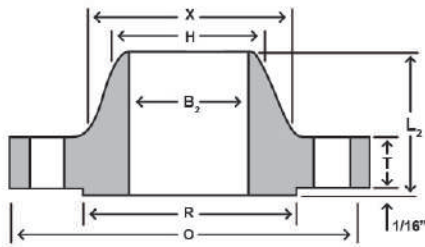
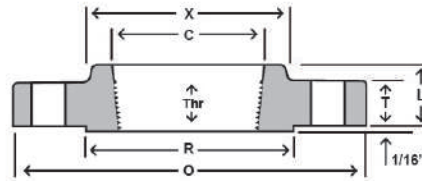


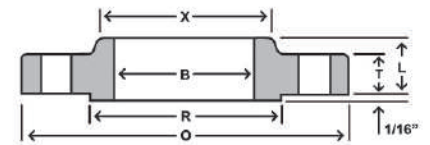
ANSI B16.5 Class 300 Forged Flanges



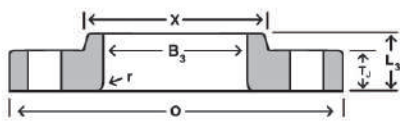
WELD NECK



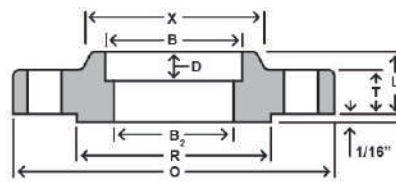
THREADED



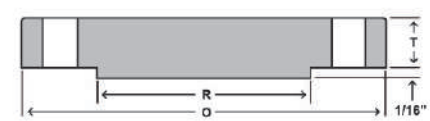
SLIP—ON



LAP JOINT



SOCKET WELD



BLIND

Nom. Pipe Size	O	T	T ₁	R	X	#/Dia of Holes ^a	Bolt Circle Dia	B	B ₂ ^b	B ₃	H	L	L ₂	L ₃ ^c	r	C	D	Thr
½	3.75	0.50	0.56	1.38	1.50	4-0.63	2.62	0.88	0.62	0.90	0.84	0.81	2.00	0.88	0.12	0.93	0.38	0.62
¾	4.62	0.56	0.62	1.69	1.88	4-0.75	3.25	1.09	0.82	1.11	1.05	0.94	2.19	1.00	0.12	1.14	0.44	0.62
1	4.88	0.62	0.69	2.00	2.12	4-0.75	3.50	1.36	1.05	1.38	1.32	1.00	2.38	1.06	0.12	1.41	0.50	0.69
1¼	5.25	0.69	0.75	2.50	2.50	4-0.75	3.88	1.70	1.38	1.72	1.66	1.00	2.50	1.06	0.19	1.75	0.56	0.81
1½	6.12	0.75	0.81	2.88	2.75	4-0.88	4.50	1.95	1.61	1.97	1.90	1.13	2.63	1.19	0.25	1.98	0.62	0.88
2	6.50	0.81	0.88	3.62	3.31	8-0.75	5.00	2.44	2.07	2.46	2.38	1.25	2.69	1.31	0.31	2.50	0.69	1.12
2½	7.50	0.94	1.00	4.12	3.94	8-0.88	5.88	2.94	2.47	2.97	2.88	1.44	2.94	1.50	0.31	3.00	0.75	1.25
3	8.25	1.06	1.12	5.00	4.62	8-0.88	6.62	3.57	3.07	3.60	3.50	1.63	3.06	1.69	0.38	3.63	0.81	1.25
3½	9.00	1.12	1.19	5.50	5.25	8-0.88	7.25	4.07	3.55	4.10	4.00	1.69	3.13	1.75	0.38	4.13	...	1.44
4	10.00	1.19	1.25	6.19	5.75	8-0.88	7.88	4.57	4.03	4.60	4.50	1.82	3.32	1.88	0.44	4.63	...	1.44
5	11.00	1.31	1.38	7.31	7.00	8-0.88	9.25	5.66	5.05	5.69	5.56	1.94	3.82	2.00	0.44	5.69	...	1.69
6	12.50	1.38	1.44	8.50	8.12	12-0.88	10.62	6.72	6.07	6.75	6.63	2.00	3.82	2.06	0.50	6.75	...	1.81
8	15.00	1.56	1.62	10.62	10.25	12-1.00	13.00	8.72	7.98	8.75	8.63	2.38	4.32	2.44	0.50	8.75	...	2.00
10	17.50	1.81	1.88	12.75	12.62	16-1.12	15.25	10.88	10.02	10.92	10.75	2.56	4.56	3.75	0.50	10.88	...	2.19
12	20.50	1.94	2.00	15.00	14.75	16-1.25	17.75	12.88	12.00	12.92	12.75	2.82	5.06	4.00	0.50	12.94	...	2.38
14	23.00	2.06	2.12	16.25	16.75	20-1.25	20.25	14.14	13.25	14.18	14.00	2.94	5.56	4.38	0.50	14.19	...	2.50
16	25.50	2.19	2.25	18.50	19.00	20-1.38	22.50	16.16	15.25	16.19	16.00	3.19	5.69	4.75	0.50	16.19	...	2.69
18	28.00	2.31	2.38	21.00	21.00	24-1.38	24.75	18.18	17.25	18.20	18.00	3.44	6.19	5.12	0.50	18.19	...	2.75
20	30.50	2.44	2.50	23.00	23.12	24-1.38	27.00	20.20	19.25	20.25	20.00	3.69	6.32	5.50	0.50	20.19	...	2.88
22	33.00	2.57	2.63	25.25	25.25	24-1.63	29.25	22.22	21.25	22.25	22.00	3.93	6.43	5.75	0.50	22.19	...	3.13
24	36.00	2.69	2.75	27.25	27.62	24-1.63	32.00	24.25	23.25	24.25	24.00	4.13	6.56	6.00	0.50	24.19	...	3.25

