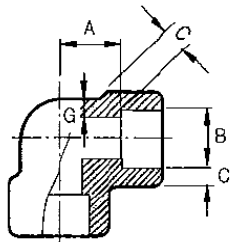
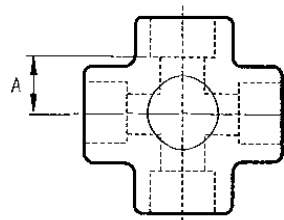


Forged Steel Socket Welding Fitting

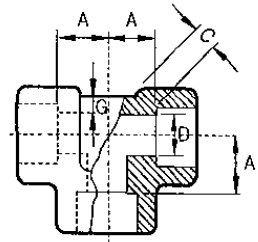
90° Elbow , 45° Elbow , Tee,
Cross, Coupling
3000# 6000# 9000#



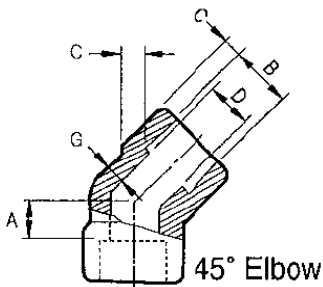
90° Elbow



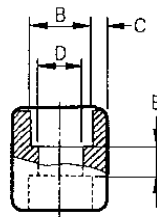
Cross



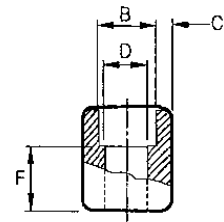
Tee



45° Elbow



Coupling



Half Coupling

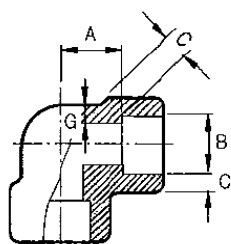
ASME B16.11

Unit : mm

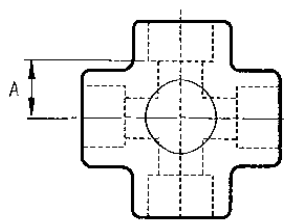
Nom PIPE SIZE (in)	Socket Bore Dia B	Bore Diameter of Fitting D			Socket Wall Thickness -C						Body Wall Thickness-G		
					Pressure Class Designation						Pressure Class Designation		
		Pressure Class Designation			3000		6000		9000		3000	6000	9000
		3000	6000	9000	Ave	Min	Ave	Min	Ave	Min	Min	Min	Min
1/8	11.2	7.6	4.8		3.18	3.18	3.96	3.43			2.41	3.15	
	10.8	6.1	3.2										
1/4	14.6	10.0	7.1		3.78	3.30	4.60	4.01			3.02	3.68	
	14.2	8.5	5.6										
3/8	18.0	13.3	9.9		4.01	3.50	5.03	4.37			3.20	4.01	
	17.6	11.8	8.4										
1/2	22.2	16.6	12.5	7.2	6.47	4.09	5.97	5.18	9.35	8.18	3.73	4.78	7.47
	21.8	15.0	11.0	5.6									
3/4	27.6	21.7	16.3	11.8	4.90	4.27	6.96	6.04	9.78	8.56	3.91	5.56	7.82
	27.2	20.2	14.8	10.3									
1	34.3	27.4	21.5	16.0	5.69	4.98	7.92	6.93	11.38	9.96	4.55	6.35	9.09
	33.9	25.9	19.9	14.5									
1.1/4	43.1	35.8	30.2	23.5	6.07	5.28	7.92	6.93	12.14	10.62	4.85	6.35	9.70
	42.7	34.3	28.7	22.0									
1.1/2	49.2	41.7	34.7	27.7	6.35	5.54	8.92	7.80	12.70	11.12	5.08	7.14	10.15
	48.8	40.1	33.2	27.2									
2	61.7	53.5	43.6	38.9	6.93	6.04	10.92	9.50	13.84	12.12	5.54	8.74	11.07
	61.2	51.7	42.1	37.4									
2.1/2	74.4	64.2			8.76	7.67					7.01		
	73.9	61.2											
3	90.3	79.5			9.52	8.30					7.62		
	89.8	76.4											
4	115.7	103.8			10.69	9.35					8.56		
	115.2	100.7											

Forged Steel Socket Welding Fitting

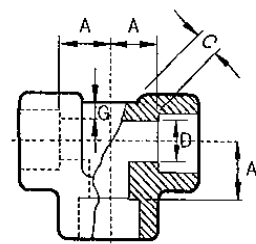
90° Elbow , 45° Elbow , Tee,
Cross, Coupling
3000# 6000# 9000#



