0.464279	0.464674	0.465066	0.465461	0.465852	0.466242	0.466631	0.467019	0.467406	0.467791	0.468175
0.65	0.468175	0.468558	0.468939	0.469320	0.469699	0.470077	0.470454	0.470829	0.471203	0.471576	0.471948
0.66	0.471948	0.472319	0.472688	0.473056	0.473423	0.473789	0.474153	0.474516	0.474878	0.475239	0.475598
0.67	0.475598	0.475957	0.476314	0.476669	0.477024	0.477377	0.477730	0.478080	0.478430	0.478779	0.479126
0.68	0.479126	0.479472	0.479817	0.480160	0.480503	0.480844	0.481184	0.481523	0.481860	0.482196	0.482531
0.69	0.482531	0.482865	0.483198	0.483529	0.483859	0.484188	0.484516	0.484843	0.485168	0.485492	0.485815
0.70	0.485815	0.486137	0.486457	0.486776	0.487094	0.487411	0.487727	0.488041	0.488354	0.488666	0.488977
0.71	0.488977	0.489287	0.489595	0.489902	0.490208	0.490513	0.490816	0.491119	0.491420	0.491720	0.492018
0.72	0.492018	0.492316	0.492612	0.492907	0.493201	0.493494	0.493786	0.494076	0.494365	0.494653	0.494940
0.73	0.494940	0.495225	0.495509	0.495793	0.496074	0.496355	0.496635	0.496913	0.497190	0.497466	0.497741
0.74	0.497741	0.498015	0.498287	0.498558	0.498828	0.499097	0.499365	0.499631	0.499896	0.500161	0.500423

WEIGHT FLOW PARAMETER (W) TTO/(A) (PTO)

UNITS W(LBS/SEC), A(SQ. IN.), TTO(DEG.R.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
0.75	0.500423	0.500685	0.500946	0.501205	0.501463	0.501720	0.501976	0.502231	0.502484	0.502737	0.502988
0.76	0.502988	0.503238	0.503486	0.503734	0.503980	0.504226	0.504470	0.504713	0.504954	0.505195	0.505434
0.77	0.505434	0.505673	0.505910	0.506146	0.506380	0.506614	0.506846	0.507078	0.507308	0.507537	0.507765
0.78	0.507765	0.507991	0.508217	0.508441	0.508664	0.508886	0.509107	0.509327	0.509545	0.509763	0.509979
0.79	0.509979	0.510194	0.510408	0.510621	0.510832	0.511043	0.511252	0.511460	0.511667	0.511873	0.512078
0.80	0.512078	0.512282	0.512484	0.512686	0.512886	0.513085	0.513283	0.513480	0.513676	0.513870	0.514064
0.81	0.514064	0.514256	0.514447	0.514637	0.514826	0.515014	0.515201	0.515386	0.515571	0.515754	0.515936
0.82	0.515936	0.516117	0.516297	0.516476	0.516654	0.516830	0.517006	0.517180	0.517353	0.517526	0.517697
0.83	0.517697	0.517867	0.518035	0.518203	0.518370	0.518535	0.518700	0.518863	0.519025	0.519186	0.519346
0.84	0.519346	0.519505	0.519663	0.519820	0.519975	0.520130	0.520283	0.520436	0.520587	0.520737	0.520886
0.85	0.520886	0.521034	0.521181	0.521327	0.521472	0.521615	0.521758	0.521899	0.522040	0.522179	0.522317
0.86	0.522317	0.522455	0.522591	0.522726	0.522860	0.522993	0.523124	0.523255	0.523385	0.523513	0.523641
0.87	0.523641	0.523768	0.523893	0.524017	0.524141	0.524263	0.524384	0.524504	0.524623	0.524742	0.524859
0.88	0.524859	0.524974	0.525089	0.525203	0.525316	0.525428	0.525538	0.525648	0.525757	0.525864	0.525971
0.89	0.525971	0.526076	0.526181	0.526284	0.526387	0.526488	0.526588	0.526688	0.526786	0.526883	0.526979
0.90	0.526979	0.527075	0.527169	0.527262	0.527354	0.527445	0.527535	0.527624	0.527712	0.527799	0.527885
0.91	0.527885	0.527970	0.528054	0.528137	0.528219	0.528300	0.528380	0.528459	0.528537	0.528614	0.528690
0.92	0.528690	0.528765	0.528839	0.528912	0.528984	0.529055	0.529125	0.529194	0.529262	0.529329	0.529395
0.93	0.529395	0.529460	0.529524	0.529587	0.529649	0.529711	0.529771	0.529830	0.529888	0.529945	0.530001
0.94	0.530001	0.530057	0.530111	0.530164	0.530217	0.530268	0.530319	0.530368	0.530417	0.530464	0.530511
0.95	0.530511	0.530556	0.530601	0.530645	0.530687	0.530729	0.530770	0.530810	0.530849	0.530887	0.530924
0.96	0.530924	0.530960	0.530995	0.531030	0.531063	0.531095	0.531127	0.531157	0.531187	0.531215	0.531243
0.97	0.531243	0.531270	0.531296	0.531321	0.531345	0.531368	0.531390	0.531411	0.531431	0.531451	0.531469
0.98	0.531469	0.531487	0.531503	0.531519	0.531534	0.531548	0.531561	0.531573	0.531584	0.531594	0.531604
0.99	0.531604	0.531612	0.531620	0.531627	0.531632	0.531637	0.531641	0.531644	0.531647	0.531648	0.531648

WEIGHT FLOW PARAMETER (W) TTO/(A) (PTO)

UNITS W(LBS/SEC) A(SQ.IN.), TTO(DEG.K.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.00	0.531648	0.531647	0.531644	0.531641	0.531637	0.531632	0.531627	0.531620	0.531613	0.531604	
1.01	0.531604	0.531595	0.531585	0.531574	0.531562	0.531550	0.531536	0.531522	0.531506	0.531490	0.531473
1.02	0.531473	0.531455	0.531437	0.531417	0.531397	0.531376	0.531353	0.531330	0.531307	0.531282	0.531257
1.03	0.531257	0.531230	0.531203	0.531175	0.531146	0.531117	0.531086	0.531055	0.531023	0.530990	0.530956
1.04	0.530956	0.530921	0.530886	0.530849	0.530812	0.530774	0.530736	0.530696	0.530656	0.530614	0.530572
1.05	0.530572	0.530530	0.530486	0.530442	0.530396	0.530350	0.530303	0.530256	0.530207	0.530158	0.530108
1.06	0.530108	0.530057	0.530006	0.529953	0.529900	0.529846	0.529791	0.529736	0.529679	0.529622	0.529564
1.07	0.529564	0.529505	0.529446	0.529386	0.529325	0.529263	0.529200	0.529137	0.529073	0.529008	0.528942
1.08	0.528942	0.528876	0.528809	0.528741	0.528672	0.528603	0.528532	0.528461	0.528389	0.528317	0.528244
1.09	0.528244	0.528170	0.528095	0.528020	0.527943	0.527866	0.527789	0.527710	0.527631	0.527551	0.527470
1.10	0.527470	0.527389	0.527307	0.527224	0.527141	0.527056	0.526971	0.526885	0.526799	0.526712	0.526624
1.11	0.526624	0.526535	0.526446	0.526356	0.526265	0.526173	0.526081	0.525988	0.525895	0.525800	0.525705
1.12	0.525705	0.525609	0.525513	0.525416	0.525318	0.525219	0.525120	0.525020	0.524920	0.524818	0.524716
1.13	0.524716	0.524614	0.524510	0.524406	0.524301	0.524196	0.524090	0.523983	0.523875	0.523767	0.523658
1.14	0.523658	0.523549	0.523439	0.523328	0.523216	0.523104	0.522991	0.522878	0.522764	0.522649	0.522533
1.15	0.522533	0.522417	0.522300	0.522183	0.522065	0.521946	0.521827	0.521707	0.521586	0.521465	0.521343
1.16	0.521343	0.521220	0.521097	0.520973	0.520848	0.520723	0.520597	0.520471	0.520344	0.520216	0.520088
1.17	0.520088	0.519959	0.519829	0.519699	0.519568	0.519437	0.519305	0.519172	0.519039	0.518905	0.518770
1.18	0.518770	0.518635	0.518499	0.518363	0.518226	0.518088	0.517950	0.517811	0.517672	0.517532	0.517391
1.19	0.517391	0.517250	0.517108	0.516966	0.516823	0.516679	0.516535	0.516390	0.516245	0.516099	0.515953
1.20	0.515953	0.515806	0.515658	0.515510	0.515361	0.515212	0.515062	0.514911	0.514760	0.514608	0.514456
1.21	0.514456	0.514303	0.514150	0.513996	0.513841	0.513686	0.513531	0.513375	0.513218	0.513061	0.512903
1.22	0.512903	0.512744	0.512585	0.512426	0.512266	0.512105	0.511944	0.511782	0.511620	0.511457	0.511294
1.23	0.511294	0.511130	0.510966	0.510801	0.510636	0.510470	0.510303	0.510136	0.509968	0.509800	0.509632
1.24	0.509632	0.509463	0.509293	0.509123	0.508952	0.508781	0.508609	0.508437	0.508264	0.508091	0.507917



WEIGHT FLOW PARAMETER (W)  $\sqrt{TTO}/(A)(PTO)$

UNITS W(LBS/SEC), A(SQ.IN.), TTO(DEG.R.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.25	0.507917	0.507743	0.507568	0.507393	0.507217	0.507041	0.506864	0.506687	0.506509	0.506331	0.506152
1.26	0.506152	0.505973	0.505793	0.505612	0.505432	0.505251	0.505069	0.504887	0.504704	0.504521	0.504337
1.27	0.504337	0.504153	0.503968	0.503783	0.503598	0.503412	0.503225	0.503038	0.502851	0.502663	0.502474
1.28	0.502474	0.502285	0.502096	0.501906	0.501716	0.501525	0.501334	0.501143	0.500951	0.500758	0.500565
1.29	0.500565	0.500372	0.500178	0.499983	0.499789	0.499593	0.499398	0.499202	0.499005	0.498808	0.498611
1.30	0.498611	0.498413	0.498214	0.498016	0.497817	0.497617	0.497417	0.497216	0.497016	0.496814	0.496613
1.31	0.496613	0.496410	0.496208	0.496005	0.495801	0.495597	0.495393	0.495189	0.494983	0.494778	0.494572
1.32	0.494572	0.494366	0.494159	0.493952	0.493744	0.493536	0.493326	0.493119	0.492910	0.492700	0.492490
1.33	0.492490	0.492280	0.492069	0.491858	0.491647	0.491435	0.491222	0.491010	0.490797	0.490583	0.490369
1.34	0.490369	0.490155	0.489940	0.489725	0.489510	0.489294	0.489078	0.488862	0.488645	0.488427	0.488210
1.35	0.488210	0.487992	0.487773	0.487555	0.487336	0.487116	0.486896	0.486676	0.486455	0.486235	0.486013
1.36	0.486013	0.485792	0.485570	0.485347	0.485125	0.484902	0.484678	0.484454	0.484230	0.484006	0.483781
1.37	0.483781	0.483556	0.483330	0.483105	0.482878	0.482652	0.482425	0.482198	0.481970	0.481743	0.481514
1.38	0.481514	0.481286	0.481057	0.480828	0.480596	0.480369	0.480138	0.479908	0.479677	0.479446	0.479215
1.39	0.479215	0.478983	0.478751	0.478515	0.478286	0.478053	0.477819	0.477586	0.477352	0.477117	0.476883
1.40	0.476883	0.476648	0.476413	0.476177	0.475941	0.475705	0.475469	0.475232	0.474995	0.474758	0.474520
1.41	0.474520	0.474282	0.474044	0.473806	0.473567	0.473328	0.473089	0.472849	0.472609	0.472369	0.472128
1.42	0.472128	0.471886	0.471647	0.471405	0.471164	0.470922	0.470680	0.470437	0.470195	0.469952	0.469708
1.43	0.469708	0.469465	0.469221	0.468977	0.468733	0.468488	0.468243	0.467998	0.467753	0.467507	0.467261
1.44	0.467261	0.467015	0.466768	0.466522	0.466275	0.466028	0.465780	0.465532	0.465285	0.465036	0.464788
1.45	0.464788	0.464539	0.464290	0.464041	0.463792	0.463542	0.463292	0.463042	0.462791	0.462541	0.462290
1.46	0.462290	0.462039	0.461787	0.461536	0.461284	0.461032	0.460780	0.460527	0.460274	0.460022	0.459768
1.47	0.459768	0.459515	0.459261	0.459007	0.458753	0.458499	0.458244	0.457990	0.457735	0.457480	0.457224
1.48	0.457224	0.456969	0.456713	0.456457	0.456200	0.455944	0.455687	0.455430	0.455173	0.454916	0.454659
1.49	0.454659	0.454401	0.454143	0.453885	0.453627	0.453368	0.453109	0.452850	0.452591	0.452332	0.452073

WEIGHT FLOW PARAMETER (W)/TTO/(A)(PTO)

UNITS W(LBS/SEC) \* A(SQ.IN.) \* TTO(DEG.R.) \* PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.50	0.452073	0.451813	0.451553	0.451293	0.451033	0.450772	0.450512	0.450251	0.449990	0.449729	0.449467
1.51	0.449467	0.449206	0.448944	0.448682	0.448420	0.448158	0.447895	0.447633	0.447370	0.447107	0.446844
1.52	0.446844	0.446580	0.446317	0.446053	0.445789	0.445525	0.445261	0.444997	0.444732	0.444468	0.444203
1.53	0.444203	0.443938	0.443673	0.443407	0.443142	0.442876	0.442610	0.442344	0.442078	0.441812	0.441545
1.54	0.441545	0.441279	0.441012	0.440745	0.440478	0.440211	0.439944	0.439676	0.439409	0.439141	0.438873
1.55	0.438873	0.438605	0.438337	0.438068	0.437800	0.437531	0.437263	0.436994	0.436725	0.436455	0.436186
1.56	0.436186	0.435917	0.435647	0.435378	0.435108	0.434838	0.434568	0.434297	0.434027	0.433757	0.433486
1.57	0.433486	0.433215	0.432944	0.432673	0.432402	0.432131	0.431860	0.431588	0.431317	0.431045	0.430773
1.58	0.430773	0.430501	0.430229	0.429957	0.429685	0.429413	0.429140	0.428867	0.428595	0.428322	0.428049
1.59	0.428049	0.427776	0.427503	0.427230	0.426956	0.426683	0.426409	0.426136	0.425862	0.425588	0.425314
1.60	0.425314	0.425040	0.424766	0.424492	0.424217	0.423943	0.423668	0.423394	0.423119	0.422844	0.422569
1.61	0.422569	0.422294	0.422019	0.421744	0.421469	0.421194	0.420918	0.420643	0.420367	0.420091	0.419816
1.62	0.419816	0.419540	0.419264	0.418988	0.418712	0.418436	0.418159	0.417883	0.417607	0.417330	0.417054
1.63	0.417054	0.416777	0.416501	0.416224	0.415947	0.415670	0.415393	0.415116	0.414839	0.414562	0.414285
1.64	0.414285	0.414007	0.413730	0.413453	0.413175	0.412898	0.412620	0.412342	0.412065	0.411787	0.411509
1.65	0.411509	0.411231	0.410953	0.410675	0.410397	0.410119	0.409841	0.409553	0.409284	0.409006	0.408728
1.66	0.408728	0.408449	0.408171	0.407892	0.407614	0.407335	0.407056	0.406778	0.406499	0.406220	0.405941
1.67	0.405941	0.405662	0.405383	0.405104	0.404825	0.404546	0.404267	0.403988	0.403709	0.403430	0.403151
1.68	0.403151	0.402871	0.402592	0.402313	0.402033	0.401754	0.401475	0.401195	0.400916	0.400636	0.400356
1.69	0.400356	0.400077	0.399797	0.399518	0.399238	0.398958	0.398679	0.398399	0.398119	0.397839	0.397560
1.70	0.397560	0.397280	0.397000	0.396720	0.396440	0.396160	0.395880	0.395600	0.395320	0.395041	0.394761
1.71	0.394761	0.394481	0.394201	0.393921	0.393641	0.393360	0.393080	0.392800	0.392520	0.392240	0.391960
1.72	0.391960	0.391680	0.391400	0.391120	0.390840	0.390560	0.390279	0.389999	0.389719	0.389439	0.389159
1.73	0.389159	0.388879	0.388599	0.388318	0.388038	0.387758	0.387478	0.387198	0.386918	0.386638	0.386358
1.74	0.386358	0.386077	0.385797	0.385517	0.385237	0.384957	0.384677	0.384397	0.384117	0.383837	0.383557

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WEIGHT FLOW PARAMETER (W)TTO/(A)(PTO)

UNITS W(LBS/SEC)A(SQ.IN.)TTO(DEG.R.)PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
1.75	0.383557	0.383277	0.382997	0.382717	0.382437	0.382157	0.381877	0.381597	0.381317	0.381037	0.380757
1.76	0.380757	0.380477	0.380197	0.379917	0.379637	0.379358	0.379078	0.378798	0.378518	0.378239	0.377959
1.77	0.377959	0.377679	0.377399	0.377120	0.376840	0.376561	0.376281	0.376001	0.375722	0.375442	0.375163
1.78	0.375163	0.374884	0.374604	0.374325	0.374045	0.373766	0.373487	0.373208	0.372928	0.372649	0.372370
1.79	0.372370	0.372091	0.371812	0.371533	0.371254	0.370975	0.370696	0.370417	0.370138	0.369859	0.369580
1.80	0.369580	0.369302	0.369023	0.368744	0.368466	0.368187	0.367909	0.367630	0.367352	0.367073	0.366795
1.81	0.366795	0.366516	0.366238	0.365960	0.365682	0.365404	0.365125	0.364847	0.364569	0.364291	0.364014
1.82	0.364014	0.363736	0.363458	0.363180	0.362902	0.362625	0.362347	0.362070	0.361792	0.361515	0.361237
1.83	0.361237	0.360960	0.360683	0.360405	0.360128	0.359851	0.359574	0.359297	0.359020	0.358743	0.358466
1.84	0.358466	0.358190	0.357913	0.357636	0.357360	0.357083	0.356807	0.356530	0.356254	0.355978	0.355701
1.85	0.355701	0.355425	0.355149	0.354873	0.354597	0.354321	0.354045	0.353770	0.353494	0.353218	0.352943
1.86	0.352943	0.352667	0.352392	0.352116	0.351841	0.351566	0.351291	0.351016	0.350741	0.350466	0.350191
1.87	0.350191	0.349916	0.349641	0.349367	0.349092	0.348817	0.348543	0.348269	0.347994	0.347720	0.347446
1.88	0.347446	0.347172	0.346898	0.346624	0.346350	0.346077	0.345803	0.345529	0.345256	0.344982	0.344709
1.89	0.344709	0.344436	0.344163	0.343889	0.343616	0.343343	0.343071	0.342798	0.342525	0.342252	0.341980
1.90	0.341980	0.341708	0.341435	0.341163	0.340891	0.340619	0.340347	0.340075	0.339803	0.339531	0.339259
1.91	0.339259	0.338988	0.338716	0.338445	0.338174	0.337902	0.337631	0.337360	0.337089	0.336818	0.336548
1.92	0.336548	0.336277	0.336006	0.335736	0.335465	0.335195	0.334925	0.334655	0.334385	0.334115	0.333845
1.93	0.333845	0.333575	0.333306	0.333036	0.332767	0.332497	0.332228	0.331959	0.331690	0.331421	0.331152
1.94	0.331152	0.330883	0.330614	0.330346	0.330077	0.329809	0.329541	0.329273	0.329004	0.328736	0.328468
1.95	0.328468	0.328201	0.327933	0.327666	0.327398	0.327131	0.326864	0.326596	0.326329	0.326062	0.325796
1.96	0.325796	0.325529	0.325262	0.324996	0.324729	0.324463	0.324197	0.323931	0.323665	0.323399	0.323133
1.97	0.323133	0.322867	0.322602	0.322336	0.322071	0.321806	0.321541	0.321276	0.321011	0.320746	0.320481
1.98	0.320481	0.320217	0.319952	0.319688	0.319424	0.319159	0.318895	0.318632	0.318368	0.318104	0.317841
1.99	0.317841	0.317577	0.317314	0.317051	0.316787	0.316524	0.316262	0.315999	0.315736	0.315474	0.315211

WEIGHT FLOW PARAMETER (W) TTO/(A)(PTO)

UNITS W(LBS/SEC) A(SQ.IN.) TTO(DEG.R.) PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.005	0.006	0.007	0.008	0.009	0.01
2.00	0.215211	0.314949	0.314687	0.314425	0.314163	0.313901	0.313639	0.313378	0.313116	0.312855	0.312594	
2.01	0.312594	0.312333	0.312072	0.311811	0.311550	0.311289	0.311029	0.310768	0.310508	0.310248	0.309988	
2.02	0.309988	0.309728	0.309468	0.309209	0.308949	0.308690	0.308430	0.308171	0.307912	0.307653	0.307394	
2.03	0.307394	0.307136	0.306877	0.306619	0.306360	0.306102	0.305844	0.305586	0.305328	0.305071	0.304813	
2.04	0.304813	0.304556	0.304298	0.304041	0.303784	0.303527	0.303271	0.303014	0.302757	0.302501	0.302245	
2.05	0.202245	0.301988	0.301732	0.301477	0.301221	0.300965	0.300710	0.300454	0.300199	0.299944	0.299689	
2.06	0.299689	0.299434	0.299179	0.298925	0.298670	0.298416	0.298162	0.297908	0.297654	0.297400	0.297146	
2.07	0.297146	0.296893	0.296639	0.296386	0.296133	0.295880	0.295627	0.295374	0.295122	0.294869	0.294617	
2.08	0.294617	0.294365	0.294113	0.293861	0.293609	0.293357	0.293106	0.292854	0.292603	0.292352	0.292101	
2.09	0.292101	0.291850	0.291599	0.291349	0.291093	0.290848	0.290598	0.290348	0.290098	0.289848	0.289599	
2.10	0.289599	0.289349	0.289100	0.288851	0.288602	0.288353	0.288104	0.287855	0.287607	0.287358	0.287110	
2.11	0.287110	0.286862	0.286614	0.286366	0.286119	0.285871	0.285624	0.285377	0.285129	0.284882	0.284636	
2.12	0.284636	0.284389	0.284142	0.283896	0.283650	0.283404	0.283158	0.282912	0.282666	0.282421	0.282175	
2.13	0.282175	0.281930	0.281685	0.281440	0.281195	0.280950	0.280706	0.280461	0.280217	0.279973	0.279729	
2.14	0.279729	0.279485	0.279242	0.278996	0.278755	0.278511	0.278268	0.278025	0.277783	0.277540	0.277297	
2.15	0.277297	0.277055	0.276813	0.276571	0.276329	0.276087	0.275845	0.275604	0.275362	0.275121	0.274880	
2.16	0.274880	0.274639	0.274399	0.274158	0.273917	0.273677	0.273437	0.273197	0.272957	0.272717	0.272478	
2.17	0.272478	0.272238	0.271999	0.271760	0.271521	0.271282	0.271043	0.270805	0.270566	0.270328	0.270090	
2.18	0.270090	0.269852	0.269614	0.269377	0.269139	0.268902	0.268665	0.268427	0.268191	0.267954	0.267717	
2.19	0.267717	0.267481	0.267244	0.267008	0.266772	0.266536	0.266301	0.266065	0.265830	0.265594	0.265359	
2.20	0.265359	0.265124	0.264890	0.264655	0.264420	0.264186	0.263952	0.263718	0.263484	0.263250	0.263017	
2.21	0.263017	0.262783	0.262550	0.262317	0.262084	0.261851	0.261618	0.261386	0.261153	0.260921	0.260689	
2.22	0.260689	0.260457	0.260225	0.259994	0.259762	0.259531	0.259300	0.259069	0.258838	0.258607	0.258377	
2.23	0.258377	0.258146	0.257916	0.257686	0.257456	0.257226	0.256997	0.256767	0.256538	0.256309	0.256080	
2.24	0.256080	0.255851	0.255622	0.255394	0.255165	0.254937	0.254709	0.254481	0.254253	0.254026	0.253798	

