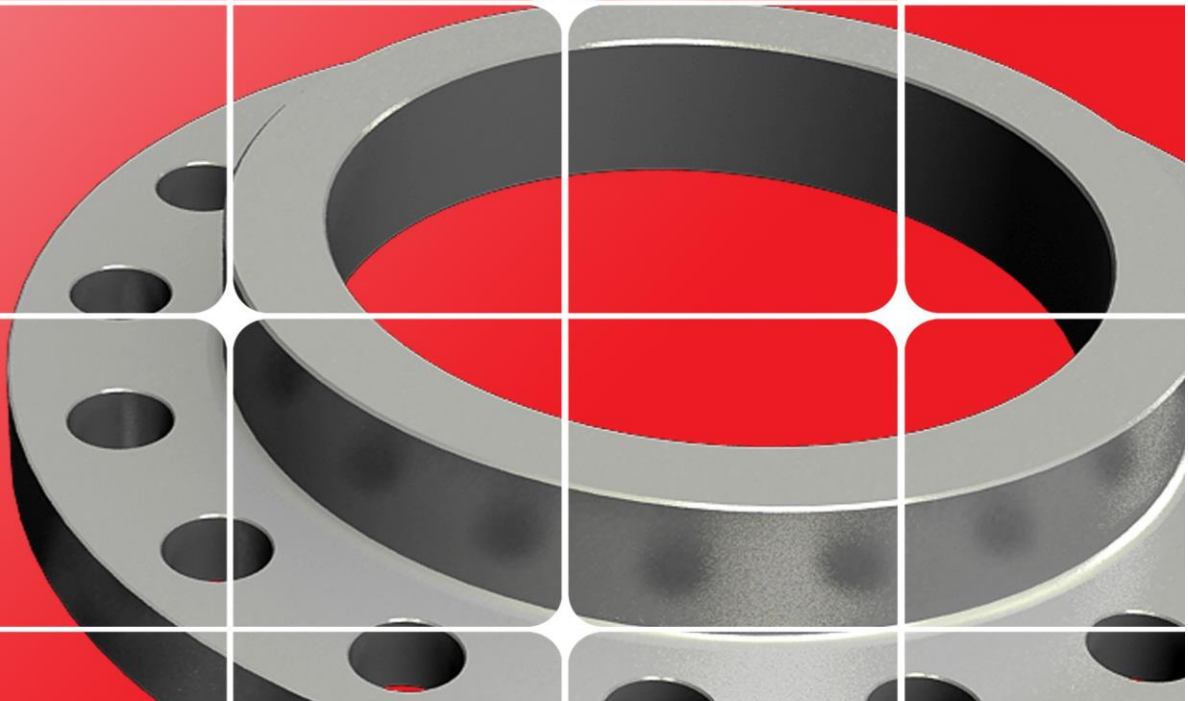
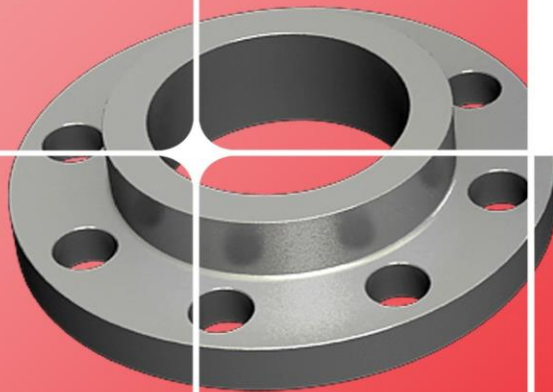
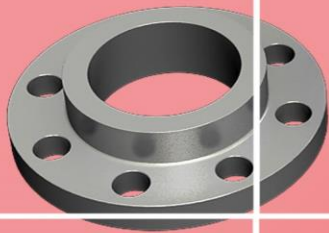


ANSI / ASME **B 16.1**

- **W**eld Neck Flanges
 - **S**lip-On Flanges
 - **B**lind Flanges
-
- Class **125** Light Weight Flanges
 - Class **125** Weld Neck Flanges
 - Class **125** Slip-On Flanges
 - Class **250** Flanges



ASME B16.1 Industry Standard Flange Specifications	
Flange Types:	Welding Neck Flange, Slip-On Flange
Dimension Standards:	B16.1 Flange
Pressure Class:	175-150 psi, 250 psi
Sizes:	1/2" NB to 96" NB
Material	Carbon Steel, Stainless Steel, Alloy Steel
Surface Treatment:	Anti-rust Paint, Oil Black Paint, Zinc Plated, Cold and Hot Dip Galvanized

Industries and Applications

This Standard for Classes 25, 125, and 250 Cast Iron Pipe Flanges and Flanged Fittings. It includes (a) pressure-temperature ratings, (b) sizes and method of designating openings of reducing fittings, (c) marking, (d) materials, (e) dimensions and tolerances, (f) bolting and gaskets (g) pressure testing. An ASME B16.1 Class 125 flange is rated for 125 psi at 353°F (178°C), which is the boiling temperature for water at that pressure. As temperature increases, the pressure rating of the flange decreases.

