

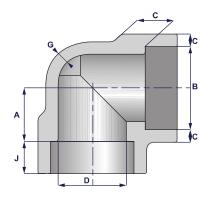
Forged Fittings

BS3799, ASME B16.11, MSS SP-97 & MSS SP-833



Carbon and Alloy Steel Pipe, Fittings & Flanges

Socket Weld Elbows - 90 Degree



3000 lbs

SIZE	B Min. Max.		Min.) Max.	Min.	C Avg.	G Min.	J Min.	Α	A Tolerances, t	Weight Kilos/Each
1/8 "	10.8	11.2	6.1	7.6	3.18	3.18	2.41	9.5	11.0	1.0	0.125
1/4 "	14.2	14.6	8.5	10.0	3.30	3.78	3.02	9.5	11.0	1.0	0.125
3/8 "	17.6	18.0	11.8	13.3	3.50	4.01	3.20	9.5	13.5	1.5	0.145
1/2 "	21.8	22.2	15.0	16.6	4.09	4.67	3.73	9.5	15.5	1.5	0.275
3/4 "	27.2	27.6	20.2	21.7	4.27	4.90	3.91	12.5	19.0	1.5	0.375
1 "	33.9	34.3	25.9	27.4	4.98	5.69	4.55	12.5	22.5	2.0	0.550
1 ½ "	42.7	43.1	34.3	35.8	5.28	6.07	4.85	12.5	27.0	2.0	0.780
1 ½ "	48.8	49.2	40.1	41.6	5.54	6.35	5.08	12.5	32.0	2.0	1.050
2 "	61.2	61.7	51.7	53.3	6.04	6.93	5.54	16.0	38.0	2.0	1.500
2 ½ "	73.9	74.4	61.2	64.2	7.67	8.76	7.01	16.0	41.0	2.5	3.000
3 "	89.8	90.3	76.4	79.4	8.30	9.52	7.62	16.0	57.0	2.5	5.000
4 "	115.2	115.7	100.7	103.8	9.35	10.69	8.56	19.0	66.5	2.5	9.000

6000 lbs

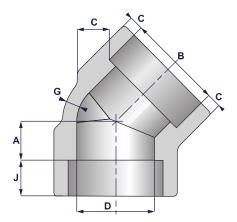
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SIZE	E	3	[)	(G	J	Α	Α	
	Min.	Max.	Min.	Max.	Min.	Avg.	Min.	Min.		Tolerances , ±	Weight Kilos/Each
1/8 "	10.8	11.2	3.2	4.8	3.43	3.96	3.15	9.5	11.0	1.0	0.140
1/4 "	14.2	14.6	5.6	7.1	4.01	4.60	3.68	9.5	13.5	1.0	0.175
3/8 "	17.6	18.0	8.4	9.9	4.37	5.03	4.01	9.5	15.5	1.5	0.350
1/2 "	21.8	22.2	11.0	12.5	5.18	5.97	4.78	9.5	19.0	1.5	0.400
3/4 "	27.2	27.6	14.8	16.3	6.04	6.96	5.56	12.5	22.5	1.5	0.650
1 "	33.9	34.3	19.9	21.5	6.93	7.92	6.35	12.5	27.0	2.0	0.950
1 1/4 "	42.7	43.1	28.7	30.2	6.93	7.92	6.35	12.5	32.0	2.0	1.350
1 ½ "	48.8	49.2	33.2	34.7	7.80	8.92	7.14	12.5	38.0	2.0	2.100
2 "	61.2	61.7	42.1	43.6	9.50	10.92	8.74	16.0	41.0	2.0	3.100

9000 lbs

SIZE	В		D		(G	J	Α	Α	
	Min.	Max.	Min.	Max.	Min.	Avg.	Min.	Min.		Tolerances, ±	Weight Kilos/Each
1/2 "	21.8	22.2	5.6	7.2	8.18	9.35	7.47	9.5	25.5	1.5	0.780
3/4 "	27.2	27.6	10.3	11.8	8.56	9.78	7.82	12.5	28.5	1.5	1.150
1 "	33.9	34.3	14.4	16.0	9.96	11.38	9.09	12.5	32.0	2.0	1.700
1 ½ "	42.7	43.1	22.0	23.5	10.62	12.14	9.70	12.5	35.0	2.0	2.400
1 ½ "	48.8	49.2	27.2	28.7	11.12	12.70	10.15	12.5	38.0	2.0	2.800
2 "	61.2	61.7	37.4	38.9	12.12	13.84	11.07	16.0	54.0	2.0	6.250

- Dimensions are in MM
- Weights are approximate

Socket Weld Elbows - 45 Degree



3000 lbs

SIZE	Min.	Max.	Min.	Max.	Min.	C Avg.	G Min.	J Min.	A	A Tolerances±	Weight Kilos/Each
1/8 "	10.8	11.2	6.1	7.6	3.18	3.18	2.41	9.5	8.0	1.0	0.100
1/4 "	14.2	14.6	8.5	10.0	3.30	3.78	3.02	9.5	8.0	1.0	0.100
3/8 "	17.6	18.0	11.8	13.3	3.50	4.01	3.20	9.5	8.0	1.5	0.120
1/2 "	21.8	22.2	15.0	16.6	4.09	4.67	3.73	9.5	11.0	1.5	0.240
3/4 "	27.2	27.6	20.2	21.7	4.27	4.90	3.91	12.5	13.0	1.5	0.330
1 "	33.9	34.3	25.9	27.4	4.98	5.69	4.55	12.5	14.0	2.0	0.460
1 ½ °	42.7	43.1	34.3	35.8	5.28	6.07	4.85	12.5	17.5	2.0	0.660
1 ½ °	48.8	49.2	40.1	41.6	5.54	6.35	5.08	12.5	20.5	2.0	1.890
2 °	61.2	61.7	51.7	53.3	6.04	6.93	5.54	16.0	25.5	2.0	1.250
2 ½ "	73.9	74.4	61.2	64.2	7.67	8.76	7.01	16.0	28.5	2.5	2.650
3 "	89.8	90.3	76.4	79.4	8.30	9.52	7.62	16.0	32.0	2.5	4.000
4 "	115.2	115.7	100.7	103.8	9.35	10.69	8.56	19.0	41.0	2.5	8.000

6000 lbs

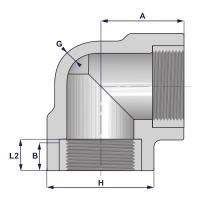
SIZE	В	3	D)			G	J	Α	Α	
	Min.	Max.	Min.	Max.	Min.	Avg.	Min.	Min.		Tolerances *	Weight Kilos/Each
1/8 "	10.8	11.2	3.2	4.8	3.43	3.96	3.15	9.5	8.0	1.0	0.120
1/4 "	14.2	14.6	5.6	7.1	4.01	4.60	3.68	9.5	8.0	1.0	0.150
3/8 "	17.6	18.0	8.4	9.9	4.37	5.03	4.01	9.5	11.0	1.5	0.290
1½ "	21.8	22.2	11.0	12.5	5.18	5.97	4.78	9.5	12.5	1.5	0.320
3¼ "	27.2	27.6	14.8	16.3	6.04	6.96	5.56	12.5	14.0	1.5	0.540
1 "	33.9	34.3	19.9	21.5	6.93	7.92	6.35	12.5	17.5	2.0	0.770
1 ¼ °	42.7	43.1	28.7	30.2	6.93	7.92	6.35	12.5	20.5	2.0	1.100
1 ½ °	48.8	49.2	33.2	34.7	7.80	7.80	8.92	12.5	25.5	2.0	1.700
2 °	61.2	61.7	42.1	43.6	9.50	9.50	10.92	16.0	28.5	2.0	2.700

9000 lbs

SIZE		В)	(C	G	J	Α	Α	
		Min.	Max.	Min,	Max.	Min.	Avg.	Min,	Min,		Tolerances:	Weight Kilos/Each
1/2 "		21.8	22.2	5.6	7.2	8.18	9.35	7.47	9.5	15.5	1.5	0.640
3/4 "		27.2	27.6	10.3	11.8	8.56	9.78	7.82	12.5	19.0	1.5	0.930
1 "		33.9	34.3	14.4	16.0	9.96	11.38	9.09	12.5	20.5	2.0	1.400
1 ½ °	4	42.7	43.1	22.0	23.5	10.62	12.14	9.70	12.5	22.5	2.0	1.800
1 ½ °		48.8	49.2	27.2	28.7	11.12	12.70	10.15	12.5	25.5	2.0	2.350
2 °		61.2	61.7	37.4	38.9	12.12	13.84	11.07	16.0	28.5	2.0	4.400

- Dimensions are in MM
- Weights are approximate

Threaded Elbows - 90 Degree



2000 lbs

SIZE	Α	Н	G	
			min. Wall Thickness	Weight Kilos/Each
1½ "	21	22	3.18	0.125
1¼ "	21	22	3.18	0.125
3½ "	25	25	3.18	0.145
½ "	28	33	3.18	0.285
¾ "	33	38	3.18	0.375
1 "	38	46	3.68	0.550
1 ¼ "	44	56	3.89	0.760
1 ½ "	51	62	4.01	1.000
2 "	60	75	4.27	1.500
2 ½ "	76	92	5.61	3.650
3 "	86	109	5.99	5.700
4 "	106	146	6.55	11.500

3000 lbs

SIZE	Α	Н	G	
			min. Wall Thickness	Weight Kilos/Each
1½ "	21	22	3.18	0.140
1¼ "	25	25	3.30	0.175
3½ "	28	33	3.51	0.325
½ "	33	38	4.09	0.465
3¼ "	38	46	4.32	0.700
1 "	44	56	4.98	1.080
1 1/4 "	51	62	5.28	1.300
1 1/2 "	60	75	5.56	2.360
2 "	64	84	7.14	2.600
2 ½ ⁴ 3 ⁴	83 95 114	102 121 152	7.65 8.84 11.18	5.700 8.000 15.500