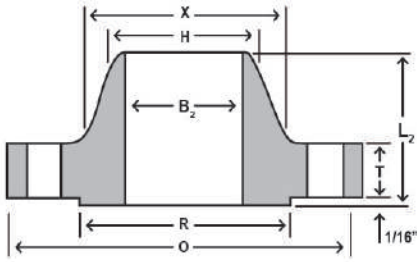
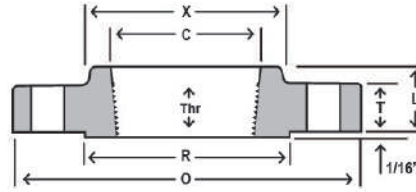
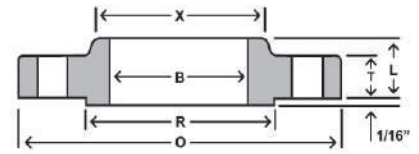
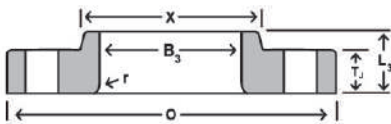
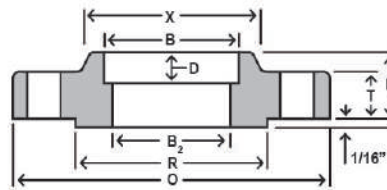
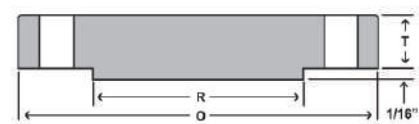
DIMENSIONS ARE IN INCHES

[A] Bolt hole diameter 1/8" larger than bolt diameter

[B] Standard bore dimensions provided. See bore chart for other wall thicknesses

[C] This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub.

