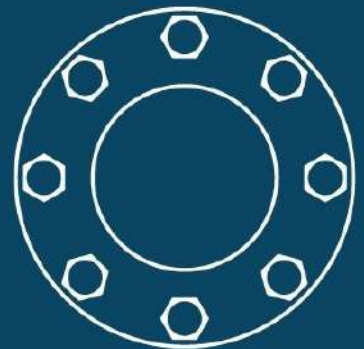
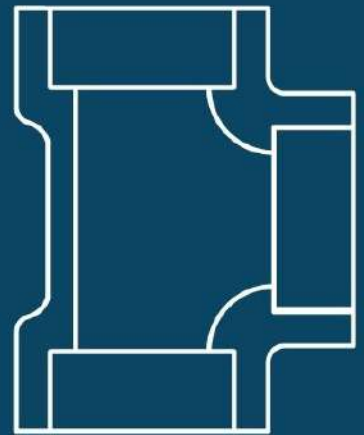
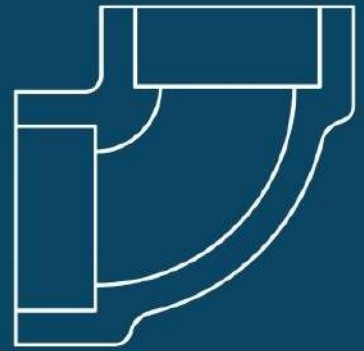




# FITT-WELL

FORGED FITTINGS

INDIA'S #1 IN QUALITY



# CARBON STEEL FORGED HIGH PRESSURE FITTINGS

Type	Elbow, Elbow 45, Tee, Cross, Union, Coupling, Half Coupling, Reducer Coupling, Cap, Hex Head Bushings, Hex Head Plug, Round Head Plug, Bull Plug, Boss, Hex Nipple & Barrel Nipple  Available In Threaded (BSPT, NPT, PT) & Socket Weld
Size	Inch: 1/4" - 4" DN: 8 - 100
Rating Pressure	Threaded End -2000 / 3000 / 6000 LBS. Socket-weld End - 3000 / 6000 / 9000 LBS.
Specifications	Dimensional Specification: ASME B16.11-2009 Material Specification: ASTM A105
Marking	Carbon and Alloy Steel: Marked by Laser Marked With Brand, Material, Heat Code, B16 (For ASME B16.11 Product), Pressure and Size.
Finishing	Carbon Steel: Galvanized or Pickled.



**GUPTA ENGINEERING WORKS**

VPO GADAIPUR, JALANDHAR (PB) INDIA  
WWW.GEWVALVES.IN | +91-7696230040



# PRODUCT LIST



## FORGED HIGH PRESSURE PIPE FITTINGS SOCKET WELD 3000-6000-9000 Lbs

ELBOW  
90°



ELBOW  
45°



TEE



CROSS



UNION



COUPLING



HALF  
COUPLING



CAP



BOSS



INSERT



SWAGE  
NIPPLE

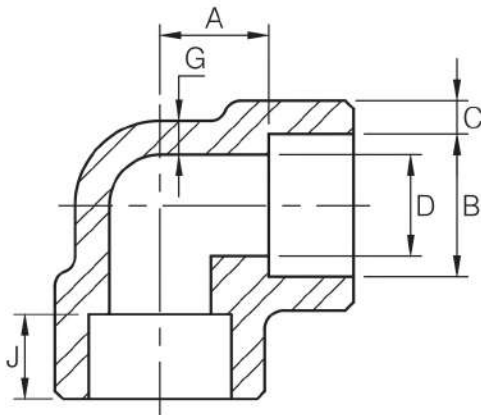


# FORGED HIGH PRESSURE PIPE FITTINGS THREADED 2000-3000-6000 Lbs

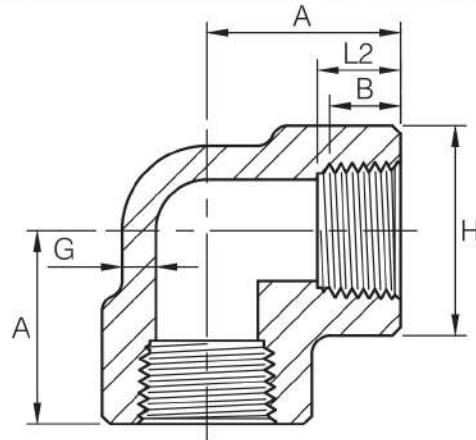


# 90° ELBOW

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding								
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	A <sup>(2)</sup>	G (Min)	J (Min)
			(Avg)	(Min)				

### 3000Lb

6	1/8	10.8	3.18	3.18	6.9	11.0	2.41	9.5
8	1/4	14.2	3.78	3.30	9.3	11.0	3.02	9.5
10	3/8	17.6	4.01	3.50	12.6	13.5	3.20	9.5
15	1/2	21.8	4.67	4.09	15.8	15.5	3.73	9.5
20	3/4	27.2	4.90	4.27	21.0	19.0	3.91	12.5
25	1	33.9	5.69	4.98	26.7	22.5	4.55	12.5
32	1-1/4	42.7	6.07	5.28	35.1	27.0	4.85	12.5
40	1-1/2	48.8	6.35	5.54	40.9	32.0	5.08	12.5
50	2	61.2	6.93	6.04	52.5	38.0	5.54	16.0
65	2-1/2	73.9	8.76	7.67	62.7	41.0	7.01	16.0
80	3	89.8	9.52	8.30	78.0	57.0	7.62	16.0
100	4	115.2	10.69	9.35	102.3	66.5	8.56	19.0

### 6000Lb

6	1/8	10.8	3.96	3.43	4.0	11.0	3.15	9.5
8	1/4	14.2	4.60	4.01	6.4	13.5	3.68	9.5
10	3/8	17.6	5.03	4.37	9.2	15.5	4.01	9.5
15	1/2	21.8	5.97	5.18	11.8	19.0	4.78	9.5
20	3/4	27.2	6.96	6.04	15.6	22.5	5.56	12.5
25	1	33.9	7.92	6.93	20.7	27.0	6.35	12.5
32	1-1/4	42.7	7.92	6.93	29.5	32.0	6.35	12.5
40	1-1/2	48.8	8.92	7.80	34.0	38.0	7.14	12.5
50	2	61.2	10.92	9.50	42.9	41.0	8.74	16.0

### 9000Lb

15	1/2	21.8	9.35	8.18	6.4	25.5	7.47	9.5
20	3/4	27.2	9.78	8.56	11.1	28.5	7.82	12.5
25	1	33.9	11.38	9.96	15.2	32.0	9.09	12.5
32	1-1/4	42.7	12.14	10.62	22.8	35.0	9.70	12.5
40	1-1/2	48.8	12.70	11.12	28.0	38.0	10.15	12.5
50	2	61.2	13.84	12.12	38.2	54.0	11.07	16.0

Threaded						
DN	Nom. Pipe Size	Length of Thread (Min)		A	G (Min)	H
		B <sup>(*)</sup>	L2 <sup>(*)</sup>			

### 2000Lb

6	1/8	6.4	6.7	21	3.18	22
8	1/4	8.1	10.2	21	3.18	22
10	3/8	9.1	10.4	25	3.18	25
15	1/2	10.9	13.6	28	3.18	33
20	3/4	12.7	13.9	33	3.18	38
25	1	14.7	17.3	38	3.68	46
32	1-1/4	17.0	18.0	44	3.89	56
40	1-1/2	17.8	18.4	51	4.01	62
50	2	19.0	19.2	60	4.27	75
65	2-1/2	23.6	28.9	76	5.61	92
80	3	25.9	30.5	86	5.99	109
100	4	27.7	33.0	106	6.55	146

### 3000Lb

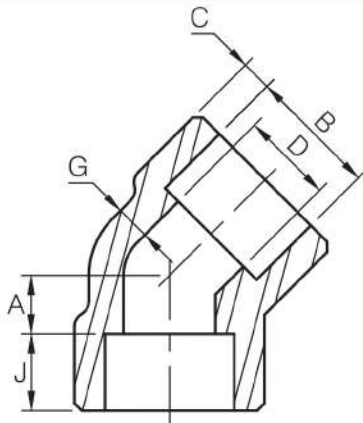
6	1/8	6.4	6.7	21	3.18	22
8	1/4	8.1	10.2	25	3.30	25
10	3/8	9.1	10.4	28	3.51	33
15	1/2	10.9	13.6	33	4.09	38
20	3/4	12.7	13.9	38	4.32	46
25	1	14.7	17.3	44	4.98	56
32	1-1/4	17.0	18.0	51	5.28	62
40	1-1/2	17.8	18.4	60	5.56	75
50	2	19.0	19.2	64	7.14	84
65	2-1/2	23.6	28.9	83	7.65	102
80	3	25.9	30.5	95	8.84	121
100	4	27.7	33.0	114	11.18	152

### 6000Lb

6	1/8	6.4	6.7	25	6.35	25
8	1/4	8.1	10.2	28	6.60	33
10	3/8	9.1	10.4	33	6.98	38
15	1/2	10.9	13.6	38	8.15	46
20	3/4	12.7	13.9	44	8.53	56
25	1	14.7	17.3	51	9.93	62
32	1-1/4	17.0	18.0	60	10.59	75
40	1-1/2	17.8	18.4	64	11.07	84
50	2	19.0	19.2	83	12.09	102
65	2-1/2	23.6	28.9	95	15.29	121
80	3	25.9	30.5	106	16.64	146
100	4	27.7	33.0	114	18.67	152

# 45° ELBOW

ASME B16.11-2016(Revision of ASME B16.11-2011)



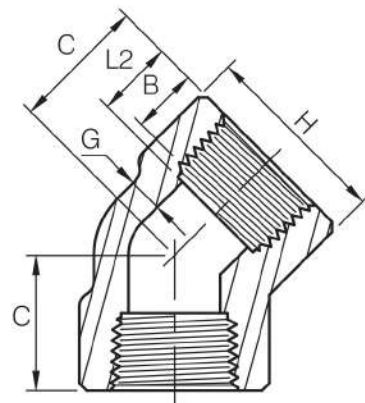
Dimensions are in millimeters.

