

STAINLESS STEEL SEAMLESS/ERW PIPE WEIGHT TABLE

■ 일본공업규격 (JIS)

OUT DIAMETER			S/5S		S/10S		S/20S		S/40S		S/80S		S/120S		S/160S	
A	B	mm	WT	WT/M(kg)	WT	WT/M(kg)	WT	WT/M(kg)	WT	WT/M(kg)	WT	WT/M(kg)	WT	WT/M(kg)	WT	WT/M(kg)
				304 316		304 316		304 316		304 316		304 316		304 316		304 316
6A	1/8	10.5	1.0	0.237 0.238	1.2	0.278 0.280	1.5	0.336 0.338	1.7	0.373 0.375	2.4	0.484 0.487				
8A	1/4	13.8	1.2	0.377 0.379	1.65	0.499 0.503	2.0	0.588 0.592	2.2	0.636 0.640	3.0	0.807 0.812				
10A	3/8	17.3	1.2	0.481 0.484	1.65	0.643 0.647	2.0	0.762 0.767	2.3	0.859 0.865	3.2	1.12 1.13				
15A	1/2	21.7	1.65	0.824 0.829	2.1	1.03 1.03	2.5	1.20 1.20	2.8	0.62 1.33	3.7	1.66 1.67			4.7	1.99 2.00
20A	3/4	27.2	1.65	1.05 1.06	2.1	1.31 1.32	2.5	1.54 1.55	2.9	1.00 1.77	3.9	2.26 2.28			5.5	2.97 2.99
25A	1	34.0	1.65	1.33 1.34	2.8	2.18 2.19	3.0	2.32 2.33	3.4	1.85 2.61	4.5	3.31 3.33			6.4	4.40 4.43
32A	1-1/4	42.7	1.65	1.69 1.70	2.8	2.78 2.80	3.0	2.97 2.99	3.6	2.97 3.53	4.9	4.61 4.64			6.4	5.79 5.82
40A	1-1/2	48.6	1.65	1.93 1.94	2.8	3.19 3.21	3.0	3.41 3.43	3.7	3.88 4.16	5.1	5.53 5.56			7.1	7.34 7.39
50A	2	60.5	1.65	2.42 2.43	2.8	4.02 4.05	3.5	4.97 5.00	3.9	6.96 5.53	5.5	7.54 7.58			8.7	11.2 11.3
65A	2-1/2	76.3	2.1	3.88 3.91	3.0	5.48 5.51	3.5	6.35 6.39	5.2	11.20 9.27	7.0	12.1 12.2			9.5	15.8 15.9
80A	3	89.1	2.1	4.55 4.58	3.0	6.43 6.48	4.0	8.48 8.53	5.5	11.5 11.5	7.6	15.4 15.5			11.1	21.6 21.7
90A	3-1/2	101.6	2.1	5.21 5.24	3.0	7.37 7.42	4.0	9.72 9.79	5.7	13.6 13.7	8.1	18.9 19.0			12.7	28.1 28.3
100A	4	114.3	2.1	5.87 5.91	3.0	8.32 8.37	4.0	11.0 11.1	6.0	16.2 16.3	8.6	22.6 22.8	11.1	28.5 28.7	13.5	33.9 34.1
125A	5	139.8	2.8	9.56 9.62	3.4	11.6 11.6	5.0	16.8 16.9	6.6	21.9 22.0	9.5	30.8 31.0	12.7	40.2 40.5	15.9	49.1 49.4
150A	6	165.2	2.8	11.3 11.4	3.4	13.7 13.8	5.0	20.0 20.1	7.1	28.0 28.1	11.0	42.3 42.5	14.3	53.8 54.1	18.2	66.6 67.1
200A	8	216.3	2.8	14.9 15.0	4.0	21.2 21.3	6.5	34.0 34.2	8.2	42.5 42.8	12.7	64.4 64.8	18.2	89.8 90.4	23.0	111.0 111.0
250A	10	267.4	3.4	22.4 22.5	4.0	26.2 26.4	6.5	42.2 42.5	9.3	59.8 60.2	15.1	94.9 95.5	21.4	131.0 132.0	28.6	170.0 171.0
300A	12	318.5	4.0	31.3 31.5	4.5	35.2 35.4	6.5	50.5 50.8	10.3	79.1 79.6	17.4	131.0 131.0	25.4	185.0 187.0	33.3	237.0 238.0
350A	14	355.6							11.1	95.3 95.9	19.0	159.0 160.0	27.8	227.0 228.0	35.7	284.0 286.0
400A	16	406.4							12.7	125.0 125.0	21.4	205.0 207.0	30.9	289.0 291.0	40.5	369.0 372.0

