

## *Forged Fitting*



*Carbon Steel*



*Stainless Steel*

**LUDA**

[www.ludahk.com](http://www.ludahk.com)

## Introduction

Being involving in manufacturing for 4 generations, Luda's Family witnessed the dramatic changes in China. Starting with Farming tools foundry in the first generation, processing factory in the second generation, flanges, fittings, valves & metal products factories in the third generation, Luda has smoothly passed to fourth generation.

Luda started as a small manufacturer in countryside. We witnessed how the history changed business world. The world keeps changing but the value of Luda remains on the cutting edge of those changes. We truly believe that love never fails. We believe our team, that is encouraged to participate in the creation of new ideas and new convictions. We have employees of 13 nationalities contributing in Luda and this number is increasing every year. We prove that we are in global basis to meet the global standards.

*" We focus upon creativity in service and excellent quality so that we can pursue the market leadership."*

## Corporate Motto

*"Love never fails"*

*From Bible*

Love is never tired of waiting; love is kind; love has no envy; love has no high opinion of itself, love has no pride; Love's ways are ever fair, it takes no thought for itself; it is not quickly made angry, it takes no account of evil; It takes no pleasure in wrong doing, but has joy in what is true; Love has the power of undergoing all things, having faith in all things, hoping all things. Though the prophet's word may come to an end, tongues come to nothing, and knowledge have no more value, love has no end. (Corinthians 13.4--8)

*" There is love, there is no hard customers, no irresponsibility, no deceit, no compromise, no greed, no selfishness, no dirty business. "*

## Luda's Vision

To provide excellent Chinese products & services to every country in the world, to win the reputation of being an international company rooted in Hong Kong, China.

## Luda's Phiosophy

We act with ambition, but maintain our calm spirit towards success & result. We pursue smartness but kind to people. We are confident and saying it without any conceit. We always keep learning and being grateful. We believe in miracles and give Glory to God.

## Luda's Mission

**L**ove people, our work, our company and our global community.

**U**nique global network to meet customer needs.

**D**ynamic response to the ever-changing competition.

**A**ggressive growth strategies to explore new business opportunities.

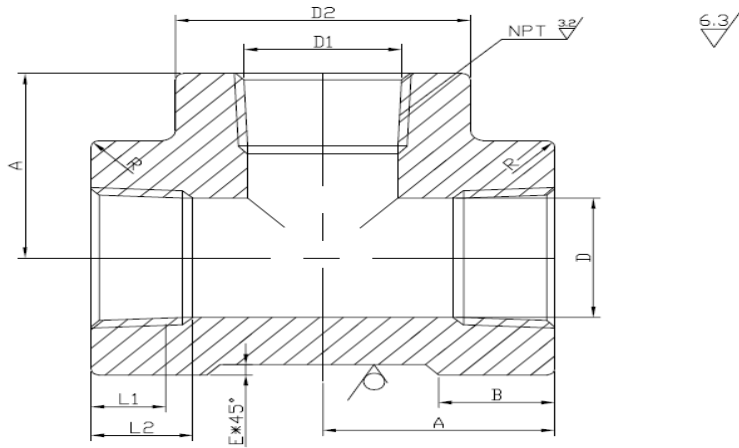


Carbon Steel



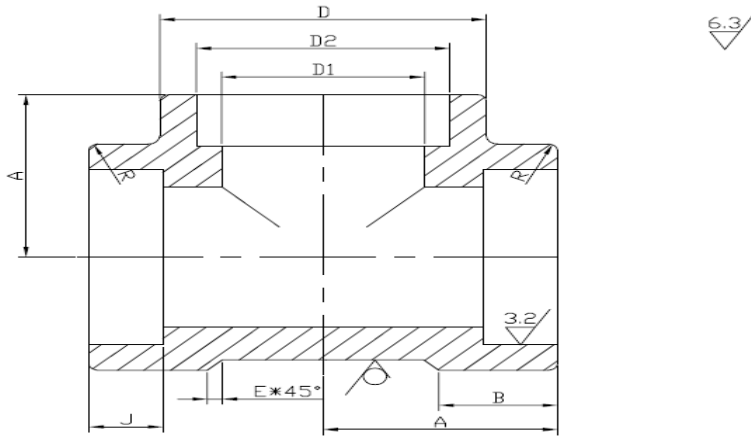
Stainless Steel

B16.11 THREADED TEE



(mm)

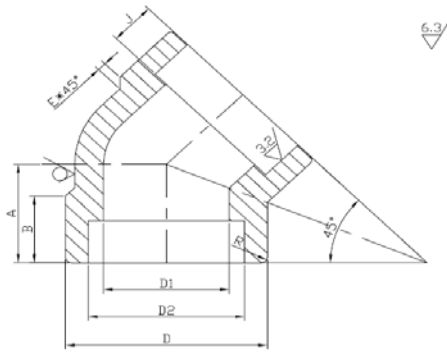
ASME B16.11 THREADED TEE											
PRESSURE	SIZE		OUTSIDE END		CENTRE TO END A	THREAD INNER D1	E.THREAD L1 min	THREAD LENGTH L2 min	BORE DIAMETER D	45d ANGLE SLIDE E	CORNER R
	INCH	DN	D2	LENGTH B							
2000LB	1/8	6	22	14	21	8.73	6.7	10	8.2	2	0.5
	1/4	8	22	15	21	11.35	10.2	13	10.5	2	0.5
	3/8	10	25	17	25	14.79	10.8	14.5	14.2	2	0.5
	1/2	15	33	18	28	18.32	13.6	18	17.6	2	1
	3/4	20	38	19	33	23.66	13.9	19	22.8	2	1
	1	25	46	22	38	29.69	17.3	22	28.7	2.5	1
	1 1/4	32	56	26	44	38.45	18	23	37.3	2.5	1.5
	1 1/2	40	62	30	51	44.52	18.4	24	43.4	3	1.5
	2	50	75	32	60	56.55	19.2	25	55.3	4	1.5
	2 1/2	65	92	36	76	67.61	28.9	34	66.1	4	2
3000LB	3	80	109	40	86	83.52	30.5	35	81.9	5	2
	4	100	146	46	106	108.89	33	38	107.1	5	2
	1/8	6	22	14	21	8.73	6.7	10	8.2	2	0.5
	1/4	8	25	15	25	11.35	10.2	13	10.5	2	0.5
	3/8	10	33	17	28	14.79	10.8	14.5	14.2	2	0.5
	1/2	15	38	18	33	18.32	13.6	18	17.6	2	1
	3/4	20	46	19	38	23.66	13.9	19	22.8	2	1
	1	25	56	22	44	29.69	17.3	22	28.7	2.5	1
	1 1/4	32	62	26	51	38.45	18	23	37.3	2.5	1.5
	1 1/2	40	75	30	60	44.52	18.4	24	43.4	3	1.5
	2	50	84	32	64	56.55	19.2	25	55.3	4	1.5
	2 1/2	65	102	36	83	67.61	28.9	34	66.1	4	2
	3	80	121	40	95	83.52	30.5	35	81.9	5	2
	4	100	152	46	114	108.89	33	38	107.1	5	2



(mm)

ASME B16.11 SOCKET TEE										
PRESSURE	SIZE		OUTSIDE END		CENTRE TO END A	SOCKET DIA	SOCKET DEPTH	BORE DIA		CORNER R
	INCH	DN	Dmin	LENGTH B		D2		J	D1	
3000LB	1/8	6	18	13	20.5	10.8	9.5	6.1	2	0.5
	1/4	8	24	14	20.5	14.2	9.5	8.5	2	0.5
	3/8	10	26	14	23	17.6	9.5	11.8	2	0.5
	1/2	15	32	16	25	21.8	9.5	15	2	1
	3/4	20	38	18	31.5	27.2	12.5	20.2	2	1
	1	25	46	20	35	33.9	12.5	25.9	2.5	1
	1 1/4	32	56	20	39.5	42.7	12.5	34.3	2.5	1.5
	1 1/2	40	62	24	44.5	48.8	12.5	40.1	3	1.5
	2	50	76	26	54	61.2	16	51.7	3	1.5
	2 1/2	65	92	29	57	73.9	16	61.2	4	2
	3	80	110	36	73	89.8	16	76.4	5	2
4	100	138	38	85.5	115.2	19	100.7	5	2	
6000LB	1/8	6	18	13	17.5	10.8	9.5	6.1	2	0.5
	1/4	8	24	16	23	14.2	9.5	5.6	2	0.5
	3/8	10	29	16	25	17.6	9.5	11.8	2	0.5
	1/2	15	32	19	28.5	21.8	9.5	11	2	1
	3/4	20	42	21	35	27.2	12.5	14.8	2.5	1
	1	25	51	24	39.5	33.9	12.5	19.9	2.5	1
	1 1/4	32	59	25	44.5	42.7	12.5	28.7	3	1.5
	1 1/2	40	68	28	50.5	48.8	12.5	33.2	3	1.5
	2	50	84	29	57	61.2	16	42.1	4	1.5

