

12 **LEVEL** III

AD-E430371

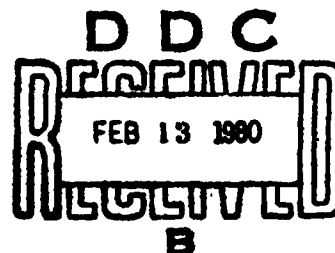
AD

MEMORANDUM REPORT ARBRL-MR-02975

AIR BLAST TABLES FOR SPHERICAL 50/50
PENTOLITE CHARGES AT SIDE-ON
AND NORMAL INCIDENCE

Bernard Soroka

December 1979



US ARMY ARMAMENT RESEARCH AND DEVELOPMENT COMMAND
BALLISTIC RESEARCH LABORATORY
ABERDEEN PROVING GROUND, MARYLAND

Approved for public release; distribution unlimited.

DDC FILE COPY

80 2 4 017

Destroy this report when it is no longer needed.
Do not return it to the originator.

Secondary distribution of this report by originating
or sponsoring activity is prohibited.

Additional copies of this report may be obtained
from the National Technical Information Service,
U.S. Department of Commerce, Springfield, Virginia
22151.

The findings in this report are not to be construed as
an official Department of the Army position, unless
so designated by other authorized documents.

*The use of trade names or manufacturers' names in this report
does not constitute indorsement of any commercial product.*

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER MEMORANDUM REPORT ARBRL-MR-02975	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) AIR BLAST TABLES FOR SPHERICAL 50/50 PENTOLITE CHARGES AT SIDE-ON AND NORMAL INCIDENCE	5. TYPE OF REPORT & PERIOD COVERED Final rept.	
7. AUTHOR(s) Bernard Soroka	6. PERFORMING ORG. REPORT NUMBER	
9. PERFORMING ORGANIZATION NAME AND ADDRESS US Army Ballistic Research Laboratory ATTN: DRDAR-BLV Aberdeen Proving Ground, MD 21005	8. CONTRACT OR GRANT NUMBER(s)	
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Armament Research & Development Command US Army Ballistic Research Laboratory ATTN: DRDAR-BL Aberdeen Proving Ground, MD 21005	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 1L162603AH18	
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) 1281	12. REPORT DATE 11 DEC 1979	
	13. NUMBER OF PAGES 81	
	15. SECURITY CLASS. (of this report) Unclassified	
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE	
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited. 18 SR1E		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 19 AD-542781		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Blast Impulse Blast Tables Duration Pentolite Time of Arrival Pressure Z		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Free-air blast parameters (peak pressure, positive impulse and positive duration) from the detonation of spherical 50/50 pentolite charges fired at sea level conditions are given as derived from interpolated computer outputs of data given in BRL Report No. 1092. Data is provided to give direct readouts of values and eliminate the necessity of making calculations for a given test in the field within the limits of the tables and values available.		

TABLE OF CONTENTS

	Page
I. INTRODUCTION.	5
II. EXPLOSIVE FACTOR.	5
III. CONCLUSION.	6
TABLE A - Air Blast Tables - Metric Units	7
TABLE B - Air Blast Tables - English Units.	44
TABLE OF SYMBOLS	77
LIST OF RANGES.	78
DISTRIBUTION LIST	79

ACCESSION for		
NTIS	White Section	☒
DDC	Bolt Section	☐
UNANNOUNCED		☐
JUSTIFICATION		
BY		
DISTRIBUTION/AVAILABILITY CODES		
Dist.	AvAIL	and/or SPECIAL
A		

I. INTRODUCTION

BRL Report 1092 has proven to be extremely useful for investigators using air blast parameters from spherical 50/50 pentolite charges detonated in free air. However, having been assigned various projects involving these types of charges, this author found it necessary to make constant calculations for specific distances not given in BRL Report 1092. To avoid the need for repetitive tedious calculations, a computer code was devised which, using linear interpolation of available data, produced a multiplicity of direct reading tables eliminating the need of further calculations.

Originally, these tables were made for use by the author. However, numerous requests for these have been received both locally and throughout the defense community so that it was decided to incorporate them into a formal report.

II. EXPLOSIVE FACTOR

These tables can be applied as approximations for use with other explosives. If the explosive factor for the desired explosive in relation to pentolite is known, then the weight of the explosive used times its explosive factor gives the equivalent weight of 50/50 pentolite for use with the tables.

The following table² lists some of the more commonly employed military explosives and their appropriate explosive factors.

The second column of the table gives the weight of pentolite equivalent to one kilogram of the explosive. For example, one kilogram of H-6 explosive will provide blast pressure and impulse equal to 1.17 kilograms of pentolite. This data is for free air blast conditions, (i.e., no ground reflected shock).

¹JMEM Air-to-Surface Weapons Characteristics, FM-101-50-20, page 1-111 (CONFIDENTIAL)

EXPLOSIVE FACTOR TABLE

Comparative Air Blast of Bare Explosives

<u>Explosives</u>	<u>Equivalent Weight</u>
Comp B	1.02
H-6	1.17
HBX-1	1.08
HTA-4	1.10
Octol	0.96
Pentolite	1.00
Picratol	0.83
TNT	0.90
Tritonal	1.11
Minol II	1.01
Nitroglycerin	1.20

III. CONCLUSION

These tables have proven very useful to the author and many others in eliminating the need for preliminary calculations for each blast test. This is especially important in field work where a minimum of calculations is desired.

When used with 50/50 pentolite charges on which the tables are based, the tables are an extremely useful tool.

TABLE A
Air Blast Tables - Metric Units

TABLE A. AIR BLAST TABLES-METRIC UNITS

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.00600					145097		
.00625					135774		
.00650					126448		
.00675					117127		
.00700					107799		
.00725					98479		
.00750					92032		
.00775	78316				87981		
.00800	75277				84474		
.00825	72443				80967		.001
.00850	69796				77460		.001
.00875	67314				73953		.001
.00900	64990				70446		.001
.00925	62804				66938		.001
.00950	60759				63431		.001
.00975	58831				59924		.002
.01000	57014				56417		.002
.01025	55292				52910		.002
.01050	53667				49403		.002
.01075	52125				45896		.002
.01100	50658				42658		.002
.01125	49265				40281		.003
.01150	47939				39097		.003
.01175	46678				37914		.003
.01200	45473				36730		.003
.01225	44333				35547		.004
.01250	43239				34363		.004
.01275	42195				33180		.004
.01300	41192				31997		.004
.01325	40230				30814		.004
.01350	39311				29630		.005
.01375	38427				28447		.005
.01400	37580				27263		.005
.01425	36769				26080		.005
.01450	35987				24896		.006
.01475	35234				23756		.006
.01500	34510				23044		.006
.01525	33813				22501		.006
.01550	33140				21959		.006
.01575	32490				21416		.007

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION OTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION LTR	TIME OF ARRIVAL T
.01600	31862				20874		.007
.01625	31254				20331		.007
.01650	30666				19789		.008
.01675	30102				19246		.008
.01700	29557				18703		.008
.01725	29030				18161		.008
.01750	28516				17618		.009
.01775	28017				17075		.009
.01800	27536				16533		.009
.01825	27071				15990		.009
.01850	26617				15484		.010
.01875	26174				15153		.010
.01900	25750				14858		.010
.01925	25334				14563		.011
.01950	24931				14268		.011
.01975	24542				13973		.011
.02000	24162				13678		.011
.02025	23791				13382		.011
.02050	23430				13086		.012
.02075	23080				12791		.012
.02100	22736				12496		.012
.02125	22402				12201		.013
.02150	22078				11906		.013
.02175	21761				11611		.013
.02200	21453				11315		.014
.02225	21152				11065		.014
.02250	20858				10864		.014
.02275	20572				10663		.014
.02300	20292				10504		.015
.02325	20022				10323		.015
.02350	19752				10143		.015
.02375	19491				9963		.016
.02400	19236				9783		.016
.02425	18989				9603		.017
.02450	18743				9423		.017
.02475	18505				9243		.017
.02500	18275				9063		.017
.02525	18048				8883		.018
.02550	17824				8703		.018
.02575	17604				8525		.018

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.02600	17389				8369		.019
.02625	17182				8250		.019
.02650	16976				8131		.019
.02675	16777				8013		.020
.02700	16580				7895		.020
.02725	16388				7776		.020
.02750	16200				7658		.021
.02775	16014				7540		.021
.02800	15830				7422		.021
.02825	15653				7303		.022
.02850	15477				7185		.022
.02875	15305				7067		.023
.02900	15136				6948		.023
.02925	14971				6830		.023
.02950	14810				6715		.023
.02975	14650				6615		.024
.03000	14494				6533		.024
.03025	14341				6451		.025
.03050	14188				6369		.025
.03075	14039				6286		.025
.03100	13895				6204		.026
.03125	13753				6122		.026
.03150	13613				6040		.027
.03175	13474				5957		.027
.03200	13337				5875		.027
.03225	13204				5793		.028
.03250	13074				5711		.028
.03275	12943				5628		.028
.03300	12813				5546		.029
.03325	12688				5464		.029
.03350	12567				5400		.030
.03375	12446				5340		.030
.03400	12324				5280		.031
.03425	12206				5220		.031
.03450	12091				5160		.031
.03475	11976				5101		.031
.03500	11862				5041		.032
.03525	11754				4981		.032
.03550	11645				4921		.033
.03575	11536				4862		.033

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.03600	11433				4802		.034
.03625	11330				4742		.034
.03650	11226				4682		.035
.03675	11125				4623		.035
.03700	11025				4566		.035
.03725	10926				4518		.036
.03750	10832				4473		.036
.03775	10737				4428		.037
.03800	10644				4383		.037
.03825	10550				4338		.037
.03850	10458				4293		.038
.03875	10369				4248		.038
.03900	10280				4203		.038
.03925	10192				4158		.039
.03950	10106				4113		.039
.03975	10020				4068		.040
.04000	9934				4023		.040
.04025	9850				3978		.041
.04050	9766				3933		.041
.04075	9684				3892		.042
.04100	9604				3855		.042
.04125	9525				3820		.043
.04150	9447				3786		.043
.04175	9370				3751		.043
.04200	9293				3716		.044
.04225	9217				3681		.044
.04250	9145				3646		.045
.04275	9073				3611		.045
.04300	9002				3576		.046
.04325	8931				3542		.046
.04350	8861				3507		.047
.04375	8792				3472		.047
.04400	8722				3437		.047
.04425	8652				3403		.048
.04450	8584				3370		.048
.04475	8519				3343		.049
.04500	8454				3315		.050
.04525	8389				3288		.050
.04550	8326				3260		.051
.04575	8263				3232		.051

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IF	DURA- TION DTR	TIME OF ARRIVAL T
.04600	8200				3205		.051
.04625	8138				3177		.052
.04650	8075				3150		.052
.04675	8014				3122		.053
.04700	7956				3094		.053
.04725	7898				3067		.054
.04750	7840				3039		.054
.04775	7782				3012		.055
.04800	7723				2984		.056
.04825	7666				2960		.056
.04850	7611				2938		.056
.04875	7555				2915		.057
.04900	7500				2893		.057
.04925	7447				2871		.058
.04950	7394				2848		.058
.04975	7340				2826		.059
.05000	7286				2804		.059
.05025	7233				2782		.060
.05050	7181				2760		.061
.05075	7130				2737		.061
.05100	7079				2715		.061
.05125	7029				2693		.062
.05150	6980				2670		.062
.05175	6931				2648		.063
.05200	6883				2629		.063
.05225	6836				2611		.064
.05250	6789				2593		.065
.05275	6742				2574		.065
.05300	6696				2556		.066
.05325	6650				2538		.066
.05350	6604				2519		.066
.05375	6559				2501		.067
.05400	6515				2483		.068
.05425	6471				2464		.068
.05450	6427				2446		.069
.05475	6384				2428		.069
.05500	6341				2410		.070
.05525	6299				2391		.071
.05550	6257				2374		.071
.05575	6215				2358		.071

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED Z DISTANCE	EXCESS PS PRESSURE	POSITIVE IS IMPULSE	DURA- DTS TION	EXCESS PR PRESSURE	POSITIVE IP IMPULSE	DURA- DTR TION	TIME OF T ARRIVAL
.05600	6174				2342		.072
.05625	6132				2327		.072
.05650	6092				2312		.073
.05675	6052				2297		.074
.05700	6012				2282		.074
.05725	5973				2266		.075
.05750	5934				2251		.076
.05775	5895				2236		.076
.05800	5857				2221		.076
.05825	5819				2206		.077
.05850	5782				2190		.077
.05875	5745				2175		.078
.05900	5708				2160		.079
.05925	5671				2145		.079
.05950	5635				2132		.080
.05975	5599				2119		.081
.06000	5563				2106		.081
.06025	5528				2093		.081
.06050	5493				2081		.082
.06075	5458				2066		.083
.06100	5424				2055		.083
.06125	5390				2042		.084
.06150	5356				2029		.085
.06175	5323				2016		.085
.06200	5289				2003		.086
.06225	5256				1990		.087
.06250	5224				1977		.087
.06275	5192				1964		.087
.06300	5160				1952		.088
.06325	5128				1941		.089
.06350	5097				1930		.089
.06375	5066				1919		.090
.06400	5035				1908		.091
.06425	5004				1897		.091
.06450	4973				1886		.092
.06475	4943				1875		.093
.06500	4913				1864		.093
.06525	4883				1853		.093
.06550	4854				1843		.094
.06575	4825				1832		.095

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.0660	4796				1821		.095
.0665	4738				1799		.097
.0670	4682				1779		.098
.0675	4627				1760		.099
.0680	4572				1742		.100
.0685	4519				1723		.102
.0690	4466				1704		.104
.0695	4414				1685		.104
.0700	4363				1667		.105
.0705	4313				1649		.107
.0710	4263				1632		.108
.0715	4214				1616		.110
.0720	4166				1599		.110
.0725	4119				1583		.112
.0730	4072				1566		.113
.0735	4047				1557		.114
.0740	3981				1534		.116
.0745	3938	157.46		28893	1521	.189	.117
.0750	3895	157.36		28599	1509	.191	.119
.0755	3852	157.27		28305	1497	.193	.120
.0760	3809	157.18		28010	1485	.194	.122
.0765	3766	157.08		27716	1473	.195	.123
.0770	3724	156.99		27422	1461	.196	.124
.0775	3684	156.90		27128	1449	.198	.126
.0780	3645	156.80		26834	1437	.200	.127
.0785	3605	156.71		26539	1425	.201	.129
.0790	3566	156.61		26245	1413	.202	.130
.0795	3527	156.52		25951	1401	.203	.131
.0800	3488	156.43		25657	1389	.206	.133
.0805	3452	156.33		25363	1377	.207	.134
.0810	3415	156.24		25068	1365	.208	.136
.0815	3379	156.15		24774	1353	.209	.137
.0820	3343	156.05		24480	1340	.210	.139
.0825	3307	155.96		24186	1328	.212	.140
.0830	3272	155.86		23892	1316	.214	.142
.0835	3238	155.77		23597	1304	.215	.143
.0840	3205	155.68		23303	1292	.216	.144
.0845	3171	155.58		23009	1280	.218	.146
.0850	3138	155.49		22715	1268	.220	.148
.0855	3105	155.40		22421	1256	.221	.149

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PF	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.0860	3073	155.30		22126	1244	.222	.151
.0865	3041	155.20		21832	1232	.223	.152
.0870	3011	155.11		21538	1220	.225	.154
.0875	2980	155.02		21244	1208	.226	.155
.0880	2949	154.92		20950	1196	.228	.157
.0885	2919	154.83		20660	1184	.229	.158
.0890	2889	154.71	.224	20393	1173	.231	.160
.0895	2860	154.56	.227	20187	1166	.233	.162
.0900	2832	154.41	.230	19982	1158	.234	.163
.0905	2803	154.26	.232	19776	1150	.236	.165
.0910	2775	154.10	.236	19570	1142	.238	.166
.0915	2746	153.96	.238	19364	1135	.240	.168
.0920	2719	153.81	.241	19158	1127	.241	.169
.0925	2692	153.66	.244	18952	1119	.243	.171
.0930	2666	153.50	.247	18746	1111	.245	.173
.0935	2640	153.35	.249	18540	1103	.246	.174
.0940	2613	153.20	.253	18334	1096	.249	.176
.0945	2587	153.05	.255	18129	1088	.250	.178
.0950	2562	152.89	.258	17923	1080	.251	.180
.0955	2537	152.74	.261	17717	1072	.253	.181
.0960	2513	152.59	.263	17511	1065	.255	.183
.0965	2488	152.44	.266	17305	1057	.256	.184
.0970	2464	152.28	.269	17099	1049	.258	.186
.0975	2440	152.13	.272	16893	1041	.260	.188
.0980	2416	151.98	.275	16687	1033	.262	.189
.0985	2393	151.83	.277	16481	1026	.263	.191
.0990	2371	151.68	.280	16275	1018	.266	.193
.0995	2348	151.52	.283	16070	1010	.267	.195
.1000	2325	151.37	.286	15864	1002	.269	.197
.1005	2303	151.22	.289	15658	994	.270	.198
.1010	2281	151.07	.292	15452	987	.272	.200
.1015	2260	150.92	.294	15246	979	.274	.202
.1020	2239	150.77	.297	15040	971	.276	.204
.1025	2218	150.62	.300	14834	963	.278	.206
.1030	2197	150.47	.303	14628	956	.279	.207
.1035	2176	150.31	.306	14426	948	.281	.209
.1040	2156	150.12	.308	14278	942	.282	.211
.1045	2136	149.93	.312	14144	937	.285	.213
.1050	2116	149.73	.315	14010	931	.287	.214
.1055	2097	149.53	.318	13877	926	.288	.216

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
.1060	2077	149.33	.321	13744	921	.290	.218
.1065	2058	149.14	.324	13611	915	.293	.220
.1070	2039	148.94	.327	13477	910	.295	.222
.1075	2021	148.74	.330	13344	905	.297	.223
.1080	2002	148.55	.334	13211	899	.298	.225
.1085	1984	148.35	.337	13078	894	.301	.227
.1090	1966	148.16	.339	12944	889	.303	.229
.1095	1948	147.96	.343	12811	883	.304	.231
.1100	1930	147.76	.345	12678	878	.306	.233
.1105	1913	147.57	.348	12544	872	.309	.235
.1110	1896	147.37	.352	12411	867	.311	.237
.1115	1879	147.17	.355	12278	862	.313	.239
.1120	1862	146.97	.358	12145	856	.314	.240
.1125	1845	146.77	.361	12011	851	.317	.242
.1130	1829	146.58	.365	11878	846	.319	.244
.1135	1813	146.38	.367	11745	840	.320	.247
.1140	1797	146.19	.370	11612	835	.322	.249
.1145	1781	145.99	.374	11478	830	.325	.250
.1150	1765	145.79	.376	11345	824	.326	.252
.1155	1749	145.60	.379	11212	819	.328	.254
.1160	1734	145.40	.383	11079	814	.330	.256
.1165	1719	145.20	.386	10945	808	.333	.259
.1170	1704	145.01	.389	10812	803	.335	.260
.1175	1689	144.81	.392	10679	798	.336	.262
.1180	1675	144.61	.396	10546	792	.338	.264
.1185	1660	144.42	.396	10424	787	.341	.267
.1190	1646	144.23	.401	10325	783	.343	.269
.1195	1632	144.05	.405	10231	779	.345	.270
.1200	1618	143.86	.408	10137	775	.348	.273
.1205	1604	143.68	.412	10042	771	.349	.275
.1210	1590	143.50	.415	9948	768	.351	.277
.1215	1576	143.31	.419	9854	764	.353	.279
.1220	1563	143.12	.422	9760	760	.356	.281
.1225	1550	142.93	.426	9665	756	.358	.283
.1230	1537	142.75	.429	9571	752	.360	.285
.1235	1524	142.56	.433	9477	748	.363	.287
.1240	1511	142.38	.435	9382	744	.365	.289
.1245	1498	142.19	.438	9288	740	.367	.291
.1250	1486	142.01	.442	9194	736	.370	.293
.1255	1474	141.83	.445	9099	732	.372	.296

