Mercado Inox

Catálogo de produtos

Missão, visão, valores

A Mercado Inox é um e-commerce com um vasto catálogo de materiais em aço inoxidável, direcionados para o mercado industrial, de gás e de construção civil.

Nossos materiais seguem rigorosas normas técnicas e especificações dos mais diversos segmentos industriais como: químico, petroquímico, alimentício, farmacêutico, de construção civil, saneamento básico, irrigação, agroindústria e indústria de máquinas e equipamentos.

Possuímos produtos com qualidade e garantia, além de possuir uma variedade de mercadorias a pronta entrega, de forma a tornar rápido o envio dos materiais.

Apresentação

Mercado Inox

Catálogo de produtos

1. Tubos e chapas

Tabela de Tubos

Perfil e Dimensões

Linha 3XX - Austenílicos

Diâmetros Externos	Tipos de Aço	Normas de Fabricação ASTM
8,00 a 2.032 mm	304, 304H, 304L 316L, 317L, 321, 347, 904L	A-249, A-269, A-270, A-312, A-358, A-409, A-554, A-778
Expessuras 0,50 a 6,35mm		

Linha 4XX - Ferríticos

Aço Inox	Diâmetro (mm) Mínimo - Máximo	Espessura (mm) Mínimo - Máximo	Norma de Fabricação ASTM
K09(409), K39MD (439), K41(441), K44(444), K03(410D	31,75 - 127,00	1,00 - 3,00	A-268

Obs: Outros diâmetros, espessuras e comprimentos podem ser fabricados sob consulta.

Tabela de Peso Teórico (kg/m)

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Tubos fabricados na norma ASTM A-249 (trocadores de calor, superaquecedores, caldeiras e condensadores

Esp.(mm) / Diâm.(mm)	BWG18 1,25	BWG16 1,65	BWG14 2,11
19,05	0,557	0,719	0,895
25,40	0,756	0,981	1,230
38,10	1,153	1,505	1,901
50,80	1,550	2,030	2,571

Tubos fabricados na norma ASTM A-269 (instrumentação)

Esp.(mm) / Diâm.(mm)	0,89	1,00	1,25	1,50	1,65
6,00		0,125	0,149		
6,35	0,263	0,134	0,160		
8,00		0,175	0,211		
9,53		0,214	0,259	0,301	0,325
10,00		0,225	0,274	0,319	0,345
12,70		0,293	0,358	0,421	0,456

Tubos fabricados na norma ASTM A-269 (resistências elétricas e refrigeração

Esp.(mm) / Diâm.(mm)	0,40	0,50	0,60	0,70	0,80
6,35	0,060	0,073	0,086	0,099	0,111
7,50	0,071	0,088	0,104	0,119	0,134
8,00	0,076	0,094	0,111	0,128	0,144
9,53	0,091	0,113	0,134	0,155	0,175
10,00	0,096	0,119	0,141	0,163	0,184
12,70	0,123	0,153	0,182	0,210	0,238
15,88				0,226	0,302

Tubos fabricados na norma ASTM A-270 (destinados a indústria de lacticínios, alimentícia e farmacêutica)

Esp.(mm) / Diâm.(mm)	1,00	1,20	1,50	2,00
25,40	0,611	0,727	0,897	1,171
31,75	0,770	0,918	1,136	1,489
38,10	0,929	1,108	1,374	1,807
50,80	1,246	1,490	1,851	2,443
63,50	1564	1,871	2,828	3,079
76,20		2,253	2,805	3,714
101,60		3,016	3,758	4,986

Tubos fabricados na norma ASTM A-269 (aplicações gerais em altas e baixas temperaturas)

Esp.(mm) / Diâm.(mm)	1,00	1,20	1,50	2,00	2,50	3,00
15,88	0,372	0,441	0,540			
19,05	0,452	0,536	0,659	0,854		
25,40	0,611	0,727	0,897	1,171		
31,75	0,770	0,918	1,136	1,489	1,830	2,159
38,10	0,979	1,108	1,374	1,807	2,228	2,636
42,16	1,030	1,230	1,527	2,010	2,482	2,941
44,45	1,088	1,299	1,613	2,125	2,625	3,112
50,80	1,246	1,490	1,851	2,443	3,022	4,543
63,50	1,564	1,871	2,328	3,079	3,817	5,497
76,20		2,253	2,805	3,714	4,612	7,404
101,60		3,016	3,758	4,986	6,201	9,311
127,00				6,258	7,791	11,218
152,40				7,529	9,380	

Obs: Outros diâmetros, espessuras e comprimentos podem ser fabricados sob consulta.

Tabela Schedules

Tubos fabricados na norma ASTM A-312, ASTM-358, ASTM A-409 E ASTM A-778, conforme padões ANSI B-36.19 e B-36.10 (terminais marítmos, papel e celulose, químico e petroquímico

Diâm. nom.	Diâm. ext. (mm)	Schuedule 5S		Schuedule 10S		Schuedule 40S	
		Eps. mm	Peso kg/m	Eps. mm	Peso kg/m	Eps. mm	Peso kg/m
1/4	13,72			1,65	0,498		
3/8	17,15			1,65	0,640		
1/2	21,34	1,65	0, 813	2,11	1,016	2,77	1,288
3/4	26,67	1,65	1,033	2,11	1,297	2,87	1,710
1	33,40	1,65	1,311	2,77	2,124	3,38	2,540
11/4	42,16	1,65	1,673	2,77	2,731	3,56	3,440
11/2	48,26	1,65	1,925	2,77	3,154	3,68	4,117
2	60,33	1,65	2,423	2,77	3,991	3,91	5,522
2.1/2	73,03	2,11	3,746	3,05	5,342	5,16	8,766
3	88,90	2,11	4,584	3,05	6,554	5,49	11,462
3.1/2	101,60	2,11	5,254	3,05	7,523	5,74	13,772
4	114,30	2,11	5,925	3,05	8,493	6,02	16,316
5	141,30	2,77	9,605	3,40	11,736	6,55	22,092
6	168,28	2,77	11,475	3,40	14,032	7,11	28,682
8	219,08	2,77	14,997	3,76	20,264	8,18	43,181
10	273,05	3,40	22,948	4,19	28,197	9,27	61,204
12	323,85	3,97	31,786	4,57	36,522	9,53b	74,977
14	355,60	3,97	34,948	4,78b	41,973	11,13b	95,964
16	406,40	4,20	42,282	4,78b	48,051	12,70b	125,150
18	457,20	4,20	47,622	4,78b	54,129	14,27b	158,205
20	508,00	4,78	60,207	5,54b	69,674	15,09b	186,173
22	558,80	5,78	66,207	5,54b	76,718		
24	609,60	5,54	42,282	6,35	98,881		
30	762,00	6,35	120,103	7,92	149,487		

a) Estas dimensões não se enquadram na ANSI B-36.19
b) Estas dimensões não se enquadram na ANSI B-36.10

Obs.: Para tubos a partir de 30”(762,00mm) até 80”(2032,00mm), fabricação somente sob consulta.

Tabela Tubos ODS Polidos Grana 400

TUBOS POLIDOS				GRANA 400
Diâm. (mm)	Espessura (mm)	Descrição	Norma	AISI - 304
				Acabamento
25,40	1,00	1° OD	ASTM A-554	Polido externo grana 400
25,40	1,20	1° OD	ASTM A-554	Polido externo grana 400
25,40	1,50	1° OD	ASTM A-554	Polido externo grana 400
25,40	2,00	1° OD	ASTM A-554	Polido externo grana 400
31,75	1,00	1 1/4" OD	ASTM A-554	Polido externo grana 400
31,75	1,20	1 1/4" OD	ASTM A-554	Polido externo grana 400
31,75	1,50	1 1/4" OD	ASTM A-554	Polido externo grana 400
31,75	2,00	1 1/4" OD	ASTM A-554	Polido externo grana 400
38,10	1,00	1 1/2" OD	ASTM A-554	Polido externo grana 400
38,10	1,20	1 1/2" OD	ASTM A-554	Polido externo grana 400
38,10	1,50	1 1/2" OD	ASTM A-554	Polido externo grana 400
38,10	2,00	1 1/2" OD	ASTM A-554	Polido externo grana 400
50,80	1,00	2" OD	ASTM A-554	Polido externo grana 400
50,80	1,20	2" OD	ASTM A-554	Polido externo grana 400
50,80	1,50	2" OD	ASTM A-554	Polido externo grana 400
50,80	2,00	2" OD	ASTM A-554	Polido externo grana 400

Obs: Outros diâmetros, espessuras e comprimentos podem ser fabricados sob consulta.

Tabela de Composição Química e Propriedades Mecânicas

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	Composição Química (%)								*Propriedades mecânicas*			
TP (AISI)	C (máx)	Mn (máx)	P (máx)	S (máx)	Si (máx)	Cr	Ni	Outros Elementos	MPA (kgf/mm) Limite de Resistência	MPA (kgf/mm) Limite de Escoamento	Along. (%) Em 2 Pol	Dureza HRB (máx)
304 A	0,08	2,00	0,040	0,030	0,75	18,0 - 20,0	8,0 - 11,0		515 (52,6)	205 (21,0)	35	90
304L A	0,030	2,00	0,040	0,030	0,75	18,0 - 20,0	8,0 - 13,0		485 (49,5)	170 (17,4)	35	90
304H A	0,04 -0,10	2,00	0,040	0,030	0,75	18,0 - 20,0	8,0 - 11,0		515 (52,6)	205 (21,0)	35	90
3095 A	0,08	2,00	0,045	0,030	0,75	22,0 - 24,0	12,0 - 15,0	Mo = 0,75 máx	515 (52,6)	205 (21,0)	35	90
3105 A	0,08	2,00	0,045	0,030	0,75	24,0 - 26,0	19,0 - 22,0	Mo = 0,75 máx	515 (52,6)	205 (21,0)	35	90
316 A	0,08	2,00	0,040	0,030	0,75	16,0 - 18,0	10,0 - 14,0	Mo = 2,00 - 3,00	515 (52,6)	205 (21,0)	35	90
316L A	0,03	2,00	0,040	0,030	0,75	16,0 - 18,0	10,0 - 15,0	Mo = 2,00 - 3,00	485 (49,5)	170 (17,4)	35	90
316 Ti B	0,08	2,00	0,040	0,030	0,75	16,0 - 18,0	10,0 - 14,0	Mo = 2,00 - 3,00 Ti = 5x(C+N) min - 0,70 máx	515 (52,6)	205 (21,0)	35	90
317 Ti B	0,03	2,00	0,040	0,030	0,75	18,0 - 20,0	11,0 - 15,0	Mo = 3,00 - 4,00	515 (52,6)	205 (21,0)	35	90
321 A	0,08	2,00	0,040	0,030	0,75	17,0 - 20,0	9,0 - 13,0	Ti = 5xC - 0,70 máx	515 (52,6)	205 (21,0)	35	90
347 B	0,08	2,00	0,040	0,030	0,75	17,0 - 20,0	9,0 - 13,0	Nb + Ta = 10xC - 1,0 máx	515 (52,6)	205 (21,0)	35	90
439	0,07	1,00	0,040	0,030	1,00	17,0 - 19,0	0,50	N = 0,04 Ti = [0,20+4(C+N)] min. - 1,10 máx Al = 0,15	415 (42,3)	205 (21,0)	22	90
444	0,025	1,00	0,040	0,030	1,00	17,5 - 19,5	1,0	Mo = 1,75 - 2,50 N = 0,035 Ti = (Ti+Cb)[0,20+4(C+N)] min.- 0,80 máx	415 (42,3)	275 (28,1)	20	89
409	0,080	1,00	0,045	0,030	1,00	10,5 -11,7	0,50	Ti = 6xCmin; 0,75 máx	380	170	20	96
410 D	0,020	0,80	0,030	0,006	0,70	11,0 - 11,7	25,0		484	356	31	95
904L	0,02					20,0	25,0	Mo = 4,50 Cu = 1,50	500	220	35	80
2205	0,030	2,00	0,030	0,020	1,00	22,0 - 23,0	4,5 - 6,5	Mo = 3,00 - 3,5 N = 0,14 - 0,20	620 (63,3)	450 (45,9)	25	31 C
2507	0,30	1,20	0,035	0,020	0,80	24,0	6,0 - 8,0	Cu = 0,50 Mo = 3,0 - 5,0 N = 0,24 - 0,32	795 (81,1)	550 (56,1)	15	32 C

A (Matéria-prima nacional) | B (Matéria-prima importada, estoque sob consulta) | C (Rockwell C)

Tabela Comparativa de Normas

Normas	A-249	A-268	A-269	A-270	A-312	A-358	A-409	A-554	A-778
Aplicação	Caldeiras, aquecedores, trocadores de calor, condensadores	Trabalhos em altas temperaturas e trabalhos em ambientes corrosivos (aços ferríticos e martensíticos)	Trabalhos em altas e baixas temperaturas em ambientescorrosivos (aços inoxidáveis austeníticos)	Tubos sanitários destinados a indústrias de laticínios, alimentícia e farmacêutica.	Trabalhos em altas e baixas temperaturas e condução de líquidos corrosivos	Trabalhos em altas temperaturas e trabalhos em ambientes corrosivos	Trabalhos em altas temperaturas e trabalhos em ambientes corrosivos	Tubos redondos, quadrados, retangulares e especiais para aplicações estruturais	Trabalhos em baixas e moderadas temperaturas
Processo de Soldagem	Solda automática por fusão sem adição de metal	Solda automática por fusão sem adição de metal	Solda automática por fusão sem adição de metal	Solda automática por fusão sem adição de metal	Solda automática por fusão sem adição de metal	Solda manual com adição de meta	Solda manual ou automática com ou sem adição de metal	Solda automática por fusão sem adição de metal	Solda manual ou automática com ou sem adição de metal
Direção da Solda	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal	Longitudinal e circunferencial	Longitudinal e circunferencial	Longitudinal	Longitudinal e circunferencial
Tratamento Térmico	Aquecimento a 1040°C min. resfriamento brusco		Aquecimento a 1040°C min. resfriamento brusco	Aquecimento a 1040°C min. resfriamento brusco	Aquecimento a 1040°C min. resfriamento brusco	Aquecimento a 1040°C min. resfriamento brusco	Aquecimento a 1040°C min. resfriamento brusco	Quando solicitado	Sem tratamento térmico
Trabalho à Frio	Laminação interna da solda			Laminação interna da solda				Laminação interna da solda	
Acabamento	Decapado, livre de rebarbas e superfície lisa	Livre de rebarbas e superfície lisa	Decapado, livre de rebarbas e superfície lisa	Polido interna e/ou externamente	Decapado, livre de rebarbas e superfície lisa	Decapado, livre de rebarbas e superfície lisa	Decapado, livre de rebarbas e superfície lisa	Decapado, livre de rebarbas e superfície lisa ou outro se solicitado	Decapado, livre de rebarbas e superfície lisa
Identificação	Nome do fabricante, norma, TP, corrida e dimensões	Nome do fabricante, norma, TP, corrida e dimensões, com ou sem solda	Nome do fabricante, norma, TP, corrida e dimensões, com ou sem solda	Nome do fabricante, norma, TP, corrida e dimensões, com ou sem solda	Nome do fabricante, norma, TP, corrida e dimensões, com ou sem solda	Nome do fabricante, norma, TP, corrida e dimensões	Nome do fabricante, norma, TP, corrida e dimensões	Nome do fabricante, norma, TP, corrida e dimensões	Nome do fabricante, norma, TP, corrida e dimensões
Destrutivos	Tração, dureza, achatamento, flangeamento, dobramento reverso	Tração, dureza, achatamento reverso, flangeamento	Dureza, achatamento reverso, flangeamento	Achatamento reverso	Tração / Achatamento p/ ø < 8" Dobramento p/ ø > 8"	Dobramento, tração	Dobramento, tração	Dureza e tração, se solicitados como requisitos suplementares - S1 e S2	Tração / Achatamento p/ ø < 8"Dobramento p/ ø > 8"
Não-Destrutivos	Teste hidrostático ou eddy current	Teste hidrostático ou eddy current	Teste hidrostático ou eddy current	Teste hidrostático ou eddy current	Teste hidroestático ou eddy current ou líquido penetrante	Líquido penetrante, raios X para classes 1, 3 e 4 (100%), classe 5 spot	Líquido penetrante	TSe solicitado como requisito suplementar - S3	Líquido penetrante quando solicitado
Diâmetro	ø <25,4mm (excl) ± 0,10mm ø 25,4mm - 38,1mm (incl) ± 0,15mm ø 38,1mm - 50,8mm (excl) ± 0,2mm ø 50,8mm - 63,5mm (excl) ± 0,25mm ø 63,5mm - 76,2mm (excl) ± 0,3mm ø 76,2mm - 101,6mm (incl) ± 0,38mm ø 101, - 152,4mm (incl) ± 0,25mm - 0,64mm	ø <38,1mm ± 0,13mm ø 38,1mm - 88,9mm (excl) ± 0,25mm ø 88,9mm - 139,7mm (excl) ± 0,38mm ø 139,7mm - 203,2mm(incl) ± 0,76mm	ø <38,1mm ± 0,13mm ø 38,1mm - 88,9mm (excl) ± 0,25mm ø 88,9mm - 139,7mm (excl) ± 0,38mm ø 139,7mm - 203,2mm (excl) ± 0,76mm ø 203,2mm -304,8mm (excl) ± 1,01mm ø 304,8mm - 355,6mm (excl) ± 1,26mm	ø <25,4mm (incl) ± 0,13mm ø 25,4mm - 50,8mm ± 0,20mm ø 50,8mm - 76,2mm ± 0,25mm ø 76,2mm -139,7mm (excl) ± 0,38mm ø 139,7mm -203,2mm (excl) ± 0,76mm ø 203,2mm - 304,8mm ± 1,27mm	ø10,29 - 48,26mm (incl) + 0,14mm - 0,8mm ø48,26 - 114,30mm (incl) ± 0,8mm ø114,30 - 219,08mm (incl) + 0,1,6mm - 0,8mm ø219,08 - 457,20mm (incl) + 2,4mm - 0,8mm	± 0,50% do diâmetro externo especificado	Para espessuras < 4,8mm ± 0,20% do ø especificado Para espessuras acima de 4,8mm (incl) ±0,40% do ø especificado	Tanto para tubos redondos como quadrados e retangulares, conforme tabela de tolerâncias dimensionais da ASTM A-554	ø10,29 - 48,26mm (incl) + 0,14mm - 0,8mm ø48,26 - 114,30mm (incl) ± 0,8mm ø114,30 - 219,08mm (incl)+ 0,1,6mm - 0,8mm ø219,08 - 457,20mm (incl) + 2,4mm 0,8mm ø457,20 - 660,40mm (incl) + 3,2mm - 0,8mm ø660,40 - 863,60mm (incl) + 4,0mm - 0,8mm ø863,60 - 1219,20mm (incl) + 4,8mm - 0,8mm
Espessura	± 10% da espessura especificada	ø <12,7mm ± 15% ø ≥12,7mm ± 10%	ø <1/2" ± 15% ø ≥1/2" ± 10%	± 12,5% da espessura especificada	- 12,5% da espessura especificada + 20,0%	- 0,30mm da espessura especificada	- 0,46mm da espessura especificada	±10% da espessura especificada	± 12,5% da espessura especificada
Comprimento	ø <50,8mm - 0 +3mm ø ≥50,8mm - 0 +5mm Obs.: tubos com comprimentos maiores que 7,3m acrescentar a tolerância de 3mm, para cada 3,0m ou fração, limitando a 13mm	ø <38,1mm - 0 +3,2mm ø 38,10 -203,2mm(incl)- 0 +4,8mm Obs.: tubos com comprimentos maiores que 7,3m acrescentar a tolerância de 3mm, para cada 3,0m ou fração, limitando a 13mm	ø <38,1 mm - 0 +3,2mm ø 38,10 - 355,60mm(excl) - 0+4,8mm Obs.: tubos com comprimentos maiores que 7,3m acrescentar a tolerância de 3mm, para cada 3,0m ou fração, limitando a 13mm	ø <101,6 mm - 0 +3,2mm ø ≥101,6 mm - 0+4,8mm Obs.: para aplicação Farmacêutica, consultar requisito suplementar S2.	- 0 + 6mm	- 0 + 6mm (comprimento fixo) ± 100mm (outros)	- 0 + 6mm (comprimento fixo) ± 100mm (outros)	Conforme tabela de tolerâncias dimensionais da ASTM A-554	0 + 6mm (comprimento fixo) ± 100mm (outros)
Ovalização	ø ≤25,4mm 0,5mm ø >25,4mm (2% ø especificado)	Dobro da variação permitida no diâmetro	Dobro da variação permitida no diâmetro		1,5% do diâmetro externo especificado	1% do diâmetro externo especificado	1,5% do diâmetro externo especificado	Conforme tabela de tolerâncias dimensionais da ASTM A-554	1,5% do diâmetro externo especificado
Flexa	0,8mm para cada 900mm	Retos	Retos	Retos	3,2mm para cada 3 metros	3,0mm para cada 3 metros	4,8mm para cada 3 metros	0,76mm para cada 900mm	6,0mm para cada 3 metros
Extremidades	Planas	Planas	Planas	Planas	Planas ou quando solicitado biseladas 37 1/2° ± 2 1/2°	Planas ou quando solicitado biseladas 37 1/2° ± 2 1/2°	Planas ou quando solicitado biseladas 37 1/2° ± 2 1/2°	Planas	Planas ou quando solicitado biseladas 37 1/2° ± 2 1/2°

