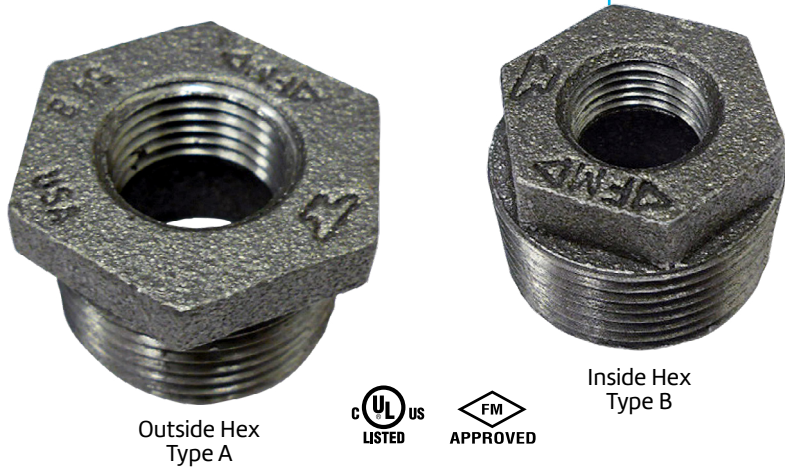


Hex Bushing (Malleable & Cast Iron) Fig. 383



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 150/300 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).

ASC's Fig. 383 Hex Bushing is offered in malleable iron and cast iron.

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.

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 250	Class 300	Class 350
*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° 260.0°	– –	510 35.2	450 31.0	385 26.5
550° 287.8°	– –	300 20.7	300 20.7	300 20.7

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

Cast Iron Threaded Fittings Pressure - Temperature Ratings

Temperature	Pressure	
	Class 125	Class 250
*F/°C	PSI/bar	PSI/bar
-20°–150° -28.9°–65.6°	175 12.1	400 27.6
200° 93.3°	165 11.4	370 25.5
250° 121.1°	150 10.3	340 23.4
300° 148.9°	140 9.7	310 21.4
350° 176.7°	125 8.6	300 20.7
400° 204.4°	– –	250 17.2

Note:
Anvil standard and extra heavy cast iron threaded fittings are manufactured in accordance with ASME B16.4. Plugs and bushings are manufactured in accordance with ASME B16.14.

Figure 367 Concentric Reducers do not meet the overall length requirement of ASME B16.4. All other dimensions are in compliance.



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

Hex Bushing (Malleable Iron) Fig. 383



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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Hex Bushing (Cast Iron) Fig. 383



Standards and Specifications

Cast Iron Threaded Fittings

	Dimensions	Material	Galvanizing*	Thread	Pressure Rating
Class 125	ASME B16.4	ASTM A126 (A)	ASTM A153	ASME B1.20.1	ASME B16.4
Class 250	ASME B16.4	ASTM A126 (A)	ASTM A153	ASME B1.20.1	ASME B16.4

Cast Iron Plugs and Bushings

	Dimensions	Material	Galvanizing*	Thread	Pressure Rating
	ASME B16.14	ASTM A126 (A)	ASTM A153	ASME B1.20.1	ASME B16.14

Note:

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



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Malleable Iron Hex Bushing Fig. 383



Outside Hex
Type A



Inside Hex
Type B

Size		Unit Weight			Size		Unit Weight		
NPS/DN	Hex Type	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg	NPS/DN	Hex Type	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg
3/4 10	A	1/8 6	0.12 0.05	0.12 0.05	1 1/4 32	B	1/4 8	0.33 0.15	0.33 0.15
		1/4 8	0.14 0.06	0.14 0.06			B	3/8 10	0.27 0.12
	A	3/8 10	0.11 0.05	0.11 0.05		A		1/2 15	0.34 0.15
		1/2 15	0.09 0.04	0.09 0.04			A	3/4 20	0.39 0.18
1 25	B	1/8 6	0.24 0.11	0.24 0.11	1 1/2 40	A		1 25	0.30 0.14
		1/4 8	0.18 0.08	0.18 0.08			A	1 1/4 32	0.30 0.14
	B	3/8 10	0.18 0.08	0.18 0.08		A		1 1/2 40	0.64 0.29
		1/2 15	0.20 0.09	0.20 0.09			A	2 50	1.02 0.46
A	3/4 20	0.16 0.07	0.16 0.07	A	2 1/2 65	1.02 0.46		1.02 0.46	

Note:

See Cast Iron section on next page for other available sizes.

Hexagon head or octagon head bushings 2 1/2 NPS (65 DN) and smaller reducing one size may be made of malleable iron, ductile iron or steel. Other sizes may be made of cast iron, ductile iron, malleable iron or steel. Face bushings 2 1/2 NPS (65 DN) and smaller may be made of malleable iron, ductile iron or steel. Face bushings 3NPS (80 DN) and larger reducing one size may be made of malleable iron, ductile iron or steel. Face bushings 3NPS (80 DN) and larger reducing two sizes or more may be made of cast or malleable iron, ductile iron, or steel. According to specifications, hex bushings and cored plugs should be used with 150# malleable iron and 125# cast iron. Solid plugs and face bushings are recommended for use with 250# and 300# fittings.

