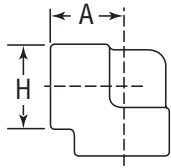


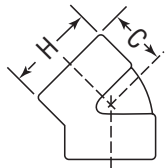
Class 2000 Threaded Fig. 2101 90° Elbows Fig. 2102 45° Elbows

Figure 2101
90° Elbows



Size		A		H		Unit Weight	
NPS	DN	in	mm	in	mm	lbs	kg
1/4	8	0.81	21	0.88	22	0.18	0.08
3/8	10	0.97	25	1.00	25	0.28	0.13
1/2	15	1.12	28	1.31	33	0.55	0.25
3/4	20	1.31	33	1.50	38	0.72	0.33
1	25	1.50	38	1.81	46	1.22	0.55
1 1/4	32	1.75	44	2.19	56	1.65	0.75
1 1/2	40	2.00	51	2.44	62	2.12	0.96
2	50	2.38	60	2.97	75	3.78	1.71
2 1/2	65	3.00	76	3.62	92	6.50	2.95
3	80	3.38	86	4.31	109	11.10	5.03
4	100	4.19	106	5.75	146	22.30	10.11

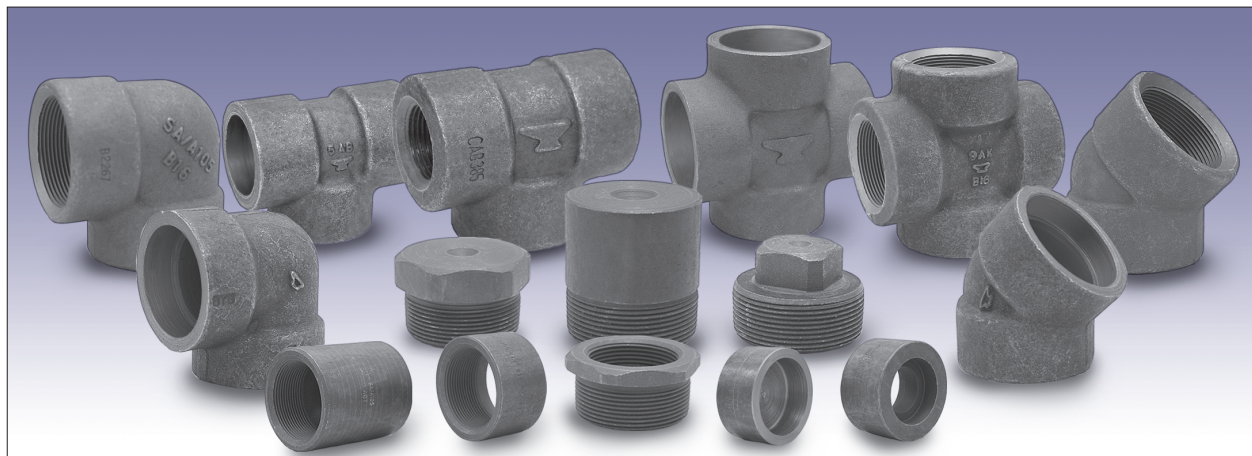
Figure 2102
45° Elbows



Size		C		H		Unit Weight	
NPS	DN	in	mm	in	mm	lbs	kg
1/4	8	0.69	17	0.88	22	0.16	0.07
3/8	10	0.75	19	1.00	25	0.25	0.11
1/2	15	0.88	22	1.31	33	0.48	0.22
3/4	20	1.00	25	1.50	38	0.57	0.26
1	25	1.12	28	1.81	46	0.88	0.40
1 1/4	32	1.31	33	2.19	56	1.32	0.60
1 1/2	40	1.38	35	2.44	62	1.62	0.73
2	50	1.69	43	2.97	75	2.83	1.28
2 1/2	65	2.06	52	3.62	92	7.70	3.49
3	80	2.50	64	4.31	109	12.00	5.44

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

Fig. 2101 90° Elbows
Fig. 2102 45° Elbows



Materials

The steel for Anvil Forged Carbon Steel Fittings consists of forging, bars, seamless pipe or tubes which conform to the requirements for melting process, chemical composition and mechanical properties of ASTM A105.

Design Basis

ASME B16.11 – Forged fittings, socket-weld and threaded

Dimensions

ASME B16.11, unless otherwise noted

Threads

ASME B1.20.1 NPT Threads

Forged Steel Fittings

In accordance with ASME standard B16.11 – “Forged Fittings, Socket-Welding and Threaded” this table shows the schedule of pipe corresponding to each class of fitting for rating purposes.

Class	Pressure Ratings	
	Schedule	
	N.P.T.	S.W.
2000	80	–
3000	160	80
6000	XXS/XXH	160

ASME B16.11 provides that the maximum allowable pressure of a fitting be computed in accordance with the applicable piping code or regulation for straight seamless pipe or for material of equivalent composition and mechanical properties to the fitting. Any corrosion or mechanical allowances and any reduction in allowable stress due to temperature or other service conditions must be applied to the pipe and fitting alike.

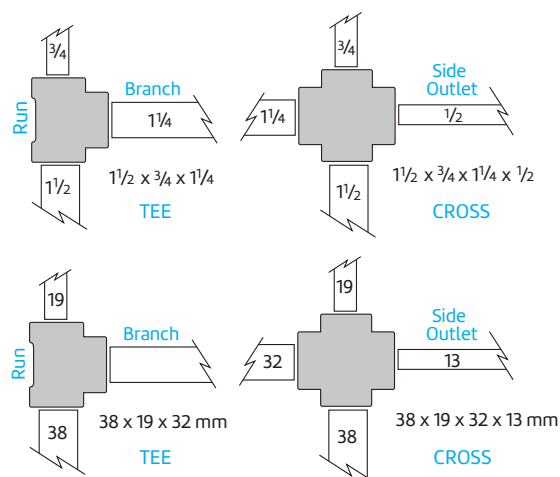
Standards and Specifications

Dimensions	Material	Thread	Pressure Rating
Forged Steel Threaded Fittings			
Class 2000, 3000, 6000	ASME B16.11	ASTM A105, ASTM A182, ASTM A350	ASME B1.20.1
			ASME B16.11

Reducing Fittings

Reducing elbows, tees and crosses are available in both threaded and socket-welding.

On reducing tees and crosses give the size of the largest run opening; then give the opposite opening. On a tee give the branch size last. On a cross give the largest side outlet third and the opposite opening last.



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Fig. 2101 90° Elbows

Fig. 2102 45° Elbows

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.