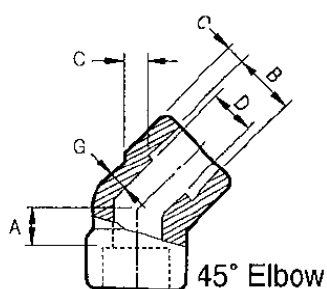
90° Elbow



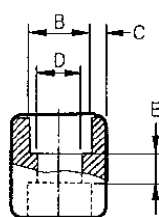
Cross



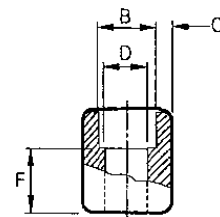
Tee



45° Elbow



Coupling



Half Coupling

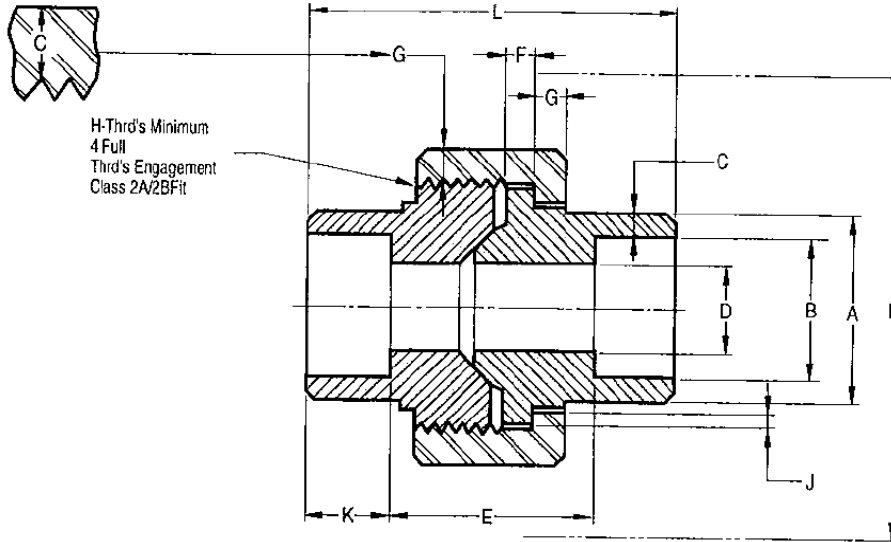
ASME B16.11

Unit : mm

Nom PIPE SIZE (in)	Depth of Socket Min-J	Center To Bottom of Socket - A						Laying Legths	
		90° Elbows , Tees and Crosses			45° Elbows			Coupling E	Half Coupling E
		Pressure Class Designation			Pressure Class Designation				
		3000	6000	9000	3000	6000	9000		
1/8	9.5	12	12		9	9		8	17
		10	10		7	7		5	15
1/4	9.5	12	14.5		9	9		8	17
		10	12.5		7	7		5	15
3/8	9.5	15	17		9.5	12.5		9.5	19
		12	14		6.5	9.5		3.5	16
1/2	9.5	17	20.5	27	12.5	14	17	12.5	24
		14	17.5	24	9.5	11	14	6.5	21
3/4	12.5	21	24	30	14.5	15.5	20.5	12.5	25.5
		18	21	27	11.5	12.5	17.5	6.5	22.5
1	12.5	24.5	29	34	16	19.5	22.5	16.5	30.5
		20.5	25	30	12	15.5	18.5	8.5	26.5
1.1/4	12.5	29	34	37	19.5	22.5	24.5	16.5	32
		25	30	33	15.5	18.5	20.5	8.5	28
1.1/2	12.5	34	40	40	22.5	27.5	27.5	16.5	34
		30	36	36	18.5	23.5	23.52	8.5	30
2	16	40	43	56	27.5	30.5	30.5	23	43
		36	39	52	23.5	26.5	26.5	15	39
2.1/2	16	43.5			31			24	45.5
		38.5			26			14	40.5
3	16	59.5			34.5			24	47
		54.5			29.5			14	42
4	19	69			43.5			24	50.5
		64			38.5			14	45.5

Forged Steel Socket Welding Fitting

**Union
3000#**



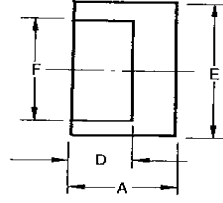
MSS SP-83 & Maker Standard

Unit : mm

Nom PIPE SIZE (in)	Pipe End Min	Socket Bore Dia	Socket Wall Min	Water Way Bore	Laying Length	Male Flange Min	Nut Min	Thrds per 25.4 Max	Bearing Min	Depth of Socket Min	Length Assem Nominal	Clear Assem Nut
	A	B	C	D	E	F	G	H	J	K	L	N
1/8	21.8	10.92 10.67	3.17	6.83 6.43	22.4 19	3.17	3.17	16	1.24	9.6	41.1	49
1/4	21.8	14.22 13.97	3.3	9.85 9.45	22.4 19	3.17	3.17	16	1.24	9.6	41.4	49
3/8	25.9	17.78 17.53	3.48	13.92 13.51	26.9 20.6	3.43	3.43	14	1.37	9.6	46	55
1/2	31.2	21.84 21.59	4.06	17.47 17.07	26.9 20.6	3.68	3.68	14	1.5	9.6	49	47
3/4	37.1	27.18 26.92	4.27	21.79 21.39	31.8 25.4	4.06	4.06	11	1.68	12.7	56.9	67
1	45.5	34.04 33.78	4.95	28.14 27.74	34.3 26.2	4.57	4.44	11	1.85	12.7	52	79
1.1/4	54.9	42.67 42.42	5.28	35.76 35.36	40.6 32.5	5.33	5.21	11	2.13	12.7	41.1	94
1.1/2	61.5	48.77 48.51	5.54	41.61 41.2	42.2 34	5.84	5.59	10	2.31	12.7	76.5	111
2	75.2	61.47 61.21	6.05	52.53 52.12	45.5 37.3	6.6	6.35	10	2.69	15.8	86.1	132
2.1/2	91.7	74.17 73.66	7.65	64.72 64.31	61.7 52.1	7.49	7.11	8	3.07	15.8	102.4	148
3	109.2	90.17 89.66	8.31	77.67 77.27	63.8 53.6	8.25	8	8	3.53	15.8	109	175

Forged Steel Socket Welding Fitting

Cap
3000# 6000#



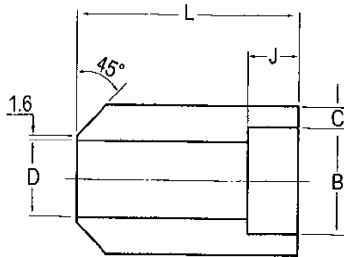
ASME B16.11

Unit : mm

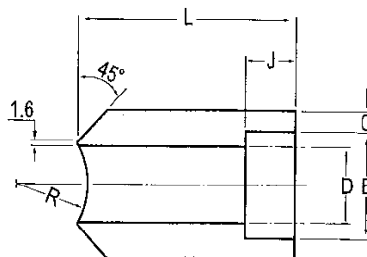
Nom PIPE SIZE (in)	A		E		F		D		Unit Weight (kg)	
	3000	6000	3000	6000	3000	6000	3000	6000	3000	6000
1/4	16	18	22	23	14.3	14.3	9.5	9.5	0.04	0.04
3/8	16	18	25.5	26.5	17.8	17.8	9.5	9.5	0.05	0.06
1/2	17.5	25.5	31.5	34	22.2	22.2	9.5	9.5	0.07	0.15
3/4	22.5	32	37	41	27.7	27.7	13	13	0.13	0.27
1	29	35.5	45.5	50	34.5	34.5	13	13	0.21	0.45
1.1/4	29	39	55	58.5	43.2	43.2	13	13	0.37	0.67
1.1/2	32	40	61.5	66.5	49.1	49.1	13	13	0.6	0.89
2	42	50	75	83	61.1	61.1	16	16	0.99	1.75
2.1/2	42	55	91.5	98	77.1	77.1	16	16	1.5	2.66
3	42	60	109	118	90.1	90.1	16	16	2.3	4.33
4	50	70	138	149	115.3	115.3	20	20	4	7.91

ANSI Forged Steel Socket Welding Fitting

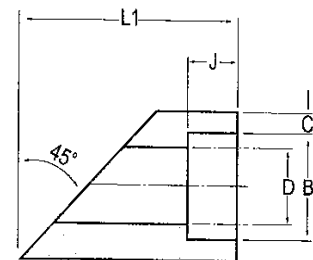
Boss
3000# 6000# 9000#



Type. 1



Type. 2



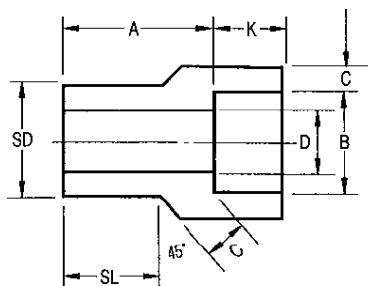
Type. 3

Unit : mm

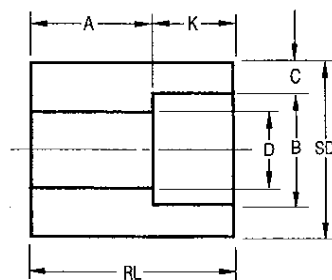
Nom PIPE SIZE (in)	Socket Bore Dia B	Bore Diameter of Fitting D			Socket Wall Thickness -C			Depth Min J	End to End	
		3000	6000	9000	3000	6000	9000		L	L1
1/4	14.10-14.35	8.5-10	5.6-7.1	-	3.3	4	-	10	30	62
3/8	17.55-17.8	11.8-13.3	8.4-9.9	-	3.5	4.35	-	10	30	66
1/2	21.7-21.95	15.5-16.6	11-12.5	5.6-7.2	4.1	5.2	8.2	10	33	82
3/4	27.05-27.3	20.2-21.7	14.8-16.3	10.3-11.8	4.25	6.05	8.55	13	35	88
1	33.8-34.05	25.9-27.4	19.9+21.5	14.5-16	5	6.95	9.95	13	43	96
1.1/4	42.55-42.8	34.3-35.8	28.7-30.2	22-23.5	5.3	6.95	10.6	13	46	105
1.1/2	48.65-48.9	40.1-41.7	33.2+34.7	27.2-28.7	5.55	7.8	11.15	13	50	112
2	61.1-61.35	51.7-53.5	42.1-43.6	37.4-38.9	6.05	9.5	12.12	16	57	125

