

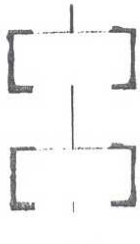
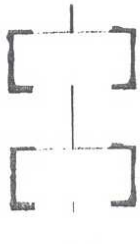
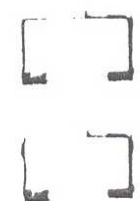
Thrust Coefficient

Appendix H

ϵ = Exit cone expansion Ratio

$\gamma = 1.22$

$\gamma = 1.22$

P_e/P_c	ϵ	$\epsilon(P_e/P_c)$	$C_{F_{vac}}$	$C_{F_{opt}}$		P_e/P_c	ϵ	$\epsilon(P_e/P_c)$	$C_{F_{vac}}$	$C_{F_{opt}}$
.47517	1.0000	.47517	1.23194	.75677		.029849	5.0000	.14924	1.61200	1.46276
.39486	1.0500	.41461	1.25344	.83884		.028264	5.2000	.14697	1.61781	1.47084
.34695	1.1000	.38165	1.27191	.89027		.026822	5.4000	.14484	1.62332	1.47848
.31158	1.1500	.35832	1.28834	.93002		.025505	5.6000	.14283	1.62855	1.48572
.28351	1.2000	.34021	1.30319	.96298		.024299	5.8000	.14094	1.63353	1.49259
.26036	1.2500	.32544	1.31677	.99133		.023191	6.0000	.13914	1.63828	1.49913
.24078	1.3000	.31301	1.32929	1.01628		.020778	6.5000	.13506	1.64925	1.51419
.22393	1.3500	.30231	1.34090	1.03859		.018778	7.0000	.13144	1.65912	1.52768
.20924	1.4000	.29293	1.35172	1.05878		.017095	7.5000	.12822	1.66808	1.53986
.19629	1.4500	.28462	1.36185	1.07723		.015663	8.0000	.12531	1.67626	1.55095
.18478	1.5000	.27717	1.37137	1.09420		.014431	8.5000	.12267	1.68378	1.56111
.17447	1.5500	.27043	1.38035	1.10992		.013361	9.0000	.12025	1.69072	1.57046
.16518	1.6000	.26429	1.38883	1.12454		.012425	9.5000	.11804	1.69716	1.57912
.15677	1.6500	.25867	1.39688	1.13821		.011599	10.0000	.11599	1.70316	1.58717
.14911	1.7000	.25349	1.40452	1.15104		.010866	10.5000	.11409	1.70877	1.59468
.14211	1.7500	.24869	1.41180	1.16311		.010212	11.0000	.11233	1.71404	1.60171
.13568	1.8000	.24423	1.41874	1.17452		.0090941	12.0000	.10913	1.72367	1.61454
.12976	1.8500	.24006	1.42538	1.18531		.0081773	13.0000	.10630	1.73229	1.62599
.12430	1.9000	.23617	1.43173	1.19556		.0074130	14.0000	.10378	1.74008	1.63630
.11923	1.9500	.23251	1.43781	1.20531		.0067674	15.0000	.10151	1.74716	1.64565
.11453	2.0000	.22906	1.44366	1.21460	.0062156	16.0000	.09945	1.75364	1.65420	
.10606	2.1000	.22273	1.45468	1.23195	.0057392	17.0000	.09757	1.75962	1.66205	
.098650	2.2000	.21703	1.46490	1.24787	.0053242	18.0000	.09584	1.76514	1.66931	
.092118	2.3000	.21187	1.47444	1.26256	.0049599	19.0000	.09424	1.77028	1.67604	
.086320	2.4000	.20717	1.48335	1.27619	.0046379	20.0000	.09276	1.77508	1.68232	
.081141	2.5000	.20285	1.49172	1.28887	.0040949	22.0000	.09009	1.78379	1.69370	
.076491	2.6000	.19888	1.49960	1.30072	.0036559	24.0000	.08774	1.79153	1.70378	
.072294	2.7000	.19519	1.50703	1.31184	.0032945	26.0000	.08566	1.79847	1.71281	
.068490	2.8000	.19177	1.51407	1.32230	.0029923	28.0000	.08379	1.80474	1.72096	
.065027	2.9000	.18858	1.52074	1.33216	.0027364	30.0000	.08209	1.81047	1.72837	
.061864	3.0000	.18559	1.52709	1.34149	.0025171	32.0000	.08055	1.81571	1.73517	
.056295	3.2000	.18015	1.53889	1.35874	.0023274	34.0000	.07913	1.82055	1.74142	
.051558	3.4000	.17530	1.54966	1.37436	.0021619	36.0000	.07783	1.82504	1.74721	
.047484	3.6000	.17094	1.55955	1.38861	.0020163	38.0000	.07662	1.82921	1.75259	
.043947	3.8000	.16700	1.56869	1.40169	.0018874	40.0000	.07550	1.83312	1.75762	
.040852	4.0000	.16341	1.57716	1.41375						
.038123	4.2000	.16012	1.58505	1.42494						
.035701	4.4000	.15709	1.59243	1.43535						
.033539	4.6000	.15428	1.59935	1.44507						
.031599	4.8000	.15167	1.60586	1.45419						