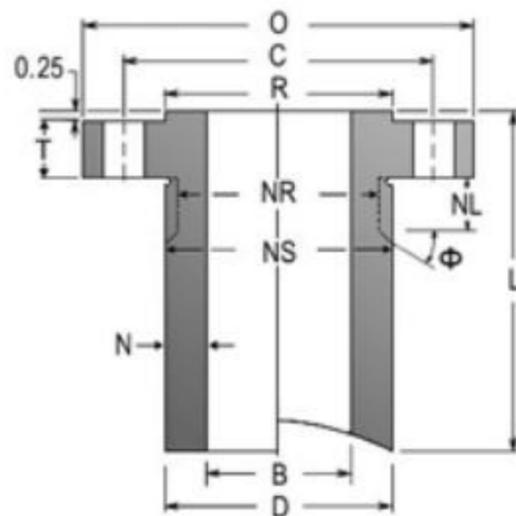
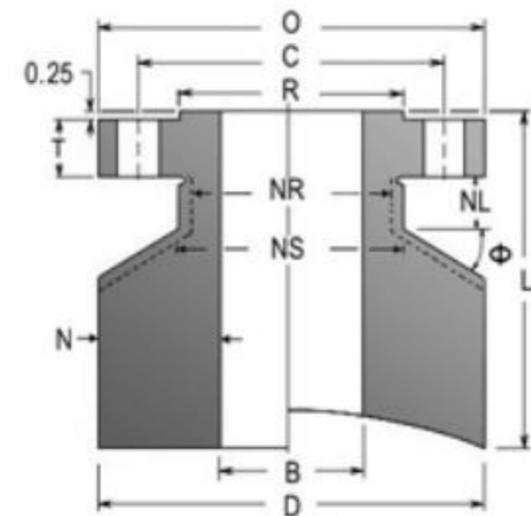


LONG WELD NECK "LWN"



HEAVY BARREL "HB"



EQUAL BARREL "E"

(enlarge)

(enlarge)

(enlarge)