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.1260	1462	141.64	.449	9005	728	.374	.298
.1265	1449	141.46	.452	8911	725	.377	.300
.1270	1437	141.26	.456	8816	721	.379	.302
.1275	1425	141.08	.459	8722	717	.381	.304
.1280	1414	140.89	.463	8628	713	.382	.307
.1285	1402	140.71	.466	8533	709	.385	.308
.1290	1391	140.53	.469	8439	705	.387	.311
.1295	1379	140.34	.472	8345	701	.389	.313
.1300	1368	140.16	.475	8251	697	.392	.315
.1305	1356	139.97	.479	8156	693	.394	.318
.1310	1346	139.79	.482	8062	689	.396	.320
.1315	1335	139.60	.486	7968	686	.399	.322
.1320	1324	139.42	.489	7873	682	.401	.324
.1325	1313	139.23	.493	7779	678	.403	.327
.1330	1302	139.04	.496	7685	674	.406	.329
.1335	1292	138.87	.500	7610	671	.408	.331
.1340	1282	138.70	.503	7542	668	.410	.334
.1345	1272	138.53	.506	7476	665	.412	.336
.1350	1262	138.36	.509	7410	662	.415	.338
.1355	1251	138.19	.513	7343	659	.417	.341
.1360	1241	138.02	.516	7277	656	.419	.342
.1365	1232	137.85	.519	7211	653	.422	.345
.1370	1222	137.68	.523	7144	650	.424	.347
.1375	1212	137.51	.526	7078	647	.426	.350
.1380	1203	137.34	.530	7012	644	.430	.352
.1385	1193	137.18	.533	6945	641	.432	.354
.1390	1184	137.01	.536	6879	638	.435	.357
.1395	1175	136.84	.539	6813	635	.437	.359
.1400	1166	136.67	.543	6746	632	.439	.362
.1405	1157	136.49	.546	6680	629	.442	.364
.1410	1148	136.32	.550	6613	626	.444	.366
.1415	1139	136.16	.553	6547	623	.446	.369
.1420	1130	135.99	.557	6481	620	.449	.372
.1425	1121	135.82	.559	6414	616	.451	.374
.1430	1113	135.65	.562	6348	613	.453	.376
.1435	1104	135.48	.566	6282	612	.456	.379
.1440	1096	135.31	.569	6215	609	.459	.381
.1445	1087	135.14	.573	6149	606	.462	.384
.1450	1079	134.97	.576	6083	603	.464	.386
.1455	1071	134.80	.580	6016	600	.466	.388

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.1460	1063	134.63	.583	5950	597	.465	.391
.1465	1055	134.46	.587	5884	594	.471	.394
.1470	1047	134.29	.589	5817	591	.473	.396
.1475	1039	134.13	.592	5751	588	.476	.398
.1480	1031	133.95	.596	5690	585	.478	.401
.1485	1024	133.77	.599	5640	583	.481	.404
.1490	1017	133.58	.603	5595	581	.484	.406
.1495	1010	133.39	.606	5550	578	.486	.409
.1500	1002	133.20	.610	5506	576	.489	.412
.1505	995	133.01	.613	5461	574	.491	.414
.1510	988	132.83	.617	5416	571	.494	.416
.1515	981	132.64	.620	5371	569	.497	.419
.1520	973	132.45	.624	5327	567	.499	.421
.1525	966	132.26	.627	5282	564	.501	.424
.1530	959	132.07	.631	5237	562	.505	.427
.1535	952	131.89	.634	5192	560	.507	.429
.1540	945	131.70	.638	5147	558	.510	.432
.1545	937	131.51	.641	5103	555	.512	.435
.1550	930	131.33	.645	5058	553	.515	.437
.1555	923	131.13	.648	5013	551	.518	.440
.1560	917	130.95	.652	4968	548	.520	.443
.1565	911	130.77	.655	4923	546	.523	.445
.1570	904	130.57	.660	4879	544	.525	.446
.1575	898	130.39	.663	4834	542	.528	.451
.1580	892	130.20	.667	4789	539	.531	.453
.1585	886	130.01	.670	4744	537	.533	.456
.1590	879	129.82	.674	4699	535	.536	.459
.1595	873	129.64	.677	4655	532	.538	.462
.1600	867	129.45	.681	4610	530	.542	.464
.1605	861	129.26	.684	4565	526	.544	.467
.1610	854	129.08	.688	4520	525	.546	.470
.1615	848	128.89	.691	4475	523	.549	.472
.1620	842	128.70	.695	4431	521	.552	.475
.1625	836	128.51	.698	4386	519	.555	.478
.1630	830	128.32	.701	4346	516	.557	.480
.1635	824	128.13	.704	4311	515	.560	.463
.1640	819	127.94	.708	4276	513	.563	.486
.1645	813	127.75	.711	4242	511	.565	.489
.1650	808	127.56	.715	4208	509	.569	.492
.1655	803	127.36	.718	4173	507	.571	.495

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PP	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
.1660	797	127.17	.720	4139	505	.573	.497
.1665	792	126.98	.724	4105	504	.577	.500
.1670	786	126.79	.727	4070	502	.579	.503
.1675	781	126.60	.731	4036	500	.582	.506
.1680	775	126.41	.734	4002	498	.585	.509
.1685	770	126.22	.736	3967	496	.588	.512
.1690	764	126.03	.740	3933	494	.590	.514
.1695	759	125.83	.743	3899	492	.594	.517
.1700	754	125.64	.747	3865	491	.596	.520
.1705	749	125.45	.749	3830	489	.599	.523
.1710	744	125.26	.753	3796	487	.602	.526
.1715	739	125.07	.756	3762	485	.604	.529
.1720	734	124.88	.759	3727	483	.607	.532
.1725	729	124.69	.762	3693	481	.610	.535
.1730	725	124.50	.765	3659	480	.613	.538
.1735	720	124.30	.769	3624	478	.616	.541
.1740	715	124.11	.772	3590	476	.618	.544
.1745	710	123.92	.776	3556	474	.621	.547
.1750	706	123.73	.778	3521	472	.624	.550
.1755	701	123.54	.781	3487	470	.627	.553
.1760	696	123.35	.785	3453	469	.630	.556
.1765	691	123.16	.788	3418	467	.632	.559
.1770	686	122.96	.792	3384	465	.635	.561
.1775	682	122.77	.795	3352	463	.638	.564
.1780	677	122.58	.797	3324	461	.641	.566
.1785	673	122.40	.801	3299	460	.643	.571
.1790	669	122.21	.804	3274	458	.647	.574
.1795	665	122.03	.808	3250	457	.649	.577
.1800	661	121.84	.810	3225	455	.653	.580
.1805	656	121.66	.814	3201	454	.656	.583
.1810	652	121.47	.817	3176	452	.659	.586
.1815	648	121.29	.821	3151	451	.662	.590
.1820	644	121.11	.824	3127	449	.665	.592
.1825	640	120.92	.826	3102	448	.668	.595
.1830	636	120.74	.830	3078	446	.671	.599
.1835	631	120.55	.833	3053	445	.673	.601
.1840	627	120.37	.835	3028	443	.677	.605
.1845	623	120.18	.839	3004	442	.679	.606
.1850	619	120.00	.842	2979	440	.682	.611
.1855	615	119.81	.846	2955	439	.685	.614

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
.1860	612	119.63	.849	2930	437	.686	.617
.1865	608	119.45	.852	2905	436	.692	.620
.1870	604	119.26	.855	2881	434	.695	.623
.1875	600	119.08	.859	2856	433	.697	.627
.1880	597	118.89	.862	2832	431	.701	.629
.1885	593	118.71	.864	2807	430	.703	.632
.1890	589	118.52	.868	2782	428	.706	.636
.1895	586	118.34	.871	2758	427	.709	.638
.1900	582	118.15	.875	2733	425	.712	.642
.1905	578	117.97	.877	2708	424	.715	.645
.1910	575	117.78	.880	2684	422	.718	.648
.1915	571	117.60	.884	2659	421	.721	.651
.1920	567	117.42	.887	2635	419	.723	.654
.1925	564	117.23	.891	2611	418	.727	.657
.1930	561	117.06	.893	2583	417	.729	.660
.1935	557	116.88	.897	2575	416	.733	.664
.1940	554	116.70	.900	2557	414	.736	.667
.1945	551	116.53	.903	2539	413	.739	.671
.1950	548	116.35	.906	2520	412	.742	.675
.1955	544	116.17	.909	2502	411	.745	.678
.1960	541	116.00	.912	2484	409	.747	.682
.1965	538	115.82	.915	2466	408	.751	.685
.1970	535	115.64	.918	2448	407	.754	.688
.1975	531	115.47	.922	2429	406	.757	.691
.1980	528	115.29	.924	2411	404	.760	.695
.1985	525	115.12	.928	2393	403	.762	.699
.1990	521	114.94	.931	2375	402	.766	.702
.1995	518	114.76	.934	2357	401	.768	.706
.2000	515	114.59	.937	2339	399	.771	.709
.2005	512	114.41	.940	2320	398	.775	.713
.2010	509	114.23	.943	2302	397	.778	.716
.2015	507	114.06	.946	2284	396	.781	.719
.2020	504	113.89	.949	2266	394	.784	.723
.2025	501	113.71	.953	2248	393	.786	.726
.2030	498	113.54	.955	2229	392	.790	.730
.2035	495	113.36	.959	2211	391	.792	.733
.2040	492	113.18	.962	2193	389	.795	.737
.2045	489	113.01	.965	2175	388	.799	.741
.2050	486	112.83	.968	2157	387	.802	.744
.2055	483	112.65	.971	2139	386	.805	.747

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PP	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.2060	481	112.46	.974	2120	364	.808	.750
.2065	478	112.30	.977	2102	363	.810	.754
.2070	475	112.13	.980	2084	362	.814	.757
.2075	472	111.96	.984	2069	361	.817	.761
.2080	470	111.79	.986	2055	360	.820	.765
.2085	468	111.62	.990	2041	379	.823	.768
.2090	465	111.45	.992	2028	378	.826	.772
.2095	463	111.29	.995	2014	377	.829	.775
.2100	461	111.12	.999	2000	375	.832	.779
.2105	458	110.96	1.002	1987	374	.836	.782
.2110	456	110.79	1.004	1973	373	.839	.786
.2115	454	110.62	1.008	1959	372	.841	.790
.2120	451	110.46	1.010	1946	371	.845	.793
.2125	449	110.29	1.014	1932	370	.848	.797
.2130	447	110.12	1.016	1918	369	.851	.800
.2135	444	109.95	1.019	1905	366	.854	.804
.2140	442	109.79	1.023	1891	367	.857	.807
.2145	440	109.62	1.026	1877	366	.860	.811
.2150	437	109.46	1.028	1864	365	.863	.815
.2155	435	109.29	1.032	1850	364	.867	.818
.2160	432	109.12	1.034	1836	363	.870	.822
.2165	430	108.95	1.037	1823	362	.872	.825
.2170	427	108.79	1.040	1809	361	.876	.829
.2175	425	108.62	1.043	1795	360	.879	.833
.2180	422	108.46	1.047	1782	359	.882	.837
.2185	420	108.29	1.049	1768	358	.885	.841
.2190	417	108.12	1.052	1754	357	.888	.844
.2195	415	107.96	1.055	1741	355	.891	.848
.2200	412	107.79	1.058	1727	354	.894	.851
.2205	410	107.62	1.062	1713	353	.898	.855
.2210	407	107.46	1.065	1700	352	.901	.859
.2215	405	107.29	1.067	1686	351	.903	.862
.2220	402	107.13	1.071	1673	350	.907	.867
.2225	400	106.97	1.073	1662	349	.910	.870
.2230	398	106.81	1.076	1652	348	.913	.874
.2235	396	106.65	1.079	1643	348	.916	.877
.2240	394	106.50	1.082	1633	347	.919	.881
.2245	392	106.34	1.085	1623	346	.923	.883
.2250	390	106.18	1.088	1613	345	.926	.886
.2255	388	106.02	1.091	1603	344	.929	.889

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.2260	386	105.87	1.094	1593	343	.932	.896
.2265	384	105.71	1.097	1583	342	.936	.900
.2270	382	105.55	1.099	1573	341	.938	.904
.2275	380	105.39	1.103	1563	340	.941	.908
.2280	377	105.24	1.105	1553	339	.945	.912
.2285	375	105.08	1.108	1543	339	.948	.915
.2290	373	104.92	1.111	1534	338	.951	.919
.2295	371	104.76	1.114	1524	337	.954	.923
.2300	370	104.61	1.117	1514	336	.957	.927
.2305	368	104.45	1.120	1504	335	.961	.931
.2310	366	104.29	1.122	1494	334	.963	.935
.2315	364	104.13	1.125	1484	333	.967	.939
.2320	362	103.98	1.128	1474	332	.970	.942
.2325	360	103.82	1.131	1464	331	.974	.946
.2330	359	103.66	1.134	1454	331	.976	.950
.2335	357	103.51	1.137	1444	330	.979	.954
.2340	355	103.35	1.140	1434	329	.983	.958
.2345	353	103.19	1.142	1425	328	.986	.962
.2350	351	103.04	1.146	1415	327	.988	.966
.2355	349	102.87	1.148	1405	326	.992	.970
.2360	348	102.71	1.152	1395	325	.995	.974
.2365	346	102.56	1.154	1385	324	.999	.977
.2370	344	102.41	1.157	1376	323	1.001	.982
.2375	342	102.27	1.160	1367	323	1.005	.986
.2380	341	102.13	1.163	1359	322	1.008	.990
.2385	339	101.98	1.166	1351	321	1.012	.994
.2390	337	101.84	1.169	1343	320	1.015	.998
.2395	336	101.69	1.172	1334	320	1.017	1.002
.2400	334	101.55	1.174	1326	319	1.021	1.006
.2405	332	101.41	1.177	1318	318	1.024	1.010
.2410	331	101.27	1.180	1310	317	1.028	1.014
.2415	329	101.13	1.182	1301	316	1.030	1.017
.2420	328	100.98	1.186	1293	316	1.033	1.021
.2425	326	100.84	1.188	1285	315	1.037	1.025
.2430	324	100.69	1.191	1277	314	1.040	1.029
.2435	323	100.55	1.194	1268	313	1.043	1.033
.2440	321	100.41	1.197	1260	313	1.046	1.037
.2445	319	100.27	1.199	1252	312	1.050	1.042
.2450	318	100.12	1.203	1243	311	1.053	1.046
.2455	316	99.98	1.205	1235	310	1.057	1.050

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.2460	315	99.84	1.208	1227	309	1.059	1.054
.2465	313	99.70	1.211	1219	309	1.062	1.056
.2470	312	99.56	1.213	1210	308	1.066	1.062
.2475	310	99.41	1.216	1202	307	1.069	1.067
.2480	309	99.27	1.219	1194	306	1.072	1.071
.2485	307	99.12	1.222	1186	306	1.075	1.074
.2490	306	98.98	1.225	1177	305	1.078	1.079
.2495	305	98.84	1.228	1169	304	1.082	1.082
.2500	303	98.70	1.231	1161	303	1.085	1.087
.2505	302	98.55	1.233	1153	303	1.088	1.091
.2510	300	98.41	1.236	1144	302	1.091	1.095
.2515	299	98.27	1.239	1136	301	1.095	1.099
.2520	297	98.13	1.242	1129	300	1.098	1.104
.2525	296	98.00	1.245	1122	300	1.101	1.108
.2530	295	97.86	1.248	1116	299	1.104	1.112
.2535	293	97.73	1.250	1109	298	1.107	1.116
.2540	292	97.59	1.252	1103	298	1.111	1.121
.2545	290	97.45	1.255	1096	297	1.114	1.125
.2550	289	97.32	1.258	1089	296	1.116	1.129
.2555	288	97.18	1.261	1083	296	1.120	1.133
.2560	286	97.04	1.263	1076	295	1.123	1.138
.2565	285	96.91	1.266	1069	294	1.127	1.142
.2570	284	96.77	1.269	1063	294	1.130	1.146
.2575	282	96.63	1.271	1056	293	1.132	1.150
.2580	281	96.50	1.274	1049	292	1.136	1.154
.2585	280	96.36	1.277	1043	292	1.139	1.159
.2590	278	96.23	1.280	1036	291	1.143	1.163
.2595	277	96.09	1.282	1029	290	1.145	1.168
.2600	276	95.95	1.285	1023	290	1.149	1.171
.2605	275	95.82	1.288	1016	289	1.152	1.176
.2610	273	95.68	1.290	1009	288	1.156	1.180
.2615	272	95.54	1.293	1003	287	1.158	1.185
.2620	271	95.41	1.296	996	287	1.161	1.189
.2625	270	95.27	1.298	989	286	1.165	1.194
.2630	269	95.13	1.301	983	285	1.168	1.198
.2635	267	95.00	1.304	976	285	1.172	1.202
.2640	266	94.86	1.307	969	284	1.174	1.208
.2645	265	94.73	1.309	963	283	1.177	1.211
.2650	264	94.59	1.312	956	283	1.181	1.215
.2655	263	94.45	1.315	950	282	1.184	1.219

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.2660	261	94.32	1.317	943	281	1.187	1.224
.2665	260	94.18	1.320	937	281	1.190	1.228
.2670	259	94.06	1.323	932	280	1.194	1.233
.2675	258	93.93	1.326	927	280	1.197	1.236
.2680	257	93.80	1.328	922	279	1.200	1.241
.2685	256	93.67	1.330	917	278	1.203	1.245
.2690	255	93.54	1.334	912	278	1.206	1.250
.2695	254	93.41	1.336	907	277	1.210	1.254
.2700	252	93.29	1.339	902	277	1.213	1.259
.2705	251	93.16	1.342	897	276	1.216	1.263
.2710	250	93.03	1.344	892	275	1.219	1.268
.2715	249	92.91	1.347	887	275	1.222	1.272
.2720	248	92.78	1.349	882	274	1.226	1.277
.2725	247	92.65	1.352	877	274	1.229	1.281
.2730	246	92.53	1.355	872	273	1.232	1.285
.2735	245	92.40	1.357	867	272	1.235	1.289
.2740	244	92.27	1.360	862	272	1.239	1.294
.2745	243	92.14	1.362	857	271	1.242	1.299
.2750	242	92.01	1.365	852	271	1.245	1.303
.2755	241	91.88	1.368	847	270	1.248	1.308
.2760	240	91.76	1.370	842	269	1.251	1.312
.2765	239	91.63	1.373	837	269	1.255	1.317
.2770	238	91.50	1.376	832	268	1.258	1.321
.2775	237	91.38	1.379	827	268	1.260	1.326
.2780	236	91.25	1.381	822	267	1.264	1.330
.2785	235	91.12	1.383	817	267	1.267	1.336
.2790	234	90.99	1.387	812	266	1.271	1.340
.2795	232	90.87	1.390	807	265	1.274	1.345
.2800	232	90.74	1.393	803	265	1.278	1.349
.2805	222	89.56	1.417	760	255	1.308	1.395
.2900	213	88.40	1.443	721	254	1.339	1.441
.2950	204	87.25	1.469	682	248	1.371	1.488
.3000	196	86.15	1.497	645	244	1.402	1.536
.3050	189	85.05	1.527	618	239	1.433	1.585
.3100	182	83.97	1.554	588	234	1.464	1.634
.3150	175	82.92	1.578	561	230	1.494	1.684
.3200	169	81.90	1.596	535	226	1.525	1.733
.3250	163	80.88	1.616	510	222	1.555	1.783
.3300	157	79.91	1.639	487	218	1.584	1.835
.3350	152	78.97	1.661	466	214	1.613	1.887