Socket Welding								
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	A <sup>(2)</sup>	G (Min)	J (Min)
			(Avg)	(Min)				

3000Lb								
6	1/8	10.8	3.18	3.18	6.9	8.0	2.41	9.5
8	1/4	14.2	3.78	3.30	9.3	8.0	3.02	9.5
10	3/8	17.6	4.01	3.50	12.6	8.0	3.20	9.5
15	1/2	21.8	4.67	4.09	15.8	11.0	3.73	9.5
20	3/4	27.2	4.90	4.27	21.0	13.0	3.91	12.5
25	1	33.9	5.69	4.98	26.7	14.0	4.55	12.5
32	1-1/4	42.7	6.07	5.28	35.1	17.5	4.85	12.5
40	1-1/2	48.8	6.35	5.54	40.9	20.5	5.08	12.5
50	2	61.2	6.93	6.04	52.5	25.5	5.54	16.0
65	2-1/2	73.9	8.76	7.67	62.7	28.5	7.01	16.0
80	3	89.8	9.52	8.30	78.0	32.0	7.62	16.0
100	4	115.2	10.69	9.35	102.3	41.0	8.56	19.0

6000Lb								
6	1/8	10.8	3.96	3.43	4.0	8.0	3.15	9.5
8	1/4	14.2	4.60	4.01	6.4	8.0	3.68	9.5
10	3/8	17.6	5.03	4.37	9.2	11.0	4.01	9.5
15	1/2	21.8	5.97	5.18	11.8	12.5	4.78	9.5
20	3/4	27.2	6.96	6.04	15.6	14.0	5.56	12.5
25	1	33.9	7.92	6.93	20.7	17.5	6.35	12.5
32	1-1/4	42.7	7.92	6.93	29.5	20.5	6.35	12.5
40	1-1/2	48.8	8.92	7.80	34.0	25.5	7.14	12.5
50	2	61.2	10.92	9.50	42.9	28.5	8.74	16.0

9000Lb								
15	1/2	21.8	9.35	8.18	6.4	15.5	7.47	9.5
20	3/4	27.2	9.78	8.56	11.1	19.0	7.82	12.5
25	1	33.9	11.38	9.96	15.2	20.5	9.09	12.5
32	1-1/4	42.7	12.14	10.62	22.8	22.5	9.70	12.5
40	1-1/2	48.8	12.70	11.12	28.0	25.5	10.15	12.5
50	2	61.2	13.84	12.12	38.2	28.5	11.07	16.0



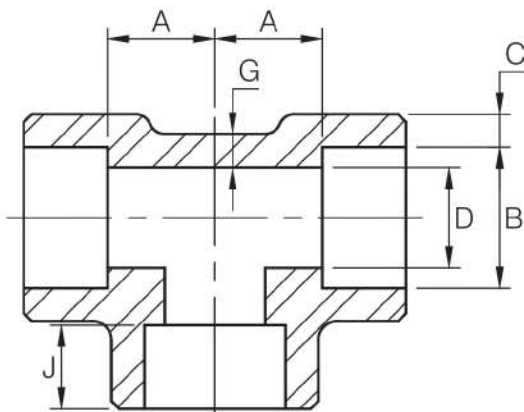
Dimensions are in millimeters.

Threaded						
DN	Nom. Pipe Size	Length of Thread. (Min)		C	G (Min)	H
		B <sup>(*)</sup>	L2 <sup>(*)</sup>			

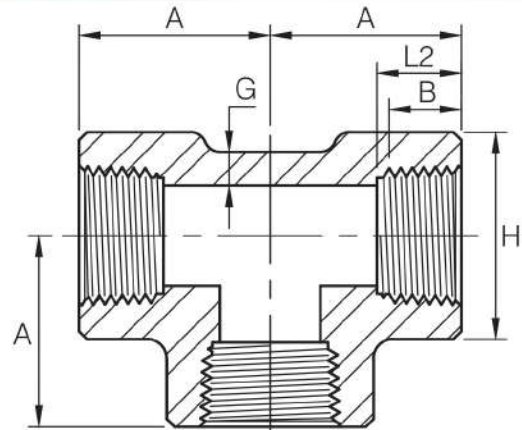
2000Lb						
6	1/8	6.4	6.7	17	3.18	22
8	1/4	8.1	10.2	17	3.18	22
10	3/8	9.1	10.4	19	3.18	25
15	1/2	10.9	13.6	22	3.18	33
20	3/4	12.7	13.9	25	3.18	38
25	1	14.7	17.3	28	3.68	46
32	1-1/4	17.0	18.0	33	3.89	56
40	1-1/2	17.8	18.4	35	4.01	62
50	2	19.0	19.2	43	4.27	75
65	2-1/2	23.6	28.9	52	5.61	92
80	3	25.9	30.5	64	5.99	109
100	4	27.7	33.0	79	6.55	146

3000Lb						
6	1/8	6.4	6.7	17	3.18	22
8	1/4	8.1	10.2	19	3.30	25
10	3/8	9.1	10.4	22	3.51	33
15	1/2	10.9	13.6	25	4.09	38
20	3/4	12.7	13.9	28	4.32	46
25	1	14.7	17.3	33	4.98	56
32	1-1/4	17.0	18.0	35	5.28	62
40	1-1/2	17.8	18.4	43	5.56	75
50	2	19.0	19.2	44	7.14	84
65	2-1/2	23.6	28.9	52	7.65	102
80	3	25.9	30.5	64	8.84	121
100	4	27.7	33.0	79	11.18	152

6000Lb						
6	1/8	6.4	6.7	19	6.35	25
8	1/4	8.1	10.2	22	6.60	33
10	3/8	9.1	10.4	25	6.98	38
15	1/2	10.9	13.6	28	8.15	46
20	3/4	12.7	13.9	33	8.53	56
25	1	14.7	17.3	35	9.93	62
32	1-1/4	17.0	18.0	43	10.59	75
40	1-1/2	17.8	18.4	44	11.07	84
50	2	19.0	19.2	52	12.09	102
65	2-1/2	23.6	28.9	64	15.29	121
80	3	25.9	30.5	79	16.64	146
100	4	27.7	33.0	79	18.67	152



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding								
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	A <sup>(2)</sup>	G (Min)	J (Min)
			(Avg)	(Min)				

**3000Lb**

6	1/8	10.8	3.18	3.18	6.9	11.0	2.41	9.5
8	1/4	14.2	3.78	3.30	9.3	11.0	3.02	9.5
10	3/8	17.6	4.01	3.50	12.6	13.5	3.20	9.5
15	1/2	21.8	4.67	4.09	15.8	15.5	3.73	9.5
20	3/4	27.2	4.90	4.27	21.0	19.0	3.91	12.5
25	1	33.9	5.69	4.98	26.7	22.5	4.55	12.5
32	1-1/4	42.7	6.07	5.28	35.1	27.0	4.85	12.5
40	1-1/2	48.8	6.35	5.54	40.9	32.0	5.08	12.5
50	2	61.2	6.93	6.04	52.5	38.0	5.54	16.0
65	2-1/2	73.9	8.76	7.67	62.7	41.0	7.01	16.0
80	3	89.8	9.52	8.30	78.0	57.0	7.62	16.0
100	4	115.2	10.69	9.35	102.3	66.5	8.56	19.0

**6000Lb**

6	1/8	10.8	3.96	3.43	4.0	11.0	3.15	9.5
8	1/4	14.2	4.60	4.01	6.4	13.5	3.68	9.5
10	3/8	17.6	5.03	4.37	9.2	15.5	4.01	9.5
15	1/2	21.8	5.97	5.18	11.8	19.0	4.78	9.5
20	3/4	27.2	6.96	6.04	15.6	22.5	5.56	12.5
25	1	33.9	7.92	6.93	20.7	27.0	6.35	12.5
32	1-1/4	42.7	7.92	6.93	29.5	32.0	6.35	12.5
40	1-1/2	48.8	8.92	7.80	34.0	38.0	7.14	12.5
50	2	61.2	10.92	9.50	42.9	41.0	8.74	16.0

**9000Lb**

15	1/2	21.8	9.35	8.18	6.4	25.5	7.47	9.5
20	3/4	27.2	9.78	8.56	11.1	28.5	7.82	12.5
25	1	33.9	11.38	9.96	15.2	32.0	9.09	12.5
32	1-1/4	42.7	12.14	10.62	22.8	35.0	9.70	12.5
40	1-1/2	48.8	12.70	11.12	28.0	38.0	10.15	12.5
50	2	61.2	13.84	12.12	38.2	54.0	11.07	16.0

Threaded						
DN	Nom. Pipe Size	Length of Thread (Min)		A	G (Min)	H
		B <sup>(*)</sup>	L2 <sup>(*)</sup>			

**2000Lb**

6	1/8	6.4	6.7	21	3.18	22
8	1/4	8.1	10.2	21	3.18	22
10	3/8	9.1	10.4	25	3.18	25
15	1/2	10.9	13.6	28	3.18	33
20	3/4	12.7	13.9	33	3.18	38
25	1	14.7	17.3	38	3.68	46
32	1-1/4	17.0	18.0	44	3.89	56
40	1-1/2	17.8	18.4	51	4.01	62
50	2	19.0	19.2	60	4.27	75
65	2-1/2	23.6	28.9	76	5.61	92
80	3	25.9	30.5	86	5.99	109
100	4	27.7	33.0	106	6.55	146

**3000Lb**

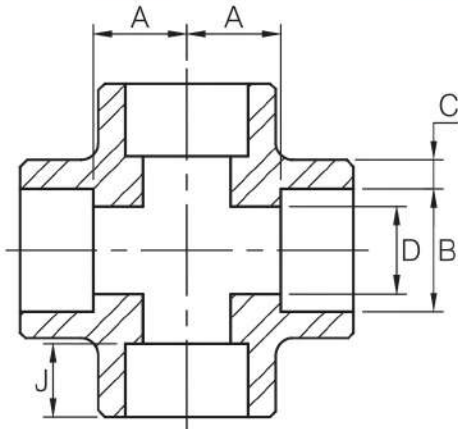
6	1/8	6.4	6.7	21	3.18	22
8	1/4	8.1	10.2	25	3.30	25
10	3/8	9.1	10.4	28	3.51	33
15	1/2	10.9	13.6	33	4.09	38
20	3/4	12.7	13.9	38	4.32	46
25	1	14.7	17.3	44	4.98	56
32	1-1/4	17.0	18.0	51	5.28	62
40	1-1/2	17.8	18.4	60	5.56	75
50	2	19.0	19.2	64	7.14	84
65	2-1/2	23.6	28.9	83	7.65	102
80	3	25.9	30.5	95	8.84	121
100	4	27.7	33.0	114	11.18	152