Forged Steel Socket Welding Fitting

**Reducer Insert
3000# 6000#**



Type 1



Type 2⁽¹⁾

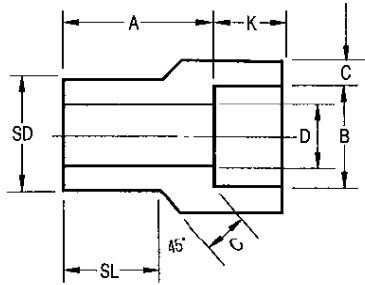
MSS SP-79

Unit : mm

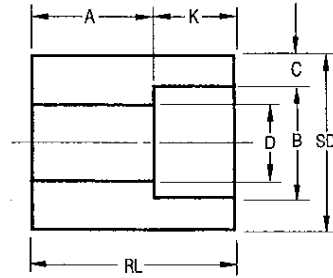
Nom PIPE SIZE (in)	Type		Socket		Shank Dia SD	Laying Length A		Bore D		Wall Min C		Length Min			
			Dia B	Depth Min K		3M	6M	3M	6M	3M	6M	SL		RL	
	3M	6M										3M	6M	3M	6M
3/8 x 1/4	1	1	14.22	9.52	17.14	19	20.6	9.14	6.35	3.78	4.6	14.22	15.75		
1/2 x 3/8 x 1/4	1	1	17.65	9.52	21.34	20.6	22.2	12.45	9.14	4.01	5.03	15.75	17.27		
	2	1	14.22	9.52	21.34	15.8	20.6	9.14	6.35	3.78	4.6	17.27	17.27		
3/4 x 1/2 x 3/8 x 1/4	1	1	21.84	9.52	26.67	22.2	25.4	15.75	11.68	4.67	5.97	17.53	19.05		
	2	1	17.65	9.52	26.67	15.8	22.2	12.45	9.14	4.01	5.03		19.05	26.92	
	2	2	14.22	9.52	26.67	17.5	22.2	9.14	63.35	3.78	4.6			26.92	29.97
1 x 3/4 x 1/2 x 3/8 x 1/4	1	1	27.18	12.7	33.35	23.8	28.5	20.83	15.49	4.9	6.96	19.05	20.57		
	2	2	21.84	9.52	33.35	15.8	20.6	15.75	11.68	4.67	5.97		20.57	28.45	
	2	2	17.65	9.52	33.35	17.5	22.2	12.45	9.14	4.01	5.03			28.45	33.27
	2	2	14.22	9.52	33.35	19	23.8	9.14	6.35	3.78	4.6			28.45	33.27
1.1/4 x 1 x 3/4 x 1/2 x 3/8 x 1/4	1	1	33.86	12.7	42.16	25.4	30.2	26.67	20.57	5.69	4.92	7.92	22.35		
	2	2	27.17	12.7	42.16	17.5	20.6	20.88	15.49	4.9	6.96	6.96		31.75	34.8
	2	2	21.84	9.52	42.16	19	22.2	15.75	11.68	4.67	5.97	5.97		31.75	34.8
	2	2	17.65	9.52	42.16	20.6	23.8	12.45	9.14	4.01	5.03	5.03		31.75	34.8
	2	2	14.22	9.52	42.16	22.2	25.4	9.14	6.35	3.78	4.6	4.6		31.75	34.8
1.1/2 x 1.1/4 x 1 x 3/4 x 1/2 x 3/8	1	1	41.67	12.7	48.26	28.5	35.1	35.05	29.46	6.07	7.92	7.92	25.4		
	2	1	33.86	12.7	48.26	17.5	28.5	26.67	20.57	5.69	7.92	7.92	25.4	33.27	
	2	2	27.18	12.7	48.26	19	25.4	20.83	15.49	4.9	6.96	6.96		33.27	39.62
	2	2	21.84	9.52	48.26	20.6	26.9	15.75	11.68	4.67	5.97	5.97		33.27	39.62
	2	2	17.65	9.52	48.26	22.2	28.5	12.45	9.14	4.01	5.03	5.03		33.27	39.62
2 x 1.1/2 x 1.1/4 x 1 x 3/4 x 1/2	1	1	48.77	12.7	60.32	31.7	46	40.89	34.04	6.35	8.91	8.91	39.62		
	2	2	42.67	12.7	60.32	20.6	23.8	34.92	29.46	6.07	7.92	7.92		38.1	45.97
	2	2	33.91	12.7	60.32	22.2	25.4	26.67	20.83	5.69	7.92	7.92		38.1	45.97
	2	2	27.18	12.7	60.32	23.8	26.9	20.83	15.49	4.9	6.96	6.96		38.1	45.97
	2	2	21.84	9.52	60.32	25.4	28.5	15.87	11.68	4.67	5.97	5.97		38.1	45.97

