

ASME B16.11 Forged Fittings

ASME B16.11 covers the requirements for forged socket-welding fittings, NPS 1/8 through 4 in Class 3000, NPS 1/8 through 2 in Classes 6000 and 9000; and forged threaded fittings NPS 1/8 through 4 in Classes 2000, 3000 and 6000. Included are 90° and 45° elbows, tees, crosses, full and half couplings, caps, plugs and bushings. Street elbows are covered in Classes 3000 and 6000 only, NPS 1/8 through 2. ASME B16.11 does not include unions, which are covered by MSS SP-83 (see pages 54-56).

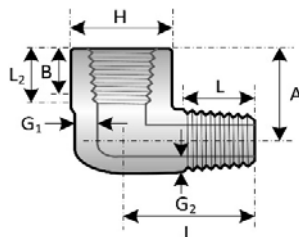
Tolerances

In addition to the tolerances shown in the tables, the following applies:

Concentricity of Bores: the socket and fitting bores shall be concentric within a tolerance of 0.03" for all sizes. Opposite socket bores shall be concentric within a tolerance of 0.06" for all sizes.

Coincidence of Axes: the maximum allowable variation in the alignment of the fitting bore and socket bore axes shall be 0.06" in 1 ft. The maximum allowable variation in alignment of threads shall be 0.06" in 1 ft.

Dimensions of Forged Threaded Fittings- ASME B16.11



Street Elbow

Nominal Pipe Size NPS	Centre-to-End				Outside Diameter of Band H ⁽²⁾		Minimum Wall Thickness G ₁		Minimum Wall Thickness G ₂ ⁽³⁾		Minimum Length Internal Thread ⁽⁴⁾		Minimum Thread Length L
	Female End A ⁽¹⁾		Male End J		3000	6000	3000	6000	3000	6000	B	L ₂	
	3000	6000	3000	6000									
1/8	0.75	0.88	1.00	1.25	0.75	1.00	0.125	0.200	0.108	0.166	0.25	0.2639	0.38
1/4	0.88	1.00	1.25	1.50	1.00	1.25	0.130	0.223	0.127	0.208	0.32	0.4018	0.44
3/8	1.00	1.12	1.50	1.62	1.25	1.50	0.138	0.275	0.138	0.220	0.36	0.4078	0.50
1/2	1.12	1.38	1.62	1.88	1.50	1.75	0.161	0.321	0.164	0.257	0.43	0.5337	0.56
3/4	1.38	1.75	1.88	2.25	1.75	2.00	0.170	0.336	0.192	0.270	0.50	0.5457	0.62
1	1.75	2.00	2.25	2.62	2.00	2.44	0.196	0.391	0.219	0.313	0.58	0.6828	0.75
1 1/4	2.00	2.12	2.62	2.81	2.44	2.75	0.208	0.417	0.219	0.334	0.67	0.7068	0.81
1 1/2	2.12	2.50	2.81	3.31	2.75	3.31	0.219	0.436	0.246	0.350	0.70	0.7235	0.81
2	2.50	3.25	3.31	4.13	3.31	4.00	0.281	0.476	0.301	0.382	0.75	0.7565	0.88

All dimensions are given in inches.

Notes:

- (1) Dimension A of the table on Page 49 for the appropriate fitting size may also be used at the option of the manufacturer.
- (2) Dimension H of the table on Page 49 for the appropriate fitting size may also be used at the option of the manufacturer.
- (3) Wall thickness before threading.
- (4) Dimension B is the minimum length of perfect thread. The length of useful thread (B plus threads with fully formed roots and flat crests) shall not be less than L₂ (effective length of external thread) required by American National Standard for Pipe Threads (ASME B1.20.1)

Trans Am

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