**6000Lb**

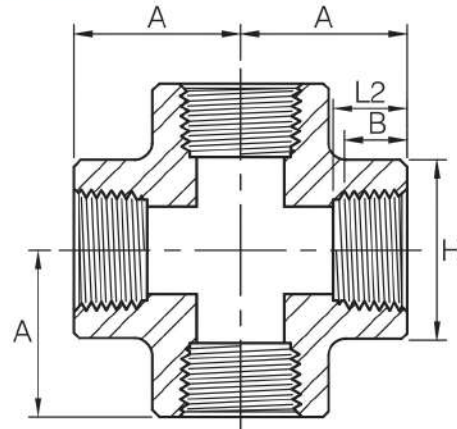
6	1/8	6.4	6.7	25	6.35	25
8	1/4	8.1	10.2	28	6.60	33
10	3/8	9.1	10.4	33	6.98	38
15	1/2	10.9	13.6	38	8.15	46
20	3/4	12.7	13.9	44	8.53	56
25	1	14.7	17.3	51	9.93	62
32	1-1/4	17.0	18.0	60	10.59	75
40	1-1/2	17.8	18.4	64	11.07	84
50	2	19.0	19.2	83	12.09	102
65	2-1/2	23.6	28.9	95	15.29	121
80	3	25.9	30.5	106	16.64	146
100	4	27.7	33.0	114	18.67	152

# CROSS

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding							
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	A <sup>(2)</sup>	J (Min)
			(Avg)	(Min)			

### 3000Lb

6	1/8	10.8	3.18	3.18	6.9	11.0	9.5
8	1/4	14.2	3.78	3.30	9.3	11.0	9.5
10	3/8	17.6	4.01	3.50	12.6	13.5	9.5
15	1/2	21.8	4.67	4.09	15.8	15.5	9.5
20	3/4	27.2	4.90	4.27	21.0	19.0	12.5
25	1	33.9	5.69	4.98	26.7	22.5	12.5
32	1-1/4	42.7	6.07	5.28	35.1	27.0	12.5
40	1-1/2	48.8	6.35	5.54	40.9	32.0	12.5
50	2	61.2	6.93	6.04	52.5	38.0	16.0
65	2-1/2	73.9	8.76	7.67	62.7	41.0	16.0
80	3	89.8	9.52	8.30	78.0	57.0	16.0
100	4	115.2	10.69	9.35	102.3	66.5	19.0

### 6000Lb

6	1/8	10.8	3.96	3.43	4.0	11.0	9.5
8	1/4	14.2	4.60	4.01	6.4	13.5	9.5
10	3/8	17.6	5.03	4.37	9.2	15.5	9.5
15	1/2	21.8	5.97	5.18	11.8	19.0	9.5
20	3/4	27.2	6.96	6.04	15.6	22.5	12.5
25	1	33.9	7.92	6.93	20.7	27.0	12.5
32	1-1/4	42.7	7.92	6.93	29.5	32.0	12.5
40	1-1/2	48.8	8.92	7.80	34.0	38.0	12.5
50	2	61.2	10.92	9.50	42.9	41.0	16.0

### 9000Lb

15	1/2	21.8	9.35	8.18	6.4	25.5	9.5
20	3/4	27.2	9.78	8.56	11.1	28.5	12.5
25	1	33.9	11.38	9.96	15.2	32.0	12.5
32	1-1/4	42.7	12.14	10.62	22.8	35.0	12.5
40	1-1/2	48.8	12.70	11.12	28.0	38.0	12.5
50	2	61.2	13.84	12.12	38.2	54.0	16.0

Threaded					
DN	Nom. Pipe Size	Length of Thread. (Min)		A	H
		B <sup>(*)</sup>	L2 <sup>(*)</sup>		

### 2000Lb

6	1/8	6.4	6.7	21	22
8	1/4	8.1	10.2	21	22
10	3/8	9.1	10.4	25	25
15	1/2	10.9	13.6	28	33
20	3/4	12.7	13.9	33	38
25	1	14.7	17.3	38	46
32	1-1/4	17.0	18.0	44	56
40	1-1/2	17.8	18.4	51	62
50	2	19.0	19.2	60	75
65	2-1/2	23.6	28.9	76	92
80	3	25.9	30.5	86	109
100	4	27.7	33.0	106	146

### 3000Lb

6	1/8	6.4	6.7	21	22
8	1/4	8.1	10.2	25	25
10	3/8	9.1	10.4	28	33
15	1/2	10.9	13.6	33	38
20	3/4	12.7	13.9	38	46
25	1	14.7	17.3	44	56
32	1-1/4	17.0	18.0	51	62
40	1-1/2	17.8	18.4	60	75
50	2	19.0	19.2	64	84
65	2-1/2	23.6	28.9	83	102
80	3	25.9	30.5	95	121
100	4	27.7	33.0	114	152

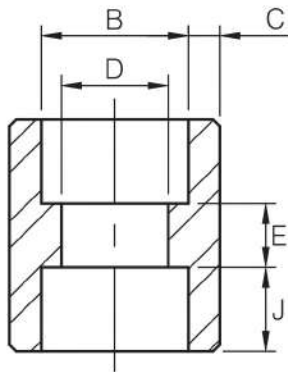
### 6000Lb

6	1/8	6.4	6.7	25	25
8	1/4	8.1	10.2	28	33
10	3/8	9.1	10.4	33	38
15	1/2	10.9	13.6	38	46
20	3/4	12.7	13.9	44	56
25	1	14.7	17.3	51	62
32	1-1/4	17.0	18.0	60	75
40	1-1/2	17.8	18.4	64	84
50	2	19.0	19.2	83	102
65	2-1/2	23.6	28.9	95	121
80	3	25.9	30.5	106	146
100	4	27.7	33.0	114	152

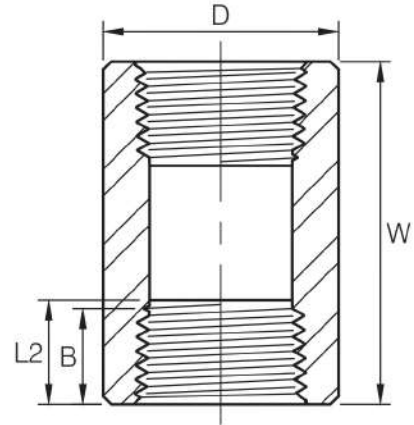


# FULL COUPLING

ASME B16.11-2016 (Revision of ASME B16.11-2011)



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding							
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	E <sup>(2)</sup>	J (Min)
			(Avg)	(Min)			

### 3000Lb

6	1/8	10.8	3.18	3.18	6.9	6.5	9.5
8	1/4	14.2	3.78	3.30	9.3	6.5	9.5
10	3/8	17.6	4.01	3.50	12.6	6.5	9.5
15	1/2	21.8	4.67	4.09	15.8	9.5	9.5
20	3/4	27.2	4.90	4.27	21.0	9.5	12.5
25	1	33.9	5.69	4.98	26.7	12.5	12.5
32	1-1/4	42.7	6.07	5.28	35.1	12.5	12.5
40	1-1/2	48.8	6.35	5.54	40.9	12.5	12.5
50	2	61.2	6.93	6.04	52.5	19.0	16.0
65	2-1/2	73.9	8.76	7.67	62.7	19.0	16.0
80	3	89.8	9.52	8.30	78.0	19.0	16.0
100	4	115.2	10.69	9.35	102.3	19.0	19.0

### 6000Lb

6	1/8	10.8	3.96	3.43	4.0	6.5	9.5
8	1/4	14.2	4.60	4.01	6.4	6.5	9.5
10	3/8	17.6	5.03	4.37	9.2	6.5	9.5
15	1/2	21.8	5.97	5.18	11.8	9.5	9.5
20	3/4	27.2	6.96	6.04	15.6	9.5	12.5
25	1	33.9	7.92	6.93	20.7	12.5	12.5
32	1-1/4	42.7	7.92	6.93	29.5	12.5	12.5
40	1-1/2	48.8	8.92	7.80	34.0	12.5	12.5
50	2	61.2	10.92	9.50	42.9	19.0	16.0

### 9000Lb

15	1/2	21.8	9.35	8.18	6.4	9.5	9.5
20	3/4	27.2	9.78	8.56	11.1	9.5	12.5
25	1	33.9	11.38	9.96	15.2	12.5	12.5
32	1-1/4	42.7	12.14	10.62	22.8	12.5	12.5
40	1-1/2	48.8	12.70	11.12	28.0	12.5	12.5
50	2	61.2	13.84	12.12	38.2	19.0	16.0

Threaded					
DN	Nom. Pipe Size	Length of Thread. (Min)		W	D
		B <sup>(*)</sup>	L2 <sup>(*)</sup>		

### 3000Lb

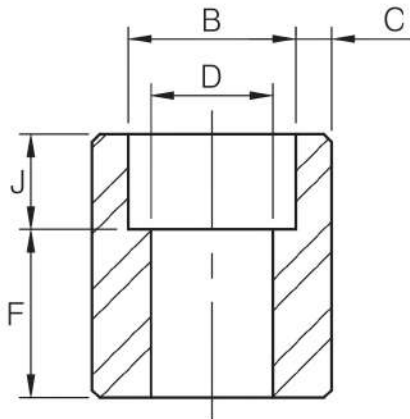
6	1/8	6.4	6.7	32	16
8	1/4	8.1	10.2	35	19
10	3/8	9.1	10.4	38	22
15	1/2	10.9	13.6	48	28
20	3/4	12.7	13.9	51	35
25	1	14.7	17.3	60	44
32	1-1/4	17.0	18.0	67	57
40	1-1/2	17.8	18.4	79	64
50	2	19.0	19.2	86	76
65	2-1/2	23.6	28.9	92	92
80	3	25.9	30.5	108	108
100	4	27.7	33.0	121	140

### 6000Lb

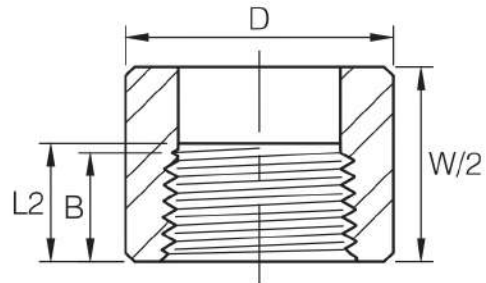
6	1/8	6.4	6.7	32	22
8	1/4	8.1	10.2	35	25
10	3/8	9.1	10.4	38	32
15	1/2	10.9	13.6	48	38
20	3/4	12.7	13.9	51	44
25	1	14.7	17.3	60	57
32	1-1/4	17.0	18.0	67	64
40	1-1/2	17.8	18.4	79	76
50	2	19.0	19.2	86	92
65	2-1/2	23.6	28.9	92	108
80	3	25.9	30.5	108	127
100	4	27.7	33.0	121	159