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
.340	147.4	78.02	1.684	445.11	210.82	1.642	1.939
.345	142.6	77.12	1.706	427.07	207.32	1.671	1.991
.350	138.1	76.22	1.728	409.91	203.89	1.700	2.044
.355	133.7	75.34	1.750	393.49	200.55	1.727	2.097
.360	129.6	74.49	1.773	378.31	197.36	1.755	2.151
.365	125.6	73.65	1.794	363.96	194.27	1.782	2.206
.370	121.8	72.83	1.815	349.86	191.22	1.808	2.261
.375	118.3	72.03	1.836	336.97	188.33	1.833	2.317
.380	114.9	71.25	1.857	324.31	185.49	1.858	2.372
.385	111.6	70.48	1.877	312.23	182.69	1.883	2.429
.390	108.5	69.73	1.898	302.16	180.04	1.907	2.485
.395	105.5	68.98	1.918	292.55	177.43	1.931	2.542
.400	102.7	68.26	1.938	283.05	174.89	1.954	2.599
.405	100.0	67.55	1.958	273.73	172.45	1.977	2.657
.410	97.4	66.86	1.977	264.50	170.06	1.999	2.715
.415	94.8	66.17	1.997	255.67	167.70	2.021	2.772
.420	92.5	65.50	2.015	248.30	165.47	2.042	2.831
.425	90.1	64.84	2.034	241.08	163.25	2.063	2.890
.430	87.8	64.19	2.053	234.06	161.09	2.082	2.948
.435	85.5	63.57	2.071	227.50	159.04	2.101	3.007
.440	83.2	62.95	2.089	221.01	157.01	2.120	3.066
.445	81.5	62.37	2.107	214.79	155.03	2.138	3.127
.450	79.9	61.81	2.125	208.65	153.10	2.154	3.189
.455	78.1	61.26	2.143	203.04	151.19	2.171	3.250
.460	76.3	60.70	2.161	197.49	149.31	2.188	3.311
.465	74.7	60.10	2.177	192.65	147.52	2.202	3.373
.470	73.0	59.51	2.195	187.65	145.73	2.217	3.434
.475	71.5	58.92	2.212	183.05	143.99	2.232	3.496
.480	70.0	58.37	2.229	178.28	142.35	2.245	3.558
.485	68.5	57.81	2.245	173.51	140.71	2.258	3.620
.490	67.1	57.30	2.261	169.20	139.12	2.271	3.683
.495	65.8	56.82	2.278	165.28	137.55	2.283	3.745
.500	64.5	56.34	2.294	161.50	136.01	2.294	3.808
.505	63.2	55.87	2.310	157.72	134.49	2.304	3.872
.510	62.0	55.39	2.325	153.95	133.04	2.315	3.935
.515	60.8	54.91	2.340	150.22	131.59	2.324	3.999
.520	59.6	54.45	2.355	146.66	130.17	2.333	4.062
.525	58.6	53.99	2.370	144.12	128.61	2.341	4.126
.530	57.5	53.54	2.385	141.40	127.45	2.350	4.190
.535	56.4	53.10	2.400	138.47	126.13	2.357	4.255

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.540	55.4	52.66	2.414	135.40	124.84	2.364	4.320
.545	54.4	52.23	2.428	132.23	123.57	2.371	4.365
.550	53.5	51.81	2.442	129.52	122.32	2.379	4.450
.555	52.6	51.38	2.457	127.08	121.08	2.388	4.517
.560	51.7	50.97	2.471	124.64	119.86	2.399	4.583
.565	50.8	50.57	2.485	122.25	118.69	2.409	4.648
.570	50.0	50.18	2.498	119.90	117.59	2.422	4.713
.575	49.2	49.80	2.511	117.54	116.44	2.435	4.778
.580	48.4	49.41	2.524	115.15	115.38	2.447	4.844
.585	47.6	49.03	2.538	112.74	114.28	2.459	4.911
.590	46.9	48.65	2.551	110.44	113.18	2.471	4.979
.595	46.1	48.29	2.564	108.60	112.14	2.483	5.045
.600	45.5	47.94	2.576	107.25	111.16	2.495	5.110
.605	44.8	47.58	2.588	105.84	110.18	2.506	5.176
.610	44.1	47.23	2.600	104.10	109.19	2.518	5.243
.615	43.4	46.88	2.613	102.61	108.20	2.528	5.311
.620	42.8	46.53	2.626	99.92	107.22	2.539	5.379
.625	42.2	46.20	2.637	98.39	106.31	2.549	5.445
.630	41.6	45.87	2.649	97.02	105.41	2.560	5.511
.635	41.0	45.55	2.661	95.65	104.52	2.570	5.577
.640	40.5	45.23	2.672	94.18	103.63	2.579	5.645
.645	39.9	44.91	2.684	92.61	102.73	2.588	5.715
.650	39.3	44.59	2.696	91.06	101.85	2.597	5.783
.655	38.8	44.29	2.707	89.53	101.02	2.605	5.851
.660	38.3	43.99	2.717	88.02	100.21	2.615	5.918
.665	37.8	43.69	2.729	86.51	99.41	2.623	5.985
.670	37.3	43.39	2.740	85.51	98.59	2.632	6.054
.675	36.8	43.09	2.751	84.62	97.76	2.640	6.123
.680	36.4	42.80	2.762	83.65	96.93	2.649	6.193
.685	35.9	42.52	2.772	82.46	96.14	2.656	6.261
.690	35.5	42.25	2.782	81.11	95.37	2.663	6.329
.695	35.0	41.97	2.792	79.65	94.61	2.670	6.396
.700	34.6	41.69	2.803	78.82	93.90	2.677	6.465
.705	34.2	41.42	2.813	77.94	93.23	2.684	6.536
.710	33.8	41.15	2.823	77.06	92.55	2.691	6.606
.715	33.4	40.88	2.834	76.03	91.84	2.697	6.676
.720	33.0	40.61	2.844	74.99	91.13	2.703	6.747
.725	32.6	40.35	2.854	73.96	90.44	2.708	6.817
.730	32.2	40.10	2.863	72.94	89.77	2.714	6.885
.735	31.9	39.85	2.873	71.94	89.12	2.719	6.953

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PF	POSITIVE IMPULSE IK	DURA- TION DTR	TIME OF ARRIVAL T
.7400	31.54	39.61	2.883	71.0	88.48		7.022
.7450	31.21	39.37	2.892	70.3	87.86		7.092
.7500	30.88	39.14	2.901	69.6	87.25		7.161
.7550	30.55	38.91	2.910	68.9	86.63		7.232
.7600	30.22	38.67	2.919	68.2	86.02		7.302
.7650	29.89	38.43	2.929	67.5	85.40		7.372
.7700	29.56	38.19	2.938	66.8	84.79		7.442
.7750	29.24	37.96	2.947	66.2	84.18		7.513
.7800	28.93	37.73	2.956	65.4	83.60		7.583
.7850	28.65	37.52	2.964	64.7	83.05		7.654
.7900	28.37	37.30	2.973	63.9	82.49		7.725
.7950	28.08	37.08	2.982	63.2	81.94		7.796
.8000	27.60	36.87	2.990	62.4	81.39		7.867
.8050	27.52	36.65	2.999	61.7	80.83		7.937
.8100	27.23	36.43	3.007	60.9	80.28		8.008
.8150	26.96	36.23	3.015	60.2	79.75		8.079
.8200	26.71	36.03	3.024	59.6	79.23		8.150
.8250	26.47	35.82	3.032	59.0	78.73		8.221
.8300	26.22	35.63	3.040	58.5	78.22		8.292
.8350	25.97	35.44	3.048	57.9	77.72		8.363
.8400	25.73	35.24	3.056	57.3	77.22		8.435
.8450	25.48	35.04	3.064	56.8	76.71		8.506
.8500	25.23	34.84	3.073	56.2	76.21		8.577
.8550	25.02	34.66	3.081	55.6	75.75		8.648
.8600	24.80	34.48	3.088	55.1	75.30		8.718
.8650	24.58	34.30	3.096	54.5	74.85		8.789
.8700	24.37	34.12	3.104	54.0	74.39		8.859
.8750	24.16	33.94	3.111	53.4	73.94		8.929
.8800	23.94	33.76	3.119	52.8	73.49		9.000
.8850	23.73	33.57	3.127	52.3	73.04		9.070
.8900	23.52	33.40	3.134	51.8	72.59		9.141
.8950	23.33	33.22	3.142	51.3	72.17		9.214
.9000	23.13	33.05	3.149	50.9	71.74		9.287
.9050	22.94	32.88	3.157	50.5	71.32		9.359
.9100	22.75	32.71	3.164	50.0	70.69		9.432
.9150	22.55	32.53	3.172	49.6	70.47		9.504
.9200	22.35	32.36	3.179	49.2	70.04		9.577
.9250	22.17	32.19	3.186	48.8	69.63		9.650
.9300	22.00	32.04	3.193	48.3	69.24		9.721
.9350	21.83	31.88	3.200	47.9	68.86		9.793

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.540	55.4	52.66	2.414	135.40	124.84	2.364	4.320
.545	54.4	52.23	2.428	132.33	123.57	2.371	4.365
.550	53.5	51.81	2.442	129.52	122.32	2.379	4.450
.555	52.6	51.38	2.457	127.08	121.08	2.388	4.517
.560	51.7	50.97	2.471	124.64	119.86	2.399	4.583
.565	50.8	50.57	2.485	122.25	118.69	2.409	4.646
.570	50.0	50.18	2.498	119.90	117.59	2.422	4.713
.575	49.2	49.80	2.511	117.54	116.49	2.435	4.778
.580	48.4	49.41	2.524	115.15	115.38	2.447	4.844
.585	47.6	49.03	2.538	112.74	114.28	2.459	4.911
.590	46.9	48.65	2.551	110.44	113.18	2.471	4.979
.595	46.1	48.29	2.564	108.60	112.14	2.483	5.045
.600	45.5	47.94	2.576	107.25	111.16	2.495	5.110
.605	44.8	47.58	2.588	105.64	110.18	2.506	5.176
.610	44.1	47.23	2.600	104.10	109.19	2.518	5.243
.615	43.4	46.88	2.613	102.61	108.20	2.528	5.311
.620	42.8	46.53	2.626	99.92	107.22	2.539	5.379
.625	42.2	46.20	2.637	98.39	106.31	2.549	5.445
.630	41.6	45.87	2.649	97.02	105.41	2.560	5.511
.635	41.0	45.55	2.661	95.65	104.52	2.570	5.577
.640	40.5	45.23	2.672	94.18	103.63	2.579	5.645
.645	39.9	44.91	2.684	92.61	102.73	2.588	5.715
.650	39.3	44.59	2.696	91.06	101.85	2.597	5.783
.655	38.8	44.29	2.707	89.53	101.02	2.605	5.851
.660	38.3	43.99	2.717	88.02	100.21	2.615	5.918
.665	37.8	43.69	2.729	86.51	99.41	2.623	5.985
.670	37.3	43.39	2.740	85.51	98.59	2.632	6.054
.675	36.8	43.09	2.751	84.62	97.76	2.640	6.123
.680	36.4	42.80	2.762	83.65	96.93	2.649	6.193
.685	35.9	42.52	2.772	82.46	96.14	2.656	6.261
.690	35.5	42.25	2.782	81.11	95.37	2.663	6.329
.695	35.0	41.97	2.792	79.65	94.61	2.670	6.396
.700	34.6	41.69	2.803	78.82	93.90	2.677	6.465
.705	34.2	41.42	2.813	77.94	93.23	2.684	6.536
.710	33.8	41.15	2.823	77.06	92.55	2.691	6.606
.715	33.4	40.88	2.834	76.03	91.64	2.697	6.676
.720	33.0	40.61	2.844	74.99	91.13	2.703	6.747
.725	32.6	40.35	2.854	73.96	90.44	2.708	6.817
.730	32.2	40.10	2.863	72.94	89.77	2.714	6.885
.735	31.9	39.85	2.873	71.94	89.12	2.719	6.953

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
.940	21.66	31.72	3.207	47.5	68.48		9.86
.945	21.49	31.57	3.214	47.1	68.10		9.93
.950	21.32	31.42	3.221	46.7	67.72		10.00
.955	21.16	31.26	3.228	46.2	67.34		10.08
.960	20.99	31.11	3.235	45.8	66.96		10.15
.965	20.83	30.96	3.242	45.4	66.60		10.22
.970	20.68	30.81	3.249	45.1	66.24		10.29
.975	20.53	30.66	3.256	44.7	65.88		10.36
.980	20.38	30.52	3.263	44.4	65.53		10.44
.985	20.22	30.37	3.270	44.1	65.17		10.51
							10.59
.990	20.07	30.22	3.277	43.7	64.82		10.66
.995	19.92	30.07	3.283	43.4	64.46		10.73
1.000	19.77	29.93	3.290	43.0	64.12		10.80
1.005	19.63	29.79	3.297	42.6	63.79		10.87
1.010	19.50	29.65	3.304	42.3	63.46		10.94
							11.01
1.015	19.36	29.52	3.311	41.9	63.13		11.09
1.020	19.22	29.38	3.317	41.5	62.80		11.16
1.025	19.08	29.25	3.323	41.1	62.47		11.23
1.030	18.95	29.11	3.330	40.8	62.14		11.31
1.035	18.81	28.96	3.337	40.4	61.81		11.38
							11.45
1.040	18.68	28.84	3.343	40.1	61.50		11.53
1.045	18.56	28.71	3.350	39.9	61.19		11.61
1.050	18.44	28.58	3.357	39.6	60.89		11.68
1.055	18.31	28.46	3.363	39.4	60.59		11.75
1.060	18.18	28.33	3.370	39.2	60.28		11.83
							11.90
1.065	18.06	28.20	3.377	38.9	59.98		11.97
1.070	17.94	28.07	3.383	38.7	59.67		12.05
1.075	17.82	27.95	3.389	38.4	59.37		12.12
1.080	17.71	27.83	3.396	38.2	59.09		12.19
1.085	17.59	27.71	3.402	37.9	58.81		12.26
							12.33
1.090	17.48	27.59	3.408	37.7	58.53		12.40
1.095	17.37	27.47	3.415	37.4	58.24		12.48
1.100	17.26	27.36	3.421	37.2	57.96		12.55
1.105	17.14	27.24	3.427	36.9	57.68		12.63
1.110	17.04	27.12	3.434	36.7	57.40		12.70
							12.76
1.115	16.93	27.01	3.440	36.4	57.14		12.83
1.120	16.83	26.89	3.447	36.2	56.88		12.90
1.125	16.73	26.78	3.453	36.0	56.61		12.97
1.130	16.63	26.67	3.460	35.7	56.36		13.04
1.135	16.53	26.56	3.465	35.5	56.09		13.11

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
1.140	16.43	26.45	3.472	35.3	55.83		12.77
1.145	16.33	26.33	3.478	35.1	55.57		12.84
1.150	16.23	26.23	3.485	34.8	54.94		12.91
1.155	16.13	26.12	3.491	34.6	54.12		12.99
1.160	16.04	26.02	3.498	34.4	53.26		13.07
1.165	15.95	25.91	3.504	34.1	52.41		13.14
1.170	15.86	25.81	3.510	33.9	51.56		13.21
1.175	15.77	25.70	3.517	33.6	50.70		13.28
1.180	15.67	25.59	3.523	33.4	49.85		13.35
1.185	15.58	25.49	3.530	33.2	49.35		13.43
1.190	15.49	25.39	3.536	33.0	49.60		13.51
1.195	15.41	25.29	3.542	32.8	49.98		13.58
1.200	15.32	25.19	3.549	32.7	50.35		13.66
1.205	15.23	25.09	3.555	32.5	50.73		13.73
1.210	15.14	24.99	3.561	32.3	51.11		13.80
1.215	15.05	24.89	3.568	32.1	51.49		13.88
1.220	14.97	24.79	3.573	32.0	51.80		13.96
1.225	14.89	24.70	3.580	31.8	51.76		14.03
1.230	14.81	24.60	3.586	31.5	51.54		14.10
1.235	14.73	24.51	3.593	31.3	51.33		14.17
1.240	14.65	24.42	3.599	31.1	51.11		14.24
1.245	14.57	24.32	3.606	30.9	50.89		14.31
1.250	14.49	24.23	3.612	30.7	50.67		14.39
1.255	14.42	24.13	3.618	30.5	50.45		14.47
1.260	14.34	24.05	3.625	30.3	50.24		14.54
1.265	14.26	23.96	3.631	30.2	50.04		14.61
1.270	14.19	23.86	3.638	30.0	49.84		14.69
1.275	14.12	23.77	3.644	29.9	49.64		14.76
1.280	14.04	23.68	3.651	29.7	49.43		14.84
1.285	13.97	23.59	3.658	29.6	49.23		14.92
1.290	13.89	23.51	3.664	29.4	49.03		14.99
1.295	13.82	23.42	3.670	29.3	48.83		15.07
1.300	13.75	23.33	3.676	29.1	48.63		15.14
1.305	13.68	23.24	3.681	29.0	48.44		15.22
1.310	13.61	23.16	3.686	28.8	48.24		15.29
1.315	13.55	23.08	3.692	28.6	48.05		15.37
1.320	13.48	23.00	3.696	28.5	47.86		15.45
1.325	13.41	22.91	3.702	28.3	47.66		15.52
1.330	13.34	22.83	3.708	28.1	47.47		15.59
1.335	13.28	22.75	3.713	28.0			15.66

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
1.340	13.22	22.67	3.718	27.8			15.73
1.345	13.16	22.59	3.723	27.7			15.80
1.350	13.09	22.51	3.728	27.6			15.88
1.355	13.03	22.43	3.733	27.4			15.95
1.360	12.96	22.35	3.739	27.3			16.02
1.365	12.90	22.27	3.743	27.1			16.10
1.370	12.84	22.19	3.749	27.0			16.17
1.375	12.78	22.12	3.755	26.9			16.24
1.380	12.72	22.04	3.762	26.7			16.32
1.385	12.66	21.97	3.768	26.6			16.40
1.390	12.60	21.90	3.774	26.5			16.47
1.395	12.55	21.82	3.780	26.4			16.55
1.400	12.49	21.74	3.787	26.2			16.62
1.405	12.43	21.67	3.792	26.1			16.70
1.410	12.38	21.60	3.797	26.0			16.77
1.415	12.32	21.52	3.802	25.8			16.85
1.420	12.26	21.44	3.805	25.7			16.93
1.425	12.21	21.37	3.810	25.6			17.01
1.430	12.15	21.30	3.813	25.5			17.08
1.435	12.10	21.23	3.818	25.4			17.16
1.440	12.04	21.16	3.822	25.2			17.23
1.445	11.99	21.09	3.826	25.1			17.30
1.450	11.94	21.02	3.830	25.0			17.38
1.455	11.88	20.95	3.834	24.9			17.45
1.460	11.83	20.88	3.838	24.8			17.53
1.465	11.78	20.81	3.843	24.7			17.60
1.470	11.73	20.75	3.846	24.6			17.67
1.475	11.68	20.68	3.851	24.5			17.74
1.480	11.62	20.61	3.855				17.81
1.485	11.57	20.55	3.859				17.89
1.490	11.53	20.48	3.864				17.97
1.495	11.48	20.41	3.868				18.04
1.500	11.43	20.34	3.872				18.12
1.505	11.38	20.28	3.876				18.19
1.510	11.33	20.22	3.881				18.27
1.515	11.28	20.15	3.884				18.35
1.520	11.24	20.09	3.890				18.42
1.525	11.19	20.02	3.896				18.50
1.530	11.15	19.96	3.901				18.58
1.535	11.10	19.90	3.908				18.65