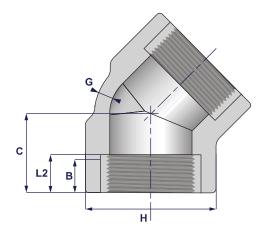
6000 lbs

DIMENSIONS COMMON TO ALL CLASSES	TOLERANCES COMMON TO ALL CLASSES
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SIZE	Α	Н	G		SIZE	В	L2	SIZE	Н	Α
			min. Wall Thickness	Weight Kilos/Each		min.	min.			
1/8 "	25	25	6.35	0.195	1/8 "	6.4	6.7	1/8 "	-0 +4	-0 +3
1/4 "	28	33	6.60	0.360	1/4 "	8.1	10.2	1/4 "	-0 +4	-0 +3
3/8 "	33	38	6.98	0.510	3/8 "	9.1	10.4	3/8 "	-0 +4	-0 +3
½ "	38	46	8.15	0.820	1½ ° 3¼ ° 1 °	10.9	13.6	½ "	-0 +4	-0 +3
¾ "	44	56	8.53	1.250		12.7	13.9	3¼ "	-0 +4	-0 +3
1 "	51	62	9.93	1.650		14.7	17.3	1 "	-0 +4	-0 +3
1 1/4 "	60	75	10.59	2.750	1 ¼ *	17.0	18.0	1 ¼ "	-0 +4	-0 +3
1 1/2 "	64	84	11.07	3.550	1 ½ *	17.8	18.4	1 ½ "	-0 +4	-0 +3
2 "	83	102	12.09	7.100	2 *	19.0	19.2	2 "	-0 +4	-0 +3
2 ½ "	95	121	15.29	11.000	2 ½ °	23.6	28.9	2 ½ "	-0 +4	-0 +3
3 "	106	146	16.64	17.500	3 °	25.9	30.5	3 "	-0 +4	-0 +3
4 "	114	152	18.67	16.500	4 °	27.7	33.0	4 "	-0 +4	-0 +3

- Dimensions are in MM
- Weights are approximate

Threaded Elbows - 45 Degree



20	00	lbs
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SIZE	C	Н	G min. Wall Thickness	Weight Kilos/Each
1/8 "	17	22	3.18	0.105
1/4 "	17	22	3.18	0.105
3/8 "	19	25	3.18	0.130
½ "	22	33	3.18	0.250
¾ "	25	38	3.18	0.310
1 "	28	46	3.68	0.440
1 ¼ "	33	56	3.89	0.670
1 ½ "	35	62	4.01	0.930
2 "	43	75	4.27	1.210
2 ½ "	52	92	5.61	3.100
3 "	64	109	5.99	5.200
4 "	79	146	6.55	10.500

3000 lbs

SIZE	С	H	G nin. Wall Thickness	Weight Kilos/Each
1/8 "	17	22	3.18	0.120
1/4 "	19	25	3.30	0.150
3/8 "	22	33	3.51	0.280
1/2 "	25	38	4.09	0.380
3/4 "	28	46	4.32	0.560
1 "	33	56	4.98	0.910
1 ¼ "	35	62	5.28	1.150
1 ½"	43	75	5.56	1.850
2 "	44	84	7.14	2.100
2 ½ °	52	102	7.65	4.850
3 °	64	121	8.84	6.650
4 °	79	152	11.18	12.500

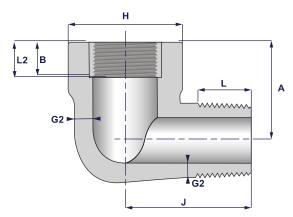
6000 lbs

SIZE	С	Н	G min. Wall Thickness	Weight Kilos/Each
1/8 "	19	25	6.35	0.165
1/4 "	22	33	6.60	0.310
3/8 "	25	38	6.98	0.420
½ "	28	46	8.15	0.650
¾ "	33	56	8.53	1.050
1 "	35	62	9.93	1.410
1 ¼ "	43	75	10.59	2.150
1 ½ "	44	84	11.07	2.750
2 "	52	102	12.09	6.150
2 ½ "	64	121	15.29	8.600
3 "	79	146	16.64	15.000
4 "	79	152	18.67	13.000

DIMENSIONS COMMON TO ALL CLASSES TOLERANCES COMMON TO ALL CLASSES								
SIZE	B min.	L2	SIZE	Н	С			
1/8 "	6.4	6.7	1/8 "	-0 +4	-0 +3			
1/4 "	8.1	10.2	1/4 "	-0 +4	-0 +3			
3/8 "	9.1	10.4	3/8 "	-0 +4	-0 +3			
½ °	10.9	13.6	½ "	-0 +4	-0 +3			
¾ °	12.7	13.9	¾ "	-0 +4	-0 +3			
1 °	14.7	17.3	1 "	-0 +4	-0 +3			
1 ½ "	17.0	18.0	1 1/4 "	-0 +4	-0 +3			
1 ½ "	17.8	18.4	1 1/2 "	-0 +4	-0 +3			
2 "	19.0	19.2	2 "	-0 +4	-0 +3			
2 ½ "	23.6	28.9	2 ½ "	-0 +4	-0 +3			
3 "	25.9	30.5	3 "	-0 +4	-0 +3			
4 "	27.7	33.0	4 "	-0 +4	-0 +3			

- Dimensions are in MM
- Weights are approximate

M/F Elbows



3000lbs

SIZE	Α	J	Н	G ₁ Min.	G ₂	B Min.	L2	L Min.	Weight Kilos/Each
1/8 "	19	25	19	3.18	2.74	6.4	6.7	10	0.100
1/4 "	22	32	25	3.30	3.22	8.1	10.2	11	0.130
3/8 "	25	38	32	3.51	3.50	9.1	10.4	13	0.215
½ "	28	41	38	4.09	4.16	10.9	13.6	14	0.330
¾ "	35	48	44	4.32	4.88	12.7	13.9	16	0.540
1 "	44	57	51	4.98	5.56	14.7	17.3	19	0.970
1 ¼ "	51	66	62	5.28	5.56	17.0	18.0	21	1.100
1 ½ "	54	71	70	5.56	6.25	17.8	18.4	21	1.940
2 "	64	84	84	7.14	7.64	19.0	19.2	22	2.340

6000 lbs

SIZE	Α	J	Н	G ₁ Min.	G ₂	B Min.	L2 Min.	L Min.	Weight Kilos/Each
1/8 "	22	32	25	5.08	4.22	6.4	6.7	10	0.130
1/4 "	25	38	32	5.66	5.28	8.1	10.2	11	0.210
3∕8 "	28	41	38	6.98	5.59	9.1	10.4	13	0.330
1/2 "	35	48	44	8.15	6.53	10.9	13.6	14	0.540
3/4 "	44	57	51	8.53	6.86	12.7	13.9	16	0.970
1 "	51	66	62	9.93	7.95	14.7	17.3	19	1.100
1 1/4 "	54	71	70	10.59	8.48	17.0	18.0	21	1.940
1 ½ "	64	84	84	11.07	8.89	17.8	18.4	21	2.340
2 "	83	105	102	12.09	9.70	19.0	19.2	22	5.000

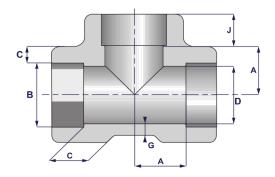
Notes:

- Dimensions are in MM
- Weights are approximate

TOLERANCES COMMON TO ALL CLASSES

DN SIZE	Η	С
1/8 "	-0 +4	-0 +3
1/4 "	-0 +4	-0 +3
3/8 "	-0 +4	-0 +3
½ "	-0 +4	-0 +3
¾ "	-0 +4	-0 +3
1 "	-0 +4	-0 +3
1 ¼ "	-0 +4	-0 +3
1 ½ "	-0 +4	-0 +3
2 "	-0 +4	-0 +3
2 ½*	-0 +4	-0 +3
3 *	-0 +4	-0 +3
4 *	-0 +4	-0 +3

Socket Weld Tees



3000 lbs

SIZE	Min.	B Max.	Min.	Max.	G Min.	J Min.	Α	A Tolerances, <u>+</u>	Weight Kilos/Each
1/8 "	10.8	11.2	6.1	7.6	2.41	9.5	11.0	1.0	0.165
1/4 "	14.2	14.6	8.5	10.0	3.02	9.5	11.0	1.0	0.165
3/8 "	17.6	18.0	11.8	13.3	3.20	9.5	13.5	1.5	0.190
1/2 "	21.8	22.2	15.0	16.6	3.73	9.5	15.5	1.5	0.360
3/4 "	27.2	27.6	20.2	21.7	3.91	12.5	19.0	1.5	0.490
1 "	33.9	34.3	25.9	27.4	4.55	12.5	22.5	2.0	0.715
1 ¼ "	42.7	43.1	34.3	35.8	4.85	12.5	27.0	2.0	1.010
1 ½ "	48.8	49.2	40.1	41.6	5.08	12.5	32.0	2.0	1.365
2 "	61.2	61.7	51.7	53.3	5.54	16.0	38.0	2.0	1.950
2 ½ "	73.9	74.4	61.2	64.2	7.01	16.0	41.0	2.5	3.900
3 "	89.8	90.3	76.4	79.4	7.62	16.0	57.0	2.5	6.300
4 "	115.2	115.7	100.7	103.8	8.56	19.0	66.5	2.5	10.400

6000 lbs

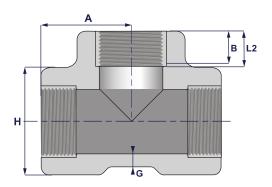
SIZE	Min.	Max.	Min.) Max.	G Min.	J Min.	A	A Tolerances,	Weight Kilos/Each
1/8 "	10.8	11.2	3.2	4.8	3.15	9.5	11.0	1.0	0.180
1/4 "	14.2	14.6	5.6	7.1	3.68	9.5	13.5	1.0	0.230
3/8 "	17.6	18.0	8.4	9.9	4.01	9.5	15.5	1.5	0.450
1/2 "	21.8	22.2	11.0	12.5	4.78	9.5	19.0	1.5	0.520
3/4 "	27.2	27.6	14.8	16.3	5.56	12.5	22.5	1.5	0.850
1 "	33.9	34.3	19.9	21.5	6.35	12.5	27.0	2.0	1.250
1 ¼ "	42.7	43.1	28.7	30.2	6.35	12.5	32.0	2.0	1.750
1 ½ "	48.8	49.2	33.2	34.7	7.14	12.5	38.0	2.0	2.750
2 "	61.2	61.7	42.1	43.6	8.74	16.0	41.0	2.0	4.000

