

MALLEABLE IRON FITTINGS



Class 150 (Standard)

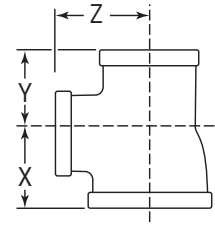
Size						X		Y		Z		Unit Weight			
												Black		Galv.	
NPS	DN	NPS	DN	NPS	DN	in	mm	in	mm	in	mm	lbs	kg	lbs	kg
1/8	6	1/8	6	1/4	8	3/4	19	3/4	19	3/4	19	0.12	0.05	0.12	0.05
1/4	8	1/4	8	1/8	6	3/4	19	3/4	19	3/4	19	0.13	0.06	0.13	0.06
				3/8	10	15/16	24	15/16	24	7/8	22	0.19	0.09	0.19	0.09
3/8	10	1/4	8	1/4	8	7/8	22	13/16	22	15/16	24	0.19	0.09	0.19	0.09
				3/8	10	15/16	24	15/16	24	15/16	24	0.21	0.10	0.21	0.10
		3/8	10	1/2	15	1 1/16	27	1 1/16	27	1 1/16	27	0.21	0.10	0.21	0.10
				1/2	15	1 1/8	29	1 1/8	29	1 1/8	29	0.27	0.12	0.27	0.12
1/2	15	1/4	8	1/2	15	1 1/8	29	1 1/8	29	1 1/8	29	0.29	0.13	0.29	0.13
				3/8	10	1 1/16	27	1	25	1 1/16	27	0.28	0.13	0.28	0.13
		3/8	10	1/2	15	1 1/8	29	1 1/16	27	1 1/8	29	0.33	0.15	0.33	0.15
				1/4	8	1	25	1	25	1	25	0.27	0.12	0.27	0.12
		1/2	15	3/8	10	1 1/16	27	1 1/16	27	1 1/16	27	0.30	0.14	0.30	0.14
				3/4	20	1 1/4	32	1 1/4	32	1 3/16	30	0.45	0.20	0.45	0.20
		1	25	1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.55	0.25	0.55	0.25
				1 1/4	32	1 5/8	41	1 5/8	41	1 1/16	27	0.27	0.12	0.27	0.12
3/4	20	1/4	8	3/4	20	1 5/16	33	1 1/8	29	1 5/16	33	0.45	0.20	0.45	0.20
				3/8	10	1 1/8	29	1 5/16	33	1 1/8	29	0.36	0.16	—	—
		3/8	10	3/4	20	1 5/16	33	1 1/8	29	1 5/16	33	0.46	0.21	0.46	0.21
				1/2	15	1 3/16	30	1 1/8	29	1 1/4	32	0.43	0.20	0.43	0.20
		1/2	15	3/4	20	1 5/16	33	1 1/4	32	1 5/16	33	0.51	0.23	0.51	0.23
				1/4	8	1 1/16	27	1 1/16	27	1 1/8	29	0.38	0.17	0.38	0.17
		3/4	20	3/8	10	1 1/8	29	1 1/8	29	1 1/8	29	0.42	0.19	0.42	0.19
				1/2	15	1 3/16	30	1 3/16	30	1 1/4	32	0.47	0.21	0.47	0.21
		1	25	1	25	1 7/16	37	1 7/16	37	1 3/8	35	0.62	0.28	0.62	0.28
				1 1/4	32	1 5/8	41	1 5/8	41	1 1/16	27	0.90	0.41	0.90	0.41
1	25	1/4	8	1	25	1 1/2	38	1 5/16	33	1 1/2	38	0.69	0.31	0.69	0.31
				1/2	15	1 1/4	32	1 1/8	29	1 3/8	35	0.70	0.32	0.70	0.32
		1/2	15	3/4	20	1 3/8	35	1 1/4	32	1 7/16	37	0.56	0.25	0.56	0.25
				1	25	1 1/2	38	1 3/8	35	1 1/2	38	0.76	0.34	0.76	0.34
		3/4	20	1/2	15	1 1/4	32	1 3/16	30	1 3/8	35	0.59	0.27	0.59	0.27
				3/4	20	1 3/8	35	1 5/16	33	1 7/16	37	0.74	0.34	0.74	0.34
		1	25	1	25	1 1/2	38	1 7/16	37	1 1/2	38	0.78	0.35	0.78	0.35
				1/4	8	1 1/8	29	1 1/8	29	1 1/4	32	0.53	0.24	0.53	0.24
		3/8	10	1/2	15	1 3/16	30	1 3/16	30	1 1/4	32	0.60	0.27	0.60	0.27
				1/2	15	1 1/4	32	1 1/4	32	1 3/8	35	0.70	0.32	0.70	0.32
		3/4	20	1/2	15	1 3/8	35	1 3/8	35	1 7/16	37	0.82	0.37	0.82	0.37
				1 1/4	32	1 1 1/16	43	1 1 1/16	43	1 9/16	40	0.92	0.42	0.92	0.42
		1 1/2	40	1 3/16	47	1 3/16	46	1 5/8	41	1 5/8	41	1.19	0.54	1.19	0.54
				2	50	2	51	2	51	1 3/4	44	1.63	0.74	1.63	0.74