# HALF COUPLING

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding							
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	F <sup>(2)</sup>	J (Min)
			(Avg)	(Min)			

### 3000Lb

6	1/8	10.8	3.18	3.18	6.9	16.0	9.5
8	1/4	14.2	3.78	3.30	9.3	16.0	9.5
10	3/8	17.6	4.01	3.50	12.6	17.5	9.5
15	1/2	21.8	4.67	4.09	15.8	22.5	9.5
20	3/4	27.2	4.90	4.27	21.0	24.0	12.5
25	1	33.9	5.69	4.98	26.7	28.5	12.5
32	1-1/4	42.7	6.07	5.28	35.1	30.0	12.5
40	1-1/2	48.8	6.35	5.54	40.9	32.0	12.5
50	2	61.2	6.93	6.04	52.5	41.0	16.0
65	2-1/2	73.9	8.76	7.67	62.7	43.0	16.0
80	3	89.8	9.52	8.30	78.0	44.5	16.0
100	4	115.2	10.69	9.35	102.3	48.0	19.0

### 6000Lb

6	1/8	10.8	3.96	3.43	4.0	16.0	9.5
8	1/4	14.2	4.60	4.01	6.4	16.0	9.5
10	3/8	17.6	5.03	4.37	9.2	17.5	9.5
15	1/2	21.8	5.97	5.18	11.8	22.5	9.5
20	3/4	27.2	6.96	6.04	15.6	24.0	12.5
25	1	33.9	7.92	6.93	20.7	28.5	12.5
32	1-1/4	42.7	7.92	6.93	29.5	30.0	12.5
40	1-1/2	48.8	8.92	7.80	34.0	32.0	12.5
50	2	61.2	10.92	9.50	42.9	41.0	16.0

### 9000Lb

15	1/2	21.8	9.35	8.18	6.4	22.5	9.5
20	3/4	27.2	9.78	8.56	11.1	24.0	12.5
25	1	33.9	11.38	9.96	15.2	28.5	12.5
32	1-1/4	42.7	12.14	10.62	22.8	30.0	12.5
40	1-1/2	48.8	12.70	11.12	28.0	32.0	12.5
50	2	61.2	13.84	12.12	38.2	41.0	16.0

Threaded					
DN	Nom. Pipe Size	Length of Thread. (Min)		W	D
		B <sup>(*)</sup>	L2 <sup>(*)</sup>		

### 3000Lb

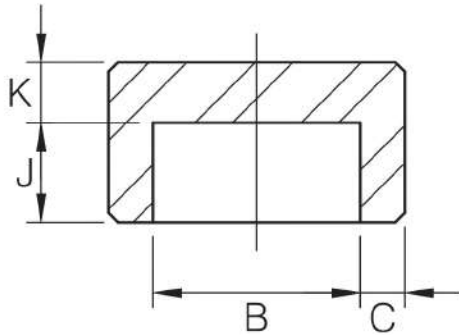
6	1/8	6.4	6.7	32	16
8	1/4	8.1	10.2	35	19
10	3/8	9.1	10.4	38	22
15	1/2	10.9	13.6	48	28
20	3/4	12.7	13.9	51	35
25	1	14.7	17.3	60	44
32	1-1/4	17.0	18.0	67	57
40	1-1/2	17.8	18.4	79	64
50	2	19.0	19.2	86	76
65	2-1/2	23.6	28.9	92	92
80	3	25.9	30.5	108	108
100	4	27.7	33.0	121	140

### 6000Lb

6	1/8	6.4	6.7	32	22
8	1/4	8.1	10.2	35	25
10	3/8	9.1	10.4	38	32
15	1/2	10.9	13.6	48	38
20	3/4	12.7	13.9	51	44
25	1	14.7	17.3	60	57
32	1-1/4	17.0	18.0	67	64
40	1-1/2	17.8	18.4	79	76
50	2	19.0	19.2	86	92
65	2-1/2	23.6	28.9	92	108
80	3	25.9	30.5	108	127
100	4	27.7	33.0	121	159

# CAP

ASME B16.11-2016 (Revision of ASME B16.11-2011)



Dimensions are in millimeters.

Socket Welding						
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		K (Min)	J (Min)
			(Avg)	(Min)		

### 3000Lb

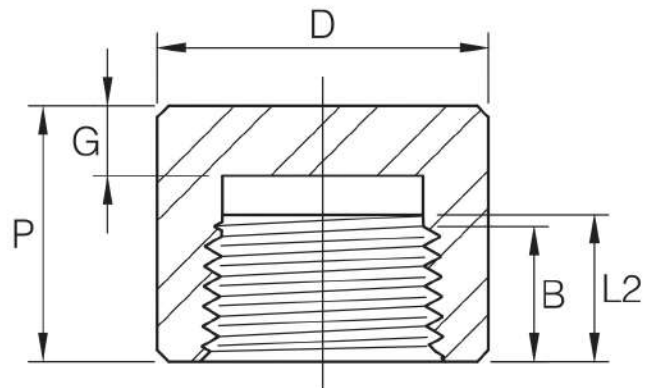
6	1/8	10.8	3.18	3.18	4.8	9.5
8	1/4	14.2	3.78	3.30	4.8	9.5
10	3/8	17.6	4.01	3.50	4.8	9.5
15	1/2	21.8	4.67	4.09	6.4	9.5
20	3/4	27.2	4.90	4.27	6.4	12.5
25	1	33.9	5.69	4.98	9.6	12.5
32	1-1/4	42.7	6.07	5.28	9.6	12.5
40	1-1/2	48.8	6.35	5.54	11.2	12.5
50	2	61.2	6.93	6.04	12.7	16.0
65	2-1/2	73.9	8.76	7.67	15.7	16.0
80	3	89.8	9.52	8.30	19.0	16.0
100	4	115.2	10.69	9.35	22.4	19.0

### 6000Lb

6	1/8	10.8	3.96	3.43	6.4	9.5
8	1/4	14.2	4.60	4.01	6.4	9.5
10	3/8	17.6	5.03	4.37	6.4	9.5
15	1/2	21.8	5.97	5.18	7.9	9.5
20	3/4	27.2	6.96	6.04	7.9	12.5
25	1	33.9	7.92	6.93	11.2	12.5
32	1-1/4	42.7	7.92	6.93	11.2	12.5
40	1-1/2	48.8	8.92	7.80	12.7	12.5
50	2	61.2	10.92	9.50	15.7	16.0

### 9000Lb

15	1/2	21.8	9.35	8.18	11.2	9.5
20	3/4	27.2	9.78	8.56	12.7	12.5
25	1	33.9	11.38	9.96	14.2	12.5
32	1-1/4	42.7	12.14	10.62	14.2	12.5
40	1-1/2	48.8	12.70	11.12	15.7	12.5
50	2	61.2	13.84	12.12	19.0	16.0



Dimensions are in millimeters.

Threaded						
DN	Nom. Pipe Size	Length of Thread (Min)		P	D	G (Min)
		B <sup>(*)</sup>	L2 <sup>(*)</sup>			

### 3000Lb

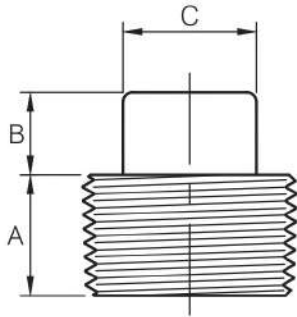
6	1/8	6.4	6.7	19	16	4.8
8	1/4	8.1	10.2	25	19	4.8
10	3/8	9.1	10.4	25	22	4.8
15	1/2	10.9	13.6	32	28	6.4
20	3/4	12.7	13.9	37	35	6.4
25	1	14.7	17.3	41	44	9.7
32	1-1/4	17.0	18.0	44	57	9.7
40	1-1/2	17.8	18.4	44	64	11.2
50	2	19.0	19.2	48	76	12.7
65	2-1/2	23.6	28.9	60	92	15.7
80	3	25.9	30.5	65	108	19.0
100	4	27.7	33.0	68	140	22.4

### 6000Lb

6	1/8	6.4	6.7	22	22	6.4
8	1/4	8.1	10.2	27	25	6.4
10	3/8	9.1	10.4	27	32	6.4
15	1/2	10.9	13.6	33	38	7.9
20	3/4	12.7	13.9	38	44	7.9
25	1	14.7	17.3	43	57	11.2
32	1-1/4	17.0	18.0	46	64	11.2
40	1-1/2	17.8	18.4	48	76	12.7
50	2	19.0	19.2	51	92	15.7
65	2-1/2	23.6	28.9	64	108	19.0
80	3	25.9	30.5	68	127	22.4
100	4	27.7	33.0	75	159	28.4

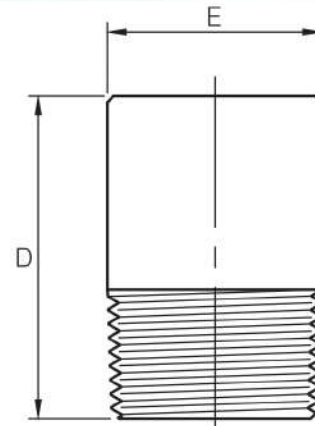
# SQUARE HEAD & ROUND HEAD PLUG

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.