Tabela de Pressão de Teste Hidrostático

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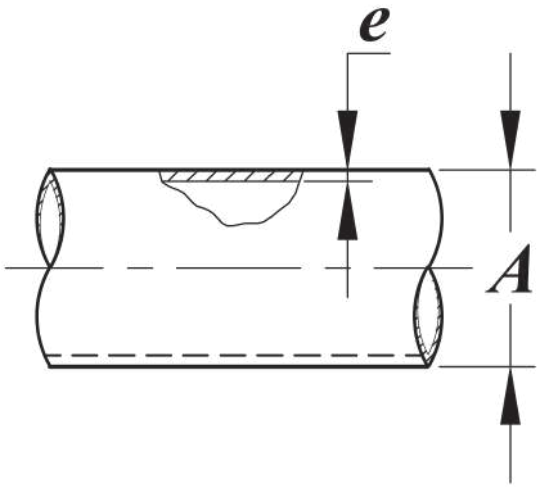
Ø Nom	Ø Externo		Espessura da Parede		Pressão	Pressão	Pressão	Pressão	Tempo de Teste
Pol	Pol	mm	sch	mm	psi 304/316	kgf/cm² 304/316	psi 304L/316L	kgf/cm² 304L/316L	
1/8"		10,29	10S 20S 40S	1,24 1,51 1,73	361 6437 3504	25 5 30 7 35	301 3364 420	21 2 25 6 29	5 seg. mínimo
	1/2"	12,70	40S	2,77	1165 4236 2283	81 6 16 6 19	137 7196 8236	6 96 138 166 208	5 seg. mínimo
1/4"		13,72	10S 20S 40S	1,65 2,00 2,24	354 360 8437 3489	24 45 4 30 7 34	295 300 6364 4408	21 1 25 6 28	5 seg. mínimo
			40S	3,02	188 9226 7283	13 3 15 9 19	157 4210 9	11 1 14 8 6	5 seg. mínimo
	5/8"	15,88		1,65 2,00 2,31	311 7377 8	21 9 26 6	359 8314 9	18 3 22 1	5 seg. mínimo
	3/4"	19,05		1,05 1,20 1,50 1,65	157 5188 9236 2	111 133 166 183 221	131 2157 5196 8	69 111 138 152 184	5 seg. mínimo
1/2"		21,34	5s 10s 20s 40s	1,65 2,11 2,50 2,77	319 486 9514 3894	163 209 247 274	133 2929 3245	136 174 206 228	5 seg. mínimo
	1"	25,40		1,00 1,50 2,00 2,11 2,50	1181 1771 2362 2492 2952	83 124 166 175 207	984 1476 1968 2076 2460	69 104 138 146 173	5 seg. mínimo
3/4"		26,67	5s 10s 20s 40s	1,65 2,11 2,87	1856 2373 2812 3228	13 0 16 7 19	1547 1978 2343 2690	108 139 165 189	5 seg. mínimo
	1 1/4"	31,75		2,80 3,56	945 1417 1890 2617 2307	66 12 100 133 184 232	787 1181 1574 2181 2756	55 83 111 153 154	5 seg. mínimo
1"		33,40	5s 10s 20s 40s	1,65 2,77 3,38	1482 2488 1695 3036	104 175 189 213	1235 2074 2245 2530	87 146 158 178	5 seg. mínimo
	1 1/2"	38,10		1,50 2,00 2,77 3,00 3,50	1181 1575 2118 2362 2756	83 111 153 166 194	984 1312 1817 1968 2296	69 92 128 138 161	5 seg. mínimo
1 1/4"		42,16	5s 10s 20s 40s	1,65 2,77 3,00 3,56	1174 1971 2135 2533	82 138 150 178	979 1643 1779 2111	69 116 125 148	5 seg. mínimo
1 1/2"		48,26	5s 10s 20s 40s	1,65 2,77 3,68	102 172 186	72 121 131 159	855 1435 1554 1891	61 101 109 133	5 seg. mínimo
	2"	50,80		1,65 2,11 2,50 2,77	974 1246 1476 1636	68 88 104 115	812 1038 1230 1363	57 73 86 96	5 seg. mínimo
2"		60,33	5s 10s 20s 40s	1,65 2,77 3,50 3,91	821 1378 1741 1945	58 97 122 137	684 1148 1450 1620	48 81 102 114	5 seg. mínimo
	2 1/2"	63,50		1,50 1,65 2,00 2,11 2,50	709 780 945 997 1181	50 55 66 70 83	590 650 787 831 984	41 46 55 58 69	5 seg. mínimo
2 1/2"		73,02	5s 10s 20s 40s	2,11 3,05 3,50 5,16	867 1253 1438 2120	61 88 101 149	732 1045 1198 1766	51 74 84 124	5 seg. mínimo
	3"	76,20		1,65 2,00 2,50 2,77 3,00	650 787 984 1090 1181	46 55 69 77 83	541 656 820 909 984	38 46 58 64 69	5 seg. mínimo
3"		88,90	5s 10s 20s 40s	2,11 3,05 4,00 5,49	712 1029 1350 1853	50 72 95 130	593 858 1125 1544	42 60 79 108	5 seg. mínimo
3 1/2"	4"	101,60	5s 10s 20s 40s	2,11 3,05 4,00 5,74	623 900 1181 1695	44 63 83 119	520 751 984 1412	3 7 5 3 6 9	5 seg. mínimo
4"		114,30	5s 10s 20s 40s	2,11 3,05 4,00 6,02	554 801 1050 1580	39 56 74 110	462 668 875 1317	9 5 6 9	5 seg. mínimo

Ø Nom	Ø Externo		Espessura da Parede		Pressão	Pressão	Pressão	Pressão	Tempo de Teste
Pol	Pol	mm	sch	mm	psi 304/316	kgf/cm² 304/316	psi 304L/316L	kgf/cm² 304L/316L	
	5"	127,00		2,00 3,00 4,00	472 709 945 1181 1500	33 50 66 83 105	394 590 787 984 1250	28 41 55 69 88	5 seg. mínimo
5"		141,30	5s 10s 20s 40s	2,77 5,00 6,55	589 722 1061 1390	42 51 75 98	490 602 885 1159	34 42 62 81	5 seg. mínimo
	6"	152,40		2,00 3,00 4,00 5,00 6,35	395 592 789 987 1253	28 42 55 69 88	329 493 658 822 1044	23 35 46 58 73	5 seg. mínimo
6"		168,28	5s 10s 20s 40s	2,77 3,40 5,00 7,11	494 606 891 1267	35 43 63 89	412 505 743 1056	29 36 52 74	5 seg. mínimo
	8"	203,20		3,50 4,50 5,50 6,35 8,00	518 664 812 937 1181	36 47 57 66 83	431 554 677 781 984	30 39 47 55 69	5 seg. mínimo
8"		219,08	5s 10s 20s 40s	2,77 3,76 6,50 8,18	380 515 890 1120	27 37 62 79	317 430 742 933	23 31 52 66	5 seg. mínimo
	10"	254,00		3,50 4,50 5,50 6,35 8,00	431 531 650 750 945	29 37 46 53 66	344 443 541 625 787	24 31 38 44 55	5 seg. mínimo
10"		273,05	5s 10s 20s 40s	3,40 4,19 6,50 9,27	374 461 714 1018	27 33 50 72	312 384 595 849	22 27 42 60	5 seg. mínimo
	12"	304,80		3,5 4,5 5,5	344 443 541 625 787	24 31 38 44 55	28 36 45	20 25 32 40	5 seg. mínimo
12"		323,85	5s 10s 20s 40s	4,19 6,35 9,53	367 423 588 883	26 30 41 62	294 391 490 736	21 27 34 52	5 seg. mínimo
14"	14"	355,60	5s 10s	3,96 4,78 6,35 8,00 9,53	334 403 536 675 804	23 28 38 47 56	278 336 446 562 670	19 24 31 39 47	5 seg. mínimo
	16"	406,40	5s 10s	4,20 4,78 6,35 8,00 9,53	310 353 469 590 703	22 25 33 41 49	258 294 391 492 586	18 21 27 35 41	5 seg. mínimo
18"	18"	457,20	5s 10s	4,20 4,78 6,35 8,00 9,53	275 314 443 525 625	19 22 31 37 44	230 261 347 437 521	16 18 24 31 37	5 seg. mínimo
20"	20"	508,00	5s 10s	4,78 5,54 6,35 8,00 9,53	263 327 375 472 562	20 23 26 33 40	235 273 312 394 482	16 19 22 28 33	5 seg. mínimo
22"	22"	558,80		5,50 6,35 8,00 9,53 12,70	295 341 429 512 682	21 24 30 36 48	246 284 358 426 568	17 20 25 30 40	5 seg. mínimo
24"	24"	609,60	5s 10s	5,54 6,35 8,00 9,53 12,70	273 312 394 469 625	19 22 28 33 44	227 260 328 391 521	16 18 23 27 37	5 seg. mínimo
26"	26"	660,40		6,35 8,00 9,53 12,70 15,87	288 363 433 577 721	20 25 30 40 51	240 303 361 481 601	17 21 25 34 42	5 seg. mínimo
28"	28"	711,20		6,35 8,00 9,53 12,70 15,87	268 337 402 536 669	19 24 28 38 47	229 381 335 446 558	16 20 23 31 39	5 seg. mínimo
30"	30"	762,00		6,35 8,00 9,53 12,70 15,87	250 315 375 500 625	17 22 26 35 44	208 262 312 417 521	15 18 22 30 37	5 seg. mínimo

Tubo OD

Tubo padrão O.D conforme norma ASTM A-270, sanitário com costura trefilado, fornecidos em aço inox 304, 304L, 316, 316L, com ou sem polimento.

Ø	A	e
1/2"		1,2 / 1,5 mm
3/4"		1,2 / 1,5 mm
1"	25,4	1,2 / 1,5 / 2mm
1.1/4"		1,2 / 1,5 / 2mm
1.1/2"	38,1	1,2 / 1,5 / 2mm
2	50,8	1,2 / 1,5/ 2mm
2.1/2"	63,5	1,5 / 2mm
3"	76,2	1,5 / 2mm
4"	101,6	1,5 / 2mm
6"	152,4	2 / 3mm



Tubos construidos para fins sanitarios, utilizados na industria alimenticia, farmaceutica e para fins decorativos(corrimãos, guarda-corpo residencial).

São feitos no formato redondo com acabamentos PE (polimento externo), PIPE (polimento interno e externo) e DEC (decapados/superficie fosca). Os tubos de inox são fabricado nas opções 304, 304-L, 316 e 316-L (outras ligas sob consulta).

Os tubos inox são uma opção quando se há necessidade de utilização em locais umidos e com produtos corrosivos pois sua liga e composta de matériais não ferrosos o que garante vida útil longa pois tem maior resistencia contra oxidação e corrosão.

Chapas

mm	Pol	Bitola n°	M²	2 x 1,20	3 x 1,20	2 x 1,50	3 x 1,50
0,30	1/80"	30	2,39	5,740	8,600	7,170	10,750
0,40	1/64"	28	3,19	7,650	11,470	9,560	14,340
0,50	3/160"	26	3,98	9,560	9,560	11,950	17,920
0,60	1/40"	24	4,78	11,470	14,340	14,340	21,510
0,80	1/32"	22	6,37	15,290	22,940	19,120	28,680
1,00	3/80"	20	7,97	19,120	28,680	23,900	35,840
1,20	3/64"	18	9,56	22,940	34,410	28,680	43,010
1,50	1/16"	16	11,95	28,680	43,010	35,840	53,770
2,00	5/64"	14	15,93	38,230	57,350	47,790	71,690
2,50	3/32"	13	19,91	47,790	71,690	59,740	89,610
2,75	7/64"	12	21,90	52,570	78,860	65,710	98,570
3,00	1/8"	11	23,90	57,350	86,030	71,690	107,530
3,50	9/64"	10	27,88	66,910	100,360	83,640	125,450
4,00	5/32"	9	31,86	76,470	114,700	95,580	143,380
4,50	11/64"	8	35,84	86,030	129,040	107,530	161,300
4,76	3/16"	7	37,91	91,000	136,490	113,740	170,620
5,00	13/64"	6	39,83	95,580	143,380	119,4780	179,220
5,50	7/32"	5	43,81	105,140	157,710	131,430	198,140
6,00	15/64"	4	47,79	114,700	172,050	143,380	215,060
6,35	1/4"	3	50,58	121,930	182,090	151,740	227,610
7,93	5/16"		63,16	151,600	227,390	189,490	284,240
10,00	3/8"		76,65	191,170	286,750	238,960	358,440
12,70	1/2"		101,16	242,780	365,170	303,480	455,220
16,00	5/8"		127,44	305,870	458,800	382,330	573,500
19,00	3/4"		151,34	363,220	544,830	454,020	681,030
22,00	7/8"		175,24	420,570	630,850	525,710	788,560
25,40	1"		202,32	485,560	728,350	606,960	910,430

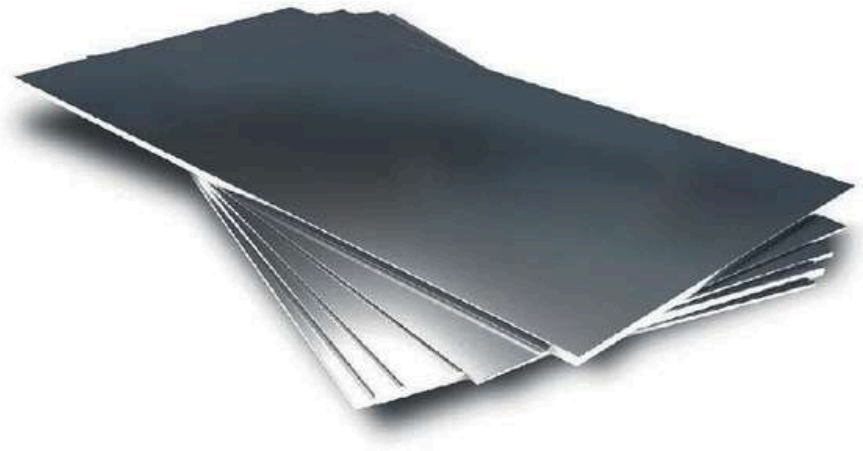
As chapas possuem boa resistência, são maleáveis e possuem acabamento diferenciado, por este motivo são utilizadas em larga escala no segmento automotivo, na construção civil, linha branca, indústria moveleira, entre outros.

Outro ponto interessante é a utilidade do objeto, já que ela compõe vários materiais que as pessoas usam no dia a dia e também são muito comuns em atividades fabris pela facilidade de usinagem e soldagem, baixa condutividade térmica e elétrica e ótimo custo-benefício. Por isso, ela sai na frente de outros tipos de aço do mercado.

Com acabamentos PE (polimento externo), PIPE (polimento interno e externo) e DEC (decapados/superficie fosca), você terá um produto de alta qualidade e desempenho para as suas necessidades.

Disponível em Aço Inox 304 ou 316, 316L

Consulte



Mercado Inox

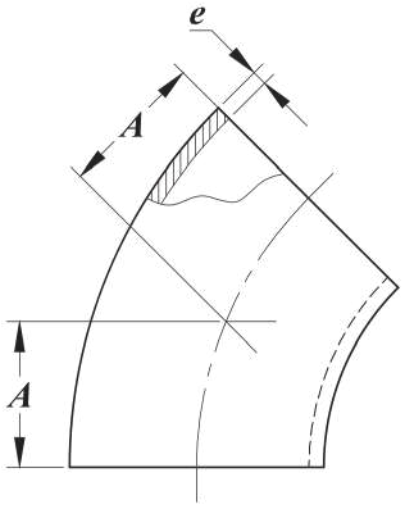
Catálogo de produtos

2.Conexões e Válvulas Sanitárias

Padrão Alimentício

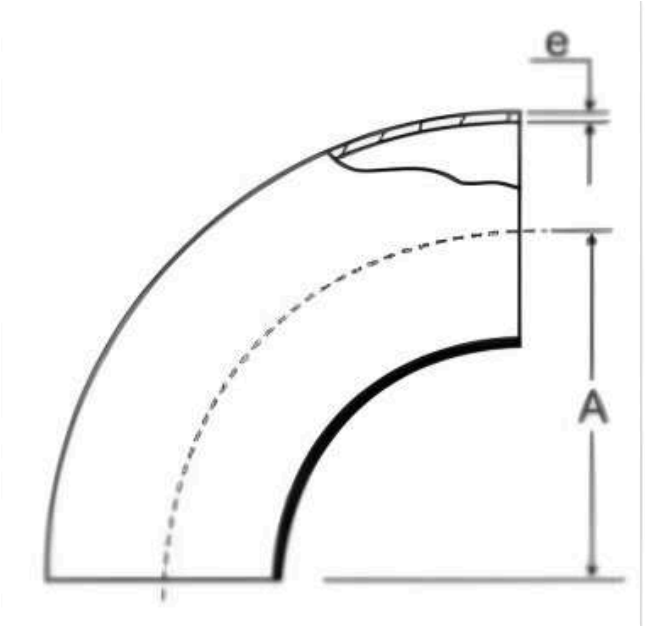
Curva 45° Solda OD

Ø	A	e
1/2"		1,2 mm
3/4"		1,2 mm
1"	14,6	1,5 mm
1.1/2"	21,9	1,5 mm
2	29,2	1,5 mm
2.1/2"	36,5	1,5 mm
3"	43,7	2 mm
4"	58,3	2 mm
6"	87,5	2 mm



Curva 90° Solda OD

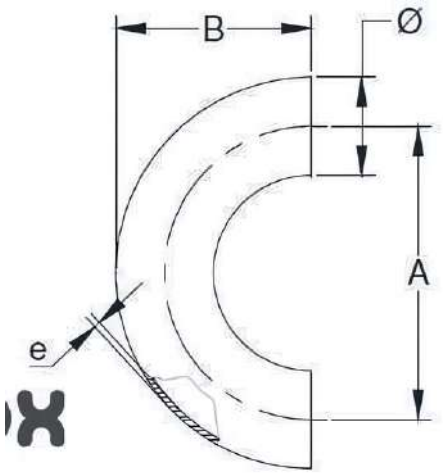
	Normal	Prolongada	
1"	152	61,1	1,5
1.1/2"	187	84,3	1,5
2"	222	107,2	1,5
2.1/2"	254	130,2	1,5
3"	273	152,2	2
4"	325	194,4	2



Curva 180° Solda OD

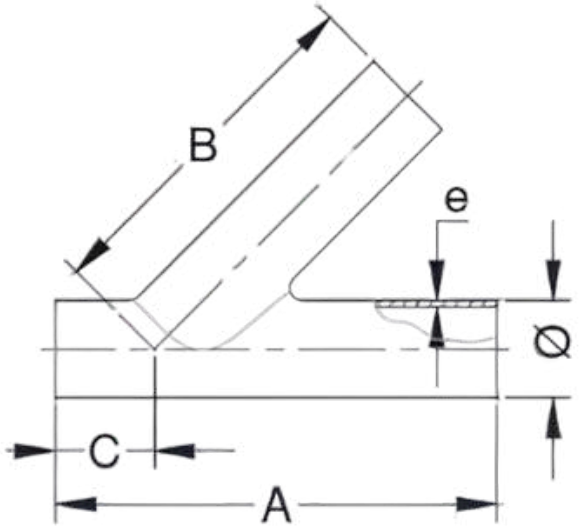
	Normal	Prolongada	
1"	152	61,1	1,5
1.1/2"	187	84,3	1,5
2"	222	107,2	1,5
2.1/2"	254	130,2	1,5
3"	273	152,2	2
4"	325	194,4	2

Ø	A	B	e
1"	76,2	50,8	1,5
1½"	114,3	76,2	1,5
2"	152,4	101,6	1,5
2½"	190,5	127	2
3"	228,6	152,4	2
4"	304,8	203,2	2
6"	457,2	304,8	2



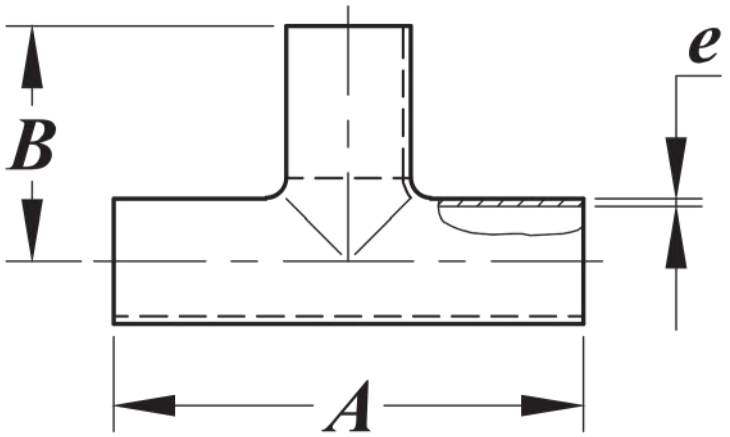
Tê 45° Solda

Ø	A	B	e
1"	152	129	1,5
1.1/2	187	159	1,5
" 2"	222	183	1,5
2.1/2"	254	218	1,5
3"	273	229	2
4"	325	278	2



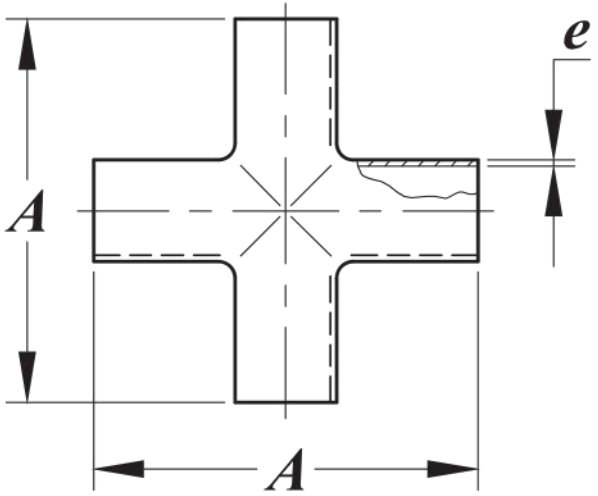
Tê Reto solda

Ø	A	B	e
1/2"			
3/4"			
1"'	96,0	48,0	1,5
1.1/2"	114,4	57,2	1,5
2"	152,4	76,2	1,5
2.1/2"	154,0	77,0	1,5
3"	166,0	83,0	2,0
4"	197,0	98,5	2,0
6"	226,0	113,0	2,0



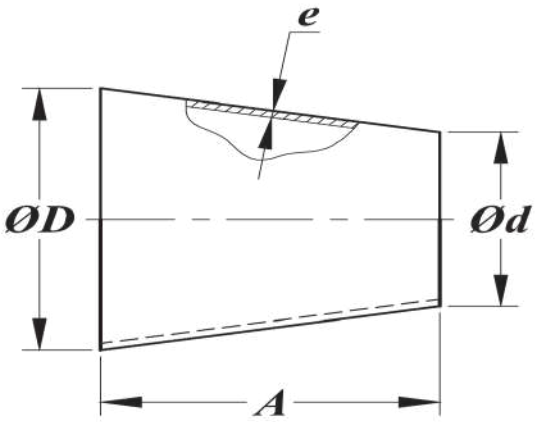
Cruzeta Solda

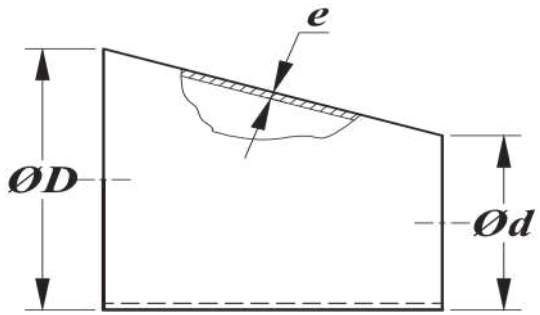
Ø	A	B	e
1/2"			
3/4"			
1"'	96,0	48,0	1,5
1.1/2"	114,4	57,2	1,5
2"	152,4	76,2	1,5
2.1/2"	154,0	77,0	1,5
3"	166,0	83,0	2,0
4"	197,0	98,5	2,0
6"	226,0	113,0	2,0



Redução Cônica OD Solda Redução Excêntrica OD Solda

ØD Ød	A		e
	CÔNICA	EXCÊNTRICA	
3/4" x 1/2"	19,05		2,0
1" x 1/2"	38,1		2,0
1" x 3/4"	19,5		2,0
1.1/2" x 1"	38,1	38,1	2,0
2" x 1"	76,2	76,2	2,0
2" x 1.1/2"	38,1	38,1	2,0
2.1/2" x 1"	114,3	114,3	2,0
2.1/2" x 1.1/2"	76,2	76,2	2,0
2.1/2" x 2'	38,1	38,1	2,0
3" x 1.1/2"	114,3	114,3	2,0
3" x 2"	76,2	76,2	2,0
3" x 2.1/2"	38,1	38,1	2,0
4" X 2"	152,4	152,4	2,0
4" x 2.1/2"	114,3	114,3	2,0
4" x 3"	76,2	76,2	2,0
6" x 3"	228,6	57,8	2,0
6" x 4"	152,4	152,4	2,0

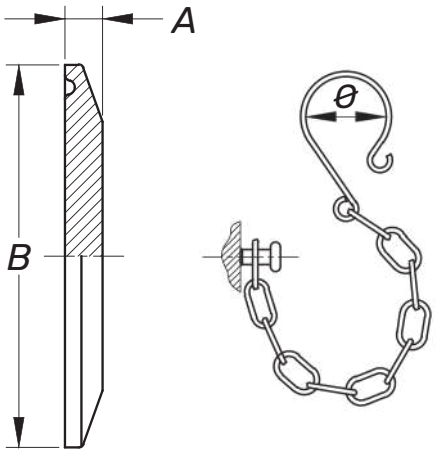




A Redução de aço inox tem como principal função fazer a conexão/união eficiente e produtiva de dois tubos que possuem tamanhos diferentes, dimensões distintas. Com acabamentos PE (polimento externo), PIPE (polimento interno e externo) e DEC (decapados/superficie fosca), você terá um produto de alta qualidade e desempenho para as suas necessidades. Disponível em Aço Inox 304 ou 316, 316L

Tampão TC

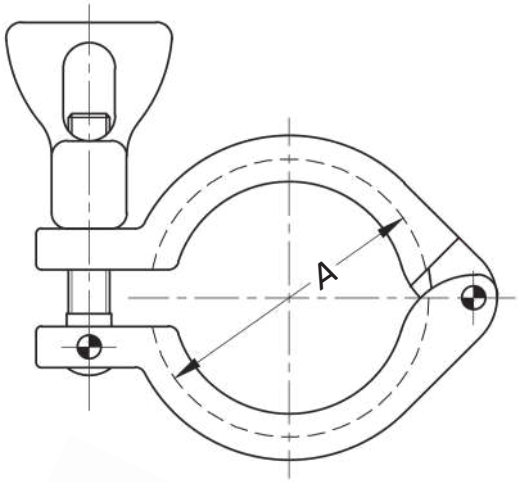
Ø	A	B
1"	6	50,4
1.1/2	6	50,4
" 2"	6	63,9
2.1/2"	6	77,4
3"	6	90,9
4"	6	118,9



Combinando funcionalidade e qualidade, este é ideal para a sua necessidade. Confere resistência e longa vida útil, enquanto seu design moderno e sofisticado adiciona um toque de estilo a qualquer ambiente.