See additional sizes on following page.

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:			

Class 150 (Standard)

FIGURE 1105R
Reducing Tee (Cont'd.)

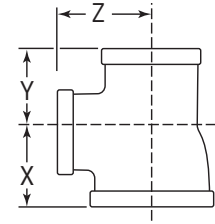


Size						X		Y		Z		Unit Weight			
												Black		Galv.	
NPS	DN	NPS	DN	NPS	DN	in	mm	in	mm	in	mm	lbs	kg	lbs	kg
1 1/4	32	1/2	15	1	25	1 9/16	40	1 3/8	35	1 11/16	43	0.87	0.39	0.87	0.39
				1 1/4	32	1 3/4	44	1 9/16	40	1 3/4	44	1.04	0.47	1.04	0.47
		3/4	20	3/4	20	1 7/16	37	1 5/16	33	1 5/8	41	0.86	0.39	0.86	0.39
				1	25	1 9/16	40	1 7/16	37	1 11/16	43	0.91	0.41	0.91	0.41
		1	25	1 1/4	32	1 3/4	44	1 5/8	41	1 3/4	44	1.04	0.47	1.04	0.47
				1/2	15	1 3/8	35	1 1/4	32	1 9/16	40	0.76	0.34	0.76	0.34
	3/4			20	1 7/16	37	1 3/8	35	1 5/8	41	0.87	0.39	0.87	0.39	
	1			25	1 9/16	40	1 1/2	38	1 11/16	43	1.11	0.50	1.11	0.50	
	1 1/4	32	1 1/4	32	1 3/4	44	1 11/16	43	1 3/4	44	1.13	0.51	1.13	0.51	
			3/8	10	1 1/4	32	1 1/4	32	1 7/16	37	0.86	0.39	0.86	0.39	
			1/2	15	1 3/8	35	1 3/8	35	1 9/16	40	0.98	0.44	0.98	0.44	
			3/4	20	1 7/16	37	1 7/16	37	1 5/8	41	1.07	0.49	1.07	0.49	
1			25	1 9/16	40	1 9/16	40	1 11/16	43	1.18	0.54	1.18	0.54		
1 1/2			40	1 7/8	48	1 7/8	48	1 13/16	47	1.45	0.66	1.45	0.66		
1 1/2	40	2	50	2 1/8	54	2 1/8	54	1 7/8	48	1.70	0.77	1.70	0.77		
		1/2	15	1 1/2	40	1 15/16	49	1 11/16	43	1 15/16	49	1.33	0.60	1.33	0.60
		3/4	20	3/4	20	1 1/2	38	1 5/16	33	1 3/4	44	1.00	0.45	1.00	0.45
				1 1/2	40	1 15/16	49	1 3/4	44	1 15/16	49	1.41	0.64	1.41	0.64
		1	25	1	25	1 5/8	41	1 1/2	38	1 13/16	47	1.14	0.52	1.14	0.52
				1 1/4	32	1 13/16	47	1 11/16	43	1 7/8	48	1.30	0.59	1.30	0.59
	1 1/2			40	1 15/16	49	1 13/16	47	1 15/16	49	1.50	0.68	1.50	0.68	
	1 1/4	32	1/2	15	1 7/16	37	1 3/8	35	1 11/16	43	1.05	0.48	1.05	0.48	
			3/4	20	1 1/2	38	1 7/16	37	1 3/4	44	1.08	0.49	1.08	0.49	
			1	25	1 5/8	41	1 9/16	40	1 13/16	47	1.26	0.57	1.26	0.57	
			1 1/4	32	1 13/16	47	1 3/4	44	1 7/8	48	1.52	0.69	1.52	0.69	
			1 1/2	40	1 15/16	49	1 7/8	48	1 15/16	49	1.50	0.68	1.50	0.68	
1 1/2			40	1 1/2	40	1 15/16	49	1 7/8	48	1 15/16	49	1.50	0.68	1.50	0.68
1 1/2	40	1/2	15	1 7/16	37	1 7/16	37	1 11/16	43	1.19	0.54	1.19	0.54		
		3/4	20	1 1/2	38	1 1/2	38	1 3/4	44	1.60	0.73	1.60	0.73		
		1	25	1 5/8	41	1 5/8	41	1 13/16	47	1.45	0.66	1.45	0.66		
		1 1/4	32	1 13/16	47	1 13/16	47	1 7/8	48	1.45	0.66	1.45	0.66		
		1 1/2	40	1 15/16	49	1 13/16	47	1 7/8	48	1.45	0.66	1.45	0.66		
		2	50	2 3/16	56	2 3/16	56	2	51	1.86	0.84	1.86	0.84		