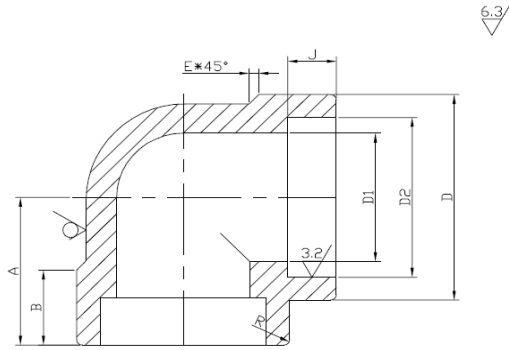
B16.11 SOCKET ELBOW



(mm)

ASME B16.11 45D SOCKET ELBOW										
PRESSURE	SIZE		OUTER DIAMETER		CENTRE TO END	SOCKET BORE	DEPTH OF SOCKET	BORE DIAMETER	ANGLE SLIDE	CORNER
	INCH	DN	Dmin	LENGTH B	A	D2	J	D1	E	R
3000LB	1/8	6	18	13	17.5	10.8	9.5	6.1	2	0.5
	1/4	8	22	14	17.5	14.2	9.5	8.5	2	0.5
	3/8	10	26	14	17.5	17.6	9.5	11.8	2	0.5
	1/2	15	32	16	20.5	21.8	9.5	15	2	1
	3/4	20	38	18	25.5	27.2	12.5	20.2	2	1
	1	25	46	20	26.5	33.9	12.5	25.9	2.5	1
	1 1/4	32	56	20	30	42.7	12.5	34.3	2.5	1.5
	1 1/2	40	62	24	33	48.8	12.5	40.1	3	1.5
	2	50	76	26	41.5	61.2	16	51.7	3	1.5
	2 1/2	65	92	29	44.5	73.9	16	61.2	4	2
6000LB	3	80	110	36	48	89.8	16	76.4	5	2
	4	100	138	38	60	115.2	19	100.7	5	2
	1/8	6	20	13	17.5	10.8	9.5	3.2	2	0.5
	1/4	8	24	16	17.5	14.2	9.5	5.6	2	0.5
	3/8	10	29	16	20.5	17.6	9.5	8.4	2	0.5
	1/2	15	35	19	22	21.8	9.5	11	2	1
	3/4	20	42	21	26.5	27.2	12.5	14.8	2.5	1
	1	25	51	24	30	33.9	12.5	19.9	2.5	1
	1 1/4	32	59	25	33	42.7	12.5	28.7	3	1.5
1 1/2	40	68	28	38	48.8	12.5	33.2	3	1.5	
2	50	84	29	44.5	61.2	16	42.1	4	1.5	

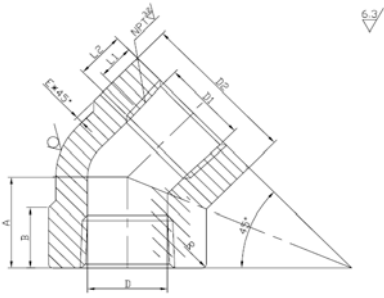
B16.11 SOCKET ELBOW (con'd)



(mm)

ASME B16.11 90D SOCKET ELBOW										
PRESSURE	SIZE		OUTER DIAMETER		CENTRE TO	SOCKET	DEPTH OF	BORE	ANGLE	CORNER
	INCH	DN	Dmin	LENGTH B	A	BORE D2	SOCKET J	DIAMETER D1	SLIDE E	R
3000LB	1/8	6	18	13	20.5	10.8	9.5	6.1	2	0.5
	1/4	8	22	14	20.5	14.2	9.5	8.5	2	0.5
	3/8	10	26	14	23	17.6	9.5	11.8	2	0.5
	1/2	15	32	16	25	21.8	9.5	15	2	1
	3/4	20	38	18	31.5	27.2	12.5	20.2	2	1
	1	25	46	20	35	33.9	12.5	25.9	2.5	1
	1 1/4	32	56	20	39.5	42.7	12.5	34.3	2.5	1.5
	1 1/2	40	62	24	44.5	48.8	12.5	40.1	3	1.5
	2	50	76	26	54	61.2	16	51.7	3	1.5
	2 1/2	65	92	29	57	73.9	16	61.2	4	2
	3	80	110	36	73	89.8	16	76.4	5	2
4	100	138	38	85.5	115.2	19	100.7	5	2	
6000LB	1/8	6	20	13	20.5	10.8	9.5	3.2	2	0.5
	1/4	8	24	16	23	14.2	9.5	5.6	2	0.5
	3/8	10	29	16	25	17.6	9.5	8.4	2	0.5
	1/2	15	35	19	28.5	21.8	9.5	11	2	1
	3/4	20	42	21	35	27.2	12.5	14.8	2.5	1
	1	25	51	24	39.5	33.9	12.5	19.9	2.5	1
	1 1/4	32	59	25	44.5	42.7	12.5	28.7	3	1.5
	1 1/2	40	68	28	50.5	48.8	12.5	33.2	3	1.5
	2	50	84	29	57	61.2	16	42.1	4	1.5

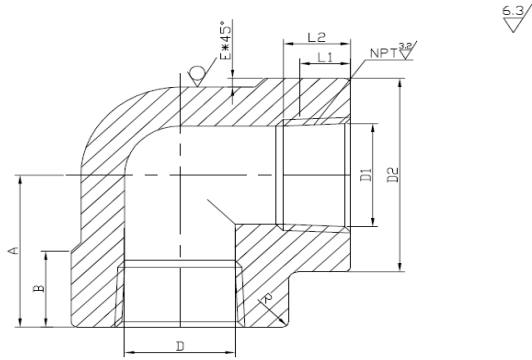
B16.11 THREADED ELBOW



(mm)

ASME B16.11 45D THREADED END ELBOW											
PRESSUR E	SIZE		OUTER DIAMETER		CENTRE TO END	SOCKET BORE	EFFECTIVE THREAD L1	MAXIMUM THREAD L2	BORE DIAMETE R	ANGLE SLIDE	CORNER
	INCH	DN	D2	LENGTH B	A	D1	L1 min	L2 min	D2	E	R
2000LB	1/8	6	22	12	17	8.73	6.7	10	8.2	2	0.5
	1/4	8	22	15	17	11.35	10.2	13	10.5	2	0.5
	3/8	10	25	17	19	14.79	10.8	14.5	14.2	2	0.5
	1/2	15	33	18	22	18.32	13.6	18	17.6	2	1
	3/4	20	38	19	25	23.66	13.9	19	22.8	2	1
	1	25	46	22	28	29.69	17.3	22	28.7	2.5	1
	1 1/4	32	56	26	33	38.45	18	23	37.3	2.5	1.5
	1 1/2	40	62	30	35	44.52	18.4	24	43.4	3	1.5
	2	50	75	32	43	56.55	19.2	25	55.3	4	1.5
	2 1/2	65	92	36	52	67.61	28.9	34	66.1	4	2
3000LB	3	80	109	40	64	83.52	30.5	35	81.9	5	2
	4	100	146	46	79	108.89	33	38	107.1	5	2
	1/8	6	22	12	17	8.73	6.7	10	8.2	2	0.5
	1/4	8	25	15	19	11.35	10.2	13	10.5	2	0.5
	3/8	10	33	17	22	14.79	10.8	14.5	14.2	2	0.5
	1/2	15	38	18	25	18.32	13.6	18	17.6	2	1
	3/4	20	46	19	28	23.66	13.9	19	22.8	2	1
	1	25	56	22	33	29.69	17.3	22	28.7	2.5	1
	1 1/4	32	62	26	35	38.45	18	23	37.3	2.5	1.5
	1 1/2	40	75	30	43	44.52	18.4	24	43.4	3	1.5
2	50	84	32	44	56.55	19.2	25	55.3	4	1.5	
2 1/2	65	102	36	52	67.61	28.9	34	66.1	4	2	
3	80	121	40	64	83.52	30.5	35	81.9	5	2	
4	100	152	46	79	108.89	33	38	107.1	5	2	

B16.11 THREADED ELBOW (con'd)

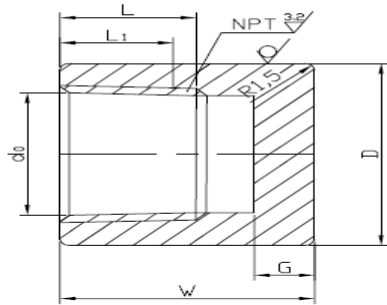


(mm)

