



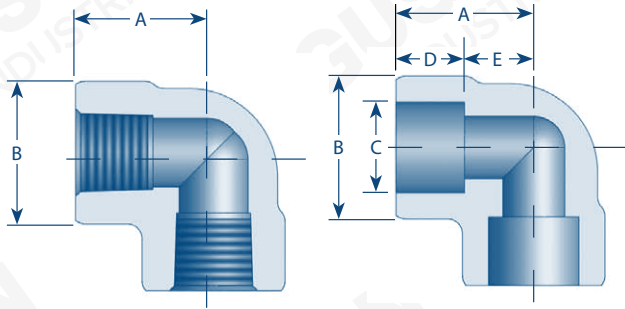
FERGUSON
INDUSTRIAL

Forged Steel Fittings
& Unions

90° ELBOW

CLASS 2000 | CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
2000	A		7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B		29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 5/8	4 5/16	5 3/4
	WEIGHT		0.23	0.29	0.48	0.75	1.08	1.59	2.19	3.52	7.09	11.33	25.08
3000	A	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6
	WEIGHT	0.27	0.35	0.58	0.97	1.42	2.29	2.77	5.43	5.87	11.03	17.50	33.20
6000	A	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 3/16	4 1/2
	B	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	5 3/4	6
	WEIGHT	0.37	0.65	1.05	1.64	2.69	3.62	6.13	7.84	14.40	22.95	37.12	33.42

Socket Weld

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	7/8	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B	29/32	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/16	4 3/8	5 3/4
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 5/8
	WEIGHT	0.25	0.21	0.26	0.45	0.75	1.05	1.52	2.08	3.37	6.67	11.08	22.59
6000	A	7/8	31/32	1 1/8	1 5/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	29/32	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 1/2	2 3/4
	WEIGHT		0.26	0.59	0.97	1.42	2.33	2.96	5.71	6.42	12.16	18.69	34.15
9000	A				1 1/2	1 3/4	2	2 3/8	2 1/2	3			
	B				1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	3 11/16			
	C				0.855	1.065	1.330	1.675	1.915	2.406			
	D MIN.				3/8	1/2	1/2	1/2	1/2	5/8			
	E				1	1 1/8	1 1/4	1 3/8	1 1/2	2 1/8			
	WEIGHT				1.70	2.79	3.81	5.71	8.15	11.26			

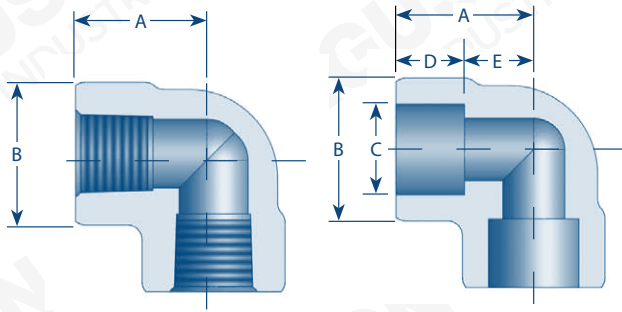
NOTES

- All Dimensions are in inches
- Weights based on carbon steel (A105)

45° ELBOW

CLASS 2000 | CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
2000	A		3/4	3/4	1	1 1/8	1 1/4	1 5/16	1 3/8	1 3/4	2 1/16	2 1/2	3 1/8
	B		29/32	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	4	4 3/8	6
	WEIGHT		0.21	0.24	0.47	0.73	1.03	1.46	1.77	3.03	8.07	9.46	24.57
3000	A	3/4	3/4	1	1 1/8	1 1/4	1 5/16	1 3/8	1 11/16	1 3/4	2 1/16	2 1/2	3 1/8
	B	29/32	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	3 5/16	4	4 3/4	6
	WEIGHT	0.23	0.30	0.58	0.91	1.29	2.02	2.29	4.54	5.26	7.83	12.99	24.75
6000	A	3/4	1	1 1/8	1 1/4	1 5/16	1 3/8	1 11/16	1 3/4	2 1/16	2 1/2	3 1/8	3 1/8
	B	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 5/16	4	4 3/4	6	6
	WEIGHT	0.56	0.58	0.91	1.54	2.25	2.84	5.12	6.82	10.28	15.00	35.20	24.75

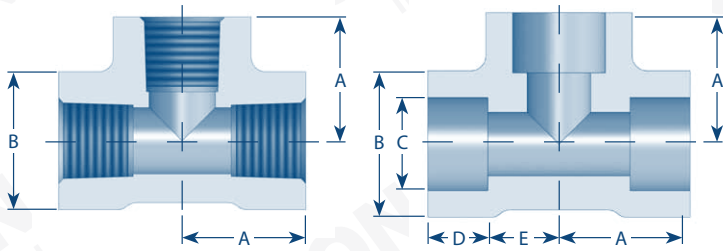
Socket Weld

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	3/4	3/4	3/4	1	1 1/8	1 1/4	1 5/16	1 3/8	1 3/4	2 1/16	2 1/2	3 1/8
	B	29/32	29/32	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	4	4 3/8	6
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	5/16	5/16	5/16	7/16	1/2	9/16	11/16	13/16	1	1 1/8	1 1/4	1 5/8
	WEIGHT	0.22	0.19	0.22	0.42	0.70	0.95	1.39	1.68	2.96	7.76	8.55	24.06
6000	A	3/4	3/4	1	1 1/8	1 1/4	1 5/16	1 3/8	1 3/4	1 27/32	2 1/16	2 1/2	3 1/8
	B	29/32	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	3 3/8	4	4 3/4	6
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	5/16	5/16	7/16	1/2	9/16	11/16	13/16	1	1 1/8	1 1/4	1 3/8	1 5/8
	WEIGHT		0.22	0.48	0.89	1.26	2.00	2.29	4.49	5.57	8.69	14.20	24.06
9000	A			1 1/4	1 5/16	1 3/8	1 3/4	1 27/32	2 1/16				
	B			1 27/32	2 7/32	2 1/2	3 1/32	3 3/8	4				
	C			0.855	1.065	1.330	1.675	1.915	2.406				
	D MIN.			3/8	1/2	1/2	1/2	1/2	5/8				
	E			5/8	3/4	13/16	7/8	1	1 1/8				
	WEIGHT			1.31	2.37	2.91	4.31	6.89	10.84				