See additional sizes on previous and following page.

Class 150 (Standard)

FIGURE 1105R
Reducing Tee (Cont'd.)



Size		X		Y		Z		Unit Weight											
								Black		Galv.									
NPS	DN	NPS	DN	NPS	DN	in	mm	in	mm	in	mm	lbs	kg	lbs	kg				
2	50	1/2	15	2	50	2 1/4	57	1 7/8	48	2 1/4	57	2.15	0.98	2.15	0.98				
		3/4	20	2	50	2 1/4	57	1 15/16	49	2 1/4	57	2.00	0.91	2.00	0.91				
		1	25	2	50	2 1/4	57	2	51	2 1/4	57	2.14	0.97	2.14	0.97				
		1 1/4	32	1 1/4	32	1 1/4	32	1 7/8	48	1 3/4	44	2 1/8	54	1.72	0.78	1.72	0.78		
				1 1/2	40	1 1/2	40	2	51	1 7/8	48	2 3/16	56	1.85	0.84	1.85	0.84		
				2	50	2	50	2 1/4	57	2 1/8	54	2 1/4	57	2.20	1.00	2.20	1.00		
		1 1/2	40	1	25	1 3/4	44	1 5/8	41	2	51	1 5/8	48	1.57	0.71	1.57	0.71		
				1 1/4	32	1 1/4	32	1 7/8	48	1 13/16	47	2 1/8	54	1.76	0.80	1.76	0.80		
				1 1/2	40	1 1/2	40	2	51	1 15/16	49	2 3/16	56	1.95	0.88	1.95	0.88		
				2	50	2	50	2 1/4	57	2 3/16	56	2 1/4	57	2.24	1.02	2.24	1.02		
				2	50	1/2	15	1 1/2	38	1 1/2	38	1 7/8	48	1 7/8	48	1.65	0.75	1.65	0.75
						3/4	20	1 5/8	41	1 5/8	41	2	51	2	51	1.87	0.85	1.87	0.85
2 1/2	65	1 1/2	40	2	50	2 3/8	60	2 3/16	56	2 5/8	67	3.43	1.56	3.43	1.56				
				2 1/2	65	2 11/16	68	2 1/2	64	2 11/16	68	3.80	1.72	3.80	1.72				
		2	50	2	50	2 3/8	60	2 1/4	57	2 5/8	67	3.28	1.49	3.28	1.49				
				2 1/2	65	2 11/16	68	2 5/8	67	2 11/16	68	4.10	1.86	4.10	1.86				
		2 1/2	65	3/4	20	1 3/4	44	1 3/4	44	2 5/16	59	2 7/8	73	2.72	1.23	2.72	1.23		
				1	25	1 7/8	48	1 7/8	48	2 3/8	60	2 7/8	73	2.85	1.29	2.85	1.29		
				1 1/4	32	2 1/16	52	2 1/16	52	2 1/16	62	2 1/2	64	3.36	1.52	3.36	1.52		
				1 1/2	40	2 3/16	56	2 3/16	56	2 1/2	64	2 1/2	64	3.46	1.57	3.46	1.57		
				2	50	2 3/8	60	2 3/8	60	2 5/8	67	2 5/8	67	3.65	1.66	3.65	1.66		
