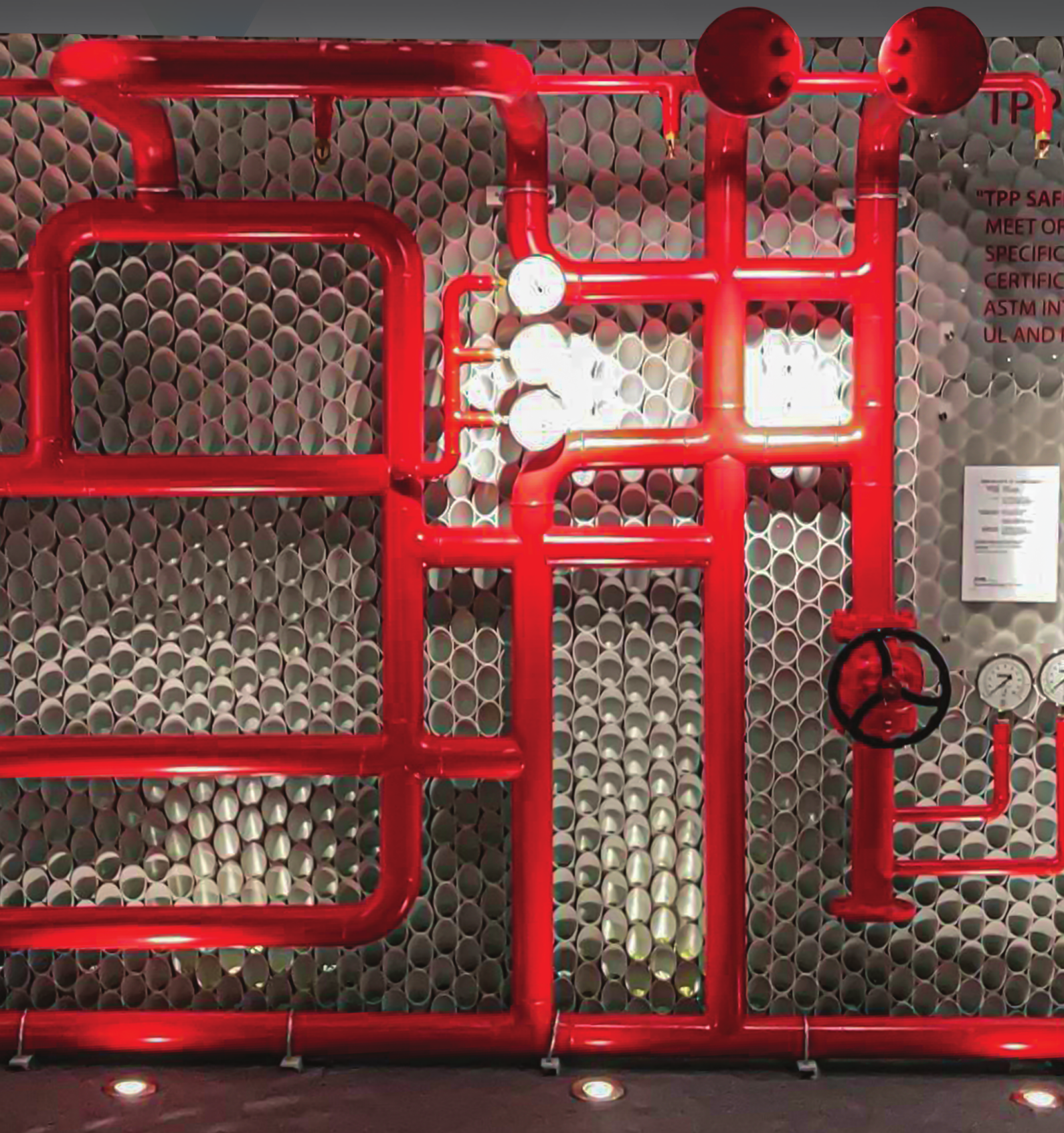
Carbon Steel Pipes for

ORDINARY PURPOSES & PIPING SYSTEM



Pipes for Fire Sprinkler Systems Ordinary Uses & Pressure Pipes

ASTM A53 (Schedule 5, 10, 40)

Welded Black Steel Pipes for Pressure Purposes

MATERIAL OF GRADE	(%) CHEMICAL COMPOSITION (Max)					MECHANICAL PROPERTIES (Min)			COLOR CODE
	C Max	Si Max	Mn Max	P Max	S Max	Yield Strength N/mm2 (min)	Tensile Strength N/mm2 (min)	Elongation % (min)	Material of Grade
Grade A	0.250	-	0.95	0.050	0.045	205	330	22	-
Grade B	0.300	-	1.20	0.050	0.045	240	415	18	-