NOTES

1. All Dimensions are in inches
2. Weights based on carbon steel (A105)

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
2000	A		7/8	31/32	11/8	15/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B		29/32	11/16	15/16	19/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/16	4 5/16	5 3/4
	WEIGHT		0.29	0.38	0.63	0.95	1.41	2.13	2.91	4.41	9.89	14.17	29.70
3000	A	7/8	31/32	11/8	15/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	29/32	11/16	15/16	19/16	1 27/32	2 7/32	2 1/2	3 1/32	1 11/32	4	4 3/4	6
	WEIGHT	0.36	0.47	0.77	1.29	1.89	3.08	3.73	7.00	7.63	14.67	22.65	40.08
6000	A	31/32	11/8	15/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 3/16	4 1/2
	B	11/16	15/16	19/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	5 3/4	6
	WEIGHT	0.47	0.87	1.45	2.24	3.71	4.92	8.13	10.11	19.16	30.43	47.55	47.77

Socket Weld

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	7/8	7/8	31/32	11/8	15/16	1 1/2	1 3/4	2	2 3/8	3	3 3/8	4 3/16
	B	29/32	29/32	11/16	15/16	19/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/16	4 3/8	5 3/4
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 5/8
	WEIGHT	0.33	0.27	0.34	0.59	0.94	1.29	2.04	2.77	4.11	8.68	13.79	28.60
6000	A	7/8	31/32	11/8	15/16	1 1/2	1 3/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	29/32	11/16	15/16	19/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	17/32	5/8	3/4	7/8	1 1/16	1 1/4	1 1/2	1 5/8	2 1/4	2 1/2	2 3/4
	WEIGHT		0.34	0.80	1.27	1.91	3.17	4.04	7.55	8.19	16.15	24.43	42.79
9000	A				1 1/2	1 3/4	2	2 3/8	2 1/2	3			
	B				1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	3 11/16			
	C				0.855	1.065	1.330	1.675	1.915	2.406			
	D MIN.				3/8	1/2	1/2	1/2	1/2	5/8			
	E				1	1 1/8	1 1/4	1 3/8	1 1/2	2 1/8			
	WEIGHT				2.31	3.62	5.20	7.55	10.78	15.79			

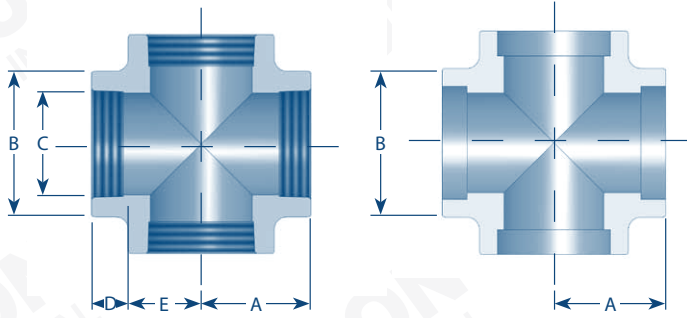
NOTES

- All Dimensions are in inches
- Weights based on carbon steel (A105)

CROSS

CLASS 2000 | CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
2000	A		31/32	31/32	11/8	15/16	11/2	13/4	2	2 3/8	3 1/4	3 3/4	4 1/2
	B		11/16	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	4	4 3/4	6
	WEIGHT		0.56	0.47	0.83	1.19	1.64	2.46	3.51	5.50	18.32	26.41	45.76
3000	A	31/32	31/32	11/8	15/16	11/2	13/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2
	B	11/16	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6
	WEIGHT	0.65	0.58	0.97	1.60	2.28	3.65	4.54	8.47	9.10	17.69	26.13	47.37
6000	A	31/32	11/8	15/16	11/2	13/4	2	2 3/8	2 1/2	3 1/4	3 3/4	4 1/2	4 1/2
	B	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	6	6
	WEIGHT	0.65	1.19	1.60	2.65	4.34	5.92	10.50	12.12	23.15	28.13	54.00	43.50

Socket Weld

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	15/16	15/16	31/32	11/8	15/16	11/2	13/4	2	2 3/8	3 1/4	3 3/4	4 1/2
	B	11/16	11/16	11/16	15/16	19/16	127/32	2 7/32	2 1/2	3 1/32	4	4 3/4	6
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	7/16	7/16	17/32	5/8	3/4	7/8	11/16	11/4	11/2	15/8	2 1/4	2 5/8
	WEIGHT	0.25	0.25	0.42	0.72	1.17	1.49	2.38	3.25	5.08	15.78	24.73	40.00
6000	A				15/16	11/2	13/4	2	2 3/8	2 1/2	3 1/4	3 3/4	
	B				19/16	127/32	2 7/32	2 1/2	3 1/32	3 11/32	4	4 3/4	
	C				0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	
	D MIN.				3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	
	E				3/4	7/8	11/16	11/4	11/2	15/8	2 1/4	2 1/2	
	WEIGHT				1.55	2.31	3.74	5.25	8.80	9.66	16.75	23.00	
9000	A				11/2	13/4	2	2 3/8	2 1/2	3 1/4			
	B				127/32	2 7/32	2 1/2	3 1/32	3 11/32	4			
	C				0.855	1.065	1.330	1.675	1.915	2.406			
	D MIN.				3/8	1/2	1/2	1/2	1/2	5/8			
	E				1	11/8	11/4	13/8	11/2	2 1/8			
	WEIGHT				1.75	4.12	5.25	5.12	8.75	22.19			

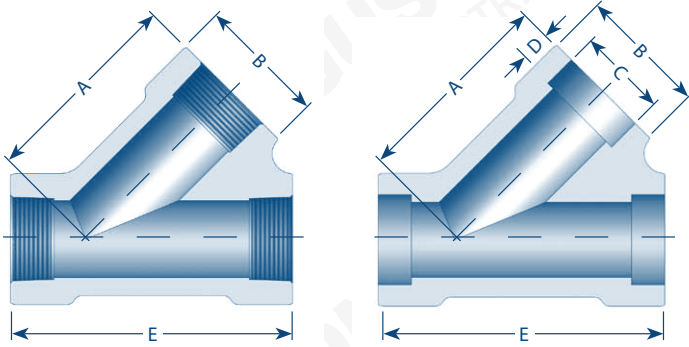
NOTES

1. All Dimensions are in inches
2. Weights based on carbon steel (A105)

LATERAL

CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: ASME B16.11 - (Socket Ends Only)
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)							
		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3000	A	1 7/8	2 1/8	2 9/16	3	3 1/2	3 15/16	4 3/4	5
	B	1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32
	E	2 11/16	3	3 9/16	4 1/8	4 13/16	5 3/8	6 7/16	6 5/8
	WEIGHT		1.00	1.99	2.73	4.43	5.45	11.10	11.70
6000	A			3	3 1/2	3 15/16	4 3/4	5	
	B			1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	
	E			4 1/8	4 13/16	5 3/8	6 7/16	6 5/8	
	WEIGHT			2.38	3.25	5.44	7.19	12.31	

