



Malleable Iron

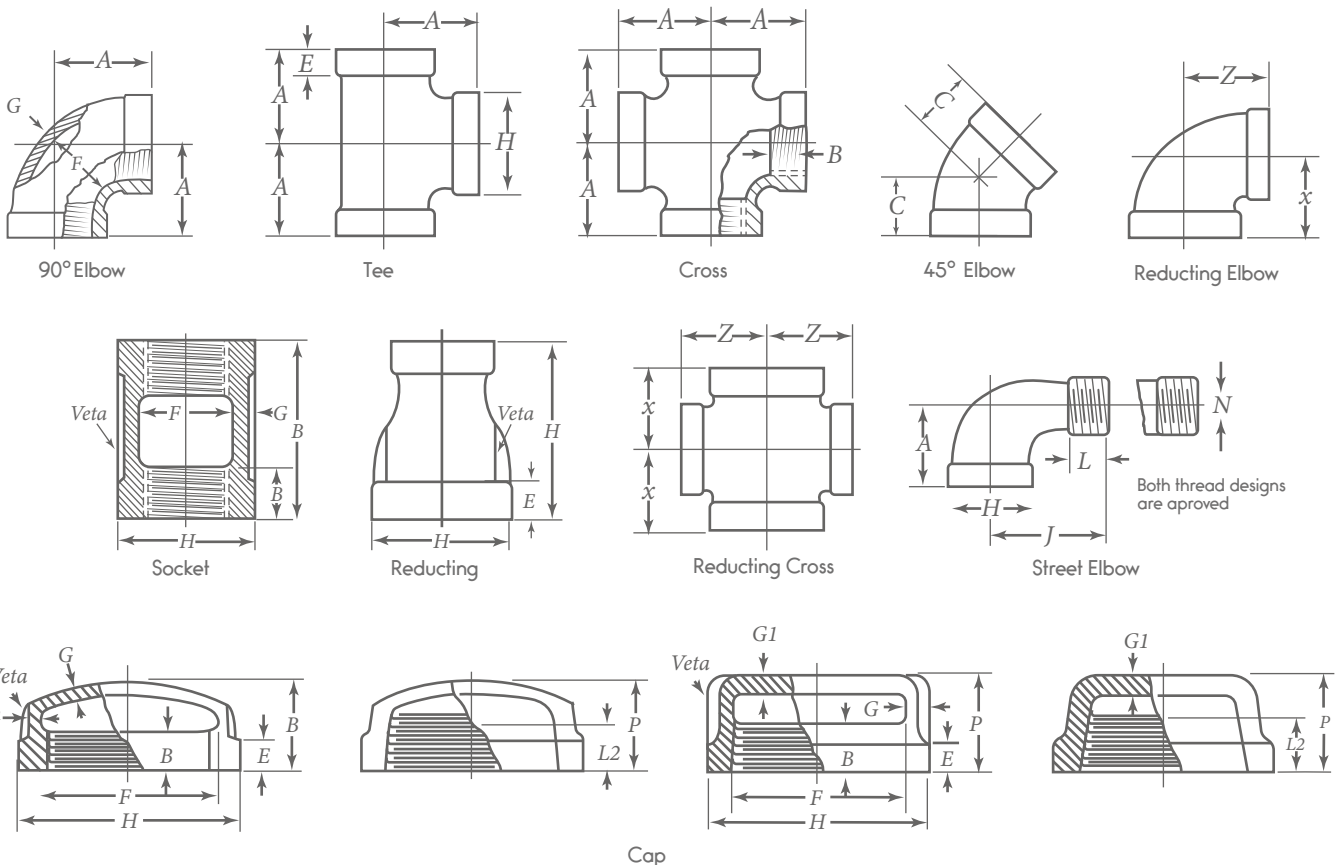
Pipe Fittings

Characteristics

1. Manufactured in malleable iron (ANSI/ASTM A 197)
2. Available in UL y UL / FM
3. Maximum working pressure 300 PSI. (the Bushings have a maximum working pressure 241 PSI).
Recommended working pressure 150PSI

General Characteristics

Material	Zinc Coating	Dimension	Thread	Working Pressure	Test Pressure
ANSI/ASTM A197	-----	ANSI B 16.3	ANSI B 1.20.1	1.6 Mpa	2.4 Mpa



Chemical Properties

C %	Mn %	Si %	P %	S %	Cr %
2.72 - 3.10	0.45 - 0.65	1.27 - 1.80	< 0.12	< 0.20	< 0.06