Square Head Plug				
DN	Nom. Pipe Size	A (Min)	B (Min)	C (Min)
6	1/8	10	6	7.15
8	1/4	11	6	9.55
10	3/8	13	8	11.11
15	1/2	14	10	14.29
20	3/4	16	11	15.88
25	1	19	13	20.64
32	1-1/4	21	14	23.81
40	1-1/2	21	16	28.58
50	2	22	18	33.27
65	2-1/2	27	19	38.10
80	3	28	21	42.86
100	4	32	25	63.50

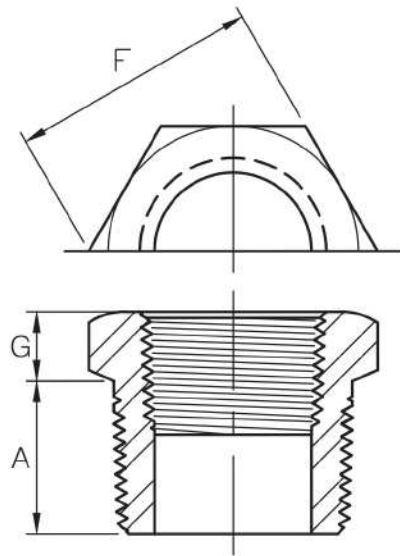
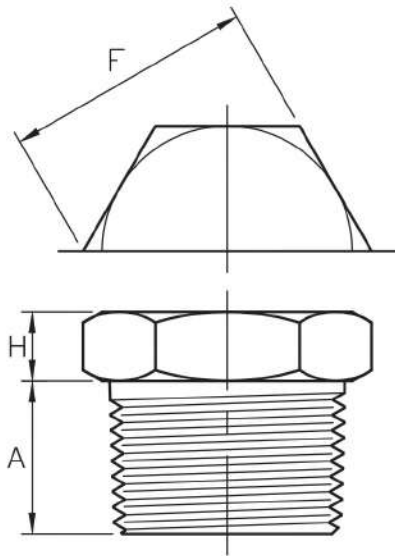


Dimensions are in millimeters.

Round Head Plug			
DN	Nom. Pipe Size	E (Nom.)	D (Min)
6	1/8	10	35
8	1/4	14	41
10	3/8	18	41
15	1/2	21	44
20	3/4	27	44
25	1	33	51
32	1-1/4	43	51
40	1-1/2	48	51
50	2	60	64
65	2-1/2	73	70
80	3	89	70
100	4	114	76

# HEX HEAD PLUG & BUSHING

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.

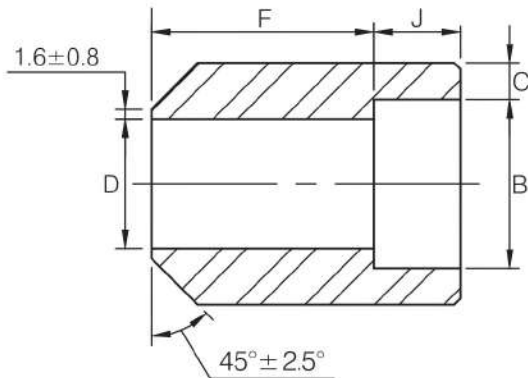
Dimensions are in millimeters.

Hex Head Plug				
DN	Nom. Pipe Size	A (Min)	F (Nom.)	H (Min)
6	1/8	10	11.11	6
8	1/4	11	15.88	6
10	3/8	13	17.46	8
15	1/2	14	22.23	8
20	3/4	16	26.99	10
25	1	19	34.93	10
32	1-1/4	21	44.45	14
40	1-1/2	21	50.80	16
50	2	22	63.50	18
65	2-1/2	27	76.20	19
80	3	28	88.90	21
100	4	32	117.48	25

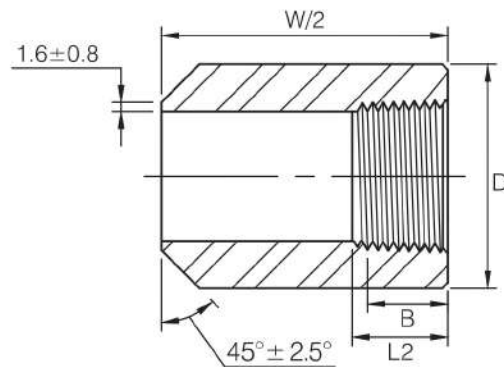
Hex Head Bushing				
DN	Nom. Pipe Size	A (Min)	F (Nom.)	G (Min)
8	1/4	11	15.88	3
10	3/8	13	17.46	4
15	1/2	14	22.23	5
20	3/4	16	26.99	6
25	1	19	34.93	6
32	1-1/4	21	44.45	7
40	1-1/2	21	50.80	8
50	2	22	63.50	9
65	2-1/2	27	76.20	10
80	3	28	88.90	10
100	4	32	117.48	13

# BOSS

ASME B16.11-2016(Revision of ASME B16.11-2011)



Dimensions are in millimeters.



Dimensions are in millimeters.

Socket Welding							
DN	Nom. Pipe Size	B <sup>(2)</sup>	C <sup>(1)</sup>		D <sup>(2)</sup>	F <sup>(2)</sup>	J (Min)
			(Avg)	(Min)			

**3000Lb**

6	1/8	10.8	3.18	3.18	6.9	16.0	9.5
8	1/4	14.2	3.78	3.30	9.3	16.0	9.5
10	3/8	17.6	4.01	3.50	12.6	17.5	9.5
15	1/2	21.8	4.67	4.09	15.8	22.5	9.5
20	3/4	27.2	4.90	4.27	21.0	24.0	12.5
25	1	33.9	5.69	4.98	26.7	28.5	12.5
32	1-1/4	42.7	6.07	5.28	35.1	30.0	12.5
40	1-1/2	48.8	6.35	5.54	40.9	32.0	12.5
50	2	61.2	6.93	6.04	52.5	41.0	16.0
65	2-1/2	73.9	8.76	7.67	62.7	43.0	16.0
80	3	89.8	9.52	8.30	78.0	44.5	16.0
100	4	115.2	10.69	9.35	102.3	48.0	19.0

**6000Lb**

6	1/8	10.8	3.96	3.43	4.0	16.0	9.5
8	1/4	14.2	4.60	4.01	6.4	16.0	9.5
10	3/8	17.6	5.03	4.37	9.2	17.5	9.5
15	1/2	21.8	5.97	5.18	11.8	22.5	9.5
20	3/4	27.2	6.96	6.04	15.6	24.0	12.5
25	1	33.9	7.92	6.93	20.7	28.5	12.5
32	1-1/4	42.7	7.92	6.93	29.5	30.0	12.5
40	1-1/2	48.8	8.92	7.80	34.0	32.0	12.5
50	2	61.2	10.92	9.50	42.9	41.0	16.0

**9000Lb**

15	1/2	21.8	9.35	8.18	6.4	22.5	9.5
20	3/4	27.2	9.78	8.56	11.1	24.0	12.5
25	1	33.9	11.38	9.96	15.2	28.5	12.5
32	1-1/4	42.7	12.14	10.62	22.8	30.0	12.5
40	1-1/2	48.8	12.70	11.12	28.0	32.0	12.5
50	2	61.2	13.84	12.12	38.2	41.0	16.0

Threaded					
DN	Nom. Pipe Size	Length of Thread. (Min)		W	D
		B <sup>(*)</sup>	L2 <sup>(*)</sup>		

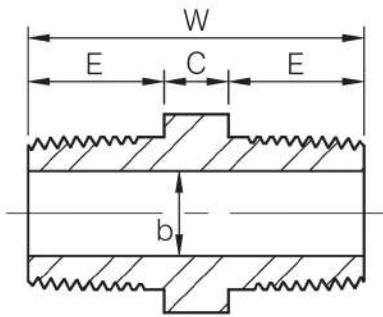
**3000Lb**

6	1/8	6.4	6.7	32	16
8	1/4	8.1	10.2	35	19
10	3/8	9.1	10.4	38	22
15	1/2	10.9	13.6	48	28
20	3/4	12.7	13.9	51	35
25	1	14.7	17.3	60	44
32	1-1/4	17.0	18.0	67	57
40	1-1/2	17.8	18.4	79	64
50	2	19.0	19.2	86	76
65	2-1/2	23.6	28.9	92	92
80	3	25.9	30.5	108	108
100	4	27.7	33.0	121	140

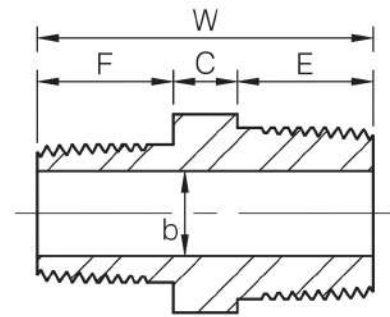
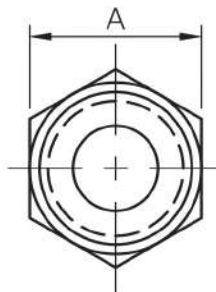
**6000Lb**

6	1/8	6.4	6.7	32	22
8	1/4	8.1	10.2	35	25
10	3/8	9.1	10.4	38	32
15	1/2	10.9	13.6	48	38
20	3/4	12.7	13.9	51	44
25	1	14.7	17.3	60	57
32	1-1/4	17.0	18.0	67	64
40	1-1/2	17.8	18.4	79	76
50	2	19.0	19.2	86	92
65	2-1/2	23.6	28.9	92	108
80	3	25.9	30.5	108	127
100	4	27.7	33.0	121	159

# HEX NIPPLE



FULL SIZE



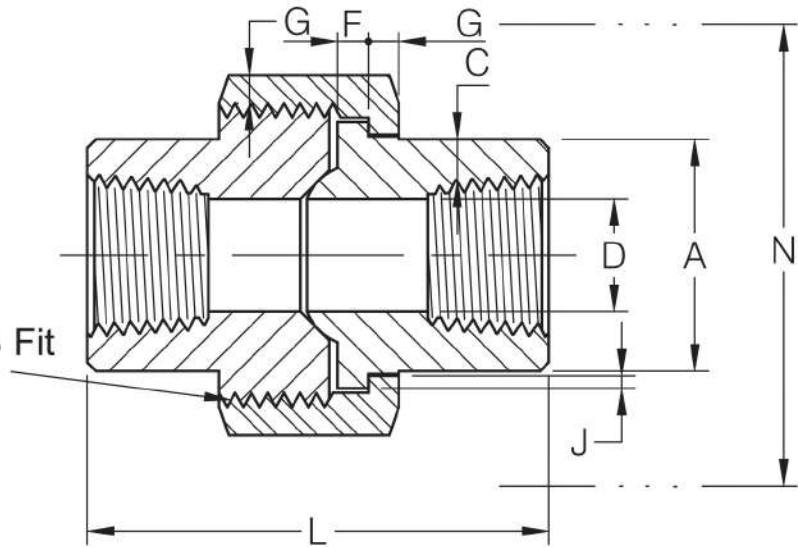
REDUCING SIZE

Dimensions are in millimeters.

