

Technical Information

Steel pipes:

Carbon steel pipes for ordinary piping : SGP

Carbon steel pipes for pressure service : STPG

Nominal size		Outside diameter (mm)	SGP (JIS G3452)	STPG (JIS G3454)					
				Nominal thickness					
				Sch10	Sch20	Sch30	Sch40	Sch60	Sch80
A	B		Wall thickness (mm)						
6	1/8"	10.5	2.0	-	-	-	1.7	2.2	2.4
8	1/4"	13.8	2.3	-	-	-	2.2	2.4	3.0
10	3/8"	17.3	2.3	-	-	-	2.3	2.8	3.2
15	1/2"	21.7	2.8	-	-	-	2.8	3.2	3.7
20	3/4"	27.2	2.8	-	-	-	2.9	3.4	3.9
25	1"	34.0	3.2	-	-	-	3.4	3.9	4.5
32	1 1/4"	42.7	3.5	-	-	-	3.6	4.5	4.9
40	1 1/2"	48.6	3.5	-	-	-	3.7	4.5	5.1
50	2"	60.5	3.8	-	3.2	-	3.9	4.9	5.5
65	2 1/2"	76.3	4.2	-	4.5	-	5.2	6.0	7.0
80	3"	89.1	4.2	-	4.5	-	5.5	6.6	7.6
90	3 1/2"	101.6	4.2	-	4.5	-	5.7	7.0	8.1
100	4"	114.3	4.5	-	4.9	-	6.0	7.1	8.6
125	5"	139.8	4.5	-	5.1	-	6.6	8.1	9.5
150	6"	165.2	5.0	-	5.5	-	7.1	9.3	11.0
200	8"	216.3	5.8	-	6.4	7.0	8.2	10.3	12.7
250	10"	267.4	6.6	-	6.4	7.8	9.3	12.7	15.1
300	12"	318.5	6.9	-	6.4	8.4	10.3	14.3	17.4
350	14"	355.6	7.9	6.4	7.9	9.5	11.1	15.1	19.0
400	16"	406.4	7.9	6.4	7.9	9.5	12.7	16.7	21.4

Stainless steel pipes (JIS G3459)

Nominal size		Outside diameter (mm)	Nominal thickness				
			Sch5S	Sch10S	Sch20S	Sch40	Sch80
			Wall thickness (mm)				
6	½"	10.5	1.0	1.2	1.5	1.7	2.4
8	¾"	13.8	1.2	1.65	2.0	2.2	3.0
10	¾"	17.3	1.2	1.65	2.0	2.3	3.2
15	½"	21.7	1.65	2.1	2.5	2.8	3.7
20	¾"	27.2	1.65	2.1	2.5	2.9	3.9
25	1"	34.0	1.65	2.8	3.0	3.4	4.5
32	1¼"	42.7	1.65	2.8	3.0	3.6	4.9
40	1½"	48.6	1.65	2.8	3.0	3.7	5.1
50	2"	60.5	1.65	2.8	3.5	3.9	5.5
65	2½"	76.3	2.1	3.0	3.5	5.2	7.0
80	3"	89.1	2.1	3.0	4.0	5.5	7.6
90	3½"	101.6	2.1	3.0	4.0	5.7	8.1
100	4"	114.3	2.1	3.0	4.0	6.0	8.6
125	5"	139.8	2.8	3.4	5.0	6.6	9.5
150	6"	165.2	2.8	3.4	5.0	7.1	11.0
200	8"	216.3	2.8	4.0	6.5	8.2	12.7
250	10"	267.4	3.4	4.0	6.5	9.3	15.1
300	12"	318.5	4.0	4.5	6.5	10.3	17.4
350	14"	355.6	-	-	-	11.1	19.0
400	16"	406.4	-	-	-	12.7	21.4

Rigid steel conduit (JIS C8305)

Thicker conduit

Nominal size	Outside diameter (mm)	Thickness (mm)
G**(PF*)		
½" (16)	21.0	2.3
¾" (22)	26.5	2.3
1" (28)	33.3	2.5
1¼" (36)	41.9	2.5
1½" (42)	47.8	2.5
2" (54)	59.6	2.8
2½" (70)	75.2	2.8
3" (82)	87.9	2.8
3½" (92)	100.7	3.5
4" (104)	113.4	3.5

Thinner conduit

Nominal size	Outside diameter (mm)	Thickness (mm)
C***		
19	19.1	1.6
25	25.4	1.6
31	31.8	1.6
39	38.1	1.6
51	50.8	1.6
63	63.5	2.0
75	76.2	2.0

***Thread CTC: JIS C 8305 Appendix, former JIS B 0204

*Thread PF: former JIS B 0202

**Thread CTG: JIS C 8305 Appendix, former JIS B 0204, equivalent to the Thread G (BSPP): JIS B 0202/ISO 228-1

Light gauge stainless tube for ordinary piping (JIS G3448)

Nominal size	Outside diameter (mm)	Thickness (mm)
Su		
8	9.52	0.7
10	12.7	0.8
13	15.88	0.8
20	22.22	1.0
25	28.58	1.0
30	34.0	1.2
40	42.7	1.2
50	48.6	1.2
60	60.5	1.5
75	76.3	1.5
80	89.1	2.0
100	114.3	2.0
125	139.8	2.0
150	165.2	3.0