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IF	DURA- TION DTR	TIME OF ARRIVAL T
1.540	11.06	19.64	3.914				18.73
1.545	11.01	19.78	3.920				18.80
1.550	10.97	19.71	3.926				18.88
1.555	10.93	19.65	3.932				18.96
1.560	10.88	19.59	3.935				19.07
1.565	10.83	19.53	3.940				19.16
1.570	10.79	19.47	3.944				19.27
1.575	10.75	19.41	3.948				19.37
1.580	10.70	19.35	3.952				19.47
1.585	10.66	19.29	3.957				19.58
1.590	10.62	19.23	3.962				19.67
1.595	10.58	19.17	3.967				19.73
1.600	10.55	19.12	3.972				19.78
1.605	10.51	19.07	3.978				19.81
1.610	10.47	19.02	3.984				19.86
1.615	10.43	18.97	3.990				19.90
1.620	10.40	18.91	3.996				19.95
1.625	10.36	18.87	4.002				19.99
1.630	10.32	18.81	4.007				20.04
1.635	10.28	18.76	4.011				20.10
1.640	10.24	18.69	4.016				20.19
1.645	10.20	18.64	4.021				20.27
1.650	10.15	18.57	4.025				20.36
1.655	10.12	18.52	4.029				20.44
1.660	10.08	18.45	4.033				20.52
1.665	10.03	18.39	4.038				20.60
1.670	9.99	18.34	4.043				20.68
1.675	9.96	18.29	4.047				20.76
1.680	9.92	18.24	4.051				20.84
1.685	9.88	18.18	4.055				20.91
1.690	9.85	18.13	4.060				20.98
1.695	9.81	18.08	4.063				21.06
1.700	9.78	18.03	4.066				21.13
1.705	9.75	17.98	4.072				21.20
1.710	9.72	17.94	4.075				21.26
1.715	9.69	17.90	4.079				21.32
1.720	9.66	17.86	4.081				21.38
1.725	9.63	17.82	4.084				21.44
1.730	9.61	17.78	4.088				21.50
1.735	9.58	17.74	4.091				21.56

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION CTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
1.740	9.55	17.70	4.095				21.62
1.745	9.52	17.66	4.098				21.68
1.750	9.48	17.61	4.104				21.77
1.755	9.44	17.55	4.112				21.66
1.760	9.40	17.48	4.120				21.96
1.765	9.36	17.42	4.126				22.06
1.770	9.31	17.36	4.136				22.16
1.775	9.27	17.29	4.144				22.25
1.780	9.24	17.24	4.149				22.34
1.785	9.21	17.19	4.152				22.42
1.790	9.17	17.15	4.157				22.49
1.795	9.14	17.10	4.162				22.57
1.800	9.11	17.06	4.165				22.64
1.805	9.08	17.01	4.170				22.72
1.810	9.05	16.97	4.174				22.79
1.815	9.02	16.92	4.178				22.87
1.820	9.00	16.88	4.182				22.95
1.825	8.97	16.83	4.187				23.02
1.830	8.93	16.79	4.190				23.09
1.835	8.90	16.75	4.194				23.17
1.840	8.88	16.71	4.198				23.24
1.845	8.85	16.66	4.202				23.32
1.850	8.82	16.62	4.206				23.39
1.855	8.79	16.57	4.209				23.47
1.860	8.76	16.53	4.212				23.55
1.865	8.73	16.49	4.216				23.62
1.870	8.70	16.45	4.219				23.70
1.875	8.68	16.40	4.222				23.77
1.880	8.65	16.36	4.225				23.85
1.885	8.62	16.31	4.229				23.93
1.890	8.59	16.27	4.232				24.00
1.895	8.57	16.23	4.234				24.08
1.900	8.54	16.19	4.238				24.15
1.905	8.51	16.15	4.241				24.23
1.910	8.49	16.11	4.245				24.30
1.915	8.46	16.07	4.248				24.36
1.920	8.43	16.03	4.250				24.46
1.925	8.41	15.99	4.254				24.53
1.930	8.38	15.95	4.260				24.60
1.935	8.36	15.91	4.267				24.68

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
1.940	8.33	15.87	4.273				24.75
1.945	8.31	15.83	4.279				24.83
1.950	8.28	15.79	4.286				24.91
1.955	8.25	15.75	4.292				24.98
1.960	8.22	15.71	4.297				25.06
1.965	8.17	15.67	4.301				25.13
1.970	8.10	15.63	4.303				25.21
1.975	8.02	15.59	4.304				25.29
1.980	7.95	15.56	4.307				25.37
1.985	7.86	15.52	4.309				25.44
1.990	7.81	15.48	4.311				25.52
1.995	7.73	15.44	4.314				25.59
2.000	7.71	15.40	4.316				25.66
2.005	7.72	15.37	4.319				25.73
2.010	7.74	15.34	4.322				25.80
2.015	7.76	15.31	4.326				25.87
2.020	7.79	15.27	4.331				25.94
2.025	7.81	15.24	4.334				26.00
2.030	7.82	15.21	4.338				26.07
2.035	7.84	15.18	4.341				26.13
2.040	7.86	15.15	4.345				26.20
2.045	7.84	15.11	4.349				26.29
2.050	7.82	15.07	4.354				26.36
2.055	7.79	15.02	4.359				26.46
2.060	7.76	14.98	4.364				26.55
2.065	7.74	14.94	4.369				26.64
2.070	7.71	14.90	4.373				26.72
2.075	7.69	14.86	4.378				26.80
2.080	7.66	14.82	4.383				26.89
2.085	7.64	14.79	4.386				26.96
2.090	7.62	14.76	4.391				27.04
2.095	7.60	14.72	4.395				27.12
2.100	7.58	14.68	4.399				27.19
2.105	7.56	14.65	4.403				27.27
2.110	7.54	14.62	4.407				27.35
2.115	7.52	14.58	4.411				27.42
2.120	7.49	14.55	4.415				27.50
2.125	7.47	14.52	4.419				27.57
2.130	7.46	14.49	4.423				27.64
2.135	7.44	14.46	4.427				27.72

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION CTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTP	TIME OF ARRIVAL T
2.140	7.41	14.42	4.431				27.79
2.145	7.39	14.39	4.435				27.87
2.150	7.38	14.36	4.440				27.95
2.155	7.35	14.33	4.444				28.02
2.160	7.33	14.29	4.448				28.10
2.165	7.31	14.26	4.453				28.18
2.170	7.29	14.23	4.456				28.25
2.175	7.27	14.20	4.460				28.33
2.180	7.25	14.17	4.464				28.41
2.185	7.23	14.13	4.468				28.49
2.190	7.21	14.10	4.471				28.56
2.195	7.19	14.07	4.474				28.64
2.200	7.18	14.04	4.477				28.71
2.205	7.16	14.01	4.481				28.79
2.210	7.14	13.98	4.484				28.87
2.215	7.12	13.95	4.487				28.94
2.220	7.10	13.92	4.490				29.02
2.225	7.08	13.89	4.493				29.09
2.230	7.07	13.85	4.497				29.17
2.235	7.05	13.82	4.499				29.24
2.240	7.03	13.79	4.502				29.32
2.245	7.01	13.76	4.506				29.40
2.250	6.99	13.74	4.509				29.47
2.255	6.97	13.70	4.513				29.55
2.260	6.95	13.67	4.516				29.62
2.265	6.94	13.65	4.520				29.70
2.270	6.92	13.62	4.524				29.77
2.275	6.90	13.58	4.526				29.85
2.280	6.88	13.56	4.532				29.93
2.285	6.86	13.53	4.536				30.00
2.290	6.85	13.50	4.540				30.08
2.295	6.83	13.47	4.544				30.16
2.300	6.81	13.44	4.546				30.23
2.305	6.80	13.41	4.548				30.31
2.310	6.78	13.39	4.550				30.39
2.315	6.76	13.35	4.552				30.47
2.320	6.75	13.33	4.555				30.54
2.325	6.73	13.30	4.557				30.62
2.330	6.71	13.27	4.559				30.70
2.335	6.69	13.24	4.563				30.77

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
2.340	6.68	13.22	4.567				30.85
2.345	6.66	13.19	4.571				30.93
2.350	6.64	13.16	4.575				31.01
2.355	6.63	13.13	4.579				31.08
2.360	6.61	13.11	4.582				31.16
2.365	6.59	13.08	4.587				31.23
2.370	6.58	13.05					31.31
2.375	6.56	13.03					31.39
2.380	6.55	13.00					31.46
2.385	6.53	12.98					31.54
2.390	6.52	12.95					31.61
2.395	6.50	12.92					31.68
2.400	6.49	12.90					31.76
2.405	6.47	12.88					31.84
2.410	6.45	12.85					31.92
2.415	6.44	12.82					31.99
2.420	6.42	12.79					32.07
2.425	6.41	12.77					32.15
2.430	6.39	12.74					32.22
2.435	6.38	12.71					32.30
2.440	6.36	12.69					32.37
2.445	6.36	12.68					32.41
2.450	6.36	12.68					32.42
2.455	6.35	12.67					32.42
2.460	6.35	12.67					32.43
2.465	6.35	12.66					32.44
2.470	6.35	12.66					32.45
2.475	6.34	12.66					32.46
2.480	6.34	12.66					32.47
2.485	6.34	12.65					32.48
2.490	6.34	12.65					32.49
2.495	6.34	12.65					32.50
2.500	6.34	12.64					32.51
2.505	6.34	12.64					32.51
2.510	6.34	12.64					32.52
2.515	6.33	12.64					32.53
2.520	6.33	12.63					32.55
2.525	6.33	12.63					32.56
2.530	6.33	12.63					32.57
2.535	6.32	12.62					32.58

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
2.540	6.32	12.62					32.59
2.545	6.32	12.62					32.60
2.550	6.32	12.62					32.60
2.555	6.32	12.62					32.61
2.560	6.31	12.61					32.62
2.565	6.31	12.61					32.63
2.570	6.31	12.61					32.64
2.575	6.31	12.60					32.65
2.580	6.31	12.60					32.66
2.585	6.31	12.60					32.67
2.590	6.31	12.60					32.68
2.595	6.30	12.59					32.69
2.600	6.30	12.59					32.69
2.605	6.30	12.59					32.70
2.610	6.30	12.58					32.71
2.615	6.29	12.58					32.72
2.620	6.29	12.58					32.73
2.625	6.29	12.58					32.74
2.630	6.29	12.57					32.75
2.635	6.29	12.57					32.76
2.640	6.29	12.56					32.77
2.645	6.29	12.56					32.77
2.650	6.28	12.56					32.78
2.655	6.28	12.55					32.79
2.660	6.28	12.55					32.80
2.665	6.28	12.55					32.81
2.670	6.28	12.55					32.82
2.675	6.27	12.54					32.83
2.680	6.27	12.54					32.84
2.685	6.27	12.54					32.85
2.690	6.27	12.53					32.86
2.695	6.27	12.53					32.86
2.700	6.27	12.53					32.87
2.705	6.27	12.53					32.88
2.710	6.26	12.53					32.89
2.715	6.26	12.53					32.90
2.720	6.26	12.52					32.91
2.725	6.26	12.52					32.92
2.730	6.26	12.52					32.93
2.735	6.25	12.51					32.94

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
2.740	6.25	12.51					32.94
2.745	6.25	12.51					32.95
2.750	6.25	12.50					32.96
2.755	6.25	12.50					32.97
2.760	5.90	11.91					35.01
2.765	5.51	11.23					37.35
2.770	5.50	11.21					37.43
2.775	5.49	11.19					37.50
2.780	5.48	11.17					37.58
2.785	5.47	11.15					37.65
2.790	5.46	11.13					37.73
2.795	5.44	11.11					37.81
2.800	5.43	11.09					37.88
2.805	5.42	11.07					37.96
2.810	5.41	11.05					38.04
2.815	5.40	11.03					38.12
2.820	5.39	11.01					38.19
2.825	5.38	11.00					38.27
2.830	5.37	10.97					38.34
2.835	5.36	10.96					38.42
2.840	5.35	10.93					38.50
2.845	5.34	10.92					38.58
2.850	5.33	10.90					38.65
2.855	5.32	10.88					38.73
2.860	5.30	10.86					38.80
2.865	5.29	10.84					38.88
2.870	5.29	10.83					38.96
2.875	5.27	10.81					39.04
2.880	5.26	10.79					39.11
2.885	5.25	10.77					39.19
2.890	5.25	10.75					39.27
2.895	5.24	10.73					39.34
2.900	5.24	10.71					39.42
2.905	5.23	10.70					39.50
2.910	5.23	10.68					39.58
2.915	5.22	10.66					39.65
2.920	5.22	10.64					39.73
2.925	5.21	10.62					39.80
2.930	5.19	10.61					39.88
2.935	5.18	10.59					39.96

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
2.940	5.16	10.58					40.04
2.945	5.15	10.56					40.11
2.950	5.13	10.54					40.19
2.955	5.12	10.52					40.27
2.960	5.11	10.50					40.35
2.965	5.09	10.49					40.43
2.970	5.08	10.47					40.51
2.975	5.07	10.45					40.58
2.980	5.06	10.44					40.66
2.985	5.06	10.42					40.73
2.990	5.05	10.41					40.81
2.995	5.03	10.39					40.89
3.000	5.02	10.37					40.97
3.005	5.02	10.35					41.04
3.010	5.00	10.33					41.12
3.015	5.00	10.32					41.20
3.020	4.99	10.30					41.27
3.025	4.98	10.28					41.35
3.030	4.97	10.27					41.43
3.035	4.96	10.25					41.51
3.040	4.95	10.24					41.58
3.045	4.94	10.22					41.66
3.050	4.93	10.20					41.73
3.055	4.92	10.18					41.81
3.060	4.91	10.16					41.89
3.065	4.90	10.15					41.97
3.070	4.90	10.13					42.05
3.075	4.89	10.12					42.12
3.080	4.88	10.10					42.20
3.085	4.87	10.08					42.27
3.090	4.86	10.07					42.34
3.095	4.85	10.05					42.42
3.100	4.84	10.04					42.50
3.105	4.83	10.02					42.57
3.110	4.83	10.00					42.65
3.115	4.82	9.99					42.72
3.120	4.81	9.97					42.80
3.125	4.80	9.96					42.88
3.130	4.79	9.94					42.96
3.135	4.78	9.93					43.03

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTP	TIME OF ARRIVAL T
3.140	4.77	9.92					43.11
3.145	4.77	9.90					43.18
3.150	4.76	9.88					43.26
3.155	4.75	9.87					43.34
3.160	4.74	9.85					43.41
3.165	4.73	9.84					43.49
3.170	4.72	9.82					43.57
3.175	4.71	9.80					43.65
3.180	4.70	9.79					43.73
3.185	4.70	9.77					43.81
3.190	4.69	9.76					43.88
3.195	4.68	9.74					43.96
3.200	4.67	9.72					44.04
3.205	4.67	9.72					44.11
3.210	4.65	9.70					44.19
3.215	4.65	9.68					44.27
3.220	4.64	9.67					44.34
3.225	4.63	9.65					44.42
3.230	4.62	9.64					44.50
3.235	4.62	9.62					44.58
3.240	4.61	9.61					44.65
3.245	4.60	9.60					44.73
3.250	4.59	9.58					44.81
3.255	4.58	9.56					44.88
3.260	4.58	9.55					44.96
3.265	4.57	9.54					45.04
3.270	4.56	9.53					45.11
3.275	4.55	9.51					45.19
3.280	4.55	9.49					45.27
3.285	4.54	9.48					45.35
3.290	4.53	9.46					45.43
3.295	4.52	9.45					45.51
3.300	4.52	9.44					45.58
3.305	4.51	9.42					45.66
3.310	4.50	9.41					45.73
3.315	4.49	9.40					45.81
3.320	4.48	9.38					45.88
3.325	4.48	9.37					45.96
3.330	4.47	9.36					46.04
3.335	4.46	9.34					46.11

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION CTR	
3.340	4.45	9.33					46.19
3.345	4.45	9.32					46.26
3.350	4.44	9.31					46.34
3.355	4.43	9.29					46.42
3.360	4.43	9.28					46.49
3.365	4.42	9.27					46.57
3.370	4.41	9.25					46.65
3.375	4.40	9.24					46.73
3.380	4.40	9.23					46.80
3.385	4.39	9.21					46.88
3.390	4.38	9.20					46.96
3.395	4.37	9.19					47.04
3.400	4.36	9.17					47.12
3.405	4.36	9.16					47.19
3.410	4.35	9.15					47.27
3.415	4.35	9.13					47.34
3.420	4.34	9.12					47.42
3.425	4.33	9.10					47.49
3.430	4.32	9.09					47.57
3.435	4.31	9.08					47.65
3.440	4.31	9.06					47.72
3.445	4.30	9.05					47.80
3.450	4.30	9.04					47.88
3.455	4.29	9.02					47.96
3.460	4.28	9.01					48.04
3.465	4.28	9.00					48.12
3.470	4.27	8.99					48.20
3.475	4.26	8.98					48.28
3.480	4.25	8.96					48.36
3.485	4.25	8.94					48.43
3.490	4.24	8.94					48.51
3.495	4.23	8.92					48.59
3.500	4.23	8.91					48.67
3.505	4.22	8.90					48.75
3.510	4.22	8.88					48.83
3.515	4.21	8.87					48.90
3.520	4.20	8.86					48.98
3.525	4.20	8.84					49.05
3.530	4.19	8.84					49.13
3.535	4.18	8.82					49.21

TABLE A. AIR PLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
3.540	4.17	8.81					49.28
3.545	4.17	8.80					49.36
3.550	4.16	8.79					49.43
3.555	4.15	8.77					49.51
3.560	4.15	8.76					49.59
3.565	4.14	8.75					49.66
3.570	4.13	8.74					49.74
3.575	4.13	8.73					49.82
3.580	4.12	8.71					49.89
3.585	4.12	8.70					49.97
3.590	4.11	8.69					50.04
3.595	4.10	8.68					50.12
3.600	4.10	8.66					50.20
3.605	4.09	8.65					50.27
3.610	4.09	8.64					50.35
3.615	4.08	8.63					50.43
3.620	4.07	8.62					50.50
3.625	4.07	8.60					50.58
3.630	4.06	8.60					50.66
3.635	4.05	8.59					50.74
3.640	4.05	8.57					50.81
3.645	4.04	8.56					50.89
3.650	4.04	8.55					50.97
3.655	4.03	8.54					51.04
3.660	4.02	8.53					51.12
3.665	4.02	8.51					51.20
3.670	4.01	8.50					51.28
3.675	4.00	8.50					51.35
3.680	4.00	8.48					51.43
3.685	3.99	8.47					51.50
3.690	3.99	8.46					51.58
3.695	3.98	8.45					51.66
3.700	3.97	8.44					51.74
3.705	3.97	8.43					51.81
3.710	3.96	8.41					51.89
3.715	3.96	8.40					51.97
3.720	3.95	8.39					52.06
3.725	3.94	8.38					52.14
3.730	3.94	8.37					52.21
3.735	3.93	8.36					52.29

TABLE A. AIR BLAST TABLES-METRIC UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
3.740	3.92	8.35					52.37
3.745	3.92	8.33					52.44
3.750	3.91	8.32					52.52
3.755	3.91	8.31					52.60
3.760	3.90	8.30					52.68
3.765	3.90	8.29					52.75
3.770	3.89	8.28					52.83
3.775	3.89	8.27					52.91
3.780	3.88	8.26					52.98
3.785	3.88	8.25					53.06
3.790	3.87	8.24					53.14
3.795	3.86	8.23					53.22
3.800	3.86	8.21					53.29
3.805	3.85	8.21					53.37
3.810	3.85	8.20					53.44
3.815	3.84	8.18					53.52
3.820	3.83	8.17					53.59
3.825	3.83	8.17					53.67
3.830	3.83	8.15					53.75
3.835	3.82	8.14					53.83