Abraçadeira TC Inox 304

Ø	A	
	NORMAL	ALTA PRESSÃO
1/2''	37,0	
3/4''	37,0	
1''	54,0	52,0
1.1/2''	54,0	52,0
2''	67,0	66,0
2.1/2'	81,0	79,0
'	94,0	92,0
3''	122,0	120,0
4''		
5'' 6''	172,0	168,0



As Conexões sanitárias são fabricadas em aço inox 304/L, especificamente utilizadas em setores que necessitam alto nível de qualidade e higiene, entre estes setores estão: Alimentício, Bebidas, Cosméticos, farmacêutico dentre outros.

Essas abraçadeiras tem a função de fixar e sustentar tubos e conexões na linha.

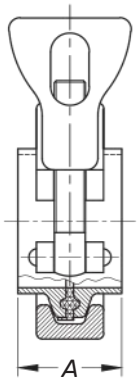
Todas as Conexões Sanitárias são padronizadas por órgãos de regulamentação sendo fornecidas com certificados de propriedades químicas e mecânicas.

Acabamento PIPE (polimento interno e externo).

São utilizadas para União Tri-clamp (2 Niples, Anel de Vedação e a Abraçadeira) ou Adaptadores Tri-Clamp para Mangueira.

União TC + Anel de vedação TC

Ø	A		
	CURTA	LONGA	EXPANSÃO
1/2"	27,2		
3/4"	27,2		
1"	27,2	57,8	41,8
1.1/2"	27,2	57,8	41,8
2"	27,2	57,8	51,8
2.1/2"	27,2	57,8	61,8
3"	27,2	57,8	61,8
4"	33,6	57,8	
6"	33,6	57,8	



A União TC é uma conexão de alta qualidade projetada para aplicações industriais que requerem resistência à corrosão e conexões seguras em sistemas de tubulação.

Fabricada em aço inoxidável 304, essa união oferece excelente resistência à oxidação e à corrosão, garantindo uma longa vida útil mesmo em ambientes agressivos.

Com uma conexão de solda TC (Tri-Clamp) de 4 polegadas, essa união é fácil de instalar e proporciona uma vedação confiável em sistemas de tubulação.

O uso de solda TC garante uma conexão robusta e livre de vazamentos.

Ø	A	C
1/2"	34,0	1,8 mm
3/4"	34,0	1,8 mm
1"	52,0	1,8 mm
1.1/2"	52,0	1,8 mm
2"	66,0	1,8 mm
2.1/2"	79,0	1,8 mm
3"	93,0	1,8 mm
4"	121,0	1,8 mm
6"	169,0	1,8 mm

Materiais de Vedação:

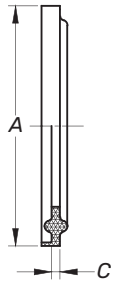
EPDM: Resistente à ácidos, solventes e oxidantes em baixas concentrações. Não é apropriada para óleos e gorduras.
Temperatura Máx: 175°C

VITON: Resistente a quase todos os líquidos agressivos. É especialmente indicado à concentrações elevadas.
Temperatura Máx: 260°C.

BUNA: Borracha de uso geral, resistente a óleos e gorduras, porém não adequada para ácidos muito fortes e temperaturas elevadas.
Temperatura Máx: 110°C.

SILICONE: Resistente a alguns ácidos, oxidantes, óleos e gorduras.
Temperatura Máx: 260°C.

TEFLON (PTFE): Excelente resistência a intempéries, calor, vapor, abrasão, ácidos, óleo de petróleo e óleo vegetal. Se adequa a altas ou baixas temperaturas. Possui pouca elasticidade e moldabilidade na vedação por ser muito rígido.
Temperatura Máx: 260°C



VITON (FKM): Resistência mecânica, química, ao calor e vapor. É particularmente adequado para produtos de óleo grosso quente. Indicado para serviço de vácuo difíceis por causa de seu alto peso molecular e baixa permeabilidade ao gás.
Temperatura Máx: 204°C e picos até 315°C.

TEFLON (PTFE) + VITON (FKM) (TC Envelope): Ideais para altas temperaturas e produtos químicos agressivos. A vedação Envelope de PTFE combina a resistência química do PTFE com as características elastoméricas do EPDM ou FKM, proporcionando a flexibilidade necessária. Essa combinação permite melhor absorção dos ciclos térmicos de sanitização.
Temperatura Máx: Teflon 260°C, Viton: 204°C.serviço de vácuo difíceis por causa de seu alto peso molecular e baixa permeabilidade ao gás.
Temperatura Máx: 204°C e picos até 315°C.

Niple TC

Niple Tri Clamp Médio (DT-4.1.4-1B) em aço inoxidável ASTM A276/A479/A511 TP-316L, sem costura.

Uma extremidade plana e prolongada para solda manual (não há extensores soldados).

Uma extremidade Tri-Clamp ISO 2852.

Acabamentos de superfície possíveis: polimento mecânico interno RA <= 0,51 micrômetros (SF1) ou polimento mecânico seguido de eletro polimento interno RA <= 0,38 micrômetros (SF4).

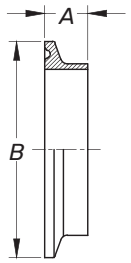
Acabamento externo polido mecanicamente (SF3).

Espessura da parede 1,65 mm.

Dimensões, tolerâncias e acabamento de acordo com a norma ASME-BPE. Niples com diâmetros menores (1/4" a 3/4") são fornecidos sem costura.

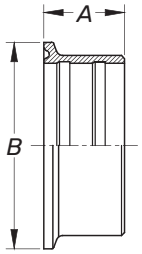
Niple Solda TC

Ø	A		B
	Curto	Longo	
1"	12,7	28,6	50,4
1.1/2"	12,7	28,6	50,4
2"	12,7	28,6	63,9
2.1/2"	12,7	28,6	77,4
3"	12,7	28,6	90,9
4"	15,8	28,6	118,9



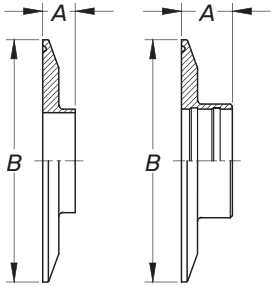
Niple de Expansão TC

Ø	A	B
1"	20	50,4
1.1/2"	20	50,4
2"	25	63,9
2.1/2"	30	77,4
3"	30	90,9



Niple Redução Solda/ Expansão

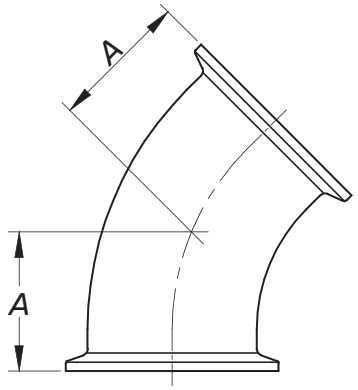
Ø	A		B
	Solda	Expansão	
1.1/2" x 1"	20	30	50,4
2" x 1" 2" x	20	30	63,9
1.1/2"	20	30	63,9
2.1/2" x 1"	20	30	77,4
2.1/2" 1.1/2"	20	30	77,4
2.1/2" x 2"	20	30	77,4
2.1/2" x 2"	20	30	77,4
3" x 1.1/2"	26	36	90,9
3" x 2"	26	36	90,4
3" x 2.1/2"	26	36	90,4
4" x 2"	30	40	118,9
4" x 2.1/2"	30	40	118,9
4" x 3"	30	40	118,9



Curva 45° 2 TC
Curva 90° 2 TC

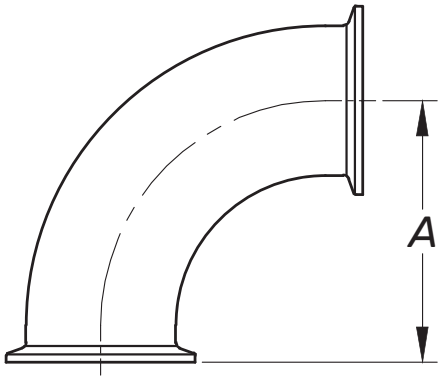
Curva 45° 2TC

Ø	A
1"	27,3
1.1/2"	34,6
2"	41,9
2.1/2"	49,2
3"	56,4
4"	74,2
6"	107,5



Curva 90° 2TC

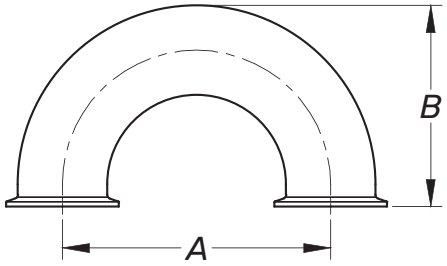
Ø	A
1"	50,8
1.1/2"	69,9
2"	88,9
2.1/2"	108,0
3"	127,0
4"	168,3
6"	248,6



Curva 180° 2TC
Tê Reto 4TC

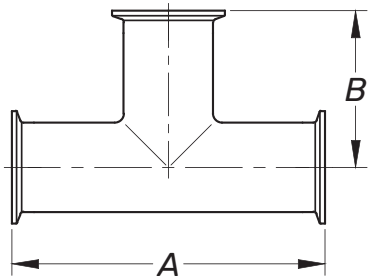
Curva 180° 2TC

Ø	A	B
1"	76,2	65,5
1.1/2"	114,4	88,9
2"	152,4	114,3
2.1/2"	190,5	139,7
3"	228,6	165,1
4"	304,8	219,1



Tê Reto 3TC

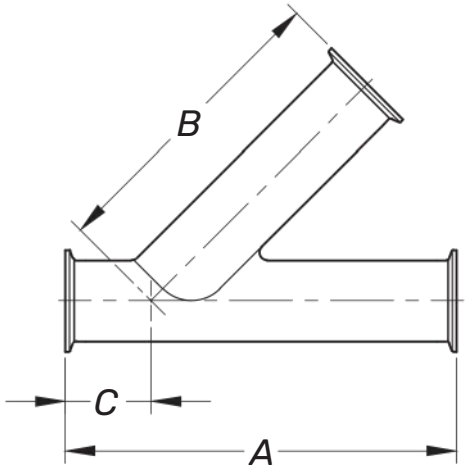
Ø	A	B
1"	121,4	60,7
1.1/2"	139,8	69,9
2"	177,8	88,9
2.1/2"	179,4	89,7
3"	191,4	95,7
4"	228,8	114,4
6"	266,0	133,0



Tê 45° 3TC
Cruzeta 4TC

Tê 45° 3TC

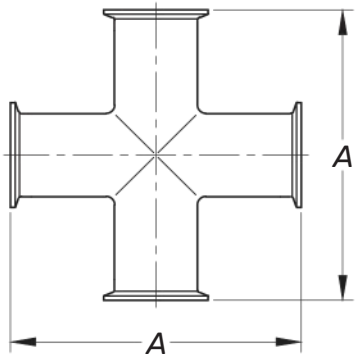
Ø	A	B	C
1"	177,8	139,7	38,5
1.1/2"	212,7	169,7	43,1
2"	247,6	193,6	54,2
2.1/2"	279,4	228,4	50,9
3"	298,4	237,9	60,5
4"	357,2	288,7	67,9



Cruzeta 4TC

Ø	A
1"	125,4
1.1/2"	159,4
2"	169,4
2.1/2"	195,4
3"	221,4
4"	247,4

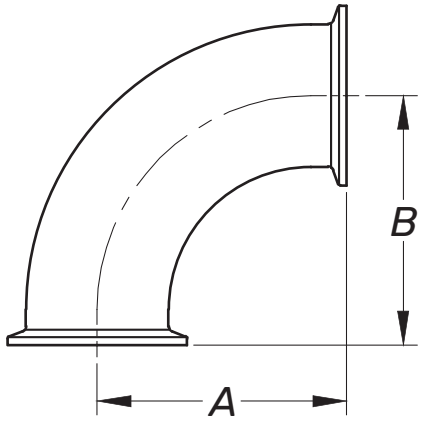
Ø	A
1"	121,4
1.1/2"	139,8
2"	177,8
2.1/2"	179,4
3"	191,4
4"	228,8
6"	266,0



Tê Redução 3TC
Curva de Redução 90° 2TC

Curva de Redução 90° 2TC

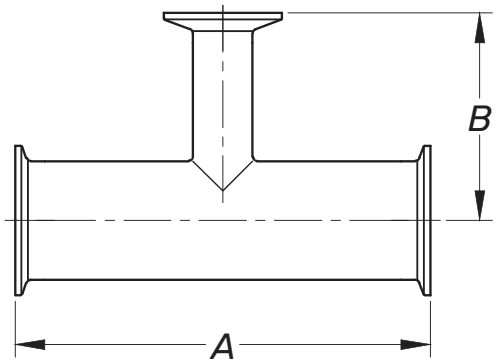
Ø	A	B
1.1/2" x 1"	50,8	58,1
2" x 1"	50,8	59,6
2" x 1.1/2"	69,9	77,2
2.1/2" x 1"	50,8	58,1
2.2/1" x 1.1/2"	69,9	77,2
2.1/2" 2"	88,9	96,2
3" x 1.1/2"	69,9	83,6
3" x 2"	88,9	102,2
3" x 2./12"	107,9	115,3
4" x 2"	88,9	106,2
4" x 2.1/2"	107	121,2
4" x 3"	127,0	140,3



Ø	A	B
1.1/2" x 1" 2" x	139,8	69,9
1"	177,8	88,9
2" x 1.1/2"	177,8	88,9
2.1/2" x 1"	179,4	89,7
2.1/2" x 1.1/2"	179,4	89,7
2.1/2" x 2"	179,4	89,7
3" x 1.1/2"	191,4	95,7
3" x 2"	191,4	95,7
3" x 2.1/2"	191,42	95,7
4" x 2"	28,8	111,2
4" x 2.1/2"	228,8	111,2
4" x 3"	228,8	111,2
6" x 4"	266,0	128,9

Tê Redução 3TC

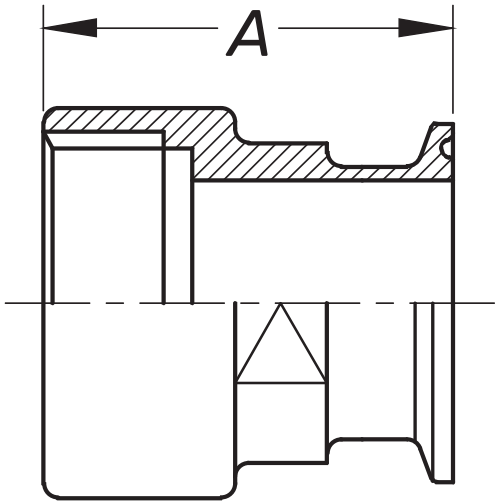
Ø	A	B
1.1/2" x 1"	159,4	79,7
2" x 1"	169,4	84,7
2" x 1.1/2"	169,4	84,7
2.1/2" x 1"	195,4	97,7
2.2/1" x 1.1/2"	195,4	97,7
2.1/2" 2"	195,4	97,7
3" x 1.1/2"	221,4	110,7
3" x 2"	221,4	110,7
3" x 2./12"	221,4	110,7
4" x 2"	247,4	123,7
4" x 2.1/2"	247,4	123,7
4" x 3"	247,4	123,7



Niple Adaptador tipo L
Niple Adaptador tipo N

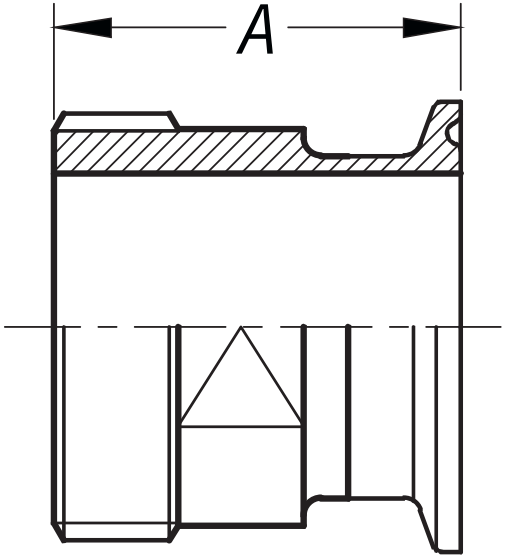
Niple adaptador tipo L

Ø	A	
	BSP	NPT
1"	59,7	59,7
1.1/2"	64,7	61,7
2"	69,7	63,7
2.1/2"	74,7	71,7
3"	79,7	75,7



Niple adaptador tipo N

Ø	A	
	BSP	NPT
1"	47,7	
1.1/2"	52,7	
2"	57,7	
2.1/2"	62,7	
3"	67,7	

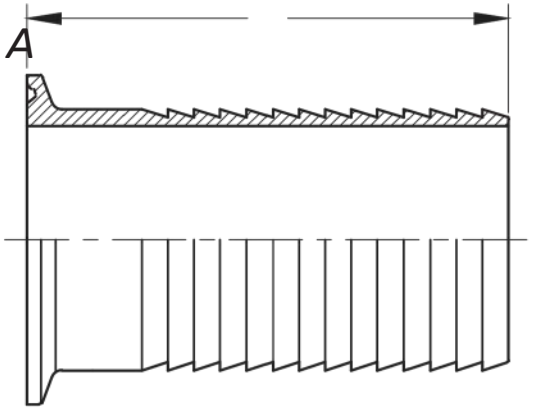


Niple Adaptador TC x Mangueira
Redução cônica 2 Clamp

Niple adaptador TC x Mangueira

Ø	A
1"	72,7
1.1/2"	92,7
2"	92,7
2.1/2"	112,7
3"	112,7
4"	112,7

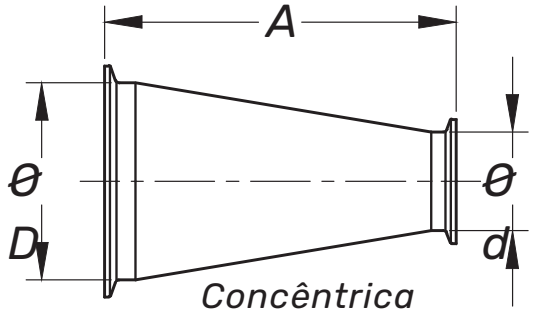
ϴ	A
1/2"	56,7
3/4"	56,7
1"	72,7
1.1/2"	92,7
2"	92,7
2.1/2"	112,7
3"	112,7
4"	115,9
6"	136,0



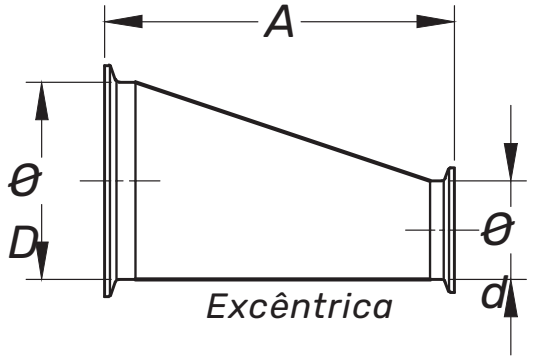
Redução Cônica 2TC

Ø	Conc./ Exc.
1.1/2" x 1"	69,9
2" x 1"	110,9
2" x 1.1/2"	66,4
2.1/2" x 1"	152,9
2.2/1" x	108,4
1.1/2" 2.1/2"	67,4
2" 3" x 1.1/2"	150,9
3" x 2"	109,9
3" x 2./12"	67,9
4" x 2"	184,9
4" x 2.1/2" 4"	142,9
x 3"	100,4

Diâmetros	A	
ϴ D x ϴ d	Conc.	Exc.
3/4" x 1/2"	44,5	-
1" x 3/4"	44,5	-
1" x 1/2"	63,5	-
1.1/2" x 1"	63,5	63,5
2" x 1"	101,6	101,6
2" x 1.1/2"	63,5	63,5
2.1/2" x 1"	139,7	139,7
2.1/2" x 1.1/2"	101,6	101,6
2.1/2" x 2"	63,5	63,5
3" x 1.1/2"	139,7	139,7
3" x 2"	101,6	101,6
3" x 2.1/2"	63,5	63,5
4" x 2"	177,8	177,8
4" x 2.1/2"	139,7	139,7
4" x 3"	101,6	101,6
5" x 3"	177,8	177,8
5" x 4"	108,0	108,0
6" x 3"	254,0	254,0
6" x 4"	184,2	184,2



Concêntrica

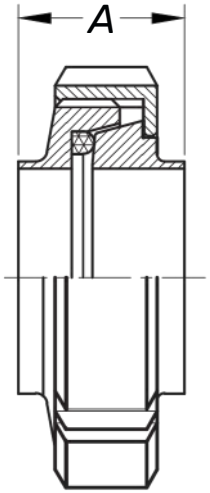


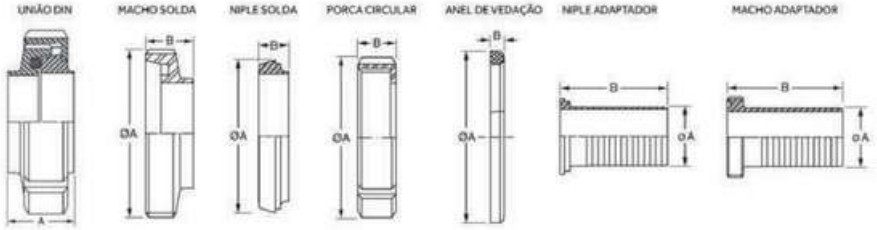
Excêntrica

União DIN

Ø	A
1/2"	28,5
3/4"	28,5
1"	36,5
1.1/2"	36,5
2"	36,5
2.1/2"	42,5
3"	51,5
4"	54,0
6"	76,5

Conexão DIN é produzida em Aço Inox 304 ou 316. É utilizada na transferência e controle de líquidos em condições sanitárias nas indústrias alimentícias, químicas e farmacêuticas, esses produtos são projetados e construídos de forma a não reter resíduos ou gerar contaminações nas linhas de processos. Possui excelente resistência a corrosão e ainda recebe mais um trabalho de polimento tornando sua superfície de contato ainda mais lisa e higiênica.