WEIGHT FLOW PARAMETER (W)TTO/(A)(PTO)

UNITS W(LBS/SEC),A(SO.IN.),TTO(DEG.R.),PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.25	0.253798	0.2533571	0.253344	0.253117	0.252890	0.252663	0.252437	0.252210	0.251984	0.251758	0.251532
2.26	0.251532	0.251306	0.251081	0.250855	0.250630	0.250405	0.250180	0.249955	0.249731	0.249506	0.249282
2.27	0.249282	0.249057	0.248833	0.248610	0.248386	0.248162	0.247939	0.247716	0.247492	0.247269	0.247047
2.28	0.247047	0.246824	0.246602	0.246379	0.246157	0.245935	0.245713	0.245492	0.245270	0.245049	0.244827
2.29	0.244827	0.244606	0.244385	0.244165	0.243944	0.243724	0.243503	0.243283	0.243063	0.242843	0.242624
2.30	0.242624	0.242404	0.242185	0.241966	0.241747	0.241528	0.241309	0.241090	0.240872	0.240654	0.240436
2.31	0.240436	0.240218	0.240000	0.239782	0.239565	0.239346	0.239131	0.238914	0.238697	0.238480	0.238264
2.32	0.238264	0.238047	0.237831	0.237615	0.237399	0.237183	0.236968	0.236752	0.236537	0.236322	0.236107
2.33	0.236107	0.235892	0.235678	0.235463	0.235249	0.235035	0.234821	0.234607	0.234393	0.234180	0.233966
2.34	0.233966	0.233753	0.233540	0.233327	0.233114	0.232902	0.232690	0.232477	0.232265	0.232053	0.231841
2.35	0.231841	0.231630	0.231418	0.231207	0.230996	0.230785	0.230574	0.230363	0.230153	0.229943	0.229732
2.36	0.229732	0.229522	0.229312	0.229103	0.228893	0.228684	0.228474	0.228265	0.228056	0.227848	0.227639
2.37	0.227639	0.227431	0.227222	0.227014	0.226806	0.226598	0.226391	0.226183	0.225976	0.225769	0.225562
2.38	0.225562	0.225355	0.225148	0.224941	0.224735	0.224525	0.224323	0.224117	0.223911	0.223705	0.223500
2.39	0.223500	0.223295	0.223090	0.222885	0.222680	0.222475	0.222271	0.222066	0.221862	0.221658	0.221454
2.40	0.221454	0.221250	0.221047	0.220843	0.220640	0.220437	0.220234	0.220031	0.219829	0.219626	0.219424
2.41	0.219424	0.219222	0.219020	0.218818	0.218616	0.218415	0.218214	0.218012	0.217811	0.217611	0.217410
2.42	0.217410	0.217209	0.217009	0.216809	0.216609	0.216409	0.216209	0.216009	0.215810	0.215610	0.215411
2.43	0.215411	0.215212	0.215014	0.214815	0.214616	0.214416	0.214220	0.214022	0.213824	0.213626	0.213429
2.44	0.213429	0.213231	0.213034	0.212837	0.212640	0.212443	0.212246	0.212050	0.211854	0.211658	0.211462
2.45	0.211462	0.211266	0.211070	0.210874	0.210679	0.210484	0.210289	0.210094	0.209899	0.209705	0.209510
2.46	0.209510	0.209316	0.209122	0.208928	0.208734	0.208540	0.208347	0.208154	0.207960	0.207767	0.207575
2.47	0.207575	0.207382	0.207189	0.206997	0.206805	0.206613	0.206421	0.206229	0.206037	0.205846	0.205654
2.48	0.205654	0.205463	0.205272	0.205082	0.204891	0.204700	0.204510	0.204320	0.204130	0.203940	0.203750
2.49	0.203750	0.203560	0.203371	0.203182	0.202993	0.202804	0.202615	0.202426	0.202238	0.202049	0.201861

WEIGHT FLOW PARAMETER (W) T(TO)/(A) (PTO)

UNITS W(LBS/SEC), A(SQ.IN.), T(TO)(DEG.R.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.50	0.201861	0.201673	0.201485	0.201297	0.201110	0.200923	0.200735	0.200548	0.200361	0.200174	0.199988
2.51	0.199988	0.199801	0.199615	0.199429	0.199243	0.199057	0.198871	0.198686	0.198500	0.198315	0.198130
2.52	0.196130	0.197945	0.197760	0.197575	0.197391	0.197207	0.197022	0.196838	0.196655	0.196471	0.196287
2.53	0.196287	0.196104	0.195921	0.195738	0.195555	0.195372	0.195189	0.195007	0.194824	0.194642	0.194460
2.54	0.194460	0.194278	0.194097	0.193915	0.193734	0.193552	0.193371	0.193190	0.193009	0.192829	0.192648
2.55	0.192648	0.192468	0.192288	0.192108	0.191928	0.191748	0.191569	0.191389	0.191210	0.191031	0.190852
2.56	0.190852	0.190673	0.190494	0.190316	0.190137	0.189959	0.189781	0.189603	0.189425	0.189248	0.189070
2.57	0.189070	0.188893	0.188716	0.188539	0.188362	0.188185	0.188009	0.187832	0.187656	0.187480	0.187304
2.58	0.187304	0.187128	0.186953	0.186777	0.186602	0.186427	0.186252	0.186077	0.185902	0.185727	0.185553
2.59	0.185553	0.185379	0.185205	0.185031	0.184857	0.184683	0.184510	0.184336	0.184163	0.183990	0.183817
2.60	0.183817	0.183644	0.183472	0.183299	0.183127	0.182954	0.182782	0.182611	0.182439	0.182267	0.182096
2.61	0.182096	0.181924	0.181753	0.181582	0.181411	0.181241	0.181070	0.180900	0.180730	0.180559	0.180389
2.62	0.180389	0.180220	0.180050	0.179880	0.179711	0.179542	0.179373	0.179204	0.179035	0.178866	0.178698
2.63	0.178698	0.178530	0.178361	0.178193	0.178026	0.177858	0.177690	0.177523	0.177355	0.177188	0.177021
2.64	0.177021	0.176854	0.176688	0.176521	0.176355	0.176188	0.176022	0.175856	0.175690	0.175525	0.175359
2.65	0.175359	0.175194	0.175029	0.174863	0.174698	0.174534	0.174369	0.174204	0.174040	0.173876	0.173712
2.66	0.173712	0.173548	0.173384	0.173220	0.173057	0.172893	0.172730	0.172567	0.172404	0.172241	0.172079
2.67	0.172079	0.171916	0.171754	0.171592	0.171430	0.171268	0.171106	0.170944	0.170783	0.170622	0.170460
2.68	0.170460	0.170299	0.170138	0.169978	0.169817	0.169656	0.169496	0.169336	0.169176	0.169016	0.168856
2.69	0.168856	0.168697	0.168537	0.168378	0.168219	0.168060	0.167901	0.167742	0.167583	0.167425	0.167266
2.70	0.167266	0.167108	0.166950	0.166792	0.166634	0.166477	0.166319	0.166162	0.166005	0.165848	0.165691
2.71	0.165691	0.165534	0.165377	0.165221	0.165064	0.164908	0.164752	0.164596	0.164440	0.164285	0.164129
2.72	0.164129	0.163974	0.163819	0.163664	0.163509	0.163354	0.163199	0.163045	0.162890	0.162736	0.162582
2.73	0.162582	0.162428	0.162274	0.162120	0.161967	0.161813	0.161660	0.161507	0.161354	0.161201	0.161048
2.74	0.161048	0.160896	0.160743	0.160591	0.160439	0.160287	0.160135	0.159983	0.159832	0.159680	0.159528

WEIGHT FLOW PARAMETER (W)/TTO/(A)(PTO)

UNITS W(LBS/SEC), A(SQ. IN.), TTO(DEG. R.), PTO(PSIA)

MACH NO.	0.	0.001	0.002	0.003	0.004	0.005	0.006	0.007	0.008	0.009	0.01
2.75	0.159529	0.159378	0.159227	0.159076	0.158925	0.158774	0.158624	0.158473	0.158323	0.158173	0.158023
2.76	0.158023	0.157873	0.157724	0.157574	0.157425	0.157275	0.157126	0.156977	0.156828	0.156680	0.156531
2.77	0.156531	0.156382	0.156234	0.156086	0.155938	0.155790	0.155642	0.155495	0.155347	0.155200	0.155052
2.78	0.155052	0.154905	0.154758	0.154612	0.154465	0.154318	0.154172	0.154026	0.153879	0.153733	0.153588
2.79	0.153588	0.153442	0.153296	0.153151	0.153005	0.152860	0.152715	0.152570	0.152425	0.152281	0.152136
2.80	0.152136	0.151992	0.151847	0.151703	0.151559	0.151415	0.151272	0.151128	0.150985	0.150841	0.150698
2.81	0.150698	0.150555	0.150412	0.150269	0.150126	0.149984	0.149841	0.149699	0.149557	0.149415	0.149273
2.82	0.149273	0.149131	0.148990	0.148848	0.148707	0.148566	0.148425	0.148284	0.148143	0.148002	0.147861
2.83	0.147861	0.147721	0.147581	0.147441	0.147300	0.147161	0.147021	0.146881	0.146742	0.146602	0.146463
2.84	0.146463	0.146324	0.146185	0.146046	0.145907	0.145769	0.145630	0.145492	0.145353	0.145215	0.145077
2.85	0.145077	0.144939	0.144802	0.144664	0.144527	0.144389	0.144252	0.144115	0.143978	0.143841	0.143705
2.86	0.143705	0.143568	0.143432	0.143295	0.143159	0.143023	0.142887	0.142751	0.142616	0.142480	0.142345
2.87	0.142345	0.142210	0.142074	0.141939	0.141804	0.141670	0.141535	0.141401	0.141266	0.141132	0.140998
2.88	0.140998	0.140864	0.140730	0.140596	0.140462	0.140329	0.140196	0.140062	0.139929	0.139796	0.139663
2.89	0.139663	0.139530	0.139396	0.139265	0.139133	0.139001	0.138869	0.138737	0.138605	0.138473	0.138341
2.90	0.138341	0.138210	0.138078	0.137947	0.137816	0.137685	0.137554	0.137423	0.137293	0.137162	0.137032
2.91	0.137032	0.136902	0.136771	0.136641	0.136511	0.136382	0.136252	0.136122	0.135993	0.135864	0.135735
2.92	0.135735	0.135606	0.135477	0.135348	0.135219	0.135091	0.134962	0.134834	0.134706	0.134578	0.134450
2.93	0.134450	0.134322	0.134194	0.134067	0.133939	0.133812	0.133685	0.133558	0.133431	0.133304	0.133177
2.94	0.133177	0.133050	0.132924	0.132798	0.132671	0.132545	0.132419	0.132293	0.132168	0.132042	0.131916
2.95	0.131916	0.131791	0.131666	0.131541	0.131416	0.131291	0.131166	0.131041	0.130917	0.130792	0.130668
2.96	0.130668	0.130544	0.130419	0.130295	0.130172	0.130048	0.129924	0.129801	0.129677	0.129554	0.129431
2.97	0.129431	0.129306	0.129185	0.129062	0.128940	0.128817	0.128695	0.128572	0.128450	0.128328	0.128206
2.98	0.128206	0.128084	0.127962	0.127841	0.127719	0.127598	0.127477	0.127356	0.127234	0.127114	0.126993
2.99	0.126993	0.126872	0.126751	0.126631	0.126511	0.126390	0.126270	0.126150	0.126031	0.125911	0.125791

Appendix F. Parameters For Thrust Calculation

This appendix contains parameters for thrust calculation.  
Included are:

- a. Isentropic Gross Thrust Parameter,  $\frac{F_g}{P_t A_{th}}$
- b. Isentropic Gross Thrust Parameter,  $\frac{F_g}{W_g T_{t_1}}$
- c. Specific Heat at Constant Pressure,  $C_p$
- d. Ratio of Specific Heat at Constant Pressure to Specific Heat at Constant Volume,
- e. Gas Constant,  $R$



Appendix F (continued)

Tabulation of:

Isentropic Gross Thrust Parameter,  $\frac{F_g}{P_t A_{th}}$

where

$F_g$  is ideal gross thrust (lbs)  $P_t$  is gas total pressure (psi or lbs/in<sup>2</sup>).

$A_{th}$  is nozzle throat area (in<sup>2</sup>). The parameter is tabulated versus the ratio of gas total pressure to exit static pressure for values of the ratio of specific heats from 1.4 to 1.2.

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.4

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PT/J/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2565	0.4082	0.4869	0.5485	0.5992	0.6422	0.6795	0.7123	0.7416	0.7679
2.0	0.7679	0.7518	0.8136	0.8337	0.8522	0.8695	0.8855	0.9005	0.9146	0.9278	0.9403
3.0	0.9403	0.9521	0.9633	0.9740	0.9841	0.9937	1.0029	1.0117	1.0202	1.0283	1.0360
4.0	1.0360	1.0435	1.0507	1.0576	1.0643	1.0707	1.0770	1.0830	1.0888	1.0944	1.0999
5.0	1.0999	1.1052	1.1104	1.1154	1.1202	1.1249	1.1295	1.1340	1.1393	1.1426	1.1467
6.0	1.1467	1.1508	1.1547	1.1585	1.1623	1.1660	1.1695	1.1730	1.1765	1.1798	1.1831
7.0	1.1831	1.1863	1.1895	1.1925	1.1956	1.1985	1.2014	1.2043	1.2071	1.2098	1.2125
8.0	1.2125	1.2152	1.2178	1.2203	1.2228	1.2253	1.2277	1.2301	1.2324	1.2347	1.2370
9.0	1.2370	1.2392	1.2414	1.2436	1.2457	1.2478	1.2499	1.2519	1.2539	1.2559	1.2578
10.0	1.2578	1.2597	1.2616	1.2635	1.2653	1.2671	1.2689	1.2707	1.2724	1.2741	1.2758
11.0	1.2758	1.2775	1.2792	1.2808	1.2824	1.2840	1.2856	1.2871	1.2886	1.2902	1.2917
12.0	1.2917	1.2931	1.2946	1.2960	1.2975	1.2989	1.3003	1.3017	1.3030	1.3044	1.3057
13.0	1.3057	1.3070	1.3083	1.3096	1.3109	1.3122	1.3134	1.3147	1.3159	1.3171	1.3183
14.0	1.3183	1.3195	1.3207	1.3218	1.3230	1.3241	1.3253	1.3264	1.3275	1.3286	1.3297
15.0	1.3297	1.3308	1.3318	1.3329	1.3339	1.3350	1.3360	1.3370	1.3380	1.3390	1.3400
16.0	1.3400	1.3410	1.3420	1.3430	1.3439	1.3449	1.3458	1.3468	1.3477	1.3486	1.3495
17.0	1.3495	1.3504	1.3513	1.3522	1.3531	1.3540	1.3549	1.3557	1.3566	1.3574	1.3583
18.0	1.3583	1.3591	1.3599	1.3608	1.3616	1.3624	1.3632	1.3640	1.3648	1.3656	1.3664
19.0	1.3664	1.3671	1.3679	1.3687	1.3694	1.3702	1.3709	1.3717	1.3724	1.3731	1.3739
20.0	1.3739	1.3746	1.3753	1.3760	1.3767	1.3774	1.3781	1.3788	1.3795	1.3802	1.3809
21.0	1.3809	1.3815	1.3822	1.3829	1.3835	1.3842	1.3849	1.3855	1.3862	1.3868	1.3874
22.0	1.3874	1.3881	1.3887	1.3893	1.3899	1.3906	1.3912	1.3918	1.3924	1.3930	1.3936
23.0	1.3936	1.3942	1.3948	1.3954	1.3960	1.3965	1.3971	1.3977	1.3983	1.3988	1.3994
24.0	1.3994	1.4000	1.4005	1.4011	1.4016	1.4022	1.4027	1.4033	1.4038	1.4043	1.4049
25.0	1.4049	1.4054	1.4059	1.4064	1.4070	1.4075	1.4080	1.4085	1.4090	1.4095	1.4100
26.0	1.4100	1.4105	1.4110	1.4115	1.4120	1.4125	1.4130	1.4135	1.4140	1.4145	1.4150
27.0	1.4150	1.4154	1.4159	1.4164	1.4168	1.4173	1.4178	1.4182	1.4187	1.4192	1.4196
28.0	1.4196	1.4201	1.4205	1.4210	1.4214	1.4219	1.4223	1.4228	1.4232	1.4236	1.4241
29.0	1.4241	1.4245	1.4249	1.4254	1.4258	1.4262	1.4266	1.4271	1.4275	1.4279	1.4283
30.0	1.4283	1.4287	1.4291	1.4295	1.4299	1.4304	1.4308	1.4312	1.4316	1.4320	1.4324

GAMMA=1.38

ISENTPROPIC GROSS THRUST PARAMETER

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
 GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PT/J/P	C.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2955	0.4063	0.4848	0.5462	0.5968	0.6398	0.6770	0.7098	0.7391	0.7654
2.0	0.7654	0.7853	0.8112	0.8313	0.8499	0.8671	0.8832	0.8982	0.9123	0.9256	0.9382
3.0	0.9382	0.9551	0.9613	0.9719	0.9821	0.9918	1.0011	1.0099	1.0184	1.0265	1.0344
4.0	1.0344	1.0419	1.0491	1.0561	1.0628	1.0693	1.0755	1.0816	1.0875	1.0932	1.0987
5.0	1.0987	1.1060	1.1142	1.1191	1.1239	1.1285	1.1330	1.1374	1.1417	1.1459	
6.0	1.1459	1.1500	1.1539	1.1578	1.1616	1.1653	1.1689	1.1725	1.1759	1.1793	1.1826
7.0	1.1826	1.1855	1.1891	1.1922	1.1952	1.1982	1.2012	1.2040	1.2069	1.2096	1.2124
8.0	1.2124	1.2150	1.2177	1.2203	1.2228	1.2253	1.2277	1.2302	1.2325	1.2349	1.2371
9.0	1.2371	1.2394	1.2416	1.2438	1.2460	1.2481	1.2502	1.2522	1.2543	1.2563	1.2582
10.0	1.2582	1.2602	1.2621	1.2640	1.2659	1.2677	1.2695	1.2713	1.2731	1.2748	1.2765
11.0	1.2765	1.2782	1.2799	1.2816	1.2832	1.2848	1.2864	1.2880	1.2895	1.2911	1.2926
12.0	1.2926	1.2941	1.2956	1.2970	1.2985	1.2999	1.3013	1.3027	1.3041	1.3055	1.3068
13.0	1.3068	1.3082	1.3095	1.3108	1.3121	1.3134	1.3147	1.3159	1.3172	1.3184	1.3196
14.0	1.3196	1.3208	1.3220	1.3232	1.3244	1.3256	1.3267	1.3279	1.3290	1.3301	1.3312
15.0	1.3312	1.3323	1.3334	1.3345	1.3355	1.3366	1.3376	1.3387	1.3397	1.3407	1.3418
16.0	1.3418	1.3428	1.3437	1.3447	1.3457	1.3467	1.3476	1.3486	1.3495	1.3505	1.3514
17.0	1.3514	1.3523	1.3532	1.3542	1.3551	1.3559	1.3568	1.3577	1.3586	1.3595	1.3603
18.0	1.3603	1.3612	1.3620	1.3628	1.3637	1.3645	1.3653	1.3661	1.3669	1.3678	1.3685
19.0	1.3685	1.3693	1.3701	1.3709	1.3717	1.3724	1.3732	1.3740	1.3747	1.3755	1.3762
20.0	1.3762	1.3769	1.3777	1.3784	1.3791	1.3798	1.3806	1.3813	1.3820	1.3827	1.3834
21.0	1.3834	1.3840	1.3847	1.3854	1.3861	1.3868	1.3874	1.3881	1.3887	1.3894	1.3900
22.0	1.3900	1.3907	1.3913	1.3920	1.3926	1.3932	1.3938	1.3945	1.3951	1.3957	1.3963
23.0	1.3963	1.3969	1.3975	1.3981	1.3987	1.3993	1.3999	1.4005	1.4011	1.4017	1.4022
24.0	1.4022	1.4028	1.4034	1.4040	1.4045	1.4051	1.4056	1.4062	1.4067	1.4073	1.4078
25.0	1.4078	1.4084	1.4089	1.4095	1.4100	1.4105	1.4110	1.4116	1.4121	1.4126	1.4131
26.0	1.4131	1.4136	1.4142	1.4147	1.4152	1.4157	1.4162	1.4167	1.4172	1.4177	1.4181
27.0	1.4181	1.4186	1.4191	1.4196	1.4201	1.4206	1.4210	1.4215	1.4220	1.4225	1.4229
28.0	1.4229	1.4234	1.4238	1.4243	1.4248	1.4252	1.4257	1.4261	1.4266	1.4270	1.4275
29.0	1.4275	1.4279	1.4283	1.4288	1.4292	1.4297	1.4301	1.4305	1.4309	1.4314	1.4318
30.0	1.4318	1.4322	1.4326	1.4331	1.4335	1.4339	1.4343	1.4347	1.4351	1.4355	1.4359

ISENTHROPIC GROSS THRUST PARAMETER

GAMMA=1.36

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JFT TOTAL PRESSURE)