Forged Steel Socket Welding Fitting

Reducer Insert
3000# 6000#



Type 1



Type 2⁽¹⁾

MSS SP-79

Unit : mm

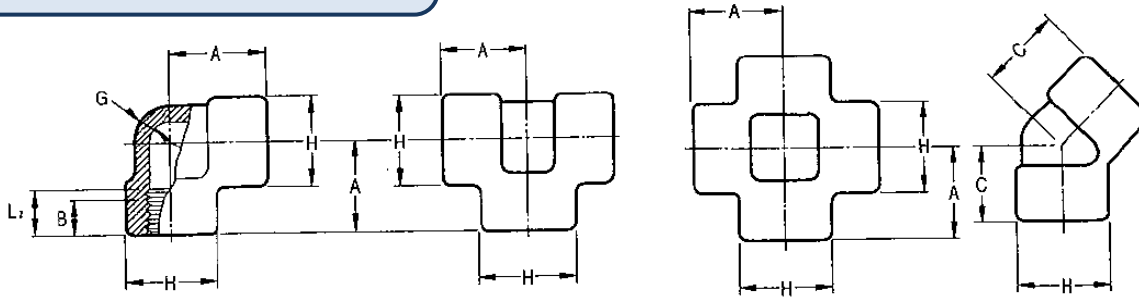
Nom PIPE SIZE (in)	Type		Socket		Shank Dia SD	Laying Length A		Bore D		Wall Min C		Length Min			
			Dia B	Depth Min K		3M	6M	3M	6M	3M	6M	SL		RL	
	3M	6M										3M	6M	3M	6M
2.1/2 x 2	1	1	61.24	15.87	73.02	46	42.8	52.58		6.93		38.1	31.75		
x 1.1/2	2	2	48.77	12.7	73.02	34.9	X	40.89	X	6.35	X			53.85	X
x 1.1/4	2	2	42.67	12.7	73.02	36.5	X	34.92	X	6.07	X			53.85	X
x 1	2	2	33.91	12.7	73.02	38.1	X	26.67	X	5.69	X			53.85	X
x 3/4	2	2	27.18	12.7	73.02	39.6	X	20.83	X	4.9	X			53.85	X
3 x 2.1/2	1	X	74.01	15.87	88.9	38.1	X	62.74	X	8.76	X	31.75	X		
x 2	2	X	61.24	15.87	88.9	25.4	X	52.58	X	6.93	X			47.5	X
x 1.1/2	2	X	48.77	12.7	88.9	28.5	X	40.89	X	6.35	X			47.5	X
x 1.1/4	2	X	67	12.7	88.9	30.1	X	34.92	X	6.07	X			47.5	X
x 1	2	X	33.91	12.7	88.9	31.7	X	26.67	X	5.06	X			47.5	X
4 x 3	2	X	89.99	15.87	114.3	33.2	X	77.99	X	9.52	X			60.32	X
x 2.1/2	2	X	74.01	15.87	114.3	38.1	X	62.74	X	8.76	X			60.32	X
x 2	2	X	61.24	15.87	114.3	38.1	X	52.58	X	6.93	X			60.32	X
x 1.1/2	2	X	48.77	12.7	114.3	41.2	X	40.89	X	6.35	X			60.32	X
x 1.1/4	2	X	42.67	12.7	114.3	42.8	X	34.92	X	6.07	X			60.32	X

(1) At the option of the manufacturer Type 2 Reducers may be furnished in Type 1 configuration.

(2) 3M and 6M symbols denote 3000 and 6000 classes.

Forged Steel Threaded Fitting

90° Elbow , 45° Elbow , Tee,
2000# 3000# 6000#

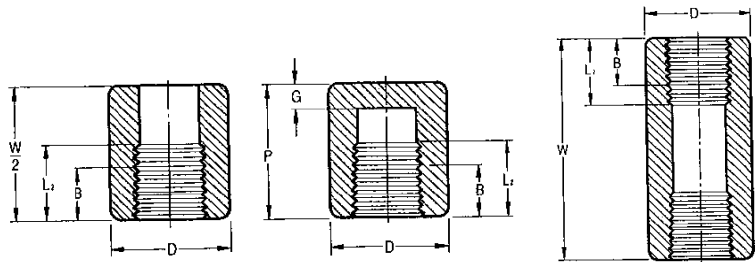


ASME B16.11

Unit : mm

Nom PIPE SIZE (in)	Center to End Elbows Tee Crosses			Center to End 45° Elbows			Outside Diameter of Band			Min Wall Thickness			Length of Thread Min	
	A			A			H						B	L2
	2000	3000	6000	2000	3000	6000	2000	3000	6000	2000	3000	6000		
1/8	21	21	25	17	17	19	22	22	25	3.18	3.18	3.65	6.4	6.7
1/4	21	25	28	17	19	22	22	25	33	3.18	3.3	6.6	8.1	10.2
3/8	25	28	33	19	22	25	25	33	38	3.18	3.51	6.98	9.1	10.4
1/2	28	33	38	22	25	28	33	38	46	3.18	4.09	8.15	10.9	13.6
3/4	33	38	44	25	28	33	38	46	56	3.18	4.32	8.53	12.7	13.9
1	38	44	51	28	33	35	46	56	62	3.68	4.98	9.93	14.7	17.3
1.1/4	44	51	60	33	35	43	56	62	75	3.89	5.28	10.59	17	18
1.1/2	51	60	64	35	43	44	62	75	84	4.01	5.56	11.07	17.8	18.4
2	60	64	83	43	44	52	75	84	102	4.27	7.14	12.09	19	19.2
2.1/2	76	83	95	52	52	64	92	102	121	5.61	7.65	15.29	23.6	28.9
3	86	95	106	64	64	79	109	121	146	5.99	8.84	16.64	25.9	30.5
4	106	114	114	79	79	79	146	152	152	6.55	11.18	18.67	27.7	33

Coupling, Half Coupling, Cap
3000# 6000#

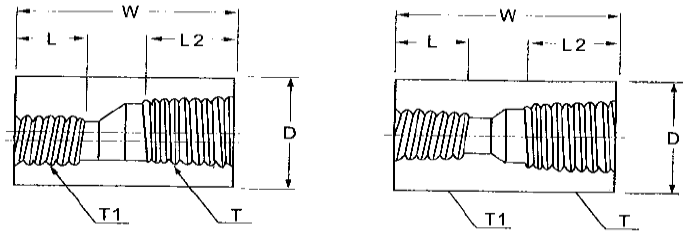


ASME B16.11

Nom PIPE SIZE (in)	End to End Couplings	End to End Caps		Outside Dia		End wall Thickness (Min)		Length of Thread (Min)	
	W	P		D		G			
	3000 & 6000	3000	6000	3000	6000	3000	6000	3000	6000
1/8	32	19		16	22	4.8		6.4	6.7
1/4	35	25	27	19	25	4.8	6.4	8.1	10.2
3/8	38	25	27	22	32	4.8	6.4	9.1	10.4
1/2	48	32	33	28	38	6.4	7.9	10.9	13.6
3/4	51	37	38	35	44	6.4	7.9	12.7	13.9
1	60	41	43	44	57	9.7	11.2	14.7	17.3
1.1/4	67	44	46	57	64	9.7	11.2	17	18
1.1/2	79	44	48	64	76	11.2	12.7	17.8	18.4
2	86	48	51	76	92	12.7	15.7	19	19.2
2.1/2	92	60	64	92	108	15.7	19	23.6	28.9
3	108	65	68	108	127	19	22.4	25.9	30.5
4	121	68	75	140	159	22.4	28.4	27.7	33