Socket Weld

Class	Dimensions	Sizes (Inches)							
		1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3000	A		1 7/8	2 1/8	2 9/16	3	3 1/2	3 15/16	4 3/4
	B		1 1/16	1 5/16	1 9/16	1 27/32	2 7/32	2 1/2	3 1/32
	C		0.690	0.855	1.065	1.330	1.675	1.915	2.406
	D MIN.		3/8	3/8	1/2	1/2	1/2	1/2	5/8
	E		2 11/16	3	3 9/16	4 1/8	4 13/16	5 3/8	6 7/16
	WEIGHT		1.00	0.88	1.56	2.08	3.08	4.22	6.89
6000	A			2 9/16	3	3 1/2	3 15/16	4 3/4	5
	B			1 9/16	1 27/32	2 7/32	2 1/2	3 1/32	3 11/32
	C			0.855	1.065	1.330	1.675	1.915	2.406
	D MIN.			3/8	1/2	1/2	1/2	1/2	5/8
	E			3 9/16	4 1/8	4 13/16	5 3/8	6 7/16	6 5/8
	WEIGHT			2.00	3.07	4.85	6.25	11.94	12.50
9000	A			3	3 1/2	3 15/16	4 3/4	5	
	B			1 27/32	2 7/32	2 1/2	3 1/32	3 11/32	
	C			0.855	1.065	1.330	1.675	1.915	
	D MIN.			9/16	5/8	11/16	7/8	1/2	
	E			4 1/8	4 13/16	5 3/8	6 7/16	6 5/8	
	WEIGHT			1.75	2.38	3.75	6.88	6.88	

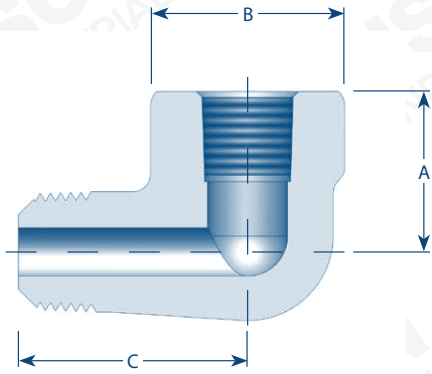
NOTES

- All Dimensions are in inches
- Weights based on carbon steel (A105)

STREET ELBOW

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)								
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
3000	A	7/8	7/8	1	1 1/8	1 3/8	1 3/4	2	2 1/8	2 1/2
	B	1 1/16	1 1/16	1 5/16	1 1/2	1 13/16	2 3/16	2 7/16	3 1/32	3 5/16
	C	1 1/4	1 1/4	1 1/2	1 5/8	1 7/8	2 1/4	2 5/8	2 15/16	3 5/16
	WEIGHT	0.27	0.25	0.41	0.61	1.02	1.73	2.42	4.05	5.25
6000	A	7/8	1	1 1/8	1 3/8	1 3/4	2	2 1/8	2 1/2	
	B	1 1/16	1 5/16	1 1/2	1 13/16	2 3/16	2 7/16	3 1/32	3 5/16	
	C	1 1/4	1 1/2	1 5/8	1 7/8	2 1/4	2 5/8	2 15/16	3 5/16	
	WEIGHT	0.42	0.44	0.69	1.18	2.09	3.12	4.87	7.04	

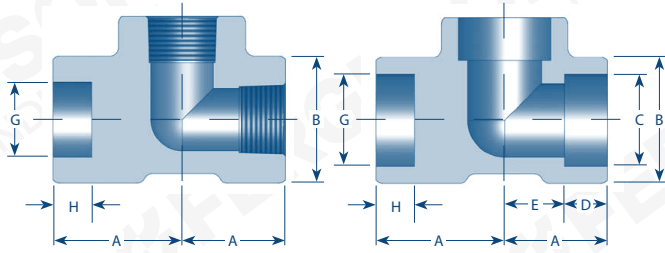
NOTES

1. All Dimensions are in inches
2. Weights based on carbon steel (A105)

QUIKLEG 90

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11 -
(Socket Dimensions Only)
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)					
		1/2	3/4	1	1 1/4	1 1/2	2
3000	A	1 1/2	1 1/2	2	2	2 3/8	2 1/2
	B	1 7/8	1 7/8	2 1/2	2 1/2	3	3 1/8
	F	1 7/8	1 7/8	2 1/2	2 1/2	3	3 1/4
	G	0.855	1.065	1.330	1.675	1.915	2.406
	H	1/2	9/16	3/4	3/4	3/4	7/8
	WEIGHT		2.63	2.19	6.02		5.10
6000	A	1 1/2	2	2	2 3/8	2 1/2	
	B	1 7/8	2 1/2	2 1/2	3	3 1/8	
	F	1 7/8	2 1/2	2 1/2	3	3 1/8	
	G	0.855	1.065	1.330	1.675	1.915	
	H	9/16	9/16	3/4	3/4	7/8	
	WEIGHT			6.53			10.31

Socket Weld

Class	Dimensions	Sizes (Inches)					
		1/2	3/4	1	1 1/4	1 1/2	2
3000	A	1 1/2	1 1/2	1 1/2	2	2	2 3/8
	B	1 7/8	1 7/8	1 7/8	2 1/2	2 1/2 3	
	C	0.855	1.065	1.330	1.675	1.915	2.406
	D MIN.	3/8	1/2	1/2	1/2	1/2	5/8
	E	5/8	3/4	7/8	1 1/4	1 1/4	1 1/2
	F	1 7/8	1 7/8	1 7/8	2 1/2	2 1/2	3
	G	0.855	1.065	1.330	1.675	1.915	2.406
	H	9/16	9/16	9/16	3/4	3/4	3/4
	WEIGHT			2.03	2.63		3.89
6000	A		1 1/2	2	2 3/8	2 3/8	2 1/2
	B		1 7/8	2 1/2	3	3	3 3/8
	C		1.065	1.330	1.675	1.915	2.406
	D MIN.		1/2	1/2	1/2	1/2	5/8
	E		7/8	1 1/16	1 1/4	1 1/2	1 5/8
	F		1 7/8	2 1/2	3	3	3 1/8
	G		1.065	1.330	1.675	1.915	2.406
	H		9/16	3/4	9/16	9/16	11/16
	WEIGHT		2.19	6.02		4.75	10.98