ASME B16.11 90D THREADED END ELBOW											
PRESSUR E	SIZE		OUTER DIAMETER		CENTRE TO END	SOCKET BORE	EFFECTIVE THREAD L1	MAXIMUM THREAD L2	BORE DIAMETE R	ANGLE SLIDE	CORNER
	INCH	DN	D2	LENGTH B	A	D1	L1 min	L2 min	D2	E	R
3000LB	1/8	6	22	14	21	8.73	6.7	10	8.2	2	0.5
	1/4	8	25	15	25	11.35	10.2	13	10.5	2	0.5
	3/8	10	33	17	28	14.79	10.8	14.5	14.2	2	0.5
	1/2	15	38	18	33	18.32	13.6	18	17.6	2	1
	3/4	20	46	19	38	23.66	13.9	19	22.8	2	1
	1	25	56	22	44	29.69	17.3	22	28.7	2.5	1
	1 1/4	32	62	26	51	38.45	18.0	23	37.3	2.5	1.5
	1 1/2	40	75	30	60	44.52	18.4	24	43.4	3	1.5
	2	50	84	32	64	56.55	19.2	25	55.3	4	1.5
	2 1/2	65	102	36	83	67.61	28.9	34	66.1	4	2
	3	80	121	40	95	83.52	30.5	35	81.9	5	2
4	100	152	46	114	108.89	33.0	38	107.1	5	2	

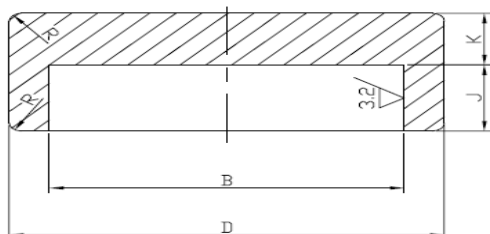
B16.11 THREADED END CAP NPT

6.3



(mm)

ASME B16.11 THREADED END CAP NPT									
PRESSURE	NPS		Outside diameter (D)	Length (W)	THREAD INNER	E.THREAD L1 min	THREAD LENGTH L min	CAP END THICKNESS G min	CORNER R
	INCH	DN							
3000LB	1/8	6	16	19	8.73	6.7	10	4.8	0.5
	1/4	8	19	25	11.35	10.2	13	4.8	0.5
	3/8	10	22	25	14.79	10.8	14.5	4.8	0.5
	1/2	15	28	32	18.32	13.6	18	6.4	1
	3/4	20	35	37	23.66	13.9	19	6.4	1
	1	25	44	41	29.69	17.3	22	9.7	1
	1 1/4	32	57	44	38.45	18	23	9.7	1.5
	1 1/2	40	64	44	44.52	18.4	24	11.2	1.5
	2	50	76	48	56.55	19.2	25	12.7	1.5
	2 1/2	65	92	60	67.61	28.9	34	15.7	2
	3	80	108	65	83.52	30.5	35	19	2
4	100	140	68	108.89	33	38	22.4	2	
6000LB	1/8	6	22		8.73	6.7	10		0.5
	1/4	8	25	27	11.35	10.2	13	6.4	0.5
	3/8	10	32	27	14.79	10.8	14.5	6.4	0.5
	1/2	15	38	33	18.32	13.6	18	7.9	1
	3/4	20	44	38	23.66	13.9	19	7.9	1
	1	25	57	43	29.69	17.3	22	11.2	1
	1 1/4	32	64	46	38.45	18	23	11.2	1.5
	1 1/2	40	76	48	44.52	18.4	24	12.7	1.5
	2	50	92	51	56.55	19.2	25	15.7	1.5
	2 1/2	65	108	64	67.61	28.9	34	19	2
	3	80	127	68	83.52	30.5	35	22.4	2
4	100	159	75	108.89	33	38	28.4	2	

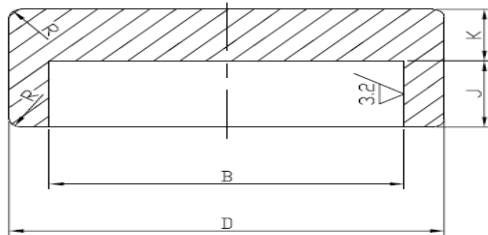


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ASME B16.11 END CAP							
PRESSURE	SIZE		OUTSIDE DIAMETER Dmin	SOCKET DIA D2	SOCKET DEPTH J	CAP END THICKNESS K min	CORNER R
	INCH	DN					
3000LB	1/8	6	18	10.8	9.5	4.8	0.5
	1/4	8	22	14.2	9.5	4.8	0.5
	3/8	10	26	17.6	9.5	4.8	0.5
	1/2	15	32	21.8	9.5	6.4	1
	3/4	20	38	27.2	12.5	6.4	1
	1	25	46	33.9	12.5	9.6	1
	1 1/4	32	56	42.7	12.5	9.6	1.5
	1 1/2	40	62	48.8	12.5	11.2	1.5
	2	50	76	61.2	16	12.7	1.5
	2 1/2	65	92	73.9	16	15.7	2
	3	80	110	89.8	16	19	2
4	100	138	115.2	19	22.4	2	
6000LB	1/8	6	20	10.8	9.5	6.4	0.5
	1/4	8	24	14.2	9.5	6.4	0.5
	3/8	10	28	17.6	9.5	6.4	0.5
	1/2	15	35	21.8	9.5	7.9	1
	3/4	20	42	27.2	12.5	7.9	1
	1	25	51	33.9	12.5	11.2	1
	1 1/4	32	59	42.7	12.5	11.2	1.5
	1 1/2	40	68	48.8	12.5	12.7	1.5
	2	50	84	61.2	16	15.7	1.5
	2 1/2	65		73.9	16	19	2
	3	80		89.8	16	22.4	2
	4	100		115.2	19	28.4	2

B16.11 END CAP (con'd)

6.3

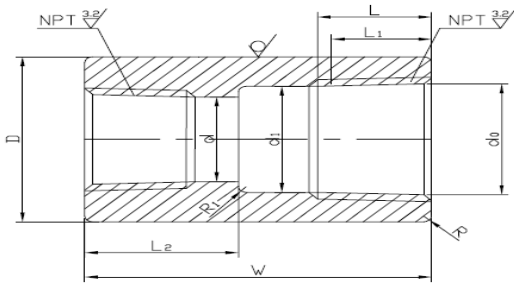


(mm)

ASME B16.11 END CAP							
PRESSURE	SIZE		OUTSIDE DIAMETER Dmin	SOCKET DIA D2	SOCKET DEPTH J	CAP END THICKNESS K min	CORNER R
	INCH	DN					
9000LB	1/8	6		10.8	9.5		0.5
	1/4	8		14.2	9.5		0.5
	3/8	10		17.6	9.5		0.5
	1/2	15	41	21.8	9.5	11.2	1
	3/4	20	48	27.2	12.5	12.7	1
	1	25	57	33.9	12.5	14.2	1
	1 1/4	32	68	42.7	12.5	14.2	1.5
	1 1/2	40	75	48.8	12.5	15.7	1.5
	2	50	90	61.2	16	19	1.5
	2 1/2	65		73.9	16		2
	3	80		89.8	16		2
4	100		115.2	19		2	

B16.11 THREAD REDUCING COUPLING

6.3

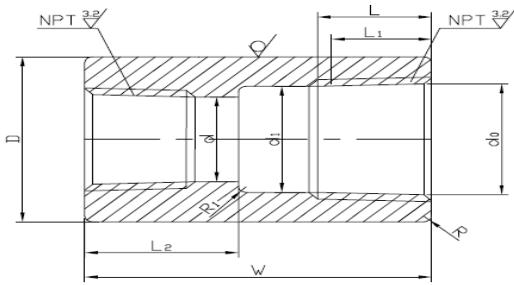


(mm)

