

Y-Branch or Lateral & Return Bends (Class 150 Standard)

Fig. 1108 45° Y-Branch or Lateral

Fig. 1119 Return Bends Open Pattern, R.H.



Fig. 1108



Fig. 1119

ASC Engineered Solutions™ offers the broadest line of malleable iron fitting sizes in both black and galvanized finishes. Every fitting is manufactured and tested to meet ASC's strict quality standards. All Anvil Class 150 Malleable Iron Fittings conform to ASME B16.3 and unions conform to ASME B16.39. All elbows and tees 3/8" (10 DN) and larger are 100% gas tested at a minimum of 100 PSI (6.9 bar).

For Listings/Approval Details and Limitations, visit our website at www.asc-es.com or contact an ASC Engineered Solutions™ Representative.

See following page for standards and specifications.

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

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

Malleable Iron Threaded Fittings Pressure - Temperature Ratings

Temperature	Pressure Class 300			
	Class 150	Sizes 1/4"-1" (6-25mm)	Sizes 1 1/4"-2" (32-51mm)	Sizes 2 1/2"-3" (64-76mm)
	PSI/bar	PSI/bar	PSI/bar	PSI/bar
-20°–150°	300	2000	1500	1000
-28.9°–65.6°	20.7	137.9	103.4	68.9
200°	265	1785	1350	910
93.3°	18.3	123.1	93.1	62.7
250°	225	1575	1200	825
121.1°	15.5	108.6	82.7	56.9
300°	185	1360	1050	735
148.9°	12.8	93.8	72.4	50.7
350°	150	1150	900	650
176.7°	10.3	79.3	62.1	44.8
400°	–	935	750	560
204.4°	–	64.5	51.7	38.6
450°	–	725	600	475
232.2°	–	50.0	41.4	32.8
500°	–	510	450	385
260.0°	–	35.2	31.0	26.5
550°	–	300	300	300
287.8°	–	20.7	20.7	20.7

Note:

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



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

Y-Branch or Lateral & Return Bends (Class 150 Standard) Fig. 1108, 1119



Standards and Specifications

Malleable Iron Fittings

	Dimensions	Material	Galvanizing*	Thread	Pressure Rating
Class 150/PN 20	ASME B16.3	ASTM A197	ASTM A153	ASME B1 20.1	ASME B16.3
Class 300/PN 50	ASME B16.3	ASTM A197	ASTM A153	ASME B1 20.1	ASME B16.3

Malleable Iron Unions

	Dimensions	Material	Galvanizing*	Thread	Pressure Rating
Class 150/PN 20	ASME B16.39	ASTM A197	ASTM A153	ASME B1 20.1	ASME B16.39
Class 250	ASME B16.39	ASTM A197	ASTM A153	ASME B1 20.1	ASME B16.39
Class 300/PN 50	ASME B16.39	ASTM A197	ASTM A153	ASME B1 20.1	ASME B16.39

Note:

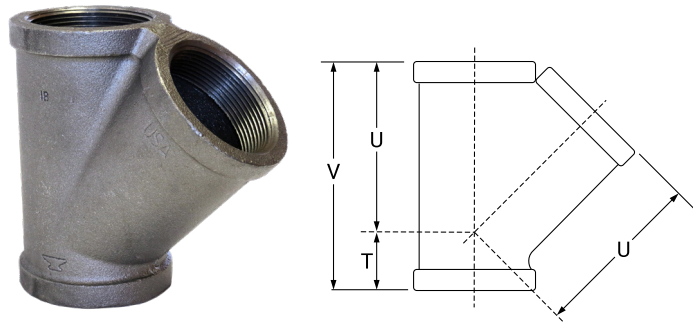
* ASTM B633, Type I, SC 4, may be supplied as alternate zinc coating per applicable ASME B16 product standard.



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Fig. 1108
45° Y-Branch or Lateral (Class 150 Standard)



Size	T	U	V	Unit Weight	
				Black	Galvanized
NPS/DN	In./mm	In./mm	In./mm	Lbs./kg	Lbs./kg
3/8	1/2	1 7/16	1 15/16	0.27	0.27
10	13	37	49	0.12	0.12
1/2	5/8	1 11/16	2 5/16	0.37	0.37
15	16	43	59	0.17	0.17
3/4	3/4	2 1/16	2 13/16	0.62	0.62
20	19	52	73	0.28	0.28
1	7/8	2 7/16	3 5/16	0.86	0.86
25	22	62	84	0.39	0.39
1 1/4	1	2 15/16	3 15/16	1.63	1.63
32	25	75	100	0.74	0.74
1 1/2	1 1/8	3 1/4	4 3/8	2.00	2.00
40	29	83	111	0.91	0.91
2	1 1/4	3 15/16	5 3/16	3.05	3.05
50	32	100	132	1.38	1.38
2 1/2	1 1/2	4 3/4	6 1/4	5.86	5.86
65	38	121	159	2.66	2.66
3	1 11/16	5 9/16	7 1/4	9.18	9.18
80	43	141	184	4.16	4.16
4	2	7	9	15.70	15.70
100	51	178	229	7.12	7.12

Fig. 1119
Return Bends Open Pattern, R.H.
(Class 150 Standard)



Size	Center to Center	Unit Weight	
		Black	Galvanized
NPS/DN	In./mm	Lbs./kg	Lbs./kg
1/2	1 1/2	0.36	—
15	38	0.16	—
3/4	2	0.64	—
20	51	0.29	—
1	2 1/2	1.10	1.10
25	64	0.50	0.50
1 1/4	3	1.77	—
32	76	0.80	—
1 1/2	3 1/2	2.55	2.55
40	90	1.16	1.16
2	4	4.00	4.00
50	102	1.81	1.81

Note:
See first page for pressure-temperature ratings. Galvanized weights may vary. Please contact your ASC Engineered Solutions™ 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)



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Fig. 1108, 1119 Y-Branch or Lateral & Return Bends

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.



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