



Malleable Iron

Cast Iron

Small Steel Fittings

Pipe Nipples & Pipe Couplings

Forged Steel Fittings & Unions

Anvils

Catawissa

J.B. Smith Products

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					
				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
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.



Malleable Iron Unions

Class 150; 250; 300

BRONZE TO IRON								
Unions	Size		End to End		Unit Weight			
	NPS	DN	in	mm	Black		Galv.	
					lbs	kg	lbs	kg
FIGURE 463 ■ Class 150 Union 150lb. wsp · 300lb. wog non-shock   (UL Listed Sizes: 1/4" - 2") (FM Approved Sizes: 1/4" - 3") Note: 3/4" x 1/2" size is not UL Listed or FM Approved.	1/8	6	1 5/16	33	0.15	0.07	0.15	0.07
	1/4	8	1 13/16	47	0.48	0.22	0.48	0.22
	3/8	10	1 13/16	47	0.42	0.19	0.42	0.19
	1/2	15	1 15/16	49	0.42	0.19	0.42	0.19
	3/4	20	2 1/16	52	0.60	0.27	0.60	0.27
	3/4 x 1/2	20 x 15	2 1/16	52	0.55	0.25	0.55	0.25
	1	25	2 7/16	62	1.12	0.51	1.12	0.51
	1 1/4	32	2 9/8	67	1.74	0.79	1.74	0.79
	1 1/2	40	2 3/4	70	2.08	0.94	2.08	0.94
	2	50	2 15/16	75	3.00	1.36	3.00	1.36
	2 1/2	65	3 3/8	92	3.60	1.63	3.60	1.63
	3	80	3 3/4	95	4.95	2.24	4.95	2.24
FIGURE 554 ■ Class 250 Union 250 lb. wsp · 500lb. wog non-shock   (UL Listed Sizes: 1/4" - 2") (FM Approved Sizes: 1/4" - 4")	1/8	6	1 5/16	33	0.14	0.06	—	—
	1/4	8	1 13/16	47	0.48	0.22	0.48	0.22
	3/8	10	1 13/16	47	0.42	0.19	0.42	0.19
	1/2	15	2 1/16	52	0.64	0.29	0.64	0.29
	3/4	20	2 1/4	57	1.00	0.45	1.00	0.45
	1	25	2 9/16	65	1.56	0.71	1.56	0.71
	1 1/4	32	2 3/4	70	2.30	1.04	2.30	1.04
	1 1/2	40	3	76	2.74	1.24	2.74	1.24
	2	50	3 3/8	86	4.34	1.97	4.34	1.97
	2 1/2	65	3 7/8	98	5.30	2.40	5.30	2.40
	3	80	4 1/4	108	7.60	3.45	7.60	3.45
	4	100	4 7/8	124	17.50	7.94	17.50	7.94
FIGURE 459 ■ Class 300 Union 300lb. wsp · 600lb. wog non-shock   (UL Listed Sizes: 1/4" - 2") (FM Approved Sizes: 1/4" - 4")	1/8	6	1 5/16	33	0.14	0.06	0.14	0.06
	1/4	8	1 13/16	47	0.48	0.22	0.48	0.22
	3/8	10	1 13/16	47	0.42	0.19	0.42	0.19
	1/2	15	2 1/16	52	0.64	0.29	0.64	0.29
	3/4	20	2 1/4	57	1.00	0.45	1.00	0.45
	1	25	2 9/16	65	1.56	0.71	1.56	0.71
	1 1/4	32	2 3/4	70	2.30	1.04	2.30	1.04
	1 1/2	40	3	76	2.74	1.24	2.74	1.24
	2	50	3 3/8	86	4.34	1.97	4.34	1.97
	2 1/2	65	3 7/8	98	5.05	2.29	5.05	2.29
	3	80	4 1/4	108	7.66	3.47	7.66	3.47
	4	100	4 7/8	124	17.70	8.03	17.70	8.03
FIGURE 551 ■ Class 300 Union male & female 300lb. wsp · 600lb. wog non-shock  	1/2	15	3	76	0.62	0.28	—	—
	3/4	20	3 3/16	81	0.92	0.42	—	—
	1	25	3 5/8	92	1.54	0.70	—	—
	1 1/2	40	4 1/4	108	2.60	1.18	—	—
	2	50	4 5/8	117	4.21	1.91	—	—

■ Pressure & Temperature rates shown on page 17.

- Anvil Malleable Iron Unions conform to ASME B 16.39 and are in compliance with the requirements of the AAR (1994 AAR Manual of standards and Practices).
- Dimensions conform to ASME B 16.39 for Class 150, 250 & 300 Unions.

wsp=working steam pressure

wog=water, oil, gas