9000 lbs

	SIZE	E	3)	G	J	Α	Α	
1		Min.	Max.	Min,	Max.	Min.	Min.		Tolerances, +	Weight Kilos/Each
	1/2 "	21.8	22.2	5.6	7.2	7.47	9.5	25.5	1.5	1.010
	3/4 "	27.2	27.6	10.3	11.8	7.82	12.5	28.5	1.5	1.500
	1 "	33.9	34.3	14.4	16.0	9.09	12.5	32.0	2.0	2.250
	1 ½ "	42.7	43.1	22.0	23.5	9.70	12.5	35.0	2.0	3.150
	1 ½ "	48.8	49.2	27.2	28.7	10.15	12.5	38.0	2.0	3.650
	2 "	61.2	61.7	37.4	38.9	11.07	16.0	54.0	2.0	8.200

- Dimensions are in MM
- Weights are approximate

Threaded Tees



2000 lbs

2000 183									
SIZE	Α	Н	G min. Wall Thickness	Weight Kilos/Each					
1/8 "	21	22	3.18	0.165					
1/4 "	21	22	3.18	0.165					
3/8 "	25	25	3.18	0.190					
1/2 *	28	33	3.18	0.370					
3/4 *	33	38	3.18	0.490					
1 *	38	46	3.68	0.715					
1 ¼ "	44	56	3.89	0.990					
1 ½ "	51	62	4.01	1.300					
2 "	60	75	4.27	1.950					
2 ½ "	76	92	5.61	4.750					
3 "	86	109	5.99	7.400					
4 -	106	146	6.55	15.000					

3000 lbs

SIZE	A	Н	G	Weight Kilos/Each
1/8 "	21	22	3.18	0.180
1/4 "	25	25	3.30	0.230
3/8 "	28	33	3.51	0.420
½ "	33	38	4.09	0.600
¾ "	38	46	4.32	0.910
1 "	44	56	4.98	1.400
1 ½ "	51	62	5.28	1.690
1 ½ "	60	75	5.56	3.050
2 "	64	84	7.14	3.400
2 ½ ° 3 ° 4 "	83	102	7.65	7.400
	95	121	8.84	10.400
	114	152	11.18	20.000

6000 lbs

SIZE	A	Н	G min. Wall Thickness	Weight Kilos/Each
1/8 "	25	25	6.35	0.255
1/4 "	28	33	6.60	0.470
3/8 "	33	38	6.98	0.665
½°	38	46	8.15	1.070
¾4°	44	56	8.53	1.625
1°	51	62	9.93	2.150
1 ¼ "	60	75	10.59	3.600
1 ½ "	64	84	11.07	4.600
2 "	83	102	12.09	9.250
2 ½"	95	121	15.29	14.500
3 "	106	146	16.64	23.000
4	114	152	18.67	21.500

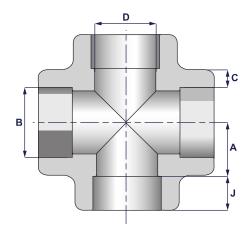
SIZE	B min.	L2
1/8 "	6.4	6.7
1/4 "	8.1	10.2
3/8 "	9.1	10.4
½ "	10.9	13.6
¾ "	12.7	13.9
1 "	14.7	17.3
1 ¼ °	17.0	18.0
1 ½ °	17.8	18.4
2 °	19.0	19.2
2 ½ "	23.6	28.9
3 "	25.9	30.5
4 "	27.7	33.0

ES TOLERANCES COMMON TO ALL CLASSES

SIZE	Н	С
1/8 "	-0 +4	-0 +3
1/4 "	-0 +4	-0 +3
3/8 "	-0 +4	-0 +3
1/2 "	-0 +4	-0 +3
3/4 "	-0 +4	-0 +3
1 "	-0 +4	-0 +3
1 ¼ "	-0 +4	-0 +3
1 ½ "	-0 +4	-0 +3
2 "	-0 +4	-0 +3
2 ½ "	-0 +4	-0 +3
3 "	-0 +4	-0 +3
4 "	-0 +4	-0 +3

- Dimensions are in MM
- Weights are approximate

Socket Weld Crosses



3000 lbs

		100									
SIZE	B Min. Max.		D Min. Max.		Min.	C Min. Avg.		G J Min. Min.		A Tolerances, ±	Weight Kilos/Each
1/8 *	10.8	11.2	6.1	7.6	3.18	3.18	2.41	9.5	11.0	1.0	0.205
1/4 *	14.2	14.6	8.5	10.0	3.30	3.78	3.02	9.5	11.0	1.0	0.205
3/8 *	17.6	18.0	11.8	13.3	3.50	4.01	3.20	9.5	13.5	1.5	0.235
½ *	21.8	22.2	15.0	16.6	4.09	4.67	3.73	9.5	15.5	1.5	0.450
¾ *	27.2	27.6	20.2	21.7	4.27	4.90	3.91	12.5	19.0	1.5	0.610
1 *	33.9	34.3	25.9	27.4	4.98	5.69	4.55	12.5	22.5	2.0	0.900
1 ¼ "	42.7	43.1	34.3	35.8	5.28	6.07	4.85	12.5	27.0	2.0	1.270
1 ½ "	48.8	49.2	40.1	41.6	5.54	6.35	5.08	12.5	32.0	2.0	1.700
2 "	61.2	61.7	51.7	53.3	6.04	6.93	5.54	16.0	38.0	2.0	2.450
2 ½ "	73.9	74.4	61.2	64.2	7.67	8.76	7.01	16.0	41.0	2.5	4.900
3 "	89.8	90.3	76.4	79.4	8.30	9.52	7.62	16.0	57.0	2.5	8.150
4 *	115.2	115.7	100.7	103.8	9.35	10.69	8.56	19.0	66.5	2.5	13.000

6000 lbs

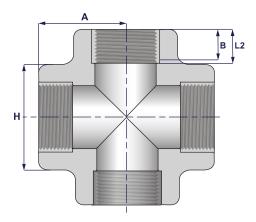
SIZE	В		D		C		G	G J		Α	
	Min.	Max.	Min.	Max.	Min.	Avg.	Min.	Min.		Tolerances, <u>+</u>	Weight Kilos/Each
1/8 *	10.8	11.2	3.2	4.8	3.43	3.96	3.15	9.5	11.0	1.0	0.230
1/4 *	14.2	14.6	5.6	7.1	4.01	4.60	3.68	9.5	13.5	1.0	0.285
3/8 *	17.6	18.0	8.4	9.9	4.37	5.03	4.01	9.5	15.5	1.5	0.570
1/2 *	21.8	22.2	11.0	12.5	5.18	5.97	4.78	9.5	19.0	1.5	0.650
3/4 ~	27.2	27.6	14.8	16.3	6.04	6.96	5.56	12.5	22.5	1.5	1.060
1 *	33.9	34.3	19.9	21.5	6.93	7.92	6.35	12.5	27.0	2.0	1.550
1 1/4 "	42.7	43.1	28.7	30.2	6.93	7.92	6.35	12.5	32.0	2.0	2.200
1 ½ "	48.8	49.2	33.2	34.7	7.80	7.80	7.14	12.5	38.0	2.0	2.420
2 *	61.2	61.7	42.1	43.6	9.50	9.50	8.74	16.0	41.0	2.0	5.050

9000 lbs

	SIZE	В				(С		G J		Α	
1		Min.	Max.	Min.	Max.	Min.	Avg.	Min.	Min.		Tolerances, ±	Weight Kilos/Each
	1/2 *	21.8	22.2	11.0	12.5	8.18	9.35	4.78	9.5	19.0	1.5	1.270
	3/4 *	27.2	27.6	14.8	16.3	8.56	9.78	5.56	12.5	22.5	1.5	1.875
	1 *	33.9	34.3	19.9	21.5	9.96	11.38	6.35	12.5	27.0	2.0	2.770
	1 1/4 "	42.7	43.1	28.7	30.2	10.62	12.14	6.35	12.5	32.0	2.0	3.950
	1 1/2 "	48.8	49.2	33.2	34.7	11.12	12.70	7.14	12.5	38.0	2.0	4.560
	2 "	61.2	61.7	42.1	43.6	12.12	13.84	8.74	16.0	41.0	2.0	10.000

- Dimensions are in MM
- Weights are approximate

Threaded Crosses



2000 lbs

SIZE	Α	Н	G min. Wall Thickness	Weight Kilos/Each
1/8 "	21	22	3.18	0.205
1/4 "	21	22	3.18	0.205
3/8 "	25	25	3.18	0.235
1½*	28	33	3.18	0.465
3¼*	33	38	3.18	0.610
1 *	38	46	3.68	0.900
1 1/4 "	44	56	3.89	1.240
1 1/2 "	51	62	4.01	1.630
2 "	60	75	4.27	2.450
2 ½ "	76	92	5.61	6.000
3 "	86	109	5.99	9.300
4 *	106	146	6.55	19.000

3000 lbs

SIZE	Α	Н	G	Weight Kilos/Each
			min. Wall Thickness	
1/8 "	21	22	3.18	0.230
1/4 "	25	25	3.30	0.285
3/8 "	28	33	3.51	0.530
1/2 "	33	38	4.09	0.760
3/4 "	38	46	4.32	1.140
1 "	44	56	4.98	1.760
1 1/4 "	51	62	5.28	2.100
1 1/2 "	60	75	5.56	3.850
2 "	64	84	7.14	4.240
2 1/2 "	83	102	7.65	9.300
3 .	95	121	8.84	13.000
4 "	114	152	11.18	25.000

6000 lbs

SIZE	Α	H	G nin. Wall Thickness	Weight Kilos/Each
1/8 "	25	25	6.35	0.320
1/4 "	28	33	6.60	0.590
3/8 "	33	38	6.98	0.830
1/2 *	38	46	8.15	1.350
3/4 *	44	56	8.53	2.040
1 *	51	62	9.93	2.700
1 1/4 "	60	75	10.59	4.500
1 1/2 "	64	84	11.07	5.800
2	83	102	12.09	11.600
2 ½ °	95	121	15.29	18.000
3 °	106	146	16.64	28.500
4 °	114	152	18.67	27.000

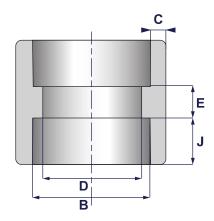
DIMENSIONS COMMON TO ALL CLASSES TOLERANCES COMMON TO ALL CLASSES

CIZE	ם	1.0		
SIZE	В	L2		
	min.	min.		
1/8 "	6.4	6.7		
1/4 "	8.1	10.2		
3/8 "	9.1	10.4		
1/2 "	10.9	13.6		
3/4 "	12.7	13.9		
1 "	14.7	17.3		
1 1/4 "	17.0	18.0		
1 1/2 "	17.8	18.4		
2 "	19.0	19.2		
2 1/2 "	23.6	28.9		
3 *	25.9	30.5		
4 "	27.7	33.0		