NOMINAL SIZE		THICKNESS MM	OUTSIDE DIAMETER MM	WEIGHT (PLAIN END) KG/M	TEST PRESSURE(KPA)		SCHEDULE
in	mm	Std.	Std.	STD	Grade A	Grade B	
1/2"	15	2.77	21.30	1.27	4800	4800	40
3/4"	20	1.65	26.70	1.02	-	-	5
		2.11	26.70	1.28	-	-	10
		2.87	26.70	1.69	4800	4800	40
1"	25	1.65	33.40	1.29	-	-	5
		2.77	33.40	2.08	-	-	10
		3.38	33.40	2.50	4800	4800	40
1-1/4"	32	1.65	42.20	1.65	-	-	5
		2.77	42.20	2.96	-	-	10
		3.56	42.20	3.39	8300	9000	40
1-1/2"	40	1.65	48.30	1.90	-	-	5
		2.77	48.30	3.11	-	-	10
		3.68	48.30	4.05	8300	9000	40
2"	50	1.65	60.30	2.35	6735	7885	5
		2.77	60.30	3.91	11295	13223	10
		3.91	60.30	5.44	15900	17200	40
2-1/2"	65	2.11	73.00	3.69	7104	8317	5
		3.05	73.00	5.25	10271	12025	10
		5.16	73.00	8.63	17200	17200	40
3"	80	2.11	88.90	4.51	5834	6830	5
		3.05	88.90	6.44	8434	9874	10
		5.49	88.90	11.29	15300	17200	40
3-1/2"	90	2.11	101.60	5.17	5105	5976	5
		3.05	101.60	7.40	7380	8640	10
		5.74	101.60	13.57	14000	16300	40
4"	100	2.11	114.30	5.83	4537	5312	5
		3.05	114.30	8.35	6560	7680	10
		6.02	114.30	16.07	13100	15200	40
5"	125	2.77	141.30	9.41	4820	5643	5
		3.40	141.30	11.60	5926	6937	10
		6.55	141.30	21.77	11500	13400	40
6"	150	2.77	168.30	11.08	4047	4738	5
		3.40	168.30	13.80	4975	5824	10
		7.11	168.30	28.26	10500	12300	40
8"	200	8.18	219.10	42.55	9200	10800	40

Dimension Tolerances

Outside Diameter	≤ 48.3 mm. : ± 0.4 mm. ≥ 60.3 mm. : ± 1%
Thickness	- 12.5%
Weight	± 10%

Steel Pipes for Fire Sprinkler System

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LISTED
EX27817

FM
APPROVED

ASTM A53
Schedule 40 : 1/2” -6”

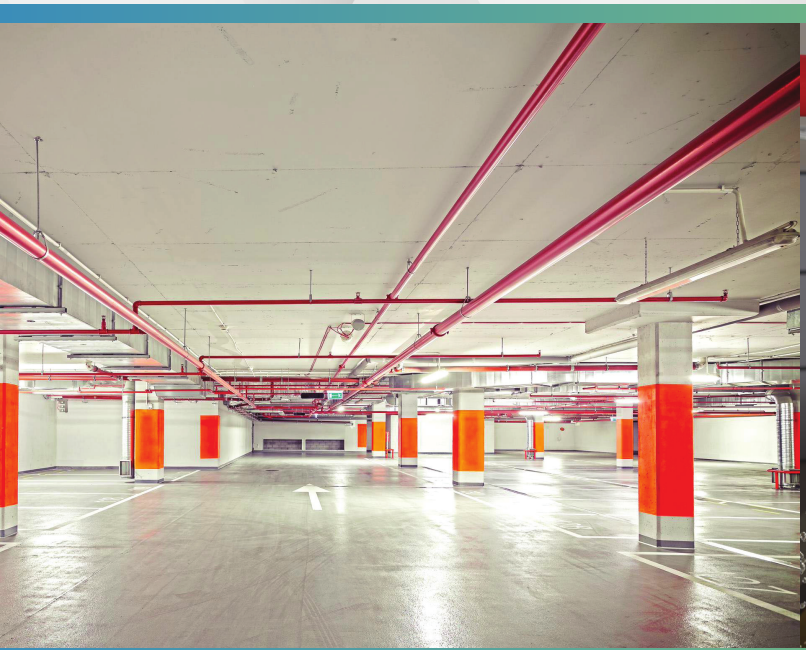
1/2", 3/4", 1", 1 1/4", 1 1/2",
2", 2 1/2", 3", 3 1/2", 4", 5" and 6"