TABLE B
Air Blast Tables - English Units

TABLE B. AIR BLAST TABLES-ENGLISH UNITS

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION CTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.105					16701		
.110					15539		
.115					14376		
.120					13214		
.125					12051		
.130					10889		
.135	11730				10118		
.140	11211				9681		
.145	10730				9243		
.150	10287				8806		.001
.155	9875				8369		.001
.160	9492				7932		.001
.165	9135				7494		.001
.170	8804				7057		.001
.175	8491				6620		.002
.180	8200				6183		.002
.185	7925				5745		.002
.190	7668				5308		.002
.195	7425				4871		.002
.200	7196				4523		.003
.205	6979				4376		.003
.210	6774				4228		.003
.215	6579				4081		.003
.220	6395				3933		.004
.225	6219				3786		.004
.230	6053				3638		.004
.235	5893				3491		.004
.240	5742				3343		.005
.245	5597				3195		.005
.250	5459				3048		.005
.255	5328				2900		.005
.260	5201				2753		.006
.265	5080				2612		.006
.270	4964				2544		.006
.275	4853				2476		.006
.280	4746				2409		.007
.285	4643				2341		.007
.290	4544				2273		.007
.295	4448				2206		.008
.300	4357				2138		.008

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IK	DURA- TION DTR	TIME OF ARRIVAL T
.305	4269				2070		.008
.310	4184				2003		.008
.315	4101				1935		.009
.320	4022				1867		.009
.325	3946				1800		.009
.330	3872				1732		.010
.335	3800				1691		.010
.340	3731				1654		.010
.345	3664				1617		.011
.350	3599				1580		.011
.355	3536				1544		.011
.360	3475				1507		.011
.365	3416				1470		.012
.370	3359				1433		.012
.375	3303				1396		.012
.380	3249				1359		.013
.385	3196				1323		.013
.390	3145				1286		.013
.395	3095				1249		.014
.400	3047				1221		.014
.405	3000				1199		.014
.410	2954				1176		.015
.415	2910				1154		.015
.420	2867				1131		.015
.425	2824				1109		.016
.430	2783				1086		.016
.435	2743				1064		.017
.440	2703				1042		.017
.445	2665				1019		.017
.450	2629				997		.018
.455	2592				974		.018
.460	2556				952		.018
.465	2521				932		.019
.470	2488				918		.019
.475	2455				903		.019
.480	2422				888		.020
.485	2391				873		.020
.490	2360				859		.021
.495	2330				844		.021
.500	2300				829		.021

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.505	2271				814		.022
.510	2243				800		.022
.515	2215				785		.023
.520	2187				770		.023
.525	2161				755		.023
.530	2135				741		.024
.535	2109				731		.024
.540	2085				721		.025
.545	2060				710		.025
.550	2035				700		.025
.555	2012				690		.026
.560	1989				680		.026
.565	1967				669		.027
.570	1944				659		.027
.575	1922				649		.028
.580	1901				639		.028
.585	1880				628		.028
.590	1859				618		.029
.595	1838				608		.029
.600	1819				600		.030
.605	1799				593		.030
.610	1779				585		.031
.615	1761				578		.031
.620	1742				570		.031
.625	1723				563		.032
.630	1706				556		.032
.635	1688				548		.033
.640	1671				541		.033
.645	1654				533		.034
.650	1637				526		.034
.655	1621				518		.035
.660	1604				511		.035
.665	1588				505		.036
.670	1573				499		.036
.675	1557				493		.037
.680	1542				488		.037
.685	1527				482		.037
.690	1512				477		.038
.695	1498				471		.038
.700	1483				465		.039

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IF	DURA- TION DTR	TIME OF ARRIVAL T
.705	1469				460		.039
.710	1455				454		.040
.715	1441				449		.040
.720	1428				443		.041
.725	1414				437		.041
.730	1401				432		.042
.735	1388				428		.042
.740	1375				424		.043
.745	1363				419		.043
.750	1350				415		.044
.755	1338				411		.044
.760	1326				406		.045
.765	1315				402		.045
.770	1303				398		.046
.775	1292				393		.046
.780	1280				389		.047
.785	1269				385		.047
.790	1258				380		.048
.795	1247				376		.048
.800	1236				373		.049
.805	1225				369		.050
.810	1215				366		.050
.815	1205				362		.051
.820	1195				359		.051
.825	1184				355		.052
.830	1174				352		.052
.835	1164				349		.053
.840	1155				345		.053
.845	1145				342		.054
.850	1135				338		.054
.855	1126				335		.055
.860	1117				331		.056
.865	1108				329		.056
.870	1099				326		.057
.875	1090				323		.057
.880	1081				320		.058
.885	1073				318		.058
.890	1064				315		.059
.895	1055				312		.059
.900	1046				309		.060

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION CTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
.905	1038				306		.061
.910	1030				304		.061
.915	1022				301		.062
.920	1014				298		.062
.925	1006				295		.063
.930	998				293		.063
.935	990				291		.064
.940	983				288		.065
.945	975				286		.065
.950	968				284		.066
.955	960				282		.066
.960	953				279		.067
.965	946				277		.068
.970	939				275		.068
.975	931				272		.069
.980	924				270		.069
.985	918				268		.070
.990	911				266		.071
.995	904				263		.071
1.000	897				262		.072
1.005	890				260		.072
1.010	884				258		.073
1.015	877				256		.074
1.020	871				254		.074
1.025	865				252		.075
1.030	858				250		.076
1.035	852				248		.076
1.040	846				246		.077
1.045	840				244		.077
1.050	834				243		.078
1.055	828				241		.079
1.060	822				239		.079
1.065	816				237		.080
1.070	810				236		.081
1.075	804				234		.081
1.080	799				232		.082
1.085	793				231		.083
1.090	787				229		.083
1.095	782				228		.084
1.100	776				226		.085

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PF	POSITIVE IMPULSE IM	DURA- TION DTA	TIME OF ARRIVAL T
1.105	771				224		.085
1.110	766				223		.086
1.115	760				221		.087
1.120	755				220		.087
1.125	750				218		.088
1.130	745				217		.089
1.135	740				215		.089
1.140	735				214		.090
1.145	730				213		.091
1.150	725				211		.091
1.155	720				210		.092
1.160	715				208		.093
1.165	710				207		.093
1.170	705				206		.094
1.175	700				204		.095
1.180	696				203		.095
1.185	691				202		.096
1.190	686				200		.097
1.195	682				199		.097
1.200	677				198		.098
1.205	673				197		.099
1.210	668				195		.100
1.215	664				194		.100
1.220	660				193		.101
1.225	655				192		.102
1.230	651				191		.103
1.235	647				190		.104
1.240	642				188		.104
1.245	638				187		.104
1.250	634				186		.105
1.255	630				185		.106
1.260	626				184		.107
1.265	622				183		.107
1.270	618				182		.108
1.275	614				181		.109
1.280	610				180		.110
1.285	606				179		.110
1.290	602				178		.111
1.295	598				177		.112
1.300	595				176		.113

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
1.305	590.81				174.60		.113
1.310	587.03				173.57		.114
1.315	583.37				172.54		.115
1.320	579.70				171.52		.116
1.330	572.62	17.55		4200.6	169.85	.145	.117
1.340	565.65	17.54		4152.9	168.35	.147	.119
1.350	558.67	17.52		4105.1	166.84	.148	.120
1.360	551.70	17.51		4057.4	165.34	.149	.122
1.370	544.73	17.50		4009.6	163.84	.150	.123
1.380	537.99	17.49		3961.9	162.34	.151	.125
1.390	531.61	17.48		3914.2	160.84	.153	.126
1.400	525.22	17.47		3866.4	159.34	.154	.128
1.410	518.83	17.45		3818.7	157.83	.155	.130
1.420	512.45	17.44		3771.0	156.33	.156	.131
1.430	506.12	17.43		3723.2	154.83	.158	.133
1.440	500.24	17.42		3675.5	153.33	.159	.134
1.450	494.36	17.41		3627.8	151.83	.160	.136
1.460	488.49	17.40		3580.0	150.32	.161	.138
1.470	482.61	17.38		3532.3	148.82	.162	.139
1.480	476.73	17.37		3484.6	147.32	.164	.141
1.490	471.25	17.36		3436.8	145.82	.165	.143
1.500	465.84	17.35		3389.1	144.32	.166	.144
1.510	460.44	17.34		3341.3	142.81	.167	.146
1.520	455.03	17.33		3293.6	141.31	.169	.148
1.530	449.63	17.31		3245.9	139.81	.170	.149
1.540	444.45	17.30		3198.1	138.31	.171	.151
1.550	439.46	17.29		3150.4	136.81	.172	.153
1.560	434.47	17.28		3102.7	135.31	.173	.155
1.570	429.48	17.27		3054.9	133.80	.175	.156
1.580	424.49	17.25		3007.2	132.30	.176	.158
1.590	419.59	17.24	.172	2962.3	130.91	.177	.160
1.600	414.96	17.22	.174	2928.9	129.94	.179	.162
1.610	410.33	17.20	.177	2895.5	128.97	.180	.163
1.620	405.70	17.18	.179	2862.1	128.00	.182	.165
1.630	401.07	17.17	.182	2828.7	127.03	.183	.167
1.640	396.44	17.15	.184	2795.3	126.06	.185	.169
1.650	392.15	17.13	.187	2761.9	125.09	.186	.170
1.660	387.88	17.11	.189	2728.5	124.12	.188	.172
1.670	383.61	17.09	.191	2695.1	123.15	.189	.174
1.680	379.34	17.07	.194	2661.6	122.18	.191	.176

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IK	DURA- TION DTP	TIME OF ARRIVAL T
1.69	375.07	17.05	.196	2628.2	121.21	.192	.178
1.70	371.00	17.03	.199	2594.8	120.24	.193	.180
1.71	367.03	17.01	.201	2561.4	119.27	.195	.182
1.72	363.06	17.00	.203	2528.0	118.30	.196	.183
1.73	359.09	16.98	.206	2494.6	117.33	.198	.185
1.74	355.12	16.96	.208	2461.2	116.36	.199	.187
1.75	351.26	16.94	.211	2427.8	115.39	.201	.189
1.76	347.57	16.92	.213	2394.4	114.42	.202	.191
1.77	343.89	16.90	.215	2361.0	113.45	.204	.193
1.78	340.20	16.88	.218	2327.6	112.48	.205	.195
1.79	336.52	16.86	.220	2294.1	111.51	.207	.197
1.80	332.85	16.84	.223	2260.7	110.54	.208	.199
1.81	329.43	16.83	.225	2227.3	109.57	.210	.201
1.82	326.01	16.81	.227	2193.9	108.60	.211	.203
1.83	322.59	16.79	.230	2160.5	107.63	.213	.205
1.84	319.17	16.77	.232	2127.1	106.66	.214	.207
1.85	315.75	16.75	.235	2093.7	105.69	.216	.209
1.86	312.51	16.73	.237	2060.7	104.97	.217	.211
1.87	309.32	16.70	.240	2028.1	104.30	.219	.213
1.88	306.12	16.68	.243	2026.5	103.63	.221	.215
1.89	302.93	16.65	.245	2004.8	102.96	.222	.217
1.90	299.74	16.63	.248	1983.2	102.30	.224	.219
1.91	296.65	16.60	.251	1961.6	101.63	.226	.221
1.92	293.09	16.58	.253	1940.0	100.96	.228	.223
1.93	290.72	16.55	.256	1918.3	100.29	.229	.225
1.94	287.75	16.53	.259	1896.7	99.62	.231	.227
1.95	284.79	16.51	.261	1875.1	98.96	.233	.229
1.96	281.86	16.48	.264	1853.5	98.29	.234	.232
1.97	279.08	16.46	.266	1831.9	97.62	.236	.234
1.98	276.30	16.43	.269	1810.2	96.96	.238	.236
1.99	273.52	16.41	.272	1788.6	96.29	.240	.238
2.00	270.74	16.38	.274	1767.0	95.62	.241	.240
2.01	267.97	16.36	.277	1745.4	94.95	.243	.242
2.02	265.36	16.33	.280	1723.7	94.29	.245	.244
2.03	262.77	16.31	.282	1702.1	93.62	.246	.247
2.04	260.18	16.28	.285	1680.5	92.95	.248	.249
2.05	257.59	16.26	.288	1658.9	92.28	.250	.251
2.06	255.00	16.24	.290	1637.3	91.62	.251	.253
2.07	252.52	16.21	.293	1615.6	90.95	.253	.255
2.08	250.10	16.19	.296	1594.0	90.28	.255	.258

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
2.09	247.68	16.16	.298	1572.4	89.61	.257	.260
2.10	245.26	16.14	.301	1550.8	88.95	.258	.262
2.11	242.84	16.11	.304	1529.1	88.28	.260	.264
2.12	240.47	16.09	.306	1509.4	87.66	.262	.267
2.13	238.21	16.07	.309	1494.1	87.18	.264	.269
2.14	235.94	16.04	.312	1478.8	86.69	.266	.271
2.15	233.67	16.02	.315	1463.5	86.20	.268	.274
2.16	231.40	16.00	.318	1448.2	85.72	.269	.276
2.17	229.14	15.97	.321	1432.9	85.23	.271	.278
2.18	227.02	15.95	.324	1417.6	84.74	.273	.281
2.19	224.91	15.93	.327	1402.3	84.25	.275	.283
2.20	222.79	15.90	.330	1387.0	83.77	.277	.285
2.21	220.68	15.88	.333	1371.7	83.28	.279	.286
2.22	218.56	15.86	.335	1356.4	82.79	.281	.290
2.23	216.54	15.83	.338	1341.1	82.31	.283	.292
2.24	214.56	15.81	.341	1325.8	81.82	.285	.295
2.25	212.57	15.79	.344	1310.5	81.33	.287	.297
2.26	210.59	15.77	.347	1295.2	80.84	.289	.300
2.27	208.60	15.74	.350	1279.9	80.36	.291	.302
2.28	206.67	15.72	.353	1264.6	79.87	.293	.304
2.29	204.80	15.70	.356	1249.3	79.38	.294	.307
2.30	202.93	15.67	.359	1234.0	78.90	.296	.309
2.31	201.06	15.65	.361	1218.7	78.41	.298	.312
2.32	199.19	15.63	.364	1203.4	77.92	.300	.314
2.33	197.33	15.60	.367	1188.1	77.43	.302	.317
2.34	195.58	15.58	.370	1172.7	76.95	.304	.319
2.35	193.82	15.56	.373	1157.4	76.46	.306	.322
2.36	192.06	15.53	.376	1142.1	75.97	.308	.324
2.37	190.30	15.51	.379	1126.8	75.49	.310	.327
2.38	188.55	15.49	.382	1111.5	75.00	.312	.329
2.39	186.89	15.47	.385	1100.3	74.62	.314	.332
2.40	185.24	15.45	.387	1089.5	74.25	.316	.335
2.41	183.60	15.42	.390	1078.8	73.89	.318	.337
2.42	181.95	15.40	.393	1068.0	73.52	.320	.340
2.43	180.31	15.38	.396	1057.3	73.15	.322	.342
2.44	178.72	15.36	.399	1046.5	72.78	.324	.345
2.45	177.17	15.34	.402	1035.7	72.42	.326	.347
2.46	175.62	15.32	.405	1025.0	72.05	.328	.350
2.47	174.07	15.30	.408	1014.2	71.68	.331	.353
2.48	172.52	15.28	.410	1003.4	71.32	.333	.355

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PP	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
2.49	171.00	15.26	.413	992.7	70.95	.335	.358
2.50	169.54	15.23	.416	981.9	70.58	.337	.361
2.51	168.09	15.21	.419	971.1	70.21	.339	.363
2.52	166.63	15.19	.422	960.4	69.85	.341	.366
2.53	165.18	15.17	.425	949.6	69.48	.343	.369
2.54	163.72	15.15	.428	938.8	69.11	.345	.372
2.55	162.34	15.13	.430	928.1	68.75	.347	.374
2.56	160.96	15.11	.433	917.3	68.38	.349	.377
2.57	159.58	15.09	.436	906.5	68.01	.351	.380
2.58	158.20	15.06	.439	895.8	67.64	.354	.383
2.59	156.82	15.04	.442	885.0	67.28	.356	.385
2.60	155.51	15.02	.445	874.2	66.91	.358	.388
2.61	154.23	15.00	.448	863.5	66.54	.360	.391
2.62	152.94	14.98	.451	852.7	66.18	.362	.394
2.63	151.66	14.96	.453	841.9	65.81	.364	.396
2.64	150.37	14.94	.456	831.2	65.44	.366	.399
2.65	149.13	14.92	.459	821.8	65.11	.368	.402
2.66	147.96	14.89	.462	814.5	64.82	.371	.405
2.67	146.79	14.87	.465	807.3	64.53	.373	.408
2.68	145.62	14.85	.468	800.0	64.25	.375	.411
2.69	144.45	14.82	.471	792.7	63.96	.377	.414
2.70	143.27	14.80	.474	785.5	63.68	.380	.416
2.71	142.10	14.78	.477	778.2	63.39	.382	.419
2.72	140.93	14.75	.480	770.9	63.10	.384	.422
2.73	139.76	14.73	.483	763.6	62.82	.386	.425
2.74	138.59	14.71	.486	756.4	62.53	.389	.428
2.75	137.42	14.68	.489	749.1	62.25	.391	.431
2.76	136.24	14.66	.492	741.8	61.96	.393	.434
2.77	135.07	14.64	.495	734.6	61.67	.395	.437
2.78	133.93	14.61	.498	727.3	61.39	.398	.440
2.79	132.91	14.59	.501	720.0	61.10	.400	.443
2.80	131.90	14.57	.504	712.8	60.82	.402	.446
2.81	130.89	14.54	.508	705.5	60.53	.404	.449
2.82	129.88	14.52	.511	698.2	60.24	.407	.452
2.83	128.86	14.50	.514	691.0	59.96	.409	.455
2.84	127.85	14.47	.517	683.7	59.67	.411	.458
2.85	126.84	14.45	.520	676.4	59.39	.413	.461
2.86	125.83	14.42	.523	669.2	59.10	.416	.464
2.87	124.81	14.40	.526	661.9	58.81	.418	.467
2.88	123.80	14.38	.529	654.6	58.53	.420	.470

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
2.89	122.79	14.35	.532	647.4	58.24	.422	.473
2.90	121.77	14.33	.535	640.1	57.96	.425	.476
2.91	120.76	14.31	.538	632.8	57.67	.427	.479
2.92	119.87	14.28	.540	627.1	57.43	.429	.482
2.93	118.98	14.26	.543	621.5	57.20	.432	.485
2.94	118.10	14.24	.546	616.0	56.97	.434	.489
2.95	117.22	14.21	.549	610.4	56.74	.437	.492
2.96	116.33	14.19	.552	604.8	56.51	.439	.495
2.97	115.45	14.16	.554	599.2	56.28	.441	.498
2.98	114.56	14.14	.557	593.7	56.05	.444	.501
2.99	113.68	14.12	.560	588.1	55.82	.446	.505
3.00	112.79	14.09	.563	582.5	55.59	.449	.508
3.01	111.91	14.07	.565	577.0	55.36	.451	.511
3.02	111.03	14.05	.568	571.4	55.13	.453	.514
3.03	110.14	14.02	.571	565.8	54.90	.456	.517
3.04	109.26	14.00	.574	560.3	54.67	.458	.520
3.05	108.45	13.97	.576	554.7	54.44	.461	.524
3.06	107.68	13.95	.579	549.1	54.21	.463	.527
3.07	106.90	13.93	.582	543.6	53.98	.465	.530
3.08	106.13	13.90	.585	538.0	53.75	.468	.534
3.09	105.35	13.88	.587	532.4	53.52	.470	.537
3.10	104.58	13.85	.590	526.9	53.29	.473	.540
3.11	103.80	13.83	.593	521.3	53.07	.475	.544
3.12	103.03	13.81	.596	515.7	52.84	.477	.547
3.13	102.25	13.78	.598	510.2	52.61	.480	.550
3.14	101.48	13.76	.601	504.6	52.38	.482	.554
3.15	100.70	13.74	.604	499.0	52.15	.485	.557
3.16	99.93	13.71	.607	493.5	51.92	.487	.560
3.17	99.15	13.69	.610	487.9	51.69	.489	.563
3.18	98.43	13.66	.612	483.1	51.48	.492	.567
3.19	97.75	13.64	.615	479.1	51.29	.494	.570
3.20	97.07	13.62	.618	475.1	51.10	.497	.574
3.21	96.39	13.59	.621	471.1	50.92	.499	.577
3.22	95.71	13.57	.623	467.1	50.73	.502	.581
3.23	95.04	13.55	.626	463.1	50.54	.505	.584
3.24	94.36	13.53	.629	459.1	50.36	.507	.588
3.25	93.68	13.50	.632	455.2	50.17	.510	.591
3.26	93.00	13.48	.634	451.2	49.98	.512	.594
3.27	92.32	13.46	.637	447.2	49.80	.515	.598
3.28	91.65	13.43	.640	443.2	49.61	.517	.601