SIZE	Н	С		
1/8 "	-0 +4	-0 +3		
1/4 "	-0 +4	-0 +3		
3/8 "	-0 +4	-0 +3		
½ "	-0 +4	-0 +3		
¾ "	-0 +4	-0 +3		
1 "	-0 +4	-0 +3		
1 ¼ "	-0 +4	-0 +3		
1 ½ "	-0 +4	-0 +3		
2 "	-0 +4	-0 +3		
2 ½ °	-0 +4	-0 +3		
3 °	-0 +4	-0 +3		
4 °	-0 +4	-0 +3		

- Dimensions are in MM
- Weights are approximate

Socket Weld Full Couplings



3000 lbs

SIZ	Έ	Min.	3 Max.	[Min.) Max.	Min.	Avg.	J Min.	E	E Tolerances <u>†</u>	Weight Kilos/Each
1/8	í *	10.8	11.2	6.1	7.6	3.18	3.18	9.5	6.5	1.5	0.055
1/4		14.2	14.6	8.5	10.0	3.30	3.78	9.5	6.5	1.5	0.060
3/8		17.6	18.0	11.8	13.3	3.50	4.01	9.5	6.5	3.0	0.085
1/2		21.8	22.2	15.0	16.6	4.09	4.67	9.5	9.5	3.0	0.150
3/4		27.2	27.6	20.2	21.7	4.27	4.90	12.5	9.5	3.0	0.210
1		33.9	34.3	25.9	27.4	4.98	5.69	12.5	12.5	4.0	0.350
1 ½	2 "	42.7	43.1	34.3	35.8	5.28	6.07	12.5	12.5	4.0	0.475
1 ½		48.8	49.2	40.1	41.6	5.54	6.35	12.5	12.5	4.0	0.620
2		61.2	61.7	51.7	53.3	6.04	6.93	16.0	19.0	4.0	1.050
2 ½		73.9	74.4	61.2	64.2	7.67	8.76	16.0	19.0	5.0	1.650
3		89.8	90.3	76.4	79.4	8.30	9.52	16.0	19.0	5.0	2.200
4		115.2	115.7	100.7	103.8	9.35	10.69	19.0	19.0	5.0	3.400

6000 lbs

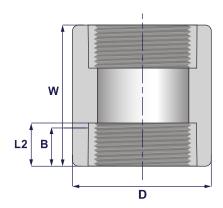
SIZE	Min.	Max.	Min.	Max.	Min.	Avg.	J Min.	E	E Tolerances†	Weight Kilos/Each
1/8 "	10.8	11.2	3.2	4.8	3.43	3.96	9.5	6.5	1.5	0.060
1/4 "	14.2	14.6	5.6	7.1	4.01	4.60	9.5	6.5	1.5	0.075
3/8 "	17.6	18.0	8.4	9.9	4.37	5.03	9.5	6.5	3.0	0.110
½ *	21.8	22.2	11.0	12.5	5.18	5.97	9.5	9.5	3.0	0.200
¾ *	27.2	27.6	14.8	16.3	6.04	6.96	12.5	9.5	3.0	0.310
1 *	33.9	34.3	19.9	21.5	6.93	7.92	12.5	12.5	4.0	0.500
1 ¼ "	42.7	43.1	28.7	30.2	6.93	7.92	12.5	12.5	4.0	0.660
1 ½ "	48.8	49.2	33.2	34.7	7.80	8.92	12.5	12.5	4.0	0.890
2 "	61.2	61.7	42.1	43.6	9.50	10.92	16.0	19.0	4.0	1.700

9000 lbs

SIZE	Min.	Max.	Min.	Max.	Min.	Avg.	J Min.	E	E Tolerances t	Weight Kilos/Each
1/2 "	21.8	22.2	5.6	7.2	8.18	9.35	9.5	9.5	3.0	0.335
3/4 "	27.2	27.6	10.3	11.8	8.56	9.78	12.5	9.5	3.0	0.440
1 "	33.9	34.3	14.4	16.0	9.96	11.38	12.5	12.5	4.0	0.750
1 ½ "	42.7	43.1	22.0	23.5	0.62	12.14	12.5	12.5	4.0	1.040
1 ½ "	48.8	49.2	27.2	28.7	1.12	12.70	12.5	12.5	4.0	1.300
2 "	61.2	61.7	37.4	38.9	2.12	13.84	16.00	19.0	4.0	2.200

- Dimensions are in MM
- Weights are approximate

Threaded Full Couplings



3000 lbs

SIZE	W	D	B min.	L2	Weight Kilos/Each
1/8 "	32	16	6.4	6.7	0.060
1/4 "	35	19	8.1	10.2	0.070
3/8 "	38	22	9.1	10.4	0.080
1/2 "	48	28	10.9	13.6	0.170
3/4 "	51	35	12.7	13.9	0.230
1 "	60	44	14.7	17.3	0.460
1 ¼ °	67	57	17.0	18.0	0.800
1 ½ °	79	64	17.8	18.4	1.110
2 °	86	76	19.0	19.2	1.500
2 ½ "	92	92	23.6	28.9	2.300
3 "	108	108	25.9	30.5	3.500
4 "	121	140	27.7	33.0	6.000

6000 lbs

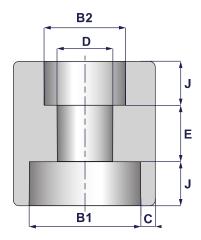
SIZE	W	D	B min.	L2	Weight Kilos/Each
½ "	32	22	6.4	6.7	0.100
½ "	35	25	8.1	10.2	0.120
3/8 "	38	32	9.1	10.4	0.210
½ "	48	38	10.9	13.6	0.350
¾ "	51	44	12.7	13.9	0.490
1 "	60	57	14.7	17.3	1.080
1 ¼ "	67	64	17.0	18.0	1.160
1 ½ "	79	76	17.8	18.4	1.960
2 "	86	92	19.0	19.2	2.940
2 ½ "	92	108	23.6	28.9	4.200
3 "	108	127	25.9	30.5	6.300
4 "	121	159	27.7	33.0	10.400

TOLERANCES COMMON TO ALL CLASSES

•								
SIZE	D	W						
1/8 "	-0 +4	-0 +3						
1/4 "	-0 +4	-0 +3						
3/8 "	-0 +4	-0 +3						
½ "	-0 +4	-0 +3						
¾ "	-0 +4	-0 +3						
1 "	-0 +4	-0 +3						
1 ¼ "	-0 +4	-0 +3						
1 ½ "	-0 +4	-0 +3						
2 "	-0 +4	-0 +3						
2 ½ "	-0 +4	-0 +3						
3 "	-0 +4	-0 +3						
4 "	-0 +4	-0 +3						

- Dimensions are in MM
- Weights are approximate

Reducing Full Coupling (Socket Weld)

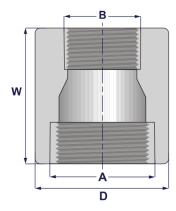


3000 lbs

						_				_		
SIZE		31		32		D	, , , , , , , , , , , , , , , , , , ,		J	Е	Tolerances t	Weight Kilos/Each
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Avg.	Min.			
1/4 " × 1/8 "	14.2	14.6	10.8	11.2	6.1	7.6	3.30	3.78	9.5	6.5	1.5	0.072
3/8 " × 1/8 "	17.6	18.0	10.8	11.2	6.1	7.6	3.50	4.01	9.5	6.5	1.5	0.102
1/4 "	17.6 21.8	18.0	14.2 14.2	14.6 14.6	8.5 8.5	10.0	3.50 4.09	4.01	9.5 9.5	6.5 9.5	3.0	0.102 0.180
1/2 " × 3/8 "	21.8	22.2	17.6	18.0	11.8	13.3	4.09	4.67	9.5	9.5	3.0	0.180
3/4 " x 3/8 "	27.2	27.6	17.6	18.0	11.8	13.3	4.27	4.90	12.5	9.5	3.0	0.252
1/2"	27.2	27.6	21.8	22.2	15.0	16.6	4.27	4.90	12.5	9.5	3.0	0.252
1 " × 1/2 "	33.9 33.9	34.3 34.3	21.8 27.2	22.2 27.6	15.0 20.2	16.6 21.7	4.98 4.98	5.69 5.69	12.5 12.5	12.5 12.5	4.0 4.0	0.420 0.420
1/2 "	42.7	43.1	21.8	22.2	15.0	16.6	5.28	6.07	12.5	12.5	4.0	0.570
1 1/4 " x 3/4 " 1	42.7 42.7	43.1 43.1	27.2 33.9	27.6 34.3	20.2 25.9	21.7 27.4	5.28 5.28	6.07 6.07	12.5 12.5	12.5 12.5	4.0 4.0	0.570 0.570
1/2 "	48.8	49.2	21.8	22.2	15.0	16.6	5.54	6.35	12.5	12.5	4.0	0.744
1 ½ " × 3/4 " 1 "	48.8 48.8	49.2 49.2	27.2 33.9	27.6 34.3	20.2 25.9	21.7 27.4	5.54 5.54	6.35 6.35	12.5 12.5	12.5 12.5	4.0 4.0	0.744 0.744
11/4 *	48.8	49.2	42.7	43.1	34.3	35.8	5.54	6.35	12.5	12.5	4.0	0.744
1/2 "	61.2	61.7	21.8	22.2	15.0	16.6	6.04	6.93	16.0	19.0	4.0	1.260
3/4 " 2 " × 1 "	61.2 61.2	61.7	27.2	27.6	20.2	21.7 27.4	6.04	6.93	16.0	19.0 19.0	4.0 4.0	1.260 1.260
11/4"	61.2	61.7 61.7	33.9 42.7	34.3 43.1	25.9 34.3	35.8	6.04 6.04	6.93 6.93	16.0 16.0	19.0	4.0	1.260
1 ½ '	61.2	61.7	48.8	49.2	40.1	41.6	6.04	6.93	16.0	19.0	4.0	1.260
1/2 "	73.9	74.4	21.8	22.2	15.0	16.6	7.67	8.76	16.0	19.0	5.0	1.980
3/4 "	73.9 73.9	74.4 74.4	27.2 33.9	27.6 34.3	20.2 25.9	21.7 27.4	7.67 7.67	8.76 8.76	16.0 16.0	19.0 19.0	5.0 5.0	1.980 1.980
2 ½ ° × 1 ¼ °	73.9	74.4	42.7	43.1	34.3	35.8	7.67	8.76	16.0	19.0	5.0	1.980
1 ½ *	73.9	74.4	48.8	49.2	40.1	41.6	7.67	8.76	16.0	19.0	5.0	1.980
2 "	73.9	74.4	61.2	61.7	51.7	53.3	7.67	8.76	16.0	19.0	5.0	1.980
1/2 "	89.8	90.3	21.8	22.2	15.0	16.6	8.30	9.52	16.0	19.0	5.0	2.640
3/4 " 1 "	89.8 89.8	90.3	27.2 33.9	27.6 34.3	20.2 25.9	21.7 27.4	8.30 8.30	9.52	16.0	19.0 19.0	5.0	2.640
3" x 11/4"	89.8	90.3	42.7	43.1	34.3	35.8	8.30	9.52 9.52	16.0 16.0	19.0	5.0 5.0	2.640 2.640
1 ½	89.8	90.3	48.8	49.2	40.1	41.6	8.30	9.52	16.0	19.0	5.0	2.640
2 "	89.8	90.3	61.2	61.7	51.7	53.3	8.30	9.52	16.0	19.0	5.0	2.640
2 ½	89.8	90.3	73.9	74.4	61.2	64.2	8.30	9.52	16.0	19.0	5.0	2.640
1/2 "		115.7	21.8	22.2	15.0	16.6	9.35	10.69	19.0	19.0	5.0	4.148
3/4 "	115.2 115.2		27.2	27.6	20.2	21.7	9.35	10.69	19.0	19.0	5.0	4.148
417.1	115.2		33.9 42.7	34.3 43.1	25.9 34.3	27.4 35.8	9.35 9.35	10.69 10.69	19.0 19.0	19.0 19.0	5.0 5.0	4.148 4.148
4 " × 1 1/4 .	115.2		48.8	49.2	40.1	41.6	9.35	10.69	19.0	19.0	5.0	4.148
2 "	115.2		61.2	61.7	51.7	53.3	9.35	10.69	19.0	19.0	5.0	4.148
2 1/2 "	115.2		73.9	74.4	61.2	64.2	9.35	10.69	19.0	19.0	5.0	4.148
3 "	115.2	115.7	89.8	90.3	76.4	79.4	9.35	10.69	19.0	19.0	5.0	4.148