Chemical Properties

Tensile Strength	Threads grade	Elongation	Surface Roughness	Hardness	Threads axis including angle
>= 150 N/MM2	+/- Roscas	8.8% - 12.4%	6.3	114 HB - 138 HB	180 +/- 30 90 +/- 1

Fittings Dimentions

*1 taken from ASME B16.3 - 1998 Standard

90° Elbow, Tee, Cross & 45° Elbow (Straight Line Measurement)

Nominal size	Center to end (A)	Lenght of Thread (B)	Center to end 45° Elbow (C)	Width of band (E)	Inside Diameter of Fitting (F)		Metal Thickness (G)	Outside Diameter of band (H)
					Mín	Máx		
1/8	0.69	0.25	...	0.20	0.40	0.43	0.09	0.69
1/4	0.81	0.32	0.73	0.21	0.54	0.58	0.09	0.84
3/8	0.95	0.36	0.80	0.23	0.67	0.72	0.10	1.01
1/2	1.12	0.43	0.88	0.25	0.84	0.90	0.10	1.20
3/4	1.31	0.50	0.98	0.27	1.05	1.11	0.12	1.46
1	1.50	0.58	1.12	0.30	1.31	1.38	0.13	1.77
1 1/4	1.75	0.67	1.29	0.34	1.66	1.73	0.14	2.15
1 1/2	1.94	0.70	1.43	0.37	1.90	1.97	0.15	2.43
2	2.25	0.75	1.68	0.42	2.37	2.44	0.17	2.96
2 1/2	2.70	0.92	1.95	0.48	2.87	2.97	0.21	3.59
3	3.08	0.98	2.17	0.55	3.50	3.60	0.23	4.28
3 1/2	3.42	1.03	2.39	0.60	4.00	4.10	0.25	4.84
4	3.79	1.08	2.61	0.66	4.50	4.60	0.26	5.40
5	4.50	1.18	3.05	0.78	5.56	5.66	0.30	6.58
6	5.13	1.28	3.46	0.90	6.62	6.72	0.34	7.77

Fittings Dimentions

*1 taken from ASME B16.3 - 1998 Standard

Reducing, Elbow & Cross

Nominal Size	Elbow		Nominal size	Center to End		Nominal Size	Cross	
	Center to end X	Z		X	Z		Center to End X	Z
1/4 x 1/8	0.74	0.76	1 1/2 x 1 1/4	1.82	1.88	3/4 x 3/4 x 1/2 x 1/2	1.20	1.22
3/8 x 1/4	0.88	0.90	1 1/2 x 1	1.65	1.80	1 x 1 x 3/4 x 3/4	1.37	1.45
3/8 x 1/8	0.81	0.85	1 1/2 x 3/4	1.52	1.75	1 x 1 x 1/2 x 1/2	1.26	1.36
1/2 x 3/8	1.04	1.03	2 x 1 1/2	2.02	2.16	1 1/4 x 1 1/4 x 1 x 1	1.58	1.67
1/2 x 1/4	0.97	0.98	2 x 1 1/4	1.90	2.10	1 1/4 x 1 1/4 x 3/4 x 3/4	1.45	1.62
			2 x 1	1.73	2.02			
3/4 x 1/2	1.20	1.22				1 1/2 x 1 1/2 x 1 1/4 x 1 1/4	1.82	1.88
3/4 x 3/8	1.12	1.13	2 x 3/4	1.60	1.97	1 1/2 x 1 1/2 x 1 x 1	1.65	1.80
3/4 x 1/4	1.05	1.08	2 1/2 x 2	2.39	2.60	1 1/2 x 1 1/2 x 3/4 x 3/4	1.52	1.75
1 x 3/4	1.37	1.45	2 1/2 x 1 1/2	2.16	2.51	2 x 2 x 1 1/2 x 1 1/2	2.02	2.16
1 x 1/2	1.26	1.36	3 x 2 1/2	2.83	2.99	2 x 2 x 1 1/4 x 1 1/4	1.90	2.10
			3 x 2	2.52	2.89			
1 x 3/8	1.18	1.27				2 x 2 x 1 x 1	1.73	2.02
1 1/4 x 1	1.58	1.67	4 x 3	3.30	3.60	2 x 2 x 3/4 x 3/4	1.60	1.97
1 1/4 x 3/4	1.45	1.62				2 1/2 x 2 1/2 x 2 x 2	2.39	2.60
1 1/4 x 1/2	1.34	1.53				3 x 3 x 2 x 2	2.52	2.89