Nom Size NPS	Flange O.D. O	Flange Thick. T	RF O.D. R	Barrel O.D.			Bore			Neck Thickness			Bolting			Nut			Stud Bolt			Weights				Length Base L	
				LWN	HB	F	LWN/F	HB	LWN	HB	F	No. of Holes	Hole Size	Bolt Circle C	Stop Dia. NS	Relief Dia. NR	Relief Length NL	Size	RF Length	RTJ Length	LWN		HB		E		
				D	D	D	B	B	N	N	N										Base	Per 1"	Base	Per 1"	Base		Per 1"
1/2	3.75	0.56	1.38	1.50	1.75	3.75	0.50	0.55	0.50	0.60	1.63	4	0.62	2.62	1.75	1.50	0.75	.50	3	3	5	0.4	7	0.6	24	3.1	9
3/4	4.62	0.62	1.69	1.88	2.19	4.62	0.75	0.74	0.57	0.73	1.94	4	0.75	3.25	2.19	1.88	0.88	.63	3.50	3.50	8	0.7	11	0.9	36	4.6	9
1	4.88	0.69	2.00	2.12	2.44	4.88	1.00	0.96	0.56	0.74	1.94	4	0.75	3.50	2.44	2.12	0.88	.63	3.50	3.50	9	0.8	12	1.1	39	5.1	9
1 1/4	5.25	0.81	2.50	2.50	2.81	5.25	1.25	1.28	0.63	0.77	2.00	4	0.75	3.88	2.81	2.50	0.88	.63	3.75	3.75	13	1.0	15	1.4	44	5.8	9
1 1/2	6.12	0.88	2.88	2.75	3.25	6.12	1.50	1.50	0.63	0.88	2.31	4	0.88	4.50	3.25	2.75	1.00	.75	4.25	4.25	16	1.2	21	1.9	59	7.8	9
2	6.50	1.00	3.62	3.31	3.94	6.50	2.00	1.94	0.66	1.00	2.25	8	0.75	5.00	3.94	3.31	0.88	.63	4.25	4.25	20	1.5	29	2.6	67	8.5	9
2 1/2	7.50	1.12	4.12	3.94	4.63	7.50	2.50	2.32	0.72	1.15	2.50	8	0.88	5.88	4.62	3.94	1.00	.75	5	4.75	27	2.1	39	3.6	85	11	9
3	8.25	1.25	5.00	4.62	5.38	8.25	3.00	2.90	0.81	1.24	2.63	8	0.88	6.62	5.38	4.62	1.00	.75	5	5.25	36	2.7	50	4.6	104	13	9
3 1/2	9.00	1.38	5.50	5.25	5.81	9.00	3.50	3.36	0.88	1.23	2.75	8	1.00	7.25	5.81	5.25	1.12	.88	5.50	5.50	45	3.4	57	5.0	116	15	9
4	10.75	1.50	6.19	6.00	7.06	10.75	4.00	3.83	1.00	1.62	3.38	8	1.00	8.50	7.06	6.00	1.12	.88	5.75	6	77	4.5	113	7.8	238	22	12
5	13.00	1.75	7.31	7.50	8.88	13.00	5.00	4.81	1.25	2.04	4.00	8	1.12	10.50	8.88	7.50	1.25	1	6.50	6.50	123	7	180	12	336	32	12
6	14.00	1.88	8.50	8.75	9.88	14.00	6.00	5.76	1.38	2.06	4.00	12	1.12	11.50	9.88	8.75	1.25	1	6.75	7	152	9	207	14	373	36	12
8	16.50	2.19	10.62	10.75	11.94	16.50	8.00	7.62	1.38	2.16	4.25	12	1.25	13.75	11.94	10.75	1.38	1.13	7.75	8	207	11	277	19	578	46	12
10	20.00	2.50	12.75	13.50	15.00	20.00	10.00	9.56	1.75	2.72	5.00	16	1.38	17.00	15.00	13.50	1.50	1.25	8.50	8.75	324	18	433	30	683	67	12
12	22.00	2.62	15.00	15.75	17.25	22.00	12.00	11.38	1.88	2.94	5.00	20	1.38	19.25	17.25	15.75	1.50	1.25	8.75	9	393	23	533	37	779	76	12
14	23.75	2.75	16.25	17.00	18.56	23.75	14.00	14.00	1.50	2.28	4.88	20	1.50	20.75	18.56	17.00	1.62	1.38	9.25	9.50	471	21	631	33	1149	82	16
16	27.00	3.00	18.50	19.50	21.38	27.00	16.00	16.00	1.75	2.69	5.50	20	1.62	23.75	21.38	19.50	1.75	1.50	10	10.25	638	28	856	45	1471	105	16
18	29.25	3.25	21.00	21.50	23.19	29.25	18.00	18.00	1.75	2.60	5.63	20	1.75	25.75	23.19	21.50	1.88	1.63	10.75	11	731	31	941	48	1628	118	16
20	32.00	3.50	23.00	24.00	25.94	32.00	20.00	20.00	2.00	2.97	6.00	24	1.75	28.50	25.94	24.00	1.88	1.63	11.50	11.75	916	39	1180	61	1920	139	16
24	37.00	4.00	27.25	28.25	30.06	37.00	24.00	24.00	2.13	3.03	6.50	24	2.00	33.00	30.06	28.25	2.12	1.88	13	13.5	1210	49	1486	73	2376	176	16

Codes: All connections are manufactured in compliance with ASME Section II, Section VIII, Div. 1, and ASME B16.5. Products may be ordered to special requirements or other standard codes such as ASME Section I, III and Section VIII, Div. 2, ASME B31.1 and B16.47 Series A&B, API and ASTM.

Materials: SA 105 in accordance with ASME Section II. Other material grades and compositions available upon request. See technical section.

Bores: Bore sizes listed are standard, smaller or larger bores are available upon request.

Facing: The flange thickness "T" excludes 0.25 inch raised face per ASME B16.5. This differs on Class 150 and 300. Special facing can be supplied as needed upon request.

Nut Relief: All connections except standard LWN's will be supplied with a "nut stop O.D." unless a "nut relief O.D." is specified.

Lengths: Listed lengths are standards used for base weight calculations. Other lengths are available upon request.

Φ 30° Sect VIII DIV 1 • 45° Sect VIII DIV 2

Complete general notes on standard and variable body connections.