■ 미국연방표준규격 (ANSI)

NPS DN mm	S/5S	S/10S	S/40S	S/80S
1/8 6 10.29		1.24 0.28	1.73 0.37	2.41 0.48
1/4 8 13.72		1.65 0.50	2.24 0.64	3.02 0.81
3/8 10 17.15		1.65 0.64	2.31 0.86	3.20 1.12
1/2 15 21.34	1.65 0.81	2.11 1.02	2.77 1.29	3.73 1.65
3/4 20 26.27	1.65 1.02	2.11 1.28	2.87 1.68	3.91 2.19
1 25 33.40	1.65 1.31	2.77 2.13	3.38 2.54	4.55 3.29
1-1/4 32 42.16	1.65 1.68	2.77 2.74	3.56 3.45	4.85 4.54
1-1/2 40 48.26	1.65 1.93	2.77 3.16	3.68 4.11	5.08 5.50
2 50 60.33	1.65 2.43	2.77 4.00	3.91 5.53	5.54 7.61
2-1/2 65 73.03	2.11 3.75	3.05 5.35	5.16 8.78	7.01 11.60
3 80 88.90	2.11 4.59	3.05 6.56	5.49 11.48	7.62 15.53
3-1/2 90 101.60	2.11 5.26	3.05 7.54	5.74 13.79	8.08 18.94
4 100 114.30	2.11 5.93	3.05 8.51	6.02 16.34	8.56 22.69
5 125 141.30	2.77 9.62	3.40 11.75	6.55 22.13	9.52 31.45
6 150 168.28	2.77 11.49	3.40 14.05	7.11 28.73	10.97 43.26
8 200 219.08	2.77 15.02	3.76 20.30	8.18 43.25	12.70 65.71
10 250 273.08	3.40 22.98	4.19 28.24	9.27 61.30	12.70 82.89
12 300 323.85	3.96 31.76	4.57 36.58	9.52 75.02	12.70 99.07
14 350 355.60	3.96 34.91	4.78 42.04		
16 400 406.40	4.19 42.25	4.78 48.13		

■ PIPE규격 조건표

배관용	관련규격				사용용도
	일본(JIS)	미국(ASTM)	독일(DIN)		
배관용 탄소강 강관	JIS G 3452	SGP	A120	St100	
압력배관용	JIS G 3454	STPG 370	A53 Gr.A	St35	350℃ 이하의 온도에서 사용하는 압력배관용 강관
탄소강 강관		STPG 410	A53 Gr.B	St45	
고압배관용	JIS G 3455	STS 370	A106 Gr.A	St35.4	350℃ 이하에서 사용하는 고압배관용 강관
탄소강 강관		STS 410	A106 Gr.B	St45.4	
		STS 480	A106 Gr.C	St55.4	
고온배관용	JIS G 3456	STPT 370	A106 Gr.A		350℃ 이상의 온도에서 사용하는 배관용 강관
탄소강 강관		STPT 410	A106 Gr.B		
		STS 480	A106 Gr.C		
배관용 합금강 강관	JIS G 3458	STPA 12	A335 P1	15Mo3	주로 고온의 배관에 사용하는 합금강 강관 (일반적으로 350℃~700℃)
		SPPA 20	A335 P2	16CrMo4	
		SPPA 22	A335 P12	13CrMo44	
		SPPA 23	A335 P11		
		SPPA 24	A335 P22	10CrMo910	
		SPPA 25	A335 P5	12CrMo195	
		SPPA 26	A335 P9	X12CrMo91	
저온배관용 강관	JIS G 3460	STPL 380	A333 Gr.1		빙점 이하의 특히 낮은 온도에서 사용하는 강관
		STPL 450	A333 Gr.3	ION14	
		STPL 690	A333 Gr.8	X8Ni9	

CARBON STEEL SEAMLESS/ERW PIPE WEIGHT TABLE

■ 미국연방표준규격 (ANSI)