ANSI B16.5 Class 150 Forged Flanges


WELD NECK

THREADED

SLIP-ON

LAP JOINT

SOCKET WELD

BLIND

Nom. Pipe Size	O	T	T ₀	R	X	#/Dia of Holes ^a	Bolt Circle Dia	B	B ₂ ^b	B ₃	H	L	L ₂	L ₃ ^c	r	D	Thr
½	3.50	0.38	0.44	1.38	1.19	4-0.62	2.38	0.88	0.62	0.90	0.84	0.56	1.81	0.62	0.12	0.38	0.62
¾	3.88	0.44	0.50	1.69	1.50	4-0.62	2.75	1.09	0.82	1.11	1.05	0.56	2.00	0.62	0.12	0.44	0.62
1	4.25	0.50	0.56	2.00	1.94	4-0.62	3.12	1.36	1.05	1.38	1.32	0.62	2.12	0.69	0.12	0.50	0.69
1¼	4.62	0.56	0.62	2.50	2.31	4-0.62	3.50	1.70	1.38	1.72	1.66	0.75	2.19	0.81	0.19	0.56	0.81
1½	5.00	0.62	0.69	2.88	2.56	4-0.62	3.88	1.95	1.61	1.97	1.90	0.81	2.38	0.88	0.25	0.62	0.88
2	6.00	0.69	0.75	3.62	3.06	4-0.75	4.75	2.44	2.07	2.46	2.38	0.94	2.44	1.00	0.31	0.69	1.00
2½	7.00	0.81	0.88	4.12	3.56	4-0.75	5.50	2.94	2.47	2.97	2.88	1.06	2.69	1.12	0.31	0.75	1.12
3	7.50	0.88	0.94	5.00	4.25	4-0.75	6.00	3.57	3.07	3.60	3.50	1.12	2.69	1.19	0.38	0.81	1.19
3½	8.50	0.88	0.94	5.50	4.81	8-0.75	7.00	4.07	3.55	4.10	4.00	1.19	2.75	1.25	0.38	0.88	1.25
4	9.00	0.88	0.94	6.19	5.31	8-0.75	7.50	4.57	4.03	4.60	4.50	1.25	2.94	1.31	0.44	0.94	1.31
5	10.00	0.88	0.94	7.31	6.44	8-0.88	8.50	5.66	5.05	5.69	5.56	1.38	3.44	1.44	0.44	0.94	1.44
6	11.00	0.94	1.00	8.50	7.56	8-0.88	9.50	6.72	6.07	6.75	6.63	1.50	3.44	1.56	0.50	1.06	1.56
8	13.50	1.06	1.12	10.62	9.69	8-0.88	11.75	8.72	7.98	8.75	8.63	1.69	3.94	1.75	0.50	1.25	1.75
10	16.00	1.12	1.19	12.75	12.00	12-1.00	14.25	10.88	10.02	10.92	10.75	1.88	3.94	1.94	0.50	1.31	1.94
12	19.00	1.19	1.25	15.00	14.38	12-1.00	17.00	12.88	12.00	12.92	12.75	2.12	4.44	2.19	0.50	1.56	2.19
14	21.00	1.31	1.38	16.25	15.75	12-1.12	18.75	14.14	13.25	14.18	14.00	2.19	4.94	3.12	0.50	1.63	2.25
16	23.50	1.38	1.44	18.50	18.00	16-1.12	21.25	16.16	15.25	16.19	16.00	2.44	4.94	3.44	0.50	1.75	2.50
18	25.00	1.50	1.56	21.00	19.88	16-1.25	22.75	18.18	17.25	18.20	18.00	2.62	5.44	3.81	0.50	1.94	2.69
20	27.50	1.62	1.69	23.00	22.00	20-1.25	25.00	20.20	19.25	20.25	20.00	2.81	5.62	4.06	0.50	2.13	2.88
22	29.50	1.75	1.81	25.25	24.25	20-1.38	27.25	22.22	21.25	22.25	22.00	3.07	5.82	4.25	0.50	2.38	3.13
24	32.00	1.81	1.88	27.25	26.12	20-1.38	29.50	24.25	23.25	24.25	24.00	3.19	5.94	4.38	0.50	2.50	3.25

DIMENSIONS ARE IN INCHES

[A] Bolt hole diameter 1/8" larger than bolt diameter

[B] Standard bore dimensions provided. See bore chart for other wall thicknesses

[C] This dimension is commonly associated with "true" lap joints. Industry standard is to make to the slip on length through the hub.