				3	80	3	76	3	76	2 13/16	73	2 13/16	73	5.82	2.64	5.82	2.64		
		3	80	2	50	2	50	2 1/2	64	2 1/4	57	2 7/8	73	4.50	2.04	4.50	2.04		
						3	80	3 1/8	79	2 7/8	73	3 1/8	79	5.80	2.63	5.80	2.63		
2 1/2	65			2	50	2 1/2	64	2 3/8	60	2 7/8	73	4.80	2.18	4.80	2.18				
				2 1/2	65	2 13/16	73	2 11/16	68	3	76	5.80	2.63	5.80	2.63				
3	80			3/4	20	1 7/8	48	1 7/8	48	2 5/8	67	2 5/8	67	4.03	1.83	4.03	1.83		
				1	25	2	51	2	51	2 5/8	67	4.13	1.87	4.13	1.87				
				1 1/4	32	2 3/16	56	2 3/16	56	2 3/4	70	4.50	2.04	4.50	2.04				
				1 1/2	40	2 5/16	59	2 5/16	59	2 13/16	73	5.18	2.35	5.18	2.35				
				2	50	2 1/2	64	2 1/2	64	2 7/8	73	5.70	2.59	5.70	2.59				
				2 1/2	65	2 13/16	73	2 13/16	73	3	76	6.09	2.76	6.09	2.76				
4	100			3	80	4	100	3 13/16	98	3 5/8	92	3 13/16	98	10.40	4.72	10.40	4.72		
				4	100	1 1/2	40	2 1/2	65	2 1/2	65	3 3/8	86	7.47	3.39	7.47	3.39		
		2	50			2 3/4	70	2 3/4	70	3 7/16	87	8.39	3.80	8.39	3.80				
		2 1/2	65			3 1/16	78	3 1/16	78	3 1/2	89	9.60	4.35	9.60	4.35				
		3	80			3 5/16	84	3 5/16	84	3 5/8	92	11.02	5.00	11.02	5.00				

See additional sizes on previous page.

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)



**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 or contact an Anvil Sales Representative.

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

Temperature		Pressure							
		Class 150		Class 300					
(°F)	(°C)	psi	bar	Sizes ¼"-1" (6-25 mm)		Sizes 1¼"-2" (32-51 mm)		Sizes 2½"-3" (64-76 mm)	
				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 ¾" (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
MALLEABLE IRON FITTINGS						
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•	
MALLEABLE IRON UNIONS						
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.