NPS DN mm	S/10	S/20	S/30	STD	S/40	S/60	XS	S/80	S/100	S/120	S/140	S/160	XXS
1/8 6 10.3				1.73 0.37	1.73 0.37		2.41 0.47	2.41 0.47					
1/4 8 13.7				2.24 0.63	2.24 0.63		3.02 0.80	3.02 0.80					
3/8 10 17.1				2.31 0.84	2.31 0.84		3.20 1.10	3.20 1.10					
1/2 15 21.3				2.77 1.27	2.77 1.27		3.73 1.62	3.73 1.62				4.78 1.95	7.47 2.55
3/4 20 26.7				2.87 1.69	2.87 1.69		3.91 2.20	3.91 2.20				5.56 2.90	7.82 3.64
1 25 33.4				3.38 2.50	3.38 2.50		4.55 3.24	4.55 3.24				6.35 4.24	9.09 5.45
1-1/4 32 42.2				3.56 3.39	3.56 3.39		4.85 4.47	4.85 4.47				6.35 5.61	9.70 7.77
1-1/2 40 48.3				3.68 4.05	3.68 4.05		5.08 5.41	5.08 5.41				7.14 7.25	10.16 9.56
2 50 60.3				3.91 5.44	3.91 5.44		5.54 7.48	5.54 7.48				8.74 11.11	11.07 13.44
2-1/2 65 73.0				5.16 8.63	5.16 8.63		7.01 11.41	7.01 11.41				9.52 14.90	14.02 20.39
3 80 88.9				5.49 11.29	5.49 11.29		7.62 15.27	7.62 15.27				11.13 21.35	15.24 27.68
3-1/2 90 101.6				5.74 13.57	5.74 13.57		8.08 18.63	8.08 18.63					
4 100 114.3				6.02 16.07	6.02 16.07		8.56 22.32	8.56 22.32		11.13 28.32		13.49 33.54	17.12 41.03
5 125 141.3				6.55 21.77	6.55 21.77		9.52 30.94	9.52 30.94		12.70 40.28		15.88 49.11	19.05 57.43
6 150 168.3				7.11 28.26	7.11 28.26		10.97 42.56	10.97 42.56		14.27 54.20		18.26 67.56	21.95 79.22
8 200 219.1	6.35 33.31	7.04 36.81	8.18 42.55	8.18 42.55		12.70 64.64	12.70 64.64	15.09 75.92	18.26 90.44	20.62 100.92	23.01 111.27	22.22 107.88	
10 250 273.0	6.35 41.75	7.80 51.01	9.27 60.29	9.27 60.29	12.70 81.52	12.70 81.52	15.09 95.97	18.26 114.71	21.44 133.00	25.40 155.09	28.57 172.21	25.40 155.09	
12 300 323.8	6.35 49.71	8.38 65.18	9.53 73.86	10.31 79.70	14.27 108.92	12.70 97.43	17.48 132.04	21.44 159.86	25.40 186.91	28.57 208.00	33.32 238.68	25.40 186.91	
14 350 355.6	6.35 54.69	7.92 67.90	9.53 81.33	9.53 81.33	11.13 94.55	15.09 126.71	12.70 107.39	19.05 158.10	23.83 194.96	27.79 224.65	31.75 253.56	35.71 281.70	
16 400 406.4	6.35 62.64	7.92 77.83	9.53 93.27	9.53 93.27	12.70 123.30	16.66 160.12	12.70 123.30	21.44 203.53	26.19 245.56	30.96 286.64	36.53 333.19	40.49 365.36	
18 450 457.0	6.35 70.57	7.92 87.71	11.13 122.38	9.53 105.16	14.27 155.80	19.05 205.74	12.70 139.15	23.83 254.55	29.36 309.62	34.92 363.46	39.67 408.26	45.24 459.37	
20 500 508.0	6.35 78.55	9.53 117.15	12.70 155.12	9.53 117.15	15.09 183.42	20.62 247.83	12.70 155.12	26.19 311.17	32.54 381.53	38.10 441.49	44.45 508.11	50.01 564.81	
22 550 558.8	6.35 86.51	9.53 129.08	12.70 171.03	9.53 129.08		22.23 294.14	12.70 171.03	28.58 373.69	34.93 451.25	41.28 526.82	47.63 600.40	53.98 671.99	
24 600 610.0	6.35 94.53	9.53 141.12	14.27 209.64	9.53 141.12	17.48 255.41	24.61 355.26	12.70 187.06	30.96 442.08	38.89 547.71	46.02 640.03	52.37 720.15	59.54 808.22	

■ 일본공업규격 (JIS)