- Dimensions are in MM
- Weights are approximate

Reducing Full Couplings (Threaded)



3000 lbs

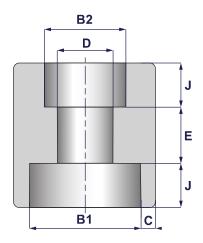
	000	מו טי	
SIZE	W	D	Weight Kilos/Each
А В			
1/4 " × 1/8 "	35	19	0.084
3/8 " × 1/8 "	38	22	0.096
78 ^ 1/4 "	38 48	22 28	0.096 0.204
1/2 " × 3/8 "	48	28	0.204
3/4 " × 3/8 " 1/2 "	51 51	35 35	0.276 0.276
1 " × 1/2 "	60 60	44 44	0.552 0,552
× ½" 1 ¼" ×× ¾" × 1	67 67 67	57 57 57	0.960 0.960 0.960
1½" 1½" × ¾" 1" 1¼"	79 79 79 79	64 64 64 64	1.332 1.332 1.332 1.332
1/2" 3/4" 2" × 1" 11/4" 11/2"	86 86 86 86	76 76 76 76 76	1.800 1.800 1.800 1.800 1.800
1½" 3¼" 2½" × 1" 1¼" 1½" 2"	92 92 92 92 92 92	92 92 92 92 92 92 92	2.760 2.760 2.760 2.760 2.760 2.760
7/2 ** 3/4 ** 1 ** 3 ** × 11/4 ** 1 1/2 ** 2 ** 2 1/2 **	108 108 108 108 108 108 108	108 108 108 108 108 108 108	4.200 4.200 4.200 4.200 4.200 4.200 4.200
12° 3/4" 1" 4" × 11/2' 2" 2 1/2' 3 "	121 121 121 121 121 121 121 121	140 140 140 140 140 140 140 140	7.200 7.200 7.200 7.200 7.200 7.200 7.200 7.200 7.200

6000 lbs

SIZE	W	D	Weight Kilos/Each
А В			
1/4 " × 1/8 "	35	25	0.144
3/8 " × 1/4 "	38	32	0.252
9/8 × 1/4 "	38 48	32	0.252 0.420
1/2 × 3/8 "	48	38	0.420
3/4 " × 3/8 " 1/2 "	51 51	44 44	0.588 0.588
1 " × 1/2 "	60 60	57 57	1.296 1.296
× ½" 1 ¼" ×× ¾" × 1	67 67 67	64 64 64	1.392 1.392 1.392
1½" 1½" × 3¼" 1 1¼"	79 79 79 79	76 76 76 76	2.352 2.352 2.352 2.352
1/2" 3/4" 2" × 1" 11/4" 11/2"	86 86 86 86	92 92 92 92 92	3.528 3.528 3.528 3.528 3.528
1½" 3¼" 2½" × 1" 1¼" 1½" 2 "	92 92 92 92 92 92	108 108 108 108 108 108	5.400 5.400 5.400 5.400 5.400 5.400
1½" 34" 1 " 3 " × 1¼" 1 ½" 2 "	108 108 108 108 108 108	127 127 127 127 127 127 127	7.560 7.560 7.560 7.560 7.560 7.560 7.560
1/2" 3/4" 1 " 4 " × 11/4" 1 1/2 2 " 2 1/2" 3 "	121 121 121 121 121 121 121 121	159 159 159 159 159 159 159 159	12.480 12.480 12.480 12.480 12.480 12.480 12.480 12.480

- Dimensions are in MM
- Weights are approximate

Reducing Full Coupling (Socket Weld)

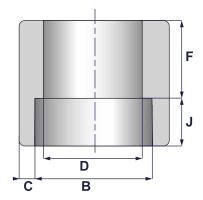


6000 lbs

SIZE	B1 Min. Max.	B2 Min. Max.	D Min. Max.	C Min. Avg.	J E	Tolerances * Weight Kilos	s/Each
1/4 " × 1/8 "	14.2 14.6	10.8 11.2	3.2 4.8	4.01 4.60	9.5 6.5	1.5 0.090	
3/8 " x 1/8 " 1/4 "	17.6 18.0 17.6 18.0	10.8 11.2 14.2 14.6	3.2 4.8 5.6 7.1	4.37 5.03 4.37 5.03	9.5 6.5 9.5 6.5	3.0 0.132 3.0 0.132	
1/2 " × 1/4 " 3/8 "	21.8 22.2 21.8 22.2	14.2 14.6 17.6 18.0	5.6 7.1 8.4 9.9	5.18 5.97 5.18 5.97	9.5 9.5 9.5 9.5	3.0 0.240 3.0 0.240	
3/4 " x 3/8 " 1/2 "	27.2 27.6 27.2 27.6	17.6 18.0 21.8 22.2	8.4 9.9 11.0 12.5	6.04 6.96 6.04 6.96	12.5 9.5 12.5 9.5	3.0 0.372 3.0 0.372	
1 " × 1/2 "	33.9 34.3 33.9 34.3	21.8 22.2 27.2 27.6	11.0 12.5 14.8 16.3	6.93 7.92 6.93 7.92	12.5 12.5 12.5 12.5	4.0 0.600 4.0 0.600	
× ½ ° 1 ¼ ° × 3¼ ° × 1	42.7 43.1 42.7 43.1 42.7 43.1	21.8 22.2 27.2 27.6 33.9 34.3	11.0 12.5 14.8 16.3 19.9 21.5	6.93 7.92 6.93 7.92 6.93 7.92	12.5 12.5 12.5 12.5 12.5 12.5	4.0 0.792 4.0 0.792 4.0 0.792	2
1½" 1½" × ¾" 114"	48.8 49.2 48.8 49.2 48.8 49.2 48.8 49.2	21.8 22.2 27.2 27.6 33.9 34.3 42.7 43.1	11.0 12.5 14.8 16.3 19.9 21.5 28.7 30.2	7.80 8.92 7.80 8.92 7.80 8.92 7.80 8.92	12.5 12.5 12.5 12.5 12.5 12.5 12.5 12.5	4.0 1.068 4.0 1.068 4.0 1.068 4.0 1.068	3
1½" 3¼" 2 " × 1" 1¼" 1 ½"	61.2 61.7 61.2 61.7 61.2 61.7 61.2 61.7 61.2 61.7	21.8 22.2 27.2 27.6 33.9 34.3 42.7 43.1 48.8 49.2	11.0 12.5 14.8 16.3 19.9 21.5 28.7 30.2 33.2 34.7	9.50 10.92 9.50 10.92 9.50 10.92 9.50 10.92 9.50 10.92	16.0 19.0 16.0 19.0 16.0 19.0 16.0 19.0 16.0 19.0	4.0 2.040 4.0 2.040 4.0 2.040 4.0 2.040 4.0 2.040 4.0 2.040	0

- Dimensions are in MM
- Weights are approximate

Socket Weld Half-Couplings



3000 lbs

SIZE	Min.	B Max.	Min.	D Max.	(Min.	C Avg.	J Min.	F	F Tolerances ±	Weight Kilos/Each
1/8 "	10.8	11.2	6.1	7.6	3.18	3.18	9.5	16.0	1.5	0.060
1/4 "	14.2	14.6	8.5	10.0	3.30	3.78	9.5	16.0	1.5	0.070
3/8 "	17.6	18.0	11.8	13.3	3.50	4.01	9.5	17.5	3.0	0.100
1½ *	21.8	22.2	15.0	16.6	4.09	4.67	9.5	22.5	3.0	0.170
3¼ *	27.2	27.6	20.2	21.7	4.27	4.90	12.5	24.0	3.0	0.240
1 *	33.9	34.3	25.9	27.4	4.98	5.69	12.5	28.5	4.0	0.400
1 ¼ "	42.7	43.1	34.3	35.8	5.28	6.07	12.5	30.0	4.0	0.545
1 ½ "	48.8	49.2	40.1	41.6	5.54	6.35	12.5	32.0	4.0	0.710
2 "	61.2	61.7	51.7	53.3	6.04	6.93	16.0	41.0	4.0	1.200
2 ½ "	73.9	74.4	61.2	64.2	7.67	8.76	16.0	43.0	5.0	1.900
3 "	89.8	90.3	76.4	79.4	8.30	9.52	16.0	44.5	5.0	2.550
4 "	115.2	115.7	100.7	103.8	9.35	10.69	19.0	48.0	5.0	3.950