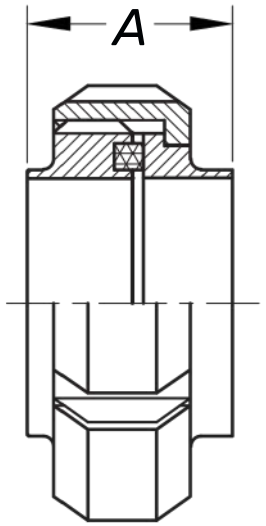


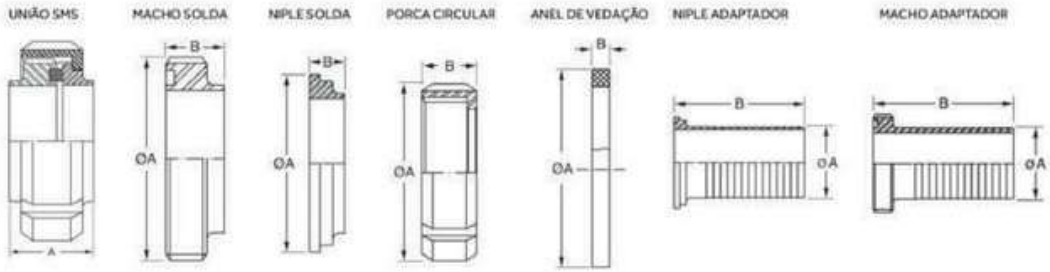


União SMS

Ø	A	
	SOLDA	EXPANSÃO
1"	32,0	39,5
1.1/2"	38,0	45,5
2"	39,0	47,5
2.1/2"	43,0	57,5
3"	45,0	67,5
4"	59,0	
5"	54,0	
6"	54,0	

Conexão SMS é produzida em Aço Inox 304 ou 316. É utilizada na transferência e controle de líquidos em condições sanitárias nas indústrias alimentícias, químicas e farmacêuticas, esses produtos são projetados e construídos de forma a não reter resíduos ou gerar contaminações nas linhas de processos. Possui excelente resistência a corrosão e ainda recebe mais um trabalho de polimento tornando sua superfície de contato ainda mais lisa e higiênica.

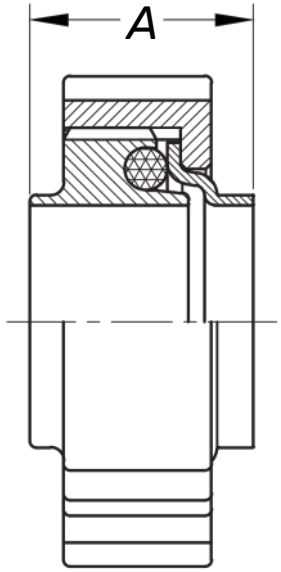


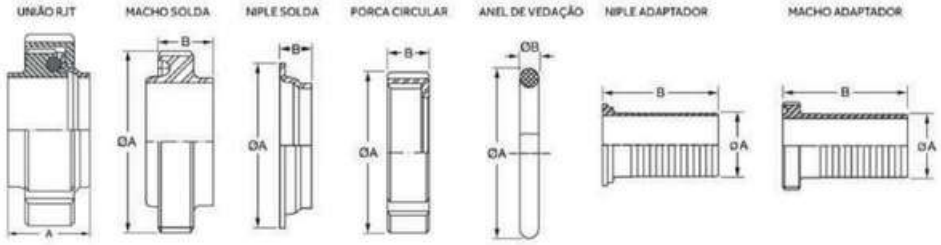


União RJT

Ø	A	
	SOLDA	EXPANSÃO
1”	32,0	39,5
1.1/2”	38,0	45,5
2”	39,0	47,5
2.1/2”	43,0	57,5
3”	45,0	67,5
4”	59,0	
5”	54,0	
6”	54,0	

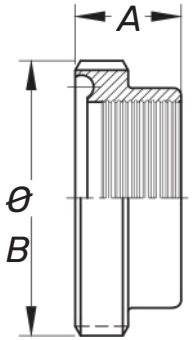
A Conexão RJT é produzida em Aço Inox 304 ou 316. É utilizada na transferência e controle de líquidos em condições sanitárias nas indústrias alimentícias, químicas e farmacêuticas, esses produtos são projetados e construídos de forma a não reter resíduos ou gerar contaminações nas linhas de processos. Possui excelente resistência a corrosão e ainda recebe mais um trabalho de polimento tornando sua superfície de contato ainda mais lisa e higiênica.



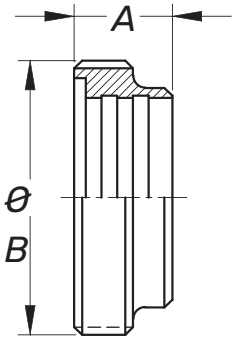


Machos Solda

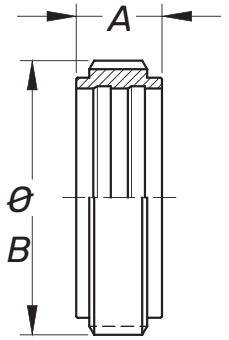
ø	RJT		SMS		DIN	
	A	øB	A	øB	A	øB
1”	20,0	45,7	20,0	40,0	17,0	37,1
1.1/2”	24,0	58,7	23,0	60,0	20,0	50,6
2”	28,0	72,7	25,0	70,0	20,0	64,1
2.1/2”	32,0	85,4	30,0	85,0	25,0	77,6
3”	32,0	98,1	35,0	98,0	30,0	91,1
4”					30,0	118,1



RJT



SMS



DIN

As conexões e válvulas de aço inox sanitárias são empregadas em indústrias alimentícias e farmacêuticas, onde o fluido não pode sofre contaminações por agentes externos.

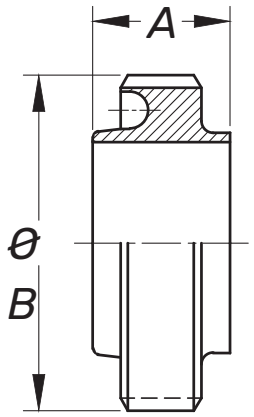
As curvas, tees, reduções, são fabricadas a partir do tubo OD inox, já as válvulas, uniões, abraçadeiras são de aço inox microfundido.

Disponível em inox 304 e 316.

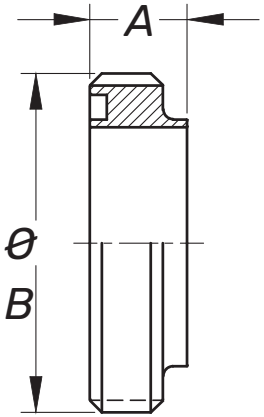
Com acabamento PIPE (polimento interno e externo) mecanicamente RA <= 0,51 Micro Metro (SF1- conforme ASME-BPE)

Machos Solda

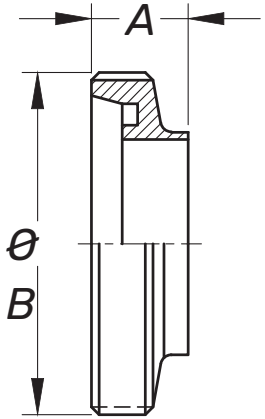
Ø	RJT		SMS		DIN	
	A	ØB	A	ØB	A	ØB
1"	23,8	45,4	15,0	39,8	22,0	52,0
1.1/2"	23,8	58,1	20,0	59,8	22,0	65,0
2"	23,8	72,4	20,0	69,8	22,0	78,0
2.1/2"	23,8	85,1	24,0	84,8	25,0	95,0
3"	23,8	97,8	24,0	97,8	30,0	110,0
4"	23,8	123,2	35,0	131,2	30,0	130,0
6"					50,0	190,0



RJT



SMS



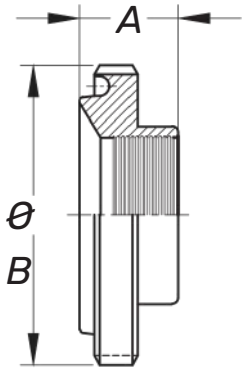
DIN

As conexões e válvulas de aço inox sanitárias são empregadas em indústrias alimentícias e farmacêuticas, onde o fluido não pode sofre contaminações por agentes externos.

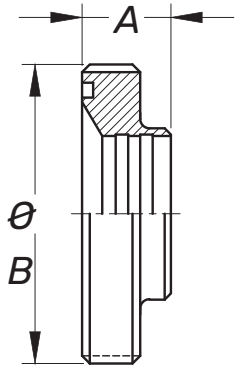
As curvas, tees, reduções, são fabricadas a partir do tubo OD inox, já as válvulas, uniões, abraçadeiras são de aço inox microfundido.

Macho de Redução Expansão

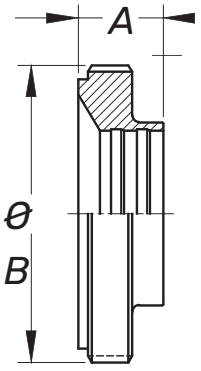
Ø	RJT		SMS		IDF	
	A	ØB	A	ØB	A	ØB
1.1/2" x 1"	25,0	58,1	25,0	59,8	22,5	50,6
2" x 1"	26,0	72,4	26,5	69,8	26,0	64,1
2" x 1.1/2"	28,5	72,4	28,0	69,8	22,5	64,1
2.1/2" x 1"	25,5	85,1	30,0	84,8	23,5	77,6
2.1/2" x 1.1/2"	30,0	85,1	28,0	84,8	26,0	77,6
2.1/2" x 2"	33,0	85,1	30,0	84,8	22,5	77,6
3" x 1.1/2"	30,0	97,8	29,0	97,8	23,5	91,1
3" x 2"	34,0	97,8	31,0	97,8	26,0	91,1
3" x 2.1/2"	36,0	97,8	35,0	97,8	22,5	91,1



RJT



SMS

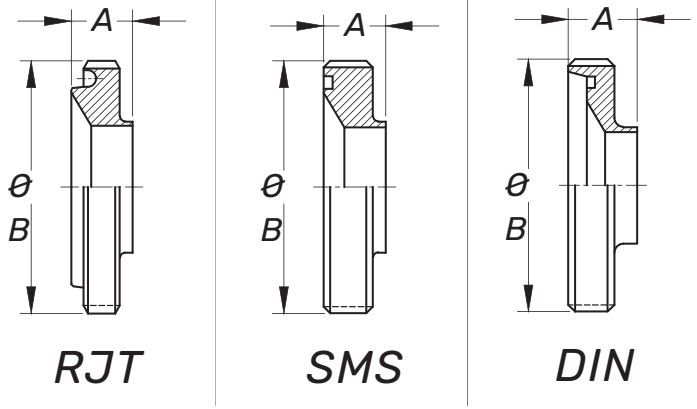


IDF

As conexões e válvulas de aço inox sanitárias são empregadas em indústrias alimentícias e farmacêuticas, onde o fluido não pode sofre contaminações por agentes externos.
As curvas, tees, reduções, são fabricadas a partir do tubo OD inox, já as válvulas, uniões, abraçadeiras são de aço inox microfundido.

Macho de Redução Solda

Ø	RJT		SMS		DIN	
	A	ØB	A	ØB	A	ØB
1.1/2'' x 1''	23,8	58,1	20,0	59,8	22,0	65,0
2'' x 1''	23,8	72,4	20,0	69,8	22,0	78,0
2'' x 1.1/2''	23,8	72,4	20,0	69,8	22,0	78,0
2.1/2'' x 1''	23,8	85,1	24,0	69,8	25,0	95,0
2.1/2'' x 1.1/2''	23,8	85,1	24,0	84,8	25,0	95,0
2.1/2'' x 2''	23,8	85,1	24,0	84,8	25,0	95,0
3'' x 1.1/2''	23,8	97,8	24,0	84,8	30,0	110,0
3'' x 2''	23,8	97,8	24,0	97,8	30,0	110,0
3'' x 2.1/2''	23,8	97,8	24,0	97,8	30,0	110,0
4'' x 2''	23,8	123,2		131,2	30,0	130,0
4'' x 2.1/2''	23,8	123,2		131,2	30,0	130,0
4'' x 3''	23,8	123,2		131,2	30,0	130,0
6'' x 4''	23,8	175,2			50,0	190,0



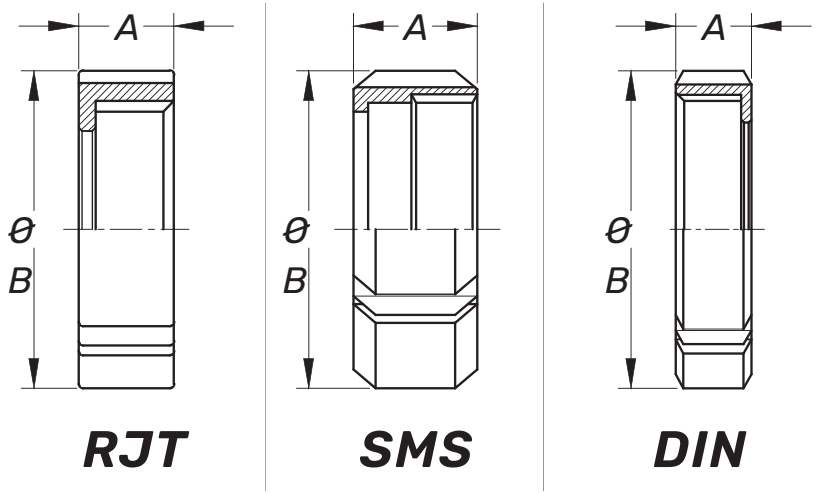
As conexões de inox tem enorme resistência à oxidação, podendo ser implantada em ambientes agressivos ou que exijam durabilidade e eficiência, mesmo em condições extremas.

Esse acessório é muito usado na indústria química, petroquímica e de papel. No caso da indústria alimentícia ou de bebidas, por exemplo, pode ser utilizado em aço inox sanitário, com polimentos internos e/ou externos.

Há vários modelos e formas para serem empregados conforme a necessidade da indústria, podendo ser roscadas 150lbs, biseladas para solda com paredes Schedule ou OD, alta pressão modelo forjado ou mesmo tipo sanitárias com conexões RTJ, SMS, entre outras.

Porca Circular

ϴ	RJT		SMS		DIN	
	A	ϴB	A	ϴB	A	ϴB
1/2"					18,0	38,0
3/4"					18,0	44,0
1"	22,2	51,3	20,0	50,0	21,0	63,0
1.1/2"	22,2	66,8	25,0	73,0	22,0	78,0
2"	22,2	78,3	26,0	83,0	22,0	92,0
2.1/2"	22,2	91,3	30,0	99,0	25,0	112,0
3"	22,2	104,4	32,0	113,0	29,0	127,0
4"	22,2	131,0	45,0	105	31,0	148,0
5"					35,0	178,0
6"					40,0	210,0



As conexões de inox tem enorme resistência à oxidação, podendo ser implantada em ambientes agressivos ou que exijam durabilidade e eficiência, mesmo em condições extremas.

Esse acessório é muito usado na indústria química, petroquímica e de papel. No caso da indústria alimentícia ou de bebidas, por exemplo, pode ser utilizado em aço inox sanitário, com polimentos internos e/ou externos.

Há vários modelos e formas para serem empregados conforme a necessidade da indústria, podendo ser roscadas 150lbs, biseladas para solda com paredes Schedule ou OD, alta pressão modelo forjado ou mesmo tipo sanitárias com conexões RTJ, SMS, entre outras.

Anéis de Vedação

	RJT		SMS		IDF		DIN	
ϴ	A	ϴB	A	ϴB	A	ϴB	A	ϴB
1"	6,6	33,2	5,5	32,0	7,0	32,5	5,0	40,0
1.1/2"	6,6	45,9	5,5	48,0	7,0	46,0	5,0	52,0
2"	6,6	58,6	5,5	61,0	7,0	59,5	5,0	64,0
2.1/2"	6,6	71,3	5,5	73,5	7,0	73,0	5,0	81,0
3"	6,6	84,0	5,5	86,0	7,0	86,5	5,0	95,0
4"	6,6	109,7	13,0	103,5	7,0	111,0	6,0	114,0
6"	6,6	158,0	-	-	-	-	7,0	167,0

Materiais de Vedação:
EPDM: Resistente à ácidos, solventes e oxidantes em baixas concentrações. Não é apropriada para óleos e gosduras.
Temperatura Máx: 175°C.

VITON: Resistente a quase todos os líquidos agressivos. É especialmente indicado à concentrações elevadas.
Temperatura Máx: 260°C.

BUNA: Borracha de uso geral, resistente a óleos e gorduras,
porém não adequada para ácidos muito fortes e temperaturas elevadas.
Temperatura Máx: 110°C.

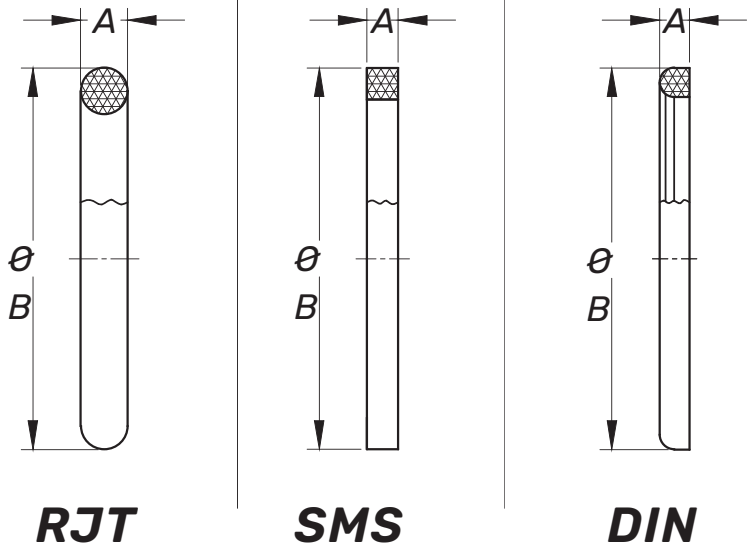
SILICONE: Resistente a alguns ácidos, oxidantes, óleos e gorduras.
Temperatura Máx: 260°C.

TEFLON (PTFE): Excelente resistência a intempéries, calor, vapor, abrasão, ácidos, óleo de petróleo e óleo vegetal. Se adequa a altas ou baixas temperaturas. Possui pouca elasticidade e moldabilidade na vedação por ser muito rígido.
Temperatura Máx: 260°C.

VITON (FKM): Resistência mecânica, química, ao calor e vapor. É particularmente adequado para produtos de óleo grosso quente. Indicado para serviço de vácuo difíceis por causa de seu alto peso molecular e baixa permeabilidade ao gás.
Temperatura Máx: 204°C e picos até 315°C.

TEFLON (PTFE) + VITON (FKM) (TC Envelope): Ideais para altas temperaturas e produtos químicos agressivos. A vedação Envelope de PTFE combina a resistência química do PTFE com as características elastoméricas do EPDM ou FKM, proporcionando a flexibilidade necessária. Essa combinação permite melhor absorção dos ciclos térmicos de sanitização.
Temperatura Máx: Teflon 260°C, Viton: 204°C.

EPDM + TEFLON (PTFE):

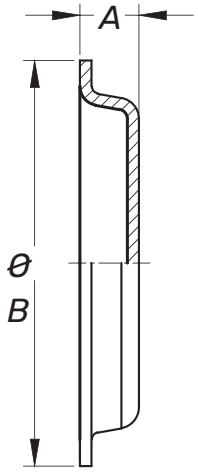


RJT **SMS** **DIN**

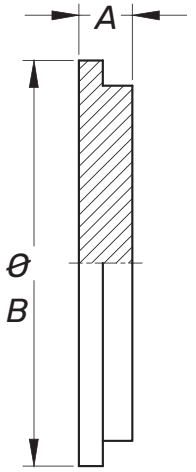
Tampão

Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	10,0	44,0	7,0	44,0	7,5	35,5
1.1/2"	10,0	56,0	7,0	56,0	8,0	55,0
2"	11,0	68,5	7,0	66,7	9,0	65,0
2.1/2"	12,0	86,0	7,0	79,4	9,0	80,0
3"	12,0	100,0	7,0	92,1	11,0	93,0
4"	15,0	121,0	7,0	117,8	13,0	127,0
5"	17,0	150,0				
6"	178,0	176,0				

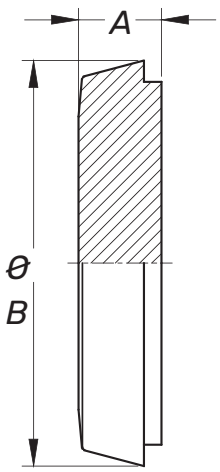
Ø	RJT		SMS		IDF		DIN	
	A	ØB	A	ØB	A	ØB	A	ØB
1"	8,0	41,3	7,0	35,0	10,0	33,8	13,0	44,0
1.1/2"	8,0	54,0	8,0	55,0	10,0	47,0	13,0	56,0
2"	9,0	66,7	9,0	65,0	10,0	60,5	14,0	68,5
2.1/2"	10,0	79,4	9,0	80,0	10,0	74,0	16,0	86,0
3"	10,0	92,1	11,0	93,0	10,0	87,5	16,0	100,0
4"	10,0	117,8	13,0	128,0	10,0	114,1	20,0	121,0
5"	-	-	-	-	-	-	22,0	149,8
6"	-	-	-	-	-	-	24,0	175,2



RJT



SMS

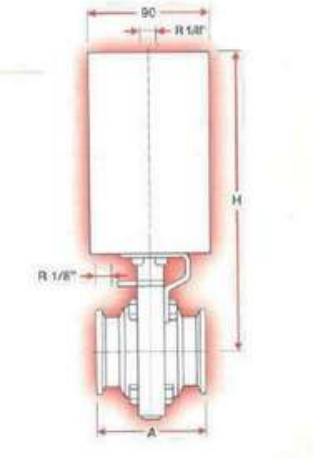


DIN

Válvula Borboleta Pneumática
Válvula de Esfera Pneumática

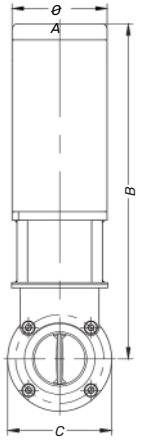
Ø	A								H
	Solda Clamp		DIN		RJT		SMS		
			2M	M-NP	2M	M-NP	2M	M-NP	
1"	40,0	65,4	88,0	82,0	94,0	80,0	70,0	66,5	233,0
1.1/2"	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	238,0
2"	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	245,0
2.1/2"	50,0	75,4	100,0	99,0	104,0	90,0	98,0	87,0	247,0
3"	50,0	75,4	110,0	108,0	104,0	90,0	98,0	88,0	254,0
4"	64,0	95,6	124,0	126,0	127,6	121,2	134,0	115,0	271,0

Atuador Retorno por Mola (RM) ou Dupla Ação (DA).



Ø	ØA	B
1"	220,0	71,0
1.1/2	227,0	85,0
" 2"	234,0	99,0
2.1/2"	240,0	111,5
3"	247,0	124,0
4"	260,0	149,5

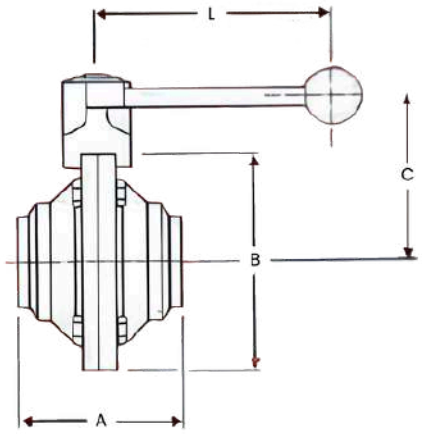
Atuador Retorno por Mola (RM) ou Dupla Ação (DA).