A	B	mm	SGP	S/10	S/20	S/30	S/40	S/60	S/80	S/100	S/120	S/140	S/160	단중계산공식										
6A	1/8	10.5	2.0	0419			1.7	0.369	2.2	0.450	2.4	0.479			1. Carbon Steel									
8A	1/4	13.8	2.3	0.652			2.2	0.629	2.4	0.675	3.0	0.799			= (O.D -t)*t*0.02466									
10A	3/8	17.3	2.3	0.851			2.3	0.851	2.8	1.00	3.2	1.11			2. SUS 304									
15A	1/2	21.7	2.8	1.31			2.8	1.31	3.2	1.46	3.7	1.64		4.7	1.97	= (O.D -t)*t*0.02491								
20A	3/4	27.2	2.8	1.68			2.9	1.74	3.4	2.00	3.9	2.24		5.5	2.94	3. SUS 316								
25A	1	34.0	3.2	2.43			3.4	2.57	3.9	2.89	4.5	3.27		6.4	4.36	= (O.D -t)*t*0.02507								
32A	1-1/4	42.7	3.5	3.38			3.6	3.47	4.5	4.24	4.9	4.57		6.4	5.73									
40A	1-1/2	48.6	3.5	3.89			3.7	4.10	4.5	4.89	5.1	5.47		7.1	7.27	O.D : 외경 (Out Diameter)								
50A	2	60.5	3.8	5.31	3.2	4.52	3.9	5.44	4.9	6.72	5.5	7.46		8.7	11.1	t : 두께(Thickness)								
65A	2-1/2	76.3	4.2	7.47	4.5	7.97	5.2	9.12	6.0	10.4	7.0	12.0		9.5	15.6									
80A	3	89.1	4.2	8.79	4.5	9.39	5.5	11.3	6.6	13.4	7.6	15.3		11.1	21.4									
90A	3-1/2	101.6	4.2	10.1	4.5	10.8	5.7	13.5	7.0	16.3	8.1	18.7		12.7	27.8									
100A	4	114.3	4.5	12.2	4.9	13.2	6.0	16.0	7.1	18.8	8.6	22.4	11.1	28.2	13.5	33.6								
125A	5	139.8	4.5	15.0	5.1	16.9	6.6	21.7	8.1	26.3	9.5	30.5	12.7	39.8	15.9	48.6								
150A	6	165.2	5.0	19.8	5.5	21.7	7.1	27.7	9.3	35.8	11.0	41.8	14.3	53.2	18.2	66.0								
200A	8	216.3	5.8	30.1	6.4	33.1	7.0	36.1	8.2	42.1	10.3	52.3	12.7	63.8	15.1	74.9	18.2	88.9	20.6	99.4	23.0	110.0		
250A	10	267.4	6.6	42.4	6.4	41.2	7.8	49.9	9.3	59.2	12.7	79.8	15.1	93.9	18.2	112.0	21.4	130.0	25.4	152.0	28.6	168.0		
300A	12	318.5	6.9	53.0	6.4	49.3	8.4	64.2	10.3	78.3	14.3	107.0	17.4	129.0	21.4	157.0	25.4	184.0	28.6	204.0	33.3	234.0		
350A	14	355.6	7.9	67.7	6.4	63.1	7.9	67.7	9.5	81.1	11.1	94.3	15.1	127.0	19.0	158.0	23.8	195.0	27.8	225.0	31.8	254.0	35.7	282.0
400A	16	406.4	7.9	77.6	6.4	73.9	77.6	9.5	93.0	12.7	123.0	16.7	160.0	21.4	203.0	26.2	246.0	30.9	286.0	36.5	333.0	40.5	365.0	
450A	18	457.2	7.9	87.5	6.4	71.1	7.9	87.5	11.1	122.0	14.3	156.0	19.0	205.0	23.8	254.0	29.4	310.0	34.9	363.0	39.7	409.0	45.2	459.0
500A	20	508.0	7.9	97.4	6.4	79.2	9.5	117.0	12.7	155.0	15.1	184.0	20.6	248.0	26.2	311.0	32.5	381.0	38.1	441.0	44.4	508.0	50.0	565.0
550A	22	558.8			6.4	87.2	9.5	129.0	12.7	171.0	15.9	213.0	22.2	294.0	28.6	374.0	34.9	451.0	41.3	527.0	47.6	600.0	54.0	672.0
600A	24	609.6			6.4	95.2	9.5	141.0	12.7	210.0	17.5	256.0	24.6	355.0	31.0	442.0	38.9	547.0	46.0	639.0	52.4	720.0	59.5	807.0