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
3.29	90.97	13.41	.642	439.2	49.42	.520	.605
3.30	90.29	13.39	.645	435.2	49.24	.522	.606
3.31	89.63	13.36	.648	431.2	49.05	.525	.612
3.32	89.03	13.34	.651	427.2	48.86	.527	.615
3.33	88.44	13.32	.653	423.2	48.66	.530	.619
3.34	87.84	13.30	.656	419.2	48.49	.533	.622
3.35	87.24	13.27	.659	415.2	48.30	.535	.626
3.36	86.65	13.25	.662	411.2	48.11	.538	.629
3.37	86.05	13.23	.664	407.2	47.93	.540	.632
3.38	85.45	13.20	.667	403.2	47.74	.543	.636
3.39	84.85	13.18	.670	399.3	47.55	.545	.639
3.40	84.26	13.16	.673	395.3	47.37	.548	.643
3.41	83.66	13.13	.675	391.3	47.18	.550	.646
3.42	83.06	13.11	.678	387.3	46.99	.553	.650
3.43	82.47	13.09	.681	383.3	46.81	.555	.653
3.44	81.87	13.07	.684	379.3	46.62	.558	.656
3.45	81.34	13.04	.686	376.3	46.46	.560	.660
3.46	80.81	13.02	.689	373.4	46.31	.563	.664
3.47	80.29	13.00	.692	370.4	46.15	.566	.668
3.48	79.76	12.98	.694	367.5	46.00	.568	.672
3.49	79.23	12.96	.697	364.5	45.84	.571	.676
3.50	78.70	12.93	.700	361.6	45.69	.573	.680
3.51	78.18	12.91	.702	358.6	45.53	.576	.684
3.52	77.65	12.89	.705	355.7	45.38	.579	.687
3.53	77.12	12.87	.708	352.7	45.22	.581	.691
3.54	76.59	12.85	.710	349.8	45.06	.584	.695
3.55	76.07	12.82	.713	346.8	44.91	.586	.699
3.56	75.54	12.80	.716	343.9	44.75	.589	.703
3.57	75.01	12.78	.718	340.9	44.60	.591	.707
3.58	74.53	12.76	.721	338.0	44.44	.594	.711
3.59	74.06	12.74	.724	335.0	44.29	.597	.715
3.60	73.60	12.71	.726	332.1	44.13	.599	.718
3.61	73.13	12.69	.729	329.1	43.97	.602	.722
3.62	72.66	12.67	.732	326.2	43.82	.604	.726
3.63	72.20	12.65	.734	323.2	43.66	.607	.730
3.64	71.73	12.63	.737	320.3	43.51	.609	.734
3.65	71.26	12.60	.740	317.3	43.35	.612	.738
3.66	70.79	12.58	.742	314.4	43.20	.615	.742
3.67	70.33	12.56	.745	311.4	43.04	.617	.746
3.68	69.86	12.54	.748	308.5	42.88	.620	.749

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
3.69	69.39	12.52	.750	305.5	42.73	.622	.753
3.70	68.93	12.49	.753	302.6	42.57	.625	.757
3.71	68.51	12.47	.756	300.1	42.43	.628	.761
3.72	68.13	12.45	.758	297.9	42.30	.630	.765
3.73	67.75	12.43	.761	295.6	42.17	.633	.769
3.74	67.38	12.41	.763	293.4	42.04	.636	.773
3.75	67.00	12.39	.766	291.2	41.91	.638	.777
3.76	66.62	12.37	.769	289.0	41.78	.641	.781
3.77	66.24	12.35	.771	286.8	41.65	.644	.785
3.78	65.86	12.33	.774	284.5	41.52	.646	.789
3.79	65.49	12.31	.776	282.3	41.38	.649	.793
3.80	65.11	12.29	.779	280.1	41.25	.652	.797
3.81	64.73	12.27	.781	277.9	41.12	.654	.801
3.82	64.35	12.24	.784	275.7	40.99	.657	.805
3.83	63.97	12.22	.787	273.4	40.86	.660	.809
3.84	63.59	12.20	.789	271.2	40.73	.662	.813
3.85	63.18	12.18	.792	269.0	40.60	.665	.817
3.86	62.77	12.16	.794	266.8	40.47	.668	.821
3.87	62.36	12.14	.797	264.6	40.34	.670	.825
3.88	61.95	12.12	.799	262.3	40.21	.673	.829
3.89	61.54	12.10	.802	260.1	40.07	.676	.834
3.90	61.14	12.08	.805	257.9	39.94	.678	.838
3.91	60.73	12.06	.807	255.7	39.81	.681	.842
3.92	60.32	12.04	.810	253.5	39.68	.684	.846
3.93	59.91	12.02	.812	251.3	39.55	.686	.850
3.94	59.50	12.00	.815	249.0	39.42	.689	.854
3.95	59.10	11.97	.818	246.8	39.29	.692	.858
3.96	58.69	11.95	.820	244.6	39.16	.694	.862
3.97	58.29	11.93	.823	242.4	39.03	.697	.867
3.98	57.96	11.91	.825	240.8	38.92	.700	.871
3.99	57.62	11.89	.828	239.2	38.81	.702	.875
4.00	57.29	11.87	.830	237.6	38.69	.705	.879
4.01	56.96	11.86	.833	236.0	38.58	.708	.883
4.02	56.63	11.84	.835	234.4	38.47	.711	.887
4.03	56.30	11.82	.838	232.8	38.36	.713	.892
4.04	55.96	11.80	.840	231.2	38.25	.716	.896
4.05	55.63	11.78	.843	229.6	38.14	.719	.900
4.06	55.30	11.76	.845	228.0	38.02	.721	.905
4.07	54.97	11.74	.848	226.4	37.91	.724	.909
4.08	54.64	11.72	.850	224.8	37.80	.727	.913

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
4.09	54.31	11.70	.853	223.1	37.69	.730	.917
4.10	53.97	11.68	.855	221.5	37.58	.732	.922
4.11	53.67	11.66	.858	219.9	37.47	.735	.926
4.12	53.38	11.64	.860	218.3	37.35	.738	.930
4.13	53.08	11.62	.862	216.7	37.24	.740	.935
4.14	52.78	11.60	.865	215.1	37.13	.743	.939
4.15	52.48	11.58	.867	213.5	37.02	.746	.943
4.16	52.19	11.56	.870	211.9	36.91	.749	.948
4.17	51.89	11.54	.872	210.3	36.80	.751	.952
4.18	51.59	11.52	.875	208.7	36.68	.754	.957
4.19	51.30	11.50	.877	207.1	36.57	.757	.961
4.20	51.00	11.48	.880	205.5	36.46	.759	.965
4.21	50.70	11.46	.882	203.9	36.35	.762	.970
4.22	50.40	11.44	.885	202.3	36.24	.765	.974
4.23	50.11	11.42	.887	200.6	36.13	.768	.978
4.24	49.83	11.40	.890	199.2	36.02	.770	.983
4.25	49.56	11.39	.892	197.9	35.93	.773	.987
4.26	49.29	11.37	.895	196.5	35.83	.776	.992
4.27	49.03	11.35	.897	195.2	35.73	.779	.996
4.28	48.76	11.33	.900	193.8	35.64	.781	1.001
4.29	48.49	11.32	.902	192.5	35.54	.784	1.005
4.30	48.22	11.30	.904	191.2	35.44	.787	1.010
4.31	47.96	11.28	.907	189.8	35.35	.790	1.014
4.32	47.69	11.26	.909	188.5	35.25	.792	1.018
4.33	47.42	11.24	.912	187.1	35.15	.795	1.023
4.34	47.15	11.23	.914	185.8	35.06	.798	1.027
4.35	46.89	11.21	.917	184.4	34.96	.801	1.032
4.36	46.62	11.19	.919	183.1	34.86	.803	1.036
4.37	46.36	11.17	.921	181.8	34.77	.806	1.041
4.38	46.12	11.16	.924	180.4	34.67	.809	1.046
4.39	45.88	11.14	.926	179.1	34.57	.812	1.050
4.40	45.64	11.12	.929	177.7	34.48	.814	1.055
4.41	45.40	11.10	.931	176.4	34.38	.817	1.059
4.42	45.16	11.08	.933	175.1	34.28	.820	1.064
4.43	44.91	11.07	.936	173.7	34.19	.823	1.069
4.44	44.67	11.05	.938	172.4	34.09	.825	1.073
4.45	44.43	11.03	.941	171.0	33.99	.828	1.078
4.46	44.19	11.01	.943	169.7	33.90	.831	1.082
4.47	43.95	11.00	.946	168.4	33.80	.834	1.087
4.48	43.71	10.98	.948	167.0	33.70	.836	1.092

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
4.49	43.47	10.96	.950	165.7	33.61	.839	1.096
4.50	43.23	10.94	.953	164.4	33.51	.842	1.101
4.51	43.01	10.93	.955	163.3	33.43	.845	1.106
4.52	42.79	10.91	.958	162.2	33.35	.847	1.110
4.53	42.58	10.89	.960	161.1	33.26	.850	1.115
4.54	42.36	10.87	.962	160.1	33.18	.853	1.120
4.55	42.14	10.86	.964	159.0	33.09	.856	1.125
4.56	41.92	10.84	.967	157.9	33.01	.858	1.129
4.57	41.70	10.82	.969	156.8	32.93	.861	1.134
4.58	41.48	10.81	.971	155.8	32.84	.864	1.139
4.59	41.27	10.79	.974	154.7	32.76	.867	1.144
4.60	41.05	10.77	.976	153.6	32.68	.869	1.148
4.61	40.83	10.76	.978	152.5	32.59	.872	1.153
4.62	40.61	10.74	.981	151.4	32.51	.875	1.158
4.63	40.39	10.72	.983	150.4	32.42	.878	1.163
4.64	40.19	10.70	.985	149.3	32.34	.880	1.168
4.65	40.00	10.69	.988	148.2	32.26	.883	1.172
4.66	39.80	10.67	.990	147.1	32.17	.886	1.177
4.67	39.60	10.65	.992	146.0	32.09	.889	1.182
4.68	39.40	10.64	.995	145.0	32.01	.891	1.187
4.69	39.21	10.62	.997	143.9	31.92	.894	1.192
4.70	39.01	10.60	.999	142.8	31.84	.897	1.197
4.71	38.81	10.59	.002	141.7	31.75	.900	1.201
4.72	38.61	10.57	.004	140.6	31.67	.902	1.206
4.73	38.42	10.55	.006	139.6	31.59	.905	1.211
4.74	38.22	10.53	.009	138.5	31.50	.908	1.216
4.75	38.02	10.52	.011	137.4	31.42	.911	1.221
4.76	37.83	10.50	.013	136.3	31.34	.913	1.226
4.77	37.64	10.48	.016	135.4	31.26	.916	1.231
4.78	37.46	10.47	.018	134.6	31.18	.919	1.235
4.79	37.28	10.45	.020	133.8	31.11	.922	1.240
4.80	37.10	10.44	.022	133.0	31.04	.924	1.245
4.81	36.92	10.42	.025	132.2	30.96	.927	1.250
4.82	36.75	10.40	.027	131.4	30.89	.930	1.255
4.83	36.57	10.39	.029	130.6	30.81	.933	1.260
4.84	36.39	10.37	.032	129.8	30.74	.935	1.265
4.85	36.21	10.36	.034	129.0	30.66	.938	1.270
4.86	36.03	10.34	.036	128.2	30.59	.941	1.275
4.87	35.85	10.33	.038	127.4	30.52	.944	1.280
4.88	35.67	10.31	.041	126.6	30.44	.946	1.285

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
4.89	35.491	10.298	1.043	125.75	30.36	.949	1.269
4.90	35.320	10.282	1.045	124.95	30.29	.952	1.295
4.91	35.156	10.266	1.047	124.14	30.21	.955	1.300
4.92	34.992	10.250	1.050	123.33	30.14	.957	1.305
4.93	34.828	10.234	1.052	122.53	30.07	.960	1.310
4.94	34.664	10.218	1.054	121.72	29.99	.963	1.315
4.95	34.500	10.202	1.057	120.91	29.92	.966	1.320
4.96	34.336	10.187	1.059	120.11	29.84	.968	1.325
4.97	34.171	10.171	1.061	119.30	29.77	.971	1.330
4.98	34.007	10.155	1.063	118.49	29.69	.974	1.336
4.99	33.843	10.139	1.066	117.69	29.62	.977	1.341
5.00	33.679	10.123	1.069	116.88	29.55	.980	1.346
5.10	32.149	9.975	1.090	110.63	28.87	1.006	1.397
5.20	30.712	9.831	1.112	103.64	28.22	1.033	1.449
5.30	29.360	9.688	1.134	97.36	27.57	1.060	1.502
5.40	28.113	9.552	1.160	92.37	26.99	1.087	1.556
5.50	26.940	9.416	1.185	87.38	26.41	1.114	1.611
5.60	25.834	9.283	1.207	82.73	25.85	1.140	1.666
5.70	24.792	9.155	1.223	78.56	25.33	1.166	1.721
5.80	23.817	9.028	1.240	74.38	24.81	1.192	1.777
5.90	22.931	8.907	1.259	70.74	24.33	1.217	1.835
6.00	22.033	8.789	1.278	67.25	23.86	1.242	1.893
6.10	21.212	8.671	1.298	63.85	23.40	1.267	1.951
6.20	20.448	8.560	1.317	61.07	22.97	1.292	2.009
6.30	19.728	8.448	1.336	58.28	22.54	1.316	2.069
6.40	19.040	8.340	1.355	55.73	22.13	1.340	2.129
6.50	18.383	8.236	1.374	53.40	21.75	1.363	2.190
6.60	17.763	8.132	1.392	51.07	21.36	1.386	2.252
6.70	17.198	8.033	1.410	48.98	21.00	1.407	2.314
6.80	16.642	7.935	1.428	46.92	20.65	1.429	2.376
6.90	16.101	7.839	1.445	44.97	20.30	1.450	2.439
7.00	15.618	7.746	1.463	43.41	19.97	1.471	2.502
7.10	15.134	7.654	1.480	41.85	19.65	1.491	2.566
7.20	14.684	7.564	1.498	40.32	19.34	1.511	2.630
7.30	14.261	7.476	1.514	38.82	19.04	1.530	2.695
7.40	13.837	7.391	1.531	37.33	18.74	1.549	2.759
7.50	13.455	7.308	1.547	36.13	18.46	1.567	2.825
7.60	13.077	7.226	1.563	34.95	18.19	1.585	2.891
7.70	12.699	7.145	1.579	33.82	17.92	1.602	2.956
7.80	12.322	7.068	1.595	32.76	17.66	1.618	3.022

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	TIME OF ARRIVAL T
7.90	11.944	6.991	1.610	31.71	17.41	1.634	3.086
8.00	11.735	6.920	1.626	30.73	17.17	1.649	3.158
8.10	11.437	6.851	1.641	29.78	16.93	1.663	3.226
8.20	11.139	6.783	1.657	28.84	16.69	1.678	3.294
8.30	10.873	6.709	1.671	28.05	16.47	1.690	3.363
8.40	10.608	6.635	1.686	27.27	16.25	1.703	3.432
8.50	10.352	6.562	1.701	26.50	16.03	1.716	3.501
8.60	10.115	6.493	1.715	25.72	15.82	1.727	3.570
8.70	9.878	6.424	1.729	24.95	15.62	1.738	3.640
8.80	9.656	6.362	1.743	24.28	15.42	1.749	3.710
8.90	9.441	6.303	1.757	23.67	15.23	1.759	3.780
9.00	9.226	6.244	1.771	23.06	15.04	1.768	3.851
9.10	9.032	6.184	1.784	22.44	14.86	1.777	3.922
9.20	8.838	6.125	1.797	21.83	14.68	1.785	3.993
9.30	8.651	6.067	1.810	21.29	14.50	1.793	4.064
9.40	8.476	6.010	1.823	20.85	14.33	1.800	4.136
9.50	8.306	5.954	1.836	20.41	14.16	1.807	4.207
9.60	8.135	5.899	1.848	19.92	14.00	1.813	4.280
9.70	7.975	5.845	1.860	19.41	13.84	1.819	4.353
9.80	7.815	5.792	1.872	18.92	13.68	1.825	4.425
9.90	7.666	5.739	1.885	18.52	13.53	1.833	4.500
10.00	7.517	5.687	1.897	18.13	13.37	1.842	4.574
10.10	7.377	5.637	1.909	17.74	13.23	1.851	4.647
10.20	7.246	5.589	1.920	17.36	13.09	1.862	4.719
10.30	7.115	5.541	1.932	16.98	12.95	1.873	4.792
10.40	6.989	5.493	1.943	16.59	12.81	1.883	4.866
10.50	6.863	5.445	1.955	16.19	12.68	1.894	4.942
10.60	6.741	5.398	1.966	15.84	12.54	1.904	5.017
10.70	6.630	5.355	1.976	15.62	12.42	1.914	5.090
10.80	6.519	5.311	1.987	15.40	12.30	1.924	5.163
10.90	6.410	5.267	1.997	15.12	12.17	1.934	5.238
11.00	6.304	5.223	2.008	14.78	12.05	1.943	5.314
11.10	6.198	5.179	2.019	14.44	11.93	1.952	5.390
11.20	6.102	5.139	2.029	14.21	11.82	1.961	5.464
11.30	6.007	5.098	2.039	14.00	11.70	1.970	5.538
11.40	5.913	5.058	2.049	13.77	11.59	1.979	5.612
11.50	5.822	5.018	2.059	13.52	11.48	1.986	5.690
11.60	5.730	4.978	2.069	13.26	11.37	1.994	5.767
11.70	5.645	4.940	2.079	13.01	11.27	2.001	5.843
11.80	5.564	4.903	2.088	12.77	11.17	2.009	5.918

