



Standard ASME Vessel Designs

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Material Specification SA-372		Outside Diameter		Minimum Wall Thickness		Nominal ⁽¹⁾ Wall Thickness		Nominal Weight Per Foot Length		Maximum ⁽²⁾ Vessel Length		Nominal Water Volume		Nominal Vessel Weight		Maximum Allowable Working Pressure (MAWP) ⁽³⁾							
																Section VIII, Div. 1, Appendix 22 +200° F (93°C) Max.				Section VIII, Division 1 +600° F (315°C) Max.			
																SF=3		SF=3 1/16" (1.6mm) Int. Corrosion Allowance		SF=3.5		SF=3.5 1/16" (1.6mm) Int. Corrosion Allowance	
Grade	Class	in.	mm	in.	mm	in.	mm	lbs./ft.	kg/m	ft.	m	cu. ft.	liters	lbs.	kg	psi	bar	psi	bar	psi	bar	psi	bar
J	65	22	559	0.415	10.5	0.474	12.0	109.1	162.4	40	12.19	93.5	2648	4365	1980	1341	92	1136	78	1149	79	974	67
	70	22	559	0.415	10.5	0.474	12.0	109.1	162.4	40	12.19	93.5	2648	4365	1980	1532	106	1298	90	1313	91	1113	77
	65	22	559	0.492	12.5	0.562	14.3	128.8	191.7	40	12.19	91.9	2603	5154	2337	1594	110	1388	96	1366	94	1190	82
	70	22	559	0.492	12.5	0.562	14.3	128.8	191.7	40	12.19	91.9	2603	5154	2337	1822	126	1587	109	1561	108	1361	94
	65	24	610	0.817	20.8	0.934	23.7	230.1	342.5	24	7.32	60.3	1708	5523	2505	2450	169	2257	156	2100	145	1935	133
	70	24	610	0.817	20.8	0.934	23.7	230.1	342.5	24	7.32	60.3	1708	5523	2505	2800	193	2580	178	2400	165	2212	153
	65	24	610	1.154	29.3	1.319	33.5	319.5	475.5	20	6.10	46.1	1306	6390	2898	3500	241	3304	228	3000	207	2832	195
	70	24	610	1.154	29.3	1.319	33.5	319.5	475.5	20	6.10	46.1	1306	6390	2898	4000	276	3776	260	3430	237	3238	223
	65	20	508	1.303	33.1	1.489	37.8	294.4	438.1	23	7.01	34.2	969	6770	3071	4811	332	4568	315	4124	284	3916	270
	70	20	508	1.303	33.1	1.489	37.8	294.4	438.1	23	7.01	34.2	969	6770	3071	5500	379	5221	360	4715	325	4477	309
	65	16	406	1.250	31.8	1.429	36.3	222.4	331.0	30	9.14	27.0	765	6672	3026	5833	402	5523	381	5000	345	4734	326
	70	16	406	1.250	31.8	1.429	36.3	222.4	331.0	30	9.14	27.0	765	6672	3026	6667	460	6312	435	5717	394	5413	373
	65	16	406	1.442	36.6	1.648	41.9	252.6	375.9	25	7.62	20.6	583	6315	2864	6798	469	6482	447	5828	402	5556	383
	70	16	406	1.442	36.6	1.648	41.9	252.6	375.9	25	7.62	20.6	583	6315	2864	7770	536	7409	511	6663	460	6353	438
	65	12.75	324	1.372	34.8	1.568	39.8	187.3	278.7	30	9.14	14.5	411	5619	2548	8242	568	7833	540	7065	487	6714	463
	70	12.75	324	1.372	34.8	1.568	39.8	187.3	278.7	30	9.14	14.5	411	5619	2548	9420	650	8952	617	8077	557	7676	529

(1) Minimum thickness is specified 12.5% less than nominal thickness per standard pipe tolerance.

(2) Vessel length can be shortened as needed to meet specific project requirements.

(3) MAWP per Appendix 22 is authorized for a maximum operating temperature of +200°F. At higher temperatures, vessels must be operated at the standard Division 1 MAWP.