REDUCCIONES

NPS	DIMENSIONES				
	DIÁMETRO EXTERIOR	DIÁMETRO EXTERIOR	CENTRO A EXTREMO	CENTRO A EXTREMO	LONGITUD
	D	D1	C	M	H
3/4" x 3/8"	27.00	17.00	29.00	29.00	38.00
3/4" x 1/2"	27.00	21.00	29.00	29.00	38.00
1" x 1 1/2"	33.00	21.00	38.00	38.00	51.00
1" x 1 3/4"	33.00	27.00	38.00	38.00	51.00
1 1/4" x 1/2"	42.00	21.00	48.00	48.00	51.00
1 1/4" x 3/4"	42.00	27.00	48.00	48.00	51.00
1 1/4" x 1"	42.00	33.00	48.00	48.00	51.00
1 1/2" x 1/2"	48.00	21.00	57.00	57.00	63.00
1 1/2" x 3/4"	48.00	27.00	57.00	57.00	63.00
1 1/2" x 1"	48.00	33.00	57.00	57.00	63.00
1 1/2" x 1 1/4"	48.00	42.00	57.00	57.00	63.00
2" x 3/4"	60.00	27.00	64.00	44.00	76.00
2" x 1"	60.00	33.00	64.00	51.00	76.00
2" x 1 1/4"	60.00	42.00	64.00	57.00	76.00
2" x 1 1/2"	60.00	48.00	64.00	60.00	76.00
2 1/2" x 1"	73.00	33.00	76.00	57.00	89.00
2 1/2" x 1 1/4"	73.00	42.00	76.00	64.00	89.00
2 1/2" x 1 1/2"	73.00	48.00	76.00	67.00	89.00
2 1/2" x 2"	73.00	60.00	76.00	70.00	89.00
3" x 1 3/4"	89.00	42.00	86.00	70.00	89.00
3" x 1 1/2"	89.00	48.00	86.00	73.00	89.00
3" x 2"	89.00	60.00	86.00	76.00	89.00
3" x 2 1/2"	89.00	73.00	86.00	83.00	89.00
3 1/2" x 1 1/2"	102.00	48.00	95.00	79.00	102.00
3 1/2" x 2"	102.00	60.00	95.00	83.00	102.00
3 1/2" x 2 1/2"	102.00	73.00	95.00	89.00	101.00
3 1/2" x 3"	102.00	89.00	95.00	92.00	101.00
4" x 1/2"	114.00	48.00	105.00	86.00	102.00
4" x 2"	114.00	60.00	105.00	89.00	102.00
4" x 2 1/2"	114.00	73.00	105.00	95.00	102.00
4" x 3"	114.00	89.00	105.00	98.00	102.00
4" x 3 1/2"	114.00	102.00	105.00	102.00	102.00
5" x 2"	141.00	60.00	124.00	105.00	127.00
5" x 2 1/2"	141.00	73.00	124.00	108.00	127.00
5" x 3"	141.00	89.00	124.00	111.00	127.00
5" x 3 1/2"	141.00	102.00	124.00	114.00	127.00
5" x 4"	141.00	114.00	124.00	117.00	127.00
6" x 2 1/2"	168.00	73.00	143.00	121.00	140.00
6" x 3"	168.00	89.00	143.00	124.00	140.00
6" x 3 1/2"	168.00	102.00	143.00	127.00	140.00
6" x 4"	168.00	114.00	143.00	130.00	140.00
6" x 5"	168.00	141.00	143.00	137.00	140.00
8" x 3 1/2"	219.00	102.00	178.00	152.00	152.00
8" x 4"	219.00	114.00	178.00	156.00	152.00
8" x 5"	219.00	141.00	178.00	162.00	152.00
8" x 6"	219.00	168.00	178.00	168.00	152.00
10" x 4"	273.00	114.00	216.00	184.00	178.00
10" x 5"	273.00	141.00	216.00	191.00	178.00
10" x 6"	273.00	168.00	216.00	194.00	178.00
10" x 8"	273.00	219.00	216.00	203.00	178.00
12" x 5"	324.00	141.00	254.00	216.00	203.00
12" x 6"	324.00	168.00	254.00	219.00	203.00
12" x 8"	324.00	219.00	254.00	229.00	203.00
12" x 10"	324.00	273.00	254.00	241.00	203.00
14" x 6"	356.00	168.00	279.00	238.00	330.00
14" x 8"	356.00	219.00	279.00	248.00	330.00
14" x 10"	356.00	273.00	279.00	257.00	330.00

Tabla 3

Dimensiones bajo las normas ASME B 16.9 y ASME B 16.28
Todas las dimensiones se expresan en milímetros, excepto las de NPS que se expresan en pulgadas.