ASME B16.11 THREADED REDUCING COUPLING 3000LB / 6000LB											
SIZE	OUTER DIA		LENGTH		THREAD INNER	E.THREAD	THREAD LENGTH	BORE DIAMETER		CORNER RADIUS	
INCH	3M	6M	W	L2	d0	L1 min	L min	d1	d	R	R1
1/4*1/8	19	25	35	15	11.35	10.2	13	10.5	8.2	0.5	1
3/8*1/8	22	32	38	15	14.79	10.8	14.5	14.2	8.2	0.5	2
3/8*1/4	22	32	38	18	14.79	10.8	14.5	14.2	10.5	0.5	2
1/2*1/8	28	38	48	15	18.32	13.6	18	17.6	8.2	1	2
1/2*1/4	28	38	48	18	18.32	13.6	18	17.6	10.5	1	2
1/2*3/8	28	38	48	20	18.32	13.6	18	17.6	14.2	1	2
3/4*1/8	35	44	51	15	23.66	13.9	19	22.8	8.2	1	2
3/4*1/4	35	44	51	18	23.66	13.9	19	22.8	10.5	1	2
3/4*3/8	35	44	51	20	23.66	13.9	19	22.8	14.2	1	2
3/4*1/2	35	44	51	23	23.66	13.9	19	22.8	17.6	1	2
1*1/8	44	57	60	15	29.69	17.3	22	28.7	8.2	1	3
1*1/4	44	57	60	18	29.69	17.3	22	28.7	10.5	1	3
1*3/8	44	57	60	20	29.69	17.3	22	28.7	14.2	1	3
1*1/2	44	57	60	23	29.69	17.3	22	28.7	17.6	1	3
1*3/4	44	57	60	24	29.69	17.3	22	28.7	22.8	1	2.5
1 1/4*1/8	57	64	67	28	38.45	18	23	37.3	8.2	1.5	3.5
1 1/4*1/4	57	64	67	28	38.45	18	23	37.3	10.5	1.5	3.5
1 1/4*3/8	57	64	67	28	38.45	18	23	37.3	14.2	1.5	3.5
1 1/4*1/2	57	64	67	28	38.45	18	23	37.3	17.6	1.5	3.5
1 1/4*3/4	57	64	67	28	38.45	18	23	37.3	22.8	1.5	3.5
1 1/4*1	57	64	67	28	38.45	18	23	37.3	28.7	1.5	3.5
1 1/2*1/8	64	76	79	28	44.52	18.4	24	43.4	8.2	1.5	5
1 1/2*1/4	64	76	79	28	44.52	18.4	24	43.4	10.5	1.5	5
1 1/2*3/8	64	76	79	28	44.52	18.4	24	43.4	14.2	1.5	5
1 1/2*1/2	64	76	79	28	44.52	18.4	24	43.4	17.6	1.5	5

B16.11 THREAD REDUCING COUPLING (con'd)

6.3

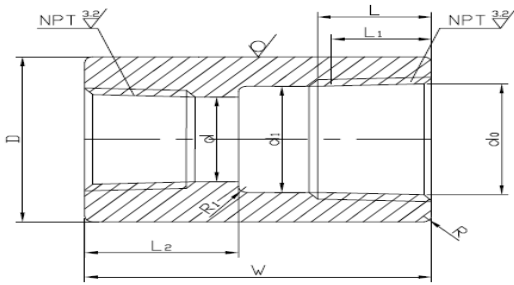


(mm)

ASME B16.11 THREADED REDUCING COUPLING 3000LB / 6000LB											
SIZE	OUTER DIA		LENGTH		THREAD INNER	E.THREA D	THREAD LENGTH	BORE DIAMETER		CORNER RADIUS	
	3M	6M	W	L2	d0	L1 min	L min	d1	d	R	R1
1 1/2*3/4	64	76	79	28	44.52	18.4	24	43.4	22.8	1.5	5
1 1/2*1	64	76	79	28	44.52	18.4	24	43.4	28.7	1.5	5
1 1/2*1 1/4	64	76	79	30	44.52	18.4	24	43.4	37.3	1.5	3
2*1/8	76	92	86	28	56.55	19.2	25	55.3	8.2	1.5	6
2*1/4	76	92	86	28	56.55	19.2	25	55.3	10.5	1.5	6
2*3/8	76	92	86	28	56.55	19.2	25	55.3	14.2	1.5	6
2*1/2	76	92	86	28	56.55	19.2	25	55.3	17.6	1.5	6
2*3/4	76	92	86	28	56.55	19.2	25	55.3	22.8	1.5	6
2*1	76	92	86	28	56.55	19.2	25	55.3	28.7	1.5	6
2*1 1/4	76	92	86	30	56.55	19.2	25	55.3	37.3	1.5	5
2*1 1/2	76	92	86	32	56.55	19.2	25	55.3	43.4	1.5	5
2 1/2*1/2	92	108	92	28	67.61	28.9	34	66.1	17.6	2	6
2 1/2*3/4	92	108	92	28	67.61	28.9	34	66.1	22.8	2	6
2 1/2*1	92	108	92	28	67.61	28.9	34	66.1	28.7	2	6
2 1/2*1 1/4	92	108	92	30	67.61	28.9	34	66.1	37.3	2	6
2 1/2*1 1/2	92	108	92	32	67.61	28.9	34	66.1	43.4	2	6
2 1/2*2	92	108	92	35	67.61	28.9	34	66.1	55.3	2	5

B16.11 THREAD REDUCING COUPLING (con'd)

6.3

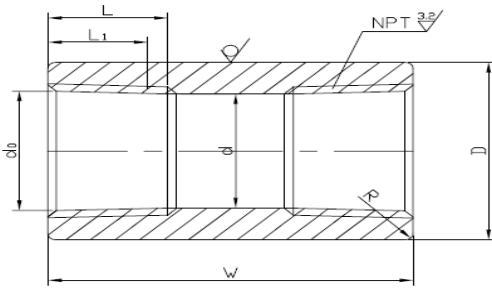


(mm)

ASME B16.11 THREADED REDUCING COUPLING 3000LB / 6000LB											
SIZE	OUTER DIA		LENGTH		THREAD INNER	E.THREAD	THREAD LENGTH	BORE DIAMETER		CORNER RADIUS	
	3M	6M	W	L2	d0	L1 min	L min	d1	d	R	R1
3*1/2	108	127	108	28	83.52	30.5	35	81.9	17.6	2	6
3*3/4	108	127	108	28	83.52	30.5	35	81.9	22.8	2	6
3*1	108	127	108	28	83.52	30.5	35	81.9	28.7	2	6
3*1 1/4	108	127	108	30	83.52	30.5	35	81.9	37.3	2	6
3*1 1/2	108	127	108	32	83.52	30.5	35	81.9	43.4	2	6
3*2	108	127	108	35	83.52	30.5	35	81.9	55.3	2	6
3*2 1/2	108	127	108	40	83.52	30.5	35	81.9	66.1	2	6
4*1/2	140	159	121	28	108.89	33	38	107.1	17.6	2	8
4*3/4	140	159	121	28	108.89	33	38	107.1	22.8	2	8
4*1	140	159	121	28	108.89	33	38	107.1	28.7	2	8
4*1 1/4	140	159	121	30	108.89	33	38	107.1	37.3	2	8
4*1 1/2	140	159	121	32	108.89	33	38	107.1	43.4	2	8
4*2	140	159	121	35	108.89	33	38	107.1	55.3	2	8
4*2 1/2	140	159	121	40	108.89	33	38	107.1	66.1	2	8
4*3	140	159	121	45	108.89	33	38	107.1	81.9	2	8

B16.11 THREAD COUPLING

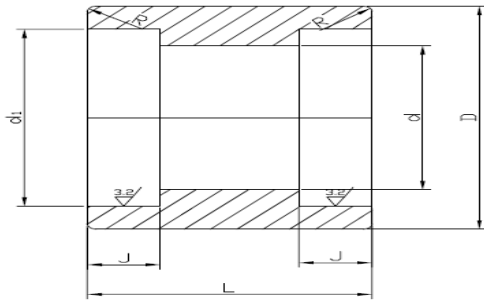
6.3



(mm)

ASME B16.11 THREADED COUPLING									
PRESSURE	SIZE		OUTER DIA	LENGTH (W)	THREAD INNER d0	E.THREAD L1 min	THREAD LENGTH L min	BORE DIAMETER D	CORNER R
	INCH	DN							
3000LB	1/8	6	16	32	8.73	6.7	10	8.2	0.5
	1/4	8	19	35	11.35	10.2	13	10.5	0.5
	3/8	10	22	38	14.79	10.8	14.5	14.2	0.5
	1/2	15	28	48	18.32	13.6	18	17.6	1
	3/4	20	35	51	23.66	13.9	19	22.8	1
	1	25	44	60	29.69	17.3	22	28.7	1
	1 1/4	32	57	67	38.45	18	23	37.3	1.5
	1 1/2	40	64	79	44.52	18.4	24	43.4	1.5
	2	50	76	86	56.55	19.2	25	55.3	1.5
	2 1/2	65	92	92	67.61	28.9	34	66.1	2
	3	80	108	108	83.52	30.5	35	81.9	2
4	100	140	121	108.89	33	38	107.1	2	
6000LB	1/8	6	22	32	8.73	6.7	10	8.2	0.5
	1/4	8	25	35	11.35	10.2	13	10.5	0.5
	3/8	10	32	38	14.79	10.8	14.5	14.2	0.5
	1/2	15	38	48	18.32	13.6	18	17.6	1
	3/4	20	44	51	23.66	13.9	19	22.8	1
	1	25	57	60	29.69	17.3	22	28.7	1
	1 1/4	32	64	67	38.45	18	23	37.3	1.5
	1 1/2	40	76	79	44.52	18.4	24	43.4	1.5
	2	50	92	86	56.55	19.2	25	55.3	1.5
	2 1/2	65	108	92	67.61	28.9	34	66.1	2
	3	80	127	108	83.52	30.5	35	81.9	2
4	100	159	121	108.89	33	38	107.1	2	