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
11.90	5.482	4.866	2.098	12.524	11.070	2.016	5.993
12.00	5.403	4.828	2.107	12.372	10.967	2.024	6.070
12.10	5.324	4.791	2.117	12.230	10.863	2.031	6.148
12.20	5.248	4.755	2.126	12.064	10.761	2.038	6.226
12.30	5.177	4.721	2.135	11.846	10.665	2.044	6.301
12.40	5.106	4.687	2.143	11.627	10.569	2.050	6.376
12.50	5.037	4.652	2.152	11.422	10.479	2.056	6.453
12.60	4.966	4.618	2.161	11.312	10.395	2.062	6.532
12.70	4.899	4.584	2.170	11.170	10.310	2.068	6.610
12.80	4.835	4.551	2.179	11.001	10.222	2.073	6.689
12.90	4.771	4.517	2.188	10.832	10.133	2.076	6.768
13.00	4.709	4.485	2.196	10.665	10.048	2.083	6.846
13.10	4.651	4.454	2.204	10.502	9.967	2.087	6.922
13.20	4.592	4.424	2.213	10.339	9.886	2.092	6.998
13.30	4.538	4.394	2.221	10.213	9.808		7.076
13.40	4.484	4.365	2.228	10.102	9.732		7.154
13.50	4.431	4.336	2.236	9.991	9.655		7.233
13.60	4.378	4.306	2.244	9.881	9.579		7.311
13.70	4.324	4.277	2.252	9.770	9.502		7.390
13.80	4.271	4.247	2.260	9.660	9.426		7.468
13.90	4.218	4.218	2.268	9.548	9.350		7.547
14.00	4.172	4.191	2.275	9.425	9.281		7.626
14.10	4.126	4.164	2.283	9.302	9.212		7.705
14.20	4.080	4.137	2.290	9.180	9.143		7.785
14.30	4.034	4.110	2.297	9.057	9.074		7.864
14.40	3.988	4.083	2.305	8.934	9.005		7.943
14.50	3.942	4.056	2.312	8.811	8.936		8.022
14.60	3.899	4.031	2.319	8.704	8.870		8.102
14.70	3.859	4.006	2.326	8.611	8.807		8.181
14.80	3.819	3.981	2.333	8.519	8.744		8.261
14.90	3.779	3.957	2.340	8.427	8.681		8.340
15.00	3.739	3.932	2.347	8.334	8.619		8.420
15.10	3.699	3.907	2.354	8.242	8.556		8.500
15.20	3.659	3.882	2.361	8.149	8.493		8.579
15.30	3.624	3.860	2.368	8.058	8.436		8.658
15.40	3.589	3.837	2.374	7.967	8.380		8.737
15.50	3.554	3.815	2.381	7.876	8.323		8.816
15.60	3.519	3.792	2.388	7.785	8.267		8.894
15.70	3.485	3.770	2.394	7.694	8.211		8.973
15.80	3.450	3.747	2.401	7.603	8.154		9.052

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
15.90	3.416	3.725	2.407	7.516	8.098		9.121
16.00	3.384	3.703	2.414	7.447	8.045		9.212
16.10	3.353	3.682	2.420	7.378	7.992		9.294
16.20	3.321	3.660	2.427	7.308	7.939		9.375
16.30	3.290	3.639	2.433	7.239	7.886		9.456
16.40	3.258	3.617	2.440	7.170	7.833		9.537
16.50	3.226	3.595	2.446	7.101	7.780		9.619
16.60	3.198	3.576	2.452	7.032	7.731		9.699
16.70	3.171	3.556	2.458	6.963	7.684		9.779
16.80	3.144	3.537	2.464	6.895	7.636		9.859
16.90	3.116	3.518	2.470	6.826	7.589		9.940
17.00	3.089	3.499	2.476	6.757	7.542		10.020
17.10	3.062	3.479	2.482	6.689	7.494		10.100
17.20	3.035	3.460	2.488	6.620	7.447		10.180
17.30	3.010	3.442	2.494	6.564	7.403		10.260
17.40	2.986	3.423	2.500	6.508	7.358		10.340
17.50	2.961	3.405	2.506	6.452	7.314		10.430
17.60	2.936	3.387	2.512	6.396	7.269		10.510
17.70	2.912	3.368	2.518	6.340	7.225		10.590
17.80	2.887	3.350	2.523	6.284	7.181		10.670
17.90	2.863	3.332	2.529	6.226	7.136		10.750
18.00	2.841	3.315	2.535	6.165	7.097		10.830
18.10	2.819	3.298	2.541	6.105	7.056		10.910
18.20	2.796	3.281	2.547	6.044	7.015		10.990
18.30	2.774	3.264	2.552	5.983	6.974		11.070
18.40	2.752	3.247	2.558	5.923	6.933		11.150
18.50	2.729	3.229	2.564	5.862	6.892		11.230
18.60	2.709	3.213	2.569	5.818	6.853		11.320
18.70	2.689	3.197	2.575	5.779	6.815		11.400
18.80	2.669	3.181	2.581	5.740	6.777		11.480
18.90	2.648	3.166	2.586	5.700	6.739		11.570
19.00	2.628	3.150	2.592	5.661	6.701		11.650
19.10	2.608	3.134	2.598	5.622	6.663		11.730
19.20	2.588	3.118	2.603	5.582	6.625		11.820
19.30	2.570	3.103	2.609	5.541	6.590		11.900
19.40	2.552	3.088	2.614	5.500	6.555		11.980
19.50	2.534	3.073	2.619	5.459	6.520		12.060
19.60	2.516	3.059	2.625	5.418	6.484		12.140
19.70	2.497	3.044	2.630	5.377	6.449		12.220
19.80	2.479	3.029	2.636	5.336	6.414		12.300

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
19.90	2.462	3.015	2.641	5.298	6.380		12.38
20.00	2.446	3.001	2.647	5.260	6.348		12.46
20.10	2.429	2.987	2.652	5.223	6.315		12.54
20.20	2.413	2.973	2.658	5.186	6.283		12.63
20.30	2.396	2.959	2.663	5.148	6.250		12.71
20.40	2.380	2.945	2.669	5.111	6.216		12.79
20.50	2.364	2.931	2.674	5.074	6.185		12.87
20.60	2.348	2.918	2.680	5.036	6.086		12.95
20.70	2.333	2.905	2.685	4.998	5.980		13.04
20.80	2.318	2.892	2.691	4.960	5.873		13.12
20.90	2.303	2.879	2.696	4.922	5.767		13.20
21.00	2.288	2.865	2.702	4.884	5.660		13.28
21.10	2.273	2.852	2.707	4.847	5.554		13.36
21.20	2.258	2.839	2.713	4.811	5.493		13.45
21.30	2.244	2.827	2.718	4.763	5.540		13.53
21.40	2.230	2.814	2.724	4.754	5.587		13.61
21.50	2.215	2.802	2.729	4.725	5.634		13.70
21.60	2.201	2.790	2.734	4.696	5.681		13.78
21.70	2.187	2.777	2.740	4.667	5.728		13.86
21.80	2.173	2.765	2.745	4.639	5.775		13.95
21.90	2.160	2.753	2.751	4.607	5.770		14.03
22.00	2.147	2.741	2.756	4.573	5.743		14.11
22.10	2.134	2.729	2.762	4.540	5.716		14.19
22.20	2.121	2.718	2.767	4.507	5.689		14.27
22.30	2.108	2.706	2.773	4.473	5.662		14.35
22.40	2.096	2.694	2.778	4.440	5.634		14.44
22.50	2.083	2.683	2.784	4.408	5.607		14.52
22.60	2.071	2.672	2.789	4.383	5.582		14.60
22.70	2.059	2.660	2.795	4.359	5.557		14.69
22.80	2.047	2.649	2.800	4.335	5.532		14.77
22.90	2.035	2.638	2.806	4.311	5.506		14.86
23.00	2.023	2.627	2.812	4.286	5.481		14.94
23.10	2.011	2.616	2.817	4.262	5.456		15.03
23.20	1.999	2.605	2.822	4.236	5.431		15.11
23.30	1.988	2.594	2.827	4.209	5.407		15.20
23.40	1.977	2.584	2.831	4.182	5.383		15.28
23.50	1.966	2.573	2.836	4.155	5.359		15.36
23.60	1.955	2.563	2.840	4.127	5.335		15.45
23.70	1.944	2.552	2.845	4.100	5.310		15.53
23.80	1.933	2.542	2.850	4.073	5.286		15.61

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
23.90	1.923	2.532	2.854	4.050			15.69
24.00	1.913	2.522	2.859	4.027			15.77
24.10	1.903	2.512	2.863	4.005			15.85
24.20	1.892	2.503	2.867	3.983			15.93
24.30	1.882	2.493	2.872	3.960			16.01
24.40	1.872	2.483	2.876	3.938			16.10
24.50	1.862	2.473	2.881	3.916			16.18
24.60	1.853	2.464	2.886	3.895			16.26
24.70	1.843	2.454	2.892	3.873			16.35
24.80	1.833	2.445	2.897	3.852			16.43
24.90	1.824	2.436	2.902	3.831			16.52
25.00	1.814	2.426	2.908	3.810			16.60
25.10	1.805	2.417	2.913	3.788			16.69
25.20	1.796	2.408	2.917	3.768			16.77
25.30	1.787	2.398	2.921	3.748			16.86
25.40	1.776	2.389	2.924	3.729			16.94
25.50	1.769	2.380	2.928	3.709			17.03
25.60	1.760	2.371	2.931	3.689			17.11
25.70	1.751	2.362	2.935	3.670			17.20
25.80	1.742	2.353	2.938	3.650			17.28
25.90	1.734	2.345	2.942	3.632			17.36
26.00	1.725	2.336	2.945	3.614			17.44
26.10	1.717	2.328	2.949	3.595			17.53
26.20	1.708	2.319	2.953	3.577			17.61
26.30	1.700	2.311	2.956	3.559			17.69
26.40	1.691	2.302	2.960	3.541			17.77
26.50	1.683	2.294	2.963				17.85
26.60	1.675	2.286	2.967				17.94
26.70	1.667	2.277	2.971				18.02
26.80	1.659	2.269	2.974				18.11
26.90	1.651	2.261	2.978				18.19
27.00	1.643	2.253	2.982				18.28
27.10	1.636	2.245	2.985				18.36
27.20	1.628	2.237	2.990				18.45
27.30	1.621	2.229	2.995				18.53
27.40	1.614	2.221	3.000				18.62
27.50	1.606	2.214	3.006				18.70
27.60	1.599	2.206	3.011				18.79
27.70	1.592	2.198	3.016				18.87
27.80	1.585	2.190	3.021				18.96

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION CTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
27.90	1.577	2.183	3.024				19.06
28.00	1.570	2.175	3.028				19.19
28.10	1.563	2.168	3.032				19.31
28.20	1.556	2.160	3.035				19.42
28.30	1.549	2.153	3.039				19.54
28.40	1.542	2.145	3.043				19.65
28.50	1.535	2.138	3.047				19.73
28.60	1.530	2.132	3.052				19.78
28.70	1.524	2.125	3.057				19.82
28.80	1.518	2.119	3.062				19.87
28.90	1.512	2.112	3.067				19.92
29.00	1.506	2.106	3.072				19.97
29.10	1.500	2.100	3.077				20.02
29.20	1.494	2.093	3.081				20.08
29.30	1.487	2.085	3.085				20.17
29.40	1.480	2.078	3.089				20.26
29.50	1.473	2.070	3.093				20.36
29.60	1.467	2.063	3.096				20.45
29.70	1.460	2.055	3.100				20.54
29.80	1.453	2.048	3.104				20.64
29.90	1.447	2.042	3.108				20.72
30.00	1.441	2.035	3.111				20.81
30.10	1.435	2.028	3.115				20.89
30.20	1.430	2.022	3.119				20.97
30.30	1.424	2.015	3.122				21.06
30.40	1.418	2.009	3.126				21.14
30.50	1.413	2.003	3.129				21.22
30.60	1.408	1.998	3.132				21.28
30.70	1.404	1.993	3.135				21.35
30.80	1.399	1.988	3.137				21.42
30.90	1.395	1.983	3.140				21.49
31.00	1.390	1.978	3.143				21.55
31.10	1.386	1.973	3.146				21.62
31.20	1.381	1.968	3.149				21.69
31.30	1.375	1.962	3.154				21.78
31.40	1.368	1.954	3.161				21.89
31.50	1.361	1.946	3.168				22.00
31.60	1.354	1.938	3.175				22.11
31.70	1.347	1.930	3.182				22.22
31.80	1.341	1.923	3.187				22.32

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
31.90	1.336	1.917	3.190				22.41
32.00	1.331	1.912	3.194				22.49
32.10	1.326	1.906	3.198				22.58
32.20	1.321	1.900	3.201				22.66
32.30	1.316	1.894	3.205				22.75
32.40	1.311	1.889	3.209				22.83
32.50	1.307	1.883	3.212				22.92
32.60	1.302	1.878	3.216				23.00
32.70	1.297	1.872	3.219				23.08
32.80	1.292	1.867	3.222				23.17
32.90	1.288	1.862	3.226				23.25
33.00	1.283	1.856	3.229				23.33
33.10	1.278	1.851	3.233				23.42
33.20	1.274	1.845	3.235				23.50
33.30	1.269	1.840	3.238				23.59
33.40	1.264	1.835	3.241				23.67
33.50	1.260	1.829	3.243				23.76
33.60	1.255	1.824	3.246				23.84
33.70	1.251	1.818	3.249				23.93
33.80	1.246	1.813	3.252				24.01
33.90	1.242	1.808	3.254				24.10
34.00	1.238	1.803	3.257				24.18
34.10	1.233	1.798	3.260				24.27
34.20	1.229	1.793	3.263				24.35
34.30	1.224	1.788	3.265				24.44
34.40	1.220	1.783	3.268				24.52
34.50	1.216	1.778	3.273				24.60
34.60	1.212	1.773	3.279				24.69
34.70	1.208	1.768	3.284				24.77
34.80	1.204	1.763	3.289				24.86
34.90	1.200	1.758	3.295				24.94
35.00	1.195	1.753	3.300				25.03
35.10	1.188	1.748	3.304				25.11
35.20	1.177	1.743	3.306				25.20
35.30	1.165	1.738	3.307				25.28
35.40	1.153	1.734	3.309				25.37
35.50	1.142	1.729	3.311				25.45
35.60	1.130	1.724	3.313				25.54
35.70	1.118	1.719	3.315				25.62
35.80	1.119	1.715	3.317				25.70

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
35.90	1.122	1.711	3.320				25.78
36.00	1.125	1.707	3.323				25.85
36.10	1.129	1.703	3.327				25.93
36.20	1.132	1.699	3.330				26.00
36.30	1.135	1.695	3.333				26.08
36.40	1.138	1.691	3.336				26.15
36.50	1.140	1.687	3.339				26.23
36.60	1.136	1.682	3.343				26.33
36.70	1.132	1.677	3.347				26.43
36.80	1.127	1.671	3.352				26.52
36.90	1.123	1.666	3.356				26.62
37.00	1.119	1.661	3.360				26.72
37.10	1.115	1.656	3.364				26.81
37.20	1.111	1.652	3.368				26.90
37.30	1.108	1.646	3.371				26.98
37.40	1.104	1.643	3.375				27.07
37.50	1.101	1.639	3.378				27.16
37.60	1.097	1.634	3.382				27.24
37.70	1.094	1.630	3.385				27.33
37.80	1.091	1.626	3.389				27.41
37.90	1.087	1.622	3.392				27.50
38.00	1.084	1.618	3.396				27.58
38.10	1.081	1.614	3.399				27.66
38.20	1.078	1.610	3.403				27.75
38.30	1.074	1.606	3.406				27.83
38.40	1.071	1.602	3.410				27.92
38.50	1.068	1.598	3.414				28.00
38.60	1.064	1.594	3.417				28.09
38.70	1.061	1.590	3.421				28.18
38.80	1.058	1.586	3.424				28.26
38.90	1.054	1.582	3.427				28.35
39.00	1.051	1.578	3.431				28.43
39.10	1.048	1.574	3.434				28.52
39.20	1.045	1.570	3.437				28.60
39.30	1.042	1.566	3.439				28.69
39.40	1.039	1.562	3.442				28.77
39.50	1.036	1.558	3.445				28.86
39.60	1.033	1.555	3.448				28.94
39.70	1.030	1.551	3.450				29.03
39.80	1.027	1.547	3.453				29.11

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
39.90	1.024	1.543	3.456				29.20
40.00	1.021	1.539	3.458				29.26
40.10	1.018	1.535	3.461				29.37
40.20	1.015	1.532	3.464				29.45
40.30	1.012	1.528	3.467				29.54
40.40	1.009	1.524	3.470				29.62
40.50	1.006	1.521	3.473				29.71
40.60	1.003	1.517	3.477				29.79
40.70	1.000	1.513	3.480				29.88
40.80	.997	1.510	3.484				29.96
40.90	.994	1.506	3.487				30.05
41.00	.992	1.502	3.491				30.13
41.10	.989	1.499	3.493				30.22
41.20	.986	1.495	3.494				30.30
41.30	.983	1.492	3.496				30.39
41.40	.981	1.488	3.498				30.48
41.50	.978	1.485	3.500				30.56
41.60	.975	1.481	3.502				30.65
41.70	.972	1.478	3.504				30.74
41.80	.970	1.474	3.508				30.82
41.90	.967	1.471	3.511				30.91
42.00	.964	1.467	3.515				31.00
42.10	.962	1.464	3.518				31.08
42.20	.959	1.461	3.521				31.17
42.30	.956	1.457	3.525				31.25
42.40	.954	1.454					31.34
42.50	.951	1.451					31.42
42.60	.949	1.448					31.51
42.70	.946	1.444					31.59
42.80	.943	1.441					31.67
42.90	.941	1.438					31.76
43.00	.938	1.435					31.84
43.10	.936	1.432					31.93
43.20	.933	1.428					32.01
43.30	.931	1.425					32.10
43.40	.928	1.422					32.19
43.50	.926	1.418					32.27
43.60	.923	1.415					32.36
43.70	.922	1.413					32.41
43.80	.922	1.413					32.42

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
43.90	.921	1.412					32.43
44.00	.921	1.412					32.44
44.10	.921	1.411					32.45
44.20	.920	1.411					32.46
44.30	.920	1.411					32.47
44.40	.920	1.410					32.48
44.50	.920	1.410					32.49
44.60	.919	1.410					32.50
44.70	.919	1.409					32.51
44.80	.919	1.409					32.52
44.90	.919	1.409					32.53
45.00	.918	1.408					32.54
45.10	.918	1.408					32.56
45.20	.918	1.408					32.57
45.30	.917	1.407					32.58
45.40	.917	1.407					32.59
45.50	.917	1.406					32.60
45.60	.917	1.406					32.61
45.70	.916	1.406					32.62
45.80	.916	1.405					32.63
45.90	.916	1.405					32.64
46.00	.915	1.405					32.65
46.10	.915	1.404					32.66
46.20	.915	1.404					32.67
46.30	.915	1.404					32.68
46.40	.914	1.403					32.69
46.50	.914	1.403					32.70
46.60	.914	1.403					32.71
46.70	.913	1.402					32.72
46.80	.913	1.402					32.73
46.90	.913	1.402					32.74
47.00	.913	1.401					32.75
47.10	.912	1.401					32.76
47.20	.912	1.400					32.77
47.30	.912	1.400					32.78
47.40	.911	1.400					32.79
47.50	.911	1.399					32.80
47.60	.911	1.399					32.81
47.70	.911	1.399					32.82
47.80	.910	1.398					32.83

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IP	DURA- TION DTR	
47.90	.910	1.398					32.64
48.00	.910	1.396					32.65
48.10	.910	1.397					32.66
48.20	.909	1.397					32.67
48.30	.909	1.397					32.68
48.40	.909	1.396					32.69
48.50	.908	1.396					32.90
48.60	.908	1.396					32.91
48.70	.908	1.395					32.92
48.80	.908	1.395					32.93
48.90	.907	1.394					32.94
49.00	.907	1.394					32.95
49.10	.907	1.394					32.96
49.20	.906	1.393					32.97
49.30	.906	1.393					32.98
49.40	.800	1.252					37.33
49.50	.798	1.250					37.41
49.60	.796	1.247					37.49
49.70	.795	1.245					37.56
49.80	.793	1.242					37.66
49.90	.791	1.240					37.75
50.00	.789	1.236					37.84
50.10	.787	1.235					37.92
50.20	.786	1.233					38.01
50.30	.784	1.230					38.10
50.40	.782	1.228					38.18
50.50	.780	1.226					38.27
50.60	.779	1.223					38.35
50.70	.777	1.221					38.44
50.80	.775	1.218					38.52
50.90	.774	1.216					38.61
51.00	.772	1.214					38.69
51.10	.770	1.211					38.78
51.20	.768	1.209					38.86
51.30	.767	1.207					38.95
51.40	.765	1.205					39.04
51.50	.763	1.202					39.12
51.60	.762	1.200					39.21
51.70	.761	1.198					39.30
51.80	.760	1.195					39.38