Stainless steel sanitary pipes (JIS G3447)

Outside diameter (mm)	Thickness (mm)
25.4	1.2
31.8	1.2
38.1	1.2
50.8	1.5
63.5	2.0
76.3	2.0
89.1	2.0
101.6	2.0
114.3	3.0
139.8	3.0
165.2	3.0

Steel pipe : EN10255 (transition from BS1387)

Nominal size		Type L2(L)			Series M&H		M	H
		Outside diameter (mm)		Wall Thickness (mm)	Outside diameter (mm)		Wall Thickness (mm)	Wall Thickness (mm)
6	⅝"	-	-	-	9.8	10.6	2.0	2.6
8	¾"	13.2	13.6	1.8	13.2	14.0	2.3	2.9
10	⅞"	16.7	17.1	1.8	16.7	17.5	2.3	2.9
15	½"	21.0	21.4	2.0	21.0	21.8	2.6	3.2
20	¾"	26.4	26.9	2.3	26.5	27.3	2.6	3.2
25	1"	33.2	33.8	2.6	33.3	34.2	3.2	4.0
32	1¼"	41.9	42.5	2.6	42.0	42.9	3.2	4.0
40	1½"	47.8	48.4	2.9	47.9	48.8	3.2	4.0
50	2"	59.6	60.2	2.9	59.7	60.8	3.6	4.5
65	2½"	75.2	76.0	3.2	75.3	76.6	3.6	4.5
80	3"	87.9	88.7	3.2	88.0	89.5	4.0	5.0
100	4"	113.0	113.9	3.6	113.1	115.0	4.5	5.4
125	5"	-	-	-	138.5	140.8	5.0	5.4
150	6"	-	-	-	163.9	165.1	5.0	5.4

not in BS1387

different from BS1387

Copper tube for construction piping (JIS H3300)

Nominal size		Outside diameter (mm)	Thickness (mm)	
			M type	L type
A	B		Water Supply	Gas and water supply
8	¼"	9.52	-	0.76
10	¾"	12.70	0.64	0.89
15	½"	15.88	0.71	1.02
-	¾"	19.05	-	1.07
20	¾"	22.22	0.81	1.14
25	1"	28.58	0.89	1.27
32	1¼"	34.92	1.07	1.40
40	1½"	41.28	1.24	1.52
50	2"	53.98	1.47	1.78

Copper tube for refrigerant piping (JIS H3300)

Nominal size	Outside diameter (mm)	Thickness (mm)
¼"	6.35	0.8
¾"	9.52	0.8
½"	12.70	0.8
¾"	15.88	1.0
¾"	19.05	1.0
¾"	22.22	1.0
1"	25.40	1.0
1½"	28.58	1.0
1¼"	31.75	1.1
1¾"	34.92	1.1
1½"	38.10	1.15
1¾"	41.28	1.2
1¼"	44.45	1.25
2"	50.80	1.4