Forged Steel Threaded Fitting

**Concentric / Eccentric Reducer,
3000# 6000#**



ANSI B16.11

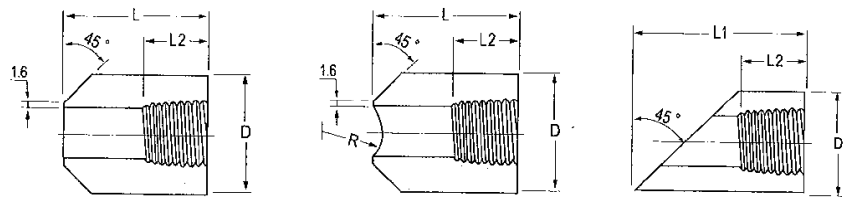
Unit : mm

Nom PIPE SIZE (in)	Outside Dia D		End to End W	Length of Thread (Min)	
	3000	6000		L2	L
T x T1	3000	6000		L2	L
1/4 x 1/2	19	25	35	8	6.5
3/8 x 1/4	22	32	38	9	8
1/2 x 1/4	29	38	48	11	8
x 3/8	29	38	418	11	9
3/4 x 1/4	35	44	51	12.5	8
x 3/8	35	44	51	12.5	9
x 1/2	353	44	51	12.5	11
1 x 3/8	44	57	60	14.5	9
x 1/2	44	57	60	14.5	11
x 3/4	44	57	60	14.5	12.5
1.1/4 x 1/2	57	64	67	17	11
x 3/4	57	64	67	17	12.5
x 1	57	64	67	17	14.5
1.1/2 x 3/4	64	76	79	18	12.5

Unit : mm

Nom PIPE SIZE (in)	Outside Dia D		End to End W	Length of Thread (Min)	
	3000	6000		L2	L
T x T1	3000	6000		L2	L
1.1/2 x 1	64	76	79	18	14.5
x 1.1/4	64	76	79	18	17
2 x 1	76	92	86	19	14.5
x 1.1/4	76	92	86	19	17
x 1.1/2	76	92	86	19	18
2.1/2 x 1.1/4	92	108	92	23.5	17
x 1.1/2	92	108	92	23.5	18
x 2	92	108	92	23.5	19
3 x 1.1/2	108	127	108	26	18
x 2	108	127	108	26	19
x 2.1/2	108	127	108	26	23.5
4 x 2	140	159	121	27.5	19
x 2.1/2	140	159	121	27.5	23.5
x 3	140	159	121	27.5	26

**Boss
3000# 6000#**



Type 1

Type 2

Type 3

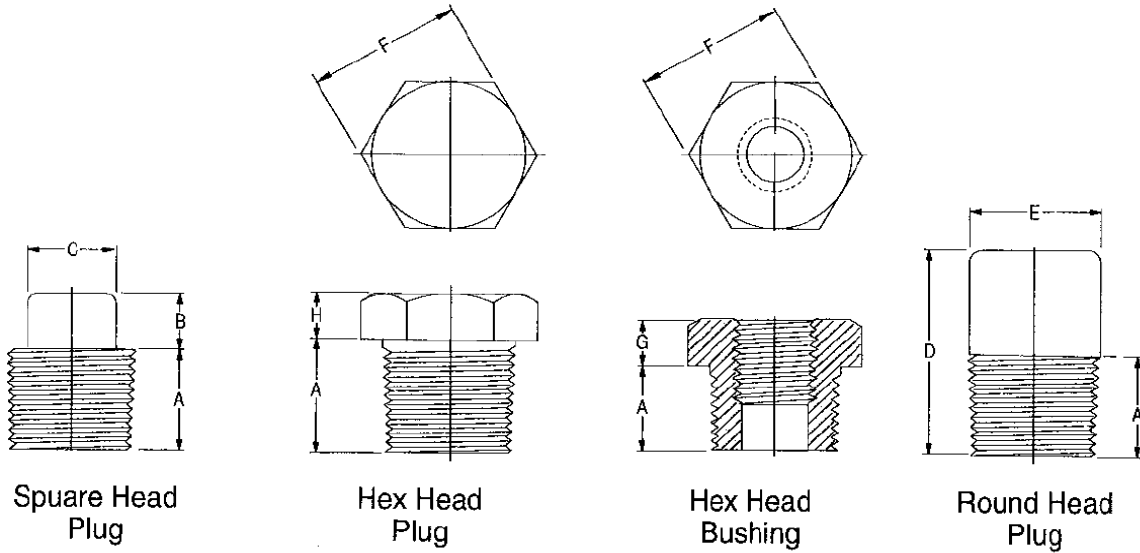
Maker Standard

Unit : mm

Nom PIPE SIZE (in)		Outside Dia D		End to End		Round-R	Length of Thread (Min) L2
B	A	3000	6000	L	L1		
1/4	8	19	25	40	62	25	8
3/8	10	22	32	45	66	30	9
1/2	15	29	38	50	82	30	11
3/4	20	35	44	50	88	30	12.5
1	25	44	57	50	96	40	14.5
1.1/4	32	57	64	50	105	45	17
1.1/2	40	64	76	50	112	55	18
2	50	76	92	50	125	55	19

Forged Steel Threaded Fitting

Plug, Bushing



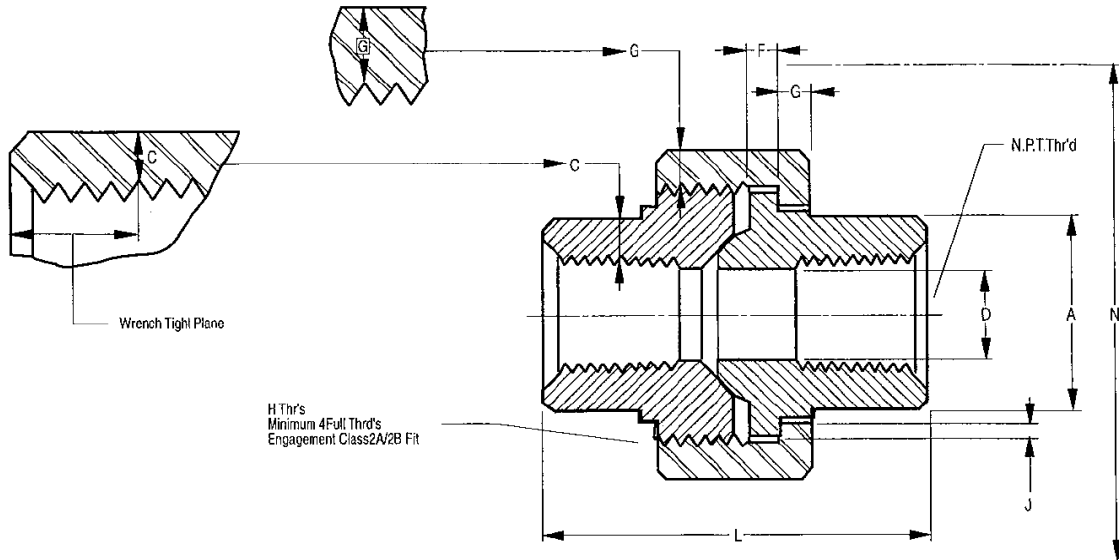
ASME B16.11

Unit : mm

Nom PIPE SIZE (in)	Length (Min) A	Plugs Square Head		Plug Round Gead		Hex Plugs & Bushings		
		Height of Square (Min) B	Width Flats (Min) C	Nominal Diameter of Head E	Length (Min) D	Width Flats (Nominal) F	Hex Height Min	
							Bushing G	Plug H
1/8	10	6	6	10	35	11		6
1/4	11	6	6	14	41	16	3	6
3/8	13	8	8	18	41	18	4	8
1/2	14	10	10	21	44	22	5	8
3/4	16	11	11	27	44	27	6	10
1	19	13	13	33	54	36	6	10
1.1/4	21	14	14	43	54	46	7	14
1.1/2	21	16	16	48	54	50	8	16
2	22	18	18	60	64	65	9	18
2.1/2	27	19	19	73	70	75	10	19
3	28	21	21	89	70	90	10	21
4	32	25	25	114	76	115	13	25