Nominal Size				A (Min)	W (Min)	E (Min)	$b^{(1)}$		C (Min)	F (Min)
Equal		Reducing					3M <sup>(2)</sup>	6M <sup>(2)</sup>		
In	DN	In	DN							
1/8	(6)	—	—	11	26	10	5	2	6	—
1/4	(8)	—	—	15	36	15	8	6	6	—
—	—	1/4 x 1/8	(8 x 6)	15	31	15	5	2	6	10
3/8	(10)	—	—	18	40	16	11	8	8	—
—	—	3/8 x 1/4	(10 x 8)	18	39	16	8	6	8	15
1/2	(15)	—	—	22	48	20	14	11	8	—
—	—	1/2 x 3/8	(15 x 10)	22	44	20	11	8	8	16
—	—	1/2 x 1/4	(15 x 8)	22	43	20	8	6	8	15
3/4	(20)	—	—	27	52	21	19	13	10	—
—	—	3/4 x 1/2	(20 x 15)	27	50	21	14	11	9	20
—	—	3/4 x 3/8	(20 x 10)	27	46	21	11	8	9	16
1	(25)	—	—	35	60	25	24	17	10	—
—	—	1 x 3/4	(25 x 20)	35	56	25	19	13	10	21
—	—	1 x 1/2	(25 x 15)	35	55	25	14	11	10	20
1-1/2	(40)	—	—	50	68	26	38	30	16	—
—	—	1-1/2 x 1	(40 x 25)	50	67	26	24	17	16	25
—	—	1-1/2 x 3/4	(40 x 20)	50	63	26	19	13	16	21
—	—	1-1/2 x 1/2	(40 x 15)	50	62	26	14	11	16	20
2	(50)	—	—	62	71	27	49	39	17	—
—	—	2 x 1-1/2	(50 x 40)	62	70	27	38	30	17	26
—	—	2 x 1	(50 x 25)	62	70	27	24	17	18	25
—	—	2 x 3/4	(50 x 20)	62	65	27	19	13	17	21
—	—	2 x 1/2	(50 x 15)	62	65	27	14	11	18	20

# THREADED END UNION

H-Thrd's  
Minimum 4 Full Thrd's  
Engagement Class 2A / 2B Fit  
ANSI B1.1



3000Lb

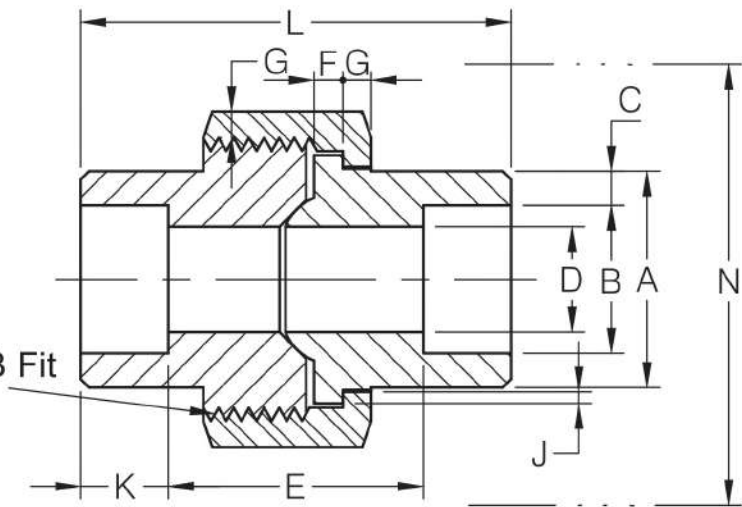
Dimensions are in millimeters.

Nom. Pipe Size	Pipe End (Min) A	Wall (Min) C	Water Way Bore D <sup>(1)</sup>	Male Flange (Min) F	Nut (Min) G	Thrds. Per 25.4mm H	Bearing (Min) J	Length Assem. Nom. L	Clear Assem. Nut N
1/8	14.7	2.41	8.43 6.43	3.18	3.18	16	1.24	41.4	50.8
1/4	19.0	3.02	11.13 9.45	3.18	3.18	16	1.24	41.4	50.8
3/8	22.9	3.20	14.27 13.51	3.43	3.43	14	1.37	46.0	55.9
1/2	27.7	3.73	17.86 17.07	3.68	3.68	14	1.50	49.0	58.4
3/4	33.5	3.91	23.01 21.39	4.06	4.06	11	1.68	56.9	66.0
1	41.4	4.55	28.98 27.74	4.57	4.45	11	1.85	62.0	78.7
1-1/4	50.5	4.85	37.69 35.36	5.33	5.21	10	2.13	71.1	94.0
1-1/2	57.2	5.08	43.54 41.20	5.84	5.59	10	2.31	76.5	111.8
2	70.1	5.54	55.58 52.12	6.60	6.35	10	2.69	86.1	132.1
2-1/2	85.3	7.01	66.27 64.31	7.49	7.11	8	3.07	102.4	149.9
3	102.4	7.62	82.55 77.27	8.26	8.00	8	3.53	109.0	175.3



# SOCKET WELD END UNION

H-Thrd's  
Minimum 4 Full Thrd's  
Engagement Class 2A / 2B Fit  
ANSI B1.1

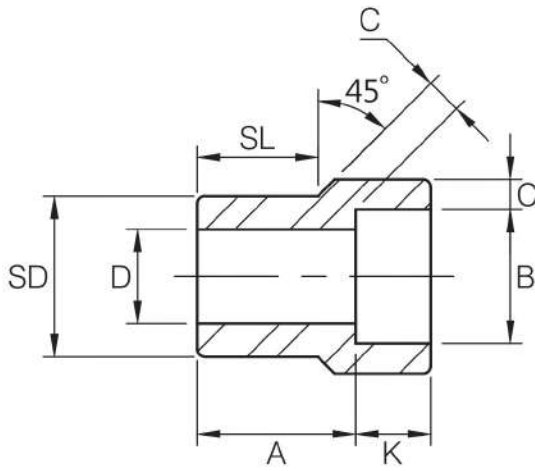


3000Lb

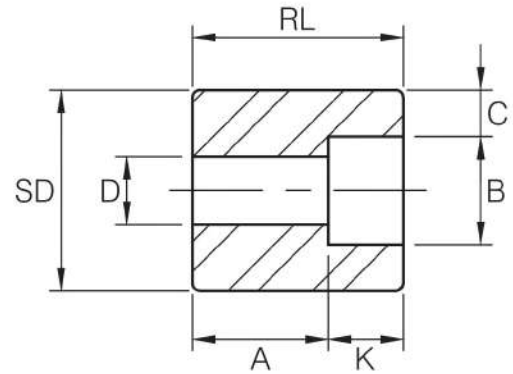
Dimensions are in millimeters.

Nom. Pipe Size	Pipe End (Min) A	Socket Bore Dia. B <sup>(1)</sup>	Socket Wall (Min) C	Water Way Bore D <sup>(1)</sup>	Laying Length E <sup>(1)</sup>	Male Flange (Min) F	Nut (Min) G	Thrds. Per 25.4mm H	Bearing (Min) J	Depth of Socket (Min) K	Length Assem. Nom. L	Clear Assem. Nut N
1/8	21.8	11.18 10.67	3.18	7.59 6.07	22.4 19.1	3.18	3.18	16	1.24	9.7	41.4	50.8
1/4	21.8	14.61 14.10	3.30	10.01 8.48	22.4 19.1	3.18	3.18	16	1.24	9.7	41.4	50.8
3/8	25.9	18.03 17.53	3.51	13.28 11.76	26.9 20.6	3.43	3.43	14	1.37	9.7	46.0	55.9
1/2	31.2	22.23 21.72	4.09	16.56 15.04	26.9 20.6	3.68	3.68	14	1.50	9.7	49.0	58.4
3/4	37.1	27.56 27.05	4.27	21.69 20.17	31.8 25.4	4.06	4.06	11	1.68	12.7	56.9	66.0
1	45.5	34.29 33.78	4.98	27.41 25.88	34.3 26.2	4.57	4.45	11	1.85	12.7	62.0	78.7
1-1/4	54.9	43.05 42.55	5.28	35.81 34.29	40.6 32.5	5.33	5.21	10	2.13	12.7	71.1	94.0
1-1/2	61.5	49.15 48.64	5.54	41.66 40.13	42.2 34.0	5.84	5.59	10	2.31	12.7	76.5	111.8
2	75.2	61.62 61.11	6.05	53.26 51.74	45.5 37.3	6.60	6.35	10	2.69	15.7	86.1	132.1
2-1/2	91.7	74.45 73.81	7.67	64.24 61.19	61.7 52.1	7.49	7.11	8	3.07	15.7	102.4	149.9
3	109.2	90.42 89.79	8.31	79.45 76.40	63.8 53.6	8.26	8.00	8	3.53	15.7	109.0	175.3

# REDUCER INSERT



TYPE 1



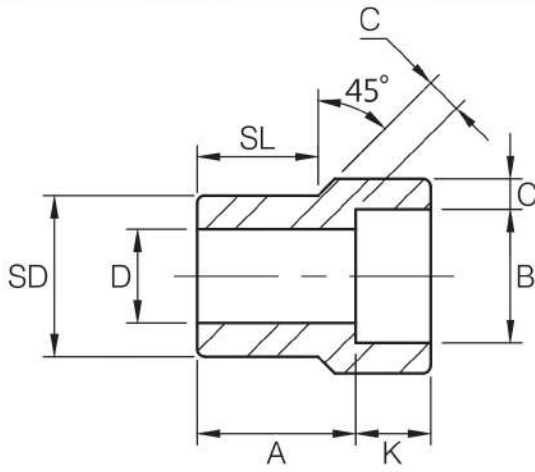
TYPE 2 <sup>(1)</sup>

Dimensions are in millimeters.