Válvula de Esfera

Manual (com acabamento sanitário)

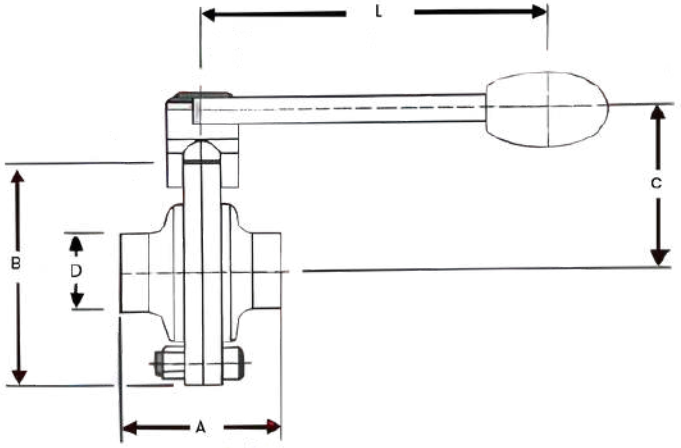
Ø	A								B	C	L
	Solda Clamp		DIN		RJT		SMS				
			2 M	M-NP	2 M	M-NP	2 M	M-NP			
1"	64,0	90,0	108,0	106,0	118,0	104,0	94,0	91,0	92,0	76,0	132,0
1.1/2	80,0	106,0	124,0	122,0	134,0	120,0	120,0	113,0	110,0	84,0	132,0
" 2	84,0	120,0	138,0	136,0	148,0	134,0	134,0	127,0	127,0	92,0	132,0
2.1/2	116,0	142,0	166,0	165,0	170,0	156,0	164,0	153,0	155,0	107,0	132,0
" 3"	134,0	160,0	194,0	192,0	188,0	174,0	182,0	172,0	180,0	126,0	142,0
4"	158,0	184,0	218,0	220,0	222,0	215,0	228,0	209,0	208,0	140,0	142,0



Com possibilidade de ser atuada pneumaticamente com Atuador Retorno por mola (RM) ou Dupla Ação (DA).

Manual

Ø	A								B	C	D	L
	Solda Clamp		DIN		RJT		SMS					
			2 M	M-NP	2 M	M-NP	2 M	M-NP				
1"	40,0	65,4	84,0	82,0	94,0	80,0	70,0	66,5	71,0	56,0	25,4	120,0
1.1/2"	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	85,0	62,0	38,1	120,0
2"	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	99,0	70,0	50,8	120,0
2.1/2"	50,0	75,4	100,0	99,0	104,0	90,0	98,0	87,0	111,5	76,0	63,5	120,0
3"	50,0	75,4	110,0	108,0	104,0	90,0	98,0	88,0	124,0	82,0	76,2	150,0
4"	50,0	81,6	110,0	126,0	113,0	107,0	120,0	101,0	149,5	95,0	101,6	150,0

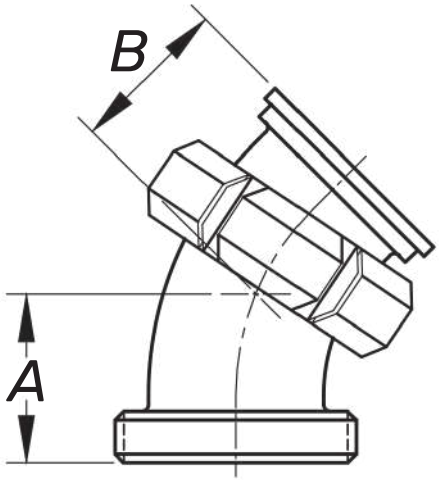


Curva 45° M-NP
Curva 90° M-NP

Mercado Inox

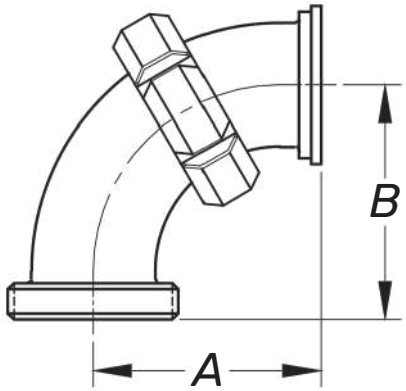
Curva 45° M - NP

Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	37,0	35,0	42,0	28,0	30	26,5
1.1/2	44,0	42,0	49,0	35,0	42	35,0
" 2"	51,0	49,0	56,0	42,0	49	42,0
2.1/2"	61,0	60,0	63,0	49,0	60	49,0
3"	74,0	72,0	71,0	57,0	68	57,0
4"	88,0	90,0	89,8	83,4	82	74,0



Curva 90° M - NP

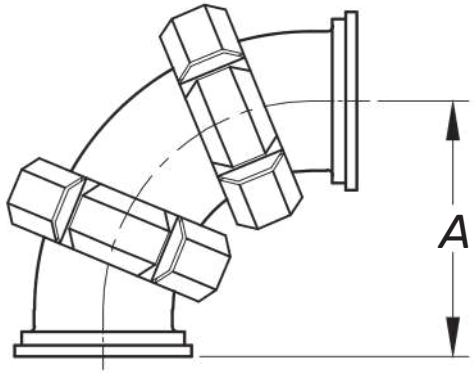
Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	58,1	60,0	51,0	65,1	49,6	78,5
1.1/2"	77,2	79,2	70,3	84,2	70,2	77,2
2"	96,2	98,2	89,2	103,2	89,2	96,2
2.1/2"	119,2	126,6	108,2	128,6	108,2	125,6
3"	142,2	144,2	127,2	141,2	128,2	138,2
4"	184,2	182,4	177,8	179,2	168,4	184,4



Curva 90° 2-NP
Curva 90° 2M

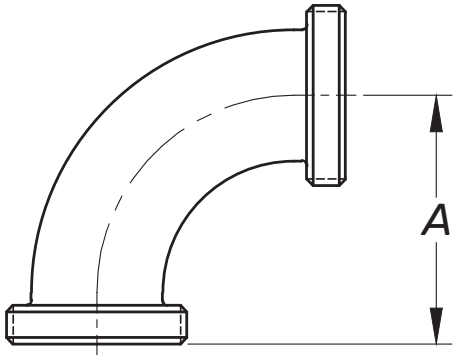
Curva 90° 2 NP

Ø	DIN	RJT	SMS
1"	58,1	51,1	49,6
1.1/2	77,2	70,3	70,2
" 2"	96,2	89,2	89,2
2.1/2"	119,2	108,2	108,2
3"	142,2	127,2	128,2
4"	184,2	177,8	168,4



Curva 90° 2M

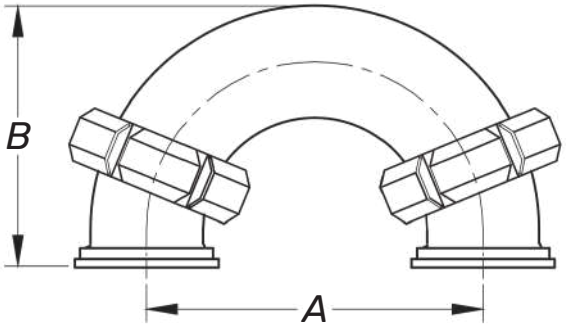
Ø	DIN	RJT	SMS
1"	60,1	65,1	78,5
1.1/2"	79,2	84,2	77,2
2"	98,2	103,2	96,2
2.1/2"	126,6	128,6	125,6
3"	144,2	141,2	138,2
4"	182,4	179,4	187,4



Curva 90° 2-NP
Curva de Redução 90° M-NP

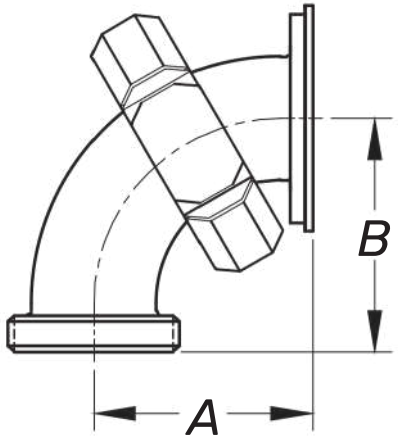
Curva 180° 2 NP

Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	76,2	71,0	76,2	64,0	76,2	62,5
1.1/2"	114,4	97,0	114,4	90,0	114,4	90,0
2"	152,4	122,0	152,4	115,0	152,4	115,0
2.1/2"	190,4	153,0	190,4	142,0	190,4	142,0
3"	228,4	181,0	228,4	166,0	228,4	167,0
4"	304,8	235,0	304,8	128,4	304,8	219,0



Curva de Redução 90° M - NP

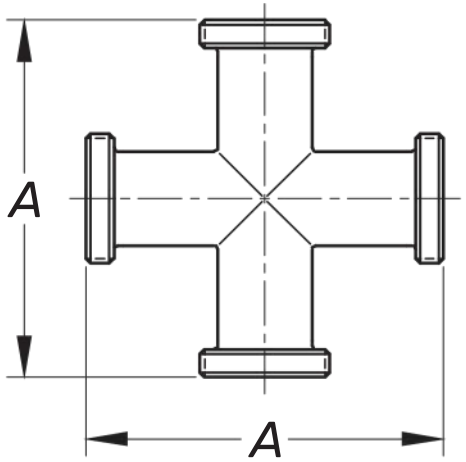
Ø	RJT		SMS		DIN	
	A	B	A	B	A	B
1.1/2" x 1"	51,1	65,1	49,6	58,1	58,1	60,1
2" x 1"	51,1	65,1	49,6	58,1	58,1	60,1
2" x 1.1/2"	70,2	84,2	70,2	96,2	96,2	98,2
2.1/2" x 1"	51,1	65,1	49,6	62,1	58,1	63,1
2.1/2" x 1.1/2"	70,2	84,2	70,2	81,2	77,2	82,2
2.1/2" x 2"	89,2	103,2	89,2	100,2	96,2	101,2
3" x 1.1/2"	70,2	84,2	108,2	81,0	77,2	87,2
3" x 2"	89,2	103,2	89,2	100,2	96,2	106,2
3" x 2.1/2"	108,2	122,2	108,2	119,2	119,2	125,2
4" x 2"	89,2	108,2	89,2	111,2	96,2	106,2
4" x 2.1/2"	108,2	127,0	108,2	130,2	119,2	125,2
4" x 3"	139,6	146,0	130,2	149,2	146,2	144,2



Cruzeta 4M
Tê Reto 3 NP

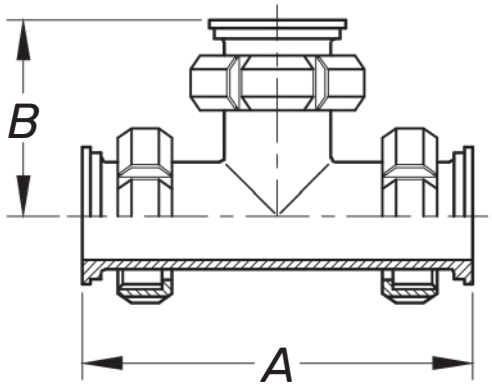
Cruzeta 4M

Ø	DIN	RJT	SMS
	A	A	A
1"	144,0	154,0	130,0
1.1/2"	178,0	188,0	174,0
2"	188,0	198,0	184,0
2.1/2"	220,0	224,0	218,0
3"	256,0	250,0	244,0
4"	282,0	285,6	292,0



Tê Reto 3 NP

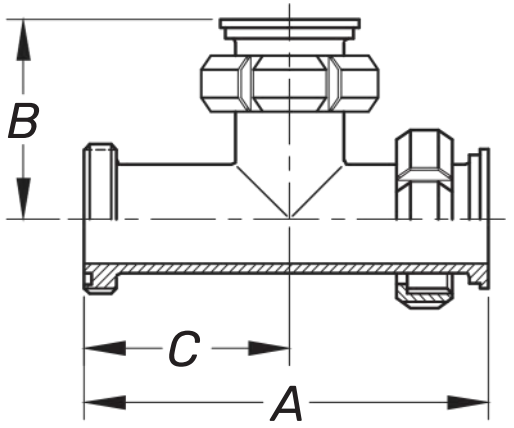
Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1''	140,0	70,0	122,0	61,5	126,0	63,0
1.1/2''	174,0	87,0	160,0	80,0	160,0	80,0
2''	184,0	92,0	170,0	85,0	170,0	85,0
2.1/2'	218,0	109,0	196,0	98,0	196,0	98,0
3''	252,0	126,0	224,0	112,0	222,0	111,0
4''	286,0	143,0	254,0	127,0	272,8	136,4



Tê Reto M - NP - NP
Tê Reto 90° 3M

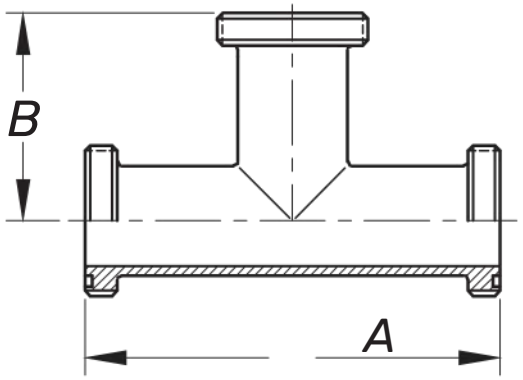
Tê Reto M - NP - NP

Ø	DIN			RJT			SMS		
	A	B	C	A	B	C	A	B	C
1''	142,0	70,0	72,0	140,0	63,0	77,0	126,5	61,5	65,0
1.1/2''	176,0	87,0	89,0	174,0	80,0	94,0	167,0	80,0	87,0
2''	186,0	92,0	94,0	184,0	85,0	99,0	177,0	85,0	92,0
2.1/2''	219,0	109,0	110,0	210,0	98,0	112,0	207,0	98,0	109,0
3''	254,0	126,0	128,0	236,0	111,0	125,0	234,0	112,0	122,0
4''	284,0	143,0	141,0	279,0	136,0	142,8	213,0	127,0	146,0



Tê Reto 90° 3M

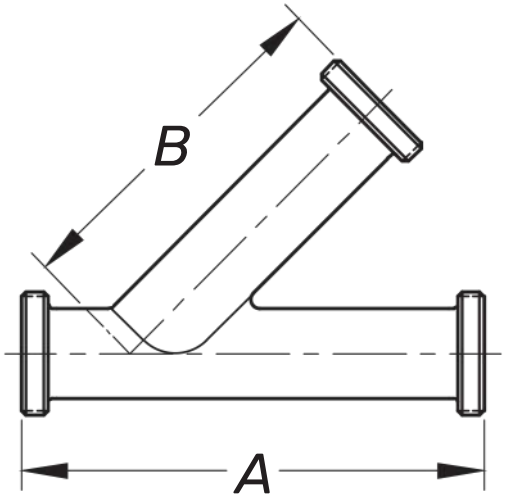
Ø	*DIN*		*RJT*		*SMS*	
	A	B	A	B	A	B
1"	144,0	72,0	154,0	77,0	130,0	65,0
1.1/2"	178,0	89,0	188,0	94,0	174,0	87,7
2"	188,0	94,0	198,0	99,0	184,0	92,0
2.1/2"	220,0	110,0	224,0	112,0	218,0	109,0
3"	256,0	123,0	250,0	125,0	244,0	220,0
4"	282,0	141,0	285,6	142,8	292,0	146,0



Tê 45° 3M
Tê Reto 90° de Redução 3M

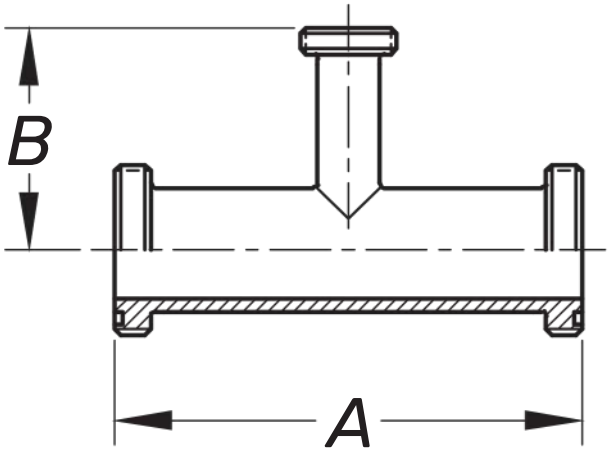
Tê 45° 3M

ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	196,0	149,0	206,0	156,0	182,0	144,0
1.1/2"	231,0	178,0	241,0	186,0	227,0	179,0
2"	266,0	203,0	276,0	210,0	262,0	203,0
2.1/2"	304,0	243,0	308,0	245,0	302,0	242,0
3"	333,0	259,0	327,0	256,0	321,0	253,0
4"	385,0	308,0	388,6	309,8	395,0	313,0



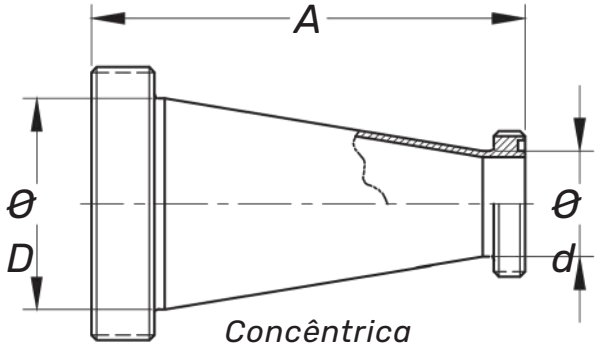
Tê Reto 90° de Redução 3M

ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1.1/2" x 1"	178,0	89,0	188,0	94,0	174,0	82,0
2" x 1"	188,0	94,0	198,0	99,0	184,0	87,0
2" x 1.1/2"	188,0	94,0	198,0	99,0	184,0	92,0
2.1/2" x 1"	220,0	107,0	224,0	112,0	218,0	90,0
2.1/2" x 1.1/2"	220,0	107,0	224,0	112,0	218,0	105,0
2.1/2" x 2"	220,0	107,0	224,0	112,0	218,0	105,0
3" x 1.1/2"	256,0	120,0	250,0	125,0	244,0	188,0
3" x 2"	256,0	120,0	250,0	125,0	244,0	188,0
3" x 2.1/2"	256,0	123,0	250,0	125,0	244,0	122,0
4" x 2"	282,0	133,0	285,6	138,0	292,0	131,0
4" x 2.1/2"	282,0	136,0	285,6	138,0	292,0	135,0
4" x 3"	282,0	141,0	285,6	138	292,0	135,0

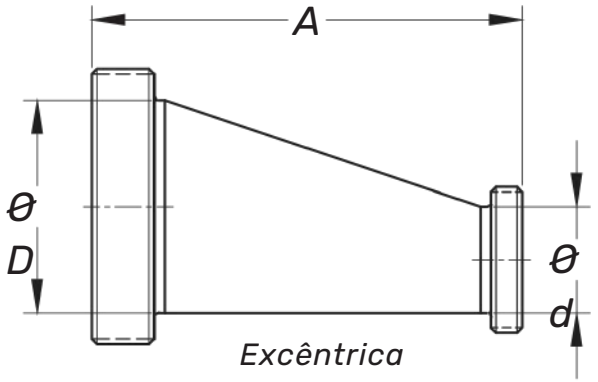


Redução Cônica 2M

Ø	DIN		RJT		SMS	
	Conc.	Exc.	Conc.	Exc.	Conc.	Exc.
1.1/2'' x 1''	88,5	88,5	98,5	98,5	79,5	79,5
2'' x 1''	129,5	129,5	139,5	139,5	120,5	120,5
2'' x 1.1/2''	85,0	85,0	95,0	95,0	81,0	81,0
2.1/2'' x 1''	174,5	174,5	181,5	181,5	166,5	166,5
2.1/2'' x 1.1/2''	130,0	130,0	137,0	137,0	127,0	127,0
2.1/2'' x 2''	89,0	89,0	96,0	96,0	86,0	86,0
3'' x 1.1/2''	177,5	177,5	179,5	179,5	169,5	169,5
3'' x 2''	136,5	136,5	138,5	138,5	128,5	128,5
3'' x 2.1/2''	97,5	97,5	96,5	96,5	90,5	90,5
4'' x 2''	211,5	211,5	218,3	218,3	214,5	214,5
4'' x 2.1/2''	172,5	172,5	176,3	176,3	176,5	176,5
4'' x 3''	135,0	135,0	133,8	133,8	134,0	134,0



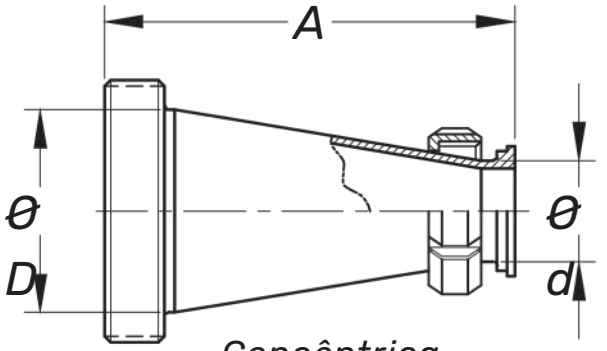
Concêntrica



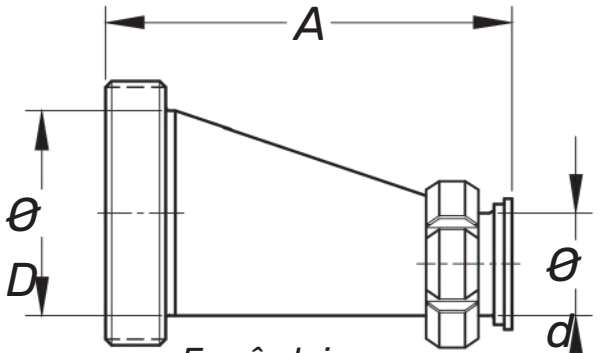
Excêntrica

Redução Cônica M NP

Ø	DIN		RJT		SMS	
	Conc.	Exc.	Conc.	Exc.	Conc.	Exc.
1.1/2'' x 1''	86,5	86,5	84,5	84,5	76,0	76,0
2'' x 1''	127,5	127,5	125,5	125,5	117,0	117,0
2'' x 1.1/2''	83,0	83,0	81,0	81,0	74,0	74,0
2.1/2'' x 1''	172,5	172,5	167,5	167,5	164,5	164,5
2.1/2'' x1.1/2''	128,0	128,0	123,0	123,0	120,0	120,0
2.1/2'' x 2''	87,0	87,0	82,0	82,0	79,0	79,0
3'' x 1.1/2''	175,5	175,5	165,5	165,5	162,5	162,5
3'' x 2''	134,5	134,5	124,5	124,5	121,5	121,5
3'' x 2.1/2''	96,5	96,5	82,5	82,5	79,5	79,5
4'' x 2''	209,5	209,5	204,3	204,3	207,5	207,5
4'' x 2.1/2''	171,5	171,5	162,3	162,3	165,5	165,5
4'' x 3''	133,0	133,0	119,8	119,8	124,0	124,0