PI/P0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	0.2941	0.4045	0.4825	0.5430	0.5944	0.6373	0.6745	0.7073	0.7366	0.7620
2.0	0.7868	0.8087	0.8288	0.8475	0.8647	0.8809	0.8959	0.9101	0.9234	0.9360
3.0	0.9260	0.9479	0.9690	0.9892	0.9992	0.9992	1.0081	1.0167	1.0248	1.0327
4.0	1.0327	1.0475	1.0566	1.0613	1.0679	1.0747	1.0803	1.0862	1.0919	1.0975
5.0	1.0975	1.1081	1.1132	1.1181	1.1229	1.1276	1.1321	1.1366	1.1409	1.1451
6.0	1.1451	1.1532	1.1572	1.1610	1.1647	1.1684	1.1720	1.1755	1.1789	1.1822
7.0	1.1822	1.1855	1.1887	1.1919	1.1950	1.1980	1.2010	1.2039	1.2066	1.2092
8.0	1.2092	1.2123	1.2150	1.2177	1.2203	1.2229	1.2254	1.2279	1.2303	1.2327
9.0	1.2327	1.2349	1.2362	1.2374	1.2384	1.2395	1.2405	1.2414	1.2423	1.2431
10.0	1.2431	1.2449	1.2466	1.2482	1.2495	1.2506	1.2517	1.2527	1.2538	1.2548
11.0	1.2548	1.2567	1.2584	1.2600	1.2614	1.2626	1.2637	1.2648	1.2658	1.2668
12.0	1.2668	1.2687	1.2704	1.2720	1.2734	1.2746	1.2757	1.2768	1.2778	1.2788
13.0	1.2788	1.2807	1.2824	1.2840	1.2854	1.2866	1.2877	1.2888	1.2898	1.2908
14.0	1.2908	1.2927	1.2944	1.2960	1.2974	1.2986	1.2997	1.3008	1.3018	1.3028
15.0	1.3028	1.3047	1.3064	1.3080	1.3094	1.3106	1.3117	1.3128	1.3138	1.3148
16.0	1.3148	1.3167	1.3184	1.3200	1.3214	1.3226	1.3237	1.3248	1.3258	1.3268
17.0	1.3268	1.3287	1.3304	1.3320	1.3334	1.3346	1.3357	1.3368	1.3378	1.3388
18.0	1.3388	1.3407	1.3424	1.3440	1.3454	1.3466	1.3477	1.3488	1.3498	1.3508
19.0	1.3508	1.3527	1.3544	1.3560	1.3574	1.3586	1.3597	1.3608	1.3618	1.3628
20.0	1.3628	1.3647	1.3664	1.3680	1.3694	1.3706	1.3717	1.3728	1.3738	1.3748
21.0	1.3748	1.3767	1.3784	1.3800	1.3814	1.3826	1.3837	1.3848	1.3858	1.3868
22.0	1.3868	1.3887	1.3904	1.3920	1.3934	1.3946	1.3957	1.3968	1.3978	1.3988
23.0	1.3988	1.4007	1.4024	1.4040	1.4054	1.4066	1.4077	1.4088	1.4098	1.4108
24.0	1.4108	1.4127	1.4144	1.4160	1.4174	1.4186	1.4197	1.4208	1.4218	1.4228
25.0	1.4228	1.4247	1.4264	1.4280	1.4294	1.4306	1.4317	1.4328	1.4338	1.4348
26.0	1.4348	1.4367	1.4384	1.4400	1.4414	1.4426	1.4437	1.4448	1.4458	1.4468
27.0	1.4468	1.4487	1.4504	1.4520	1.4534	1.4546	1.4557	1.4568	1.4578	1.4588
28.0	1.4588	1.4607	1.4624	1.4640	1.4654	1.4666	1.4677	1.4688	1.4698	1.4708
29.0	1.4708	1.4727	1.4744	1.4760	1.4774	1.4786	1.4797	1.4808	1.4818	1.4828
30.0	1.4828	1.4847	1.4864	1.4880	1.4894	1.4906	1.4917	1.4928	1.4938	1.4948

GAMMA=1.34

ISENTROPIC GROSS THRUST PARAMETER

(GASFS EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
 GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PTJ/PA	$\gamma$	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2027	0.4026	0.6005	0.5416	0.5920	0.6768	0.6720	0.7068	0.7360	0.7604
2.0	0.7704	0.4052	0.4052	0.3266	0.2450	0.2536	0.2745	0.2937	0.3079	0.3212	0.3330
3.0	0.8339	0.0458	0.0572	0.0680	0.0782	0.0880	0.0974	0.0963	0.0960	0.0931	0.0911
4.0	1.0311	1.0317	1.0650	1.0531	1.0500	1.0665	1.0728	1.0700	1.0540	1.0407	1.0263
5.0	1.0053	1.1017	1.1070	1.1121	1.1171	1.1220	1.1267	1.1313	1.1358	1.1401	1.1444
6.0	1.1466	1.1685	1.1526	1.1546	1.1604	1.1662	1.1670	1.1715	1.1751	1.1795	1.1819
7.0	1.1819	1.1852	1.1885	1.1917	1.1948	1.1979	1.1989	1.2017	1.2047	1.2073	1.2096
8.0	1.2126	1.2151	1.2178	1.2206	1.2230	1.2256	1.2281	1.2306	1.2330	1.2354	1.2378
9.0	1.2370	1.2401	1.2426	1.2446	1.2468	1.2480	1.2512	1.2533	1.2554	1.2576	1.2595
10.0	1.2505	1.2615	1.2636	1.2654	1.2673	1.2692	1.2710	1.2720	1.2747	1.2755	1.2782
11.0	1.2783	1.2400	1.2417	1.2435	1.2451	1.2468	1.2484	1.2501	1.2517	1.2533	1.2548
12.0	1.2568	1.2566	1.2579	1.2592	1.2609	1.2626	1.2642	1.2658	1.2674	1.2687	1.2702
13.0	1.3006	1.3100	1.3123	1.3137	1.3150	1.3163	1.3177	1.3190	1.3203	1.3215	1.3228
14.0	1.3228	1.3240	1.3253	1.3265	1.3277	1.3290	1.3301	1.3313	1.3325	1.3335	1.3348
15.0	1.3348	1.3350	1.3370	1.3382	1.3393	1.3404	1.3414	1.3425	1.3436	1.3447	1.3457
16.0	1.3457	1.3467	1.3478	1.3488	1.3498	1.3508	1.3518	1.3529	1.3538	1.3548	1.3557
17.0	1.3557	1.3567	1.3576	1.3586	1.3595	1.3604	1.3614	1.3623	1.3632	1.3641	1.3650
18.0	1.3650	1.3667	1.3667	1.3676	1.3685	1.3693	1.3702	1.3710	1.3719	1.3727	1.3735
19.0	1.3735	1.3742	1.3752	1.3760	1.3768	1.3776	1.3784	1.3792	1.3800	1.3807	1.3815
20.0	1.3815	1.3822	1.3830	1.3839	1.3845	1.3852	1.3860	1.3868	1.3875	1.3882	1.3890
21.0	1.3890	1.3927	1.3906	1.3911	1.3918	1.3925	1.3932	1.3939	1.3946	1.3953	1.3959
22.0	1.3959	1.3966	1.3973	1.3978	1.3986	1.3993	1.3998	1.4005	1.4012	1.4019	1.4025
23.0	1.4025	1.4031	1.4038	1.4044	1.4050	1.4056	1.4062	1.4069	1.4075	1.4081	1.4087
24.0	1.4087	1.4093	1.4099	1.4105	1.4110	1.4116	1.4122	1.4128	1.4134	1.4139	1.4145
25.0	1.4145	1.4151	1.4156	1.4162	1.4168	1.4173	1.4179	1.4184	1.4190	1.4195	1.4200
26.0	1.4200	1.4206	1.4211	1.4217	1.4222	1.4227	1.4232	1.4238	1.4243	1.4248	1.4253
27.0	1.4253	1.4258	1.4263	1.4268	1.4273	1.4278	1.4283	1.4288	1.4293	1.4298	1.4303
28.0	1.4303	1.4314	1.4313	1.4317	1.4322	1.4327	1.4332	1.4337	1.4341	1.4346	1.4351
29.0	1.4351	1.4355	1.4360	1.4366	1.4370	1.4374	1.4378	1.4383	1.4387	1.4392	1.4396
30.0	1.4396	1.4400	1.4405	1.4410	1.4414	1.4419	1.4423	1.4427	1.4431	1.4435	1.4439

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.33

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)

GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PT/J/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	0.0	0.2519	0.4016	0.4794	0.5405	0.5908	0.6336	0.6707	0.7035	0.7327	0.7591
2.0	0.7591	0.7831	0.8053	0.8252	0.8438	0.8612	0.8774	0.8925	0.9067	0.9201	0.9324
3.0	0.9324	0.9448	0.9562	0.9670	0.9773	0.9871	0.9965	1.0054	1.0140	1.0223	1.0302
4.0	1.0302	1.0379	1.0452	1.0523	1.0592	1.0658	1.0722	1.0783	1.0843	1.0901	1.0957
5.0	1.0957	1.1012	1.1065	1.1117	1.1167	1.1215	1.1263	1.1309	1.1354	1.1398	1.1441
6.0	1.1441	1.1482	1.1523	1.1563	1.1602	1.1640	1.1677	1.1713	1.1749	1.1784	1.1818
7.0	1.1818	1.1851	1.1884	1.1916	1.1947	1.1978	1.2009	1.2038	1.2067	1.2096	1.2124
8.0	1.2124	1.2152	1.2179	1.2205	1.2232	1.2257	1.2283	1.2308	1.2332	1.2356	1.2380
9.0	1.2380	1.2403	1.2426	1.2449	1.2471	1.2493	1.2515	1.2536	1.2557	1.2578	1.2598
10.0	1.2598	1.2618	1.2638	1.2658	1.2677	1.2696	1.2715	1.2734	1.2752	1.2770	1.2788
11.0	1.2788	1.2806	1.2823	1.2840	1.2857	1.2874	1.2891	1.2907	1.2923	1.2939	1.2955
12.0	1.2955	1.2970	1.2986	1.3001	1.3016	1.3031	1.3046	1.3061	1.3075	1.3089	1.3103
13.0	1.3103	1.3117	1.3131	1.3145	1.3158	1.3172	1.3185	1.3198	1.3211	1.3224	1.3237
14.0	1.3237	1.3250	1.3262	1.3274	1.3287	1.3299	1.3311	1.3323	1.3335	1.3346	1.3358
15.0	1.3358	1.3369	1.3381	1.3392	1.3403	1.3414	1.3425	1.3436	1.3447	1.3458	1.3468
16.0	1.3468	1.3479	1.3489	1.3499	1.3510	1.3520	1.3530	1.3540	1.3550	1.3560	1.3569
17.0	1.3569	1.3579	1.3589	1.3598	1.3608	1.3617	1.3626	1.3635	1.3645	1.3654	1.3663
18.0	1.3663	1.3672	1.3681	1.3689	1.3698	1.3707	1.3715	1.3724	1.3732	1.3741	1.3749
19.0	1.3749	1.3758	1.3766	1.3774	1.3782	1.3790	1.3798	1.3806	1.3814	1.3822	1.3830
20.0	1.3830	1.3838	1.3845	1.3853	1.3860	1.3868	1.3876	1.3883	1.3890	1.3898	1.3905
21.0	1.3905	1.3912	1.3919	1.3927	1.3934	1.3941	1.3948	1.3955	1.3962	1.3969	1.3976
22.0	1.3976	1.3982	1.3989	1.3996	1.4003	1.4009	1.4016	1.4022	1.4029	1.4035	1.4042
23.0	1.4042	1.4048	1.4055	1.4061	1.4067	1.4074	1.4080	1.4086	1.4092	1.4098	1.4104
24.0	1.4104	1.4110	1.4116	1.4122	1.4128	1.4134	1.4140	1.4146	1.4152	1.4158	1.4163
25.0	1.4163	1.4169	1.4175	1.4181	1.4186	1.4192	1.4197	1.4203	1.4208	1.4214	1.4219
26.0	1.4219	1.4225	1.4230	1.4236	1.4241	1.4246	1.4252	1.4257	1.4262	1.4267	1.4273
27.0	1.4273	1.4278	1.4283	1.4288	1.4293	1.4298	1.4303	1.4308	1.4313	1.4318	1.4323
28.0	1.4323	1.4328	1.4333	1.4338	1.4343	1.4348	1.4352	1.4357	1.4362	1.4367	1.4371
29.0	1.4371	1.4376	1.4381	1.4385	1.4390	1.4395	1.4399	1.4404	1.4408	1.4413	1.4417
30.0	1.4417	1.4422	1.4426	1.4431	1.4435	1.4440	1.4444	1.4448	1.4453	1.4457	1.4461

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.32

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PTJ/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2912	0.4007	0.4783	0.5393	0.5896	0.6323	0.6695	0.7022	0.7315	0.7578
2.0	0.7578	0.7818	0.8037	0.8239	0.8426	0.8600	0.8762	0.8914	0.9056	0.9190	0.9317
3.0	0.9317	0.9437	0.9551	0.9660	0.9763	0.9861	0.9955	1.0046	1.0132	1.0215	1.0294
4.0	1.0294	1.0371	1.0445	1.0516	1.0585	1.0651	1.0715	1.0777	1.0837	1.0895	1.0952
5.0	1.0952	1.1007	1.1060	1.1112	1.1162	1.1211	1.1259	1.1305	1.1350	1.1394	1.1437
6.0	1.1437	1.1479	1.1520	1.1560	1.1599	1.1638	1.1675	1.1712	1.1747	1.1782	1.1817
7.0	1.1817	1.1850	1.1883	1.1915	1.1947	1.1978	1.2009	1.2038	1.2068	1.2097	1.2125
8.0	1.2125	1.2153	1.2180	1.2207	1.2233	1.2259	1.2285	1.2310	1.2334	1.2359	1.2382
9.0	1.2382	1.2406	1.2429	1.2452	1.2474	1.2497	1.2518	1.2540	1.2561	1.2582	1.2602
10.0	1.2602	1.2623	1.2643	1.2663	1.2682	1.2701	1.2720	1.2739	1.2757	1.2776	1.2794
11.0	1.2794	1.2811	1.2829	1.2846	1.2863	1.2880	1.2897	1.2913	1.2930	1.2946	1.2962
12.0	1.2962	1.2978	1.2993	1.3009	1.3024	1.3039	1.3054	1.3068	1.3083	1.3097	1.3112
13.0	1.3112	1.3126	1.3140	1.3153	1.3167	1.3181	1.3194	1.3207	1.3220	1.3233	1.3246
14.0	1.3246	1.3259	1.3272	1.3284	1.3297	1.3309	1.3321	1.3333	1.3345	1.3357	1.3368
15.0	1.3368	1.3380	1.3391	1.3403	1.3414	1.3425	1.3436	1.3447	1.3458	1.3469	1.3480
16.0	1.3480	1.3490	1.3501	1.3511	1.3522	1.3532	1.3542	1.3552	1.3562	1.3572	1.3582
17.0	1.3582	1.3592	1.3601	1.3611	1.3621	1.3630	1.3639	1.3649	1.3658	1.3667	1.3676
18.0	1.3676	1.3685	1.3694	1.3703	1.3712	1.3721	1.3729	1.3738	1.3747	1.3755	1.3764
19.0	1.3764	1.3772	1.3780	1.3789	1.3797	1.3805	1.3813	1.3821	1.3829	1.3837	1.3845
20.0	1.3845	1.3853	1.3861	1.3868	1.3876	1.3884	1.3891	1.3899	1.3906	1.3914	1.3921
21.0	1.3921	1.3928	1.3936	1.3943	1.3950	1.3957	1.3964	1.3971	1.3978	1.3985	1.3992
22.0	1.3992	1.3999	1.4006	1.4013	1.4020	1.4026	1.4033	1.4040	1.4046	1.4053	1.4059
23.0	1.4059	1.4066	1.4072	1.4079	1.4085	1.4092	1.4098	1.4104	1.4110	1.4117	1.4123
24.0	1.4123	1.4129	1.4135	1.4141	1.4147	1.4153	1.4159	1.4165	1.4171	1.4177	1.4182
25.0	1.4182	1.4188	1.4194	1.4200	1.4205	1.4211	1.4217	1.4222	1.4228	1.4234	1.4239
26.0	1.4239	1.4245	1.4250	1.4256	1.4261	1.4266	1.4272	1.4277	1.4282	1.4288	1.4293
27.0	1.4293	1.4298	1.4303	1.4309	1.4314	1.4319	1.4324	1.4329	1.4334	1.4339	1.4344
28.0	1.4344	1.4349	1.4354	1.4359	1.4364	1.4369	1.4374	1.4378	1.4383	1.4388	1.4393
29.0	1.4393	1.4398	1.4402	1.4407	1.4412	1.4416	1.4421	1.4426	1.4430	1.4435	1.4439
30.0	1.4439	1.4444	1.4449	1.4453	1.4458	1.4462	1.4466	1.4471	1.4475	1.4480	1.4484

GAMMA=1.30		ISENTROPIC GROSS THRUST PARAMETER									
(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)		GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)									
PT/JPA	C.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2897	0.3987	0.4761	0.5369	0.5871	0.6298	0.6669	0.6996	0.7289	0.7552
2.0	0.7552	0.7792	0.8012	0.8214	0.8402	0.8576	0.8738	0.8891	0.9034	0.9168	0.9296
3.0	0.9296	0.9416	0.9531	0.9640	0.9744	0.9843	0.9937	1.0028	1.0115	1.0198	1.0279
4.0	1.0279	1.0356	1.0430	1.0502	1.0571	1.0638	1.0702	1.0765	1.0826	1.0884	1.0941
5.0	1.0941	1.0997	1.1050	1.1103	1.1153	1.1203	1.1251	1.1298	1.1343	1.1388	1.1431
6.0	1.1431	1.1474	1.1515	1.1556	1.1595	1.1634	1.1672	1.1709	1.1745	1.1780	1.1815
7.0	1.1815	1.1849	1.1882	1.1915	1.1947	1.1979	1.2009	1.2040	1.2069	1.2099	1.2127
8.0	1.2127	1.2155	1.2183	1.2210	1.2237	1.2263	1.2289	1.2315	1.2340	1.2364	1.2388
9.0	1.2388	1.2412	1.2436	1.2459	1.2482	1.2504	1.2526	1.2548	1.2570	1.2591	1.2612
10.0	1.2612	1.2632	1.2653	1.2673	1.2693	1.2712	1.2731	1.2750	1.2769	1.2788	1.2806
11.0	1.2806	1.2824	1.2842	1.2859	1.2877	1.2894	1.2911	1.2928	1.2944	1.2961	1.2977
12.0	1.2977	1.2993	1.3009	1.3024	1.3040	1.3055	1.3070	1.3085	1.3100	1.3115	1.3129
13.0	1.3129	1.3144	1.3158	1.3172	1.3186	1.3200	1.3213	1.3227	1.3240	1.3253	1.3267
14.0	1.3267	1.3280	1.3292	1.3305	1.3318	1.3330	1.3343	1.3355	1.3367	1.3379	1.3391
15.0	1.3391	1.3403	1.3414	1.3426	1.3438	1.3449	1.3460	1.3471	1.3483	1.3494	1.3504
16.0	1.3504	1.3515	1.3526	1.3537	1.3547	1.3558	1.3568	1.3578	1.3589	1.3599	1.3609
17.0	1.3609	1.3619	1.3629	1.3638	1.3648	1.3658	1.3667	1.3677	1.3686	1.3696	1.3705
18.0	1.3705	1.3714	1.3723	1.3732	1.3742	1.3750	1.3759	1.3768	1.3777	1.3786	1.3794
19.0	1.3794	1.3803	1.3811	1.3820	1.3828	1.3837	1.3845	1.3853	1.3861	1.3869	1.3877
20.0	1.3877	1.3885	1.3893	1.3901	1.3909	1.3917	1.3925	1.3932	1.3940	1.3948	1.3955
21.0	1.3955	1.3963	1.3970	1.3978	1.3985	1.3992	1.4000	1.4007	1.4014	1.4021	1.4028
22.0	1.4028	1.4035	1.4042	1.4049	1.4056	1.4063	1.4070	1.4077	1.4083	1.4090	1.4097
23.0	1.4097	1.4103	1.4110	1.4117	1.4123	1.4130	1.4136	1.4142	1.4149	1.4155	1.4162
24.0	1.4162	1.4168	1.4174	1.4180	1.4186	1.4193	1.4199	1.4205	1.4211	1.4217	1.4223
25.0	1.4223	1.4229	1.4235	1.4240	1.4246	1.4252	1.4258	1.4264	1.4269	1.4275	1.4281
26.0	1.4281	1.4286	1.4292	1.4298	1.4303	1.4309	1.4314	1.4320	1.4325	1.4331	1.4336
27.0	1.4336	1.4341	1.4347	1.4352	1.4357	1.4362	1.4368	1.4373	1.4378	1.4383	1.4388
28.0	1.4388	1.4393	1.4399	1.4404	1.4409	1.4414	1.4419	1.4424	1.4429	1.4434	1.4438
29.0	1.4438	1.4443	1.4448	1.4453	1.4458	1.4463	1.4467	1.4472	1.4477	1.4482	1.4486
30.0	1.4486	1.4491	1.4496	1.4500	1.4505	1.4509	1.4514	1.4518	1.4523	1.4527	1.4532



ISENTHROPIC GROSS THRUST PARAMETER

GAMMA=1.28

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)

GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PT/J/PA	C.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	0.0	0.2882	0.3968	0.4739	0.5345	0.5846	0.6272	0.6643	0.6970	0.7263	0.7527
2.0	0.7527	0.7767	0.7987	0.8184	0.8377	0.8552	0.8715	0.8868	0.9011	0.9146	0.9274
3.0	0.9274	0.9396	0.9511	0.9620	0.9725	0.9824	0.9919	1.0011	1.0098	1.0182	1.0263
4.0	1.0263	1.0341	1.0416	1.0488	1.0558	1.0625	1.0690	1.0753	1.0814	1.0874	1.0931
5.0	1.0931	1.0987	1.1041	1.1094	1.1145	1.1195	1.1244	1.1291	1.1337	1.1382	1.1426
6.0	1.1426	1.1469	1.1511	1.1552	1.1592	1.1631	1.1669	1.1707	1.1744	1.1779	1.1815
7.0	1.1815	1.1849	1.1883	1.1916	1.1948	1.1980	1.2011	1.2042	1.2072	1.2102	1.2131
8.0	1.2131	1.2159	1.2187	1.2215	1.2242	1.2269	1.2295	1.2321	1.2346	1.2371	1.2396
9.0	1.2396	1.2420	1.2444	1.2467	1.2491	1.2513	1.2536	1.2558	1.2580	1.2601	1.2623
10.0	1.2623	1.2643	1.2664	1.2685	1.2705	1.2724	1.2744	1.2763	1.2782	1.2801	1.2820
11.0	1.2820	1.2838	1.2856	1.2874	1.2892	1.2909	1.2927	1.2944	1.2961	1.2977	1.2994
12.0	1.2994	1.3010	1.3026	1.3042	1.3058	1.3074	1.3089	1.3104	1.3119	1.3134	1.3149
13.0	1.3149	1.3164	1.3178	1.3193	1.3207	1.3221	1.3235	1.3249	1.3262	1.3276	1.3289
14.0	1.3289	1.3302	1.3315	1.3328	1.3341	1.3354	1.3366	1.3379	1.3391	1.3404	1.3416
15.0	1.3416	1.3428	1.3440	1.3452	1.3463	1.3475	1.3486	1.3498	1.3509	1.3520	1.3532
16.0	1.3532	1.3543	1.3554	1.3564	1.3575	1.3586	1.3596	1.3607	1.3617	1.3628	1.3638
17.0	1.3638	1.3648	1.3658	1.3668	1.3678	1.3688	1.3698	1.3708	1.3717	1.3727	1.3736
18.0	1.3736	1.3746	1.3755	1.3764	1.3774	1.3783	1.3792	1.3801	1.3810	1.3819	1.3828
19.0	1.3828	1.3836	1.3845	1.3854	1.3862	1.3871	1.3879	1.3888	1.3896	1.3904	1.3913
20.0	1.3913	1.3921	1.3929	1.3937	1.3945	1.3953	1.3961	1.3969	1.3977	1.3984	1.3992
21.0	1.3992	1.4000	1.4007	1.4015	1.4023	1.4030	1.4038	1.4045	1.4052	1.4060	1.4067
22.0	1.4067	1.4074	1.4081	1.4088	1.4095	1.4102	1.4109	1.4116	1.4123	1.4130	1.4137
23.0	1.4137	1.4144	1.4151	1.4157	1.4164	1.4171	1.4177	1.4184	1.4190	1.4197	1.4203
24.0	1.4203	1.4210	1.4216	1.4223	1.4229	1.4235	1.4241	1.4248	1.4254	1.4260	1.4266
25.0	1.4266	1.4272	1.4278	1.4284	1.4290	1.4296	1.4302	1.4308	1.4314	1.4320	1.4326
26.0	1.4326	1.4331	1.4337	1.4343	1.4349	1.4354	1.4360	1.4365	1.4371	1.4377	1.4382
27.0	1.4382	1.4388	1.4393	1.4399	1.4404	1.4409	1.4415	1.4420	1.4425	1.4431	1.4436
28.0	1.4436	1.4441	1.4446	1.4452	1.4457	1.4462	1.4467	1.4472	1.4477	1.4482	1.4487
29.0	1.4487	1.4492	1.4497	1.4502	1.4507	1.4512	1.4517	1.4522	1.4527	1.4532	1.4536
30.0	1.4536	1.4541	1.4546	1.4551	1.4555	1.4560	1.4565	1.4569	1.4574	1.4579	1.4583

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.27

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PT/J/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2875	0.3958	0.4728	0.5333	0.5833	0.6259	0.6630	0.6957	0.7249	0.7513
2.0	0.7513	0.7754	0.7574	0.8177	0.8365	0.8540	0.8703	0.8856	0.9000	0.9136	0.9264
3.0	0.9264	0.9385	0.9501	0.9610	0.9715	0.9815	0.9911	1.0002	1.0090	1.0174	1.0255
4.0	1.0255	1.0333	1.0408	1.0481	1.0551	1.0619	1.0684	1.0748	1.0809	1.0869	1.0926
5.0	1.0926	1.0982	1.1037	1.1090	1.1142	1.1192	1.1241	1.1288	1.1335	1.1380	1.1424
6.0	1.1424	1.1467	1.1509	1.1551	1.1591	1.1630	1.1669	1.1706	1.1743	1.1779	1.1815
7.0	1.1815	1.1849	1.1893	1.1917	1.1949	1.1981	1.2013	1.2044	1.2074	1.2104	1.2133
8.0	1.2133	1.2162	1.2190	1.2218	1.2245	1.2272	1.2298	1.2324	1.2350	1.2375	1.2400
9.0	1.2400	1.2424	1.2448	1.2472	1.2495	1.2518	1.2541	1.2563	1.2585	1.2607	1.2629
10.0	1.2629	1.2650	1.2670	1.2691	1.2711	1.2731	1.2751	1.2771	1.2790	1.2809	1.2828
11.0	1.2828	1.2846	1.2864	1.2882	1.2900	1.2918	1.2935	1.2953	1.2970	1.2986	1.3003
12.0	1.3003	1.3020	1.3036	1.3052	1.3068	1.3084	1.3099	1.3115	1.3130	1.3145	1.3160
13.0	1.3160	1.3175	1.3189	1.3204	1.3218	1.3232	1.3246	1.3260	1.3274	1.3287	1.3301
14.0	1.3301	1.3314	1.3327	1.3341	1.3354	1.3366	1.3379	1.3392	1.3404	1.3417	1.3429
15.0	1.3429	1.3441	1.3453	1.3465	1.3477	1.3489	1.3500	1.3512	1.3523	1.3535	1.3546
16.0	1.3546	1.3557	1.3568	1.3575	1.3590	1.3601	1.3612	1.3622	1.3633	1.3643	1.3654
17.0	1.3654	1.3664	1.3674	1.3684	1.3694	1.3704	1.3714	1.3724	1.3734	1.3743	1.3753
18.0	1.3753	1.3762	1.3772	1.3781	1.3791	1.3800	1.3809	1.3818	1.3827	1.3836	1.3845
19.0	1.3845	1.3854	1.3863	1.3872	1.3880	1.3889	1.3898	1.3906	1.3915	1.3923	1.3931
20.0	1.3931	1.3940	1.3948	1.3956	1.3964	1.3972	1.3980	1.3988	1.3996	1.4004	1.4012
21.0	1.4012	1.4020	1.4027	1.4035	1.4043	1.4050	1.4058	1.4065	1.4073	1.4080	1.4087
22.0	1.4087	1.4095	1.4102	1.4109	1.4116	1.4123	1.4130	1.4137	1.4144	1.4151	1.4158
23.0	1.4158	1.4165	1.4172	1.4179	1.4186	1.4192	1.4199	1.4206	1.4212	1.4219	1.4226
24.0	1.4226	1.4232	1.4239	1.4245	1.4251	1.4258	1.4264	1.4270	1.4277	1.4283	1.4289
25.0	1.4289	1.4295	1.4301	1.4307	1.4314	1.4320	1.4326	1.4332	1.4338	1.4343	1.4349
26.0	1.4349	1.4355	1.4361	1.4367	1.4373	1.4378	1.4384	1.4390	1.4395	1.4401	1.4407
27.0	1.4407	1.4412	1.4418	1.4423	1.4429	1.4434	1.4440	1.4445	1.4450	1.4456	1.4461
28.0	1.4461	1.4466	1.4472	1.4477	1.4482	1.4487	1.4493	1.4498	1.4503	1.4508	1.4513
29.0	1.4513	1.4518	1.4523	1.4528	1.4533	1.4538	1.4543	1.4548	1.4553	1.4558	1.4563
30.0	1.4563	1.4568	1.4573	1.4577	1.4582	1.4587	1.4592	1.4596	1.4601	1.4606	1.4611

ISENTROPIC GROSS THRUST PARAMETER  
(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JET INITIAL PRESSURE)

GAMMA=1.26

PTJ/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2867	0.3948	0.4716	0.5321	0.5821	0.6246	0.6617	0.6944	0.7236	0.751
2.0	0.7500	0.7741	0.7961	0.8164	0.8352	0.8528	0.8691	0.8844	0.8989	0.9125	0.925
3.0	0.9253	0.9375	0.9491	0.9601	0.9706	0.9806	0.9902	0.9994	1.0082	1.0166	1.025
4.0	1.0248	1.0326	1.0401	1.0474	1.0545	1.0613	1.0678	1.0742	1.0804	1.0864	1.092
5.0	1.0922	1.0978	1.1033	1.1086	1.1138	1.1188	1.1238	1.1285	1.1332	1.1378	1.142
6.0	1.1422	1.1465	1.1508	1.1549	1.1590	1.1629	1.1668	1.1706	1.1743	1.1779	1.181
7.0	1.1815	1.1850	1.1884	1.1918	1.1951	1.1983	1.2015	1.2046	1.2076	1.2106	1.213
8.0	1.2136	1.2165	1.2193	1.2221	1.2249	1.2276	1.2302	1.2329	1.2354	1.2380	1.240
9.0	1.2405	1.2429	1.2453	1.2477	1.2501	1.2524	1.2547	1.2569	1.2591	1.2613	1.263
10.0	1.2635	1.2656	1.2677	1.2698	1.2718	1.2739	1.2758	1.2778	1.2798	1.2817	1.283
11.0	1.2836	1.2854	1.2873	1.2891	1.2909	1.2927	1.2944	1.2962	1.2979	1.2996	1.301
12.0	1.3013	1.3029	1.3046	1.3062	1.3078	1.3094	1.3110	1.3125	1.3141	1.3156	1.317
13.0	1.3171	1.3186	1.3201	1.3215	1.3230	1.3244	1.3258	1.3272	1.3286	1.3300	1.331
14.0	1.3313	1.3327	1.3340	1.3353	1.3367	1.3380	1.3392	1.3405	1.3418	1.3430	1.344
15.0	1.3443	1.3455	1.3467	1.3479	1.3491	1.3503	1.3515	1.3527	1.3538	1.3550	1.356
16.0	1.3561	1.3572	1.3583	1.3595	1.3606	1.3616	1.3627	1.3638	1.3649	1.3659	1.367
17.0	1.3670	1.3680	1.3690	1.3701	1.3711	1.3721	1.3731	1.3741	1.3751	1.3761	1.377
18.0	1.3770	1.3780	1.3789	1.3799	1.3808	1.3818	1.3827	1.3836	1.3845	1.3855	1.387
19.0	1.3864	1.3873	1.3882	1.3890	1.3899	1.3908	1.3917	1.3925	1.3934	1.3942	1.395
20.0	1.3951	1.3959	1.3967	1.3976	1.3984	1.3992	1.4000	1.4008	1.4016	1.4024	1.403
21.0	1.4032	1.4040	1.4048	1.4056	1.4063	1.4071	1.4079	1.4086	1.4094	1.4101	1.411
22.0	1.4109	1.4116	1.4123	1.4131	1.4138	1.4145	1.4152	1.4159	1.4166	1.4174	1.418
23.0	1.4181	1.4188	1.4194	1.4201	1.4208	1.4215	1.4222	1.4229	1.4235	1.4242	1.425
24.0	1.4249	1.4255	1.4262	1.4268	1.4275	1.4281	1.4288	1.4294	1.4300	1.4307	1.431
25.0	1.4313	1.4319	1.4325	1.4332	1.4338	1.4344	1.4350	1.4356	1.4362	1.4368	1.437
26.0	1.4374	1.4380	1.4386	1.4392	1.4397	1.4403	1.4409	1.4415	1.4421	1.4426	1.443
27.0	1.4432	1.4438	1.4443	1.4449	1.4454	1.4460	1.4465	1.4471	1.4476	1.4482	1.448
28.0	1.4487	1.4493	1.4498	1.4503	1.4509	1.4514	1.4519	1.4524	1.4530	1.4535	1.454
29.0	1.4540	1.4545	1.4550	1.4555	1.4560	1.4565	1.4570	1.4575	1.4580	1.4585	1.459
30.0	1.4590	1.4595	1.4600	1.4605	1.4610	1.4615	1.4620	1.4624	1.4629	1.4634	1.463

GAMMA=1.24

ISENTROPIC GROSS THRUST PARAMETER

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)  
GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PTJ/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2852	0.3928	0.4694	0.5296	0.5795	0.6220	0.6590	0.6917	0.7210	0.7474
2.0	0.7474	0.7715	0.7935	0.8139	0.8328	0.8503	0.8667	0.8821	0.8966	0.9103	0.9232
3.0	0.9232	0.9354	0.9471	0.9581	0.9687	0.9788	0.9884	0.9977	1.0065	1.0151	1.0233
4.0	1.0233	1.0312	1.0388	1.0461	1.0532	1.0601	1.0667	1.0731	1.0794	1.0854	1.0913
5.0	1.0913	1.0970	1.1025	1.1079	1.1131	1.1182	1.1232	1.1280	1.1328	1.1374	1.1419
6.0	1.1419	1.1463	1.1505	1.1547	1.1588	1.1628	1.1668	1.1706	1.1744	1.1781	1.1817
7.0	1.1817	1.1852	1.1887	1.1921	1.1954	1.1987	1.2019	1.2050	1.2081	1.2112	1.2142
8.0	1.2142	1.2171	1.2200	1.2228	1.2256	1.2284	1.2311	1.2337	1.2364	1.2389	1.2415
9.0	1.2415	1.2441	1.2464	1.2489	1.2513	1.2536	1.2559	1.2582	1.2605	1.2627	1.2649
10.0	1.2649	1.2671	1.2692	1.2713	1.2734	1.2754	1.2775	1.2795	1.2814	1.2834	1.2853
11.0	1.2853	1.2872	1.2891	1.2910	1.2928	1.2946	1.2964	1.2982	1.2999	1.3017	1.3034
12.0	1.3034	1.3051	1.3067	1.3084	1.3100	1.3116	1.3132	1.3148	1.3164	1.3180	1.3195
13.0	1.3195	1.3210	1.3225	1.3240	1.3255	1.3269	1.3284	1.3298	1.3312	1.3326	1.3340
14.0	1.3340	1.3354	1.3368	1.3381	1.3395	1.3408	1.3421	1.3434	1.3447	1.3460	1.3472
15.0	1.3472	1.3485	1.3497	1.3510	1.3522	1.3534	1.3546	1.3558	1.3570	1.3582	1.3593
16.0	1.3593	1.3605	1.3616	1.3627	1.3639	1.3650	1.3661	1.3672	1.3683	1.3694	1.3704
17.0	1.3704	1.3715	1.3726	1.3736	1.3746	1.3757	1.3767	1.3777	1.3787	1.3797	1.3807
18.0	1.3807	1.3817	1.3827	1.3837	1.3846	1.3856	1.3865	1.3875	1.3884	1.3893	1.3903
19.0	1.3903	1.3912	1.3921	1.3930	1.3939	1.3948	1.3957	1.3966	1.3974	1.3983	1.3992
20.0	1.3992	1.4000	1.4009	1.4017	1.4026	1.4034	1.4042	1.4051	1.4059	1.4067	1.4075
21.0	1.4075	1.4083	1.4091	1.4099	1.4107	1.4115	1.4123	1.4131	1.4138	1.4146	1.4154
22.0	1.4154	1.4161	1.4169	1.4176	1.4184	1.4191	1.4198	1.4206	1.4213	1.4220	1.4227
23.0	1.4227	1.4235	1.4242	1.4249	1.4256	1.4263	1.4270	1.4277	1.4284	1.4290	1.4297
24.0	1.4297	1.4304	1.4311	1.4317	1.4324	1.4331	1.4337	1.4344	1.4350	1.4357	1.4363
25.0	1.4363	1.4370	1.4376	1.4382	1.4389	1.4395	1.4401	1.4407	1.4414	1.4420	1.4426
26.0	1.4426	1.4432	1.4438	1.4444	1.4450	1.4456	1.4462	1.4469	1.4474	1.4480	1.4486
27.0	1.4486	1.4491	1.4497	1.4503	1.4509	1.4514	1.4520	1.4526	1.4531	1.4537	1.4542
28.0	1.4542	1.4548	1.4553	1.4559	1.4564	1.4570	1.4575	1.4581	1.4586	1.4591	1.4597
29.0	1.4597	1.4602	1.4607	1.4612	1.4618	1.4623	1.4628	1.4633	1.4638	1.4643	1.4648
30.0	1.4648	1.4653	1.4659	1.4664	1.4669	1.4674	1.4678	1.4683	1.4688	1.4693	1.4698

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.22

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)

GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PTJ/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	0.2836	0.3997	0.4670	0.5272	0.5769	0.6193	0.6563	0.6890	0.7183	0.7447	
2.0	0.7447	0.7910	0.8114	0.8303	0.8479	0.8644	0.8798	0.8944	0.9081	0.9211	
3.0	0.9211	0.9451	0.9562	0.9668	0.9770	0.9867	0.9960	1.0050	1.0135	1.0218	
4.0	1.0218	1.0298	1.0374	1.0449	1.0520	1.0589	1.0656	1.0721	1.0784	1.0845	1.0905
5.0	1.0905	1.0962	1.1018	1.1072	1.1125	1.1177	1.1227	1.1276	1.1324	1.1371	1.1416
6.0	1.1416	1.1461	1.1504	1.1547	1.1588	1.1629	1.1668	1.1707	1.1745	1.1783	1.1819
7.0	1.1819	1.1855	1.1890	1.1925	1.1959	1.1992	1.2025	1.2057	1.2088	1.2119	1.2149
8.0	1.2149	1.2175	1.2208	1.2237	1.2266	1.2294	1.2321	1.2348	1.2375	1.2401	1.2427
9.0	1.2427	1.2452	1.2477	1.2502	1.2526	1.2550	1.2574	1.2597	1.2620	1.2643	1.2665
10.0	1.2665	1.2687	1.2709	1.2730	1.2751	1.2772	1.2793	1.2813	1.2833	1.2853	1.2873
11.0	1.2873	1.2892	1.2911	1.2930	1.2949	1.2968	1.2986	1.3004	1.3022	1.3039	1.3057
12.0	1.3057	1.3074	1.3091	1.3108	1.3125	1.3141	1.3158	1.3174	1.3190	1.3206	1.3221
13.0	1.3221	1.3237	1.3252	1.3267	1.3282	1.3297	1.3312	1.3327	1.3341	1.3355	1.3370
14.0	1.3370	1.3384	1.3398	1.3411	1.3425	1.3439	1.3452	1.3465	1.3479	1.3492	1.3505
15.0	1.3505	1.3517	1.3530	1.3543	1.3555	1.3568	1.3580	1.3592	1.3604	1.3616	1.3628
16.0	1.3628	1.3640	1.3652	1.3663	1.3675	1.3686	1.3697	1.3709	1.3720	1.3731	1.3742
17.0	1.3742	1.3753	1.3764	1.3774	1.3785	1.3795	1.3806	1.3816	1.3827	1.3837	1.3847
18.0	1.3847	1.3857	1.3867	1.3877	1.3887	1.3897	1.3907	1.3916	1.3926	1.3935	1.3945
19.0	1.3945	1.3954	1.3964	1.3973	1.3982	1.3991	1.4001	1.4010	1.4019	1.4027	1.4036
20.0	1.4036	1.4045	1.4054	1.4063	1.4071	1.4080	1.4088	1.4097	1.4105	1.4114	1.4122
21.0	1.4122	1.4130	1.4138	1.4146	1.4155	1.4163	1.4171	1.4179	1.4187	1.4194	1.4202
22.0	1.4202	1.4210	1.4218	1.4225	1.4233	1.4241	1.4248	1.4256	1.4263	1.4271	1.4278
23.0	1.4278	1.4285	1.4293	1.4300	1.4307	1.4314	1.4321	1.4329	1.4336	1.4343	1.4350
24.0	1.4350	1.4357	1.4364	1.4370	1.4377	1.4384	1.4391	1.4398	1.4404	1.4411	1.4418
25.0	1.4418	1.4424	1.4431	1.4437	1.4444	1.4450	1.4457	1.4463	1.4469	1.4476	1.4482
26.0	1.4482	1.4488	1.4494	1.4501	1.4507	1.4513	1.4519	1.4525	1.4531	1.4537	1.4543
27.0	1.4543	1.4549	1.4555	1.4561	1.4567	1.4573	1.4579	1.4584	1.4590	1.4596	1.4602
28.0	1.4602	1.4607	1.4613	1.4619	1.4624	1.4630	1.4635	1.4641	1.4646	1.4652	1.4657
29.0	1.4657	1.4663	1.4668	1.4674	1.4679	1.4684	1.4690	1.4695	1.4700	1.4706	1.4711
30.0	1.4711	1.4716	1.4721	1.4726	1.4732	1.4737	1.4742	1.4747	1.4752	1.4757	1.4762

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.20

(GASES EXPANDED ISENTROPICALLY TO AMBIENT PRESSURE)

GROSS THRUST DIVIDED BY (THROAT AREA X JET TOTAL PRESSURE)

PTJ/PA	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.0	-0.	0.2820	0.3987	0.4647	0.5246	0.5743	0.6167	0.6536	0.6863	0.7156	0.7421
2.0	0.7421	0.7662	0.7984	0.8084	0.8278	0.8455	0.8620	0.8775	0.8921	0.9059	0.9189
3.0	0.9189	0.9313	0.9431	0.9543	0.9650	0.9752	0.9850	0.9944	1.0034	1.0121	1.0204
4.0	1.0204	1.0284	1.0362	1.0437	1.0509	1.0579	1.0646	1.0712	1.0775	1.0837	1.0897
5.0	1.0897	1.0955	1.1012	1.1067	1.1120	1.1173	1.1224	1.1273	1.1322	1.1369	1.1415
6.0	1.1415	1.1460	1.1504	1.1547	1.1589	1.1630	1.1670	1.1710	1.1749	1.1786	1.1823
7.0	1.1823	1.1860	1.1896	1.1931	1.1965	1.1999	1.2032	1.2064	1.2096	1.2128	1.2158
8.0	1.2158	1.2189	1.2219	1.2248	1.2277	1.2305	1.2333	1.2360	1.2388	1.2414	1.2440
9.0	1.2440	1.2466	1.2492	1.2517	1.2542	1.2566	1.2590	1.2614	1.2637	1.2660	1.2683
10.0	1.2683	1.2705	1.2727	1.2749	1.2771	1.2792	1.2813	1.2834	1.2854	1.2875	1.2895
11.0	1.2895	1.2915	1.2934	1.2953	1.2972	1.2991	1.3010	1.3028	1.3047	1.3065	1.3082
12.0	1.3082	1.3100	1.3117	1.3135	1.3152	1.3168	1.3185	1.3202	1.3218	1.3234	1.3250
13.0	1.3250	1.3266	1.3282	1.3297	1.3313	1.3328	1.3343	1.3358	1.3373	1.3387	1.3402
14.0	1.3402	1.3416	1.3430	1.3444	1.3458	1.3472	1.3486	1.3500	1.3513	1.3526	1.3540
15.0	1.3540	1.3553	1.3566	1.3579	1.3592	1.3604	1.3617	1.3629	1.3642	1.3654	1.3666
16.0	1.3666	1.3678	1.3690	1.3702	1.3714	1.3726	1.3737	1.3749	1.3760	1.3771	1.3783
17.0	1.3783	1.3794	1.3805	1.3816	1.3827	1.3838	1.3848	1.3859	1.3869	1.3880	1.3890
18.0	1.3890	1.3901	1.3911	1.3921	1.3931	1.3941	1.3951	1.3961	1.3971	1.3981	1.3991
19.0	1.3991	1.4000	1.4010	1.4019	1.4029	1.4038	1.4048	1.4057	1.4066	1.4075	1.4084
20.0	1.4084	1.4093	1.4102	1.4111	1.4120	1.4129	1.4138	1.4146	1.4155	1.4164	1.4172
21.0	1.4172	1.4181	1.4189	1.4196	1.4206	1.4214	1.4222	1.4231	1.4239	1.4247	1.4255
22.0	1.4255	1.4263	1.4271	1.4279	1.4286	1.4294	1.4302	1.4310	1.4317	1.4325	1.4333
23.0	1.4333	1.4340	1.4348	1.4355	1.4363	1.4370	1.4377	1.4385	1.4392	1.4399	1.4406
24.0	1.4406	1.4413	1.4420	1.4428	1.4435	1.4442	1.4449	1.4455	1.4462	1.4469	1.4476
25.0	1.4476	1.4483	1.4490	1.4496	1.4503	1.4510	1.4516	1.4523	1.4529	1.4536	1.4542
26.0	1.4542	1.4549	1.4555	1.4562	1.4568	1.4574	1.4580	1.4587	1.4593	1.4599	1.4605
27.0	1.4605	1.4611	1.4618	1.4624	1.4630	1.4636	1.4642	1.4648	1.4654	1.4660	1.4666
28.0	1.4666	1.4671	1.4677	1.4683	1.4689	1.4695	1.4700	1.4706	1.4712	1.4717	1.4723
29.0	1.4723	1.4729	1.4734	1.4740	1.4745	1.4751	1.4756	1.4762	1.4767	1.4773	1.4778
30.0	1.4778	1.4783	1.4789	1.4794	1.4799	1.4805	1.4810	1.4815	1.4820	1.4825	1.4831

## Appendix F (continued)

Tabulation of:

Isentropic Gross Thrust Parameter,

$$\frac{F_g}{W_g \sqrt{T_t}}$$

where

 $F_g$  is ideal gross thrust (lbs) $W_g$  is gas flow (lbs/sec) $T_t$  is gas total temperature ( $^{\circ}R$ )

The parameter is tabulated versus the ratio of gas total pressure to exit static pressure for values of the ratio of specific heats from 1.4 to 1.2.