6000 lbs

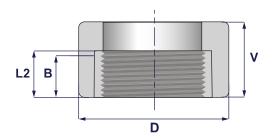
SIZE	Min.	Max.	D Min.	Max.	Min.	C Avg.	J Min.	F	F Tolerances ±	Weight Kilos/Each
1/8 "	10.8	11.2	3.2	4.8	3.43	3.96	9.5	16.0	1.5	0.070
1/4 "	14.2	14.6	5.6	7.1	4.01	4.60	9.5	16.0	1.5	0.090
3/8 "	17.6	18.0	8.4	9.9	4.37	5.03	9.5	17.5	3.0	0.130
½ "	21.8	22.2	11.0	12.5	5.18	5.97	9.5	22.5	3.0	0.230
3¼ "	27.2	27.6	14.8	16.3	6.04	6.96	12.5	24.0	3.0	0.360
1 "	33.9	34.3	19.9	21.5	6.93	7.92	12.5	28.5	4.0	0.580
1 ¼ "	42.7	43.1	28.7	30.2	6.93	7.92	12.5	30.0	4.0	0.770
1 ½ "	48.8	49.2	33.2	34.7	7.80	8.92	12.5	32.0	4.0	1.050
2 "	61.2	61.7	42.1	43.6	9.50	10.92	16.0	41.0	4.0	2.000

9000 lbs

SIZE	E	3	D)	(C*	J	F	F	
	Min.	Max.	Min.	Max.	Min.	Avg.	Min.		Tolerances ±	Weight Kilos/Each
1/2 * 3/4 * 1 *	21.8	22.2	5.6	7.2	8.18	9.35	9.5	22.5	3.0	0.375
	27.2	27.6	10.3	11.8	8.56	9.78	12.5	24.0	3.0	0.500
	33.9	34.3	14.4	16.0	9.96	11.38	12.5	28.5	4.0	0.850
1 ½ °	42.7	43.1	22.0	23.5	10.62	12.14	12.5	30.0	4.0	1.190
1 ½ °	48.8	49.2	27.2	28.7	11.12	12.70	12.5	32.0	4.0	1.500
2 °	61.2	61.7	37.4	38.9	12.12	13.84	16.0	41.0	4.0	2.540

- Dimensions are in MM
- Weights are approximate

Threaded Half-Couplings



3000 lbs

SIZE	V	D	B Min.	L2 Min.	Weight Kilos/Each
1/8 "	16	16	6.4	6.7	0.030
1/4 "	17.5	19	8.1	10.2	0.035
3/8 "	19	22	9.1	10.4	0.040
1/2 °	24	28	10.9	13.6	0.085
3/4 °	25.5	35	12.7	13.9	0.115
1 °	30	44	14.7	17.3	0.230
1 ½ "	33.5	57	17.0	18.0	0.400
1 ½ "	39.5	64	17.8	18.4	0.555
2 "	43	76	19.0	19.2	0.750
2 ½ "	46	92	23.6	28.9	1.150
3 "	54	108	25.9	30.5	1.750
4 "	60.5	140	27.7	33.0	3.000

6000 lbs

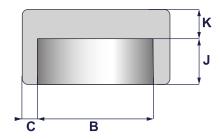
SIZE	V D		B _{Min.}	L2 Min.	Weight Kilos/Each
1/8 ° 1/4 ° 3/8 °	16	22	6.4	6.7	0.050
	17.5	25	8.1	10.2	0.060
	19	32	9.1	10.4	0.105
1½ °	24	38	10.9	13.6	0.175
3¼ °	25.5	44	12.7	13.9	0.245
1 °	30	57	14.7	17.3	0.540
1 ½ "	33.5	64	17.0	18.0	0.580
1 ½ "	39.5	76	17.8	18.4	0.980
2 -	43	92	19.0	19.2	1.470
2 ½"	46	108	23.6	28.9	2.100
3 "	54	127	25.9	30.5	3.150
4 "	60.5	159	27.7	33.0	5.200

TOLERANCES COMMON TO ALL CLASSES

SIZE	D	V				
½ "	-0 +4	-0 +3				
¼ "	-0 +4	-0 +3				
3% "	-0 +4	-0 +3				
½ "	-0 +4	-0 +3				
¾ "	-0 +4	-0 +3				
1 "	-0 +4	-0 +3				
1 ¼ *	-0 +4	-0 +3				
1 ½ *	-0 +4	-0 +3				
2 *	-0 +4	-0 +3				
2 ½ *	-0 +4	-0 +3				
3 *	-0 +4	-0 +3				
4 "	-0 +4	-0 +3				

- Dimensions are in MM
- Weights are approximate

Socket Weld Cap



3000 lbs

SIZE	В			C	J	K		
	Min.	Max.	Min.	Avg.	Min.	Min.	Weight Kilos/Each	
1/8 "	10.8	11.2	3.18	3.18	9.5	4.8	0.035	
1/4 "	14.2	14.6	3.30	3.78	9.5	4.8	0.050	
3/8 "	17.6	18.0	3.50	4.01	9.5	4.8	0.070	
½ "	21.8	22.2	4.09	4.67	9.5	6.4	0.110	
¾ "	27.2	27.6	4.27	4.90	12.5	6.4	0.175	
1 "	33.9	34.3	4.98	5.69	12.5	9.6	0.260	
1 ¼ "	42.7	43.1	5.28	6.07	12.5	9.6	0.435	
1 ½ "	48.8	49.2	5.54	6.35	12.5	11.2	0.580	
2 "	61.2	61.7	6.04	6.93	16.0	12.7	1.000	
2 ½ "	73.9	74.4	7.67	8.76	16.0	15.7	1.700	
3 "	89.8	90.3	8.30	9.52	16.0	19.0	2.600	
4 "	115.2	115.7	9.35	10.69	19.0	22.4	4.200	

6000 lbs

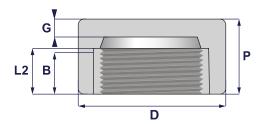
SIZE	Min.	Max.	Min.	Avg.	J Min.	K Min.	Weight Kilos/Each
1/8 "	10.8	11.2	3.43	3.96	9.5	6.4	0.070
1/4 "	14.2	14.6	4.01	4.60	9.5	6.4	0.090
3/8 "	17.6	18.0	4.37	5.03	9.5	6.4	0.130
½ "	21.8	22.2	5.18	5.97	9.5	7.9	0.155
¾ "	27.2	27.6	6.04	6.96	12.5	7.9	0.260
1 "	33.9	34.3	6.93	7.92	12.5	11.2	0.400
1 ¼ "	42.7	43.1	6.93	7.92	12.5	11.2	0.630
1 ½ "	48.8	49.2	7.80	8.92	12.5	12.7	0.860
2 "	61.2	61.7	9.50	10.92	16.0	15.7	1.600

9000 lbs

	SIZE	E	В		С		K	
		Min. Max.		Min.	Min. Avg.		Min.	Weight Kilos/Each
	1/2 21.8 22.2 3/4 27.2 27.6 1 33.9 34.3		8.18 8.56 9.96	8.56 9.78		11.2 12.7 14.2	0.375 0.500 0.850	
	1 ½ " 1 ½ " 2 "	42.7 48.8 61.2	43.1 49.2 61.7	10.62 11.12 12.12	12.14 12.70 13.84	12.5 12.5 16.0	14.2 15.7 19.0	1.190 1.500 2.540

- Dimensions are in MM
- Weights are approximate

Threaded Caps



3000 lbs

SIZE	Р	D	B Min.	L2 Min.	G	Peso Kg./Cad. Weight Kilos/Each
1/8 "	19	16	6.4	6.7	4.8	0.030
1/4 "	25	19	8.1	10.2	4.8	0.045
3/8 "	25	22	9.1	10.4	4.8	0.060
½ "	32	28	10.9	13.6	6.4	0.130
¾ "	37	35	12.7	13.9	6.4	0.200
1 "	41	44	14.7	17.3	9.7	0.350
1 ¼ "	44	57	17.0	18.0	9.7	0.640
1 ½ "	44	64	17.8	18.4	11.2	0.770
2 "	48	76	19.0	19.2	12.7	1.128
2 ½ "	60	92	23.6	28.9	15.7	2.000
3 "	65	108	25.9	30.5	19.0	3.000
4 "	68	140	27.7	33.0	22.4	5.500

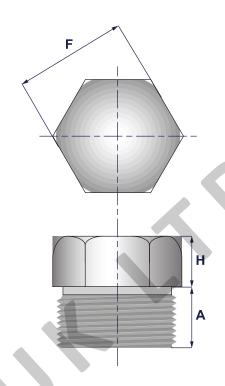
6000 lbs

	SIZE	Р	D	B	L2 Min.	G	Peso Kg./Cad. Weight Kilos/Each
I	1/8 "	22	22	6.4	6.7	6.4	0.055
	1/4 "	27	25	8.1	10.2	6.4	0.100
	3/8 "	27	32	9.1	10.4	6.4	0.160
	1/2 *	33	38	10.9	13.6	7.9	0.265
	3/4 *	38	44	12.7	13.9	7.9	0.410
	1 *	43	57	14.7	17.3	11.2	0.740
	1 1/4 "	46	64	17.0	18.0	11.2	0.920
	1 1/2 "	48	76	17.8	18.4	12.7	1.380
	2 "	51	92	19.0	19.2	15.7	2.100
	2 ½ "	64	108	23.6	28.9	19.0	3.500
	3 "	68	127	25.9	30.5	22.4	5.000
	4 "	75	159	27.7	33.0	28.4	8.600