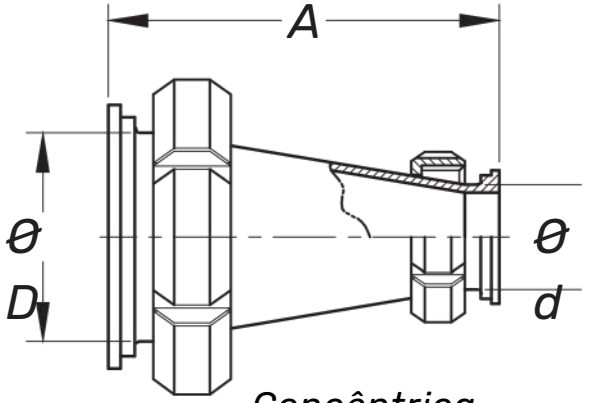
Concêntrica



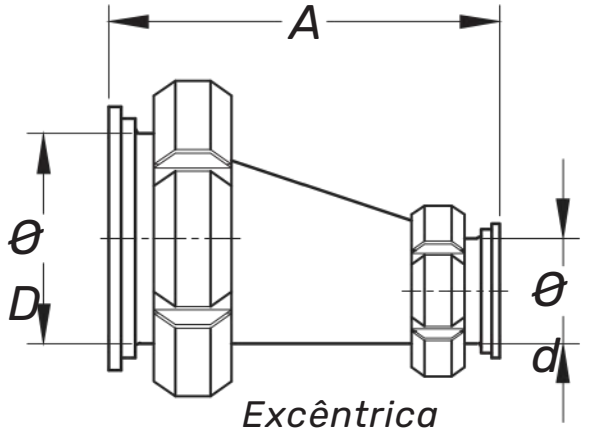
Excêntrica

Redução Cônica 2 NP

Ø	DIN		RJT		SMS	
	Conc.	Exc.	Conc.	Exc.	Conc.	Exc.
1.1/2'' x 1''	84,5	84,5	70,5	70,5	69,0	69,0
2'' x 1''	125,5	125,5	111,5	111,5	110,0	110,0
2'' x 1.1/2''	81,0	81,0	67,0	67,0	67,0	67,0
2.1/2'' x 1''	171,5	171,5	153,5	153,5	152,0	152,0
2.1/2'' x 1.1/2''	127,0	127,0	109,0	109,0	109,0	109,0
2.1/2'' x 2''	86,0	86,0	68,0	68,0	68,0	68,0
3'' x 1.1/2''	173,5	173,5	151,5	151,5	152,5	152,5
3'' x 2''	132,5	132,5	110,5	110,5	111,5	111,5
3'' x 2.1/2''	94,5	94,5	68,5	68,5	69,5	69,5
4'' x 2''	211,5	211,5	197,9	197,9	188,5	188,5
4'' x 2.1/2''	173,5	173,5	155,9	155,9	146,5	146,5
4'' x 3''	135,0	135,0	113,4	113,4	105,0	105,0



Concêntrica

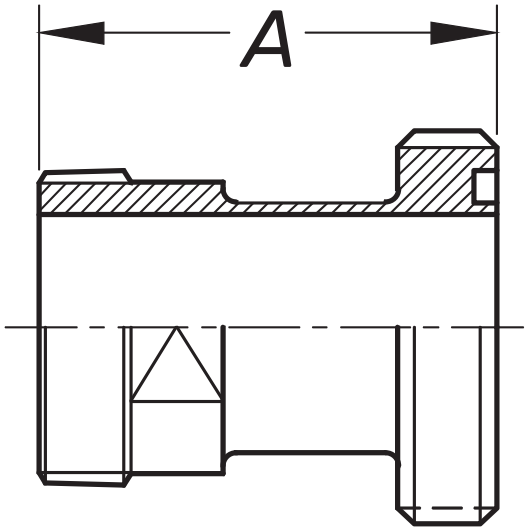


Excêntrica

Macho Adaptador tipo N
Macho Adaptador tipo L

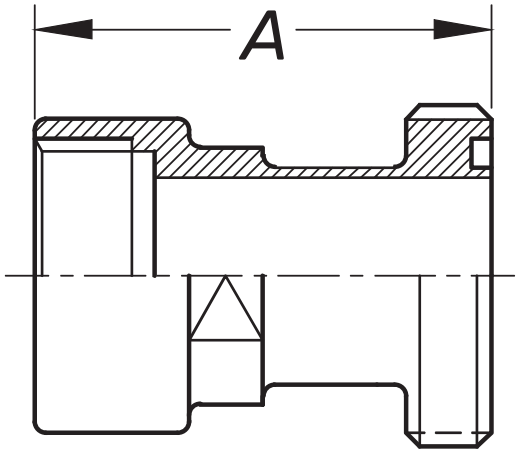
Macho Adaptador Tipo N

Ø	DIN		RJT		SMS	
	BSP	NPT	BSP	NPT	BSP	NPT
1"	59,0	59,0	59,0	59,0	59,0	59,0
1.1/2"	64,0	64,0	64,0	64,0	64,0	64,0
2"	69,0	69,0	69,0	69,0	69,0	69,0
2.1/2"	74,0	74,0	74,0	74,0	74,0	74,0
3"	86,0	86,0	79,0	79,0	79,0	79,0
4"	91,0	91,0	84,0	84,0	84,0	84,0



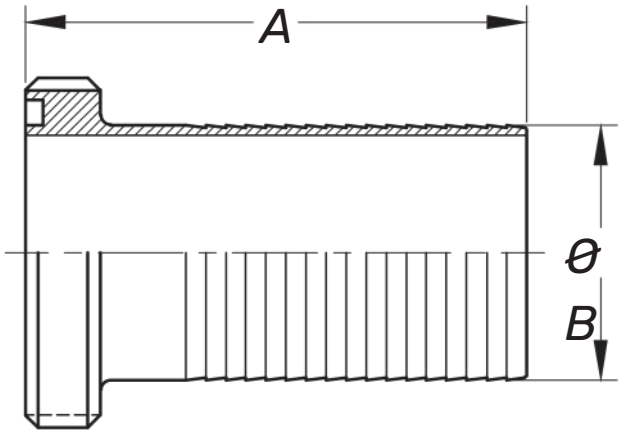
Macho Adaptador Tipo L

Ø	DIN		RJT		SMS	
	BSP	NPT	BSP	NPT	BSP	NPT
1"	71,0	71,0	71,0	71,0	71,0	71,0
1.1/2"	76,0	73,0	76,0	73,0	76,0	73,0
2"	81,0	75,0	81,0	75,0	81,0	75,0
2.1/2"	86,0	83,0	86,0	83,0	86,0	83,0
3"	91,0	87,0	98,0	94,0	91,0	87,0
4"	110,0	100,0	106,0	96,0	99,0	89,0



Macho Adaptador P/ Mangueira

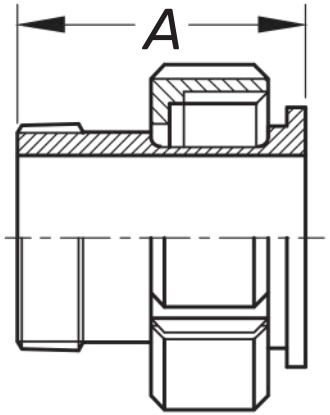
Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	82,0	25,4	87,0	25,4	75,0	25,4
1.1/2"	102,0	38,1	107,0	38,1	100,0	38,1
2"	102,0	50,8	107,0	50,8	100,0	50,8
2.1/2"	125,0	63,5	127,0	63,5	124,0	63,5
3"	130,0	76,2	127,0	76,2	124,0	76,2
4"	130,0	101,6	131,8	101,6	135,0	101,6



Macho Adaptador tipo N
Macho Adaptador tipo L

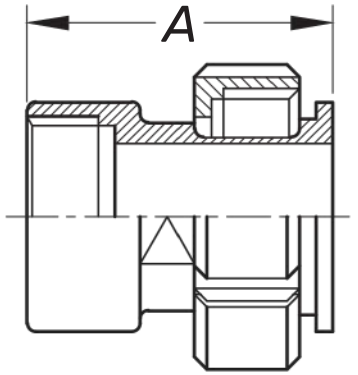
Niple Porca Adaptador Tipo N

ø	DIN		RJT		SMS	
	BSP	NPT	BSP	NPT	BSP	NPT
1"	55,0	55,0	48,0	48,0	46,0	46,0
1.1/2"	60,0	60,0	53,0	53,0	51,0	51,0
2"	66,0	66,0	58,0	58,0	56,0	56,0
2.1/2"	74,0	74,0	63,0	63,0	61,0	61,0
3"	79,0	79,0	68,0	68,0	66,0	66,0



Niple Porca Adaptador Tipo L

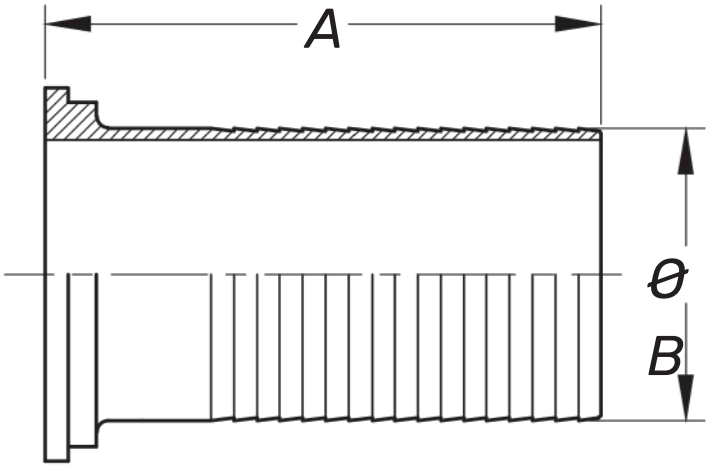
ø	DIN		RJT		SMS	
	BSP	NPT	BSP	NPT	BSP	NPT
1"	67,0	67,0	60,0	60,0	58,0	58,0
1.1/2"	72,0	69,0	65,0	62,0	63,0	60,0
2"	78,0	72,0	70,0	64,0	68,0	62,0
2.1/2"	86,0	83,0	75,0	72,0	73,0	70,0
3"	91,0	87,0	80,0	76,0	78,0	74,0



Macho Adaptador P/ Mangueira

Niple Adaptador p/ Mangueira

Ø	DIN		RJT		SMS	
	A	B	A	B	A	B
1"	80,0	25,4	73,0	25,4	71,5	25,4
1.1/2"	100,0	38,1	93,0	38,1	93,0	38,1
2"	100,0	50,8	93,0	50,8	93,0	50,8
2.1/2"	124,0	63,5	113,0	63,5	113,0	63,5
3"	128,0	76,2	113,0	76,2	114,0	76,2
4"	132,0	101,6	125,4	101,6	116,0	101,6



Válvula Borboleta

Condições de Projeto:

Pressão máxima de trabalho: 10 Kgf/cm² à 22° C.

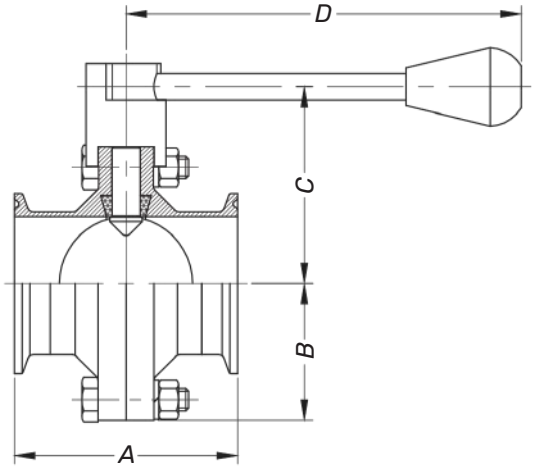
Pressão de teste hidrostático: Ø 1" a 3" = 13 Kgf/cm² à 22° C.
Ø 4" a 6" = 6,0 Kgf/cm² à 22° C.

Temperatura máxima de trabalho: EPDM = 120° C.
Silicone= 150° C.
Viton = 220° C

Torque em Nm	
1”	5
1.1/2”	5
2”	10
2.1/2”	12
3”	16
4”	22

Ø	A								B	C	D
	Solda Clamp		DIN		RJT		SMS				
			2M	M-NP	2M	M-NP	2M	M-NP			
1”	40,0	65,4	84,0	82,0	94,0	80,0	70,0	66,5	87,0	90,0	150,0
1.1/2”	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	97,0	95,0	150,0
2”	50,0	75,4	94,0	92,0	104,0	90,0	90,0	83,0	110,0	100,0	150,0
2.1/2”	50,0	75,4	100,0	99,0	104,0	98,0	98,0	87,0	112,0	102,0	150,0
3”	50,0	75,4	110,0	108,0	104,0	98,0	98,0	88,0	127,0	110,0	150,0
4”	64,0	95,6	124,0	126,0	127,6	134,0	134,0	115,0	162,0	128,0	150,0

A válvula borboleta pode ser usada para isolar ou regular a vazão de uma rede. O elemento de vedação tem a forma de um disco, e seu acionamento pode ser realizado manualmente ou por mecanismos hidráulicos ou pneumáticos. A Válvula borboleta é utilizada principalmente em sistemas de adução e de distribuição de água bruta ou tratada, e em estações de tratamento de água e de esgotos e ainda é utilizada na indústria química, petroquímica, farmacêutica e alimentícia. Essas válvulas permitem um fechamento rápido. As válvulas borboleta são preferidas porque são mais baratas que outros modelos, além de serem mais leves requerendo suportes mais simples e ocupando menos espaço que as válvulas gavetas ou globo. O disco está posicionado no centro da válvula e, atravessando-o de um lado ao outro, há uma haste conectada a um atuador do lado de fora da válvula. A rotação do atuador faz o disco girar para uma posição paralela ou perpendicular ao fluxo. Ao contrário de uma válvula esfera, o disco está sempre presente dentro do fluxo, portanto uma queda de pressão é sempre induzida no fluxo, independentemente da posição da válvula. Modelo de válvula borboleta Wafer que para a sua instalação são utilizados dois flanges e a válvula é apertada entre esses dois flanges por meio de parafusos.

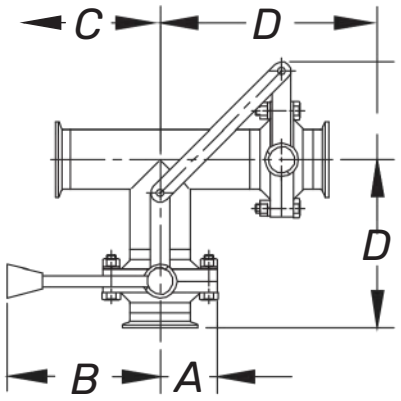


Válvula de Esfera Multivias tipo Tê Válvula Borboleta Pneumática (atuador Valmicro)

Mercado Inox

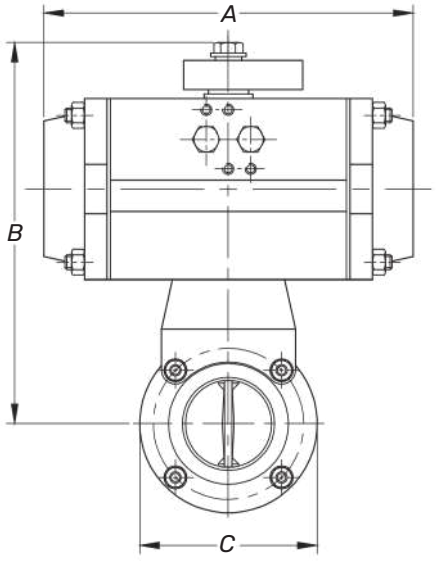
Válvula de Esfera Multivias tipo Tê

Ø	A	B	C				D			
			Clamp	DIN	RJT	SMS	Clamp	DIN	RJT	SMS
1"	20,0	120,0	62,7	72,0	77,0	65,0	102,7	112,0	117,0	105,0
1.1/2"	25,0	120,0	79,7	89,0	94,0	87,0	129,7	139,0	144,0	137,0
2"	25,0	120,0	84,7	94,0	99,0	92,0	134,7	144,0	139,0	142,0
2.1/2"	25,0	120,0	97,7	110,0	112,0	109,0	147,7	160,0	162,0	159,0
3"	25,0	150,0	110,7	128,0	125,0	122,0	160,7	178,0	175,0	172,0
4"	25,0	150,0	123,7	141,0	142,8	146,0	176,8	191,0	193,0	196,0



Válvula Borboleta Pneumática (atuador Valmicro)

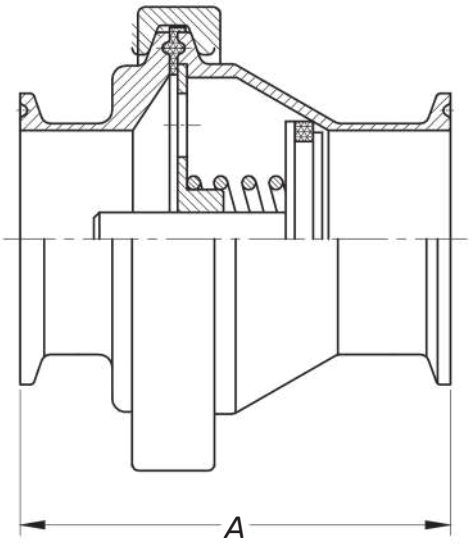
Ø	A			B			C
	100 DA	150 M	175 RM	100 DA	150 RM	175 RM	
1"	152,0	202,0		173,0	190,0		71,0
1.1/2"	152,0	202,0		180,0	197,0		85,0
2"	152,0	202,0		187,0	204,0		99,0
2.1/2"	152,0	202,0		193,0	210,0		111,5
3"	152,0	202,0		200,0	217,0		124,0
4"	152,0		230,0	212,0		239,0	149,5



Atuador Retorno por Mola (RM) ou Dupla Ação (DA).

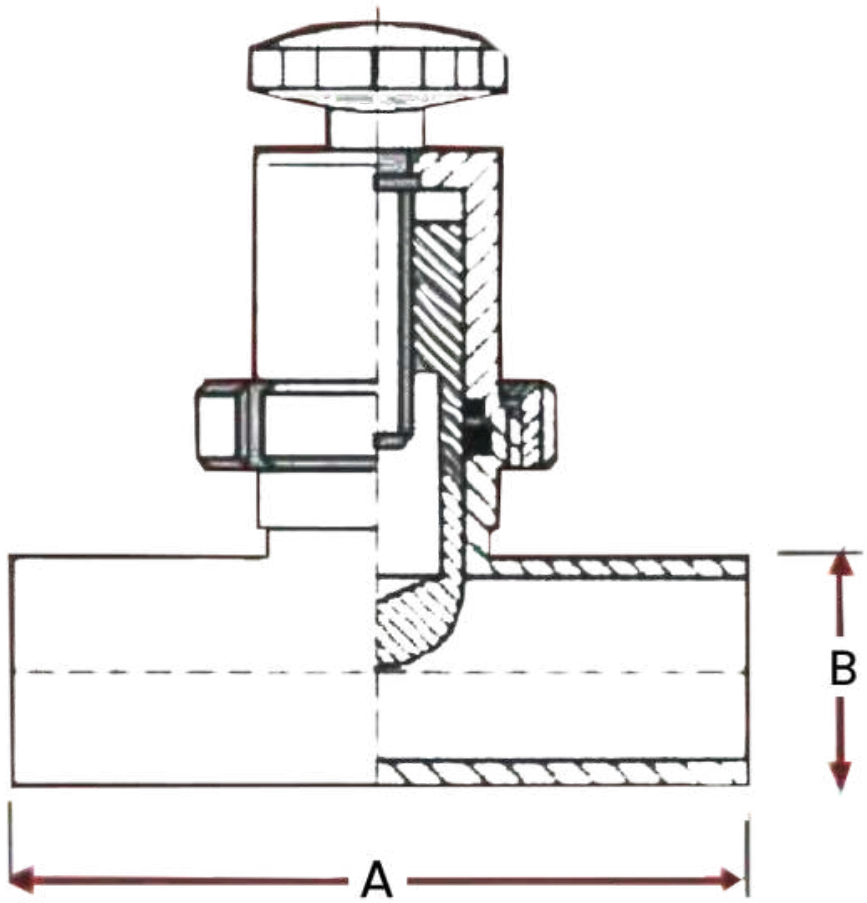
Válvula de Esfera de Retenção

∅	Solda	Clamp	2M RJT	2M SMS	2M DIN
1"	60,0	85,4	114,0	90,0	104,0
1.1/2"	71,0	96,4	125,0	111,0	115,0
2"	76,0	101,4	130,0	116,0	120,0
2.1/2"	98,0	123,4	152,0	146,0	148,0
3"	114,0	139,4	168,0	162,0	174,0
4"	130,0	155,4	193,8	200,0	190,0



Válvula Micrométrica

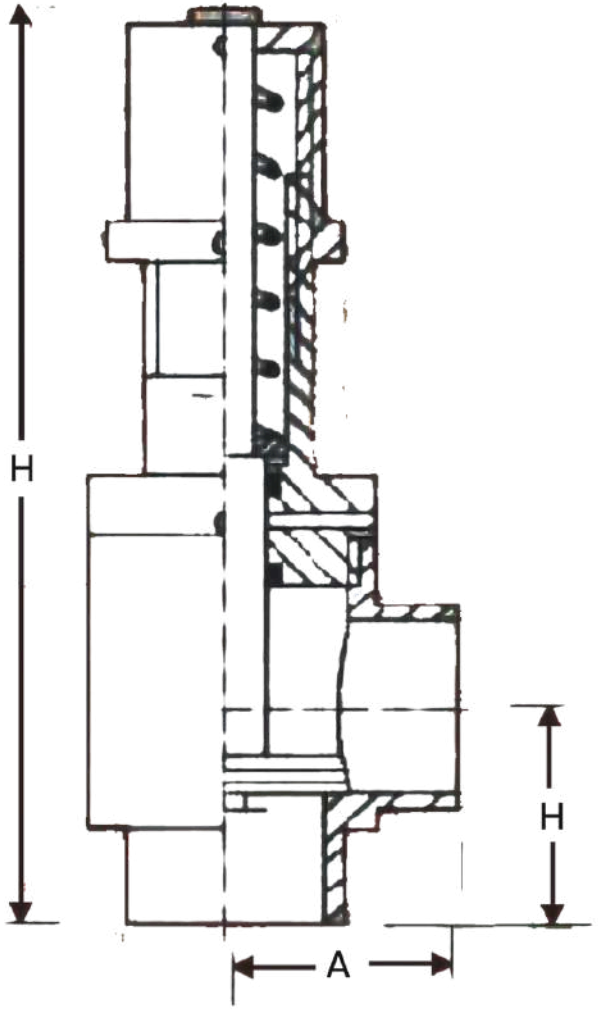
Ø	A	B
1"	110	25,4
1.1/2"	140	38,1
2"	165	50,8
2.1/2"	210	63,5
3"	220	76,2
4"	260	101,6



Válvula de Segurança

Ø	A	B	H
1"	48	48	248
1.1/2"	58	58	264
2"	62	62	272
2.1/2"	75	75	295

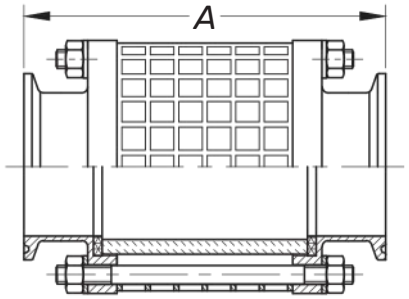
Tipos de Molas: I - 0,5 a 3,0 Kg/cm2
I I - 3,0 a 6,0 Kg/cm2



Acessórios

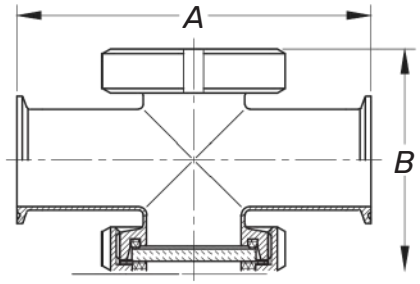
Visor de Linha Tubular

Ø	SOLDA CLAMP		DIN		RJT		SMS		P. máx Kgf/cm²
			2 M	M-NP	2 M	M-NP	2 M	M-NP	
1"	152,0	177,0	196,0	194,0	206,0	192,0	182,0	178,0	16,0
1.1/2"	152,0	177,0	196,0	194,0	206,0	192,0	192,0	185,0	13,0
2"	152,0	177,0	196,0	194,0	206,0	192,0	192,0	185,0	10,0
2.1/2"	152,0	177,0	202,0	201,0	206,0	192,0	200,0	189,0	10,0
3"	152,0	177,0	212,0	210,0	206,0	192,0	200,0	190,0	8,0
4"	152,0	183,0	212,0	214,0	215,0	209,0	222,0	203,0	6,0



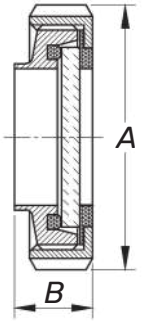
Visor de Linha Tipo Cruzeta

Ø	A					B
	Solda	Clamp	DIN	RJT	SMS	
1"	100,0	125,4	144,0	154,0	130,0	104,4
1.1/2"	134,0	159,4	178,0	188,0	174,0	117,1
	144,0	169,4	188,0	198,0	184,0	129,6
2.21"/2"	170,0	195,4	220,0	224,0	218,0	148,5
3"	196,0	221,4	256	250,0	244,0	171,2
4"	222,0	282,0	282,0	286,0	292,0	199,6



Visor de Linha Tipo Macho

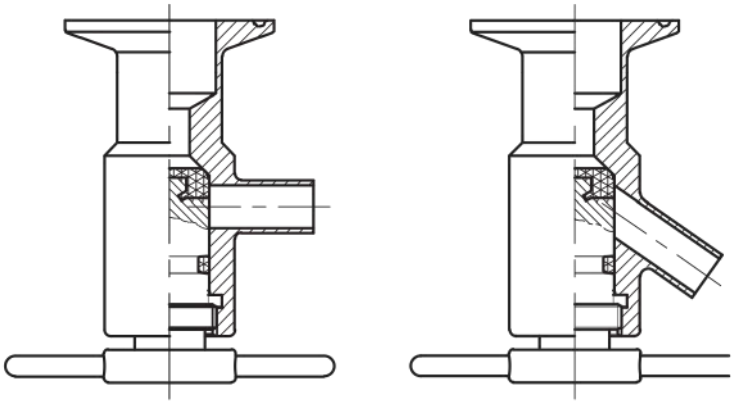
Ø	A	B	P. máx (Kgf/cm²)
1"	63,0	31,5	15,0
1.1/2"	78,0	31,5	11,0
2"	92,0	31,5	10,0
2.1/2"	112,0	34,5	10,0
3"	127,0	39,5	8,0
4"	148,0	41,0	6,0



Acessórios

Torneira de Amostra

Terminais	
TC	1/2" e 3/4"
TC	1" e 1.1/2"
BSP	1/2"
BSP	3/4"
NPT	1/2"
NPT	3/4"



Torneira De Amosta 3/4 Inox 304 45 ou 90° Rosca Macho Bsp

As Torneiras de amostra são utilizadas em fábricas de produtos alimentícios para tomada de amostra de líquidos.