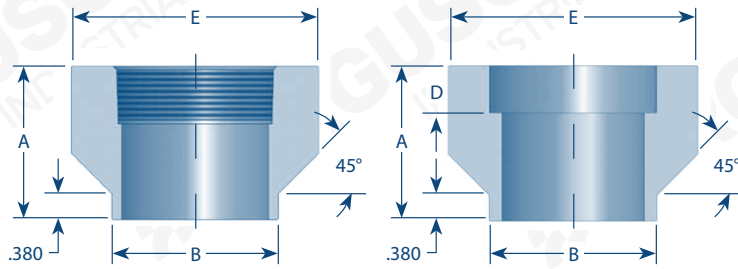
NOTES

1. All Dimensions are in inches
2. Weights based on carbon steel (A105)

BOSS WITH LIP

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11 -
(Socket Dimensions Only)
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)										
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
3000	A		13/16	13/16	15/16	13/8	111/16	17/8	2	2 1/4	2 1/2	2 3/4
	B		11/16	13/16	15/16	11/16	15/16	111/16	115/16	2 7/16	2 7/8	3 1/2
	E		1	11/16	13/8	11/2	113/16	2 1/4	2 1/2	3 1/8	3 5/8	4 3/8
	WEIGHT		0.13	0.21	0.29	0.29	0.51	0.84	1.18	2.04	2.93	4.11
6000	A 1	3/16	13/16	13/16	15/16	13/8	111/16	17/8	2	2 1/4	2 1/2	2 3/4
	B	9/16	11/16	13/16	15/16	11/16	15/16	111/16	115/16	2 7/16	2 7/8	3 1/2
	E	7/8	1	1 1/4	1 1/2	13/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5
	WEIGHT	0.12	0.15	0.20	0.33	0.43	0.93	1.15	1.86	3.02	4.40	6.40

Socket Weld

Class	Dimensions	Sizes (Inches)										
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
3000	A		13/16	13/16	15/16	13/8	111/16	17/8	2	2 1/4	2 1/2	2 3/4
	B		11/16	13/16	15/16	11/16	15/16	111/16	115/16	2 7/16	2 7/8	3 1/2
	D MIN.		3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8
	E		15/16	11/16	15/16	11/2	113/16	2 1/4	2 1/2	3 1/8	3 5/8	4 3/8
	F		0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535
	WEIGHT		0.13	0.21	0.29	0.29	0.51	0.84	1.18	2.04	2.93	4.11
6000	A	13/16	13/16	13/16	15/16	13/8	111/16	17/8	2	2 1/4	2 1/2	2 3/4
	B	9/16	11/16	13/16	15/16	11/16	15/16	111/16	115/16	2 7/16	2 7/8	3 1/2
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8
	E	7/8	1	1 1/4	1 1/2	13/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5
	F	0.420	0.555	0.690	0.855	1.065	1.340	1.675	1.915	2.406	2.906	3.535
	WEIGHT	0.18	0.16	0.22	0.33	0.43	0.93	1.24	1.91	3.07	4.83	6.83

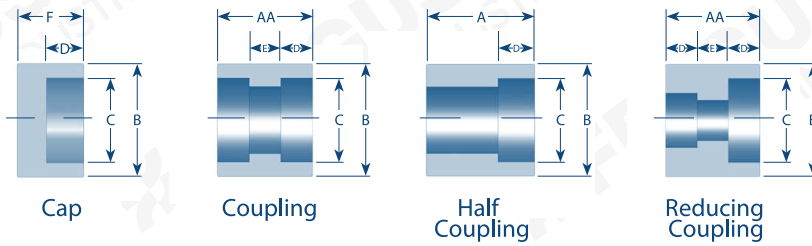
NOTES

1. All Dimensions are in inches
2. Weights based on carbon steel (A105)

SOCKET WELD COUPLINGS, REDUCERS AND CAPS

CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: ASME B16.11



Threaded

Class	Dimensions	Sizes (Inches)												
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	
3000	A	1 1/16	1 1/16	1 1/8	1 3/8	1 1/2	1 3/4	1 7/8	2	2 1/2	2 9/16	2 3/4	3	
	AA	1 1/32	1 1/32	1 1/32	1 3/16	1 13/32	1 33/64	1 33/64	1 33/64	2 1/64	2 1/64	2 1/64	2 17/64	
	B	3/4	7/8	1 1/16	1 1/4	1 1/2	1 13/16	2 1/4	2 1/2	3	3 5/8	4 5/16	5 1/2	
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545	
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4	
	E	1/4	1/4	1/4	3/8	3/8	1/2	1/2	1/2	3/4	3/4	3/4	3/4	
	F	1 1/16	3/4	3/4	7/8	1	1 1/16	1 3/16	1 1/4	1 1/2	1 9/16	1 13/16	2 1/16	
COUPLING	WEIGHT	0.09	0.12	0.16	0.24	0.39	0.57	0.90	1.04	1.79	2.42	4.06	5.73	
HALF COUPLING	WEIGHT		0.10	0.13	0.18	0.24	0.39	0.57	0.90	1.04	1.79	2.42	4.06	5.73
REDUCER	WEIGHT			0.12	0.16	0.24	0.39	0.57	0.90	1.04	1.79	2.42	4.06	5.73
CAP	WEIGHT	0.07	0.10	0.14	0.22	0.36	0.55	1.01	1.27	1.99	3.38	6.30	12.08	
6000	A	1 1/16	1 1/16	1 1/8	1 3/8	1 1/2	1 3/4	1 7/8	2	2 1/2	2 9/16	2 3/4	3	
	AA	1 1/16	1 1/8	1 1/8	1 5/32	1 13/32	1 33/64	1 33/64	1 33/64	2 1/64	2 1/64	2 1/64	2 17/64	
	B	7/8	1 1/16	1 5/16	1 1/2	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5	6 1/4	
	C	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545	
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4	
	E	1/4	1/4	1/4	3/8	3/8	1/2	1/2	1/2	3/4	3/4	3/4	3/4	
	F		1 5/16	1 5/16	1	1 1/16	1 1/4	1 5/16	1 3/8	1 5/8	1 11/16	1 15/16	2 5/16	
COUPLING	WEIGHT		0.23	0.33	0.45	0.67	1.27	1.37	2.09	3.85	4.93	6.69	8.00	
HALF COUPLING	WEIGHT				0.56	0.80	1.58	1.72	2.99	4.99	5.44	9.50	12.64	
REDUCER	WEIGHT		0.23	0.33	0.45	0.67	1.27	1.37	2.09	3.85	4.93	6.69	8.00	
CAP	WEIGHT		0.20	0.27	0.42	0.58	1.18	1.41	2.19	3.65	5.63	8.78	14.25	
9000	A				1 3/8	1 1/2	1 3/4	1 51/64	2	2 1/2				
	AA				1 3/8	1 1/2	1 3/4	1 51/64	2	2 1/2				
	B				1 13/16	2	2 3/8	2 3/4	3 1/16	3 5/8				
	C				0.855	1.065	1.330	1.675	1.915	2.406				
	D MIN.				3/8	1/2	1/2	1/2	1/2	5/8				
	E				3/8	3/8	1/2	1/2	1/2	3/4				
COUPLING	WEIGHT				0.62	1.04	1.71	1.69	2.93	4.61				
HALF COUPLING	WEIGHT				0.88	0.80	1.74	2.22	2.93	4.99				
REDUCER	WEIGHT				0.62	1.04	1.71	1.69	2.93	4.61				