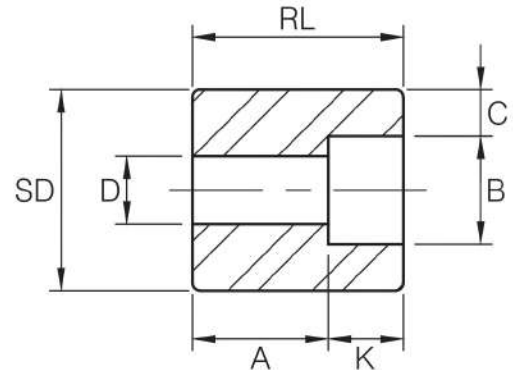
Nom. Pipe Size	Type <sup>(2)</sup>		Socket		Shank Dia. SD	Laying Length A		Bore D		Wall (Min) C		Length			
			Dia. B	Depth (Min) K		3M	6M	3M	6M	3M	6M	SL		RL (Min)	
	3M	6M									3M	6M	3M	6M	
3/8 × 1/4	1	1	14.4	9.5	17.1	19.0	21.3	9.2	6.3	3.78	4.60	14.2	15.7	—	—
1/2 × 3/8	1	1	17.8	9.5	21.3	20.6	23.1	12.5	9.1	4.01	5.03	15.7	15.7	—	—
1/2 × 1/4	1	1	14.4	9.5	21.3	20.6	20.6	9.2	6.3	3.78	4.60	15.7	15.7	—	—
3/4 × 1/2	1	1	22.0	9.5	26.7	22.4	25.4	15.8	11.7	4.67	5.97	17.5	19.0	—	—
3/4 × 3/8	2	1	17.8	9.5	26.7	15.7	22.4	12.5	9.1	4.01	5.03	—	19.0	26.9	—
3/4 × 1/4	2	2	14.4	9.5	26.7	17.5	22.4	9.2	6.3	3.78	4.60	—	—	26.9	32.0
1 × 3/4	1	1	27.4	12.5	33.4	23.9	28.4	20.9	15.5	4.90	6.96	19.0	20.6	—	—
1 × 1/2	2	1	22.0	9.5	33.4	15.7	28.4	15.8	11.7	4.67	5.97	—	20.6	28.4	—
1 × 3/8	2	2	17.8	9.5	33.4	17.5	22.4	12.5	9.1	4.01	5.03	—	—	28.4	33.2
1 × 1/4	2	2	14.4	9.5	33.4	19.0	23.9	9.2	6.3	3.78	4.60	—	—	28.4	33.2
1-1/4 × 1	1	1	34.1	12.5	42.2	25.4	30.2	26.6	20.7	5.69	7.92	20.6	22.4	—	—
1-1/4 × 3/4	2	2	27.4	12.5	42.2	17.5	20.6	20.9	15.5	4.90	6.96	—	—	31.7	34.7
1-1/4 × 1/2	2	2	22.0	9.5	42.2	19.0	22.4	15.8	11.7	4.67	5.97	—	—	31.7	34.7
1-1/4 × 3/8	2	2	17.8	9.5	42.2	20.6	23.9	12.5	9.1	4.01	5.03	—	—	31.7	34.7
1-1/4 × 1/4	2	2	14.4	9.5	42.2	22.4	25.4	9.2	6.3	3.78	4.60	—	—	31.7	34.7
1-1/2 × 1-1/4	1	1	42.9	12.5	48.2	28.4	35.0	35.0	29.4	6.07	7.92	22.4	25.4	—	—
1-1/2 × 1	2	1	34.1	12.5	48.2	17.5	29.2	26.6	20.7	5.69	7.92	—	25.4	33.2	—
1-1/2 × 3/4	2	2	27.4	12.5	48.2	19.0	25.4	20.9	15.5	4.90	6.96	—	—	33.2	39.6
1-1/2 × 1/2	2	2	22.0	9.5	48.2	20.6	26.9	15.8	11.7	4.67	5.97	—	—	33.2	39.6
1-1/2 × 3/8	2	2	17.8	9.5	48.2	22.4	28.4	12.5	9.1	4.01	5.03	—	—	33.2	39.6
2 × 1-1/2	1	1	49.0	12.5	60.3	31.8	38.9	40.8	33.9	6.35	8.92	25.4	28.7	—	—
2 × 1-1/4	2	2	42.9	12.5	60.3	20.6	23.9	35.0	29.4	6.07	7.92	—	—	38.1	41.1
2 × 1	2	2	34.1	12.5	60.3	22.4	25.4	26.6	20.7	5.69	7.92	—	—	38.1	41.1
2 × 3/4	2	2	27.4	12.5	60.3	23.9	26.9	20.9	15.5	4.90	6.96	—	—	38.1	41.1
2 × 1/2	2	2	22.0	9.5	60.3	25.4	28.4	15.8	11.7	4.67	5.97	—	—	38.1	41.1

# REDUCER INSERT

MSS SP-79-2011



TYPE 1



TYPE 2 <sup>(1)</sup>

(Continued)

Dimensions are in millimeters.

Nom. Pipe Size	Type <sup>(2)</sup>		Socket		Shank Dia. SD	Laying Length A		Bore D		Wall (Min) C		Length			
	3M	6M	Dia. B	Depth (Min) K		3M	6M	3M	6M	3M	6M	SL		RL (Min)	
												3M	6M	3M	6M
2-1/2 × 2	1	1	61.4	16.0	73.0	46.0	42.7	52.4	42.8	6.93	10.92	38.1	31.8	—	—
2-1/2 × 1-1/2	2	2	49.0	12.5	73.0	35.0	35.0	40.8	33.9	6.35	8.92	—	—	53.8	53.8
2-1/2 × 1-1/4	2	2	42.9	12.5	73.0	36.6	36.6	35.0	29.4	6.07	7.92	—	—	53.8	53.8
2-1/2 × 1	2	2	34.1	12.5	73.0	38.1	38.1	26.6	20.7	5.69	7.92	—	—	53.8	53.8
2-1/2 × 3/4	2	2	27.4	12.5	73.0	39.6	38.1	20.9	15.5	4.90	6.96	—	—	53.8	53.8
3 × 2-1/2	1	1	74.1	16.0	88.9	38.1	57.2	62.7	54.0	8.76	11.91	31.8	44.4	—	—
3 × 2	2	2	61.4	16.0	88.9	25.4	31.8	52.4	42.8	6.93	10.92	—	—	47.4	53.8
3 × 1-1/2	2	2	49.0	12.5	88.9	28.4	31.8	40.8	33.9	6.35	8.92	—	—	47.4	53.8
3 × 1-1/4	2	2	42.9	12.5	88.9	30.2	31.8	35.0	29.4	6.07	7.92	—	—	47.4	53.8
3 × 1	2	2	34.1	12.5	88.9	31.8	31.8	26.6	20.7	5.69	7.92	—	—	47.4	53.8
4 × 3	2	—	90.0	16.0	114.3	33.3	—	77.9	—	9.52	—	—	—	60.4	—
4 × 2-1/2	2	—	74.1	16.0	114.3	38.1	—	62.7	—	8.76	—	—	—	60.4	—
4 × 2	2	—	61.4	16.0	114.3	38.1	—	52.4	—	6.93	—	—	—	60.4	—
4 × 1-1/2	2	—	49.0	12.5	114.3	41.1	—	40.8	—	6.35	—	—	—	60.4	—
4 × 1-1/4	2	—	42.9	12.5	114.3	42.9	—	35.0	—	6.07	—	—	—	60.4	—



# SWAGED NIPPLE

(Continued)

Dimensions are in millimeters.

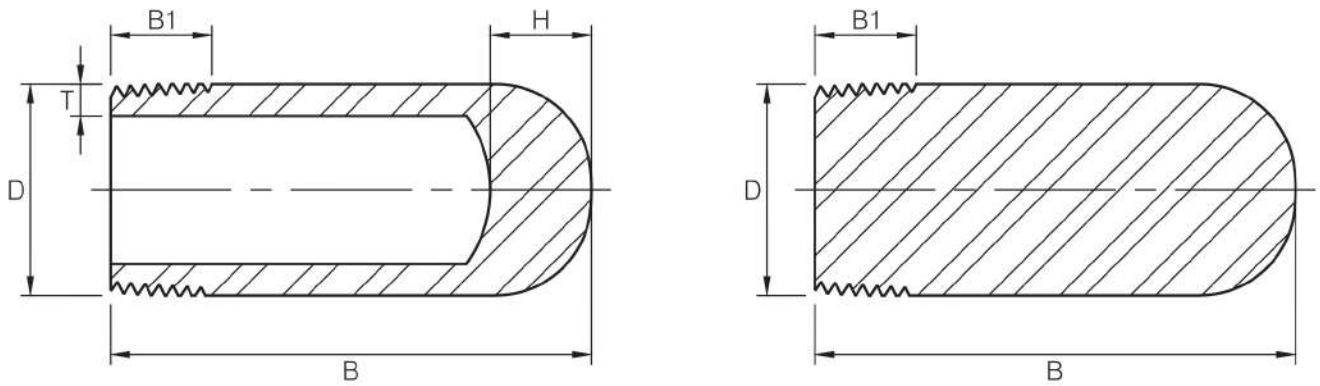
Nom. Pipe Size	Outside Diameter		End to End "A"	Wall Thickness							
	Large End D1	Small End D2		T1				T2			
				Sch40 (STD)	Sch80 (XS)	Sch160	XXS	Sch40 (STD)	Sch80 (XS)	Sch160	XXS
2-1/2 x 1-1/4	73.0	42.2	178	5.2	7.0	9.5	14.0	3.6	4.9	6.4	9.7
2-1/2 x 1-1/2	73.0	48.3	178	5.2	7.0	9.5	14.0	3.7	5.1	7.1	10.2
2-1/2 x 2	73.0	60.3	178	5.2	7.0	9.5	14.0	3.9	5.5	8.7	11.1
3 x 1/8	88.9	10.3	203	5.5	7.6	11.1	15.2	1.7	2.4	—	—
3 x 1/4	88.9	13.7	203	5.5	7.6	11.1	15.2	2.2	3.0	—	—
3 x 3/8	88.9	17.1	203	5.5	7.6	11.1	15.2	2.3	3.2	—	—
3 x 1/2	88.9	21.3	203	5.5	7.6	11.1	15.2	2.8	3.7	4.8	7.5
3 x 3/4	88.9	26.7	203	5.5	7.6	11.1	15.2	2.9	3.9	5.6	7.8
3 x 1	88.9	33.4	203	5.5	7.6	11.1	15.2	3.4	4.5	6.4	9.1
3 x 1-1/4	88.9	42.2	203	5.5	7.6	11.1	15.2	3.6	4.9	6.4	9.7
3 x 1-1/2	88.9	48.3	203	5.5	7.6	11.1	15.2	3.7	5.1	7.1	10.2
3 x 2	88.9	60.3	203	5.5	7.6	11.1	15.2	3.9	5.5	8.7	11.1
3 x 2-1/2	88.9	73.0	203	5.5	7.6	11.1	15.2	5.2	7.0	9.5	14.0
3-1/2 x 1/8	101.6	10.3	203	5.7	8.1	—	—	1.7	2.4	—	—
3-1/2 x 1/4	101.6	13.7	203	5.7	8.1	—	—	2.2	3.0	—	—
3-1/2 x 3/8	101.6	17.1	203	5.7	8.1	—	—	2.3	3.2	—	—
3-1/2 x 1/2	101.6	21.3	203	5.7	8.1	—	—	2.8	3.7	4.8	7.5
3-1/3 x 3/4	101.6	26.7	203	5.7	8.1	—	—	2.9	3.9	5.6	7.8
3-1/2 x 1	101.6	33.4	203	5.7	8.1	—	—	3.4	4.5	6.4	9.1
3-1/2 x 1-1/4	101.6	42.2	203	5.7	8.1	—	—	3.6	4.9	6.4	9.7
3-1/2 x 1-1/2	101.6	48.3	203	5.7	8.1	—	—	3.7	5.1	7.1	10.2
3-1/2 x 2	101.6	60.3	203	5.7	8.1	—	—	3.9	5.5	8.7	11.1
3-1/2 x 2-1/2	101.6	73.0	203	5.7	8.1	—	—	5.2	7.0	9.5	14.0
3-1/2 x 3	101.6	88.9	203	5.7	8.1	—	—	5.5	7.6	11.1	15.2
4 x 1/4	114.3	13.7	229	6.0	8.6	13.5	17.1	2.2	3.0	—	—
4 x 3/8	114.3	17.1	229	6.0	8.6	13.5	17.1	2.3	3.2	—	—
4 x 1/2	114.3	21.3	229	6.0	8.6	13.5	17.1	2.8	3.7	4.8	7.5
4 x 3/4	114.3	26.7	229	6.0	8.6	13.5	17.1	2.9	3.9	5.6	7.8
4 x 1	114.3	33.4	229	6.0	8.6	13.5	17.1	3.4	4.5	6.4	9.1
4 x 1-1/4	114.3	42.2	229	6.0	8.6	13.5	17.1	3.6	4.9	6.4	9.7
4 x 1-1/2	114.3	48.3	229	6.0	8.6	13.5	17.1	3.7	5.1	7.1	10.2
4 x 2	114.3	60.3	229	6.0	8.6	13.5	17.1	3.9	5.5	8.7	11.1
4 x 2-1/2	114.3	73.0	229	6.0	8.6	13.5	17.1	5.2	7.0	9.5	14.0
4 x 3	114.3	88.9	229	6.0	8.6	13.5	17.1	5.5	7.6	11.1	15.2
4 x 3-1/2	114.3	101.6	229	6.0	8.6	13.5	17.1	5.7	8.1	—	—