Forged Steel Threaded Fitting

**Union
3000#**



MSS SP-83 & Maker Standard

Unit : mm

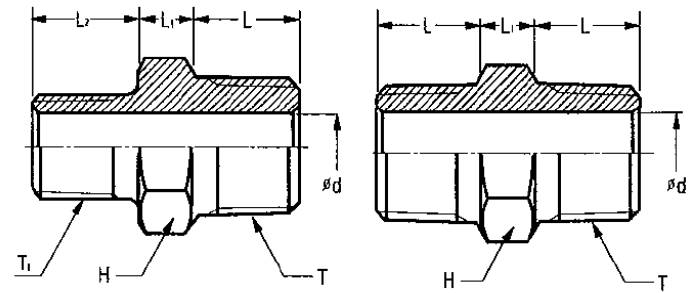
Nom PIPE SIZE (in)	Pipe End Min	Wall Min	Water Way Bore	Male Flange Min	Nut Min	Thrds Per 25.4 Max	Bearing Min	Length Assem Nominal	Clear Assem Nut
	A	C	D	F	G	H	J	L	N
1/8	21.8	3.18	6.83 6.43	3.17	3.2	16	1.24	41.4	49
1/4	21.8	3.3	9.85 9.45	3.17	3.2	16	1.24	41.4	49
3/8	25.9	3.5	13.92 13.51	3.43	3.4	14	1.37	46	55
1/2	31.2	4.09	17.47 17.07	3.68	3.7	14	1.5	49	57
3/4	37.1	4.27	21.79 21.39	4.06	4.1	11	1.68	56.9	67
1	45.4	4.99	28.14 27.74	4.57	4.4	11	1.85	62	79
1.1/4	54.9	5.28	35.76 35.36	5.33	5.2	11	2.13	71.1	94
1.1/2	61.5	5.54	41.61 41.2	5.84	5.6	10	2.31	76.4	111
2	75.2	6.05	52.53 52.12	6.6	6.4	10	2.69	86.1	132
2.1/2	91.7	7.68	64.72 64.31	7.49	7.1	8	3.07	102.4	148
3	109.2	8.31	77.67 77.27	8.25	8	8	3.53	109	175

Forged Steel Threaded Fitting

Hex Nipple 3000# 6000#

Unit : mm

Nom PIPE TxT1 (in)	d	H	L	L1	L2	Unit Weight (kg)
3/8 x 1/4	7.1	19	14	8	14	0.05
1/2 x 1/4	7.1	24	19	9	14	0.09
1/2 x 3/8	8.9	24	19	9	14	0.09
3/4 x 1/4	7.1	30	19	10	14	0.15
3/4 x 3/8	8.9	30	19	10	14	0.15
3/4 x 1/2	11.9	30	19	10	19	0.15
1 x 3/8	8.9	36	24	11	14	0.27
1 x 1/2	11.9	36	24	11	19	0.27
1 x 3/4	16	36	24	11	19	0.27
1.1/4 x 1/2	11.9	46	24	12	19	0.45
1.1/4 x 3/4	16	46	24	12	19	0.45
1.1/4 x 1/2	20.1	46	24	12	24	0.45
1.1/2 x 3/84	16	50	25	14	19	0.62
1.1/2 x 1	20.1	50	25	14	24	0.62
1.1/2 x 1.1/4	27.9	50	25	14	24	0.62
2 x 1	20.1	65	26	16	24	1.03
2 x 1.1/4	27.9	65	26	16	24	1.03
2 x 1.1/2	32	65	26	16	25	1.03
2.1/2 x 1.1/4	27.9	80	38	18	24	1.51
2.1/2 x 1.1/2	32	80	38	18	25	1.51
2.1/2 x 2	39.9	80	38	18	26	1.51
3 x 1.1/2	32	95	40	20	25	2.22
3 x 2	39.9	95	40	20	26	2.22
3 x 2.1/2	55.1	95	40	20	38	2.22



Nom PIPE T	d	H	L	L1	Unit Weight (kg)
1/8	4.1	12	10	6	0.03
1/4	7.1	17	14	8	0.04
3/8	8.9	19	14	8	0.05
1/2	11.9	24	19	9	0.09
3/4	16	30	19	10	0.15
1	20.1	36	24	11	0.27
1.1/4	27.9	46	24	12	0.45
1.1/2	32	50	25	14	0.62
2	39.9	65	26	16	1.03
2.1/2	55.1	80	38	18	1.51
3	65	95	40	20	2.22

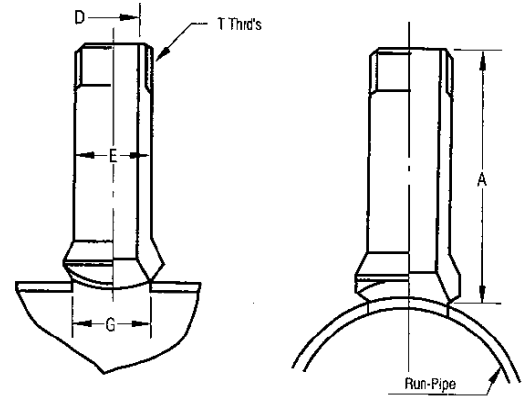
Forged Steel Threaded Fitting

Nipple, Outlet 3000#

MSS SP-97 & Maker Standard

Unit : mm

Nom PIPE SIZE (in)	d	H	L	L1	L2	Unit Weight (kg)
36-3/4	1/2	88.9	23.9	14	21.3	0.36
36-1	3/4	88.9	30.2	18.8	26.7	0.56
36-1.1/4	1	88.9	36.6	24.4	33.3	0.84
36-1.1/2	1.1/4	88.9	44.5	32.5	42.2	1.22
36-2	1.1/2	88.9	50.8	38.1	48.3	2
36-2.1/2	2	88.9	65	49.3	60.5	3.12

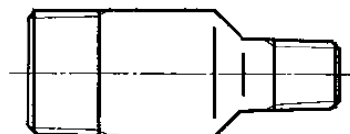


Swaged Nipple

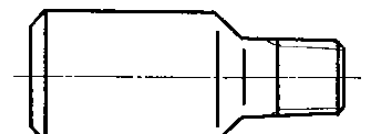
MSS SP-75

Large end Size(in)	Small end size	Length (mm)
1/2	3/8-1/8	70
3/4	1/2-1/8	76
1	3/4-1/8	89
1.1/4	1-1/8	102
1.1/2	1.1/4-1/8	114
2	1.1/2-1/8	165
2.1/2	2-1/8	178
3	2.1/2-1/8	203
3.1/2	3-1/8	203
4	3.1/2-1/8	229