ISENTROPIC GROSS THRUST PARAMETER  
GAMMA=1.4

FG/MG SQUARE ROOT TT7

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55841	0.76757	0.91558	1.03146	1.12681	1.20772	1.27783	1.33956	1.39458	1.44410
2.	1.44410	1.48904	1.53010	1.56785	1.60273	1.63510	1.66526	1.69347	1.71994	1.74484	1.76833
3.	1.76833	1.79055	1.81161	1.83162	1.85065	1.86879	1.88612	1.90269	1.91855	1.93377	1.94837
4.	1.94837	1.96242	1.97593	1.98895	2.00150	2.01362	2.02532	2.03664	2.04759	2.05820	2.06848
5.	2.06848	2.07845	2.08813	2.09753	2.10666	2.11554	2.12417	2.13258	2.14077	2.14875	2.15653
6.	2.15653	2.16411	2.17151	2.17874	2.18580	2.19269	2.19943	2.20602	2.21246	2.21877	2.22494
7.	2.22494	2.23098	2.23690	2.24270	2.24838	2.25395	2.25941	2.26477	2.27003	2.27519	2.28025
8.	2.28025	2.28522	2.29011	2.29490	2.29962	2.30425	2.30881	2.31328	2.31769	2.32202	2.32628
9.	2.32628	2.33048	2.33460	2.33867	2.34267	2.34661	2.35049	2.35431	2.35807	2.36179	2.36544
10.	2.36544	2.36905	2.37260	2.37611	2.37956	2.38297	2.38633	2.38965	2.39292	2.39615	2.39934
11.	2.39934	2.40248	2.40559	2.40866	2.41168	2.41468	2.41763	2.42055	2.42343	2.42628	2.42909
12.	2.42909	2.43187	2.43462	2.43733	2.44002	2.44267	2.44530	2.44789	2.45046	2.45299	2.45550
13.	2.45550	2.45799	2.46044	2.46287	2.46528	2.46766	2.47001	2.47234	2.47464	2.47693	2.47919
14.	2.47919	2.48142	2.48364	2.48583	2.48800	2.49015	2.49228	2.49439	2.49647	2.49854	2.50059
15.	2.50059	2.50262	2.50463	2.50662	2.50860	2.51055	2.51249	2.51441	2.51632	2.51821	2.52008
16.	2.52008	2.52193	2.52377	2.52559	2.52740	2.52919	2.53096	2.53273	2.53447	2.53620	2.53792
17.	2.53792	2.53963	2.54132	2.54299	2.54465	2.54630	2.54794	2.54956	2.55117	2.55277	2.55436
18.	2.55436	2.55593	2.55749	2.55904	2.56058	2.56210	2.56362	2.56512	2.56661	2.56809	2.56956
19.	2.56956	2.57102	2.57247	2.57391	2.57533	2.57675	2.57816	2.57956	2.58094	2.58232	2.58369
20.	2.58369	2.58505	2.58640	2.58774	2.58907	2.59039	2.59170	2.59301	2.59430	2.59559	2.59687
21.	2.59687	2.59814	2.59940	2.60065	2.60190	2.60314	2.60436	2.60559	2.60680	2.60801	2.60920
22.	2.60920	2.61039	2.61158	2.61275	2.61392	2.61508	2.61624	2.61738	2.61852	2.61966	2.62078
23.	2.62078	2.62190	2.62302	2.62412	2.62522	2.62632	2.62740	2.62848	2.62956	2.63063	2.63169
24.	2.63169	2.63274	2.63379	2.63484	2.63588	2.63691	2.63793	2.63895	2.63997	2.64098	2.64198
25.	2.64198	2.64298	2.64397	2.64496	2.64594	2.64692	2.64789	2.64886	2.64982	2.65077	2.65172
26.	2.65172	2.65267	2.65361	2.65454	2.65548	2.65640	2.65732	2.65824	2.65915	2.66006	2.66096
27.	2.66096	2.66186	2.66275	2.66364	2.66452	2.66540	2.66628	2.66715	2.66802	2.66888	2.66974
28.	2.66974	2.67059	2.67144	2.67229	2.67313	2.67397	2.67480	2.67563	2.67645	2.67728	2.67809
29.	2.67809	2.67891	2.67972	2.68052	2.68133	2.68213	2.68292	2.68371	2.68450	2.68528	2.68606



ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.39

FG/WG SQUARE ROOT TT7

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	0.	0.55848	0.76775	0.91589	1.03190	1.12739	1.20843	1.27868	1.34054	1.39569	1.44534
2.	1.44534	1.49041	1.53160	1.56946	1.60446	1.63694	1.66721	1.69553	1.72210	1.74711	1.77070
3.	1.77070	1.79302	1.81417	1.83427	1.85339	1.87163	1.88904	1.90569	1.92164	1.93693	1.95162
4.	1.95162	1.96574	1.97935	1.99242	2.00505	2.01723	2.02901	2.04040	2.05142	2.06209	2.07244
5.	2.07244	2.08247	2.09221	2.10167	2.11036	2.11980	2.12850	2.13696	2.14521	2.15324	2.16108
6.	2.16108	2.16972	2.17617	2.18345	2.19056	2.19751	2.20429	2.21093	2.21743	2.22378	2.23000
7.	2.23000	2.23609	2.24205	2.24790	2.25362	2.25924	2.26474	2.27015	2.27545	2.28065	2.28575
8.	2.28575	2.29077	2.29569	2.30053	2.30529	2.30996	2.31455	2.31907	2.32351	2.32788	2.33210
9.	2.33210	2.33641	2.34057	2.34467	2.34871	2.35268	2.35660	2.36046	2.36426	2.36800	2.37169
10.	2.37169	2.37533	2.37892	2.38245	2.38594	2.38938	2.39278	2.39613	2.39943	2.40269	2.40591
11.	2.40591	2.40908	2.41222	2.41532	2.41837	2.42139	2.42438	2.42732	2.43023	2.43311	2.43595
12.	2.43595	2.43876	2.44154	2.44428	2.44699	2.44967	2.45232	2.45494	2.45754	2.46010	2.46264
13.	2.46264	2.46514	2.46763	2.47008	2.47251	2.47491	2.47729	2.47965	2.48198	2.48428	2.48657
14.	2.48657	2.48883	2.49106	2.49328	2.49547	2.49765	2.49980	2.50193	2.50404	2.50613	2.50820
15.	2.50820	2.51025	2.51229	2.51430	2.51630	2.51827	2.52023	2.52218	2.52410	2.52601	2.52790
16.	2.52790	2.52978	2.53164	2.53348	2.53531	2.53712	2.53891	2.54069	2.54246	2.54421	2.54595
17.	2.54595	2.54767	2.54938	2.55108	2.55276	2.55443	2.55608	2.55772	2.55935	2.56097	2.56257
18.	2.56257	2.56417	2.56575	2.56731	2.56887	2.57041	2.57194	2.57346	2.57497	2.57647	2.57796
19.	2.57796	2.57944	2.58090	2.58236	2.58380	2.58524	2.58666	2.58807	2.58948	2.59087	2.59226
20.	2.59226	2.59363	2.59500	2.59636	2.59770	2.59904	2.60037	2.60169	2.60300	2.60430	2.60560
21.	2.60560	2.60688	2.60816	2.60943	2.61069	2.61194	2.61319	2.61442	2.61565	2.61687	2.61809
22.	2.61809	2.61929	2.62049	2.62168	2.62286	2.62404	2.62521	2.62637	2.62753	2.62867	2.62981
23.	2.62981	2.63095	2.63208	2.63320	2.63431	2.63542	2.63652	2.63761	2.63870	2.63978	2.64086
24.	2.64086	2.64193	2.64299	2.64405	2.64510	2.64615	2.64719	2.64822	2.64925	2.65027	2.65129
25.	2.65129	2.65230	2.65330	2.65430	2.65530	2.65629	2.65727	2.65825	2.65922	2.66019	2.66116
26.	2.66116	2.66211	2.66307	2.66401	2.66496	2.66590	2.66683	2.66776	2.66868	2.66960	2.67052
27.	2.67052	2.67143	2.67233	2.67323	2.67413	2.67502	2.67591	2.67679	2.67767	2.67854	2.67941
28.	2.67941	2.68028	2.68114	2.68200	2.68285	2.68370	2.68454	2.68538	2.68622	2.68705	2.68788
29.	2.68788	2.68871	2.68953	2.69035	2.69116	2.69197	2.69278	2.69358	2.69438	2.69517	2.69596

ISENTROPIC GROSS THRUST PARAMETER

GAMMA=1.38

FC/WG SQUARE ROOT TT7

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55854	0.76793	0.91619	1.03234	1.12797	1.20915	1.27954	1.34154	1.39683	1.44661
2.	1.44661	1.49180	1.53311	1.57110	1.60621	1.63881	1.66920	1.69763	1.72430	1.74941	1.77311
3.	1.77311	1.79553	1.81678	1.83697	1.85618	1.87451	1.89201	1.90875	1.92478	1.94016	1.95492
4.	1.95492	1.96912	1.98279	1.99596	2.00866	2.02092	2.03276	2.04422	2.05531	2.06605	2.07647
5.	2.07647	2.08657	2.09637	2.10589	2.11515	2.12415	2.13290	2.14143	2.14973	2.15782	2.16571
6.	2.16571	2.17341	2.18092	2.18825	2.19541	2.20241	2.20925	2.21594	2.22248	2.22888	2.23515
7.	2.23515	2.24129	2.24730	2.25319	2.25897	2.26463	2.27018	2.27562	2.28097	2.28621	2.29136
8.	2.29136	2.29642	2.30139	2.30626	2.31106	2.31577	2.32041	2.32496	2.32944	2.33385	2.33814
9.	2.33819	2.34246	2.34666	2.35080	2.35487	2.35888	2.36283	2.36672	2.37056	2.37434	2.37806
10.	2.37806	2.38174	2.38536	2.38893	2.39245	2.39592	2.39935	2.40273	2.40607	2.40936	2.41261
11.	2.41261	2.41581	2.41898	2.42211	2.42520	2.42825	2.43126	2.43423	2.43717	2.44008	2.44295
12.	2.44295	2.44579	2.44859	2.45136	2.45410	2.45681	2.45949	2.46214	2.46476	2.46735	2.46991
13.	2.46991	2.47244	2.47495	2.47743	2.47989	2.48232	2.48472	2.48710	2.48945	2.49179	2.49409
14.	2.49409	2.49638	2.49864	2.50088	2.50310	2.50529	2.50747	2.50962	2.51176	2.51387	2.51597
15.	2.51597	2.51804	2.52010	2.52213	2.52415	2.52615	2.52813	2.53010	2.53204	2.53397	2.53589
16.	2.53589	2.53778	2.53966	2.54153	2.54338	2.54521	2.54702	2.54883	2.55061	2.55239	2.55414
17.	2.55414	2.55589	2.55762	2.55933	2.56103	2.56272	2.56439	2.56606	2.56770	2.56934	2.57096
18.	2.57096	2.57257	2.57417	2.57576	2.57733	2.57889	2.58044	2.58198	2.58351	2.58503	2.58653
19.	2.58653	2.58803	2.58951	2.59098	2.59245	2.59390	2.59534	2.59677	2.59819	2.59960	2.60101
20.	2.60101	2.60240	2.60378	2.60515	2.60652	2.60787	2.60922	2.61055	2.61188	2.61320	2.61451
21.	2.61451	2.61581	2.61711	2.61839	2.61967	2.62094	2.62220	2.62345	2.62469	2.62593	2.62716
22.	2.62716	2.62838	2.62959	2.63080	2.63200	2.63319	2.63437	2.63555	2.63672	2.63788	2.63904
23.	2.63904	2.64018	2.64133	2.64246	2.64359	2.64471	2.64583	2.64694	2.64804	2.64913	2.65021
24.	2.65022	2.65131	2.65238	2.65346	2.65452	2.65558	2.65663	2.65768	2.65872	2.65976	2.66079
25.	2.66079	2.66181	2.66283	2.66385	2.66485	2.66586	2.66685	2.66785	2.66883	2.66981	2.67079
26.	2.67079	2.67176	2.67273	2.67369	2.67464	2.67560	2.67654	2.67748	2.67842	2.67935	2.68028
27.	2.68028	2.68120	2.68212	2.68303	2.68394	2.68484	2.68574	2.68664	2.68753	2.68841	2.68930
28.	2.68930	2.69017	2.69105	2.69192	2.69278	2.69364	2.69450	2.69535	2.69620	2.69704	2.69788
29.	2.69788	2.69872	2.69955	2.70038	2.70121	2.70203	2.70285	2.70366	2.70447	2.70527	2.70608

ISENTROPIC GROSS THRUST PARAMETER  
 EG/WG SQUARE ROOT TT  
 GAMMA=1.387

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55861	0.76811	0.91651	1.03280	1.12857	1.20989	1.28042	1.34256	1.39798	1.44789
2.	1.44789	1.49321	1.53465	1.57277	1.60800	1.64072	1.67122	1.69976	1.72654	1.75176	1.77556
3.	1.77556	1.79808	1.81943	1.83971	1.85902	1.87744	1.89503	1.91185	1.92797	1.94343	1.95828
4.	1.95828	1.97256	1.98631	1.99955	2.01233	2.02467	2.03659	2.04812	2.05928	2.07009	2.08057
5.	2.08057	2.09073	2.10060	2.11019	2.11951	2.12857	2.13739	2.14597	2.15433	2.16248	2.17043
6.	2.17043	2.17810	2.18575	2.19314	2.20035	2.20740	2.21430	2.22104	2.22763	2.23409	2.24040
7.	2.24040	2.24659	2.25265	2.25859	2.26441	2.27012	2.27571	2.28121	2.28660	2.29188	2.29708
8.	2.29708	2.30218	2.30719	2.31211	2.31695	2.32170	2.32637	2.33097	2.33549	2.33994	2.34432
9.	2.34432	2.34862	2.35286	2.35704	2.36115	2.36520	2.36919	2.37311	2.37699	2.38080	2.38456
10.	2.38456	2.38827	2.39192	2.39553	2.39908	2.40259	2.40605	2.40946	2.41283	2.41616	2.41944
11.	2.41944	2.42268	2.42588	2.42904	2.43215	2.43523	2.43828	2.44128	2.44425	2.44719	2.45009
12.	2.45009	2.45295	2.45579	2.45859	2.46135	2.46409	2.46680	2.46947	2.47212	2.47474	2.47733
13.	2.47733	2.47989	2.48242	2.48493	2.48741	2.48987	2.49230	2.49470	2.49708	2.49944	2.50177
14.	2.50177	2.50408	2.50637	2.50863	2.51088	2.51310	2.51530	2.51748	2.51963	2.52177	2.52389
15.	2.52389	2.52599	2.52807	2.53013	2.53217	2.53419	2.53619	2.53818	2.54015	2.54210	2.54404
16.	2.54404	2.54596	2.54786	2.54974	2.55161	2.55347	2.55530	2.55713	2.55893	2.56073	2.56251
17.	2.56251	2.56427	2.56602	2.56775	2.56948	2.57118	2.57288	2.57456	2.57623	2.57788	2.57953
18.	2.57953	2.58116	2.58277	2.58438	2.58597	2.58755	2.58912	2.59068	2.59223	2.59376	2.59528
19.	2.59528	2.59680	2.59830	2.59979	2.60127	2.60274	2.60420	2.60565	2.60709	2.60852	2.60994
20.	2.60994	2.61135	2.61275	2.61414	2.61552	2.61689	2.61825	2.61961	2.62095	2.62229	2.62361
21.	2.62361	2.62493	2.62624	2.62754	2.62883	2.63012	2.63140	2.63266	2.63392	2.63518	2.63642
22.	2.63642	2.63766	2.63889	2.64011	2.64132	2.64253	2.64373	2.64492	2.64611	2.64728	2.64845
23.	2.64845	2.64962	2.65077	2.65192	2.65307	2.65420	2.65533	2.65646	2.65757	2.65869	2.65979
24.	2.65979	2.66089	2.66198	2.66306	2.66414	2.66522	2.66629	2.66735	2.66840	2.66945	2.67050
25.	2.67050	2.67153	2.67257	2.67359	2.67462	2.67563	2.67664	2.67765	2.67865	2.67964	2.68063
26.	2.68063	2.68162	2.68260	2.68357	2.68454	2.68550	2.68646	2.68742	2.68837	2.68931	2.69025
27.	2.69025	2.69119	2.69212	2.69304	2.69396	2.69488	2.69579	2.69670	2.69760	2.69850	2.69939
28.	2.69939	2.70028	2.70117	2.70205	2.70293	2.70380	2.70467	2.70553	2.70639	2.70725	2.70810
29.	2.70810	2.70895	2.70980	2.71064	2.71147	2.71231	2.71313	2.71396	2.71478	2.71560	2.71641

ISENTROPIC GROSS THRUST PARAMETER  
 FG/MG SQUAKE R3CT IT7  
 GAMMA=1.36

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55809	0.76830	0.91683	1.03325	1.12917	1.21064	1.28131	1.34359	1.39915	1.44920
2.	1.44920	1.49465	1.53622	1.57446	1.60982	1.64265	1.67327	1.70192	1.72882	1.75414	1.77805
3.	1.77905	1.80067	1.82212	1.84251	1.86191	1.88042	1.89810	1.91502	1.93122	1.94677	1.96170
4.	1.96170	1.97607	1.99989	2.00322	2.01607	2.02848	2.04048	2.05208	2.06331	2.07419	2.08474
5.	2.08474	2.09498	2.10491	2.11457	2.12395	2.13307	2.14195	2.15060	2.15902	2.16723	2.17524
6.	2.17524	2.18305	2.19067	2.19812	2.20539	2.21249	2.21944	2.22623	2.23288	2.23939	2.24575
7.	2.24575	2.25197	2.25810	2.26409	2.26996	2.27571	2.28136	2.28690	2.29233	2.29767	2.30290
8.	2.30290	2.30805	2.31310	2.31807	2.32295	2.32774	2.33246	2.33710	2.34166	2.34615	2.35056
9.	2.35056	2.35491	2.35919	2.36340	2.36755	2.37164	2.37566	2.37963	2.38354	2.38739	2.39119
10.	2.39119	2.39493	2.39862	2.40226	2.40585	2.40939	2.41289	2.41633	2.41973	2.42309	2.42641
11.	2.42641	2.42968	2.43291	2.43610	2.43925	2.44236	2.44544	2.44847	2.45147	2.45444	2.45737
12.	2.45737	2.46026	2.46313	2.46596	2.46875	2.47152	2.47426	2.47696	2.47964	2.48228	2.48490
13.	2.48490	2.48749	2.49005	2.49258	2.49509	2.49757	2.50003	2.50246	2.50487	2.50725	2.50961
14.	2.50961	2.51195	2.51426	2.51655	2.51882	2.52106	2.52329	2.52549	2.52767	2.52983	2.53198
15.	2.53198	2.53410	2.53620	2.53828	2.54035	2.54239	2.54442	2.54643	2.54842	2.55040	2.55236
16.	2.55236	2.55430	2.55622	2.55813	2.56002	2.56190	2.56376	2.56560	2.56743	2.56924	2.57104
17.	2.57104	2.57283	2.57460	2.57635	2.57810	2.57983	2.58154	2.58324	2.58493	2.58661	2.58827
18.	2.58827	2.58992	2.59155	2.59318	2.59479	2.59639	2.59798	2.59956	2.60112	2.60268	2.60422
19.	2.60422	2.60575	2.60727	2.60878	2.61028	2.61177	2.61325	2.61472	2.61617	2.61762	2.61906
20.	2.61906	2.62049	2.62190	2.62331	2.62471	2.62610	2.62748	2.62885	2.63021	2.63156	2.63291
21.	2.63291	2.63424	2.63557	2.63689	2.63820	2.63950	2.64079	2.64208	2.64335	2.64462	2.64588
22.	2.64588	2.64714	2.64839	2.64962	2.65085	2.65207	2.65329	2.65449	2.65570	2.65689	2.65807
23.	2.65807	2.65925	2.66043	2.66159	2.66275	2.66390	2.66505	2.66619	2.66732	2.66844	2.66956
24.	2.66956	2.67067	2.67174	2.67288	2.67398	2.67506	2.67615	2.67722	2.67829	2.67936	2.68041
25.	2.68041	2.68147	2.68251	2.68355	2.68459	2.68562	2.68665	2.68766	2.68868	2.68969	2.69069
26.	2.69069	2.69169	2.69268	2.69367	2.69465	2.69563	2.69660	2.69757	2.69853	2.69949	2.70044
27.	2.70044	2.70139	2.70233	2.70327	2.70421	2.70513	2.70606	2.70698	2.70790	2.70881	2.70971
28.	2.70971	2.71062	2.71151	2.71241	2.71330	2.71418	2.71506	2.71594	2.71681	2.71768	2.71855
29.	2.71855	2.71941	2.72026	2.72112	2.72197	2.72281	2.72365	2.72449	2.72532	2.72615	2.72698