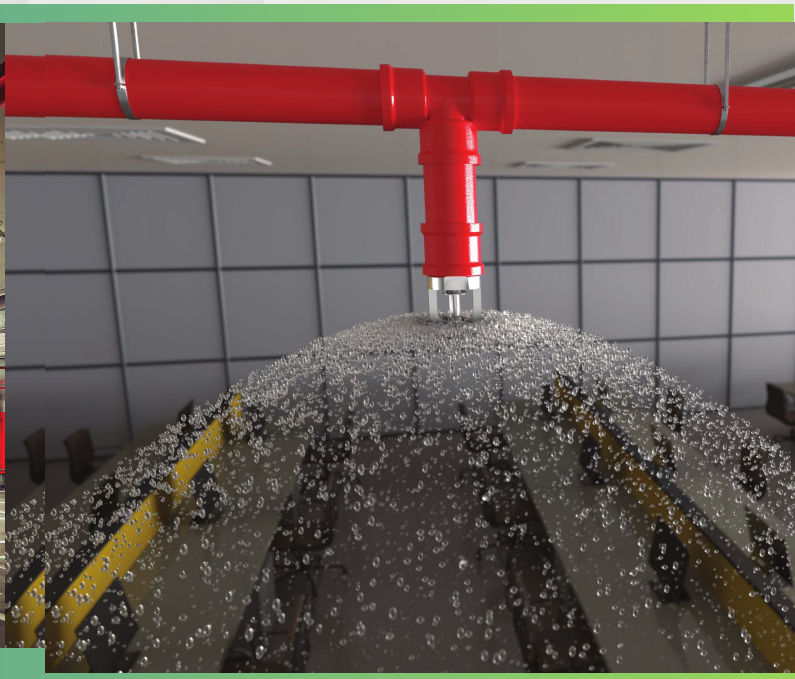
ASTM A795
Schedule 10 : 3/4” -6”

3/4", 1", 1 1/4", 1 1/2", 2",
2 1/2", 3", 3 1/2", 4", 5", and 6"

ASTM A795
Schedule 7 : 1” - 4”

1", 1 1/4", 1 1/2", 2",
2 1/2", 3", 4" and 6"





ASTM A53

Carbon Steel Pipes for Fire Protection Use

FM APPROVED

MATERIAL OF GRADE	(%) CHEMICAL COMPOSITION (Max)										MECHANICAL PROPERTIES (Min)		
	C	Si	Mn	P	S	Cu	Ni	Cr	Mo	V	Yield Strength	Tensile Strength	Elongation
											MPa	MPa	%
Grade A	0.25		0.95	0.05	0.045	0.40	0.40	0.40	0.15	0.08	205	330	As Per Standard
Grade B	0.30		1.20	0.05	0.045	0.40	0.40	0.40	0.15	0.08	240	415	As Per Standard

NOMINAL SIZE		THICKNESS MM	OUTSIDE DIAMETER MM	WEIGHT (PLAIN END) KG/M	TEST PRESSURE(KPA)				SCHEDULE
					Grade A		Grade B		
in	mm	Std.	Std.	STD	Psi	kPa	Psi	kPa	
1/2”	15	2.77	21.30	1.27	1200	8300	1200	8300	40
3/4”	20	2.87	26.70	1.69	1200	8300	1200	8300	40
1”	25	3.38	33.40	2.50	1200	8300	1200	8300	40
1-1/4”	32	3.56	42.20	3.39	1200	8300	1200	9000	40
1-1/2”	40	3.68	48.30	4.05	1200	8300	1200	9000	40
2”	50	3.91	60.30	5.44	2300	15900	2300	17200	40
2-1/2”	65	5.16	73.30	8.63	2500	17200	2500	17200	40
3”	80	5.49	88.90	11.29	2220	15300	2220	17200	40
3-1/2”	90	5.74	101.60	13.57	2030	14000	2030	15200	40
4”	100	6.02	114.30	16.07	1900	13100	1900	13400	40
6”	150	7.11	168.30	28.26	1520	10500	1520	12300	40
8”	200	8.18	219.10	42.55	1340	9200	1520	10800	40

Dimension Tolerances

Outside Diameter	NPS 1 1/2 in (40 mm) : ± 0.016 in (0.41 mm) NPS 2 in (50 mm) : ± 1% from specifed OD
Thickness	-12.5% , +Not Limit
Weight	± 10%
Length	0 mm ,+ 50 mm

Metallic Sprinkler Pipe for Fire Protection Service

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NOMINAL SIZE		THICKNESS MM	OUTSIDE DIAMETER MM	WEIGHT (PLAIN END) KG/M	Hydrostatic Test Pressure (Grade A, B)				SCHEDULE
					for 1 minute		for 5 seconds		
inch	mm	Std.	mm	Kg/m	psi	kPa	psi	kPa	
3/4”	20	2.87	26.70	1.69	600	4100	1200	8300	40
1”	25	3.38	33.40	2.50	600	4100	1200	8300	40
1-1/4”	32	3.56	42.20	3.39	600	4100	1200	8300	40
1-1/2”	40	3.68	48.30	4.05	600	4100	1200	8300	40
2”	50	3.91	60.30	5.44	600	4100	1200	8300	40
2-1/2”	65	5.16	73.00	8.63	600	4100	1200	8300	40
3”	80	5.49	88.90	11.29	600	4100	1200	8300	40
3-1/2”	90	5.74	101.60	13.57	600	4100	1200	8300	40
4”	100	6.02	114.30	16.07	600	4100	1200	8300	40
5”	125	6.55	141.30	21.77	600	4100	1200	8300	40
6”	150	7.11	168.30	28.26	600	4100	1200	8300	40
8”	200	8.18	219.10	42.55	600	4100	1200	8300	40