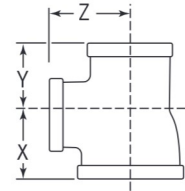


MALLEABLE IRON FITTINGS



Class 150 (Standard)

FIGURE 1105R
Reducing Tee

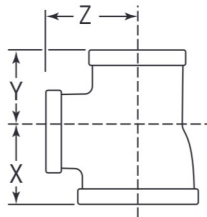


Size						X		Y		Z		Unit Weight			
NPS	DN	NPS	DN	NPS	DN	in mm		in mm		in mm		Black		Galv.	
1/8	6	1/8	6	1/4	8	3/4	19	3/4	19	3/4	19	lbs	kg	lbs	kg
1/4	8	1/4	8	3/8	10	15/16	24	15/16	24	7/8	22	0.12	0.05	0.12	0.05
3/8	10	1/4	8	1/4	8	7/8	22	13/16	22	15/16	24	0.13	0.06	0.13	0.06
				3/8	10	15/16	24	15/16	24	15/16	24	0.19	0.09	0.19	0.09
		3/8	10	1/4	8	7/8	22	7/8	22	15/16	24	0.19	0.09	0.19	0.09
				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	1/4	8	1/2	15	1 1/8	29	1 1/8	29	1 1/8	29	0.21	0.10	0.21	0.10
				3/8	10	1 1/16	27	1	25	1 1/16	27	0.27	0.12	0.27	0.12
		3/8	10	1/2	15	1 1/8	29	1 1/16	27	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
				1/2	15	1 1/8	29	1 1/16	27	1 1/8	29	0.33	0.15	0.33	0.15
				3/4	20	1 1/4	32	1 1/4	32	1 3/16	30	0.27	0.12	0.27	0.12
3/4	20	1/4	8	3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.30	0.14	0.30	0.14
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.45	0.20	0.45	0.20
		3/8	10	3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.55	0.25	0.55	0.25
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.45	0.20	0.45	0.20
		1/2	15	3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.36	0.16	—	—
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.46	0.21	0.46	0.21
		3/4	20	1/2	15	1 3/8	35	1 3/8	35	1 1/4	32	0.43	0.20	0.43	0.20
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.51	0.23	0.51	0.23
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.38	0.17	0.38	0.17
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.42	0.19	0.42	0.19
1	25	1/4	8	1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.47	0.21	0.47	0.21
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.62	0.28	0.62	0.28
		3/8	10	1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.90	0.41	0.90	0.41
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.69	0.31	0.69	0.31
		1/2	15	3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.70	0.32	0.70	0.32
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.56	0.25	0.56	0.25
		3/4	20	1/2	15	1 3/8	35	1 3/8	35	1 1/4	32	0.76	0.34	0.76	0.34
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.59	0.27	0.59	0.27
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.74	0.34	0.74	0.34
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.78	0.35	0.78	0.35
		1	25	1/2	15	1 3/8	35	1 3/8	35	1 1/4	32	0.53	0.24	0.53	0.24
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.60	0.27	0.60	0.27
				1	25	1 3/8	35	1 3/8	35	1 1/4	32	0.70	0.32	0.70	0.32
				3/4	20	1 3/8	35	1 3/8	35	1 1/4	32	0.82	0.37	0.82	0.37
				1 1/4	32	1 11/16	43	1 11/16	43	1 9/16	40	0.92	0.42	0.92	0.42
				1 1/2	40	1 13/16	47	1 13/16	46	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:		☐ Approved	
Address:		☐ Approved as noted	
Contractor:		☐ 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
1¼	32	½	15	1	25	1⅞	40	1⅜	35	1⅞	43	0.87	0.39	0.87	0.39
				1¼	32	1¾	44	1⅞	40	1¾	44	1.04	0.47	1.04	0.47
		¾	20	¾	20	1⅞	37	1⅝	33	1⅝	41	0.86	0.39	0.86	0.39
				1	25	1⅞	40	1⅞	37	1⅞	43	0.91	0.41	0.91	0.41
				1¼	32	1¾	44	1⅝	41	1¾	44	1.04	0.47	1.04	0.47
		1	25	½	15	1⅝	35	1¼	32	1⅞	40	0.76	0.34	0.76	0.34
				¾	20	1⅞	37	1⅝	35	1⅝	41	0.87	0.39	0.87	0.39
				1	25	1⅞	40	1½	38	1⅞	43	1.11	0.50	1.11	0.50
				1¼	32	1¾	44	1⅞	43	1¾	44	1.13	0.51	1.13	0.51
		1¼	32	¾	10	1¼	32	1¼	32	1⅞	37	0.86	0.39	0.86	0.39
				½	15	1⅝	35	1⅝	35	1⅞	40	0.98	0.44	0.98	0.44
				¾	20	1⅞	37	1⅞	37	1⅝	41	1.07	0.49	1.07	0.49
	1			25	1⅞	40	1⅞	40	1⅞	43	1.18	0.54	1.18	0.54	
	1½	40	1½	40	1⅞	48	1⅞	48	1⅞	47	1.45	0.66	1.45	0.66	
			2	50	2⅞	54	2⅞	54	1⅞	48	1.70	0.77	1.70	0.77	
40			½	15	1½	40	1⅞	49	1⅞	43	1⅞	49	1.33	0.60	1.33
	¾	20			1½	38	1⅝	33	1¾	44	1.00	0.45	1.00	0.45	
	¾	20	1½	40	1⅞	49	1¾	44	1⅞	49	1.41	0.64	1.41	0.64	
			1	25	1⅝	41	1½	38	1⅞	47	1.14	0.52	1.14	0.52	
	1¼	32	1¼	32	1⅞	47	1⅞	43	1⅞	48	1.30	0.59	1.30	0.59	
			1½	40	1⅞	49	1⅞	47	1⅞	49	1.50	0.68	1.50	0.68	
1½			40	½	15	1⅞	37	1⅝	35	1⅞	43	1.05	0.48	1.05	0.48
				¾	20	1½	38	1⅞	37	1¾	44	1.08	0.49	1.08	0.49
1½	40	1¼	32	1	25	1⅝	41	1⅞	40	1⅞	47	1.26	0.57	1.26	0.57
				1¼	32	1⅞	47	1¾	44	1⅞	48	1.52	0.69	1.52	0.69
				1½	40	1⅞	49	1⅞	48	1⅞	49	1.50	0.68	1.50	0.68
				1½	40	1⅞	37	1⅞	37	1⅞	43	1.19	0.54	1.19	0.54
	1½	40	¾	20	1½	38	1½	38	1¾	44	1.60	0.73	1.60	0.73	
			1	25	1⅝	41	1⅝	41	1⅞	47	1.45	0.66	1.45	0.66	
	1¼	32	1¼	32	1⅞	47	1⅞	47	1⅞	48	1.45	0.66	1.45	0.66	
			2	50	2⅞	56	2⅞	56	2	51	1.86	0.84	1.86	0.84	