Steel Pipe: ASME / ANSI B36.10

Nominal size		Outside Diameter		Nominal Thickness															
				Schdule 10		Schdule 20		Schdule 30		STD		Schdule 40		XS		Schdule 60		Schdule 80	
				Wall Thickness															
A	B	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
6	½"	10.3	0.405	-	-	-	-	-	-	1.73	0.068	1.73	0.068	2.41	0.095	-	-	2.41	0.095
8	¾"	13.7	0.540	-	-	-	-	-	-	2.24	0.088	2.24	0.088	3.02	0.119	-	-	3.02	0.119
10	¾"	17.1	0.675	-	-	-	-	-	-	2.31	0.091	2.31	0.091	3.20	0.126	-	-	3.20	0.126
15	½"	21.3	0.840	-	-	-	-	-	-	2.77	0.109	2.77	0.109	3.73	0.147	-	-	3.73	0.147
20	¾"	26.7	1.050	-	-	-	-	-	-	2.87	0.113	2.87	0.113	3.91	0.154	-	-	3.91	0.154
25	1"	33.4	1.315	2.8	0.109	-	-	-	-	3.38	0.133	3.38	0.133	4.55	0.179	-	-	4.55	0.179
32	1¼"	42.2	1.660	2.8	0.109	-	-	-	-	3.56	0.140	3.56	0.140	4.85	0.191	-	-	4.85	0.191
40	1½"	48.3	1.900	2.8	0.109	-	-	-	-	3.68	0.145	3.68	0.145	5.08	0.200	-	-	5.08	0.200
50	2"	60.3	2.375	2.8	0.109	-	-	-	-	3.91	0.154	3.91	0.154	5.54	0.218	-	-	5.54	0.218
65	2½"	73.0	2.875	3.1	0.120	-	-	-	-	5.16	0.203	5.16	0.203	7.01	0.276	-	-	7.01	0.276
80	3"	88.9	3.500	3.1	0.120	-	-	-	-	5.49	0.216	5.49	0.216	7.62	0.300	-	-	7.62	0.300
90	3½"	101.6	4.000	3.1	0.120	-	-	-	-	5.74	0.226	5.74	0.226	8.09	0.318	-	-	8.08	0.318
100	4"	114.3	4.500	3.1	0.120	-	-	-	-	6.02	0.237	6.02	0.237	8.56	0.337	-	-	8.56	0.337
125	5"	141.3	5.563	3.4	0.134	-	-	-	-	6.55	0.258	6.55	0.258	9.53	0.375	-	-	9.53	0.375
150	6"	168.3	6.625	3.4	0.134	-	-	-	-	7.11	0.280	7.11	0.280	10.97	0.432	-	-	10.97	0.432
200	8"	219.1	8.625	3.8	0.140	6.35	0.250	7.04	0.277	8.18	0.322	8.18	0.322	12.70	0.500	10.31	0.406	12.70	0.500
250	10"	273.1	10.750	4.2	0.165	6.35	0.250	7.80	0.307	9.27	0.365	9.27	0.365	12.70	0.500	12.70	0.500	15.09	0.594
300	12"	323.9	12.750	4.6	0.180	6.35	0.250	8.38	0.330	9.53	0.375	10.31	0.406	12.70	0.500	14.27	0.562	17.48	0.688
350	14"	355.6	14.000	6.4	0.250	7.92	0.312	9.53	0.375	9.53	0.375	11.13	0.438	12.70	0.500	15.09	0.594	19.05	0.750
400	16"	406.4	16.000	6.4	0.250	7.92	0.312	9.53	0.375	9.53	0.375	12.70	0.500	12.70	0.500	16.66	0.656	21.44	0.844
450	18"	457.2	18.000	6.4	0.250	7.92	0.312	11.13	0.438	9.53	0.375	14.27	0.562	12.70	0.500	19.05	0.750	23.83	0.938
500	20"	508.0	20.000	6.4	0.250	9.53	0.375	12.70	0.500	9.53	0.375	15.09	0.594	12.70	0.500	20.62	0.812	26.19	1.031
600	24"	610.0	24.000	6.4	0.250	9.53	0.375	14.27	0.502	9.53	0.375	17.48	0.688	12.70	0.500	24.61	0.909	30.96	1.219

 : Differs from JIS pipes by 3mm or more

Stainless Steel Pipe: ASME B36.19M-1985

Nominal size		Outside Diameter		Nominal Thickness							
				Schdule 5S		Schdule 10S		Schdule 40S		Schdule 80S	
				Wall Thickness							
A	B	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
6	½"	10.3	0.405	-	-	1.24	0.049	1.73	0.068	2.41	0.095
8	¾"	13.7	0.540	-	-	1.65	0.065	2.24	0.088	3.02	0.119
10	¾"	17.1	0.675	-	-	1.65	0.065	2.31	0.091	3.20	0.126
15	½"	21.3	0.840	1.65	0.065	2.11	0.083	2.77	0.109	3.75	0.147
20	¾"	26.7	1.050	1.65	0.065	2.11	0.083	2.87	0.113	3.91	0.154
25	1"	33.4	1.315	1.65	0.065	2.77	0.109	3.38	0.133	4.55	0.179
32	1¼"	42.2	1.660	1.65	0.065	2.77	0.109	3.56	0.140	4.85	0.191
40	1½"	48.3	1.900	1.65	0.065	2.77	0.109	3.68	0.145	5.08	0.200
50	2"	60.3	2.375	1.65	0.065	2.77	0.109	3.91	0.154	5.54	0.218
65	2½"	73.0	2.875	2.11	0.083	3.05	0.120	5.16	0.203	7.01	0.276
80	3"	88.9	3.500	2.11	0.083	3.05	0.120	5.49	0.216	7.62	0.300
90	3½"	101.6	4.000	2.11	0.083	3.05	0.120	5.74	0.226	8.08	0.318
100	4"	114.3	4.500	2.11	0.083	3.05	0.120	6.02	0.237	8.56	0.337
125	5"	141.3	5.563	2.77	0.109	3.40	0.134	6.55	0.258	9.53	0.375
150	6"	168.3	6.625	2.77	0.109	3.40	0.134	7.11	0.280	10.97	0.432
200	8"	219.1	8.625	2.77	0.109	3.76	0.148	8.18	0.322	12.70	0.500
250	10"	273.1	10.750	3.40	0.134	4.19	0.165	9.27	0.365	12.70	0.500
300	12"	323.9	12.750	3.96	0.156	4.57	0.180	9.53	0.375	12.70	0.500
350	14"	355.6	14.000	3.96	0.156	4.78	0.188	-	-	-	-
400	16"	406.4	16.000	4.19	0.165	4.78	0.188	-	-	-	-
450	18"	457.2	18.000	4.19	0.165	4.78	0.188	-	-	-	-
500	20"	508.0	20.000	4.78	0.188	5.54	0.218	-	-	-	-
550	22"	559.0	22.000	4.78	0.188	5.54	0.218	-	-	-	-
600	24"	610.0	24.000	5.54	0.218	6.35	0.250	-	-	-	-

 : Size differs from steel pipe