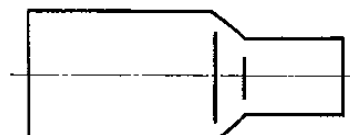
SHAPE



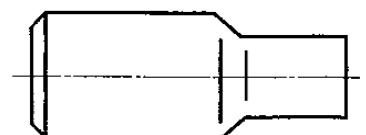
TBE



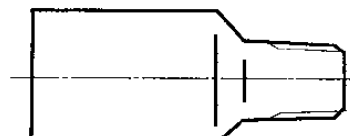
BLE/TSE



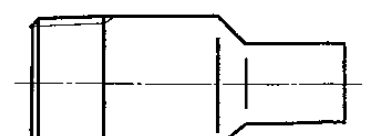
PBE



BLE/PSE



PLE/TSE



TLE/PSE

TBE Threaded Both End

PBE Plain Both End

PLE/TSE Plain Large End/Threaded Small End

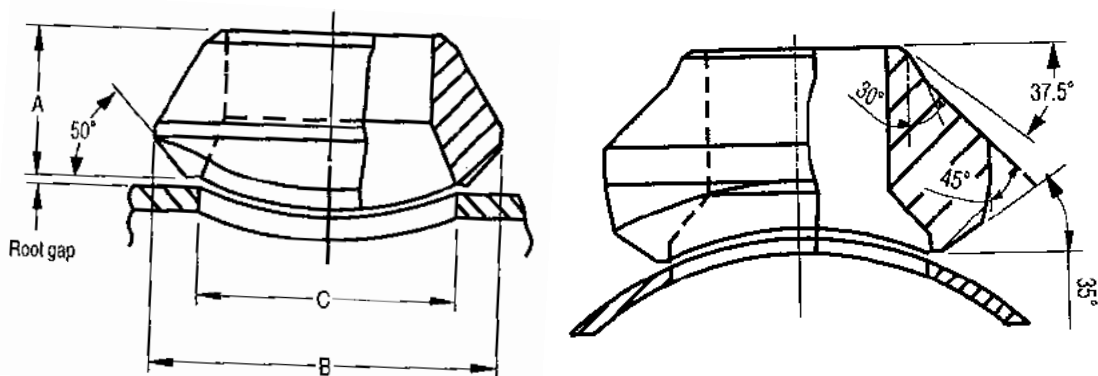
BLE/TSE Beveled Large End/Threaded Small End

BLE/PSE Beveled Large End/Plain Small End

TLE/PSE Threaded Large End/Plain Small End

Forged Steel Outlet Fitting

Weld-Outlets
STD(Sch 40), XS(Sch 80)



MSS SP-97 & Maker Standard

Unit : mm

Outlet Size(in)	A		B		C		APP' Weight (KG)	
	STD	XS	STD	XS	STD	XS	STD	XS
1/2	19.1	19.1	34.9	34.9	23.6	23.6	0.08	0.09
3/4	22.2	22.2	44.5	44.5	30.2	30.2	0.11	0.14
1	27	27	54	54	36.5	36.5	0.23	0.21
1.1/4	31.8	31.8	65.1	65.1	44.5	44.5	0.36	0.41
1.1/2	33.3	33.3	73	73	50.8	50.8	0.45	0.5
2	38.1	38.1	88.9	88.9	65.1	65.1	0.8	0.8
2.1/2	41.3	41.3	103.2	103.2	76.2	76.2	1.14	1.2
3	44.5	44.5	122.2	122.2	93.7	93.7	1.82	1.9
4	50.8	50.8	152.4	152.4	120.7	120.7	2.86	2.9
5	57.2	57.2	179.4	179.4	141.3	141.3	4.66	4.7
6	60.3	77.8	215.9	225.4	169.9	169.9	6.45	10.5
8	69.9	98.5	263.5	292.1	220.7	220.7	10.68	16.8
10	77.8	93.7	322.3	323.9	274.7	265.1	17.73	20.9
12	85.7	103.2	377.8	379.4	325.4	317.5	26.82	27.7
14	88.9	100	409.6	431.8	357.2	350.8	30	31.8
16	93.7	106.4	463.6	466.7	408	403.2	34.1	46.4
18	96.8	111.1	520.7	523.9	458.8	455.6	44.1	59.1
20	101.6	119.1	571.5	582.6	508	509.6	53.6	71.8
24	115.6	139.7	689	708	614.4	638.2	100	131.8
26	119.1	146.1	738.2	765.2	666.8	692.2	120.5	159.1

- Applicable Run Pipe sizes are From Out-Let size to 36".

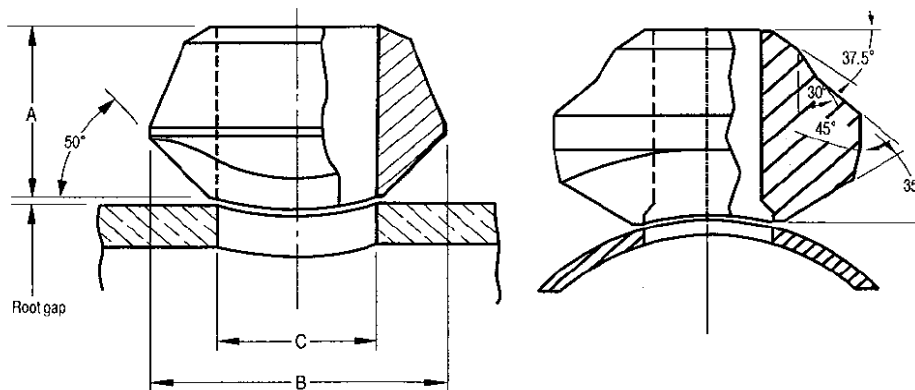
- For the 3000# and 6000# Socket-outlets, Thredolets, Inside Bore, Thread, Socket Vore and Socket Depth Dimensions are in accordance with ASME B16.11.

- Pipe schedule numbers and weight designations are in accordance with ASME B36.10M.

- When ordering Socket-outlets and Thredolets, Include the Quantity, Run and Outlet size, Item and Rating (or Schedule number) and Material.