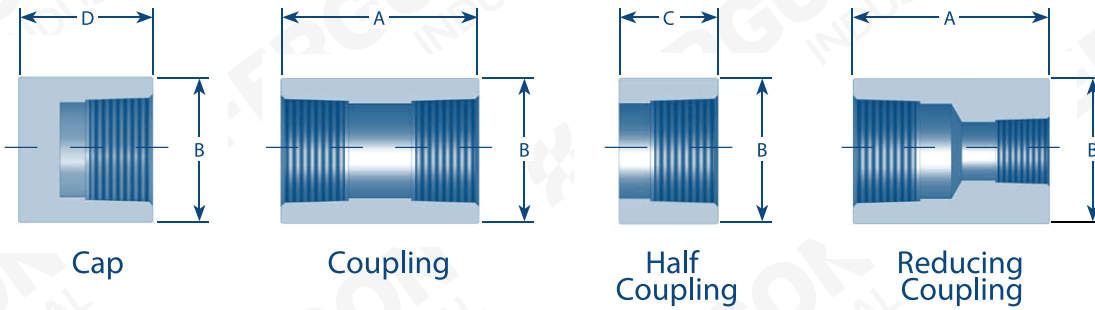
NOTES

1. All dimensions are in inches.
2. Weights based on carbon steel (A105)
3. Reducer weights shown are based on full coupling sizes.
4. Reducers smaller than 1/4" are not offered.

THREADED COUPLINGS, REDUCERS AND CAPS

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Threaded

Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	1 1/4	1 3/8	1 1/2	1 7/8	2	2 3/8	2 5/8	3 1/8	3 3/8	3 5/8	4 1/4	4 3/4
	B	3/4	3/4	7/8	1 1/8	1 3/8	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5 1/2
	C	5/8	1 1/16	3/4	15/16	1	1 3/16	1 5/16	1 9/16	1 11/16	1 13/16	2 1/8	2 3/8
	D	15/16	1	1	1 1/4	1 7/16	1 5/8	1 3/4	1 3/4	1 7/8	2 3/8	2 9/16	2 11/16
	D MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	E	1/4	1/4	1/4	3/8	3/8	1/2	1/2	1/2	3/4	3/4	3/4	3/4
	F	1 1/16	3/4	3/4	7/8	1	1 1/16	1 3/16	1 1/4	1 1/2	1 9/16	1 13/16	2 1/16
COUPLING	WEIGHT	0.13	0.11	0.13	0.29	0.42	0.85	1.60	2.26	2.95	4.61	6.89	12.48
HALF COUPLING	WEIGHT	0.06	0.05	0.06	0.13	0.21	0.42	0.79	1.12	1.53	2.34	3.26	6.48
REDUCER	WEIGHT		0.11	0.13	0.29	0.42	0.85	1.60	2.26	2.95	4.61	6.89	12.48
CAP	WEIGHT	0.10	0.09	0.10	0.24	0.37	0.74	1.35	1.64	2.40	4.45	7.14	12.42
6000	A	1 1/4	1 3/8	1 1/2	1 7/8	2	2 3/8	2 5/8	3 1/8	3 3/8	3 5/8	4 1/4	4 3/4
	B	7/8	1	1 1/4	1 1/2	1 3/4	2 1/4	2 1/2	3	3 5/8	4 1/4	5	6 1/4
	C	5/8	1 1/16	3/4	15/16	1	1 3/16	1 5/16	1 9/16	1 11/16	1 13/16	2 1/8	2 3/8
	D	1	1 1/16	1 1/16	1 5/16	1 1/2	1 11/16	1 13/16	1 7/8	2	2 1/2	2 11/16	2 15/16
COUPLING	WEIGHT	0.18	0.28	0.39	0.70	0.95	1.93	2.28	4.20	6.00	8.65	13.41	21.86
HALF COUPLING	WEIGHT	0.10	0.12	0.19	0.35	0.49	0.97	1.15	2.08	3.05	4.35	6.83	7.05
REDUCER	WEIGHT		0.28	0.39	0.70	0.95	1.93	2.28	4.20	6.00	8.65	13.41	21.86
CAP	WEIGHT	0.16	0.23	0.31	0.55	0.78	1.55	1.90	2.79	4.35	8.10	10.73	15.58

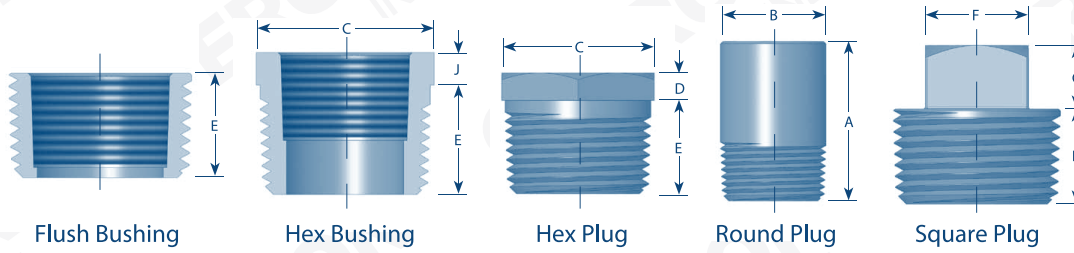
NOTES

1. All dimensions are in inches.
2. Weights based on carbon steel (A105)
3. Reducer weights shown are based on full coupling sizes.
4. Reducers smaller than 1/4" are not offered.