6.3

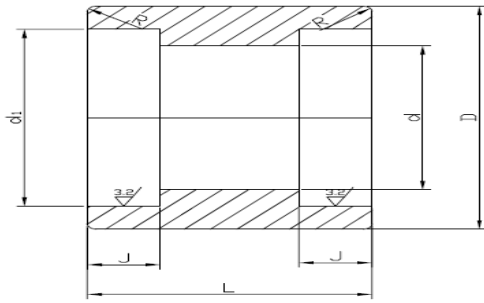


(mm)

ASME B16.11 COUPLING								
PRESSURE	SIZE		LENGTH Lmin	OUTER DIAMETER D	SOCKET DIAMETER d1	SOCKET DEPTH J	BORE DIAMETER d	CORNER R
	INCH	DN						
3000LB	1/8	6	25	18	10.8	9.5	6.1	0.5
	1/4	8	25	22	14.2	9.5	8.5	0.5
	3/8	10	25	26	17.6	9.5	11.8	0.5
	1/2	15	27	32	21.8	9.5	15	1
	3/4	20	33	38	27.2	12.5	20.2	1
	1	25	35	46	33.9	12.5	25.9	1
	1 1/4	32	35	56	42.7	12.5	34.3	1.5
	1 1/2	40	35	62	48.8	12.5	40.1	1.5
	2	50	49	76	61.2	16	51.7	1.5
	2 1/2	65	49	92	73.9	16	61.2	2
	3	80	49	110	89.8	16	76.4	2
4	100	54	138	115.2	19	100.7	2	
6000LB	1/8	6	25	20	10.8	9.5	3.2	0.5
	1/4	8	25	24	14.2	9.5	5.6	0.5
	3/8	10	25	28	17.6	9.5	8.4	0.5
	1/2	15	27	35	21.8	9.5	11	1
	3/4	20	33	42	27.2	12.5	14.8	1
	1	25	35	51	33.9	12.5	19.9	1
	1 1/4	32	35	59	42.7	12.5	28.7	1.5
	1 1/2	40	35	68	48.8	12.5	33.2	1.5
	2	50	49	84	61.2	16	42.1	1.5
	2 1/2	65	49		73.9	16		2
	3	80	49		89.8	16		2
4	100	54		115.2	19		2	

B16.11 COUPLING (con'd)

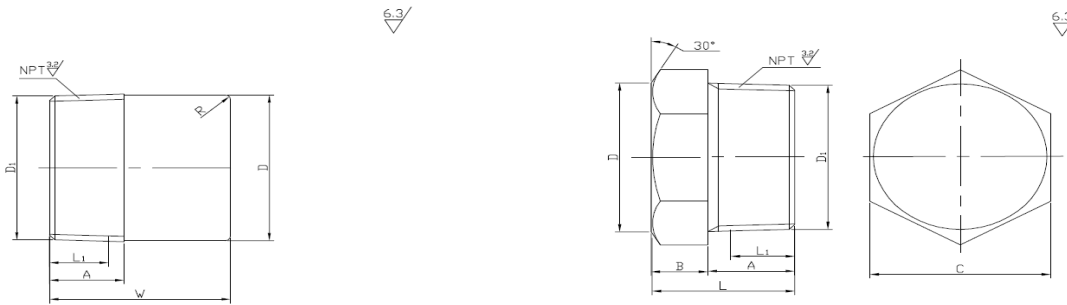
6.3



(mm)

ASME B16.11 COUPLING								
PRESSURE	SIZE		LENGTH Lmin	OUTER DIAMETER D	SOCKET DIAMETER d1	SOCKET DEPTH J	BORE DIAMETER d	CORNER R
	INCH	DN						
9000LB	1/8	6	25		10.8	9.5		0.5
	1/4	8	25		14.2	9.5		0.5
	3/8	10	25		17.6	9.5		0.5
	1/2	15	27	41	21.8	9.5	5.6	1
	3/4	20	33	48	27.2	12.5	10.3	1
	1	25	35	57	33.9	12.5	14.4	1
	1 1/4	32	35	68	42.7	12.5	22	1.5
	1 1/2	40	35	75	48.8	12.5	27.2	1.5
	2	50	49	90	61.2	16	37.4	1.5
	2 1/2	65	49		73.9	16		2
	3	80	49		89.8	16		2
4	100	54		115.2	19		2	

**B16.11 ROUND HEAD PLUG**



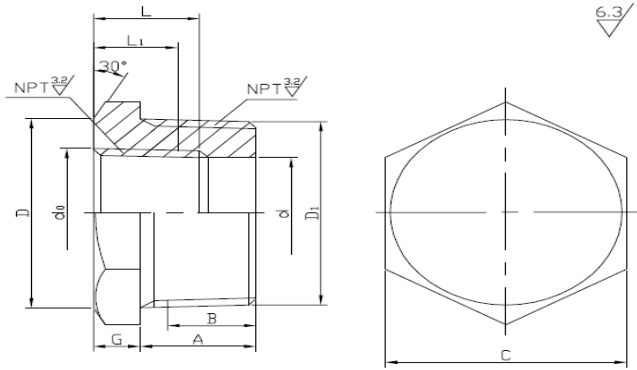
(mm)

ASME B16.11 ROUND HEAD PLUG							
SIZE		OUTER DIA	OVERALL LENGTH W	THREAD END OD	E.THREAD	THREAD LENGTH	CORNER
INCH	DN	D		D1	L min	A min	R
1/8	6	10	35	9.98	6.4	10	0.5
1/4	8	14	41	13.25	8.1	11	0.5
3/8	10	18	41	16.67	9.1	13	0.5
1/2	15	21	44	20.71	10.9	14	1
3/4	20	27	44	26.03	12.7	16	1
1	25	33	51	32.59	14.7	19	1
1 1/4	32	43	51	41.31	17	21	1.5
1 1/2	40	48	51	47.38	17.8	21	1.5
2	50	60	64	59.4	19	22	1.5
2 1/2	65	73	70	71.61	23.6	27	2
3	80	89	70	87.39	25.9	28	2
4	100	114	76	112.63	27.7	32	2

(mm)

ASME B16.11 HEX HEAD PLUG								
SIZE		HEX EDGE DISTANCE	THICKNESS	OUTER THREAD	TOTAL HEIGHT	E.THREAD	THREAD LENGTH	CIRCLE ON HEX TOP
INCH	DN	C min	B min	OD D1	L min	L1 min	A min	D
1/8	6	11	6	9.98	16	6.4	10	10
1/4	8	16	6	13.25	17	8.1	11	15
3/8	10	18	8	16.67	21	9.1	13	17
1/2	15	22	8	20.71	22	10.9	14	21
3/4	20	27	10	26.03	26	12.7	16	26
1	25	36	10	32.59	29	14.7	19	35
1 1/4	32	46	14	41.31	35	17	21	44
1 1/2	40	50	16	47.38	37	17.8	21	48
2	50	65	18	59.4	40	19	22	63
2 1/2	65	75	19	71.61	46	23.6	27	73
3	80	90	21	87.39	49	25.9	28	88
4	100	115	25	112.63	57	27.7	32	113

B16.11 HEX HEAD BUSHING

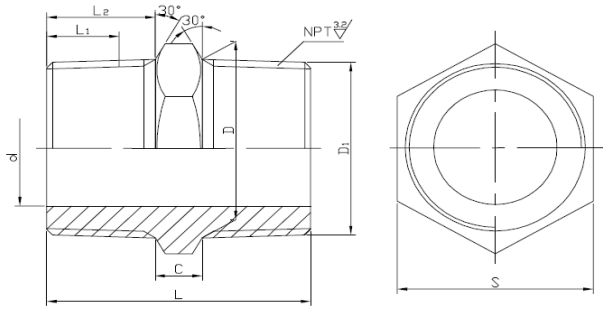


(mm)

ASME B16.11 HEX HEAD BUSHING											
SIZE		OUTER THREAD			INNER THREAD				HEX EDGE DISTANCE	HEX THICKNESS	CIRCLE ON HEX TOP
INCH	DN	OD D1	E.THREAD B min	TH LENGTH A min	BORE d	THREAD INNER d0	E.THREAD L1 min	THREAD LENGTH L min	C min	G min	D
1/8	6	9.98	6.4	10	8.2	8.73	6.7	10	11		10
1/4	8	13.25	8.1	11	10.5	11.35	10.2	13	16	3	15
3/8	10	16.67	9.1	13	14.2	14.79	10.8	14.5	18	4	17
1/2	15	20.71	10.9	14	17.6	18.32	13.6	18	22	5	21
3/4	20	26.03	12.7	16	22.8	23.66	13.9	19	27	6	26
1	25	32.59	14.7	19	28.7	29.69	17.3	22	36	6	35
1 1/4	32	41.31	17	21	37.3	38.45	18	23	46	7	44
1 1/2	40	47.38	17.8	21	43.4	44.52	18.4	24	50	8	48
2	50	59.4	19	22	55.3	56.55	19.2	25	65	9	63
2 1/2	65	71.61	23.6	27	66.1	67.61	28.9	34	75	10	73
3	80	87.39	25.9	28	81.9	83.52	30.5	35	90	10	88
4	100	112.6	27.7	32	107.1	108.89	33	38	115	13	113