PBE: PLAIN BOTH ENDS  
PSE: PLAIN SMALL END  
PLE: PLAIN LARGE END

BBE: BEVEL BOTH ENDS  
BSE: BEVEL SMALL END  
BLE: BEVEL LARGE END

TBE: THREAD BOTH ENDS  
TSE: THREAD SMALL END  
TLE: THREAD LARGE END

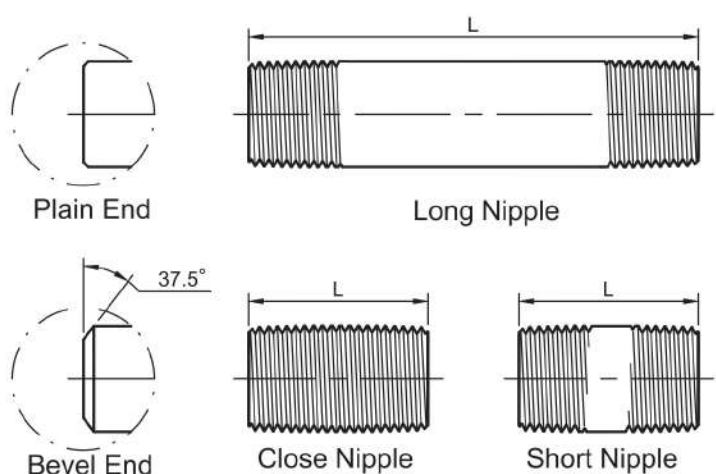
# BULL PLUG



Dimensions are in millimeters.

Nom. Pipe Size	D	B	B1	T (Min)				H
				Sch 40/STD	Sch 80/XS (3M)	Sch160 (6M)	XXS	
1/8	10.3	51	9.5	1.73	2.41	—	—	14
1/4	13.7	51	11.0	2.24	3.02	—	—	14
3/8	17.1	57	12.5	2.31	3.20	—	—	14
1/2	21.3	64	14.5	2.77	3.73	4.78	7.47	14
3/4	26.7	70	16.0	2.87	3.91	5.56	7.82	18
1	33.4	76	19.0	3.38	4.55	6.35	9.09	18
1-1/4	42.2	83	20.5	3.56	4.85	6.35	9.70	18
1-1/2	48.3	89	20.5	3.68	5.08	7.14	10.15	18
2	60.3	102	22.0	3.91	5.54	8.74	11.07	20
2-1/2	73.0	127	27.0	5.16	7.01	9.53	14.02	20
3	88.9	152	28.5	5.49	7.62	11.13	15.24	20
4	114.3	178	32.0	6.02	8.56	13.49	17.12	20

# NIPPLE



Dimensions in Inch.

Plain End Weight (Kg)per meter

Nom. Pipe Size	L			Weight			
	Close Nipple	Short Nipple	Long Nipple	Sch 40/STD	Sch 80/XS	Sch 160	XXS
1/8	3/4	1-1/2	2~12	0.37	0.47	-	-
1/4	7/8	1-1/2	2~12	0.63	0.80	-	-
3/8	1	1-1/2	2~12	0.84	1.10	-	-
1/2	1-1/8	1-1/2	2~12	1.27	1.62	1.95	2.55
3/4	1-3/8	1-1/2	2~12	1.69	2.20	2.90	3.64
1	1-1/2	2	2-1/2~12	2.50	3.24	4.24	5.45
1-1/4	1-5/8	2	2-1/2~12	3.39	4.47	5.61	7.77
1-1/2	1-3/4	2	2-1/2~12	4.05	5.41	7.25	9.56
2	2	2-1/2	3~12	5.44	7.48	11.11	13.44
2-1/2	2-1/2	3	3-1/2~12	8.63	11.41	14.92	20.39
3	2-5/8	3	3-1/2~12	11.29	15.27	21.35	27.68
3-1/2	2-3/4	4	4-1/2~12	13.57	18.64	-	-
4	2-7/8	4	4-1/2~12	16.07	22.32	33.54	41.03
5	3	4-1/2	5~12	21.77	30.97	49.12	57.43
6	3-1/8	4-1/2	5~12	28.26	42.56	67.56	79.22

# PACKING LIST

Carton Size : 28 x 20 x 18 cm (L x W x H)

Unit : PC

SIZE NPS	90° Elbow				45° Elbow				Tee				
	2M NPT 3M SW	3M NPT	6M SW	6M NPT	2M NPT 3M SW	3M NPT	6M SW	6M NPT	2M NPT 3M SW	3M NPT	6M SW	6M NPT	9M SW
1/4"	150	100	100	80	150	100	100	80	100	80	80	50	50
3/8"	100	80	80	50	100	80	80	50	80	50	50	35	35
1/2"	80	50	50	25	80	50	50	25	50	35	35	20	15
3/4"	50	25	25	20	50	30	30	20	35	20	20	12	15
1"	30	20	20	12	30	20	20	12	20	15	15	10	10
1-1/4"	20	15	15	5	20	15	15	5	15	10	10	5	6
1-1/2"	15	6	6	4	15	8	8	4	10	5	5	4	4
2"	8	5	5	2	10	6	6	2	6	4	4	2	2
2-1/2"	4	2	2	1	5	2	2	2	3	2	2	1	-
3"	2	2	1	1	2	2	1	1	2	1	1	1	-
4"	1	1	1	1	1	1	1	1	1	1	1	1	-

SIZE NPS	Cross				Full Coupling				Half Coupling			
	2M NPT 3M SW	3M NPT	6M SW	6M NPT	3M SW	3M NPT	6M SW	6M NPT	3M SW	3M NPT	6M SW	6M NPT
1/4"	40	40	80	40	350	250	250	200	400	800	300	150
3/8"	40	40	40	30	250	200	200	100	250	500	150	80
1/2"	40	30	30	20	120	100	100	60	120	250	80	80
3/4"	30	20	20	12	80	70	70	35	80	150	50	50
1"	20	12	12	6	50	35	35	20	50	80	30	35
1-1/4"	10	6	6	4	30	20	20	15	30	35	25	25
1-1/2"	6	4	4	2	25	15	15	10	25	30	15	20
2"	4	4	2	1	15	10	10	5	15	20	10	6
2-1/2"	2	1	-	-	10	5	5	3	10	12	5	4
3"	1	1	-	-	6	3	3	2	6	6	3	2
4"	-	-	-	-	4	2	2	1	4	4	-	1

SIZE NPS	Cap			Boss				Insert	
	3M SW/NPT	6M SW	6M NPT	3M SW	3M NPT	6M SW	6M NPT	3M SW	6M SW
1/4"	300	200	250	250	200	200	150	300	250
3/8"	250	150	130	200	150	150	100	300	200
1/2"	130	80	80	90	80	80	60	150	120
3/4"	80	50	50	70	40	40	35	100	80
1"	50	30	30	35	30	30	20	80	60
1-1/4"	30	25	25	30	20	20	15	60	50
1-1/2"	25	15	15	25	15	15	10	40	40
2"	15	8	10	15	10	10	5	25	20
2-1/2"	10	5	4	10	5	-	-	12	10
3"	4	3	3	6	3	-	-	10	8
4"	3	2	2	4	2	-	-	4	2

SIZE NPS	Union		Hex Plug	Round Plug	Square Plug	Bushing	Hex Nipple	Swage Nipple
	3M SW/NPT	6M SW/NPT	NPT	NPT	NPT	NPT	NPT	S40/S80 S160/XXS
1/4"	70	-	800	250	800	600	500	200
3/8"	70	50	600	200	500	500	400	150
1/2"	50	30	250	150	300	400	200	100
3/4"	30	20	150	100	200	200	100	70
1"	20	14	100	80	150	100	65	50
1-1/4"	14	10	35	50	80	60	35	30
1-1/2"	10	6	25	30	50	50	25	20
2"	6	2	20	15	30	25	15	8
2-1/2"	2	-	8	10	15	15	5	4
3"	2	-	6	5	10	10	3	3
4"	1	-	3	3	3	5	2	1