ASME B 16.1 Industry Standard Flanges are critical in countless systems, such as: Water and Waste Water Management, High volume valves and vessels, Industrial pumps and manufacturing systems, Food and beverage processing.

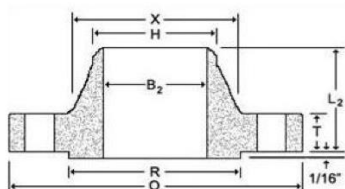
ASME B16.1 Industry Standard Types



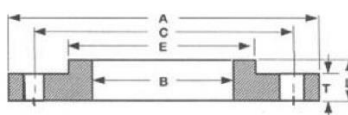
B16.1 I/S Weld Neck Flange



B16.1 I/S Slip-On Flange



B16.1 I/S Weld Neck Flange



B16.1 I/S Slip-On Flange

ASME B16.1 Industry Standard Class

Class 125 Light Weight Flanges	Class 125 Weld Neck Flanges
Class 125 Slip-On Flanges	Class 250 Flanges

ASME-ANSI B16.1 Industry Standard Class 125 Light Weight (175-150 psi*) Flange Dimensions										
Nom Size	OD	Thicknes s	Dia at Base	Bore	LTH	Drilling				Weight
	A	T	E	B	L	Bolt Circle C	Bolt Length	Hole Dia	# of Holes	
4	9	0.5	5.312	4.57	0.875	7.5	2.75	0.75	8	7
5	10	0.562	6.438	5.66	1.25	8.5	3.25	0.875	8	9
6	11	0.562	7.562	6.72	1.25	9.5	3.25	0.875	8	11
8	13.5	0.562	9.688	8.72	1.25	11.75	3.25	0.875	8	15
10	16	0.688	12	10.88	1.25	14.25	3.75	1	12	22
12	19	0.688	14.375	12.88	1.25	17	3.75	1	12	33
14	21	0.75	15.75	14.19	1.25	18.75	4	1.125	12	43
16	23.5	0.75	18	16.19	1.25	21.25	4	1.125	16	52
18	25	0.75	19.875	18.19	1.25	22.75	4.25	1.25	16	52
20	27.5	0.75	22	20.19	1.25	25	4.25	1.25	20	61
22	29.5	1	24	22.19	1.75	27.25	5	1.375	20	92
24	32	1	26.125	24.19	1.75	29.5	5	1.375	20	105
26	34.25	1	28.5	26.19	1.75	31.75	5	1.375	24	119
28	36.5	1	30.5	28.19	1.75	34	5	1.375	28	130
30	38.75	1	32.5	30.19	1.75	36	5	1.375	28	144
32	41.75	1.125	34.75	32.19	1.75	38.5	6	1.625	28	182
34	43.75	1.125	36.75	34.19	1.75	40.5	6	1.625	32	191
36	46	1.125	38.75	36.19	1.75	42.75	6	1.625	32	207
38	48.75	1.125	40.75	38.19	1.75	45.25	6	1.625	32	237
40	50.75	1.125	43	40.19	1.75	47.25	6	1.625	36	249
42	53	1.25	45	42.19	1.75	49.5	6.25	1.625	36	287
44	55.25	1.25	47	44.19	2.25	51.75	6.25	1.625	40	334
46	57.25	1.25	49	46.19	2.25	53.75	6.25	1.625	40	348
48	59.5	1.375	51	48.19	2.5	56	6.5	1.625	44	407
50	61.75	1.375	53	50.19	2.5	58.25	7	1.875	44	421
52	64	1.375	55	52.19	2.5	60.5	7	1.875	44	448
54	66.25	1.375	57	54.19	2.5	62.75	7	1.875	44	475
60	73	1.5	63	60.19	2.75	69.25	7.25	1.875	52	605
66	80	1.5	69	66.19	2.75	76	7.25	1.875	52	718
72	86.5	1.5	75	72.19	2.75	82.5	7.25	1.875	60	803
78	93	1.75	81.25	78.19	3	89	8.25	2.125	64	1010
84	99.75	1.75	87.5	84.19	3	95.5	8.25	2.125	64	1160
90	106.5	2	93.75	90.19	3.25	102	9.5	2.438	68	1430
96	113.25	2	100	96.19	3.25	108.5	9.5	2.438	68	1618

* Dimensions are in inch and weight in pounds.

* Class 125 Light Weight (175-150 psi*) is same as AWWA Class D Hub

* Hub flanges are to be used on pipe that has an OD equal to the nominal pipe size in the first column.