BS3799 STRAIGHT NIPPLE

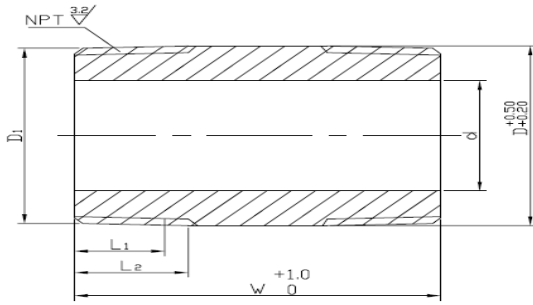
6.3



(mm)

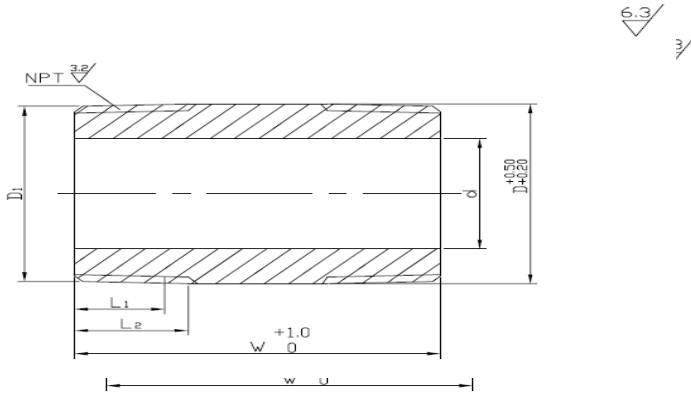
BS3799 STRAIGHT NIPPLES									
PRESSURE	SIZE		OVERALL LENGTH L	HEX OUTER			THREAD		HOLE DIA d
	INCH	DN		D	THICKNESS C	CIRCLE ON HEX TOP D1	E.THREAD L1min	THREAD LENGTH L2	
3000LB	1/8	6	26	10.3	6.4	9.98	6.7	10	5
	1/4	8	36	13.7	8.1	13.25	10.2	15	8
	3/8	10	40	17.1	9.1	16.67	10.4	16	11
	1/2	15	48	21.3	10.9	20.71	13.6	20	14
	3/4	20	52	26.7	12.7	26.03	13.9	21	19
	1	25	60	33.4	14.7	32.59	17.3	25	24
	1 1/2	40	68	48.3	17.8	47.38	18.4	26	38
	2	50	71	60.3	19	59.4	19.2	27	49
6000LB	1/8	6	26	10.3	6.4	9.98	6.7	10	2
	1/4	8	36	13.7	8.1	13.25	10.2	15	6
	3/8	10	40	17.1	9.1	16.67	10.4	16	8
	1/2	15	48	21.3	10.9	20.71	13.6	20	11
	3/4	20	52	26.7	12.7	26.03	13.9	21	13
	1	25	60	33.4	14.7	32.59	17.3	25	17
	1 1/2	40	68	48.3	17.8	47.38	18.4	26	30
	2	50	71	60.3	19	59.4	19.2	27	39

BS3799 THREAD S PIPE



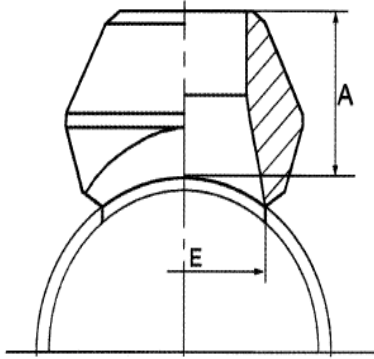
(mm)

cBS3799 THREAD SHORT											
PIPE SCH	SIZE		OUTER DIA D	OVERALL LENGTH W				THREAD END OD	E.THREAD	THREAD LENGTH	HOLE DIA d
	INCH	DN						D1	L min	L2	
SCH 80	1/8	6	10.3	50	75	100	150	9.98	6.7	10	5
	1/4	8	13.7	50	75	100	150	13.26	10.2	15	7
	3/8	10	17.1	50	75	100	150	16.67	10.4	16	10.5
	1/2	15	21.3		75	100	150	20.72	13.6	20	13.5
	3/4	20	26.7		75	100	150	26.03	13.9	21	18.5
	1	25	33.4		75	100	150	32.59	17.3	25	24
	1 1/2	40	48.3		75	100	150	47.39	18.4	26	38
	2	50	60.3		75	100	150	59.4	19.2	27	49
	2 1/2	65	73			100	150	71.62	28.9	40	58.5
	3	80	88.9			100	150	87.39	30.5	42	73.5
4	100	114.3				150	112.63	33	44	97	
SCH 160	1/8	6	10.3	50	75	100	150	9.98	6.7	10	
	1/4	8	13.7	50	75	100	150	13.26	10.2	15	
	3/8	10	17.1	50	75	100	150	16.67	10.4	16	
	1/2	15	21.3		75	100	150	20.72	13.6	20	11.5
	3/4	20	26.7		75	100	150	26.03	13.9	21	15.5
	1	25	33.4		75	100	150	32.59	17.3	25	20.5
	1 1/2	40	48.3		75	100	150	47.39	18.4	26	34
	2	50	60.3		75	100	150	59.4	19.2	27	42.5
	2 1/2	65	73			100	150	71.62	28.9	40	53.5
	3	80	88.9			100	150	87.39	30.5	42	66.5
4	100	114.3				150	112.63	33	44	87	



(mm)

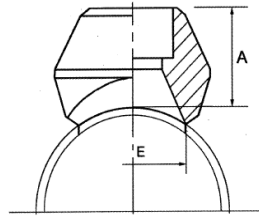
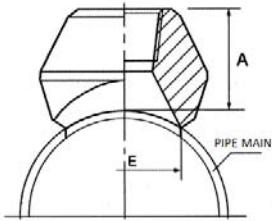
cBS3799 THREAD SHORT											
PIPE SCH	SIZE		OUTER DIA D	OVERALL LENGTH W				THREAD END OD D1	E.THREAD L min	THREAD LENGTH L2	HOLE DIA d
	INCH	DN		50	75	100	150				
XXS	1/8	6	10.3	50	75	100	150	9.98	6.7	10	
	1/4	8	13.7	50	75	100	150	13.26	10.2	15	
	3/8	10	17.1	50	75	100	150	16.67	10.4	16	
	1/2	15	21.3		75	100	150	20.72	13.6	20	6
	3/4	20	26.7		75	100	150	26.03	13.9	21	11
	1	25	33.4		75	100	150	32.59	17.3	25	15
	1 1/2	40	48.3		75	100	150	47.39	18.4	26	28
	2	50	60.3		75	100	150	59.4	19.2	27	38
	2 1/2	65	73			100	150	71.62	28.9	40	44.5
	3	80	88.9			100	150	87.39	30.5	42	58
4	100	114.3				150	112.63	33	44	80	



(mm)

MSS SP-SP97 WELDOLET MSS SP- 97									
Outlet Size		Run Size (not less than >)		A			E		
mm	INCH	mm	INCH	STD	XS	XXS	STD	XS	XXS
6	1/8	20	3/4	15.9	-	-	15.9	-	-
8	1/4	20	3/4	15.9	-	-	15.9	-	-
10	3/8	25	1	19.1	-	-	19.1	-	-
15	1/2	32	1.1/4	19.1	19.1	28.6	23.8	23.8	14.3
20	3/4	40	1.1/2	22.2	22.2	31.8	30.2	30.2	19.1
25	1	50	1.1/2	27	27	38.1	36.5	36.5	25.4
32	1.1/4	65	2.1/2	31.8	31.8	44.5	44.5	44.5	33.3
40	1.1/2	65	2.1/2	33.3	33.3	50.8	50.8	50.8	38.1
50	2	80	3	38.1	38.1	58.6	65.1	65.1	42.9
65	2.1/2	100	4	41.3	41.3	61.9	76.2	76.2	54
80	3	125	5	44.5	44.5	73	93.7	93.7	77
90	3.1/2	150	6	47	47	-	101.6	101.6	-
100	4	150	6	50.8	50.8	84.1	120.7	120.7	98.4
125	5	200	8	57.2	57.2	93.7	141.3	141.3	122.2
150	6	200	8	60.3	77.8	104.8	169.9	169.9	146.1
200	8	250	10	69.9	98.4	-	220.7	220.7	-
250	10	300	12	77.8	93.7	-	274.6	265.1	-
300	12	350	14	85.7	103.2	-	325.4	317.5	-
350	14	400	16	88.9	100	-	357.2	350.9	-
400	16	450	18	93.7	106.4	-	408	403.2	-
450	18	500	20	96.8	111.1	-	458.8	455.6	-
500	20	600	24	101.6	119.1	-	508.8	509.6	-
600	24	650	26	115.9	139.7	-	614.4	614.4	-

