



# MALLEABLE IRON FITTINGS



## Class 150 (Standard)

<input type="checkbox"/> <b>FIGURE 1102</b> 45° Elbow	Size		C		Unit Weight			
					Black		Galv.	
	NPS	DN	in	mm	lbs	kg	lbs	kg
	1/8	6	1 1/16	17	0.07	0.03	0.07	0.03
	1/4	8	3/4	19	0.11	0.05	0.11	0.05
	3/8	10	13/16	22	0.16	0.07	0.16	0.07
	1/2	15	7/8	22	0.22	0.10	0.22	0.10
	3/4	20	1	25	0.37	0.17	0.37	0.17
	1	25	1 1/8	29	0.54	0.24	0.54	0.24
	1 1/4	32	1 5/16	33	0.86	0.39	0.86	0.39
	1 1/2	40	1 7/16	37	1.13	0.51	1.13	0.51
	2	50	1 11/16	43	1.79	0.81	1.79	0.81
	2 1/2	65	1 15/16	49	3.60	1.63	3.60	1.63
	3	80	2 3/16	56	4.48	2.03	4.48	2.03
	4	100	2 5/8	67	7.40	3.36	7.40	3.36
	5	125	3 1/16	78	11.46	5.20	11.46	5.20
	6	150	3 7/16	87	19.93	9.04	19.93	9.04

<input type="checkbox"/> <b>FIGURE 1103 (Straight)</b> <input type="checkbox"/> <b>FIGURE 1103R (Reducing)</b> 90° Street Elbow	Size		A		J		Unit Weight			
							Black		Galv.	
	NPS	DN	in	mm	in	mm	lbs	kg	lbs	kg
	1/8	6	1 1/16	17	1	25	0.06	0.03	0.06	0.03
	1/4	8	1 3/16	22	1 3/16	30	0.10	0.05	0.10	0.05
	3/8	10	1 5/16	24	1 7/16	37	0.17	0.08	0.17	0.08
	1/2	15	1 7/8	29	1 5/8	41	0.28	0.13	0.28	0.13
	3/4	20	1 9/16	33	1 7/8	48	0.41	0.19	0.41	0.19
	1	25	1 1/2	38	2 1/8	54	0.62	0.28	0.62	0.28
	1 1/4	32	1 3/4	44	2 7/16	62	1.09	0.49	1.09	0.49
	1 1/2	40	1 15/16	49	2 11/16	68	1.44	0.65	1.44	0.65
	2	50	2 1/4	57	3 1/4	83	2.85	1.29	2.85	1.29
	2 1/2	65	2 11/16	68	3 7/8	98	4.00	1.81	4.00	1.81
	3	80	3 1/16	78	4 1/2	114	6.06	2.75	6.06	2.75
	4	100	3 13/16	98	5 11/16	144	10.53	4.78	10.53	4.78
	1/2 x 3/8	15 x 10	1 1/16	27	1 9/16	40	0.23	0.10	0.23	0.10
	3/4 x 1/2	20 x 15	1 3/16	30	1 3/4	44	0.32	0.15	0.32	0.15
	1 x 3/4	25 x 20	1 3/8	35	2 1/16	52	0.54	0.24	0.54	0.24
	1 1/4 x 1	32 x 25	1 9/16	40	2 5/16	59	0.86	0.39	0.86	0.39
	1 1/4 x 3/4	32 x 20	1 7/16	37	2 1/4	57	0.75	0.34	0.75	0.34
	1 1/2 x 1 1/4	40 x 32	1 13/16	47	2 9/16	65	1.18	0.54	1.18	0.54
	1 1/2 x 1	40 x 25	1 5/8	41	2 1/2	64	1.08	0.49	1.08	0.49
	2 x 1 1/2	50 x 40	2	51	2 15/16	75	1.85	0.84	1.85	0.84

First size denotes female end.

**Note:** See following page for pressure-temperature ratings. Galvanized weights may vary. Please contact your Anvil Representative if you need verification.  
All Elbows & Tees 3/8" (10 DN) and Larger are 100% Gas Tested at a Minimum of 100 PSI. (6.9 bar)

PROJECT INFORMATION		APPROVAL STAMP	
Project:		<input type="checkbox"/> Approved	
Address:		<input type="checkbox"/> Approved as noted	
Contractor:		<input type="checkbox"/> Not approved	
Engineer:		Remarks:	
Submittal Date:			
Notes 1:			
Notes 2:			