REDUCCIONES

NPS	DIMENSIONES				
	DIÁMETRO EXTERIOR	DIÁMETRO EXTERIOR	CENTRO A EXTREMO	CENTRO A EXTREMO	LONGITUD
	D	D1	C	M	H
16" x 6"	406.00	168.00	305.00	264.00	356.00
16" x 8"	406.00	219.00	305.00	273.00	356.00
16" x 10"	406.00	273.00	305.00	283.00	356.00
16" x 12"	406.00	324.00	305.00	295.00	356.00
16" x 14"	406.00	356.00	305.00	305.00	356.00
18" x 8"	457.00	219.00	343.00	298.00	381.00
18" x 10"	457.00	273.00	343.00	308.00	381.00
18" x 12"	457.00	324.00	343.00	321.00	381.00
18" x 14"	457.00	356.00	343.00	330.00	381.00
18" x 16"	457.00	406.00	343.00	330.00	381.00
20" x 8"	508.00	219.00	381.00	324.00	508.00
20" x 10"	508.00	273.00	381.00	333.00	508.00
20" x 12"	508.00	324.00	381.00	346.00	508.00
20" x 14"	508.00	356.00	381.00	356.00	508.00
20" x 16"	508.00	406.00	381.00	356.00	508.00
20" x 18"	508.00	457.00	381.00	368.00	508.00
22" x 10"	559.00	273.00	419.00	359.00	508.00
22" x 12"	559.00	324.00	419.00	371.00	508.00
22" x 14"	559.00	356.00	419.00	381.00	508.00
22" x 16"	559.00	406.00	419.00	381.00	508.00
22" x 18"	559.00	457.00	419.00	394.00	508.00
22" x 20"	559.00	508.00	419.00	406.00	508.00
24" x 10"	610.00	273.00	432.00	384.00	508.00
24" x 12"	610.00	324.00	432.00	397.00	508.00
24" x 14"	610.00	356.00	432.00	406.00	508.00
24" x 16"	610.00	406.00	432.00	406.00	508.00
24" x 18"	610.00	457.00	432.00	419.00	508.00
24" x 20"	610.00	508.00	432.00	432.00	508.00
24" x 22"	610.00	559.00	432.00	432.00	508.00
26" x 18"	660.00	457.00	495.00	444.00	610.00
26" x 20"	660.00	508.00	495.00	457.00	610.00
26" x 22"	660.00	559.00	495.00	470.00	610.00
26" x 24"	660.00	610.00	495.00	483.00	610.00
28" x 18"	711.00	457.00	521.00	470.00	610.00
28" x 20"	711.00	508.00	521.00	483.00	610.00
28" x 22"	711.00	559.00	521.00	495.00	610.00
28" x 24"	711.00	610.00	521.00	508.00	610.00
28" x 26"	711.00	660.00	521.00	521.00	610.00
30" x 18"	762.00	457.00	559.00	495.00	610.00
30" x 20"	762.00	508.00	559.00	508.00	610.00
30" x 22"	762.00	559.00	559.00	521.00	610.00
30" x 24"	762.00	610.00	559.00	533.00	610.00
30" x 26"	762.00	660.00	559.00	546.00	610.00
30" x 28"	762.00	711.00	559.00	546.00	610.00
32" x 20"	813.00	508.00	597.00	533.00	610.00
32" x 22"	813.00	559.00	597.00	546.00	610.00
32" x 24"	813.00	610.00	597.00	559.00	610.00
32" x 26"	813.00	660.00	597.00	572.00	610.00
32" x 28"	813.00	711.00	597.00	572.00	610.00
32" x 30"	813.00	762.00	597.00	584.00	610.00
34" x 20"	864.00	508.00	635.00	559.00	610.00
34" x 22"	864.00	559.00	635.00	572.00	610.00
34" x 24"	864.00	610.00	635.00	584.00	610.00
34" x 26"	864.00	660.00	635.00	597.00	610.00
34" x 28"	864.00	711.00	635.00	597.00	610.00
34" x 30"	864.00	762.00	635.00	610.00	610.00
34" x 32"	864.00	813.00	635.00	622.00	610.00

Tabla 4

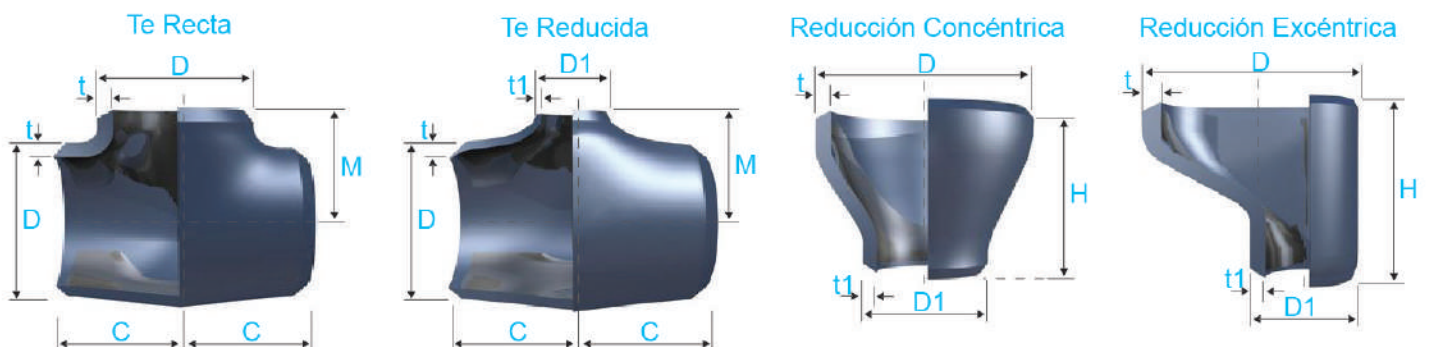
Dimensiones bajo las normas ASME B 16.9 y ASME B 16.28

En la tabla 2 se observa el espesor de pared según especificación ASME B 36.10 y ASME 36.19.