## Socket & Threadolet MSS SP97



(mm)

**MSS SP-SP97 THREDOLET MSS SP- 97**

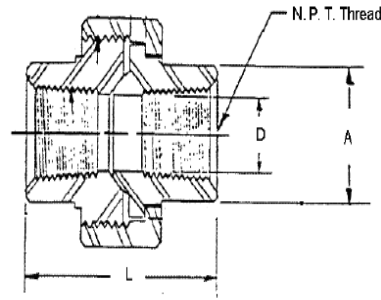
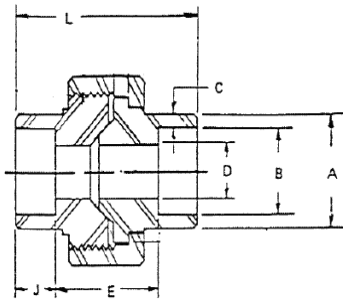
Outlet Size		Run Size (not less than >)		A		E	
mm	INCH	mm	in	3000Lb	6000Lb	3000Lb	6000Lb
6	1/8	20	3/4	19.1	-	15.9	-
8	1/4	20	3/4	19.1	-	15.9	-
10	3/8	25	1	20.6	-	19.1	-
15	1/2	32	1.1/4	25.4	31.8	23.8	19.1
20	3/4	40	1.1/2	27	36.5	30.2	25..4
25	1	50	2	33.3	39.7	36.5	33.3
32	1.1/4	65	2.1/2	33.3	41.3	44.5	38.1
40	1.1/2	65	2.1/2	34.9	42.9	50.8	49.2
50	2	80	3	38.1	52.4	65.1	69.9
65	2.1/2	100	4	46	-	76.2	-
80	3	125	5	50.8	-	93.7	-
100	4	150	6	57.2	-	120.7	-

**MSS SP-SP97 SOCKOLET MSS SP- 97**

Outlet Size		Run Size (not less than >)		A		E	
mm	INCH	mm	in	3000Lb	6000Lb	3000Lb	6000Lb
6	1/8	20	3/4	19.1	-	15.9	-
8	1/4	20	3/4	19.1	-	15.9	-
10	3/8	25	1	20.6	-	19.1	-
15	1/2	32	1.1/4	25.4	31.8	23.8	19.1
20	3/4	40	1.1/2	27	36.5	30.2	25..4
25	1	50	2	33.3	39.7	36.5	33.3
32	1.1/4	65	2.1/2	33.3	41.3	44.5	38.1
40	1.1/2	65	2.1/2	34.9	42.9	50.8	49.2
50	2	80	3	38.1	52.4	65.1	69.9
65	2.1/2	100	4	39.7	-	76.2	-
80	3	125	5	44.5	-	93.7	-
100	4	150	6	47.6	-	120.7	-

Pressure Class	Schedule Class
3000Lb	Sch40, Sch80, STD, XS
6000 Lb	Sch160, XXS

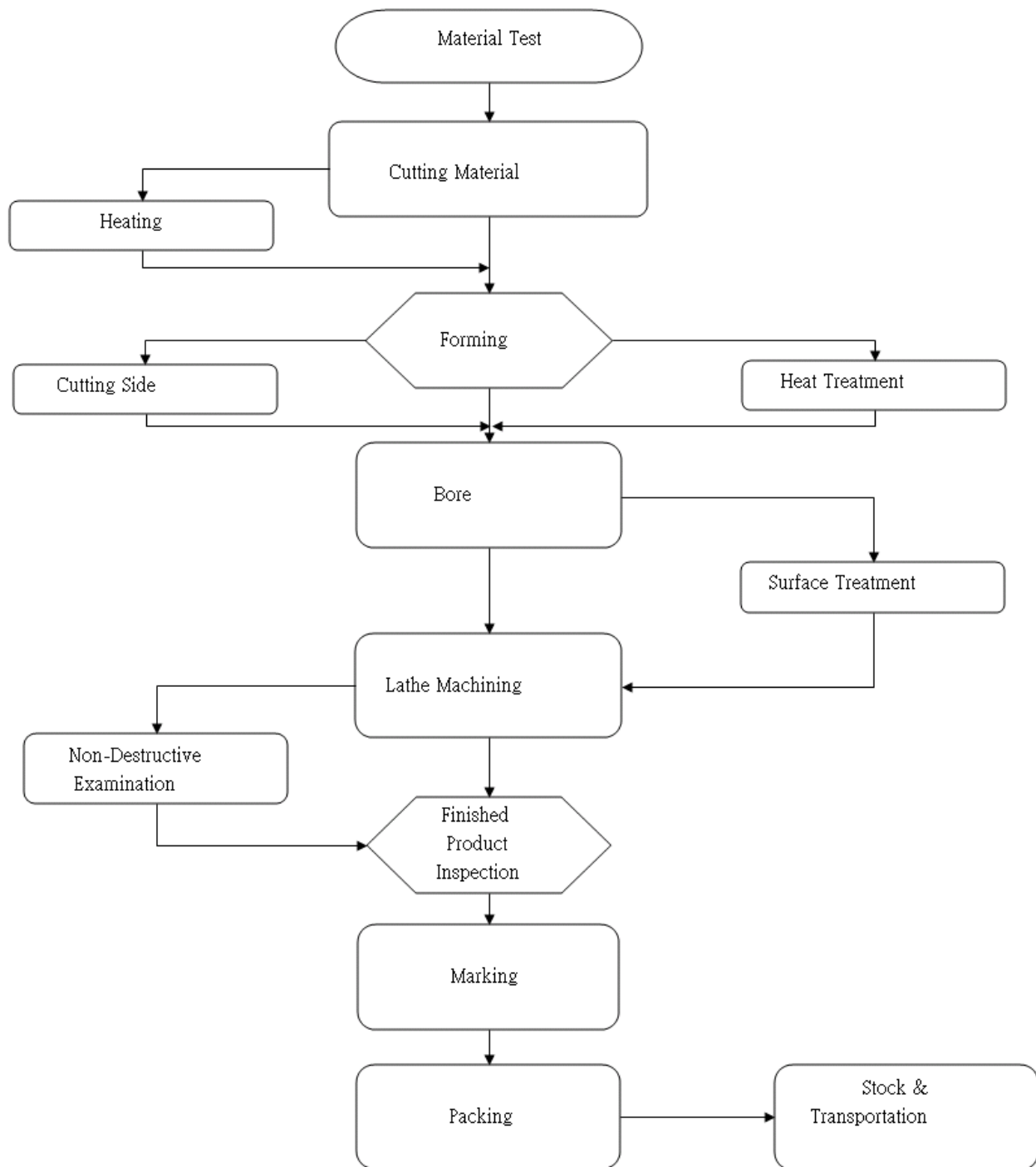
## Socket Union



(mm)

MSS SP-83 Socket Unions 3000LBS								
INCH	DN	Outside Diameter A min	Wall C min	Socket Bore B	Water way Diameter D	Nut (face to face distance) Min	Depth of Socket J min	Length Assembly Nominal L
1/8	6	21.8	3.2	10.65	6.43	3.2	9.7	41.4
1/4	8	21.8	3.3	14.10	9.45	3.2	9.7	41.4
3/8	10	25.9	3.5	17.55	13.51	3.4	9.7	46.0
1/2	15	31.5	4.1	21.70	17.07	3.7	9.7	49.0
3/4	20	37.1	4.3	27.05	21.39	4.1	12.7	56.9
1	25	45.5	5.0	33.80	27.74	4.4	12.7	62.0
1.1/4	32	54.9	5.3	42.55	35.36	5.2	12.7	71.1
1.1/2	40	61.5	5.6	48.65	41.20	5.6	12.7	76.5
2	50	75.2	6.1	61.10	52.12	6.4	15.8	86.1
2.1/2	65	91.7	7.7	73.80	64.31	7.1	15.8	102.4
3	80	109.2	8.4	89.80	77.27	8	15.8	109.0