* Pressure Ratings are from AWWA Table 3 Class D.

* Pressure rating at atmospheric temperature: sizes 4-12 in. inclusive, 175 psi; sizes larger than 12 in., 150 psi.

* These flanges have the same diameter and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges.

* In sizes 24 inch and smaller they also match up to ANSI/ASME B16.5 150-psi standard for steel flanges.

ASME-ANSI B16.1 Industry Standard Class 125 Weld Neck (175-150 psi*) Flange Dimensions

Nom Size	OD	Thickne ss	OD of RF	Dia at Base	Bor e	Dia Be vel	LTH	Drilling				Weight
								Bolt Circle	Bolt Length	Hole Dia	# of Holes	
	O	C	R	X	B	A	Y					
6	11	1	8.5	7.56	To be specified by purchaser	6.63	3.5	9.5	4	0.88	8	24
8	13.5	1.13	10.63	9.69		8.63	4	11.75	4.5	0.88	8	39
10	16	1.19	12.75	12		10.75	4	14.25	5	1	12	52
12	19	1.25	15	14.38		12.75	4.5	17	5	1	12	80
14	21	1.38	16.25	15.75		14	5	18.75	5.5	1.13	12	110
16	23.5	1.44	18.5	18		16	5	21.25	5.75	1.13	16	140
18	25	1.56	21	19.88		18	5.5	22.75	6	1.25	16	150
20	27.5	1.69	23	22		20	5.69	25	6.5	1.25	20	180
22	29.5	1.81	25.25	24.25		22	5.88	27.25	6.75	1.38	20	225
24	32	1.88	27.25	26.13		24	6	29.5	7	1.38	20	255
26	34.25	2	29.5	28.5		26	5	31.75	7.25	1.38	24	265
28	36.5	2.06	31.5	30.75		28	5.06	34	7.5	1.38	28	295
30	38.75	2.13	33.75	32.75		30	5.13	36	7.75	1.38	28	340
32	41.75	2.25	36	35		32	5.25	38.5	8.5	1.63	28	410
34	43.75	2.31	38	37		34	5.31	40.5	8.5	1.63	32	440
36	46	2.38	40.25	39.25		36	5.38	42.75	8.75	1.63	32	495
38	48.75	2.38	42.25	41.75		38	5.38	45.25	8.75	1.63	32	570
40	50.75	2.5	44.25	43.75		40	5.5	47.25	9	1.63	36	620
42	53	2.63	47	46		42	5.63	49.5	9.25	1.63	36	710
44	55.25	2.63	49	48		44	5.63	51.75	9.25	1.63	40	750
46	57.25	2.69	51	50		46	5.68	53.75	9.25	1.63	40	800
48	59.5	2.75	53.5	52.25		48	5.75	56	9.5	1.63	44	870
50	61.75	2.75	55.5	54.25		50	5.75	58.25	10	1.88	44	900
52	64	2.88	57.5	56.5		52	5.88	60.5	10.25	1.88	44	1000
54	66.25	3	59.75	58.75		54	6	62.75	10.5	1.88	44	1100
60	73	3.13	66	65.25		60	6.13	69.25	11	1.88	52	1350
66	80	3.38	—	71.5		66	6.38	76	11.5	1.88	52	1775
72	86.5	3.5	—	78.5		72	6.5	82.5	11.75	1.88	60	2100
84	99.75	3.88	—	90.5		84	6.88	95.5	13	2.13	64	2825
96	113.25	4.25	—	102.75		96	7.25	108.5	14.25	2.44	68	3800

* Dimensions are in inches, weight in pounds.

* Can be furnished with a flat face. These flanges have the same OD and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges.