ISENTROPIC GROSS THRUST PARAMETER  
 EG/WG SQUARE ROOT ITT  
 GAMMA=1.35

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55876	0.76849	0.91715	1.03372	1.12978	1.21140	1.28222	1.34464	1.40034	1.45052
2.	1.45052	1.49611	1.53782	1.57618	1.61166	1.64462	1.67536	1.70413	1.73114	1.75657	1.78058
3.	1.78058	1.80331	1.82486	1.84535	1.86485	1.88346	1.90123	1.91824	1.93453	1.95017	1.96519
4.	1.96519	1.97963	1.99354	2.00695	2.01988	2.03237	2.04444	2.05612	2.06742	2.07838	2.08900
5.	2.08900	2.09930	2.10931	2.11902	2.12847	2.13766	2.14661	2.15532	2.16380	2.17207	2.18014
6.	2.18014	2.18801	2.19569	2.20319	2.21052	2.21768	2.22468	2.23153	2.23823	2.24479	2.25121
7.	2.25121	2.25750	2.26366	2.26969	2.27561	2.28142	2.28711	2.29270	2.29818	2.30356	2.30884
8.	2.30884	2.31403	2.31913	2.32414	2.32906	2.33390	2.33866	2.34334	2.34795	2.35248	2.35693
9.	2.35693	2.36132	2.36564	2.36989	2.37408	2.37821	2.38227	2.38628	2.39022	2.39411	2.39794
10.	2.39794	2.40172	2.40545	2.40913	2.41275	2.41633	2.41986	2.42334	2.42678	2.43017	2.43352
11.	2.43352	2.43682	2.44009	2.44331	2.44649	2.44964	2.45274	2.45581	2.45884	2.46184	2.46480
12.	2.46480	2.46773	2.47062	2.47348	2.47631	2.47910	2.48187	2.48460	2.48730	2.48998	2.49262
13.	2.49262	2.49524	2.49783	2.50039	2.50293	2.50544	2.50792	2.51038	2.51282	2.51523	2.51761
14.	2.51761	2.51997	2.52231	2.52463	2.52692	2.52919	2.53144	2.53367	2.53588	2.53806	2.54023
15.	2.54023	2.54238	2.54450	2.54661	2.54870	2.55077	2.55282	2.55486	2.55687	2.55887	2.56085
16.	2.56085	2.56281	2.56476	2.56669	2.56860	2.57050	2.57239	2.57425	2.57610	2.57794	2.57976
17.	2.57976	2.58157	2.58336	2.58514	2.58690	2.58865	2.59039	2.59211	2.59382	2.59551	2.59720
18.	2.59720	2.59987	2.60052	2.60217	2.60380	2.60542	2.60703	2.60863	2.61021	2.61179	2.61335
19.	2.61335	2.61490	2.61644	2.61797	2.61949	2.62099	2.62249	2.62398	2.62545	2.62692	2.62837
20.	2.62837	2.62982	2.63126	2.63268	2.63410	2.63551	2.63690	2.63829	2.63967	2.64104	2.64240
21.	2.64240	2.64376	2.64510	2.64644	2.64776	2.64908	2.65039	2.65169	2.65299	2.65427	2.65555
22.	2.65555	2.65682	2.65808	2.65934	2.66058	2.66182	2.66305	2.66428	2.66549	2.66670	2.66790
23.	2.66790	2.66910	2.67029	2.67147	2.67264	2.67381	2.67497	2.67613	2.67727	2.67841	2.67955
24.	2.67955	2.68068	2.68180	2.68291	2.68402	2.68513	2.68622	2.68731	2.68840	2.68948	2.69055
25.	2.69055	2.69162	2.69268	2.69373	2.69478	2.69583	2.69687	2.69790	2.69893	2.69995	2.70097
26.	2.70097	2.70198	2.70299	2.70399	2.70499	2.70598	2.70696	2.70794	2.70892	2.70989	2.71086
27.	2.71086	2.71182	2.71278	2.71373	2.71468	2.71562	2.71656	2.71749	2.71842	2.71934	2.72026
28.	2.72026	2.72118	2.72209	2.72300	2.72390	2.72480	2.72569	2.72658	2.72746	2.72835	2.72922
29.	2.72922	2.73010	2.73097	2.73183	2.73269	2.73355	2.73440	2.73525	2.73610	2.73694	2.73778

ISENTROPIC GROSS THRUST PARAMETER  
EG/MG SQUARE ROOT ITT

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.	
	GAMMA=1.34											
1.	-0.	0.55883	0.76868	0.91748	1.03419	1.13040	1.21217	1.28313	1.34570	1.40154	1.45187	
2.	1.45187	1.49760	1.53944	1.57793	1.61354	1.64662	1.67748	1.70637	1.73349	1.75904	1.78316	
3.	1.78316	1.80599	1.82765	1.84824	1.86784	1.88655	1.90441	1.92152	1.93790	1.95363	1.96873	
4.	1.96873	1.98326	1.99726	2.01074	2.02376	2.03633	2.04848	2.06023	2.07161	2.08264	2.09333	
5.	2.09333	2.10370	2.11378	2.12357	2.13308	2.14234	2.15135	2.16012	2.16867	2.17700	2.18513	
6.	2.18513	2.19306	2.20080	2.20836	2.21575	2.22297	2.23002	2.23693	2.24368	2.25029	2.25677	
7.	2.25677	2.26311	2.26932	2.27541	2.28138	2.28723	2.29297	2.29861	2.30414	2.30957	2.31490	
8.	2.31490	2.32013	2.32528	2.33033	2.33530	2.34019	2.34499	2.34971	2.35436	2.35893	2.36343	
9.	2.36343	2.36786	2.37222	2.37651	2.38074	2.38491	2.38901	2.39305	2.39704	2.40097	2.40484	
10.	2.40484	2.40865	2.41242	2.41613	2.41979	2.42341	2.42697	2.43049	2.43396	2.43739	2.44077	
11.	2.44077	2.44411	2.44741	2.45066	2.45388	2.45706	2.46020	2.46330	2.46636	2.46939	2.47238	
12.	2.47238	2.47554	2.47826	2.48115	2.48401	2.48684	2.48963	2.49240	2.49513	2.49784	2.50051	
13.	2.50051	2.50316	2.50578	2.50837	2.51093	2.51347	2.51598	2.51847	2.52093	2.52337	2.52578	
14.	2.52578	2.52817	2.53053	2.53287	2.53519	2.53749	2.53977	2.54202	2.54425	2.54647	2.54866	
15.	2.54866	2.55083	2.55298	2.55512	2.55723	2.55932	2.56140	2.56346	2.56550	2.56752	2.56952	
16.	2.56952	2.57151	2.57348	2.57543	2.57737	2.57929	2.58120	2.58309	2.58496	2.58682	2.58866	
17.	2.58866	2.59049	2.59231	2.59411	2.59589	2.59766	2.59942	2.60116	2.60290	2.60461	2.60632	
18.	2.60632	2.60801	2.60969	2.61135	2.61301	2.61465	2.61628	2.61789	2.61950	2.62109	2.62267	
19.	2.62267	2.62424	2.62580	2.62735	2.62889	2.63042	2.63193	2.63344	2.63493	2.63642	2.63789	
20.	2.63789	2.63936	2.64081	2.64226	2.64369	2.64512	2.64654	2.64794	2.64934	2.65073	2.65211	
21.	2.65211	2.65348	2.65484	2.65619	2.65754	2.65887	2.66020	2.66152	2.66283	2.66413	2.66543	
22.	2.66543	2.66672	2.66799	2.66927	2.67053	2.67178	2.67303	2.67427	2.67551	2.67673	2.67795	
23.	2.67795	2.67916	2.68037	2.68156	2.68275	2.68394	2.68511	2.68628	2.68745	2.68860	2.68975	
24.	2.68975	2.69090	2.69204	2.69317	2.69429	2.69541	2.69652	2.69763	2.69873	2.69982	2.70091	
25.	2.70091	2.70199	2.70307	2.70414	2.70520	2.70626	2.70732	2.70836	2.70941	2.71044	2.71148	
26.	2.71148	2.71250	2.71352	2.71454	2.71555	2.71656	2.71756	2.71855	2.71954	2.72053	2.72151	
27.	2.72151	2.72248	2.72345	2.72442	2.72538	2.72634	2.72729	2.72823	2.72918	2.73011	2.73105	
28.	2.73105	2.73198	2.73290	2.73382	2.73474	2.73565	2.73655	2.73746	2.73836	2.73925	2.74014	
29.	2.74014	2.74103	2.74191	2.74279	2.74366	2.74453	2.74539	2.74626	2.74711	2.74797	2.74882	

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT TT7

GAMMA=1.33

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55891	0.76888	0.91781	1.03468	1.13104	1.21295	1.28407	1.34679	1.40277	1.45324
2.	1.45324	1.49911	1.54108	1.57971	1.61545	1.64866	1.67964	1.70865	1.73589	1.76155	1.78579
3.	1.78579	1.80875	1.83049	1.85118	1.87089	1.88969	1.90766	1.92485	1.94133	1.95715	1.97234
4.	1.97234	1.98696	2.00104	2.01461	2.02771	2.04036	2.05259	2.06442	2.07587	2.08698	2.09774
5.	2.09774	2.10819	2.11834	2.12819	2.13778	2.14710	2.15618	2.16502	2.17363	2.18203	2.19022
6.	2.19022	2.19821	2.20601	2.21363	2.22108	2.22835	2.23547	2.24243	2.24924	2.25591	2.26244
7.	2.26244	2.26883	2.27510	2.28124	2.28726	2.29316	2.29895	2.30464	2.31022	2.31570	2.32107
8.	2.32107	2.32636	2.33155	2.33665	2.34166	2.34659	2.35144	2.35621	2.36090	2.36552	2.37006
9.	2.37006	2.37453	2.37893	2.38327	2.38754	2.39174	2.39589	2.39997	2.40399	2.40796	2.41187
10.	2.41187	2.41575	2.41953	2.42328	2.42698	2.43063	2.43423	2.43778	2.44129	2.44475	2.44817
11.	2.44817	2.45155	2.45480	2.45817	2.46142	2.46463	2.46780	2.47094	2.47404	2.47710	2.48012
12.	2.48012	2.48311	2.48607	2.48899	2.49188	2.49474	2.49756	2.50036	2.50312	2.50586	2.50856
13.	2.50856	2.51124	2.51389	2.51651	2.51910	2.52167	2.52421	2.52672	2.52921	2.53168	2.53412
14.	2.53412	2.53653	2.53893	2.54130	2.54364	2.54597	2.54827	2.55055	2.55281	2.55505	2.55727
15.	2.55727	2.55946	2.56164	2.56380	2.56594	2.56806	2.57016	2.57224	2.57431	2.57635	2.57838
16.	2.57838	2.58039	2.58239	2.58437	2.58633	2.58827	2.59020	2.59211	2.59401	2.59589	2.59776
17.	2.59776	2.59961	2.60145	2.60327	2.60508	2.60687	2.60865	2.61042	2.61217	2.61391	2.61563
18.	2.61563	2.61735	2.61905	2.62073	2.62241	2.62407	2.62572	2.62736	2.62898	2.63060	2.63220
19.	2.63220	2.63379	2.63537	2.63694	2.63850	2.64005	2.64158	2.64311	2.64462	2.64613	2.64762
20.	2.64762	2.64910	2.65058	2.65204	2.65350	2.65494	2.65638	2.65780	2.65922	2.66063	2.66202
21.	2.66202	2.66341	2.66479	2.66617	2.66753	2.66888	2.67023	2.67156	2.67289	2.67421	2.67553
22.	2.67553	2.67683	2.67813	2.67942	2.68070	2.68197	2.68323	2.68449	2.68574	2.68699	2.68822
23.	2.68822	2.68945	2.69067	2.69138	2.69309	2.69429	2.69548	2.69667	2.69785	2.69902	2.70019
24.	2.70019	2.70135	2.70250	2.70365	2.70479	2.70592	2.70705	2.70817	2.70929	2.71040	2.71150
25.	2.71150	2.71260	2.71369	2.71478	2.71586	2.71693	2.71800	2.71906	2.72012	2.72117	2.72222
26.	2.72222	2.72326	2.72430	2.72533	2.72635	2.72737	2.72839	2.72940	2.73040	2.73140	2.73240
27.	2.73240	2.73339	2.73437	2.73535	2.73633	2.73730	2.73826	2.73922	2.74018	2.74113	2.74208
28.	2.74208	2.74302	2.74396	2.74489	2.74582	2.74674	2.74767	2.74858	2.74949	2.75040	2.75130
29.	2.75130	2.75220	2.75310	2.75399	2.75488	2.75576	2.75664	2.75751	2.75838	2.75925	2.76011

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT TT7

PT/P	GAMMA=1.32										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55896	0.67908	0.81815	1.03517	1.15168	1.21575	1.28502	1.34789	1.40402	1.45464
2.	1.45464	1.50065	1.54276	1.58152	1.61759	1.65073	1.68184	1.71027	1.73633	1.76411	1.78846
3.	1.78846	1.81151	1.83358	1.85418	1.87399	1.89289	1.91096	1.92825	1.94482	1.96073	1.97602
4.	1.97602	1.99075	2.00487	2.01855	2.03173	2.04446	2.05677	2.06868	2.08022	2.09140	2.10224
5.	2.10224	2.11276	2.12298	2.13291	2.14256	2.15196	2.16110	2.17001	2.17869	2.18715	2.19541
6.	2.19541	2.20346	2.21112	2.21901	2.22651	2.23385	2.24102	2.24804	2.25491	2.26163	2.26821
7.	2.26821	2.27466	2.28098	2.28718	2.29325	2.29921	2.30505	2.31079	2.31642	2.32195	2.32737
8.	2.32737	2.33271	2.33795	2.34309	2.34816	2.35313	2.35803	2.36284	2.36757	2.37223	2.37682
9.	2.37682	2.38154	2.38618	2.39076	2.39527	2.39982	2.40429	2.40873	2.41309	2.41751	2.42195
10.	2.42195	2.42629	2.43079	2.43548	2.44041	2.44580	2.45164	2.45782	2.46487	2.47227	2.48557
11.	2.48557	2.49144	2.49625	2.50183	2.50712	2.51237	2.51757	2.52274	2.52817	2.53497	2.54880
12.	2.54880	2.55495	2.56105	2.56704	2.57299	2.57880	2.58456	2.59028	2.59599	2.60168	2.61678
13.	2.61678	2.62217	2.62717	2.63262	2.63764	2.64304	2.64837	2.65361	2.65876	2.66481	2.67078
14.	2.67078	2.67603	2.68158	2.68740	2.69352	2.69984	2.70637	2.71311	2.71996	2.72692	2.73400
15.	2.73400	2.74049	2.74704	2.75374	2.76059	2.76759	2.77474	2.78204	2.78949	2.79709	2.80484
16.	2.80484	2.81187	2.81907	2.82644	2.83397	2.84166	2.84951	2.85751	2.86566	2.87396	2.88241
17.	2.88241	2.89095	2.89965	2.90851	2.91753	2.92671	2.93605	2.94555	2.95521	2.96503	2.97501
18.	2.97501	2.98516	2.99547	3.00594	3.01657	3.02736	3.03831	3.04942	3.06069	3.07212	3.08371
19.	3.08371	3.09535	3.10714	3.11908	3.13117	3.14341	3.15580	3.16834	3.18103	3.19387	3.20686
20.	3.20686	3.21990	3.23309	3.24643	3.25992	3.27356	3.28735	3.30129	3.31538	3.32962	3.34401
21.	3.34401	3.35855	3.37324	3.38808	3.40307	3.41821	3.43350	3.44894	3.46453	3.48027	3.49616
22.	3.49616	3.51220	3.52839	3.54473	3.56122	3.57786	3.59465	3.61159	3.62868	3.64592	3.66331
23.	3.66331	3.68085	3.69854	3.71638	3.73437	3.75251	3.77080	3.78924	3.80783	3.82657	3.84546
24.	3.84546	3.86440	3.88349	3.90273	3.92212	3.94166	3.96135	3.98119	3.99999	4.01999	4.03999
25.	4.03999	4.05999	4.07999	4.09999	4.11999	4.13999	4.15999	4.17999	4.19999	4.21999	4.23999
26.	4.23999	4.25999	4.27999	4.29999	4.31999	4.33999	4.35999	4.37999	4.39999	4.41999	4.43999
27.	4.43999	4.45999	4.47999	4.49999	4.51999	4.53999	4.55999	4.57999	4.59999	4.61999	4.63999
28.	4.63999	4.65999	4.67999	4.69999	4.71999	4.73999	4.75999	4.77999	4.79999	4.81999	4.83999
29.	4.83999	4.85999	4.87999	4.89999	4.91999	4.93999	4.95999	4.97999	4.99999	5.01999	5.03999



ISENTROPIC GROSS THRUST PARAMETER  
F<sub>0</sub>/WG SQUARE ROOT ITT

PT/P	GAMMA=1.31										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55906	0.76928	0.91850	1.03566	1.13233	1.21456	1.28598	1.34901	1.40529	1.45606
2.	1.45606	1.50221	1.54446	1.58337	1.61937	1.65284	1.68408	1.71333	1.74081	1.76671	1.79117
3.	1.79117	1.81434	1.83632	1.85723	1.87715	1.89615	1.91432	1.93171	1.94838	1.96438	1.97977
4.	1.97977	1.99456	2.00882	2.02256	2.03583	2.04865	2.06104	2.07303	2.08465	2.09590	2.10682
5.	2.10682	2.11742	2.12771	2.13772	2.14744	2.15691	2.16612	2.17510	2.18384	2.19237	2.20069
6.	2.20069	2.20881	2.21674	2.22448	2.23205	2.23945	2.24668	2.25376	2.26069	2.26747	2.27411
7.	2.27411	2.28062	2.28699	2.29324	2.29937	2.30538	2.31128	2.31706	2.32274	2.32832	2.33380
8.	2.33380	2.33918	2.34447	2.34967	2.35478	2.35980	2.36474	2.36960	2.37439	2.37909	2.38372
9.	2.38372	2.38828	2.39277	2.39719	2.40155	2.40584	2.41007	2.41423	2.41834	2.42239	2.42638
10.	2.42638	2.43031	2.43419	2.43802	2.44180	2.44553	2.44920	2.45283	2.45642	2.45995	2.46344
11.	2.46344	2.46689	2.47030	2.47366	2.47698	2.48026	2.48350	2.48671	2.48987	2.49300	2.49609
12.	2.49609	2.49913	2.50217	2.50516	2.50812	2.51104	2.51393	2.51679	2.51962	2.52241	2.52518
13.	2.52518	2.52792	2.53063	2.53331	2.53596	2.53859	2.54119	2.54377	2.54631	2.54884	2.55134
14.	2.55134	2.55381	2.55626	2.55869	2.56109	2.56347	2.56583	2.56816	2.57048	2.57277	2.57504
15.	2.57504	2.57730	2.57953	2.58174	2.58393	2.58610	2.58825	2.59039	2.59250	2.59460	2.59668
16.	2.59668	2.59874	2.60079	2.60282	2.60483	2.60682	2.60880	2.61076	2.61271	2.61464	2.61655
17.	2.61655	2.61845	2.62033	2.62220	2.62406	2.62590	2.62772	2.62953	2.63133	2.63312	2.63489
18.	2.63489	2.63665	2.63839	2.64012	2.64184	2.64355	2.64524	2.64692	2.64859	2.65025	2.65189
19.	2.65189	2.65353	2.65515	2.65676	2.65836	2.65995	2.66152	2.66309	2.66465	2.66619	2.66773
20.	2.66773	2.66925	2.67077	2.67227	2.67376	2.67525	2.67672	2.67819	2.67964	2.68109	2.68253
21.	2.68253	2.68395	2.68537	2.68678	2.68818	2.68957	2.69096	2.69233	2.69370	2.69506	2.69640
22.	2.69640	2.69775	2.69908	2.70040	2.70172	2.70303	2.70433	2.70562	2.70691	2.70819	2.70946
23.	2.70946	2.71072	2.71198	2.71323	2.71447	2.71570	2.71693	2.71815	2.71936	2.72057	2.72177
24.	2.72177	2.72296	2.72415	2.72533	2.72650	2.72767	2.72883	2.72999	2.73113	2.73228	2.73341
25.	2.73341	2.73454	2.73567	2.73678	2.73790	2.73900	2.74010	2.74120	2.74229	2.74337	2.74445
26.	2.74445	2.74552	2.74659	2.74765	2.74870	2.74975	2.75080	2.75184	2.75287	2.75390	2.75493
27.	2.75493	2.75595	2.75696	2.75797	2.75898	2.75997	2.76097	2.76196	2.76294	2.76393	2.76490
28.	2.76490	2.76587	2.76684	2.76780	2.76876	2.76971	2.77066	2.77160	2.77254	2.77348	2.77441
29.	2.77441	2.77534	2.77626	2.77718	2.77809	2.77900	2.77991	2.78081	2.78171	2.78260	2.78349