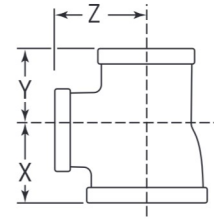
See additional sizes on previous and following page.

MALLEABLE IRON FITTINGS



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 7/8	48	1 3/4	44	2 1/8	54	1.72	0.78	1.72	0.78
				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 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	1.57	0.71	1.57	0.71
				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	2	51	1 15/16	49	2 3/16	56	1.95	0.88	1.95	0.88
				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	1.65	0.75	1.65	0.75
				3/4	20	1 5/8	41	1 5/8	41	2	51	1.87	0.85	1.87	0.85
				1	25	1 3/4	44	1 3/4	44	2	51	1.76	0.80	1.76	0.80
				1 1/4	32	1 7/8	48	1 7/8	48	2 1/8	54	2.35	1.07	2.35	1.07
				1 1/2	40	2	51	2	51	2 3/16	56	2.55	1.16	2.55	1.16
				2 1/2	65	2 5/8	67	2 5/8	67	2 3/8	60	3.50	1.59	3.50	1.59
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	2.72	1.23	2.72	1.23
				1	25	1 7/8	48	1 7/8	48	2 3/8	60	2.85	1.29	2.85	1.29
				1 1/4	32	2 1/16	52	2 1/16	52	2 7/16	62	3.36	1.52	3.36	1.52
				1 1/2	40	2 3/16	56	2 3/16	56	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	3.65	1.66	3.65	1.66
				3	80	3	76	3	76	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	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 FITTINGS



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°	265	18.3	455	31.4	550	37.9
250°	225	15.5	405	27.9	505	34.8
300°	185	12.8	360	24.8	460	31.7
350°	150	10.3	315	21.7	415	28.6
400°	110	7.6	270	18.6	370	25.5
450°	75	5.2	225	15.5	325	22.4
500°	—	—	180	12.4	280	19.3
550°	—	—	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 1/4"–1" (6–25 mm)		Sizes 1 1/4"–2" (32–51 mm)	Sizes 2 1/2"–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
200°	265	18.3	1,785	123.1	1,350	93.1
250°	225	15.5	1,575	108.6	1,200	82.7
300°	185	12.8	1,360	93.8	1,050	72.4
350°	150	10.3	1,150	79.3	900	62.1
400°	—	—	935	64.5	750	51.7
450°	—	—	725	50.0	600	41.4
500°	—	—	510	35.2	450	31.0
550°	—	—	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
MALLEABLE IRON FITTINGS					
Class 150/PN 20	ASME B16.3	ASTM A-197	ASTM A-153	ASME B1 20.1	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
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

* 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 $\frac{1}{2}$ " through 2" thread varies from $4\frac{1}{2}$ turns to 5 turns.
 - For $2\frac{1}{2}$ " through 4" sizes, wrench tight makeup is considered two full turns past handtight. Handtight engagement for $2\frac{1}{2}$ " through 4" thread varies from $5\frac{1}{2}$ turns to $6\frac{3}{4}$ turns.