ASME-ANSI B16.1 Industry Standard Class 125 Slip-On (175-150 psi*) Flange Dimensions										
Nom Size	OD		Dia at Base	Bore	LTH	Drilling				
	A	T	E	B	L	Bolt Circle	Bolt Length	Hole Dia	# of Holes	Weight
						C				
4	9	0.938	5.312	4.57	1.312	7.5	3.75	0.75	8	13
5	10	0.938	6.438	5.66	1.438	8.5	4	0.875	8	14
6	11	1	7.562	6.72	1.562	9.5	4	0.875	8	17
8	13.5	1.125	9.688	8.72	1.75	11.75	4.5	0.875	8	28
10	16	1.188	12	10.88	1.938	14.25	5	1	12	37
12	19	1.25	14.375	12.88	2.188	17	5	1	12	59
14	21	1.375	15.75	14.19	2.25	18.75	5.5	1.125	12	78
16	23.5	1.438	18	16.19	2.5	21.25	5.75	1.125	16	101
18	25	1.562	19.875	18.19	2.688	22.75	6	1.25	16	110
20	27.5	1.688	22	20.19	2.875	25	6.5	1.25	20	139
22	29.5	1.812	24	22.19	3.125	27.25	6.75	1.375	20	162
24	32	1.875	26.125	24.19	3.25	29.5	7	1.375	20	197
26	34.25	2	28.5	26.19	3.375	31.75	7.25	1.375	24	235
28	36.5	2.062	30.75	28.19	3.438	34	7.5	1.375	28	269
30	38.75	2.125	32.75	30.19	3.5	36	7.75	1.375	28	303
32	41.75	2.25	35	32.19	3.625	38.5	8.5	1.625	28	375
34	43.75	2.312	37	34.19	3.688	40.5	8.5	1.625	32	401
36	46	2.375	39.25	36.19	3.75	42.75	8.75	1.625	32	452
38	48.75	2.375	41.75	38.19	3.75	45.25	8.75	1.625	32	528
40	50.75	2.5	43.75	40.19	3.875	47.25	9	1.625	36	573
42	53	2.625	46	42.19	4	49.5	9.25	1.625	36	648
44	55.25	2.625	48	44.19	4	51.75	9.25	1.625	40	688
46	57.25	2.688	50	46.19	4.062	53.75	9.25	1.625	40	733
48	59.5	2.75	52.25	48.19	4.125	56	9.5	1.625	44	799
50	61.75	2.75	54.25	50.19	4.125	58.25	10	1.875	44	827
52	64	2.875	56.5	52.19	4.25	60.5	10.25	1.875	44	922
54	66.25	3	58.75	54.19	4.375	62.75	10.5	1.875	44	1024
60	73	3.125	65.25	60.19	4.5	69.25	11	1.875	52	1253
66	80	3.375	71.5	66.19	4.875	76	11.5	1.875	52	1623
72	86.5	3.5	78.5	72.19	5	82.5	11.75	1.875	60	1922
78	93	3.875	84.5	78.19	5.375	89	13	2.125	64	2279
84	99.75	3.875	90.5	84.19	5.375	95.5	13	2.125	64	2586
90	106.5	4.25	96.75	90.19	5.75	102	14.25	2.438	68	3061
96	113.25	4.25	102.75	96.19	5.75	108.5	14.25	2.438	68	3432

Dimensions are in inches. Weights are in pounds.

Same as AWWA Table 4 Class E

* Commonly referred to as a class 150# in larger diameter. Can be furnished with a raised face.

* Pressure ratings from AWWA table 4 Class E. Pressure rating at atmospheric temperature is 275 psi.

* These flanges have the same OD and drilling as ANSI/ASME B16.1 class 125 cast-iron flanges.

* In sizes 24 inch and smaller, they also match ANSI/ASME B16.5 150-psi standard for steel flanges.

ASME-ANSI B16.1 Industry Standard **Class 250** Flange Dimensions

Nom. Size	OD	Thick ness	OD of RF	Dia at Base	Bore		LTH		Drilling				Weights		
					W N	SO	Weld Neck	SO	Bolt Circle	Bolt Length	Hole Dia	# Holes	Weld Neck	Slip-on	Blind
	O	T	R	X	B ₂	B	L ₂	L							
26	38.25	2.81	32.44	30.5	To be specified by purchaser	26.25	5.81	4.75	34.5	10	1.88	28	534	531	916
28	40.75	2.94	34.94	33		28.25	5.94	5	37	10.25	1.88	28	629	637	1095
30	43	3	37.19	35.25		30.25	6	5	39.25	10.5	1.88	28	702	707	1236
32	45.25	3.12	39.44	37.5		32.25	6.12	5.12	41.5	10.75	1.88	28	793	801	1424
34	47.5	3.25	41.44	39.5		34.25	6.25	5.25	43.5	11.25	1.88	28	882	889	1649
36	50	3.38	43.69	41.5		36.25	6.38	5.38	46	12	2.13	32	969	970	1884
38	52.25	3.44	45.69	43.5		38.25	6.44	5.5	48	12	2.13	32	1057	1062	2094
40	54.25	3.56	47.94	45.75		40.25	6.56	5.5	50.25	12.25	2.13	36	1158	1172	2336
42	57	3.69	50.44	47.75		42.25	6.94	5.62	52.75	12.5	2.125	36	1318	1288	2673
44	59.25	3.75	52.69	49.75		44.25	7	5.75	55	12.75	2.13	36	1423	1397	2935
46	61.5	3.88	54.94	51.75		46.25	7.12	5.88	57.25	13	2.13	40	1536	1510	3272
48	65	4	58.44	54		48.25	7.25	6	60.75	13.25	2.13	40	1824	1797	3768

Dimensions are in inches, weight in pounds.

*AWWA Pressure rating at atmospheric temperature is 300 psi. These flanges have the same OD and drilling as ANSI/ASME B16.1 class 250 cast iron pipe and flanged fittings.