Girando-se o volante, abrimos para tomada de amostra de líquido, podendo também regular a quantidade de saída do fluxo.

As Torneiras são construídas em aço inoxidável AISI 304L ou 316L. Equipadas com vedação em borracha Silicone, EPDM ou VITON. Sede do fecho em PTFE.

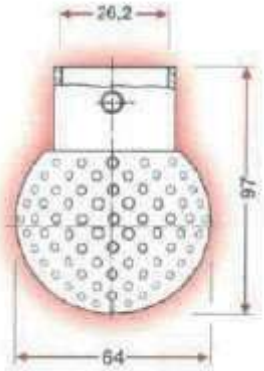
As Torneiras de Amostra podem ser fornecidas em dois modelos: saída 90°, 125°. Terminais TC, DIN, SMS, Rosca BSP, NPT ou solda. Bitolas: 1/2”, 3/4” e 1”.

As Torneiras de Amostra Metal Limpo possuem parafuso trava que garante que o fecho não saia totalmente durante o manuseio, evitando a saída indesejada do produto pelo corpo.

A Torneira de Amostra Metal Limpo é de fácil manutenção e limpeza. Para ter acesso ao interior da torneira, basta soltar o parafuso e desrosquear a parte superior. Desta forma teremos acesso ao anel de vedação que é o principal item de manutenção da torneira.

aspesores "spray-ball"

Padrão	Ø Furos	Vazão à 2Kgf/cm² (m³ / h)	Ø do Leque (m)
360°	3/32"	16	4,0
	1/16"	10	3,8
270°	3/32"	15	4,0
superior	1/16"	09	3,8
180°	3/32"	08	4,1
superior	1/16"	05	3,9

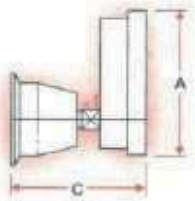


manômetro

Angular/Reto
Escalas - Kgf/cm²

	CLAMP		
Ø	A	B	C
2"	106	150	95

Escalas Disponíveis: 0-2, 0-4 e 0-7.
Diafragma sanitário. Enchimento em óleo silicone p/trabalho em tubulação sob efeito de vibrações.
Para temperaturas maiores que 90° somente sob consulta.



angular

reto

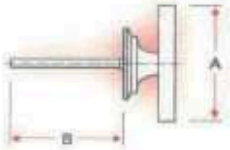
termômetro

Reto/Angular

	CLAMP	
Ø	A	B
2"	130	100

Selo Bimetálico Sanitário.
Escalas Disponíveis: 0 + 120° C e -30 + 50° C.

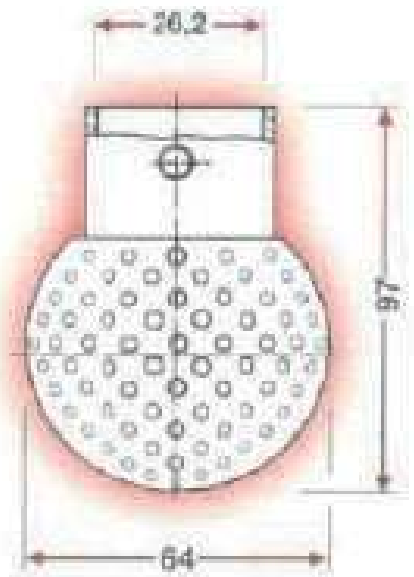
reto



angular

aspesores "spray-ball"

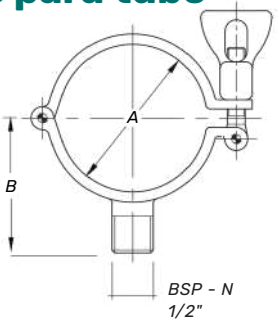
Padrão	Ø Furos	Vazão à 2Kgf/cm² (m³ / h)	Ø do Leque (m)
360°	3/32"	16	4,0
	1/16"	10	3,8
270°	3/32"	15	4,0
superior	1/16"	09	3,8
180°	3/32"	08	4,1
superior	1/16"	05	3,9



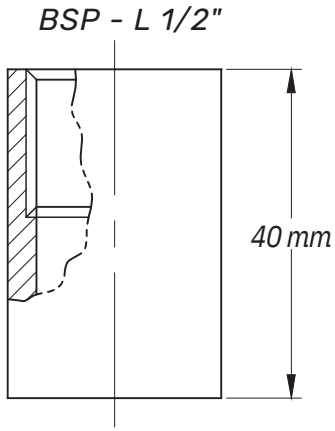
Acessórios

Abraçadeira suporte para tubo

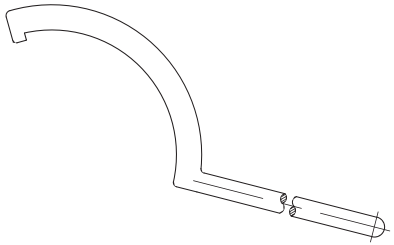
Ø	A	B
1"	23,4	45,7
1.1/2"	38,1	52,0
2"	50,8	58,4
2.1/2"	63,5	64,7
3"	76,2	71,1
4"	101,6	83,8



Luva para Abraçadeira



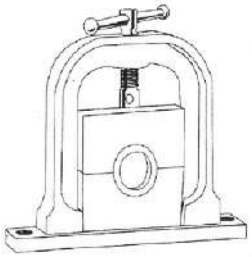
Chave para Porca



Articulada 1" e 4", Atende s
normas DIN, RJT e SMS

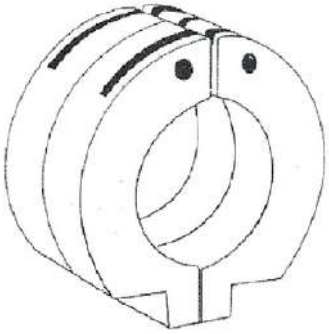
Morsa e Bloco de Expansão

Ø	
1"	25,0
1.1/2"	38,0
2"	51,0
2.1/2"	63,5
3"	76,0



Guia para Corte de Tubo

Ø	
1"	25,0
1.1/2"	38,0
2"	51,0
2.1/2"	63,5
3"	76,0
4"	102,0



Expandidor

Ø		Torque p/ Exp. Kgf.m
1"	25,0	2,0
1.1/2"	38,0	4,0
2"	51,0	8,0
2.1/2"	63,5	14,0
3"	76,0	14,0

Mercado Inox

Catálogo de produtos

3. Conexões e Válvulas Sanitárias

Pharma Clean e Food Clean

Especificações Para Conexões

A Mercado Inox é especializada em projetos e montagens industriais utilizando a solda orbital e manual sanitária para toda linha clean de tubulações de processos das indústrias alimentícias, cosméticas e farmacêuticas, onde é exigido um alto grau de sanitariedade de acordo com a Norma ASME BPE.

Manual

Conexões de aço inoxidável em conformidade com a norma SME-BPE. As vedações são feitas de materiais aprovados pelo FDA e USP 87, 88 Classe VI Farmacêutica;

Diâmetros

As conexões de aço inoxidável estão disponíveis nos diâmetros de 1/4” - 6” O.D.

Materiais

Tipo	*UNS*	*Classe*	*Similar EN (European) Grade*	*C (max)*	*N*	*Cr*	*Ni*	*Mo*	*Cu*	*Marcas Específicas*	*Código Material*
Austenitic	S31603	316L	1.4404	0.03	0.10	16.0-18.0	10.0-14.0	2.0-3.0			6L
Austenitic		316L	1.4435	0.03	0.10	17.0-19.0	12.5-15.0	2.5-3.0			S6L

Especificações Para Conexões

Diâmetros

Dimensões segundo especificações da ASME-BPE Parte (DT-3-1, DT-3-2, DT4-1, DT-44.1-1, DT-7-1).

Ø	Tolerância OD		Tolerância de Espessura de parede antes do EP		Tolerância de Espessura de parede depois do EP		Comprimento da área de inspeção C		Comprimento da parte reta T		Enquadrejamento da Face B		Ângulo O		Planacidade P		Espessura da parede	
	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm
1/4”	± 0.005	± 0.13	+0.003/-0.004	+0.08/-0.10	+0.003/-0.006	+0.08/-0.15	0.500	12,7	1.500	38,10	0.005	0.13	0.030	0.23	0.030	0.76	0.035	0,88
3/8”	± 0.005	± 0.13	+0.003/-0.004	+0.08/-0.10	+0.003/-0.006	+0.08/-0.15	0.500	12,7	1.500	38,10	0.005	0.13	0.030	0.30	0.030	0.76	0.035	0,88
1/2”	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.500	12,7	1.500	38,10	0.005	0.13	0.030	0.36	0.030	0.76	0.065	1,65
3/4”	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	0.750	19,05	1.500	38,10	0.005	0.13	0.030	0.46	0.030	0.76	0.065	1,65
1”	± 0.005	± 0.13	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	1.000	25,40	1.500	38,10	0.008	0.20	0.030	0.64	0.030	0.76	0.065	1,65
1.1/2”	± 0.008	± 0.20	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	1.000	25,40	1.500	38,10	0.008	0.20	0.050	0.86	0.050	1.27	0.065	1,65
2”	± 0.008	± 0.20	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	1.000	25,40	1.500	38,10	0.008	0.20	0.050	1.09	0.050	1.27	0.065	1,65
2.1/2”	± 0.010	± 0.25	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	1.000	25,40	1.500	38,10	0.010	0.25	0.050	1.37	0.050	1.27	0.065	1,65
3”	± 0.010	± 0.25	+0.005/-0.008	+0.13/-0.20	+0.005/-0.010	+0.13/-0.25	1.000	25,40	1.750	44,45	0.016	0.41	0.050	1.73	0.050	1.27	0.065	1,65
4”	± 0.015	± 0.38	+0.008/-0.010	+0.20/-0.25	+0.008/-0.012	+0.20/-0.30	1.000	25,40	2.000	50,80	0.016	0.41	0.060	2.18	0.060	1.52	0.083	2,11
6”	± 0.030	± 0.76	+0.015/-0.015	+0.38/-0.38	+0.015/-0.017	+0.38/-0.43	1.000	25,40	2.500	63,50	0.030	0.76	0.060	3.43	0.060	1.52	0.109	2,77

Acabamento de superfície

Referência: ASME-BPE parte SF, tabela 2.4-1.

Código de acabamento de superfície	Nomenclatura da superfície ASME BPE	Superfície Interna			Superfície Externa
		Ra Máximo		Tratamento de superfície	Tratamento de superfície
		µ-pol.	µ-m		
PX	SF0			Sem Polimento	Polimento Leve
PL	SF1	20	0.51	Polimento Mecânico*	Polimento Mecânico 32 Ra µ-pol.
PM	SF4	15	0.38	Polimento Mecânico e Eletropolimento*	Polimento Mecânico 32 Ra µ-pol.

*Ou qualquer outro método de acabamento que respeite o Ra máximo.

Especificações Para Conexões

Limpeza

Um ciclo de limpeza de sete etapas é aplicado para garantir que os componentes fiquem livres de contaminantes tais como oxidantes, óleos, partículas perdidas etc. No estágio final, as conexões são enxaguadas duas vezes utilizando água quente deonizada.

Procedimentos de Inspeção

Todas Conexões são 100% visualmente inspecionadas para detectar imperfeições no acabamento da superfície, como mencionado nas tabelas SF-1, SF-2 especificada na ASME-BPE. Todas características dimencionadas são inspecionadas 100% para tolerância listadas na tabela OT-3-1, OT-7-1, OT-9.3-1 e OT-3-2 especificada na SME-BPE.

Marcação

Cada Conexão BPE é marcada com os seguintes:

- Número de corrida
- Número de lote
- Grau e material
- Norma
- Acabamento de superfície (SF), como especificado na ASME-BPE - parte DT.
- Nome da marca

Embalagem

Cada conexão é tamponada, embalada e rotulada de acordo com a norma ASME-BPE.

Documentação

Certificação completa dos materiais é fornecida junto com os produtos finalizados.

Especificações Para Tubos

Normas

ASTM A-269/A-270S2 ASME BPE

Tabela SF-2.4-1 Leituras Ra para tubos de acordo com as normas ASME

Designação da Superfície	Quando polido mecanicamente		Designação da Superfície	Quando polido mecanicamente	
	Ra Máximo			Ra Máximo	
	µ-pol.	µ-m		µ-pol.	µ-m
SF1	20	0.51	SF4	15	0.38
SF3	30	0.76			

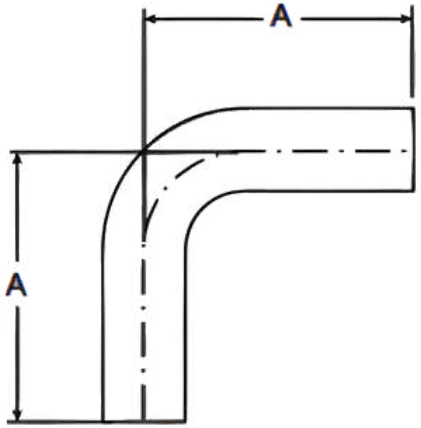
Tolerâncias dimensionais dos Tubos: Especificações do Tubo, ASTM A-269/A270S2

Diâmetro do Tubo		Bitola Espessura da Parede		Especificações Dimencional OD		Comprimento		Tolerância da espessura da parede
Pol.	mm	Pol.	mm	Pol.	mm	Pol.	mm	ASTM Espec.
1/4"	6,35	0.035	0,89	+/- 0.005	+/- 0.127	0.125	3,175	+/- 10%
3/8"	9,53	0.035	0,89	+/- 0.005	+/- 0.128	0.125	3,175	+/- 10%
1/2"	12,70	0.035	1,65	+/- 0.005	+/- 0.129	0.125	3,175	+/- 10%
3/4	19,05	0.065	1,65	+/- 0.005	+/- 0.130	0.125	3,175	+/- 10%
" 1"	25,40	0.065	1,65	+/- 0.005	+/- 0.131	0.125	3,175	+/- 10%
1.1/2"	38,10	0.065	1,65	+/- 0.008	+/- 0.203	0.125	3,175	+/- 10%
2"	50,80	0.065	1,65	+/- 0.008	+/- 0.204	0.125	3,175	+/- 10%
2.1/2"	63,50	0.065	1,65	+/- 0.010	+/- 0.254	1.000	3,175	+/- 10%
3"	76,20	0.065	1,65	+/- 0.015	+/- 0.381	1.000	3,175	+/- 10%
4"	101,60	0.083	2,11	+/- 0.015	+/- 0.381	1.000	4,763	+/- 10%
6"	152,40	0.109	2,77	+/- 0.030	+/- 0.762	0.188	4,763	+/- 10%

Curvas 90° Solda

Curva 90° Solda

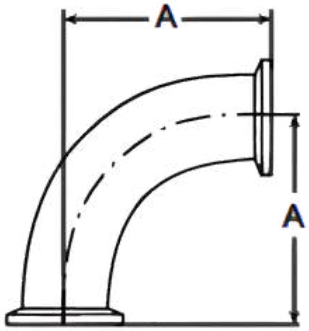
θ	Dimensões	
	A pol	A mm
1/4"	2.625	66,7
3/8"	2.625	66,7
1/2"	3.000	76,2
3/4"	3.000	76,2
1"	3.000	76,2
1.1/2"	3.750	95,3
2"	4.750	120,7
2.1/2"	5.500	139,7
3"	6.250	158,8
4"	8.000	203,2
6"	11.500	292,1



BPE TABLE # DT-4.1.1-1

Curva 90° TC

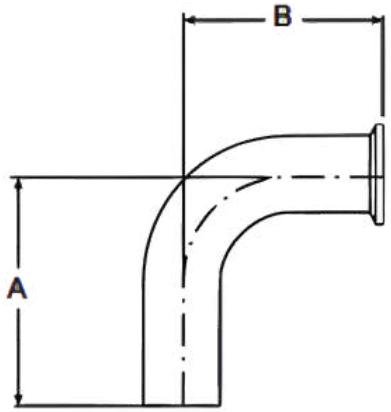
θ	Dimensões	
	A pol	A mm
1/4"	1.625	41,3
3/8"	1.625	41,3
1/2"	1.625	41,3
3/4"	1.625	41,3
1"	2.000	50,8
1.1/2"	2.750	69,9
2"	3.500	88,9
2.1/2"	4.250	108,0
3"	5.000	127,0
4"	6.625	168,3
6"	10.500	266,7



BPE TABLE # DT-4.1.1-3

Curva 90° Solda X TC

θ	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	2.625	66,7	1.625	41,3
3/8"	2.625	66,7	1.625	41,3
1/2"	3.000	76,2	1.625	41,3
3/4"	3.000	76,2	1.625	41,3
1"	3.000	76,2	2.000	50,8
1.1/2"	3.750	95,3	2.750	69,9
2"	4.750	120,7	3.500	88,9
2.1/2"	5.500	139,7	4.250	108,0
3"	6.250	158,8	5.000	127,0
4"	8.000	203,2	6.625	168,3
6"	11.500	292,1	10.500	266,7



BPE TABLE # DT-4.1.1-2

Curvas 45° Solda

Curva 45° Solda

Ø	Dimensões	
	A pol	A mm
1/4"	2.000	50,8
3/8"	2.000	50,8
1/2"	2.250	57,2
3/4"	2.250	57,2
1"	2.250	57,2
1.1/2"	2.500	63,5
2"	3.000	76,2
2.1/2"	3.375	85,7
3"	3.625	92,1
4"	4.500	114,3
6"	6.250	158,8

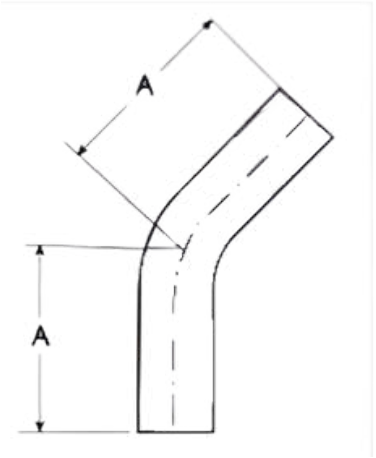


TABELA BPE # DT-4.1.1-4

Curva 45° TC

Ø		
	A pol	A mm
1/4"	1.000	25,4
3/8"	1.000	25,4
1/2"	1.000	25,4
3/4"	1.000	25,4
1"	1.125	28,6
1.1/2"	1.438	36,5
2"	1.750	44,5
2.1/2"	2.063	52,4
3"	2.375	60,3
4"	3.125	79,4
6"	5.250	133,4

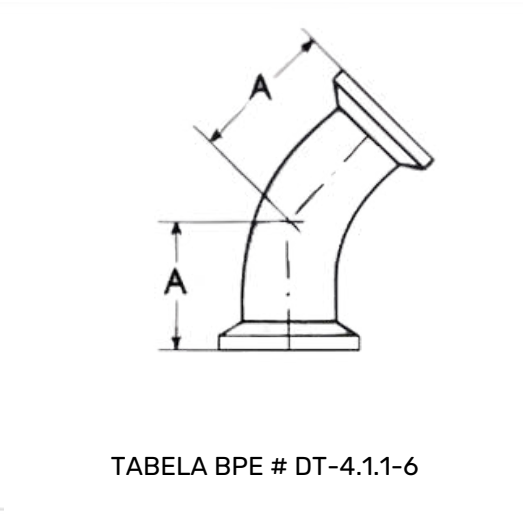


TABELA BPE # DT-4.1.1-6

Curva 45° Solda X TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	2.000	50,8	1.000	25,4
3/8"	2.000	50,8	1.000	25,4
1/2"	2.250	57,2	1.000	25,4
3/4"	2.250	57,2	1.000	25,4
1"	2.250	57,2	1.125	28,6
1.1/2"	2.500	63,5	1.438	36,5
2"	3.000	76,2	1.750	44,5
2.1/2"	3.375	85,7	2.063	52,4
3"	3.625	92,1	2.375	60,3
4"	4.500	114,3	3.125	79,4
6"	6.250	158,8	5.250	133,4