MSS SP-83 Threaded NPT Unions 3000LBS							
INCH	DN	Outside Diameter A min	Wall C min	Water way Diameter D	Nut (face to face distance) Min	Thread standard NPT	Length Assembly Nominal L
1/8	6	14.8	2.5	6.43	3.2	1/8"	41.4
1/4	8	19.0	3.1	9.45	3.2	1/4"	41.4
3/8	10	22.9	3.2	13.51	3.4	3/8"	46.0
1/2	15	27.7	3.8	17.07	3.7	1/2"	49.0
3/4	20	33.6	4.0	21.39	4.1	3/4"	56.9
1	25	41.4	4.6	27.74	4.4	1"	62.0
1.1/4	32	50.5	4.9	35.36	5.2	1.1/4"	71.1
1.1/2	40	57.2	5.1	41.20	5.6	1.1/2"	76.5
2	50	70.1	5.6	52.12	6.4	2"	86.1
2.1/2	65	85.3	7.1	64.31	7.1	2.1/2"	102.4
3	80	102.4	7.7	77.27	8	3"	109.0



CARBON STEEL	CHEMICAL COMPOSITION %														MECHANICAL PROPERTIES							
	C	Mn	P	S	Si	Cu	Ni	Cr	Mo	Nb	N	Al	Ti	V	Cu+Ni +Cr+ Mo+V	C.E.	Tensile Strength	Yield Strength	Elonga- tion (in 2 inch)	Reduction of Area	Hardness HB	Impact Test at Room Temp.
	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	%	MPa	MPa	min, %	min, %		
A105	0.35	0.60	0.035	0.040	0.35	0.40	0.40	0.30	0.12					0.08	1.00	0.32	485	250	30	30	137	
A36	0.26	0.60	0.040	0.050	0.40	0.20											400	250	23			
A350 LF1	0.30	0.60	0.035	0.040	0.15									0.08	1.00	0.32	415	205	28	38	197	18J
A350 LF2	0.30	0.60	0.035	0.040	0.30	0.40	0.40	0.30	0.12	0.02				0.08	1.00	0.32	485	250	30	30	197	20J
A350 LF3	0.20	0.90	0.035	0.040	0.20	0.40	3.30	0.30	0.12	0.02				0.08			655	260	30	35	197	20J
P235GH	0.40	0.40	0.035	0.040	0.35	0.40	3.70	0.30	0.12	0.02	0.020			0.08			360	235	25			47J
(1.0345)	0.16	1.20	0.03	0.025	0.35	0.30	0.30	0.30	0.08	0.01			0.030	0.02	+		480					
P250GH (222.8)	0.18	0.30	0.025	0.015	0.40						0.015						410	250	25			47J
(1.0460)	0.23	0.90	0.025	0.015	0.40						0.050			0.030	0.02	+	540					
P265GH	0.20	0.50	0.03	0.025	0.40						0.020						410	265	23			47J
(1.0425)	0.20	1.40	0.03	0.025	0.40	0.30	0.30	0.30	0.08	0.01			0.030	0.02	+	530						
P295GH	0.08	0.90	0.03	0.025	0.40	0.30	0.30	0.30	0.08	0.01	0.020						460	295	22			47J
(1.0481)	0.20	1.50	0.03	0.025	0.40	0.30	0.30	0.30	0.08	0.01			0.030	0.02	+	580						
P355GH	0.10	1.00	0.03	0.025	0.60	0.30	0.30	0.30	0.08	0.01	0.020						510	355	21			47J
(1.0473)	0.22	1.70	0.03	0.025	0.40	0.30	0.30	0.30	0.08	0.01			0.030	0.02	+	650						
P245GH	0.08	0.50	0.025	0.015	0.40												410	245	25			32J
(1.0352)	0.20	1.30	0.025	0.015	0.40												410	245	25			32J
P280GH	0.08	0.90	0.025	0.015	0.40												460	280	23			48J
(1.0426)	0.20	1.50	0.025	0.015	0.40												580					
P305GH	0.15	0.90	0.025	0.015	0.40												490	305	22			48J
(1.0436)	0.20	1.60	0.025	0.015	0.40												610					
S235JR (RST37-2)	0.17	1.40	0.035	0.035	0.55	0.55				0.012							360	235	26			27J
(1.0038)	0.21	1.50	0.035	0.035	0.55												490					
S275JR	0.21	1.50	0.035	0.035	0.55					0.012							430	275	23			27J
(1.0044)	0.24	1.60	0.035	0.035	0.55	0.55											510	355	22			27J
S355JR	0.24	1.60	0.035	0.035	0.55	0.55				0.012							600					
(1.0045)	0.25	1.60	0.050	0.050	0.50												430	275	22			27J
43A	0.25	1.60	0.050	0.050	0.50												580					

+ Cr+Cu+Mo+Ni max is 0,70%.

STAINLESS STEEL			CHEMICAL COMPOSITION %											MECHANICAL PROPERTIES					
			C	Mn	P	S	Si	Ni	Cr	Mo	Co	Ti	N	Tensile Strength MPa	Yield Strength MPa	Elongation (in 2 inch) min.%	Reduction of Area min.%	Hardness HB	Impact energy J (min) at 20 °C (1) (ft)
F304	ASTM A182	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	8.00 11.00	18.00 20.00										
F304L	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	8.00 13.00	18.00 20.00										
F304/304L	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	11.00 20.00	2.00 3.00										
F316	ASTM A182	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	10.00 14.00	16.00 18.00	2.00 3.00									
F316L	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	10.00 15.00	16.00 18.00	2.00 3.00									
F316/316L	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	10.00 14.00	16.00 18.00	2.00 3.00									
F316Ti	ASTM A182	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	10.00 14.00	16.00 18.00	2.00 3.00	5°C% 0.70								
F321	ASTM A182	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	9.00 12.00	17.00 19.00		5°C% 0.70								
F347	ASTM A182	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.030 0.030	1.00 1.00	9.00 13.00	17.00 19.00		10°C% 1.10								
F51 (S31803)	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.030 0.030	0.020 0.020	1.00 1.00	4.50 6.50	21.00 23.00	2.50 3.00		0.08 0.20							
F60 (S32205)	ASTM A182	Min% Max%	0.030 0.030	2.00 2.00	0.030 0.030	0.020 0.020	1.00 1.00	4.50 6.50	22.00 23.00	3.00 3.50		0.14 0.20							
EN 1.4301	DIN EN 10222-5	Min% Max%	0.070 0.070	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	8.00 10.50	17.00 19.50			0.11							
EN 1.4307	DIN EN 10222-5	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	8.00 10.00	17.50 19.50			0.11							
EN 1.4301/1.4307	DIN EN 10222-5	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	8.00 10.00	17.50 19.50	2.00 2.50		0.11							
EN 1.4401	DIN EN 10222-5	Min% Max%	0.070 0.070	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	10.00 13.00	16.50 18.50	2.00 2.50		0.11							
EN 1.4404	DIN EN 10222-5	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	10.00 13.00	16.50 18.50	2.00 2.50		0.11							
EN 1.4401/1.4404	DIN EN 10222-5	Min% Max%	0.030 0.030	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	10.00 13.00	16.50 18.50	2.00 2.50		0.11							
EN 1.4541	DIN EN 10222-5	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	9.00 12.00	17.00 19.00		5°C% 0.70								
EN 1.4571	DIN EN 10222-5	Min% Max%	0.080 0.080	2.00 2.00	0.045 0.045	0.015 0.015	1.00 1.00	10.50 13.50	16.50 18.50	2.00 2.50	5°C% 0.70								
BF Z 3 ON 19-09	NF E 29-204	Min% Max%	0.030 0.030	2.04 2.04	0.045 0.045	0.035 0.035	0.80 0.80	8.00 10.10	18.00 19.20										
BF Z 7 ON 18-09	NF E 29-204	Min% Max%	0.080 0.080	2.04 2.04	0.045 0.045	0.035 0.035	0.80 0.80	8.00 10.10	17.00 19.20										
BF Z3 OND 17-11-02	NF E 29-204	Min% Max%	0.030 0.030	2.04 2.04	0.045 0.045	0.035 0.035	0.80 0.80	10.00 12.15	16.00 18.20	2.00 2.60									
BF Z7 OND 17-11-02	NF E 29-204	Min% Max%	0.080 0.080	2.04 2.04	0.045 0.045	0.035 0.035	0.80 0.80	10.00 12.15	16.00 18.20	2.00 2.60									
SUS F304	JIS G3214	Min% Max%	0.080 0.080	2.00 2.00	0.040 0.040	0.030 0.030	1.00 1.00	8.00 11.00	18.00 20.00										
SUS F304L	JIS G3214	Min% Max%	0.030 0.030	2.00 2.00	0.040 0.040	0.030 0.030	1.00 1.00	9.00 13.00	18.00 20.00										
SUS F316	JIS G3214	Min% Max%	0.080 0.080	2.00 2.00	0.040 0.040	0.030 0.030	1.00 1.00	10.00 14.00	16.00 18.00	2.00 3.00									
SUS F316L	JIS G3214	Min% Max%	0.030 0.030	2.00 2.00	0.040 0.040	0.030 0.030	1.00 1.00	12.00 15.00	16.00 18.00	2.00 3.00									