TABLE 8. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
51.90	.759	1.193					39.47
52.00	.759	1.191					39.56
52.10	.758	1.189					39.64
52.20	.757	1.186					39.73
52.30	.756	1.184					39.81
52.40	.753	1.182					39.90
52.50	.751	1.180					39.99
52.60	.748	1.178					40.07
52.70	.746	1.176					40.16
52.80	.743	1.174					40.25
52.90	.741	1.171					40.33
53.00	.739	1.169					40.42
53.10	.737	1.167					40.51
53.20	.736	1.165					40.59
53.30	.734	1.163					40.68
53.40	.733	1.161					40.76
53.50	.731	1.159					40.85
53.60	.729	1.157					40.94
53.70	.728	1.154					41.02
53.80	.726	1.152					41.11
53.90	.725	1.150					41.20
54.00	.723	1.148					41.28
54.10	.722	1.146					41.37
54.20	.720	1.144					41.46
54.30	.719	1.142					41.54
54.40	.717	1.140					41.63
54.50	.716	1.137					41.71
54.60	.714	1.135					41.80
54.70	.713	1.133					41.89
54.80	.711	1.131					41.97
54.90	.710	1.129					42.06
55.00	.709	1.127					42.14
55.10	.707	1.125					42.23
55.20	.706	1.123					42.31
55.30	.704	1.121					42.39
55.40	.703	1.119					42.48
55.50	.701	1.117					42.56
55.60	.700	1.115					42.65
55.70	.699	1.113					42.73
55.80	.697	1.111					42.82

TABLE B. AIF BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL 1
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
55.90	.696	1.109					42.91
56.00	.694	1.108					42.99
56.10	.693	1.106					43.06
56.20	.692	1.104					43.16
56.30	.690	1.102					43.25
56.40	.689	1.100					43.34
56.50	.688	1.098					43.42
56.60	.686	1.096					43.51
56.70	.685	1.094					43.60
56.80	.683	1.092					43.68
56.90	.682	1.090					43.77
57.00	.681	1.088					43.86
57.10	.679	1.086					43.94
57.20	.678	1.084					44.03
57.30	.677	1.083					44.11
57.40	.675	1.081					44.20
57.50	.674	1.079					44.29
57.60	.673	1.077					44.37
57.70	.671	1.075					44.46
57.80	.670	1.073					44.55
57.90	.669	1.072					44.63
58.00	.668	1.070					44.72
58.10	.666	1.068					44.81
58.20	.665	1.066					44.89
58.30	.664	1.064					44.96
58.40	.662	1.063					45.06
58.50	.661	1.061					45.15
58.60	.660	1.059					45.24
58.70	.659	1.057					45.32
58.80	.657	1.055					45.41
58.90	.656	1.054					45.50
59.00	.655	1.052					45.58
59.10	.654	1.050					45.67
59.20	.652	1.049					45.75
59.30	.651	1.047					45.84
59.40	.650	1.045					45.92
59.50	.649	1.044					46.01
59.60	.648	1.042					46.09
59.70	.646	1.040					46.18
59.80	.645	1.039					46.26

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			TIME OF ARRIVAL T
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	
59.90	.644	1.037					46.35
60.00	.643	1.035					46.44
60.10	.642	1.034					46.52
60.20	.640	1.032					46.61
60.30	.639	1.030					46.70
60.40	.638	1.029					46.78
60.50	.637	1.027					46.87
60.60	.636	1.025					46.96
60.70	.634	1.024					47.04
60.80	.633	1.022					47.13
60.90	.632	1.020					47.21
61.00	.631	1.019					47.30
61.10	.630	1.017					47.38
61.20	.629	1.015					47.47
61.30	.627	1.014					47.55
61.40	.626	1.012					47.64
61.50	.625	1.010					47.72
61.60	.624	1.009					47.81
61.70	.623	1.007					47.90
61.80	.622	1.005					47.99
61.90	.621	1.004					48.08
62.00	.620	1.002					48.17
62.10	.618	1.001					48.26
62.20	.617	.999					48.35
62.30	.616	.997					48.43
62.40	.615	.996					48.52
62.50	.614	.994					48.61
62.60	.613	.993					48.69
62.70	.612	.991					48.78
62.80	.611	.989					48.87
62.90	.610	.988					48.95
63.00	.609	.986					49.04
63.10	.608	.985					49.12
63.20	.606	.983					49.21
63.30	.605	.982					49.29
63.40	.604	.980					49.38
63.50	.603	.979					49.46
63.60	.602	.977					49.55
63.70	.601	.976					49.63
63.80	.600	.974					49.72

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
63.90	.599	.973					49.61
64.00	.598	.971					49.89
64.10	.597	.970					49.96
64.20	.596	.968					50.06
64.30	.595	.967					50.15
64.40	.594	.965					50.23
64.50	.593	.964					50.32
64.60	.592	.962					50.40
64.70	.591	.961					50.49
64.80	.590	.959					50.57
64.90	.589	.958					50.66
65.00	.588	.957					50.75
65.10	.587	.955					50.83
65.20	.586	.954					50.92
65.30	.585	.952					51.01
65.40	.584	.951					51.09
65.50	.583	.949					51.18
65.60	.582	.948					51.27
65.70	.581	.947					51.35
65.80	.580	.945					51.44
65.90	.579	.944					51.52
66.00	.578	.942					51.61
66.10	.577	.941					51.70
66.20	.576	.940					51.78
66.30	.575	.938					51.87
66.40	.574	.937					51.96
66.50	.573	.935					52.05
66.60	.572	.934					52.14
66.70	.571	.933					52.22
66.80	.570	.931					52.31
66.90	.569	.930					52.40
67.00	.568	.928					52.48
67.10	.567	.927					52.57
67.20	.566	.926					52.66
67.30	.565	.924					52.74
67.40	.565	.923					52.83
67.50	.564	.922					52.92
67.60	.563	.920					53.00
67.70	.562	.919					53.09
67.80	.561	.918					53.18

TABLE B. AIR BLAST TABLES-ENGLISH UNITS (CONTINUED)

SIDE ON PARAMETERS				REFLECTED PARAMETERS			
SCALED DISTANCE Z	EXCESS PRESSURE PS	POSITIVE IMPULSE IS	DURA- TION DTS	EXCESS PRESSURE PR	POSITIVE IMPULSE IR	DURA- TION DTR	TIME OF ARRIVAL T
67.90	.560	.916					53.26
68.00	.559	.915					53.35
68.10	.558	.914					53.43
66.20	.557	.912					53.52
68.30	.556	.911					53.60
68.40	.555	.910					53.69
68.50	.555	.908					53.77
68.60	.554	.907					53.86

TABLE OF SYMBOLS

COMPILED FREE-AIR BLAST DATA ON BARE SPHERICAL PENTOLITE (50/50)
WITH DENSITY OF 1.65 gm/cc FIRED AT SEA LEVEL CONDITIONS¹

SYMBOLS AND UNITS

		<u>Metric Units</u>	<u>English Units</u>
DTR	REFLECTED DURATION $\Delta t/W^{1/3}$	ms/kg ^{1/3}	ms/lb ^{1/3}
DTS	SIDE ON DURATION $\Delta t/W^{1/3}$	ms/kg ^{1/3}	ms/lb ^{1/3}
I	POSITIVE IMPULSE $\int_t^{t+\Delta} (p-p_o)dt$	kPa-ms	psi-ms
IR	REFLECTED IMPULSE $I/W^{1/3}$	kPa-ms/kg	psi-ms/lb ^{1/3}
IS	SIDE ON IMPULSE $I/W^{1/3}$	kPa-ms/kg	psi-ms/lb ^{1/3}
P	TOTAL PEAK PRESSURE	kPa	psi
P _o	AMBIENT SEA LEVEL PRESSURE	kPa	psi
PR	REFLECTED PRESSURE $(p-p_o)$	kPa	psi
PS	SIDE ON PRESSURE $(p-p_o)$	kPa	psi
R	DISTANCE FROM CENTER OF EXPLOSIVE	m	ft
T	TIME OF ARRIVAL	ms/lb ^{1/3}	ms/lb ^{1/3}
W	CHARGE WEIGHT	kg	lbs
Z	SCALED DISTANCE $R/W^{1/3}$	m/kg ^{1/3}	ft/lb ^{1/3}

¹Source of original data - BRL R 1092 by H.J. Goodman.

LIST OF Z RANGES

These air blast tables are presented using scaled distance values (Z) as the primary parameter rather than charge radii because scaled distance is a more generally used parameter in air blast studies.

1. Metric Units (metres/kilogram^{1/3})

Increments in (Z) are as follows:

Z	Increments of Z
0.006 - 0.06575	0.00025
0.0660 - 0.2800	0.0005
0.285 - 3.835	0.005

2. English Units (feet/pound^{1/3})

Increments in (Z) are used as follows:

Z	Increments of Z
0.105 to 1.320	0.005
1.33 to 5.00	0.01
5.1 to 68.7	0.1

DISTRIBUTION LIST

<u>No. of Copies</u>	<u>Organization</u>	<u>No. of Copies</u>	<u>Organization</u>
12	Commander Defense Technical Info Center ATTN: DDC-DDA Cameron Station Alexandria, VA 22314	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCMS 5001 Eisenhower Avenue Alexandria, VA 22333
1	Office Secretary of Defense The Pentagon Washington, DC 20301	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCLDC, T. Shirata 5001 Eisenhower Avenue Alexandria, VA 22333
1	Director Defense Advanced Research Projects Agency 1400 Wilson Blvd. Arlington, VA 22209	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCGC-L 5001 Eisenhower Avenue Alexandria, VA 22333
1	Commander US Army Engineer Waterways Experimental Station ATTN: Mr. D. Coltharp PO Box 631 Vicksburg, MS 29180	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCBSI 5001 Eisenhower Avenue Alexandria, VA 22333
1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCDMD-ST 5001 Eisenhower Avenue Alexandria, VA 22333	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCPA-S 5001 Eisenhower Avenue Alexandria, VA 22333
1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCDMD-T 5001 Eisenhower Avenue Alexandria, VA 22333	1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCDMD 5001 Eisenhower Avenue Alexandria, VA 22333
1	Commander US Army Materiel Devel and Readiness Command ATTN: DRCCP 5001 Eisenhower Avenue Alexandria, VA 22333		

DISTRIBUTION LIST

<u>No. of Copies</u>	<u>Organization</u>	<u>No. of Copies</u>	<u>Organization</u>
2	Commander US Army Armament Rsch and Devel Command ATTN: DRDAR-TSS (2 cys) Dover, NJ 07801	1	Commander US Army Electronics Rsch and Devel Command Technical Support Activity ATTN: DELSD-L Fort Monmouth, NJ 07703
1	Commander US Army Armament Materiel and Readiness Command ATTN: DRSAR-LEP-L, Tech Library Rock Island, IL 61299	3	Commander US Army Missile Research and Development Command ATTN: DRDMI-R DRDMI-C DRDMI-YDL Redstone Arsenal, AL 35809
1	Director US Army ARRADCOM Benet Weapons Laboratory ATTN: DRDAR-LCB-TL Watervliet, NY 12189	1	Commander US Army Tank Automotive Rs ch and Devel Command ATTN: DRDTA-UL Warren, MI 48090
1	Commander US Army Aviation R&D Command ATTN: DRS AV-E 12th and Spruce Streets St. Louis, MO 63166	5	Commander US Army Tank Automotive Rs ch and Devel Command ATTN: DRDTA Warren, MI 48090
1	Director US Army Air Mobility Rsch and Devel Lab Ames Research Center Moffett Field, CA 94035	1	Director US Army Materials and Mechanics Research Center Watertown, MA 02172
1	Director Applied Technology Lab US Army Research and Technology Laboratories ATTN: DAUDL-EU-MOS (VAT) Fort Eustis, VA 23604	1	Director US Army TRADOC Systems Analysis Activity ATTN: ATAA-SL, Tech Library White Sands Missile Range, NM 88002
1	Commander US Army Communications Rsch and Devel Command ATTN: DRDCO-PPA-SA Fort Monmouth, NJ 07703	1	Commander US Army Engineer School ATTN: ATSE-CDC Fort Belvoir, VA 22060

DISTRIBUTION LIST

<u>No. of Copies</u>	<u>Organization</u>	<u>No. of Copies</u>	<u>Organization</u>
1	Commander US Army Field Artillery School Fort Sill, OK 73505	2	AFATL-DLYW (W. Thomas) (J. Flint) Eglin AFB, FL 32542
2	Commandant US Army Field Artillery Center ATTN: ATSF-CA ATSF-CD-W Fort Sill, OK 73503	1	AFWL Kirtland AFB, NM 87117
1	Commander Concepts Analysis Agency 8120 Woodmont Avenue Bethesda, MD 20014		<u>Aberdeen Proving Ground</u> Dir, USAMSAA ATTN: DRXSY-D DRXSY-MP, H.Cohen
1	Commander Naval Surface Weapons Center Code DG-20 ATTN: Mr. Shamblen Dahlgren, VA 22448		Cdr, USATECOM ATTN: DRSTE-TO-F
1	Commander Naval Surface Weapons Ctr Silver Spring, MD 20910		Dir, Wpns Sys Concepts Team Bldg. E3516, EA ATTN: DRDAR-ACW
2	Commander Naval Weapons Center ATTN: Mel Keith Tech Library China Lake, CA 93555		
1	Commander Naval Research Laboratory Washington, DC 20375		
1	Commander Naval Ordnance Station Indian Head, MD 20640		
1	AFSC Andrews AFB Washington, DC 20331		

USER EVALUATION OF REPORT

Please take a few minutes to answer the questions below; tear out this sheet and return it to Director, US Army Ballistic Research Laboratory, ARRADCOM, ATTN: DRDAR-TSB, Aberdeen Proving Ground, Maryland 21005. Your comments will provide us with information for improving future reports.

1. BRL Report Number _____

2. Does this report satisfy a need? (Comment on purpose, related project, or other area of interest for which report will be used.)

3. How, specifically, is the report being used? (Information source, design data or procedure, management procedure, source of ideas, etc.) _____

4. Has the information in this report led to any quantitative savings as far as man-hours/contract dollars saved, operating costs avoided, efficiencies achieved, etc.? If so, please elaborate.

5. General Comments (Indicate what you think should be changed to make this report and future reports of this type more responsive to your needs, more usable, improve readability, etc.) _____

6. If you would like to be contacted by the personnel who prepared this report to raise specific questions or discuss the topic, please fill in the following information.

Name: _____

Telephone Number: _____

Organization Address: _____

SUPPLEMENTARY

INFORMATION



DEPARTMENT OF THE ARMY
U. S. ARMY ARMAMENT RESEARCH AND DEVELOPMENT COMMAND
U. S. ARMY BALLISTIC RESEARCH LABORATORY
ABERDEEN PROVING GROUND, MARYLAND 21005

DRDAR-TSB

15 Feb 80

SUBJECT: Corrected Pages to Memorandum Report ARBRL-MR-02975

AD-17080537
Commander
Defense Technical Info Center
ATTN: DDC-DDA
Cameron Station
Alexandria, VA 22314

1. Inclosed are corrected pages to Memorandum Report ARBRL-MR-02975, Titled: "Air Blast Tables for Spherical 50/50 Pentolite Charges at Side-On And Normal Incidence", dated December 1979. Report is UNCLASSIFIED.
2. Copy(s) of the subject document were forwarded to your organization on/or about 1 February 1980.
3. Request the inclosed pages be inserted in your copy of ARBRL-MR-02975 and the old pages be destroyed in accordance with pertinent security regulations.

FOR THE COMMANDER:

1 Incl
as

Vernon J. Wyatt
VERNON J. WYATT
Chief
Technical Support Division

I. INTRODUCTION

BRL Report 1092¹ has proven to be extremely useful for investigators using air blast parameters from spherical 50/50 pentolite charges detonated in free air. However, having been assigned various projects involving these types of charges, this author found it necessary to make constant calculations for specific distances not given in BRL Report 1092. To avoid the need for repetitive tedious calculations, a computer code was devised which, using linear interpolation of available data, produced a multiplicity of direct reading tables eliminating the need for further calculations.

Originally, these tables were made for use by the author. However, numerous requests for these have been received both locally and throughout the defense community so that it was decided to incorporate them into a formal report.

II. EXPLOSIVE FACTOR

These tables can be applied as approximations for use with other explosives. If the explosive factor for the desired explosive in relation to pentolite is known, then the weight of the explosive used times its explosive factor gives the equivalent weight of 50/50 pentolite for use with the tables.

The following table² lists some of the more commonly employed military explosives and their appropriate explosive factors.

The second column of the table gives the weight of pentolite equivalent to one kilogram of the explosive. For example, one kilogram of H-6 explosive will provide blast pressure and impulse equal to 1.17 kilograms of pentolite. This data is for free air blast conditions, (i.e., no ground reflected shock).

¹Source of original data - BRL R 1092, "Compiled Free Air Blast Data on Bare Spherical Pentolite" by H.J. Goodman

²JMEM Air-to-Surface Weapons Characteristics, FM-101-50-20, page 1-111, (CONFIDENTIAL)

EXPLOSIVE FACTOR TABLE

Comparative Air Blast of Bare Explosives

<u>Explosives</u>	<u>Equivalent Weight</u>
Comp B	1.02
H-6	1.17
HBX-1	1.08
HTA-4	1.10
Octol	0.96
Pentolite	1.00
Picratol	0.83
TNT	0.90
Tritonal	1.11
Minol II	1.01
Nitroglycerin	1.20

III. CONCLUSION

These tables have proven very useful to the author and many others in eliminating the need for preliminary calculations for each blast test. This is especially important in field work where a minimum of calculations is desired.

When used with 50/50 pentolite charges on which the tables are based, the tables are an extremely useful tool.

TABLE A

Air Blast Tables - Metric Units*

*(See page 77 for definitions of symbols)

TABLE OF SYMBOLS

COMPILED FREE-AIR BLAST DATA ON BARE SPHERICAL PENTOLITE (50/50)
WITH DENSITY OF 1.65 gm/cc FIRED AT SEA LEVEL CONDITIONS¹

SYMBOLS AND UNITS

		<u>Metric Units</u>	<u>English Units</u>
DTR	SCALED REFLECTED DURATION $\Delta t/W^{1/3}$	ms/kg ^{1/3}	ms/lb ^{1/3}
DTS	SCALED SIDE ON DURATION $\Delta t/W^{1/3}$	ms/kg ^{1/3}	ms/lb ^{1/3}
I	POSITIVE IMPULSE $\int_t^{t+t} (p-p_0)dt$	kPa-ms	psi-ms
IR	SCALED REFLECTED IMPULSE $I/W^{1/3}$	kPa-ms/kg	psi-ms/lb ^{1/3}
IS	SCALED SIDE ON IMPULSE $I/W^{1/3}$	kPa-ms/kg	psi-ms/lb ^{1/3}
p	TOTAL PEAK PRESSURE	kPa	psi
p ₀	AMBIENT SEA LEVEL PRESSURE	kPa	psi
PR	REFLECTED PRESSURE (p-p ₀)	kPa	psi
PS	SIDE ON PRESSURE (p-p ₀)	kPa	psi
R	DISTANCE FROM CENTER OF EXPLOSIVE	m	ft
T	SCALED TIME OF ARRIVAL $t/W^{1/3}$	ms/kg ^{1/3}	ms/lb ^{1/3}
W	CHARGE WEIGHT	kg	lbs
Z	SCALED DISTANCE $R/W^{1/3}$	m/kg	ft/lb ^{1/3}

LIST OF Z RANGES

These air blast tables are presented using scaled distance values (Z) as the primary parameter rather than charge radii because scaled distance is a more generally used parameter in air blast studies.

1. Metric Units (metres/kilogram^{1/3})

Increments in (Z) are as follows:

Z	Increments of Z
0.006 - 0.06575	0.00025
0.0660 - 0.2800	0.0005
0.285 - 3.835	0.005

2. English Units (feet/pound^{1/3})

Increments in (Z) are used as follows:

Z	Increments of Z
0.105 to 1.320	0.005
1.33 to 5.00	0.01
5.1 to 68.7	0.1