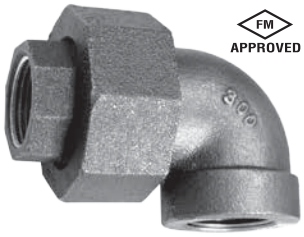
Malleable Iron Unions • Class 150; 250; 300

BRONZE TO IRON

Unions	Size		End to End		Unit Weight			
					Black		Galv.	
	NPS	DN	in	mm	lbs	kg	lbs	kg
FIGURE 459 ■ Class 300 Union 300lb. wsp · 600lb. wog non-shock  c UL us LISTED FM APPROVED For Listings/Approval Details and Limitations, visit our website at www.anvilintl.com or contact an Anvil Sales Representative.	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  FM APPROVED	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	–	–

FIGURE 552 Class 300 90° Elbow Female Union 300lb. wsp	Size		Center to End				Unit Weight	
			Elbow		Union		Black	
	NPS	DN	in	mm	in	mm	lbs	kg
 FM APPROVED	3/8	10	1 1/16	27	2 1/16	52	0.51	0.23
	1/2	15	1 1/4	32	2 5/16	59	0.79	0.36
	3/4	20	1 7/16	37	2 3/4	70	1.24	0.56
	1	25	1 5/8	41	3	76	1.88	0.85

■ See following page for pressure-temperature ratings.
- Anvil Malleable Iron Unions conform to ASME B 16.39.
- Dimensions conform to ASME B 16.39 for Class 150, 250 & 300 Unions.

wsp=working steam pressure wog=water, oil, gas

PROJECT INFORMATION	APPROVAL STAMP
Project:	☐ Approved
Address:	☐ Approved as noted
Contractor:	☐ Not approved
Engineer:	**Remarks:**
Submittal Date:	
Notes 1:	
Notes 2:	

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°	*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

c UL us

FM APPROVED

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Malleable Iron Threaded Fittings Pressure - Temperature Ratings

Temperature		Pressure							
		Class 150		Class 300					
				Sizes ¼"–1" *(6–25 mm)*		Sizes 1¼"–2" *(32–51 mm)*		Sizes 2½"–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 ⅜" *(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 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.