- Dimensions are in MM
- Weights are approximate

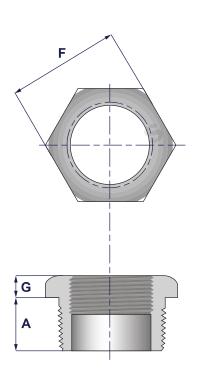
Threaded Plugs

SIZE	A Min.	H Min.	F	Weight Kilos/Each
1/4 "	11	6	16.00	0.025
3/8 "	13	8	19.00	0.045
1½ "	14	8	22.00	0.070
¾ "	16	10	27.00	0.125
1 "	19	10	35.00	0.220
1 ¼ "	21	14	46.00	0.410
1 ½ "	21	16	51.00	0.570
2 "	22	18	63.50	0.900
2 ½ "	27	19	76.00	1.600
3 "	28	21	90.00	2.500
4 "	32	25	118.00	5.000



Threaded Hex Bush

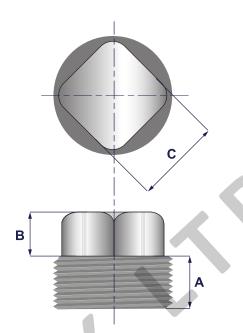
SIZE	A Min.			Weight Kilos/Each
1/4 "	11	3 4	16.00	0.020
3/8 "	13		19.00	0.025
1/2 "	14	5	22.00	0.040
3/4 "	16	6	27.00	0.070
1 "	19	6	35.00	0.115
1 1/4 1 1/2 2 "	21	7	46.00	0.230
	21	8	51.00	0.250
	22	9	63.50	0.500
2 ½ °	27	10	76.00	0.750
3 °	28	10	90.00	1.150
4 "	32	13	118.00	2.500



- Dimensions are in MM
- Weights are approximate

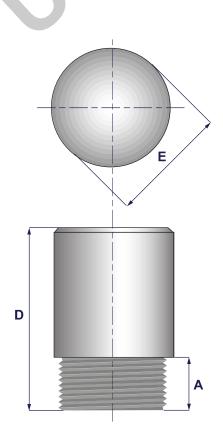
Threaded Square Plugs

SIZE	A Min.			Weight Kilos/Each
1/8 "	10	6	7.15	0.015
1/4 "	11	6	9.55	0.020
3/8 "	13	8	11.11	0.035
½ "	14	16 11 15.8		0.055
¾ "	16			0.090
1 "	19			0.170
1 ½ "	21	14	23.81	0.290
1 ½ "	21	16	28.58	0.390
2 "	22	18	33.27	0.600
2 ½ "	27	19	38.10	1.100
3 "	28	21	42.86	1.700
4 "	32	25	63.50	3.500



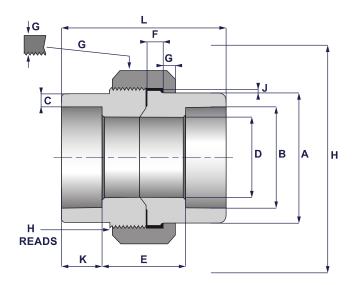
Threaded Round Plugs

SIZE	A Min.	D Min.	E	Weight Kilos/Each
1/8 "	10	35	10	0.025
1/4 "	11	41	14	0.050
3/8 "	13	41	18	0.075
1/2 "	14	44	22	0.125
3/4 "	16	44	28	0.200
1 "	19	51	35	0.350
1 1/4 °	21	51	45	0.555
1 1/2 °	21	51	50	0.725
2 "	22	64	60	1.420
2 ½ ° 3 ° 4 ° °	27	70	75	2.250
	28	70	89	3.400
	32	76	115	6.100



- Dimensions are in MM
- Weights are approximate

Socket Weld Unions



3000 lbs

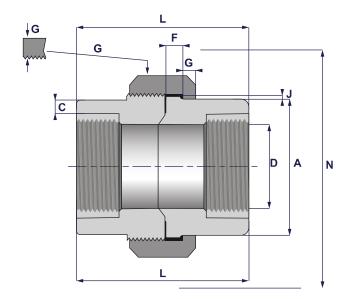
SIZE	Α	В	С	D	Е	F	G	Н	J	K	, L	N	Weight Kilos/Each
	Min.	Min. Max.	Min. Avg.	Min. Max.	Min. Max.	Min.	Min.	Threads per inch.	Min.	Min.			
1/8 "	21.8	10.6 11.2	3.18 3.18	6.07 7.590	19.05 22.35	3.17	3.17	16	1.24	9.650	41.4	50.8	0.170
1/4 "	21.8	14.0 14.6	3.30 3.78	8.48 10.00	19.05 22.35	3.17	3.17	16	1.24	9.650	41.4	50.8	0.170
3/8 "	25.9	17.5 18.0	3.50 4.01	11.70 13.28	20.57 26.92	3.42	3.42	14	1.37	9.650	45.9	55.9	0.250
1½ *	31.2	21.7 22.2	4.08 4.67	15.03 16.56	20.57 26.92	3.68	3.68	14	1.49	9.650	49.0	58.4	0.330
3¼ *	37.0	27.0 27.6	4.26 4.90	20.16 21.69	25.40 31.75	4.06	4.06	11	1.67	12.70	56.9	66.0	0.430
1 *	45.4	33.8 34.3	4.97 5.69	25.88 27.41	26.16 34.29	4.57	4.44	11	1.85	12.70	61.9	78.8	0.670
1 ½ "	54.8	42.5 43.0	5.28 6.07	34.29 35.81	32.51 40.64	5.33	5.20	10	2.13	12.70	71.1	93.9	1.550
1 ½ "	61.4	48.6 49.2	5.53 6.35	40.13 41.66	34.04 42.16	5.84	5.58	10	2.31	12.70	76.5	111.7	
2 "	75.2	61.1 61.6	6.04 6.93	51.74 53.26	37.34 45.47	6.60	6.35	10	2.69	15.75	86.1	132.0	
2 ½ "	91.6 109.2	73.8 74.4 89.8 90.4	7.67 8.76 8.30 9.52	61.19 64.24 76.40 79.45	52.07 61.72 53.59 63.75	7.49 8.25	7.11 8.00	8 8	3.07 3.53	15.75 15.75	102.4 109.0		

6000 lbs

SIZE	Α	В			D		E		F	G	Н	J	K	L	N	Weight Kilos/Each
	Min.	Min. Max.	Min.	Avg.	Min. M	ax. I	Min.	Max.	Min.	Min.	Threads per inch.	Min.	Min.			
1/8 " 1/4 " 3/8 "	21.8 25.9 31.2	10.6 11.2 14.0 14.6 17.5 18.0	4.01	3.96 4.60 5.03	5.58 7.	11 20).57	22.35 26.92 26.92	3.17 3.42 3.68	3.17 3.42 3.68	16 14 14	1.24 1.37 1.49	9.650 9.650 9.650	41.4 45.9 49.0	50.8 55.9 58.4	0.340
1/2 ° 3/4 ° 1	37.0 45.4 54.8	21.7 22.2 27.0 27.6 33.8 34.3	6.04	5.97 6.96 7.92	11.2 12 14.78 16 19.94 21	.31 26	5.16	31.75 34.29 40.64	4.06 4.57 5.33	4.06 4.44 5.20	11 11 10	1.67 1.85 2.13	9.650 12.70 12.70	56.9 61.9 71.1	66.0 78.8 93.9	1.150
1 1/4 " 1 1/2 " 2 " 2 1/2 "	61.4 75.2 91.6 109.2	42.5 43.0 48.6 49.2 61.1 61.6 73.8 74.4	7.79 9.49	7.92 8.92 10.92 13.00	28.70 30 33.22 34 42.09 43 53.21 54	.75 37 .61 52	7.34 2.07	42.16 45.47 61.72 63.75	5.84 6.60 7.49 8.25	5.58 6.35 7.11 8.00	10 10 8 8	2.31 2.69 3.07 3.53	12.70 12.70 15.75 15.75	102.3		5.500

- Dimensions are in MM
- Weights are approximate

Threaded Unions



3000 lbs

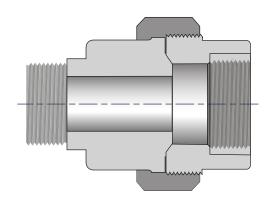
SIZE	Α	С	D	F	G	Н	J	L	N	Weight Kilos/Each
	Min.	Min.	Min. Max.	Min.	Min.	Threads per inch.	Min.			
1/8 °	14.73	2.41	6.42 8.43	3.17	3.17	16	1.25	41.40	50.8	0.165
1/4 °	19.05	3.02	9.45 11.13	3.17	3.17	16	1.25	41.40	50.8	0.165
3/8 °	22.86	3.20	13.51 14.27	3.42	3.42	14	1.37	45.98	55.9	0.240
½ *	27.69	3.73	17.06 17.86	3.68	3.68	14	1.49	49.02	58.4	0.340
3¼ *	33.53	3.91	21.39 23.01	4.06	4.06	11	1.67	56.90	66.0	0.430
1 *	41.40	4.54	27.74 28.99	4.57	4.44	11	1.85	61.98	78.8	0.660
1 ½ "	50.55	4.85	35.36 37.69	5.33	5.20	10	2.13	71.12	93.9	1.100
1 ½ "	57.15	5,08	41.20 43.54	5.84	5.58	10	2.31	76.45	111.7	1.550
2 "	70.10	5.53	52.12 55.58	6.60	6.35	10	2.69	86.11	132.0	2.250
2 ½ "	85.34	7.01	64.31 66.27	7.49	7.11	8	3.07	102.36	149.8	4.700
	102.36	7.62	77.27 82.55	8.25	8.00	8	3.53	108.97	175.2	6.400

6000 lbs

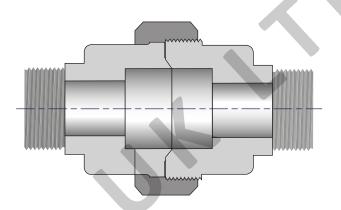
SIZE	Α	С	D		G	Н	J	L	N	Weight Kilos/Each
	Min.	Min.	Min. M	ax. M	in. Min	. Threads per in	nch. Min.			
1/8 " 1/4 " 3/8 "	1.651 2.108 2.515	3.15 3.68 4.01	5.59 1	3.43 3.4 1.13 3.4 4.27 3.6	42 3.42	14	1.25 1.37 1.49	41.4 45.9 49.0	50.8 50.8 55.9	0.350 0.350 0.470
1/2 ° 3/4 1 °	3.099 3.785 4.623	4.78 5.56 6.35	14.78 23	7.86 4.0 3.01 4.5 3.98 5.3	57 4.44	11	1.67 1.85 2.13	56.8 61.9 71.1	58.4 66.0 78.8	0.880 1.150 2.000
1 1/4 " 1 1/2 " 2 "	5.486 6,248 7.772	6.35 7.14 8.74	33.22 43	7.69 5.8 3.54 6.6 5.58 7.4	6.35	5 10	2.31 2.69 3.07	76.4 86.1 102.3	93.9 111.7 132.0	2.500 3.250 5.350
2 ½ " 3 "	9.220 11.125	9.53 11.13		6.27 8.2 2.55 10.1		_	3.53 4.06	108.9 190.5	149.8 175.2	8.400 13.250