Fittings Dimentions

*1 taken from ASME B16.3 - 1998 Standard

Street Elbow

Nominal Size	Center to End (A)	Outside Diameter of Band (H)	Center to male end(J)	Length of external Thread (L)	Max Port Diameter Male End (N)
1/8	0.69	0.69	1.00	0.26	0.20
1/4	0.81	0.84	1.19	0.40	0.26
3/8	0.95	1.01	1.44	0.41	0.37
1/2	1.12	1.20	1.63	0.53	0.51
3/4	1.31	1.46	1.89	0.55	0.69
1	1.50	1.77	2.14	0.68	0.91
1 1/4	1.75	2.15	2.45	0.71	1.19
1 1/2	1.94	2.43	2.69	0.72	1.39
2	2.25	2.96	3.26	0.76	1.79
2 1/2	2.70	3.59	3.86	1.14	2.20
3	3.08	4.28	4.51	1.20	2.78
4	3.79	5.40	5.69	1.30	3.70
5	4.50	6.58	6.86	1.41	4.69
6	5.13	7.77	8.03	1.51	5.67

Fittings Dimentions

*1 taken from ASME B16.3 - 1998 Standard

Couplings (Straight and Reducing Sizes)

Nominal Size	Length of Thread Min. (B)	Length of Thread Min. (L2)	Width of Band Min. (E)	Inside Diameter of Fittings Min	Inside Diameter of Fittings Max	Metal Thickness (C)	Outsider Diameter of Band Min(H)	Thickness of Ribs	Length of Straight Couplings (w)	Length of Reducing Couplings (M)
1/8	0.25	0.2639	0.20	0.40	0.43	0.09	0.69	0.09	0.96	...
1/4	0.32	0.4018	0.21	0.54	0.58	0.09	0.84	0.09	1.06	1.00
3/8	0.36	0.4078	0.23	0.67	0.72	0.10	1.01	0.10	1.16	1.13
1/2	0.43	...	0.25	0.84	0.90	0.10	1.20	0.10	1.34	1.25
3/4	0.50	...	0.27	1.05	1.11	0.12	1.46	0.12	1.52	1.44
1	0.58	...	0.30	1.31	1.38	0.13	1.77	0.13	1.67	1.69
1 1/4	0.67	...	0.34	1.66	1.73	0.14	2.15	0.14	1.93	2.06
1 1/2	0.70	...	0.37	1.90	1.97	0.15	2.43	0.15	2.15	2.31
2	0.75	...	0.42	2.37	2.44	0.17	2.96	0.17	2.53	2.81
2 1/2	0.92	...	0.48	2.87	2.97	0.21	3.59	0.21	2.88	3.25
3	0.98	...	0.55	3.50	3.60	0.23	4.28	0.23	3.18	3.69
4	1.08	...	0.66	4.50	4.60	0.26	5.40	0.26	3.69	4.38

Fittings Dimensions

*1 taken from ASME B16.3 - 1998 Standard

Caps

Nominal Size	Length of Thread min (B)		Width of Band Min (E)	Inside Diameter of Fitting		Metal Thickness of side (G)	Outside Diameter of Band min.(H)	Height Min (P)	Thicness of Ribs	Thickness of flat top Caps (G1)
		(L2)		Min	Max					
1/8	0.25	0.2639	0.20	0.40	0.43	0.09	0.69	0.53
1/4	0.32	0.4018	0.21	0.54	0.58	0.09	0.84	0.63
3/8	0.36	0.4078	0.23	0.67	0.72	0.10	1.01	0.74
1/2	0.43	0.5337	0.25	0.84	0.90	0.10	1.20	0.87	0.10	...
3/4	0.50	0.5457	0.27	1.05	1.11	0.12	1.46	0.97	0.12	0.13
1	0.58	0.6828	0.30	1.31	1.38	0.13	1.77	1.16	0.13	0.15
1 1/4	0.67	0.7068	0.34	1.66	1.73	0.14	2.15	1.28	0.14	0.17
1 1/2	0.70	0.7235	0.37	1.90	1.97	0.15	2.43	1.33	0.15	0.19
2	0.75	0.7565	0.42	2.37	2.44	0.17	2.46	1.45	0.17	0.22
2 1/2	0.92	1.1375	0.48	2.87	2.97	0.21	3.59	1.70	0.21	0.25
3	0.98	1.1200	0.55	3.50	3.60	0.23	4.28	1.80	0.23	0.29
3 1/2	1.03	1.2500	0.60	4.00	4.10	0.25	4.84	1.90	0.25	0.30
4	1.08	1.3000	0.66	4.50	4.60	0.26	5.40	2.08	0.26	0.36
5	1.18	1.4063	0.78	5.56	5.66	0.30	6.58	2.32	0.30	...
6	1.28	1.5125	0.90	6.62	6.72	0.34	7.77	2.55	0.34	...