ESPESOR DE PARED																		
NPS	DIÁMETRO EXTERNO	NORMA ASME B 36.10 ESPESOR DE PARED NOMINAL (t)													NORMA ASME B 36.19 ESPESOR DE PARED NOMINAL (t)			
		CÉDULA													CÉDULA			
		10	20	30	STD	40	60	XS	80	100	120	140	160	XXS	5S	10S	40S	80S
1/2'	21.34				2.77	2.77		3.73	3.73				4.78	7.47	1.65	2.11	2.77	3.73
3/4'	26.67				2.87	2.87		3.91	3.91				5.56	7.82	1.65	2.11	2.87	3.91
1"	33.40				3.38	3.38		4.55	4.55				6.35	9.09	1.65	2.77	3.38	4.55
1 1/4"	42.16				3.56	3.56		4.85	4.85				6.35	9.70	1.65	2.77	3.56	4.85
1 1/2"	48.26				3.68	3.68		5.08	5.08				7.14	10.16	1.65	2.77	3.68	5.08
2"	60.32				3.91	3.91		5.54	5.54				8.74	11.07	1.65	2.77	3.91	5.54
2 1/2"	73.02				5.16	5.16		7.01	7.01				9.52	14.02	2.11	3.05	5.16	7.01
3"	88.90				5.49	5.49		7.62	7.62				11.13	15.24	2.11	3.05	5.49	7.62
3 1/2"	101.60				5.74	5.74		8.08	8.08						2.11	3.05	5.74	8.08
4"	114.30				6.02	6.02		8.56	8.56		11.13		13.49	17.12	2.11	3.05	6.02	8.56
5"	141.30				6.55	6.55		9.52	9.52		12.70		15.88	19.05	2.77	3.40	6.55	9.52
6"	168.27				7.11	7.11		10.97	10.97		14.27		18.26	21.95	2.77	3.40	7.11	10.97
8"	219.07		6.35	7.04	8.18	8.18	10.31	12.70	12.70	15.09	18.26	20.62	23.01	22.22	2.77	3.76	8.18	12.70
10"	273.05		6.35	7.80	9.27	9.27	12.70	12.70	15.09	18.26	21.44	25.40	28.58	25.40	3.40	4.19	9.27	12.70
12"	323.85		6.35	8.38	9.52	10.31	14.27	12.70	17.48	21.44	25.40	28.58	33.32	25.40	3.96	4.57	9.52	12.70
14"	355.60	6.35	7.92	9.52	9.52	11.13	15.09	12.70	19.05	23.83	27.79	31.75	35.71		3.96	4.77		
16"	406.40	6.35	7.92	9.52	9.52	12.70	16.66	12.70	21.44	26.19	30.96	36.53	40.49		4.19	4.77		
18"	457.20	6.35	7.92	11.13	9.52	14.27	19.05	12.70	23.83	29.36	34.93	39.67	45.24		4.19	4.77		
20"	508.00	6.35	9.52	12.70	9.52	15.09	20.62	12.70	26.19	32.54	38.10	44.45	50.01		4.77	5.54		
22"	558.80	6.35	9.52	12.70	9.52	15.88	22.22	12.70	28.58	34.92	41.28	47.63	53.98		4.77	5.54		
24"	609.60	6.35	9.52	14.27	9.52	17.48	24.61	12.70	30.96	38.89	46.02	52.37	59.54		5.54	6.35		
26"	660.40	7.92	12.70		9.52			12.70										
28"	711.20	7.92	12.70	15.88	9.52			12.70							6.35	7.92		
30"	762.00	7.92	12.70	15.88	9.52			12.70										
32"	812.80	7.92	12.70	15.88	9.52	17.48		12.70										
34"	863.60	7.92	12.70	15.88	9.52	17.48		12.70										
36"	914.40	7.92	12.70	15.88	9.52	19.05		12.70										

Tabla 2

Todas las dimensiones se expresan en milímetros, excepto las de NPS que se expresan en pulgadas.



Tolerancias

En la tabla 5 se observan las tolerancias dimensionales, según especificación ASME B16.9-2001 y ASME B16.28-2001.

DIMENSIONALES

NPS	TODAS LAS CONEXIONES		CODO 90° Y 45°; TES	REDUCCIONES	TAPÓN CAPA	RETORNOS 180°		
	DIÁMETRO EXTERIOR AL BISEL (1)	DIÁMETRO INTERIOR AL EXTREMO (2)	CENTRO A EXTREMO A-B-C-M	LONGITUD TOTAL H	LONGITUD E	CENTRO A CENTRO	HOMBRO A CARA	ALINEACIÓN DE EXTREMOS
1/2" a 2 1/2"	+1.6 -0.8	± 0.8	± 2.0	± 2.0	± 3.0	± 6.0	± 6.0	± 1.0
3" a 3 1/2"	±1.6	± 1.6	± 2.0	± 2.0	± 3.0	± 6.0	± 6.0	± 1.0
4"	±1.6	± 1.6	± 2.0	± 2.0	± 3.0	± 6.0	± 6.0	± 1.0
5" a 6"	+2.4 -1.6	± 1.6	± 2.0	± 2.0	± 6.0	± 6.0	± 6.0	± 1.0
8"	+2.4 -1.6	± 1.6	± 2.0	± 2.0	± 6.0	± 6.0	± 6.0	± 1.0
10"	+4.0 -3.2	± 3.2	± 2.0	± 2.0	± 6.0	± 10.0	± 6.0	± 2.0
12" a 18"	+4.0 -3.2	± 3.2	± 2.0	± 2.0	± 6.0	± 10.0	± 6.0	± 2.0
20" a 24"	+6.4 -4.8	± 4.8	± 2.0	± 2.0	± 6.0	± 10.0	± 6.0	± 2.0
26" a 30"	+6.4 -4.8	± 4.8	± 3.0	± 5.0	± 10.0			
37" a 48"	+6.4 -4.8	± 4.8	± 5.0	± 5.0	± 10.0			

Tabla 5

Todas las dimensiones se expresan en milímetros, excepto las de NPS que se expresan en pulgadas.