PLUGS & BUSHINGS

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Class	Dimensions	Sizes (Inches)											
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000/ 6000	A	13/8	15/8	15/8	13/4	13/4	2	2	2	2 1/2	2 3/4	2 3/4	3
	B	13/32	9/16	11/16	13/16	11/16	15/16	1 11/16	1 29/32	2 3/8	2 7/8	3 1/2	4 1/2
	C	7/16	5/8	1/16	7/8	11/16	13/8	13/4	2	2 1/2	3	3 3/4	4 7/8
	D MIN.	1/4	1/4	5/16	5/16	3/8	3/8	9/16	5/8	11/16	3/4	13/16	1
	E	7/16	1/2	9/16	11/16	3/4	27/32	7/8	15/16	1	11/4	1 11/16	1 25/32
	F	9/32	3/8	7/16	9/16	5/8	13/16	15/16	1 1/8	15/16	11/2	1 11/16	2 1/2
	G	1/4	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	1 1/4
	H	3/8	7/16	1/2	9/16	5/8	3/4	13/16	13/16	7/8	1 1/16	1 1/8	1 1/4
	J MIN.		3/16	3/16	3/16	1/4	1/4	3/8	3/8	3/8	1/2	7/16	1
ROUND PLUG	WEIGHT	0.05	0.11	0.18	0.25	0.41	0.73	1.20	1.57	3.10	5.01	7.40	13.25
HEXAGON PLUG	WEIGHT	0.03	0.06	0.09	0.16	0.27	0.48	0.93	1.35	2.26	3.84	7.08	12.07
SQUARE PLUG	WEIGHT	0.02	0.04	0.06	0.12	0.19	0.35	0.61	0.83	1.41	2.33	3.57	6.28
HEX BUSHING	WEIGHT		0.03	0.04	0.06	0.12	0.21	0.38	0.37	0.77	1.31	3.78	7.31
FLUSH BUSHING	WEIGHT		0.05	0.07	0.03	0.06	0.09	0.17	0.19	0.39	0.62	1.00	1.88

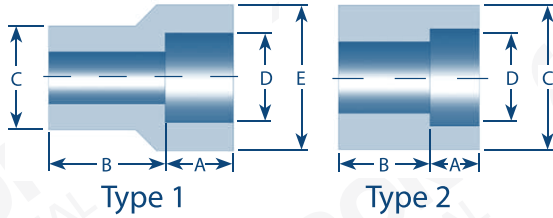
NOTES

1. All dimensions are in inches.
2. Weights based on carbon steel (A105)

SOCKET WELD REDUCER INSERTS (MSS SP-79)

CLASS 3000 | CLASS 6000 | CLASS 9000

Specifications: MSS SP-79
ASME B16.11 -
(Socket Dimensions Only)



SIZE	C	D	3000			6000				9000				WEIGHT			
			FIG TYPE	A MIN	B	E	FIG TYPE	A MIN	B	E	FIG TYPE	A MIN	B	E	3000	6000	9000
3/8 X 1/4	0.685	0.555	1	3/8	3/4	15/16	1	3/8	27/32	1					0.12	0.20	
1/2 X 3/8	0.850	0.690	1	3/8	13/16	11/16	1	3/8	29/32	13/16					0.16	0.19	
1/2 X 1/4	0.850	0.555	1	3/8	13/16	15/16	1	3/8	13/16	1					0.17	0.19	
3/4 X 1/2	1.060	0.855	1	3/8	7/8	15/16	1	3/8	1	13/8	1	3/8	13/16	13/4	0.26	0.36	0.62
3/4 X 3/8	1.060	0.690	2	3/8	5/8		1	3/8	7/8	13/16					0.19	0.25	
3/4 X 1/4	1.060	0.555	2	3/8	11/16		2	3/8	7/8						0.23	0.27	
1 X 3/4	1.325	1.065	1	1/2	15/16	117/32	1	1/2	11/8	111/16	11/2	11/4	2	0.38	0.60	1.10	
1 X 1/2	1.325	0.855	2	3/8	5/8		1	3/8	11/8	13/8	1	3/8	11/8	13/4	0.32	0.49	0.74
1 X 3/8	1.325	0.690	2	3/8	11/16		2	3/8	7/8						0.37	0.41	
1 X 1/4	1.325	0.555	2	3/8	3/4		2	3/8	15/16						0.41	0.50	
1 1/4 X 1	1.670	1.330	1	1/2	1	17/8	1	1/2	13/16	2	1	1/2	13/8	2 3/8	0.62	0.89	1.44
1 1/4 X 3/4	1.670	1.065	2	1/2	11/16		2	1/2	13/16		1	1/2	13/16		2 0.54	1.04	1.81
1 1/4 X 1/2	1.670	0.855	2	3/8	3/4		2	3/8	7/8		2	3/8	7/8		0.65	0.95	1.14
1 1/4 X 3/8	1.670	0.690	2	3/8	13/16		2	3/8	15/16						0.70	1.04	
1 1/4 X 1/4	1.670	0.555	2	3/8	7/8		2	3/8	1						0.75	1.14	
1 1/2 X 1 1/4	1.910	1.675	1	1/2	1 1/8	2 1/4	1	1/2	13/8	2 3/8	1	1/2	15/8	2 3/4	0.80	1.23	1.90
1 1/2 X 1	1.910	1.330	2	1/2	11/16		1	1/2	15/32	2 1/16	1	1/2	13/8	2 3/8	0.68	1.13	1.13
1 1/2 X 3/4	1.910	1.065	2	1/2	3/4		2	1/2	1		2	1/2	1		0.84	1.04	1.23
1 1/2 X 1/2	1.910	0.855	2	3/8	13/16		2	3/8	11/16		2	3/8	1		0.97	1.15	1.33
1 1/2 X 3/8	1.910	0.690	2	3/8	7/8		2	3/8	11/8						1.00	1.25	
2 X 1 1/2	2.385	1.915	1	1/2	1 1/4	2 1/2	1	1/2	117/32	2 11/16	1	1/2	2 1/16	3	1.24	1.93	2.43
2 X 1 1/4	2.385	1.675	2	1/2	13/16		2	1/2	15/16		1	1/2	2	2 3/4	1.16	1.36	1.96
2 X 1 2.385	1.330	2	1/2	7/8			2	1/2	1		2	1/2	1		1.50	1.86	1.54
2 X 3/4	2.385	1.065	2	1/2	15/16		2	1/2	11/16		2	1/2	11/16		1.69	1.82	1.82
2 X 1/2	2.385	0.855	2	3/8	1		2	3/8	11/8		2	3/8	11/8		1.81	1.92	1.92

