Anvil® Malleable Iron Fittings

ASC Engineered Solutions

Reducer (Class 300 XS/XH)
Fig. 1167

c UL us LISTED

FM APPROVED

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 300 Malleable Iron Fittings conform to ASME B16.3 and unions conform to ASME B16.39. All elbows and tees ⅜" (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 ⅜" (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°–150° -28.9°–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

Malleable Iron Threaded Fittings
Pressure - Temperature Ratings

Temperature	Pressure			
	Class 150	Class 300		
		Sizes ¼"–1" (6-25mm)	Sizes 1¼"–2" (32-51mm)	Sizes 2½"–3" (64-76mm)
°F/°C	PSI/bar	PSI/bar	PSI/bar	PSI/bar
-20°–150° -28.9°–65.6°	300 20.7	2000 137.9	1500 103.4	1000 68.9
200° 93.3°	265 18.3	1785 123.1	1350 93.1	910 62.7
250° 121.1°	225 15.5	1575 108.6	1200 82.7	825 56.9
300° 148.9°	185 12.8	1360 93.8	1050 72.4	735 50.7
350° 176.7°	150 10.3	1150 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°	– –	510 35.2	450 31.0	385 26.5
550° 287.8°	– –	300 20.7	300 20.7	300 20.7

ANVIL
An ASC Engineered Solution

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:	

Reducer (Class 300 XS/XH)
Fig. 1167

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.

Reducer (Class 300 XS/XH)
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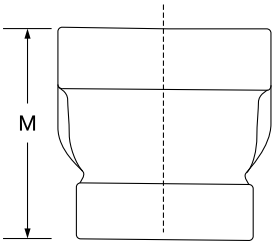

Size		End to End M	Unit Weight	
			Black	Galvanized
NPS/DN	NPS/DN	In./mm	Lbs./kg	Lbs./kg
3/8 10	1/4 8	1 7/16 37	0.21 0.10	0.21 0.10
1/2 15	1/4 8	1 11/16 43	0.31 0.14	0.31 0.14
	3/8 10		0.34 0.15	0.34 0.15
3/4 20	1/4 8	1 3/4 44	0.46 0.21	– –
	3/8 10		0.47 0.21	0.47 0.21
	1/2 15		0.50 0.23	0.50 0.23
1 25	1/4 8	2 51	0.66 0.30	0.66 0.30
	3/8 10		0.71 0.32	0.71 0.32
	1/2 15		0.71 0.32	0.71 0.32
	3/4 20		0.77 0.35	0.77 0.35
1 1/4 32	1/2 15	2 3/8 60	1.12 0.51	1.12 0.51
	3/4 20		1.16 0.53	1.16 0.53
	1 25		1.27 0.58	1.27 0.58
1 1/2 40	1/2 15	2 11/16 68	1.51 0.68	1.51 0.68
	3/4 20		1.57 0.71	1.57 0.71
	1 25		1.62 0.73	1.62 0.73

Size		End to End M	Unit Weight	
			Black	Galvanized
NPS/DN	NPS/DN	In./mm	Lbs./kg	Lbs./kg
1 1/2 40	1 1/4 32	2 11/16 68	1.78 0.81	1.78 0.81
	1/2 15		2.39 1.08	2.39 1.08
	3/4 20		2.44 1.11	2.44 1.11
2 50	1 25	3 3/16 81	2.54 1.15	2.54 1.15
	1 1/4 32		2.66 1.21	2.66 1.21
	1 1/2 40		2.72 1.23	2.72 1.23
2 1/2 65	1 1/2 40	3 11/16 94	4.09 1.85	4.09 1.85
	2 50		4.32 1.96	– –
3 80	1 1/2 40	4 1/16 103	5.79 2.63	– –
	2 50		5.83 2.64	5.83 2.64
	2 1/2 65		6.45 2.93	6.45 2.93
4 100	2 50	4 3/8 111	9.50 4.31	– –
	3 80		10.00 4.54	– –

Notes:

See first page for pressure-temperature ratings. Galvanized weights may vary.
Please contact your ASC Engineered Solutions™ Representative if you need verification.

All elbows and tees 3/8" (10 DN) and larger are 100% gas tested at a minimum of 100 PSI (6.9 bar).

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Building connections that last™

Fig. 1167 Reducer (Class 300 XS/XH)

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.
- Throroughly 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 ½" through 2" thread varies from 4½ turns to 5 turns.
- For 2½" through 4" sizes, wrench tight makeup is considered two full turns past handtight. Handtight engagement for 2½" through 4" thread varies from 5½ turns to 6¾ turns.