Espesor de pared no menor al 87.5% del espesor nominal.

(1) Es la suma de los valores absolutos mas la tolerancia mínima.

(2) El diámetro interno al extremo y el espesor nominal deberán ser especificados por el cliente.

Revisadas conforme a norma ASME B16.9-2001

En la tabla 6 se observan las tolerancias angulares.

ANGULARES		
NPS	Fuera de Plano P	Fuera de Ángulo Q
1/2" a 4"	± 0.8	± 1.6
5" a 8"	± 1.6	± 3.1
10" a 12"	± 2.4	± 4.8
14" a 16"	± 2.4	± 6.4
18" a 24"	± 3.1	± 9.6
26" a 30"	± 4.8	± 9.6
32" a 42"	± 4.8	± 12.7
44" a 48"	± 4.8	± 19.0

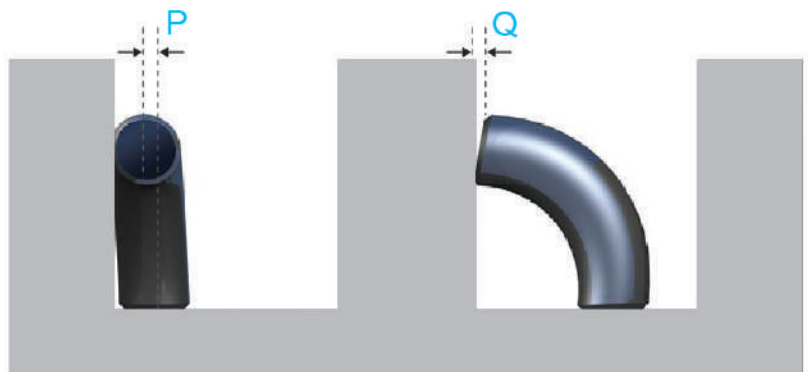


Tabla 6

Todas las dimensiones se expresan en milímetros, excepto las de NPS que se expresan en pulgadas.

Dimensiones

En las tablas 1, 2, 3 y 4 se incluyen las listas de las medidas con las dimensiones finales.

CODOS, TES Y TAPONES CAPA									
NPS	DIAMETRO EXTERNO	CENTRO A CARA	CENTRO A CARA	CENTRO A CENTRO	CENTRO A CENTRO	CENTRO A CARA	LONGITUD		CENTRO A EXTREMO
							E*		
	D	A	A1	O	O1	B	< =XS	XS >	C - M
1/2"	21.34	38.00	19.00	76.00	36.00	16.00	25.00	25.00	25.00
3/4"	26.67	38.00	18.00	76.00	36.00	11.00	25.00	25.00	29.00
1"	33.40	38.00	25.00	76.00	51.00	22.00	38.00	38.00	38.00
1 1/4"	42.16	48.00	32.00	95.00	64.00	25.00	38.00	38.00	48.00
1 1/2"	48.26	57.00	38.00	114.00	76.00	29.00	38.00	38.00	57.00
2"	60.32	76.00	51.00	152.00	102.00	35.00	38.00	44.00	64.00
2 1/2"	73.02	95.00	64.00	191.00	127.00	44.00	38.00	51.00	76.00
3"	88.90	114.00	76.00	229.00	152.00	51.00	51.00	64.00	86.00
3 1/2"	101.60	133.00	89.00	267.00	178.00	57.00	64.00	16.00	95.00
4"	114.30	152.00	102.00	305.00	203.00	64.00	64.00	76.00	105.00
5"	141.30	190.00	127.00	381.00	254.00	79.00	76.00	89.00	124.00
6"	168.27	229.00	152.00	457.00	305.00	95.00	89.00	102.00	143.00
8"	219.07	305.00	203.00	610.00	406.00	127.00	102.00	127.00	178.00
10"	273.05	381.00	254.00	762.00	508.00	159.00	127.00	152.00	216.00
12"	323.85	475.00	305.00	914.00	610.00	190.00	152.00	178.00	254.00
14"	355.60	533.00	356.00	1,067.00	711.00	222.00	165.00	191.00	279.00
16"	406.40	610.00	406.00	1,219.00	813.00	254.00	178.00	203.00	305.00
18"	457.20	686.00	457.00	1,372.00	914.00	286.00	203.00	229.00	343.00
20"	508.00	762.00	508.00	1,524.00	1,016.00	318.00	229.00	254.00	381.00
22"	558.80	838.00	559.00	1,676.00	1,118.00	343.00	254.00	254.00	419.00
24"	609.60	914.00	610.00	1,829.00	1,219.00	381.00	267.00	305.00	432.00
26"	660.40	991.00	660.00			406.00	267.00	267.00	495.00
28"	711.20	1,067.00	711.00			438.00	267.00	267.00	521.00
30"	762.00	1,143.00	762.00			470.00	267.00	267.00	559.00
32"	812.80	1,219.00	813.00			502.00	267.00	267.00	597.00
34"	863.60	1,295.00	864.00			533.00	267.00	267.00	635.00
36"	914.40	1,372.00	914.00			565.00	267.00	267.00	673.00