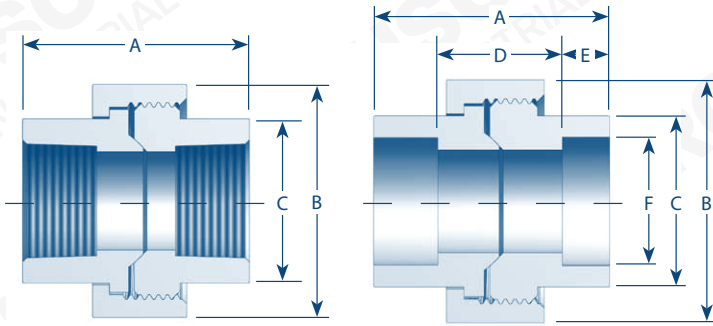
NOTES

- All dimensions are in inches.
- Weights based on carbon steel (A105)
- Larger sizes are available upon request, and are supplied in accordance to MSS SP-79.

SP-83 UNION

CLASS 3000 | CLASS 6000

Specifications: ASME B16.11
ASME B1.20.1 - (NPT)



Class	Dimensions	Sizes (Inches)										
		1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
3000	A	1 45/64	1 23/32	1 7/8	2	2 9/32	2 1/2	2 7/8	3 1/32	3 1/2	4 3/64	4 19/64
	B	1 3/8	1 3/8	1 9/16	1 13/16	2 11/64	2 9/16	3 1/8	3 1/2	4 1/4	4 7/8	5 3/4
	C	7/8	7/8	1 1/32	1 15/64	1 31/64	1 13/16	2 15/64	2 31/64	3 1/32	3 21/32	4 13/32
	D	61/64	31/32	1 1/8	1 1/4	1 9/32	1 1/2	1 7/8	2 1/32	2 1/4	2 51/64	3 3/64
	E MIN.	3/8	3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8
	F	0.420	0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535
	WEIGHT	0.41	0.38	0.54	0.79	1.25	1.80	2.88	3.64	5.81	8.77	12.98
6000	A		1 7/8	1 63/64	2 19/64	2 1/2	2 7/8	3 1/64	3 17/32	4 17/64		
	B		1 37/64	1 13/16	2 13/64	2 37/64	3 7/64	3 27/64	4 3/32	4 7/8		
	C		1 1/32	1 15/64	1 15/32	1 51/64	2 11/64	2 15/32	3 1/32	3 21/32		
	D		1 1/8	1 15/64	1 35/64	1 1/2	1 7/8	2 1/64	2 17/32	3 1/64		
	E MIN.		3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8		
	F		0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406		
	WEIGHT		0.59	0.84	1.42	2.09	3.40	4.09	7.18	12.44		

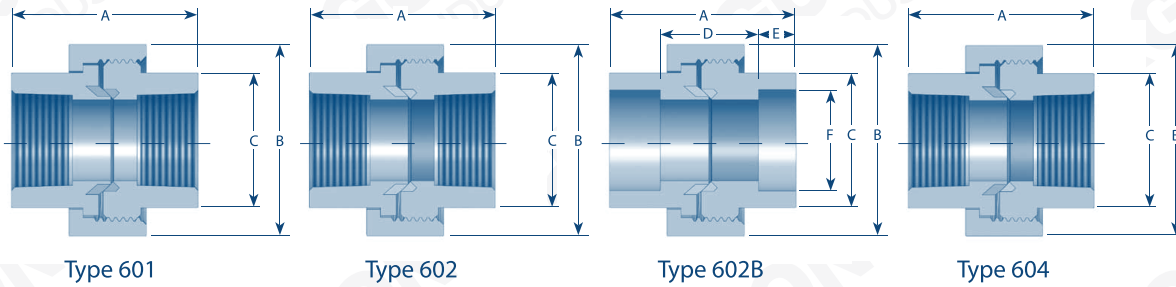
NOTES

1. The "B" Dimensions is measured across the flats of the union nut.
2. All Dimensions are in inches
3. Weights based on carbon steel (A105)

ROCKWOOD UNIONS





TYPE 601 | TYPE 602 | TYPE 602B | TYPE 604

Specifications: ASME B16.11 -
(SOCKET DIMENSIONS ONLY)
ASME B1.20.1 - (NPT)



TYPE	Dimensions	Sizes (Inches)								
		1/8 18-NPT	1/4 18-NPT	3/8 18-NPT	1/2 14-NPT	3/4 14-NPT	1 11 1/2-NPT	1 1/4 11 1/2-NPT	1 1/2 11 1/2-NPT	2 11 1/2-NPT
Type 601, 602, 604	A	17/8	17/8	2	2 5/32	2 25/64	2 25/32	2 31/32	3 5/64	3 21/32
	B	1 1/4	1 1/4	1 3/8	1 21/32	2	2 3/8	2 3/4	3	3 23/32
	C	3/4	3/4	29/32	1 7/64	1 27/64	1 41/64	2 1/32	2 5/16	2 13/16
	STYLE NUT	HEX	HEX	HEX	HEX	OCTAGON	OCTAGON	OCTAGON	OCTAGON	OCTAGON
	WEIGHT	0.37	0.34	0.43	0.68	1.06	1.51	2.19	2.58	4.83
TYPE 602B	A		1 3/4	2	2 11/64	2 7/16	2 3/4	2 15/16	3 7/64	3 21/32
	B		1 1/4	1 3/8	1 21/32	2	2 3/8	2 3/4	3	3 23/32
	C		3/4	29/32	1 1/8	1 27/64	1 41/64	2 1/32	2 5/16	2 13/16
	D		1	1 1/4	1 27/64	1 7/16	1 3/4	1 15/16	2 7/64	2 13/32
	E MIN.		3/8	3/8	3/8	1/2	1/2	1/2	1/2	5/8
	F		0.555	0.690	0.855	1.065	1.330	1.675	1.915	2.406
	STYLE NUT		HEX	HEX	HEX	OCTAGON	OCTAGON	OCTAGON	OCTAGON	OCTAGON
	WEIGHT		0.30	0.43	0.68	1.04	1.46	2.09	2.55	4.71