Forged Steel Outlet Fitting

Weld-Outlets Sch 160, XXS



MSS SP-97 & Maker Standard

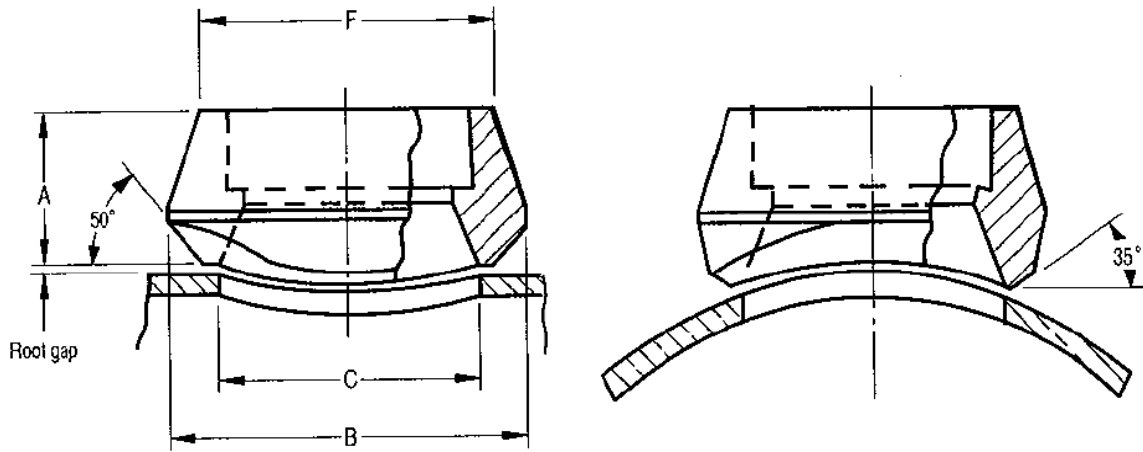
Unit : mm

Outlet Size(in)	A		B		C		APP' Weight (KG)	
	Sch 160	XXS	Sch 160	XXS	Sch 160	XXS	Sch 160	XXS
1/2	28.6	28.6	34.9	34.9	14.3	14.3	0.11	0.11
3/4	31.8	31.8	44.5	44.5	19.1	19.1	0.32	0.32
1	38.1	38.1	50.8	50.8	25.4	25.4	0.38	0.38
1.1/4	44.5	44.5	61.9	61.9	33.3	33.3	0.57	0.57
1.1/2	50.8	50.8	69.9	69.9	38.1	38.1	0.8	0.8
2	55.6	55.6	81	81	42.9	42.9	1	1
2.1/2	61.9	61.9	96.8	96.8	54	54	1.54	1.54
3	73	73	120.7	120.7	73	73	2.9	2.9
4	84.1	84.1	152.4	152.4	98.4	98.4	4.8	4.8
5	93.7	93.7	187.3	187.3	122.2	122.2	6.5	6.5
6	104.8	104.8	220.7	220.7	146.1	146.1	12.7	12.7
8	111.1	111.1	284.2	284.2	173.1	173.1	50.5	50.5
10	125.4	125.4	312.7	312.7	215.9	215.9	38.6	38.6

- Applicable Run Pipe sizes are From Out-Let size to 36".
- For the 3000# and 6000# Socket-outlets, Thredolets, Inside Bore, Thread, Socket Vore and Socket Depth Dimensions are in accordance with ASME B16.11.
- Pipe schedule numbers and weight designations are in accordance with ASME B36.10M.
- When ordering Socket-outlets and Thredolets, Include the Quantity, Run and Outlet size, Item and Rating (or Schedule number) and Material.

Forged Steel Outlet Fitting

**Socket-Outlets
3000# 6000#**



MSS SP-97 & Maker Standard

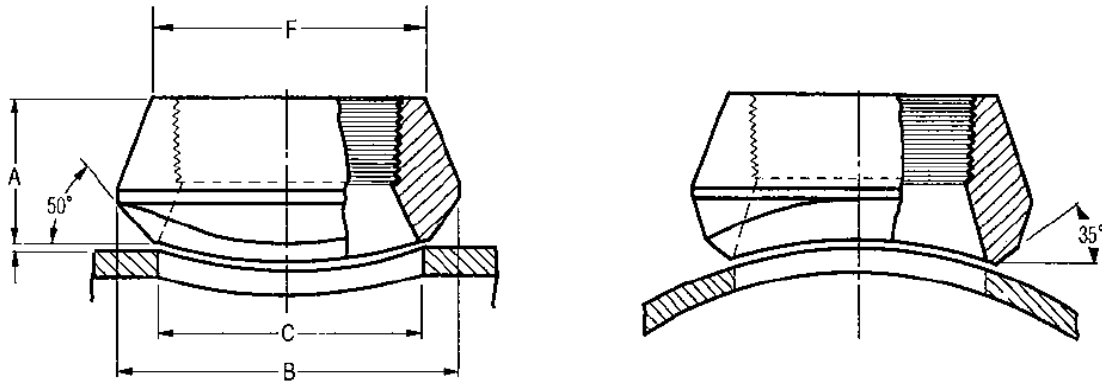
Unit : mm

Outlet Size(in)	A		B		C		F		APP' Weight (KG)	
	3000	6000	3000	6000	3000	6000	3000	6000	3000	6000
1/2	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	0.14	0.23
3/4	27	36.5	44.5	50.8	30.2	25.4	36.5	45.2	0.15	0.36
1	33.3	39.7	54	61.9	36.5	33.3	46	57.2	0.27	0.59
1.1/4	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.39	0.73
1.1/2	34.9	42.9	73	82.6	50.8	49.2	61.9	76.2	0.47	0.91
2	38.1	58.7	88.9	103.2	65.1	58.7	74.6	92.1	0.73	2.33
2.1/2	46	-	103.2	-	76.2	-	87.3	-	1.25	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.73	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.3	-

- Applicable Run Pipe sizes are From Out-Let size to 36".
- For the 3000# and 6000# Socket-outlets, Thredolets, Inside Bore, Thread, Socket Vore and Socket Depth Dimensions are in accordance with ASME B16.11.
- Pipe schedule numbers and weight designations are in accordance with ASME B36.10M.
- When ordering Socket-outlets and Thredolets, Include the Quantity, Run and Outlet size, Item and Rating (or Schedule number) and Material.

Forged Steel Outlet Fitting

**Thread-Outlets
3000# 6000#**



MSS SP-97 & Maker Standard

Unit : mm

Outlet Size(in)	A		B		C		F		APP' Weight (KG)	
	3000	6000	3000	6000	3000	6000	3000	6000	3000	6000
1/2	25.4	31.8	34.9	44.5	23.8	19.1	31.8	39.7	1.11	0.2
3/4	27	36.5	44.5	50.8	30.2	25.4	36.5	45.2	0.16	0.34
1	33.3	39.7	54	61.9	36.5	33.3	46	57.2	0.28	0.56
1.1/4	33.3	41.3	65.1	69.9	44.5	38.1	55.6	65.1	0.41	0.71
1.1/2	34.9	42.9	73	82.6	50.8	49.2	61.9	76.2	0.45	0.89
2	38.1	52.4	88.9	103.2	65.1	69.9	74.6	92.1	0.8	2.3
2.1/2	46	-	103.2	-	76.2	-	87.3	-	1.36	-
3	50.8	-	122.2	-	93.7	-	104.8	-	1.98	-
4	57.2	-	152.4	-	120.7	-	130.2	-	3.22	-

- Applicable Run Pipe sizes are From Out-Let size to 36".
- For the 3000# and 6000# Socket-outlets, Thredolets, Inside Bore, Thread, Socket Vore and Socket Depth Dimensions are in accordance with ASME B16.11.
- Pipe schedule numbers and weight designations are in accordance with ASME B36.10M.
- When ordering Socket-outlets and Thredolets, Include the Quantity, Run and Outlet size, Item and Rating (or Schedule number) and Material.