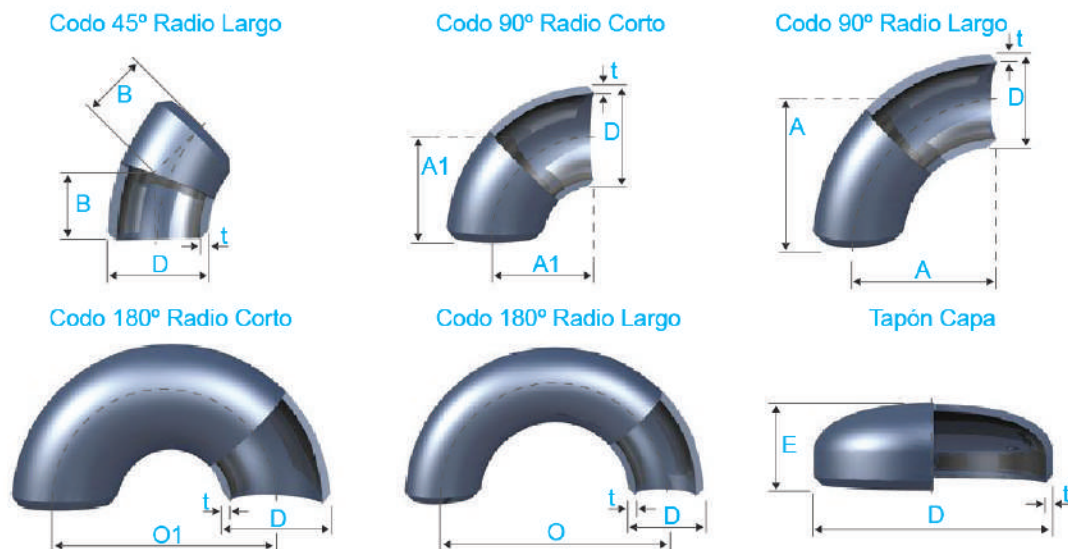
Tabla 1.

Todas las dimensiones se expresan en milímetros, excepto las de NPS que se expresan en pulgadas.

* El dato indicado en la columna de la izquierda se refiere a tapones capa con espesor menor o igual a cédula XS.

El dato indicado en la columna de la derecha se refiere a tapones capa con espesor mayor a cédula XS.

Dimensiones bajo las normas ASME B 16.9 y ASME B 16.28



Controles de Calidad

La fabricación de las conexiones se realiza bajo las siguientes normas:

- AE 250 NF A 49-281
- ANSI B 16.9
- ASME A/SA 234 WPB
- ASME B 16.9
- ASME B 16.28 Edición 2001
- ASME II Parte D Tabla Y1
- ASTM A 234-02
- ASTM A 234-97
- NACE MR 0175 Edición 03 conforme a ASME II Edición 2001
- NRF-096-PEMEX-2004 Rev. 0
- PED 97/23/EC Anexo I Párrafo 7.5

La certificación de las conexiones cumple con los requerimientos de las normas: DIN EN 10204 3.1.B e ISO 10474 3.1.B.



Para garantizar la calidad de las conexiones se llevan a cabo las siguientes pruebas:

1. En la materia prima

- Análisis químico de colada
- Prueba de tensión
- Inspección electromagnética
- Inspección visual y dimensional
- Prueba hidrostática

2. En la conexión

- Inspección visual y dimensional
- Pruebas mecánicas (muestreo)

Si existe cualquier otro tipo de inspección y/o análisis no mencionados en la lista anterior, se pueden acordar previo a la fabricación. La planta cuenta con un laboratorio mecánico-metalúrgico completo, el cual apoya esta clase de requerimientos especiales.



Conexiones:

Codos, Tes, Reducciones y Tapones Capa