- NOTES**
1. The "B" Dimension is measured across the flats of the union nut.
 2. All Dimensions are in inches
 3. Weights based on carbon steel (A105)

Product Comparison				
	TYPE 601	TYPE 602	TYPE 602B	TYPE 604
Seat Material				
	SILICON BRONZE	STAINLESS STEEL	STAINLESS STEEL	SILICON BRONZE (MALE) STAINLESS (FEMALE)
End Connection	THREADED	THREADED	SOCKET WELD	THREADED

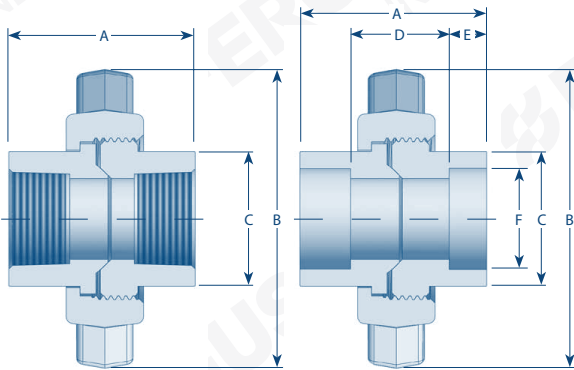
- Features:**
- Ideal for Steam Service
 - Designs rated for 3000 WOG / 600 WSP
 - Ball-to-Cone Seats for smooth alignment
 - Can be repeatedly assembled and disassembled
 - Replaceable and interchangeable parts
 - Carbon steel components are coated to resist corrosion
 - Stays sealed - regardless of shock, vibration, expansion and rough wrenching
 - Silicon Bronze and Stainless Steel seats double locked under 120,000 lbs, psi
 - Conveniently packaged Suitable for use with Schedule 40/80 pipe
 - 100% hydro tested
 - Type 604 is preferred over bronze to carbon steel seated unions

LUG NUT UNIONS

CLASS 3000 | CLASS 6000

Lug Nut unions from Ferguson Industries are supplied with modified Stub Acme threads ideal for applications requiring rapid assembly and/or disassembly.

Specifications: ASME B16.11 -
(SOCKET DIMENSIONS ONLY)
ASME B1.20.1 - (NPT)



Class	Dimensions	Sizes (Inches)									
		3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
3000	A	1 7/8	1 63/64	2 19/64	2 57/64	2 29/32	3 1/32	3 31/64	4 1/16	4 31/64	8 1/32
	B	2 9/16	3	3 5/8	4 1/4	5	5 5/8	6 3/8	7 3/16	8	10 23/64
	C	1 1/32	1 15/64	1 31/64	1 13/16	2 3/16	2 15/32	3 1/32	3 21/32	4 13/32	5 29/64
	D	1 1/8	1 15/64	1 19/64	1 57/64	1 29/32	2 1/32	2 15/64	2 13/16	3 15/64	6 17/32
	E MIN.	3/8	3/8	1/2	1/2	1/2	1/2	5/8	5/8	5/8	3/4
	F	0.690	0.855	1.065	1.330	1.675	1.915	2.406	2.906	3.535	4.545
	WEIGHT	0.59	0.91	3.12	2.28	3.48	4.66	7.07	11.40	15.42	
6000	A		2 3/8	2 37/64	2 57/64	3 1/8	3 37/64	4 9/64			
	B		3 5/8	4 1/4	5	5 5/8	6 3/8	7 3/16			
	C		1 15/32	1 51/64	2 11/64	2 9/16	3 1/32	3 11/16			
	D		1 5/8	1 37/64	1 57/64	2 1/8	2 37/64	2 57/64			
	E MIN.		3/8	1/2	1/2	1/2	1/2	5/8			
	F		0.855	1.065	1.330	1.675	1.915	2.406			
	WEIGHT		1.95	2.84	3.96		7.00	14.16			

NOTES

1. Seating characteristics of MSS SP-83 unions.
2. The "B" dimension is the diameter across the lugs of the union nut.
3. Twin lug design offered in sizes up to 3/4" Class 3000 & 1/2" Class 6000
4. Tri-Lug design offered in sizes from 1" to 3" Class 3000 & 3/4" to 2" Class 6000.
5. Quad-Lug design offered in 4" Class 3000.

TECHNICAL INFORMATION

PIPE SCHEDULE – EQUIVALENCY

Pressure Ratings for Ferguson Industries Forged Steel Fittings comply with ASME B16.11. The allowable pressure rating for fittings are equivalent to the pressure ratings of the corresponding pipe listed in the table below. The fitting is suitable for the application if the application pipe nominal wall thickness is less than or equal to the nominal thickness of the Schedule No. / Wall Designation listed below.

Fitting Class	Fitting Connection	Pipe Equivalent	
		Schedule No.	Wall Designation
2000	THREADED	Sch. 80	XS
3000	THREADED	Sch. 160	—
6000	THREADED	—	XXS
3000	SOCKET-WELD	Sch. 80	XS
6000	SOCKET-WELD	Sch. 160	—
9000	SOCKET-WELD	—	XXS

PIPE PRESSURE CALCULATIONS

ASME B31.1 – 2012	ASME B31.3 - 2012
$P = \frac{2SE(t_m - A)}{D_o - 2y(t_m - A)}$	$t = \frac{PD}{2(SEW + PY)} \quad \text{OR} \quad P = \frac{2(SEW + PY)}{D - 2tY}$
<p>P = Pressure Rating SE = Allowable Stress (@temperature) t_m = Wall Thickness A = Corrosion Allowance (Typically = 0) D_o = O uter Diameter of Pipe Y = Table 104.1.2 (A) of ASME B31.1 (0.4 if temperature is less than 900°F)</p>	<p>P = Pressure Rating D = O uter Diameter of Pipe S = Allowable Stress (@ Temperature): Table A-1 E = Q uality Factor: Table A-1A or A-1B W = Weld Joint Strength Reduction Factor: Para. 302.3.5(e) (Typically = 1.0) t = Pipe Wall Thickness Y = Table 304.1.1 or Intermediate Temperature Interpolations (Below Equation)</p> $Y = \frac{d + 2c}{D + d + 2c}$ <p>D = O uter Diameter of Pipe d = I nside Diameter of Pipe c = Sum of Mechanical Allowances plus Corrosion and Erosion Allowances. Threads: Dimension h of ASME B1.20. Machined Surfaces or Grooves: Specified Tolerance (or 0.02” plus Specified Depth of Cut; when tolerance is not specified)</p>

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