Cast Iron Hex Bushings on next page.



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Cast Iron Hex Bushing Fig. 383



Outside Hex
Type A



Inside Hex
Type B

Size		Unit Weight			Size		Unit Weight		
NPS/DN	Hex Type/All Cast Iron	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg	NPS/DN	Hex Type/All Cast Iron	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg
1 1/2 40	B	1/4	0.47	0.47	2 1/2 65	B	1	1.16	1.16
	C	8	0.21	0.21		C	25	0.53	0.53
	B	3/8	0.47	0.47		B	1 1/4	1.24	1.24
	C	10	0.21	0.21		C	32	0.56	0.56
	B	1/2	0.42	0.42		A	1 1/2	1.29	1.29
	C	15	0.19	0.19		C	40	0.59	0.59
2 50	B	3/4	0.47	0.47	B	1/2	1.93	1.93	
	C	20	0.21	0.21	C	15	0.88	0.88	
	A	1	0.50	0.50	B	3/4	1.92	1.92	
	C	25	0.23	0.23	C	20	0.87	0.87	
	B	1/4	0.75	0.75	B	1	1.90	1.90	
	C	8	0.34	0.34	C	25	0.86	0.86	
2 1/2 65	B	3/8	0.75	0.75	3 80	B	1 1/4	1.77	1.77
	C	10	0.34	0.34		C	32	0.80	0.80
	B	1/2	0.70	0.70		B	1 1/2	1.79	1.79
	C	15	0.32	0.32		C	40	0.81	0.81
	B	3/4	0.71	0.71		A	2	1.90	1.90
	C	20	0.32	0.32		C	50	0.86	0.86
3 1/2 90	B	1	0.73	0.73	A	2 1/2	1.63	1.63	
	C	25	0.33	0.33	C	65	0.74	0.74	
	A	1 1/4	0.81	0.81	B	1	2.42	2.42	
	C	32	0.37	0.37	C	25	1.10	1.10	
	B	1/2	1.28	1.28	B	1 1/4	2.56	2.56	
	C	15	0.58	0.58	C	32	1.16	1.16	
3 1/2 90	B	3/4	1.25	1.25	B	1 1/2	2.65	2.65	
	C	20	0.57	0.57	C	40	1.20	1.20	

Note:

See Malleable Iron section on previous page for other available sizes.

According to specifications, hex bushings and cored plugs should be used with 150# malleable iron and 125# cast iron. Solid plugs and face bushings are recommended for use with 250# and 300# fittings.

Additional Cast Iron Hex Bushings on next page.



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Cast Iron Hex Bushing Fig. 383

(Continued)



Outside Hex
Type A



Inside Hex
Type B

Size		Unit Weight			Size		Unit Weight		
NPS/DN	Hex Type/All Cast Iron	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg	NPS/DN	Hex Type/All Cast Iron	NPS/DN	Black Lbs./kg	Galvanized Lbs./kg
3½ 80	B	2	2.54	2.54	5 125	A	3½	4.00	—
	C	50	1.15	1.15		C	90	1.81	—
	A	2½	3.23	3.23		A	4	3.94	3.94
	C	65	1.46	1.46		C	100	1.79	1.79
4 100	A	3	1.96	1.96	6 150	B	2	8.00	8.00
	C	80	0.89	0.89		C	50	3.63	3.63
	B	1	3.59	3.59		B	2½	7.72	—
	C	25	1.63	1.63		C	65	3.50	—
4 100	B	1¼	3.54	3.54	8 200	B	3	7.75	7.75
	C	32	1.61	1.61		C	80	3.51	3.51
	B	1½	3.44	3.44		B	4	6.83	6.83
	C	40	1.56	1.56		C	100	3.10	3.10
5 125	B	2	3.11	3.11	10 250	A	5	5.24	5.24
	C	50	1.41	1.41		C	125	2.38	2.38
	B	2½	3.29	3.29		B	3	15.50	—
	C	65	1.49	1.49		C	80	7.03	—
5 125	A	3	3.15	3.15	10 250	B	4	13.93	—
	C	80	1.43	1.43		C	100	6.32	—
	A	3½	2.50	2.50		B	5	13.65	—
	C	90	1.13	1.13		C	125	6.19	—
5 125	B	2	5.12	5.12	10 250	A	6	13.19	13.19
	C	50	2.32	2.32		C	150	5.98	5.98
	B	2½	4.87	4.87		B	6	24.50	—
	C	65	2.21	2.21		C	150	11.11	—
5 125	B	3	4.83	4.83	10 250	A	8	22.00	—
	C	80	2.19	2.19		C	200	9.98	—

Note:

See Malleable Iron section on first page for other available sizes.

According to specifications, hex bushings and cored plugs should be used with 150# malleable iron and 125# cast iron. Solid plugs and face bushings are recommended for use with 250# and 300# fittings.

Additional Cast Iron Hex Bushings on previous page.



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Fig. 383 Hex Bushing (Malleable & Cast Iron)

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 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.



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