ISENTROPIC GROSS THRUST PARAMETER  
 FG/WG SQUARE ROOT TT7  
 GAMMA=1.30

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55914	0.76948	0.91885	1.03617	1.13300	1.21538	1.28697	1.35014	1.40658	1.45750
2.	1.45750	1.50380	1.54620	1.58524	1.62138	1.65499	1.68635	1.71573	1.74334	1.76936	1.79394
3.	1.79394	1.81722	1.83932	1.86034	1.88036	1.89947	1.91774	1.93523	1.95201	1.96811	1.98358
4.	1.98358	1.99847	2.01282	2.02665	2.04001	2.05291	2.06539	2.07746	2.08916	2.10050	2.11149
5.	2.11149	2.12217	2.13254	2.14262	2.15242	2.16195	2.17124	2.18029	2.18910	2.19770	2.20609
6.	2.20609	2.21427	2.22226	2.23007	2.23770	2.24516	2.25246	2.25960	2.26658	2.27342	2.28012
7.	2.28012	2.28669	2.29312	2.29942	2.30561	2.31167	2.31763	2.32347	2.32920	2.33483	2.34036
8.	2.34036	2.34579	2.35113	2.35638	2.36154	2.36661	2.37160	2.37651	2.38134	2.38609	2.39077
9.	2.39077	2.39537	2.39991	2.40437	2.40877	2.41311	2.41738	2.42159	2.42574	2.42983	2.43386
10.	2.43386	2.43784	2.44176	2.44563	2.44944	2.45321	2.45693	2.46060	2.46422	2.46779	2.47132
11.	2.47132	2.47481	2.47825	2.48165	2.48501	2.48833	2.49160	2.49484	2.49805	2.50121	2.50434
12.	2.50434	2.50743	2.51049	2.51351	2.51650	2.51945	2.52238	2.52527	2.52813	2.53096	2.53376
13.	2.53376	2.53653	2.53927	2.54198	2.54467	2.54733	2.54996	2.55256	2.55514	2.55770	2.56023
14.	2.56023	2.56273	2.56521	2.56767	2.57010	2.57251	2.57489	2.57726	2.57960	2.58192	2.58422
15.	2.58422	2.58650	2.58876	2.59100	2.59322	2.59542	2.59760	2.59976	2.60190	2.60403	2.60613
16.	2.60613	2.60822	2.61029	2.61235	2.61438	2.61640	2.61841	2.62039	2.62236	2.62432	2.62626
17.	2.62626	2.62818	2.63009	2.63198	2.63386	2.63573	2.63758	2.63941	2.64123	2.64304	2.64484
18.	2.64484	2.64662	2.64839	2.65014	2.65188	2.65361	2.65533	2.65703	2.65872	2.66040	2.66207
19.	2.66207	2.66373	2.66537	2.66700	2.66862	2.67023	2.67183	2.67342	2.67500	2.67657	2.67812
20.	2.67812	2.67967	2.68120	2.68273	2.68424	2.68575	2.68724	2.68873	2.69020	2.69167	2.69313
21.	2.69313	2.69457	2.69601	2.69744	2.69886	2.70027	2.70168	2.70307	2.70446	2.70583	2.70720
22.	2.70720	2.70856	2.70991	2.71126	2.71259	2.71392	2.71524	2.71655	2.71786	2.71915	2.72044
23.	2.72044	2.72172	2.72300	2.72426	2.72552	2.72678	2.72802	2.72926	2.73049	2.73172	2.73293
24.	2.73293	2.73414	2.73535	2.73655	2.73774	2.73892	2.74010	2.74127	2.74244	2.74360	2.74475
25.	2.74475	2.74589	2.74704	2.74817	2.74930	2.75042	2.75154	2.75265	2.75375	2.75485	2.75595
26.	2.75595	2.75704	2.75812	2.75920	2.76027	2.76133	2.76239	2.76345	2.76450	2.76555	2.76659
27.	2.76659	2.76762	2.76865	2.76968	2.77070	2.77171	2.77272	2.77373	2.77473	2.77572	2.77671
28.	2.77671	2.77770	2.77868	2.77966	2.78063	2.78160	2.78256	2.78352	2.78447	2.78542	2.78637
29.	2.78637	2.78731	2.78825	2.78918	2.79011	2.79103	2.79195	2.79287	2.79378	2.79469	2.79559

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT TT7

PT/P	GAMMA=1.29										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	0.	0.5921	0.76969	0.91920	1.03668	1.13367	1.21622	1.28796	1.35130	1.40790	1.45897
2.	1.45897	1.50542	1.54796	1.58715	1.62343	1.65717	1.68867	1.71818	1.74591	1.77206	1.79676
3.	1.79676	1.82016	1.84237	1.86350	1.88363	1.90285	1.92123	1.93882	1.95570	1.97190	1.98747
4.	1.98747	2.00246	2.01689	2.03082	2.04426	2.05726	2.06982	2.08198	2.09376	2.10518	2.11626
5.	2.11626	2.12701	2.13746	2.14761	2.15749	2.16710	2.17646	2.18558	2.19446	2.20313	2.21159
6.	2.21159	2.21984	2.22790	2.23577	2.24347	2.25099	2.25835	2.26555	2.27260	2.27950	2.28626
7.	2.28626	2.29288	2.29937	2.30574	2.31198	2.31810	2.32410	2.33000	2.33579	2.34147	2.34705
8.	2.34705	2.35254	2.35793	2.36324	2.36844	2.37356	2.37860	2.38355	2.38843	2.39323	2.39796
9.	2.39796	2.40261	2.40719	2.41170	2.41615	2.42053	2.42484	2.42910	2.43329	2.43742	2.44150
10.	2.44150	2.44552	2.44948	2.45339	2.45725	2.46106	2.46482	2.46852	2.47219	2.47580	2.47937
11.	2.47937	2.48289	2.48637	2.48981	2.49321	2.49656	2.49988	2.50316	2.50639	2.50959	2.51276
12.	2.51276	2.51589	2.51898	2.52204	2.52506	2.52805	2.53101	2.53393	2.53683	2.53969	2.54252
13.	2.54252	2.54533	2.54810	2.55085	2.55357	2.55626	2.55892	2.56156	2.56417	2.56675	2.56931
14.	2.56931	2.57185	2.57436	2.57684	2.57931	2.58174	2.58416	2.58656	2.58893	2.59128	2.59361
15.	2.59361	2.59592	2.59820	2.60047	2.60272	2.60495	2.60715	2.60934	2.61151	2.61366	2.61580
16.	2.61580	2.61791	2.62001	2.62209	2.62415	2.62620	2.62823	2.63024	2.63224	2.63422	2.63618
17.	2.63618	2.63813	2.64007	2.64199	2.64389	2.64578	2.64765	2.64951	2.65136	2.65319	2.65501
18.	2.65501	2.65682	2.65861	2.66039	2.66215	2.66390	2.66564	2.66737	2.66909	2.67079	2.67248
19.	2.67248	2.67416	2.67582	2.67748	2.67912	2.68076	2.68238	2.68399	2.68559	2.68718	2.68875
20.	2.68875	2.69032	2.69188	2.69342	2.69496	2.69649	2.69800	2.69951	2.70101	2.70249	2.70397
21.	2.70397	2.70544	2.70690	2.70835	2.70979	2.71122	2.71264	2.71406	2.71546	2.71686	2.71825
22.	2.71825	2.71963	2.72100	2.72236	2.72372	2.72506	2.72640	2.72773	2.72906	2.73037	2.73168
23.	2.73168	2.73298	2.73427	2.73556	2.73684	2.73811	2.73937	2.74063	2.74188	2.74312	2.74436
24.	2.74436	2.74559	2.74681	2.74802	2.74923	2.75043	2.75163	2.75282	2.75400	2.75518	2.75635
25.	2.75635	2.75751	2.75867	2.75982	2.76097	2.76211	2.76324	2.76437	2.76549	2.76661	2.76772
26.	2.76772	2.76882	2.76992	2.77102	2.77210	2.77319	2.77426	2.77534	2.77640	2.77746	2.77852
27.	2.77852	2.77957	2.78062	2.78166	2.78269	2.78372	2.78475	2.78577	2.78679	2.78780	2.78880
28.	2.78880	2.78981	2.79080	2.79180	2.79278	2.79377	2.79474	2.79572	2.79669	2.79765	2.79861
29.	2.79861	2.79957	2.80052	2.80147	2.80241	2.80335	2.80429	2.80522	2.80614	2.80707	2.80798

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT TT7

PT/P	GAMMA=1.28										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55930	0.76990	0.91956	1.03720	1.13436	1.21707	1.28898	1.35248	1.40923	1.46046
2.	1.46046	1.50706	1.54976	1.58909	1.62551	1.65939	1.69103	1.72067	1.74854	1.77480	1.79963
3.	1.79963	1.82315	1.84548	1.86672	1.88697	1.90630	1.92478	1.94248	1.95946	1.97576	1.99143
4.	1.99143	2.00651	2.02105	2.03507	2.04860	2.06168	2.07434	2.08658	2.09845	2.10995	2.12111
5.	2.12111	2.13195	2.14247	2.15271	2.16266	2.17235	2.18178	2.19097	2.19993	2.20867	2.21720
6.	2.21720	2.22552	2.23365	2.24159	2.24935	2.25694	2.26436	2.27163	2.27874	2.28570	2.29252
7.	2.29252	2.29920	2.30575	2.31218	2.31847	2.32465	2.33072	2.33667	2.34251	2.34825	2.35389
8.	2.35389	2.35943	2.36487	2.37022	2.37548	2.38065	2.38574	2.39075	2.39568	2.40053	2.40530
9.	2.40530	2.41000	2.41463	2.41919	2.42368	2.42811	2.43247	2.43677	2.44100	2.44518	2.44930
10.	2.44930	2.45336	2.45737	2.46132	2.46523	2.46908	2.47287	2.47662	2.48033	2.48398	2.48759
11.	2.48759	2.49115	2.49467	2.49815	2.50159	2.50498	2.50833	2.51165	2.51492	2.51816	2.52136
12.	2.52136	2.52453	2.52766	2.53075	2.53381	2.53683	2.53983	2.54279	2.54572	2.54862	2.55148
13.	2.55148	2.55432	2.55713	2.55991	2.56266	2.56538	2.56808	2.57075	2.57339	2.57601	2.57860
14.	2.57860	2.58116	2.58371	2.58622	2.58872	2.59119	2.59364	2.59606	2.59846	2.60084	2.60320
15.	2.60320	2.60554	2.60786	2.61015	2.61243	2.61469	2.61692	2.61914	2.62134	2.62352	2.62568
16.	2.62568	2.62782	2.62995	2.63205	2.63414	2.63622	2.63827	2.64031	2.64234	2.64434	2.64634
17.	2.64634	2.64831	2.65027	2.65222	2.65415	2.65606	2.65796	2.65985	2.66172	2.66357	2.66542
18.	2.66542	2.66725	2.66906	2.67087	2.67266	2.67443	2.67620	2.67795	2.67969	2.68141	2.68313
19.	2.68313	2.68483	2.68652	2.68820	2.68986	2.69152	2.69316	2.69480	2.69642	2.69803	2.69963
20.	2.69963	2.70122	2.70280	2.70437	2.70592	2.70747	2.70901	2.71054	2.71206	2.71357	2.71506
21.	2.71506	2.71655	2.71803	2.71951	2.72097	2.72242	2.72386	2.72530	2.72672	2.72814	2.72955
22.	2.72955	2.73095	2.73234	2.73372	2.73510	2.73647	2.73782	2.73918	2.74052	2.74185	2.74318
23.	2.74318	2.74450	2.74581	2.74712	2.74842	2.74971	2.75099	2.75226	2.75353	2.75479	2.75605
24.	2.75605	2.75730	2.75854	2.75977	2.76100	2.76222	2.76343	2.76464	2.76584	2.76703	2.76822
25.	2.76822	2.76940	2.77058	2.77175	2.77291	2.77407	2.77522	2.77637	2.77751	2.77864	2.77977
26.	2.77977	2.78089	2.78200	2.78312	2.78422	2.78532	2.78641	2.78750	2.78859	2.78966	2.79074
27.	2.79074	2.79181	2.79287	2.79392	2.79498	2.79602	2.79707	2.79810	2.79913	2.80016	2.80118
28.	2.80118	2.80220	2.80321	2.80422	2.80523	2.80622	2.80722	2.80821	2.80919	2.81017	2.81115
29.	2.81115	2.81212	2.81309	2.81405	2.81501	2.81596	2.81691	2.81786	2.81880	2.81974	2.82067

ISENTHROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT TT7

PT/P	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55938	0.77011	0.91993	1.03773	1.13505	1.21793	1.29001	1.35368	1.41059	1.46198
2.	1.46198	1.50874	1.55158	1.59106	1.62763	1.66165	1.69343	1.72321	1.75120	1.77760	1.80255
3.	1.80255	1.82620	1.84865	1.87001	1.89037	1.90981	1.92840	1.94621	1.96329	1.97970	1.99547
4.	1.99547	2.01065	2.02528	2.03940	2.05303	2.06620	2.07894	2.09128	2.10323	2.11482	2.12606
5.	2.12606	2.13698	2.14759	2.15790	2.16794	2.17770	2.18721	2.19648	2.20551	2.21432	2.22292
6.	2.22292	2.23131	2.23951	2.24752	2.25535	2.26301	2.27050	2.27783	2.28500	2.29203	2.29891
7.	2.29891	2.30566	2.31227	2.31875	2.32511	2.33135	2.33747	2.34348	2.34938	2.35517	2.36086
8.	2.36086	2.36646	2.37196	2.37736	2.38267	2.38790	2.39304	2.39810	2.40308	2.40798	2.41280
9.	2.41280	2.41755	2.42223	2.42684	2.43137	2.43585	2.44026	2.44460	2.44888	2.45311	2.45727
10.	2.45727	2.46138	2.46543	2.46943	2.47337	2.47727	2.48111	2.48490	2.48864	2.49234	2.49599
11.	2.49599	2.49960	2.50316	2.50667	2.51015	2.51358	2.51697	2.52033	2.52364	2.52692	2.53016
12.	2.53016	2.53336	2.53652	2.53966	2.54275	2.54581	2.54884	2.55184	2.55480	2.55774	2.56064
13.	2.56064	2.56351	2.56636	2.56917	2.57196	2.57471	2.57744	2.58014	2.58282	2.58547	2.58809
14.	2.58809	2.59069	2.59327	2.59582	2.59834	2.60084	2.60332	2.60578	2.60821	2.61062	2.61301
15.	2.61301	2.61538	2.61773	2.62005	2.62236	2.62465	2.62691	2.62916	2.63139	2.63359	2.63578
16.	2.63578	2.63796	2.64011	2.64225	2.64436	2.64647	2.64855	2.65062	2.65267	2.65470	2.65672
17.	2.65672	2.65872	2.66071	2.66268	2.66464	2.66658	2.66850	2.67041	2.67231	2.67419	2.67606
18.	2.67606	2.67792	2.67976	2.68159	2.68340	2.68520	2.68699	2.68877	2.69053	2.69228	2.69402
19.	2.69402	2.69575	2.69746	2.69916	2.70085	2.70253	2.70420	2.70586	2.70750	2.70914	2.71076
20.	2.71076	2.71237	2.71397	2.71557	2.71715	2.71872	2.72028	2.72183	2.72337	2.72490	2.72642
21.	2.72642	2.72793	2.72943	2.73093	2.73241	2.73388	2.73535	2.73680	2.73825	2.73969	2.74112
22.	2.74112	2.74254	2.74395	2.74536	2.74675	2.74814	2.74952	2.75089	2.75225	2.75361	2.75495
23.	2.75495	2.75629	2.75763	2.75895	2.76027	2.76158	2.76288	2.76418	2.76546	2.76674	2.76802
24.	2.76802	2.76928	2.77054	2.77180	2.77304	2.77428	2.77551	2.77674	2.77796	2.77917	2.78038
25.	2.78038	2.78158	2.78277	2.78396	2.78514	2.78632	2.78749	2.78865	2.78981	2.79096	2.79210
26.	2.79210	2.79324	2.79438	2.79551	2.79663	2.79775	2.79886	2.79996	2.80106	2.80216	2.80325
27.	2.80325	2.80433	2.80541	2.80649	2.80756	2.80862	2.80968	2.81073	2.81178	2.81282	2.81386
28.	2.81386	2.81490	2.81593	2.81695	2.81797	2.81898	2.82000	2.82100	2.82200	2.82300	2.82399
29.	2.82399	2.82498	2.82596	2.82694	2.82791	2.82888	2.82985	2.83081	2.83177	2.83272	2.83367

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT  $\sqrt{TT}$

PT/P	GAMMA=1.26										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55946	0.77033	0.92031	1.03827	1.13576	1.21881	1.29106	1.35489	1.41198	1.46352
2.	1.46352	1.51044	1.55344	1.59308	1.62979	1.66396	1.69587	1.72579	1.75392	1.78045	1.80553
3.	1.80553	1.82930	1.85187	1.87335	1.89383	1.91339	1.93209	1.95001	1.96720	1.98371	1.99959
4.	1.99959	2.01487	2.02960	2.04382	2.05754	2.07081	2.08364	2.09607	2.10811	2.11979	2.13112
5.	2.13112	2.14212	2.15281	2.16321	2.17332	2.18316	2.19275	2.20210	2.21121	2.22009	2.22876
6.	2.22876	2.23723	2.24550	2.25358	2.26148	2.26920	2.27676	2.28416	2.29140	2.29849	2.30544
7.	2.30544	2.31224	2.31892	2.32546	2.33188	2.33818	2.34436	2.35043	2.35639	2.36224	2.36799
8.	2.36799	2.37364	2.37919	2.38465	2.39002	2.39530	2.40050	2.40561	2.41064	2.41559	2.42046
9.	2.42046	2.42526	2.42999	2.43465	2.43924	2.44376	2.44821	2.45261	2.45694	2.46121	2.46542
10.	2.46542	2.46957	2.47367	2.47771	2.48170	2.48564	2.48952	2.49335	2.49714	2.50088	2.50458
11.	2.50458	2.50822	2.51183	2.51538	2.51890	2.52237	2.52581	2.52920	2.53255	2.53587	2.53915
12.	2.53915	2.54239	2.54559	2.54876	2.55189	2.55499	2.55806	2.56109	2.56410	2.56707	2.57000
13.	2.57000	2.57291	2.57579	2.57864	2.58146	2.58425	2.58702	2.58975	2.59246	2.59515	2.59780
14.	2.59780	2.60044	2.60304	2.60563	2.60818	2.61072	2.61323	2.61572	2.61818	2.62063	2.62305
15.	2.62305	2.62545	2.62782	2.63018	2.63252	2.63483	2.63713	2.63941	2.64167	2.64390	2.64612
16.	2.64612	2.64832	2.65051	2.65267	2.65482	2.65695	2.65906	2.66116	2.66324	2.66530	2.66734
17.	2.66734	2.66937	2.67139	2.67339	2.67537	2.67734	2.67929	2.68123	2.68315	2.68506	2.68696
18.	2.68696	2.68884	2.69071	2.69256	2.69440	2.69623	2.69804	2.69984	2.70163	2.70341	2.70517
19.	2.70517	2.70692	2.70866	2.71039	2.71210	2.71381	2.71550	2.71718	2.71885	2.72051	2.72215
20.	2.72215	2.72379	2.72541	2.72703	2.72863	2.73023	2.73181	2.73338	2.73495	2.73650	2.73804
21.	2.73804	2.73958	2.74110	2.74262	2.74412	2.74562	2.74710	2.74858	2.75005	2.75151	2.75296
22.	2.75296	2.75440	2.75584	2.75726	2.75868	2.76009	2.76149	2.76288	2.76427	2.76564	2.76701
23.	2.76701	2.76837	2.76972	2.77107	2.77241	2.77374	2.77506	2.77637	2.77768	2.77898	2.78027
24.	2.78027	2.78156	2.78284	2.78411	2.78538	2.78664	2.78789	2.78913	2.79037	2.79160	2.79283
25.	2.79283	2.79405	2.79526	2.79647	2.79767	2.79886	2.80005	2.80123	2.80241	2.80358	2.80474
26.	2.80474	2.80590	2.80705	2.80820	2.80934	2.81047	2.81160	2.81273	2.81384	2.81496	2.81606
27.	2.81606	2.81717	2.81826	2.81935	2.82044	2.82152	2.82260	2.82367	2.82473	2.82580	2.82685
28.	2.82685	2.82790	2.82895	2.82999	2.83103	2.83206	2.83308	2.83411	2.83512	2.83614	2.83714
29.	2.83714	2.83815	2.83915	2.84014	2.84113	2.84212	2.84310	2.84408	2.84505	2.84602	2.84698

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT IT7

PT/P	GAMMA=1.25										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55954	0.77055	0.92069	1.03482	1.13648	1.21971	1.29213	1.35613	1.41339	1.46510
2.	1.46510	1.51218	1.55534	1.59512	1.63199	1.66631	1.69836	1.72842	1.75669	1.78335	1.80856
3.	1.80856	1.83246	1.85516	1.87675	1.89736	1.91703	1.93586	1.95389	1.97119	1.98780	2.00378
4.	2.00378	2.01917	2.03401	2.04832	2.06214	2.07550	2.08843	2.10095	2.11309	2.12485	2.13627
5.	2.13627	2.14736	2.15814	2.16862	2.17881	2.18874	2.19841	2.20783	2.21702	2.22598	2.23472
6.	2.23472	2.24327	2.25161	2.25976	2.26773	2.27553	2.28315	2.29062	2.29793	2.30509	2.31210
7.	2.31210	2.31897	2.32571	2.33232	2.33880	2.34516	2.35140	2.35753	2.36355	2.36946	2.37527
8.	2.37527	2.38098	2.38659	2.39210	2.39753	2.40286	2.40811	2.41328	2.41836	2.42336	2.42829
9.	2.42829	2.43314	2.43792	2.44263	2.44727	2.45184	2.45635	2.46079	2.46517	2.46948	2.47374
10.	2.47374	2.47794	2.48209	2.48618	2.49021	2.49419	2.49812	2.50200	2.50583	2.50962	2.51335
11.	2.51335	2.51704	2.52069	2.52429	2.52785	2.53136	2.53484	2.53827	2.54167	2.54502	2.54834
12.	2.54834	2.55162	2.55486	2.55807	2.56124	2.56438	2.56749	2.57056	2.57360	2.57661	2.57958
13.	2.57958	2.58253	2.58544	2.58833	2.59118	2.59401	2.59681	2.59958	2.60233	2.60505	2.60774
14.	2.60774	2.61040	2.61305	2.61566	2.61825	2.62082	2.62337	2.62589	2.62838	2.63086	2.63331
15.	2.63331	2.63574	2.63816	2.64054	2.64291	2.64526	2.64759	2.64990	2.65218	2.65445	2.65670
16.	2.65670	2.65893	2.66115	2.66334	2.66552	2.66768	2.66982	2.67194	2.67405	2.67614	2.67822
17.	2.67822	2.68027	2.68232	2.68434	2.68636	2.68835	2.69033	2.69230	2.69425	2.69619	2.69811
18.	2.69811	2.70002	2.70191	2.70379	2.70566	2.70751	2.70935	2.71118	2.71299	2.71480	2.71659
19.	2.71659	2.71836	2.72013	2.72188	2.72362	2.72535	2.72706	2.72877	2.73046	2.73215	2.73382
20.	2.73382	2.73548	2.73713	2.73877	2.74039	2.74201	2.74362	2.74521	2.74680	2.74838	2.74995
21.	2.74995	2.75150	2.75305	2.75459	2.75612	2.75763	2.75914	2.76064	2.76214	2.76362	2.76509
22.	2.76509	2.76656	2.76801	2.76946	2.77090	2.77233	2.77375	2.77516	2.77657	2.77797	2.77936
23.	2.77936	2.78074	2.78211	2.78348	2.78484	2.78619	2.78753	2.78887	2.79019	2.79151	2.79283
24.	2.79283	2.79414	2.79543	2.79673	2.79801	2.79929	2.80056	2.80183	2.80309	2.80434	2.80558
25.	2.80558	2.80682	2.80805	2.80928	2.81050	2.81171	2.81292	2.81412	2.81532	2.81650	2.81769
26.	2.81769	2.81886	2.82003	2.82120	2.82236	2.82351	2.82466	2.82580	2.82694	2.82807	2.82920
27.	2.82920	2.83032	2.83143	2.83254	2.83364	2.83474	2.83584	2.83692	2.83801	2.83909	2.84016
28.	2.84016	2.84123	2.84229	2.84335	2.84440	2.84545	2.84650	2.84754	2.84857	2.84960	2.85062
29.	2.85062	2.85165	2.85266	2.85367	2.85468	2.85568	2.85668	2.85767	2.85866	2.85965	2.86063

ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT IT7

PT/P	GAMMA=1.24										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55965	0.77078	0.92107	1.03938	1.13722	1.22062	1.29322	1.35739	1.41482	1.46670
2.	1.46670	1.51394	1.55726	1.59721	1.63423	1.66870	1.70090	1.73110	1.75951	1.78631	1.81166
3.	1.81166	1.83568	1.85851	1.88024	1.90096	1.92075	1.93969	1.95784	1.97525	1.99198	2.00807
4.	2.00807	2.02356	2.03850	2.05291	2.06684	2.08030	2.09332	2.10594	2.11816	2.13002	2.14153
5.	2.14153	2.15271	2.16357	2.17414	2.18442	2.19443	2.20418	2.21368	2.22295	2.23199	2.24081
6.	2.24081	2.24943	2.25785	2.26607	2.27412	2.28199	2.28968	2.29722	2.30460	2.31182	2.31890
7.	2.31890	2.32584	2.33265	2.33932	2.34587	2.35229	2.35860	2.36479	2.37086	2.37684	2.38270
8.	2.38270	2.38847	2.39414	2.39971	2.40520	2.41059	2.41589	2.42111	2.42625	2.43131	2.43629
9.	2.43629	2.44120	2.44603	2.45079	2.45548	2.46010	2.46466	2.46915	2.47358	2.47794	2.48225
10.	2.48225	2.48650	2.49069	2.49483	2.49891	2.50294	2.50692	2.51084	2.51472	2.51855	2.52233
11.	2.52233	2.52606	2.52975	2.53340	2.53700	2.54056	2.54407	2.54755	2.55099	2.55438	2.55774
12.	2.55774	2.56106	2.56435	2.56759	2.57081	2.57399	2.57713	2.58024	2.58332	2.58636	2.58938
13.	2.58938	2.59236	2.59531	2.59824	2.60113	2.60399	2.60683	2.60964	2.61242	2.61517	2.61790
14.	2.61790	2.62060	2.62328	2.62593	2.62856	2.63116	2.63374	2.63629	2.63882	2.64133	2.64382
15.	2.64382	2.64628	2.64873	2.65115	2.65355	2.65593	2.65829	2.66063	2.66295	2.66525	2.66753
16.	2.66753	2.66979	2.67204	2.67426	2.67647	2.67866	2.68083	2.68298	2.68512	2.68724	2.68935
17.	2.68935	2.69143	2.69351	2.69556	2.69760	2.69963	2.70164	2.70363	2.70561	2.70758	2.70953
18.	2.70953	2.71146	2.71338	2.71529	2.71719	2.71907	2.72093	2.72279	2.72463	2.72646	2.72827
19.	2.72827	2.73008	2.73187	2.73364	2.73541	2.73717	2.73891	2.74064	2.74236	2.74407	2.74576
20.	2.74576	2.74745	2.74912	2.75079	2.75244	2.75408	2.75571	2.75733	2.75894	2.76054	2.76214
21.	2.76214	2.76372	2.76529	2.76685	2.76840	2.76994	2.77148	2.77300	2.77451	2.77602	2.77752
22.	2.77752	2.77900	2.78048	2.78195	2.78341	2.78487	2.78631	2.78775	2.78917	2.79059	2.79200
23.	2.79200	2.79341	2.79480	2.79619	2.79757	2.79894	2.80031	2.80166	2.80301	2.80436	2.80569
24.	2.80569	2.80702	2.80834	2.80965	2.81096	2.81226	2.81355	2.81484	2.81611	2.81739	2.81865
25.	2.81865	2.81991	2.82116	2.82241	2.82365	2.82488	2.82611	2.82733	2.82854	2.82975	2.83095
26.	2.83095	2.83215	2.83334	2.83452	2.83570	2.83687	2.83804	2.83920	2.84036	2.84151	2.84265
27.	2.84265	2.84379	2.84492	2.84605	2.84718	2.84829	2.84940	2.85051	2.85161	2.85271	2.85380
28.	2.85380	2.85489	2.85597	2.85704	2.85812	2.85918	2.86024	2.86130	2.86235	2.86340	2.86444
29.	2.86444	2.86548	2.86651	2.86754	2.86857	2.86959	2.87060	2.87161	2.87262	2.87362	2.87462



ISENTROPIC GROSS THRUST PARAMETER  
FG/MG SQUARE ROOT TT?

PT/P	GAMMA=1.22										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55981	0.77124	0.92186	1.04052	1.13872	1.22249	1.29545	1.35999	1.41776	1.46999
2.	1.46999	1.51758	1.56123	1.60150	1.63884	1.67361	1.70612	1.73662	1.76532	1.79240	1.81802
3.	1.81802	1.84232	1.86541	1.88740	1.90837	1.92841	1.94759	1.96598	1.98362	2.00057	2.01689
4.	2.01689	2.03260	2.04776	2.06238	2.07651	2.09018	2.10340	2.11622	2.12864	2.14068	2.15238
5.	2.15238	2.16374	2.17479	2.18553	2.19599	2.20617	2.21609	2.22576	2.23519	2.24439	2.25338
6.	2.25338	2.26215	2.27073	2.27911	2.28730	2.29532	2.30317	2.31085	2.31837	2.32574	2.33296
7.	2.33296	2.34004	2.34698	2.35378	2.36046	2.36702	2.37346	2.37977	2.38598	2.39208	2.39807
8.	2.39807	2.40396	2.40975	2.41545	2.42105	2.42656	2.43198	2.43731	2.44257	2.44774	2.45283
9.	2.45283	2.45785	2.46279	2.46766	2.47246	2.47719	2.48185	2.48644	2.49098	2.49545	2.49985
10.	2.49985	2.50420	2.50850	2.51273	2.51691	2.52104	2.52511	2.52913	2.53310	2.53702	2.54090
11.	2.54090	2.54472	2.54851	2.55224	2.55593	2.55958	2.56319	2.56675	2.57027	2.57376	2.57720
12.	2.57720	2.58061	2.58398	2.58731	2.59060	2.59386	2.59709	2.60028	2.60344	2.60657	2.60966
13.	2.60966	2.61272	2.61575	2.61875	2.62172	2.62467	2.62758	2.63046	2.63332	2.63615	2.63895
14.	2.63895	2.64173	2.64447	2.64720	2.64990	2.65257	2.65522	2.65785	2.66045	2.66303	2.66558
15.	2.66558	2.66812	2.67063	2.67312	2.67559	2.67803	2.68046	2.68287	2.68525	2.68762	2.68997
16.	2.68997	2.69229	2.69460	2.69689	2.69916	2.70142	2.70365	2.70587	2.70807	2.71025	2.71242
17.	2.71242	2.71457	2.71670	2.71881	2.72091	2.72300	2.72507	2.72712	2.72916	2.73118	2.73319
18.	2.73319	2.73519	2.73717	2.73913	2.74108	2.74302	2.74495	2.74686	2.74875	2.75064	2.75251
19.	2.75251	2.75437	2.75621	2.75804	2.75986	2.76167	2.76347	2.76525	2.76703	2.76879	2.77054
20.	2.77054	2.77227	2.77400	2.77572	2.77742	2.77911	2.78080	2.78247	2.78413	2.78578	2.78742
21.	2.78742	2.78905	2.79067	2.79229	2.79389	2.79548	2.79706	2.79863	2.80019	2.80175	2.80329
22.	2.80329	2.80483	2.80635	2.80787	2.80938	2.81088	2.81237	2.81385	2.81533	2.81679	2.81825
23.	2.81825	2.81970	2.82114	2.82257	2.82400	2.82542	2.82683	2.82823	2.82962	2.83101	2.83239
24.	2.83239	2.83376	2.83512	2.83648	2.83783	2.83917	2.84051	2.84184	2.84316	2.84447	2.84578
25.	2.84578	2.84708	2.84837	2.84966	2.85094	2.85222	2.85349	2.85475	2.85600	2.85725	2.85850
26.	2.85850	2.85973	2.86096	2.86219	2.86341	2.86462	2.86583	2.86703	2.86822	2.86941	2.87059
27.	2.87059	2.87177	2.87295	2.87411	2.87527	2.87643	2.87758	2.87872	2.87986	2.88100	2.88213
28.	2.88213	2.88325	2.88437	2.88549	2.88659	2.88770	2.88880	2.88989	2.89098	2.89206	2.89314
29.	2.89314	2.89422	2.89529	2.89635	2.89741	2.89847	2.89952	2.90057	2.90161	2.90264	2.90368



ISENTROPIC GROSS THRUST PARAMETER  
FG/WG SQUARE ROOT, TT

PT/P	GAMMA=1.20										
	0.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.
1.	-0.	0.55999	0.77172	0.92268	1.04171	1.14028	1.22443	1.29776	1.36267	1.42082	1.47340
2.	1.47340	1.52134	1.56534	1.60595	1.64362	1.67872	1.71154	1.74235	1.77135	1.79873	1.82464
3.	1.82464	1.84922	1.87258	1.89484	1.91608	1.93638	1.95581	1.97445	1.99233	2.00953	2.02608
4.	2.02608	2.04202	2.05740	2.07225	2.08660	2.10047	2.11391	2.12693	2.13955	2.15180	2.16369
5.	2.16369	2.17525	2.18648	2.19741	2.20805	2.21841	2.22851	2.23836	2.24797	2.25734	2.26649
6.	2.26649	2.27543	2.28417	2.29271	2.30107	2.30924	2.31724	2.32508	2.33275	2.34027	2.34764
7.	2.34764	2.35486	2.36195	2.36890	2.37572	2.38241	2.38898	2.39544	2.40178	2.40801	2.41413
8.	2.41413	2.42015	2.42607	2.43189	2.43762	2.44325	2.44880	2.45426	2.45963	2.46492	2.47013
9.	2.47013	2.47527	2.48032	2.48531	2.49022	2.49506	2.49983	2.50454	2.50918	2.51376	2.51828
10.	2.51828	2.52273	2.52713	2.53147	2.53575	2.53998	2.54416	2.54828	2.55235	2.55637	2.56034
11.	2.56034	2.56427	2.56814	2.57198	2.57576	2.57950	2.58320	2.58686	2.59048	2.59405	2.59759
12.	2.59759	2.60108	2.60454	2.60796	2.61135	2.61469	2.61801	2.62128	2.62453	2.62774	2.63092
13.	2.63092	2.63406	2.63718	2.64026	2.64331	2.64634	2.64933	2.65229	2.65523	2.65814	2.66102
14.	2.66102	2.66387	2.66670	2.66950	2.67227	2.67503	2.67775	2.68045	2.68313	2.68578	2.68841
15.	2.68841	2.69102	2.69360	2.69616	2.69871	2.70122	2.70372	2.70620	2.70865	2.71109	2.71351
16.	2.71351	2.71590	2.71828	2.72064	2.72298	2.72530	2.72760	2.72988	2.73215	2.73440	2.73663
17.	2.73663	2.73884	2.74104	2.74322	2.74538	2.74753	2.74967	2.75178	2.75388	2.75597	2.75804
18.	2.75804	2.76010	2.76214	2.76416	2.76618	2.76817	2.77016	2.77213	2.77408	2.77603	2.77796
19.	2.77796	2.77987	2.78178	2.78367	2.78555	2.78741	2.78927	2.79111	2.79294	2.79475	2.79656
20.	2.79656	2.79835	2.80013	2.80190	2.80366	2.80541	2.80715	2.80888	2.81059	2.81230	2.81399
21.	2.81399	2.81568	2.81735	2.81901	2.82067	2.82231	2.82394	2.82557	2.82718	2.82879	2.83038
22.	2.83038	2.83197	2.83355	2.83511	2.83667	2.83822	2.83976	2.84130	2.84282	2.84434	2.84584
23.	2.84584	2.84734	2.84883	2.85031	2.85178	2.85325	2.85471	2.85616	2.85760	2.85903	2.86046
24.	2.86046	2.86188	2.86329	2.86469	2.86609	2.86747	2.86886	2.87023	2.87160	2.87296	2.87431
25.	2.87431	2.87566	2.87699	2.87833	2.87965	2.88097	2.88228	2.88359	2.88489	2.88618	2.88747
26.	2.88747	2.88875	2.89002	2.89129	2.89255	2.89381	2.89506	2.89630	2.89754	2.89877	2.89999
27.	2.89999	2.90121	2.90243	2.90364	2.90484	2.90604	2.90723	2.90841	2.90959	2.91077	2.91194
28.	2.91194	2.91310	2.91426	2.91542	2.91656	2.91771	2.91885	2.91998	2.92111	2.92223	2.92335
29.	2.92335	2.92446	2.92557	2.92668	2.92777	2.92887	2.92996	2.93104	2.93212	2.93320	2.93427

## Appendix F (continued)

## Tabulation of:

- a. Specific Heat at Constant Pressure,  
 $C_p$  (Btu 1 lb<sup>o</sup> R)
- b. The Ratio of Specific Heat at Constant Pressure  
to Specific Heat at Constant Volume
- c. The Gas Constant,  $R$ (ft lb/lb <sup>o</sup>R). The tabulation of  
the parameters is versus static temperature in <sup>o</sup>R  
and fuel-air ratio.

T	FAR	0.	0.0100	0.0200	0.0300	0.0400	0.0500	0.0600	0.0670
400.	CP	0.2393	0.2409	0.2424	0.2439	0.2454	0.2469	0.2483	0.2497
	GAMMA	1.4015	1.3980	1.3946	1.3914	1.3883	1.3853	1.3824	1.3796
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
500.	CP	0.2392	0.2413	0.2433	0.2452	0.2471	0.2490	0.2508	0.2526
	GAMMA	1.4017	1.3971	1.3928	1.3886	1.3846	1.3808	1.3771	1.3735
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
600.	CP	0.2400	0.2424	0.2447	0.2470	0.2493	0.2515	0.2537	0.2558
	GAMMA	1.3999	1.3946	1.3895	1.3847	1.3800	1.3756	1.3713	1.3672
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
700.	CP	0.2414	0.2441	0.2468	0.2493	0.2519	0.2544	0.2568	0.2592
	GAMMA	1.3966	1.3907	1.3851	1.3797	1.3746	1.3697	1.3651	1.3606
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
800.	CP	0.2434	0.2464	0.2492	0.2521	0.2549	0.2576	0.2603	0.2629
	GAMMA	1.3921	1.3858	1.3798	1.3740	1.3686	1.3634	1.3585	1.3538
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
900.	CP	0.2458	0.2490	0.2521	0.2552	0.2582	0.2611	0.2640	0.2668
	GAMMA	1.3867	1.3801	1.3738	1.3679	1.3622	1.3568	1.3517	1.3468
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1000.	CP	0.2486	0.2520	0.2553	0.2585	0.2617	0.2648	0.2678	0.2708
	GAMMA	1.3808	1.3740	1.3675	1.3614	1.3556	1.3501	1.3449	1.3399
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1100.	CP	0.2516	0.2551	0.2586	0.2620	0.2654	0.2686	0.2718	0.2750
	GAMMA	1.3746	1.3676	1.3610	1.3548	1.3490	1.3434	1.3381	1.3330
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1200.	CP	0.2547	0.2584	0.2621	0.2656	0.2691	0.2725	0.2759	0.2792
	GAMMA	1.3683	1.3612	1.3546	1.3483	1.3424	1.3368	1.3314	1.3263
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1300.	CP	0.2579	0.2618	0.2655	0.2693	0.2729	0.2765	0.2800	0.2834
	GAMMA	1.3621	1.3550	1.3483	1.3420	1.3361	1.3304	1.3250	1.3199
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593

T	FAR	O.	0.0100	0.0200	0.0300	0.0400	0.0500	0.0600	0.0670
1400.	CP	0.2610	0.2651	0.2690	0.2729	0.2767	0.2804	0.2840	0.2876
	GAMMA	1.3562	1.3490	1.3423	1.3360	1.3300	1.3243	1.3190	1.3138
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1500.	CP	0.2641	0.2683	0.2724	0.2764	0.2803	0.2842	0.2880	0.2917
	GAMMA	1.3506	1.3434	1.3367	1.3303	1.3243	1.3186	1.3132	1.3081
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1600.	CP	0.2671	0.2714	0.2756	0.2798	0.2839	0.2879	0.2918	0.2956
	GAMMA	1.3454	1.3381	1.3314	1.3250	1.3190	1.3133	1.3079	1.3027
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1700.	CP	0.2699	0.2744	0.2787	0.2830	0.2872	0.2914	0.2954	0.2994
	GAMMA	1.3405	1.3333	1.3265	1.3201	1.3140	1.3083	1.3029	1.2978
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1800.	CP	0.2725	0.2771	0.2817	0.2861	0.2904	0.2947	0.2989	0.3030
	GAMMA	1.3361	1.3288	1.3220	1.3155	1.3095	1.3038	1.2984	1.2932
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
1900.	CP	0.2750	0.2797	0.2844	0.2890	0.2935	0.2979	0.3022	0.3064
	GAMMA	1.3321	1.3248	1.3179	1.3114	1.3053	1.2996	1.2942	1.2890
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2000.	CP	0.2773	0.2822	0.2870	0.2917	0.2963	0.3008	0.3052	0.3096
	GAMMA	1.3285	1.3211	1.3142	1.3077	1.3016	1.2958	1.2904	1.2852
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2100.	CP	0.2794	0.2844	0.2893	0.2942	0.2989	0.3035	0.3081	0.3126
	GAMMA	1.3252	1.3178	1.3108	1.3043	1.2981	1.2923	1.2869	1.2817
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2200.	CP	0.2813	0.2865	0.2915	0.2965	0.3013	0.3061	0.3108	0.3154
	GAMMA	1.3222	1.3147	1.3077	1.3012	1.2950	1.2892	1.2837	1.2785
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2300.	CP	0.2831	0.2884	0.2936	0.2986	0.3036	0.3085	0.3133	0.3180
	GAMMA	1.3195	1.3120	1.3049	1.2983	1.2921	1.2863	1.2808	1.2756
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593

T	FAR	0.	0.0100	0.0200	0.0300	0.0400	0.0500	0.0600	0.0670
2400.	CP	0.2848	0.2902	0.2955	0.3006	0.3057	0.3107	0.3156	0.3204
	GAMMA	1.3171	1.3095	1.3024	1.2958	1.2895	1.2837	1.2782	1.2729
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2500.	CP	0.2863	0.2918	0.2972	0.3025	0.3077	0.3128	0.3178	0.3227
	GAMMA	1.3148	1.3072	1.3001	1.2934	1.2871	1.2813	1.2757	1.2705
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2600.	CP	0.2878	0.2934	0.2989	0.3043	0.3095	0.3147	0.3198	0.3248
	GAMMA	1.3128	1.3051	1.2979	1.2912	1.2849	1.2790	1.2735	1.2682
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2700.	CP	0.2891	0.2948	0.3004	0.3059	0.3113	0.3166	0.3218	0.3268
	GAMMA	1.3108	1.3031	1.2959	1.2892	1.2829	1.2770	1.2714	1.2661
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2800.	CP	0.2904	0.2962	0.3019	0.3075	0.3129	0.3183	0.3236	0.3287
	GAMMA	1.3091	1.3013	1.2941	1.2873	1.2810	1.2751	1.2695	1.2642
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
2900.	CP	0.2916	0.2975	0.3033	0.3089	0.3145	0.3199	0.3253	0.3305
	GAMMA	1.3074	1.2996	1.2923	1.2856	1.2792	1.2733	1.2677	1.2624
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3000.	CP	0.2928	0.2987	0.3046	0.3103	0.3160	0.3215	0.3269	0.3322
	GAMMA	1.3058	1.2980	1.2907	1.2839	1.2776	1.2716	1.2660	1.2607
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3100.	CP	0.2939	0.2999	0.3058	0.3117	0.3174	0.3229	0.3284	0.3338
	GAMMA	1.3043	1.2965	1.2892	1.2824	1.2760	1.2700	1.2644	1.2591
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3200.	CP	0.2949	0.3010	0.3070	0.3129	0.3187	0.3243	0.3299	0.3353
	GAMMA	1.3029	1.2950	1.2877	1.2809	1.2746	1.2686	1.2630	1.2577
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3300.	CP	0.2959	0.3021	0.3081	0.3141	0.3199	0.3256	0.3312	0.3367
	GAMMA	1.3016	1.2937	1.2864	1.2796	1.2732	1.2672	1.2616	1.2563
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593

T	FAR	0.	0.0100	0.0200	0.0300	0.0400	0.0500	0.0600	0.0670
3400.	CP	0.2968	0.3030	0.3092	0.3152	0.3210	0.3268	0.3325	0.3380
	GAMMA	1.3004	1.2925	1.2852	1.2784	1.2720	1.2660	1.2604	1.2551
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3500.	CP	0.2976	0.3039	0.3101	0.3162	0.3221	0.3279	0.3336	0.3392
	GAMMA	1.2993	1.2914	1.2841	1.2772	1.2708	1.2649	1.2593	1.2540
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3600.	CP	0.2984	0.3048	0.3110	0.3171	0.3230	0.3289	0.3347	0.3403
	GAMMA	1.2983	1.2904	1.2830	1.2762	1.2698	1.2638	1.2582	1.2529
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3700.	CP	0.2991	0.3055	0.3118	0.3179	0.3239	0.3298	0.3356	0.3413
	GAMMA	1.2973	1.2894	1.2821	1.2753	1.2689	1.2629	1.2573	1.2520
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3800.	CP	0.2998	0.3062	0.3125	0.3187	0.3248	0.3307	0.3365	0.3422
	GAMMA	1.2965	1.2886	1.2812	1.2744	1.2680	1.2620	1.2564	1.2511
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
3900.	CP	0.3005	0.3070	0.3133	0.3195	0.3256	0.3315	0.3374	0.3431
	GAMMA	1.2956	1.2877	1.2804	1.2735	1.2672	1.2612	1.2556	1.2503
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
4000.	CP	0.3012	0.3077	0.3141	0.3203	0.3264	0.3324	0.3383	0.3441
	GAMMA	1.2946	1.2868	1.2795	1.2726	1.2663	1.2603	1.2547	1.2495
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
4100.	CP	0.3012	0.3077	0.3141	0.3203	0.3264	0.3324	0.3383	0.3441
	GAMMA	1.2946	1.2868	1.2795	1.2726	1.2663	1.2603	1.2547	1.2495
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
4200.	CP	0.3012	0.3077	0.3141	0.3203	0.3264	0.3324	0.3383	0.3441
	GAMMA	1.2946	1.2868	1.2795	1.2726	1.2663	1.2603	1.2547	1.2495
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593
4300.	CP	0.3012	0.3077	0.3141	0.3203	0.3264	0.3324	0.3383	0.3441
	GAMMA	1.2946	1.2868	1.2795	1.2726	1.2663	1.2603	1.2547	1.2495
	R	53.3490	53.3662	53.3831	53.3997	53.4159	53.4318	53.4474	53.4593