- Dimensions are in MM
- Weights are approximate

M/F Union (Threaded)



M/M Union (Threaded)



Notes:

- Dimensions are in MM
- Weights are approximate

3000 lbs

SIZE	Weight h	(ilos/Each
	M/M	F/M
1/4 "	0.205	0.185
3/8 "	0.290	0.265
1/2 "	0.440	0.390
3/4 "	0.590	0.510
1 "	0.900	0.780
1 ¼ *	1.420	1.260
1 ½ *	1.990	1.770
2 "	2.950	2.600

6000 lbs

SIZE	Weight K	ilos/Each
	M/M	F/M
1/4 "	0.390	0.370
3/8 "	0.520	0.495
½ "	0.980	0.930
¾ "	1.310	1.230
1 "	2.240	2.120
1 ¼ "	2.820	2.660
1 ½ "	3.690	3.470
2 "	6.050	5.700

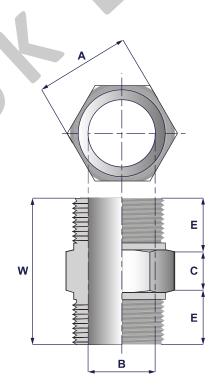
Threaded Hex Nipples

3000 lbs

SIZE	В	A Min.	W Min.	C Min.	E	Weight Kilos/Each
1/4 "	8	16	36	6	15	0.030
3/8 "	11	19	40	8	16	0.045
1/2 "	14	22	48	8	20	0.070
3/4 "	19	27	52	10	21	0.105
1 "	24	35	60	10	25	0.180
1 ¼ "	32	46	66	14	26	0.290
1 ½ "	38	50	68	16	26	0.355
2 "	49	62	71	17	27	0.530
2 ½ "	59	76	99	19	40	1.050
3 "	73.5	90	104	20	42	1.650
4 "	97	118	114	22	46	2.550

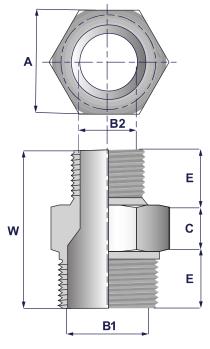


SIZE	В	A Min.	W Min.	C Min.	E Min.	Weight Kilos/Each
1/4 3/8	6 8	16 19	36 40	6 8	15 16	0.035 0.055
1/2 *	11	22	48	8	20	0.100
3/4 *	13	27	52	10	21	0.160
1 *	17	35	60	10	25	0.280
1 ½ "	22	46	66	14	26	0.450
1 ½ "	30	50	68	16	26	0.560
2	39	62	71	17	27	0.870
2 ½ "	45	76	99	19	40	1.630
3 "	58.5	90	104	20	42	2.600
4 *	80	118	114	22	46	4.200



- Dimensions are in MM
- Weights are approximate

Reducing Hex Nipples (Threaded)

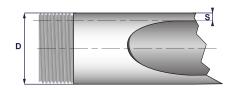


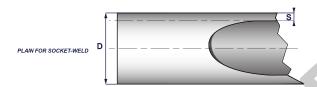
0175	3000 lbs		600) lbs		10/	_	_	3000 lbs	6000 lbs
SIZE A B	B1	B2	B1	B2	A Min.	W Min.	C Min.	Min.	Weight Kilos/Each	Weight Kilos/Each
3/8 " × 1/4 "	11	8	8	6	19	40	8	16	0.045	0.050
1/2 "× 1/4 "	14 14	8 11	11 11	6 8	22 22	48 48	8 8	20 20	0.060 0.060	0.075 0.080
3/4 "× 3/8 " 1/2 "	19 19	11 14	13 13	8 11	27 27	52 52	10 10	21 21	0.090 0.100	0.125 0.145
1 " × 1/2 "	24 24	14 19	17 17	11 13	35 35	60 60	10 10	25 25	0.160 0.165	0.230 0.250
1½" 1¼" x ¾" 1	32 32 32	14 19 24	22 22 22	11 13 17	46 46 46	66 66	14 14 14	26 26 26	0.265 0.270 0.285	0.370 0.385 0.420
1½" 1½" × ³ ¼" 1 " 1¼"	38 38 38 38	14 19 24 32	30 30 30 30	11 13 17 22	50 50 50 50	68 68 68 68	16 16 16 16	26 26 26 26	0.335 0.340 0.350 0.350	0.545 0.540 0.480 0.460
1/2 " 3/4 " 2 " × 1 " 11/4 " 1 1/2 "	49 49 49 49 49	14 19 24 32 38	39 39 39 39 39	11 13 17 22 30	62 62 62 62 62	71 71 71 71 71	17 17 17 17 17	27 27 27 27 27	0.510 0.515 0.525 0.525 0.525	0.700 0.720 0.760 0.800 0.810
1 " 2 ½ * x 1 ½ * 1 ½ * 2 "	59 59 59 59	24 32 38 49	45 45 45 45	17 22 30 39	76 76 76 76	99 99 99 99	19 19 19 19	40 40 40 40	0.950 0.950 0.950 0.950	1.400 1.350 1.350 1.400
1 " 114" 3 " × 114" 2 " 2 1/2"	73.5 73.5 73.5 73.5 73.5	24 32 38 49 59	58.5 58.5 58.5 58.5 58.5	17 22 30 39 45	90 90 90 90 90	104 104 104 104 104	20 20 20 20 20 20	42 42 42 42 42	1.500 1.500 1.500 1.500 1.500	2.150 2.150 2.150 2.200 2.400
1 " 11/4" 4 " × 11/2" 2 " 2 ½ " 3 "	97 97 97 97 97 97	24 32 38 49 59 73.5	80 80 80 80 80	17 22 30 39 45 58.5	118 118 118 118 118 118	114 114 114 114 114 114	22 22 22 22 22 22 22	46 46 46 46 46 46	2.400 2.400 2.400 2.400 2.400 2.400	3.900 3.900 3.900 3.900 3.900 3.900

- Dimensions are in MM
- Weights are approximate

Pipe Nipples

THREADED





SIZE	D	D	S	S	S	S
		Tolerances	Schedule STD - 40 - 40 S mm Kg/m	Schedule XS - 80 - 80 S mm Kg/m	Schedule 160 mm Kg/m	Schedule XXS mm Kg/m
1/4 **	13.7	† 0.4	2.24 0.63	3.02 0.80	3.68 -	6.05 -
3/8 **	17.1	† 0.4	2.31 0.84	3.20 1.10	4.01 -	6.40 -
1½ *	21.3	† 0.4	2.77 1.27	3.73 1.62	4.78 1.95	7.47 2.55
3¼ *	26.7	† 0.4	2.87 1.69	3.91 2.20	5.56 2.90	7.82 3.64
1 *	33.4	† 0.4	3.38 2.50	4.55 3.24	6.35 4.24	9.09 5.45
1 ¼ "	42.2	± 0.4	3.56 3.39	4.85 4.47	6.35 5.61	9.70 7.77
1 ½ "	48.3	± 0.4	3.68 4.05	5.08 5.41	7.14 7.25	10.15 9.56
2 *	60.3	± 0.8	3.91 5.44	5.54 7.48	8.74 11.11	11.07 13.44
2 ½ "	73.0	± 0.8	5.16 8.63	7.01 11.41	9.52 14.92	14.02 20.39
3 "	88.9	± 0.8	5.49 11.29	7.62 15.27	11.13 21.35	15.24 27.68
4 "	114.3	± 0.8	6.02 16.07	8.56 22.32	13.49 33.54	17.12 41.03



S	IZE		L = 5	0 mm			L = 7	'6 mm			L = 1	00 mm			L = 1	50 mm	
		sch. 40 Kg	sch. 80 Kg	sch. 160 Kg	XXS Kg	sch. 40 Kg	sch. 80 Kg	sch. 160 Kg	XXS Kg	sch. 40 Kg	sch. 80 Kg	sch. 160 Kg	XXS Kg	sch. 40 Kg	sch. 80 Kg	sch. 160 Kg	xxs Kg
	1/4 * 3/8 *	0.032 0.042	0.040 0.055	-	-	0.048 0.064	0.061 0.084	- -	-	0.063 0.084	0.080 0.110	-	-	0.095 0.127	0.121 0.167	-	-
	1/2 " 3/4 " 1 "	0.064 0.085 0.125	0.081 0.110 0.162		0.128 0.182 0.273	0.097 0.129 0.190	0.123 0.167 0.246	0.148 0.221 0.322	0.194 0.277 0.414	0.127 0.169 0.250	0.162 0.220 0.324	0.195 0.290 0.424	0.255 0.364 0.545	0.192 0.256 0.379	0.245 0.333 0.491	0.295 0.439 0.642	0.386 0.552 0.826
	1 1/4 " 1 1/2 " 2 "	0.170 0.203 0.272	0.224 0.271 0.374	0.363	0.389 0.478 0.672	0.258 0.308 0.414	0.340 0.411 0.569	0.427 0.551 0.845	0.591 0.727 1.022	0.339 0.405 0.544	0.447 0.541 0.748	0.561 0.725 1.111	0.777 0.956 1.344	0.514 0.614 0.824	0.677 0.820 1.133	0.850 1.098 1.683	1.177 1.448 2.036
	2 ½ " 3 " 3 ½ " 4 "	0.432 0.565 0.678 0.804	0.571 0.764 0.932 1.116	0.746 1.068 - 1.677	1.020 1.384 - 2.052	0.656 0.859 1.032 1.222	0.868 1.161 1.417 1.697	1.135 1.624 - 2.551	1.551 2.105 - 3.120	0.863 1.129 1.357 1.607	1.141 1.527 1.863 2.232	1.492 2.135 3.354	2.039 2.768 - 4.103	1.308 1.711 2.056 2.435	1.729 2.314 2.823 3.382	2.261 3.235 5.082	3.089 4.194 - 6.217

- Dimensions are in MM
- Weights are approximate