**Malleable Iron Threaded Pipe Unions  
Pressure - Temperature Ratings**

Temperature		Pressure					
		Class 150		Class 250		Class 300	
(°F)	(°C)	psi	bar	psi	bar	psi	bar
-20° to 150°	-28.9° to 65.6°	300	20.7	500	34.5	600	41.4
200°	93.3°	265	18.3	455	31.4	550	37.9
250°	121.1°	225	15.5	405	27.9	505	34.8
300°	148.9°	185	12.8	360	24.8	460	31.7
350°	176.7°	150	10.3	315	21.7	415	28.6
400°	204.4°	110	7.6	270	18.6	370	25.5
450°	232.2°	75	5.2	225	15.5	325	22.4
500°	260.0°	-	-	180	12.4	280	19.3
550°	287.8°	-	-	130	9.0	230	15.9

Note: Unions with Copper or Copper Alloy seats are not intended for use where temperature exceeds 450°F



For Listings/Approval Details and Limitations, visit our website at [www.anvilintl.com](http://www.anvilintl.com) or contact an Anvil Sales Representative.

**Malleable Iron Threaded Fittings  
Pressure - Temperature Ratings**

Temperature		Pressure							
		Class 150		Class 300					
				Sizes 1/4"-1" (6-25 mm)		Sizes 1 1/4"-2" (32-51 mm)		Sizes 2 1/2"-3" (64-76 mm)	
(°F)	(°C)	psi	bar	psi	bar	psi	bar	psi	bar
-20° to 150°	-28.9° to 65.6°	300	20.7	2,000	137.9	1,500	103.4	1,000	68.9
200°	93.3	265	18.3	1,785	123.1	1,350	93.1	910	62.7
250°	121.1	225	15.5	1,575	108.6	1,200	82.7	825	56.9
300°	148.9	185	12.8	1,360	93.8	1,050	72.4	735	50.7
350°	176.7	150	10.3	1,150	79.3	900	62.1	650	44.8
400°	204.4	-	-	935	64.5	750	51.7	560	38.6
450°	232.2	-	-	725	50.0	600	41.4	475	32.8
500°	260.0	-	-	510	35.2	450	31.0	385	26.5
550°	287.8	-	-	300	20.7	300	20.7	300	20.7

Anvil Class 150/300 Malleable Iron Fittings conform to ASME B16.3 and Unions conform to ASME B16.39.

**ALL ELBOWS & TEES 3/8" (10 DN) and LARGER ARE 100% GAS TESTED AT A MINIMUM OF 100 PSI. (6.9 bar)**

## Standards and Specifications

	Dimensions	Material	Galvanizing****	Thread	Pressure Rating	Federal/Other
<b>MALLEABLE IRON FITTINGS</b>						
Class 150/PN 20	ASME B16.3•	ASTM A-197	ASTM A-153	ASME B1 20.1+	ASME B16.3•	ASME B16.3**
Class 300/PN 50	ASME B16.3•	ASTM A-197	ASTM A-153	ASME B1 20.1+	ASME B16.3•	
<b>MALLEABLE IRON UNIONS</b>						
Class 150/PN 20	ASME B16.39•	ASTM A-197	ASTM A-153	ASME B1 20.1+	ASME B16.39•	ASME B16.39***
Class 250	ASME B16.39•	ASTM A-197	ASTM A-153	ASME B1 20.1+	ASME B16.39•	
Class 300/PN 50	ASME B16.39•	ASTM A-197	ASTM A-153	ASME B1 20.1+	ASME B16.39•	

• an American National standard (ANSI), + ASME B1.20.1 was ANSI B2.1, \*\* Formerly WW-P-521, \*\*\* Formerly WW-U-531

\*\*\*\* ASTM B 633. Type I, SC 4, may be supplied as alternate zinc coating per applicable ASME B16 product standard.

## General Assembly of Threaded Fittings

- 1) Inspect both male and female components prior to assembly.
  - Threads should be free from mechanical damage, dirt, chips and excess cutting oil.
  - Clean or replace components as necessary.
- 2) Application of thread sealant
  - Use a thread sealant that is fast drying, sets-up to a semi hard condition and is vibration resistant. Alternately, an anaerobic sealant may be utilized.
  - Thoroughly mix the thread sealant prior to application.
  - Apply a thick even coat to the male threads only. Best application is achieved with a brush stiff enough to force sealant down to the root of the threads.
- 3) Joint Makeup
  - For sizes up to and including 2" pipe, wrench tight makeup is considered three full turns past handtight. Handtight engagement for 1/2" through 2" thread varies from 4 1/2 turns to 5 turns.
  - For 2 1/2" through 4" sizes, wrench tight makeup is considered two full turns past handtight. Handtight engagement for 2 1/2" through 4" thread varies from 5 1/2 turns to 6 3/4 turns.