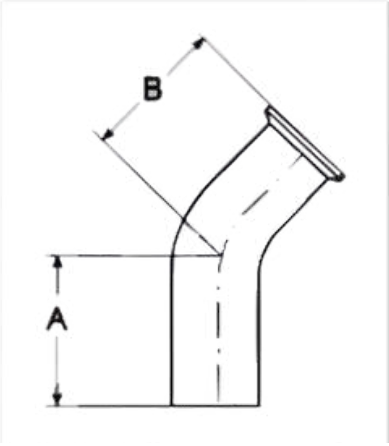


TABELA BPE # DT-4.1.1-6

Tês Simétricos

Tê Reto Solda

Ø	Dimensões	
	A pol	A mm
1/4"	1.750	44,5
3/8"	1.750	44,5
1/2"	1.875	47,6
3/4"	2.000	50,8
1"	2.125	54,0
1.1/2"	2.375	60,3
2"	2.875	73,0
2.1/2"	3.125	79,4
3"	3.375	85,7
4"	4.125	104,8
6"	5.625	142,9

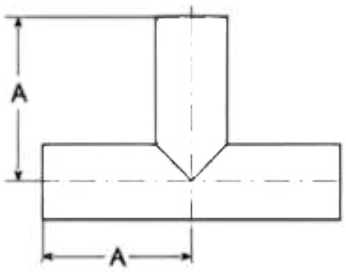


TABELA BPE # DT-4.1.2-1

Tê Reto TC

Ø	Dimensões	
	A pol	A mm
1/4"	2.250	57,2
3/8"	2.250	57,2
1/2"	2.375	60,33
3/4"	2.500	63,50
1"	2.625	66,7
1.1/2"	2.875	73,0
2"	3.375	85,7
2.1/2"	3.625	92,1
3"	3.875	98,4
4"	4.750	120,7
6"	7.125	181,0

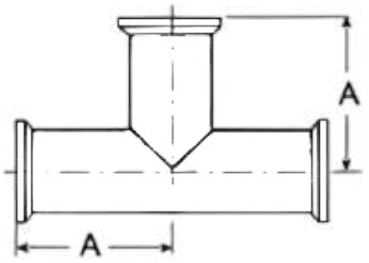
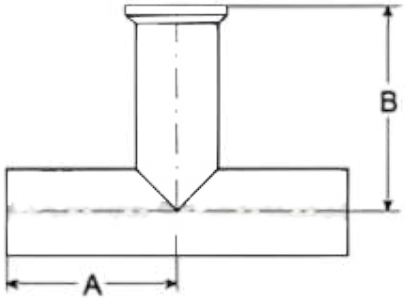


TABELA BPE # DT-4.1.2-4

Tê Reto Solda X TC X Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/2"	1.875	47,6	2.250	60,33
3/4"	2.000	50,8	2.375	63,50
1"	2.125	54,0	2.625	67,68
1.1/2"	2.375	60,3	2.875	73,03
2"	2.875	73,0	3.375	85,73
2.1/2"	3.125	79,4	3.625	92,08
3"	3.375	85,7	3.875	98,43
4"	4.125	104,8	4.750	120,76
6"	5.625	142,9	7.125	161,93



Derivação Curta

Tê Reto Curto Solda X TC X Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	1.750	44,5	1.000	25,4
3/8"	1.750	44,5	1.000	25,4
1/2"	1.875	47,6	1.000	25,4
3/4"	2.000	50,8	1.000	25,4
1"	2.125	54,0	1.125	28,6
1.1/2"	2.375	60,3	1.375	34,9
2"	2.875	73,0	1.625	41,3
2.1/2"	3.125	79,4	1.875	47,6
3"	3.375	85,7	2.125	54,0
4"	4.125	104,8	2.750	69,9
6"	5.625	142,9	4.625	117,5

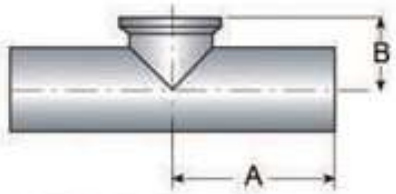


TABELA BPE # DT-4.1.2-2

Tê Reto Curto TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	1.750	44,5	1.000	25,4
3/8"	1.750	44,5	1.000	25,4
1/2"	1.875	47,6	1.000	25,4
3/4"	2.000	50,8	1.000	25,4
1"	2.125	54,0	1.125	28,6
1.1/2"	2.375	60,3	1.375	34,9
2"	2.875	73,0	1.625	41,3
2.1/2"	3.125	79,4	1.875	47,6
3"	3.375	85,7	2.125	54,0
4"	4.125	104,8	2.750	69,9
6"	5.625	142,9	4.625	117,5

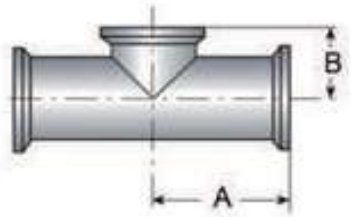


TABELA BPE # DT-4.1.2-5

Tê Reto Curto TC X Solda X Solda

Ø	Dimensões					
	A pol	A mm	B pol	B mm	C pol	C mm
1/4"	0.875	22,2	1.750	44,5	1.750	44,5
3/8"	0.875	22,2	1.750	44,5	1.750	44,5
1/2"	0.875	22,2	1.875	47,6	1.875	47,6
3/4"	1.000	25,4	2.000	50,8	2.000	50,8
1"	1.125	28,6	2.125	54,0	2.125	54,0
1.1/2"	1.375	34,9	2.375	60,3	2.375	60,3
2"	1.625	41,3	2.875	73,0	2.875	73,0
2.1/2"	1.875	47,6	3.125	79,4	3.125	79,4
3"	2.125	54,0	3.375	85,7	3.375	85,7
4"	2.750	69,9	4.125	104,8	4.125	104,8
6"	4.625	117,5	5.625	142,9	5.625	142,9

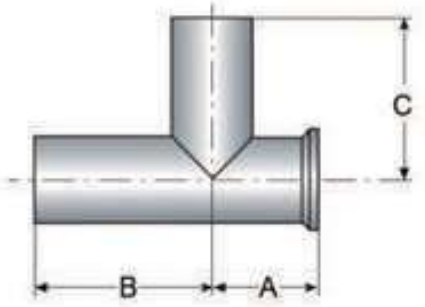


TABELA BPE # DT-4.1.2-3

Tê Redução

Tê de Redução Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	47,6	1.750	44,5
1/2" x 1/4"	1.875	47,6	1.875	47,6
1/2" x 3/8"	1.875	47,6	1.875	47,6
3/4" x 1/4"	2.000	50,8	2.000	50,8
3/4" x 3/8"	2.000	50,8	2.000	50,8
3/4" x 1/2"	2.000	50,8	2.000	50,8
1" x 1/4"	2.125	54,0	2.125	54,0
1 x 3/8"	2.125	54,0	2.125	54,0
1" x 1/2"	2.125	54,0	2.125	54,0
1" x 3/4"	2.125	54,0	2.125	54,0
1.1/2" x 1/2"	2.375	60,3	2.375	60,3
1.1/2" x 3/4"	2.375	60,3	2.375	60,3
1.1/2" x 1"	2.375	60,3	2.375	60,3
2" x 1/2"	2.875	73,0	2.625	66,7
2 x 3/4"	2.875	73,0	2.625	66,7
2" x 1"	2.875	73,0	2.625	66,7
2" x 1.1/2"	2.875	73,0	2.625	66,7
2.1/2" x 1/2"	3.125	79,4	2.625	73,0
2.1/2" x 3/4"	3.125	79,4	2.875	73,0
2.1/2" x 1"	3.125	79,4	2.875	73,0
2.1/2" x 1.1/2"	3.125	79,4	2.875	73,0
2.1/2" x 1/2"	3.125	79,4	2.875	73,0
3" x 1/2"	3.375	85,7	2.875	79,4
3" x 3/4"	3.375	85,7	3.125	79,4
3" x 1"	3.375	85,7	3.125	79,4
3" x 1.1/2"	3.375	85,7	3.125	79,4
3" x 2"	3.375	85,7	3.125	79,4
3" x 2.1/2"	3.375	85,7	3.125	79,4
4" x 1/2"	4.125	104,8	3.625	92,1
4" x 3/4"	4.125	104,8	3.625	92,1
4" x 1"	4.125	104,8	3.625	92,1
4" x 1.1/2"	4.125	104,8	3.625	92,1
4" x 2"	4.125	104,8	3.875	98,4
4" x 2.1/2"	4.125	104,8	3.875	98,4
4" x 3"	4.125	104,8	3.875	98,4
6" x 3"	5.625	142,9	4.875	123,8
6" x 4"	5.625	142,9	5.125	130,2

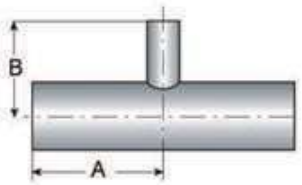
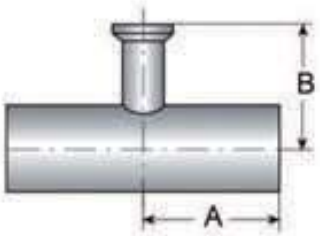


TABELA BPE # DT-4.1.2-6

Tê de Redução Solda X TC X Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	44,5	2.250	57,2
1/2" x 1/4"	1.875	47,6	2.375	60,3
1/2" x 3/8"	1.875	47,6	2.375	60,3
3/4" x 1/4"	2.000	50,8	2.500	63,5
3/4" x 3/8"	2.000	50,8	2.500	63,5
3/4" x 1/2"	2.000	50,8	2.500	63,5
1" x 1/4"	2.125	54,0	2.625	66,7
1 x 3/8"	2.125	54,0	2.625	66,7
1" x 1/2"	2.125	54,0	2.625	66,7
1" x 3/4"	2.125	54,0	2.625	66,7
1.1/2" x 1/2"	2.375	60,3	2.875	73,0
1.1/2" x 3/4"	2.375	60,3	2.875	73,0
1.1/2" x 1"	2.375	60,3	2.875	73,0
2" x 1/2"	2.875	73,0	3.125	79,4
2 x 3/4"	2.875	73,0	3.125	79,4
2" x 1"	2.875	73,0	3.125	79,4
2" x 1.1/2"	2.875	73,0	3.125	79,4
2.1/2" x 1/2"	3.125	79,4	3.375	85,7
2.1/2" x 3/4"	3.125	79,4	3.375	85,7
2.1/2" x 1"	3.125	79,4	3.375	85,7
2.1/2" x 1.1/2"	3.125	79,4	3.375	85,7
2.1/2" x 1/2"	3.125	79,4	3.375	85,7
3" x 1/2"	3.375	85,7	3.625	92,1
3" x 3/4"	3.375	85,7	3.625	92,1
3" x 1"	3.375	85,7	3.625	92,1
3" x 1.1/2"	3.375	85,7	3.625	92,1
3" x 2"	3.375	85,7	3.625	92,1
3" x 2.1/2"	3.375	85,7	3.625	92,1
4" x 1/2"	4.125	104,8	4.125	104,8
4" x 3/4"	4.125	104,8	4.125	104,8
4" x 1"	4.125	104,8	4.125	104,8
4" x 1.1/2"	4.125	104,8	4.125	104,8
4" x 2"	4.125	104,8	4.375	111,1
4" x 2.1/2"	4.125	104,8	4.375	111,1
4" x 3"	4.125	104,8	4.375	111,1
6" x 3"	5.625	142,9	5.375	136,5
6" x 4"	5.625	142,9	5.750	146,1



Tê Redução

Tê de Redução Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	47,6	1.750	44,5
1/2" x 1/4"	1.875	47,6	1.875	47,6
1/2" x 3/8"	1.875	47,6	1.875	47,6
3/4" x 1/4"	2.000	50,8	2.000	50,8
3/4" x 3/8"	2.000	50,8	2.000	50,8
3/4" x 1/2"	2.000	50,8	2.000	50,8
1" x 1/4"	2.125	54,0	2.125	54,0
1 x 3/8"	2.125	54,0	2.125	54,0
1" x 1/2"	2.125	54,0	2.125	54,0
1" x 3/4"	2.125	54,0	2.125	54,0
1.1/2" x 1/2"	2.375	60,3	2.375	60,3
1.1/2" x 3/4"	2.375	60,3	2.375	60,3
1.1/2" x 1"	2.375	60,3	2.375	60,3
2" x 1/2"	2.875	73,0	2.625	66,7
2 x 3/4"	2.875	73,0	2.625	66,7
2" x 1"	2.875	73,0	2.625	66,7
2" x 1.1/2"	2.875	73,0	2.625	66,7
2.1/2" x 1/2"	3.125	79,4	2.625	73,0
2.1/2" x 3/4"	3.125	79,4	2.875	73,0
2.1/2" x 1"	3.125	79,4	2.875	73,0
2.1/2" x 1.1/2"	3.125	79,4	2.875	73,0
2.1/2" x 1/2"	3.125	79,4	2.875	73,0
3" x 1/2"	3.375	85,7	2.875	79,4
3" x 3/4"	3.375	85,7	3.125	79,4
3" x 1"	3.375	85,7	3.125	79,4
3" x 1.1/2"	3.375	85,7	3.125	79,4
3" x 2"	3.375	85,7	3.125	79,4
3" x 2.1/2"	3.375	85,7	3.125	79,4
4" x 1/2"	4.125	104,8	3.625	92,1
4" x 3/4"	4.125	104,8	3.625	92,1
4" x 1"	4.125	104,8	3.625	92,1
4" x 1.1/2"	4.125	104,8	3.625	92,1
4" x 2"	4.125	104,8	3.875	98,4
4" x 2.1/2"	4.125	104,8	3.875	98,4
4" x 3"	4.125	104,8	3.875	98,4
6" x 3"	5.625	142,9	4.875	123,8
6" x 4"	5.625	142,9	5.125	130,2

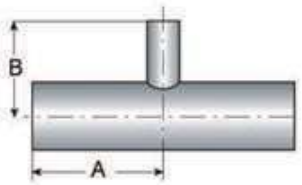
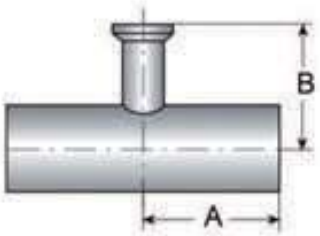


TABELA BPE # DT-4.1.2-6

Tê de Redução Solda X TC X Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	44,5	2.250	57,2
1/2" x 1/4"	1.875	47,6	2.375	60,3
1/2" x 3/8"	1.875	47,6	2.375	60,3
3/4" x 1/4"	2.000	50,8	2.500	63,5
3/4" x 3/8"	2.000	50,8	2.500	63,5
3/4" x 1/2"	2.000	50,8	2.500	63,5
1" x 1/4"	2.125	54,0	2.625	66,7
1 x 3/8"	2.125	54,0	2.625	66,7
1" x 1/2"	2.125	54,0	2.625	66,7
1" x 3/4"	2.125	54,0	2.625	66,7
1.1/2" x 1/2"	2.375	60,3	2.875	73,0
1.1/2" x 3/4"	2.375	60,3	2.875	73,0
1.1/2" x 1"	2.375	60,3	2.875	73,0
2" x 1/2"	2.875	73,0	3.125	79,4
2 x 3/4"	2.875	73,0	3.125	79,4
2" x 1"	2.875	73,0	3.125	79,4
2" x 1.1/2"	2.875	73,0	3.125	79,4
2.1/2" x 1/2"	3.125	79,4	3.375	85,7
2.1/2" x 3/4"	3.125	79,4	3.375	85,7
2.1/2" x 1"	3.125	79,4	3.375	85,7
2.1/2" x 1.1/2"	3.125	79,4	3.375	85,7
2.1/2" x 1/2"	3.125	79,4	3.375	85,7
3" x 1/2"	3.375	85,7	3.625	92,1
3" x 3/4"	3.375	85,7	3.625	92,1
3" x 1"	3.375	85,7	3.625	92,1
3" x 1.1/2"	3.375	85,7	3.625	92,1
3" x 2"	3.375	85,7	3.625	92,1
3" x 2.1/2"	3.375	85,7	3.625	92,1
4" x 1/2"	4.125	104,8	4.125	104,8
4" x 3/4"	4.125	104,8	4.125	104,8
4" x 1"	4.125	104,8	4.125	104,8
4" x 1.1/2"	4.125	104,8	4.125	104,8
4" x 2"	4.125	104,8	4.375	111,1
4" x 2.1/2"	4.125	104,8	4.375	111,1
4" x 3"	4.125	104,8	4.375	111,1
6" x 3"	5.625	142,9	5.375	136,5
6" x 4"	5.625	142,9	5.750	146,1



Tê Redução

Tê de Redução TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	2.250	57,2	2.250	57,2
1/2" x 1/4"	2.375	60,3	2.375	60,3
1/2" x 3/8"	2.375	60,3	2.375	63,5
3/4" x 1/4"	2.500	63,5	2.500	63,5
3/4" x 3/8"	2.500	63,5	2.500	63,5
3/4" x 1/2"	2.500	63,5	2.500	50,8
1" x 1/4"	2.625	66,7	2.625	66,7
1 x 3/8"	2.625	66,7	2.625	66,7
1" x 1/2"	2.625	66,7	2.625	66,7
1" x 3/4"	2.625	66,7	2.625	66,7
1.1/2" x 1/2"	2.875	73,0	2.875	73,0
1.1/2" x 3/4"	2.875	73,0	2.875	73,0
1.1/2" x 1"	2.875	73,0	2.875	73,0
2" x 1/2"	3.375	85,7	3.125	79,4
2 x 3/4"	3.375	85,7	3.125	79,4
2" x 1"	3.375	85,7	3.125	79,4
2" x 1.1/2"	3.375	85,7	3.125	79,4
2.1/2" x 1/2"	3.625	92,1	3.375	85,7
2.1/2" x 3/4"	3.625	92,1	3.375	85,7
2.1/2" x 1"	3.625	92,1	2.875	85,7
2.1/2" x 1.1/2"	3.625	92,1	2.875	85,7
2.1/2" x 1/2"	3.625	92,1	2.875	85,7
3" x 1/2"	3.875	98,4	2.875	92,1
3" x 3/4"	3.875	98,4	3.125	92,1
3" x 1"	3.875	98,4	3.125	92,1
3" x 1.1/2"	3.875	98,4	3.125	92,1
3" x 2"	3.875	98,4	3.125	92,1
3" x 2.1/2"	3.875	98,4	3.125	92,1
4" x 1/2"	4.750	120,7	3.625	104,8
4" x 3/4"	4.750	120,7	3.625	104,8
4" x 1"	4.750	120,7	3.625	104,8
4" x 1.1/2"	4.750	120,7	3.625	104,8
4" x 2"	4.750	120,7	3.875	111,1
4" x 2.1/2"	4.750	120,7	3.875	111,1
4" x 3"	4.750	120,7	3.875	111,1
6" x 3"	7.125	181,0	4.875	136,5
6" x 4"	7.125	181,0	5.125	146,1

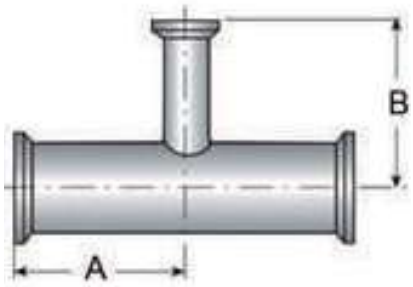


TABELA BPE # DT-4.1.2-8

Tê Curto de Redução TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	44,5	1.000	25,4
1/2" x 1/4"	1.875	47,6	1.000	25,4
1/2" x 3/8"	1.875	47,6	1.000	25,4
3/4" x 1/4"	2.000	50,8	1.000	25,4
3/4" x 3/8"	2.000	50,8	1.000	25,4
3/4" x 1/2"	2.000	50,8	1.000	25,4
1" x 1/4"	2.125	54,0	1.125	28,6
1 x 3/8"	2.125	54,0	1.125	28,6
1" x 1/2"	2.125	54,0	1.125	28,6
1" x 3/4"	2.125	54,0	1.125	28,6
1.1/2" x 1/2"	2.375	60,3	1.375	34,9
1.1/2" x 3/4"	2.375	60,3	1.375	34,9
1.1/2" 1" 2" x 1/2"	2.375	60,3	1.625	34,9
2 x 3/4" 2" x1"	2.875	73,0	1.625	41,3
2" 1.1/2"	2.875	73,0	1.625	41,3
2.1/2" x 1/2"	2.875	73,0	1.625	41,3
2.1/2" x 3/4"	3.125	79,4	1.875	47,6
2.1/2" x 1"	3.125	79,4	1.875	47,6
2.1/2" x 1.1/2"	3.125	79,4	1.875	47,6
2.1/2" x 2"	3.125	79,4	1.875	47,6
3" x 1/2" 3" x 3/4"	3.375	85,7	2.125	54,0
3" x 1" 3" x 1.1/2"	3.375	85,7	2.125	54,0
3" x 2"	3.375	85,7	2.125	54,0
3" x 2.1/2"	3.375	85,7	2.625	54,0
4" x 1/2"	4.125	104,8	2.625	54,0
4" x 3/4"	4.125	104,8	2.625	66,7
4" x 1"	4.125	104,8	2.625	66,7
4" x 1.1/2"	4.125	104,8	2.675	66,7
4" x 2"	4.125	104,8	2.675	66,7
4" x 2.1/2"	4.125	104,8	2.675	66,7
4" x 3"	4.125	104,8	3.675	66,7
6" x 1/2"	5.625	142,9	3.675	66,7
6" x 3/4"	5.625	142,9	3.625	92,1
6" x 1"	5.625	142,9	3.625	92,1
6" x 1.1/2"	5.625	142,9	3.675	92,1
6" x 2"	5.625	142,9	3.675	92,1
6" x 2.1/2"	5.625	142,9	5.375	92,1
6" x 3"	5.625	142,9	3.750	92,1
6" x 4"	5.625	142,9		92,1
				95,3

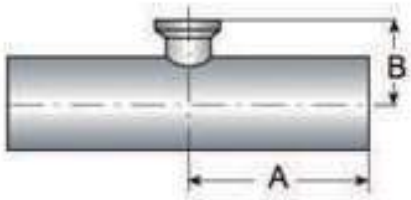


TABELA BPE # DT-4.1.2-7

Instrumentação

Tê de Instrumentação Solda x TC X Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/2" x 1"	2.250	57,15	0.875	22,2
3/4" x 1"	2.250	57,15	1.000	25,40
1/2" x 1.1/2"	2.500	63,5	0.875	22,2
3/4" x 1.1/2"	2.500	63,5	1.000	25,4
1" x 1.1/2"	2.500	63,5	1.125	28,6
1/2" x 2"	2.750	69,9	1.000	25,4
3/4" x 2"	2.750	69,9	1.125	28,6
1" x 2"	2.750	69,9	1.250	31,8
1.1/2" x 2"	2.750	69,9	1.500	38,1

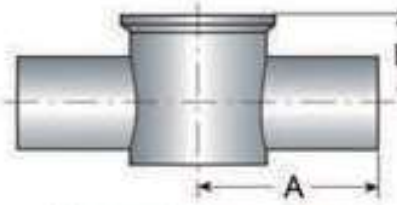


TABELA BPE # DT-4.1.2-10

Tê de Instrumentação TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/2" x 1.1/2"	2.250	57,15	0.875	22,2
3/4" x 1.1/2"	2.250	57,15	1.000	25,40
1" x 1.1/2"	2.500	63,5	0.875	22,2
1/2" x 2"	2.500	63,5	1.000	25,4
3/4" x 2"	2.500	63,5	1.125	28,6
1" x 2"	2.750	69,9	1.000	25,4
1.1/2" x 2"	2.750	69,9	1.125	28,6

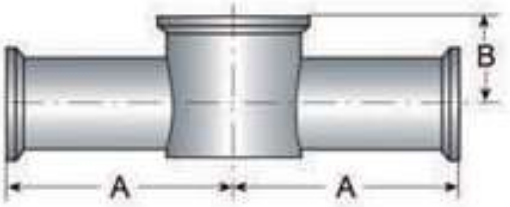


TABELA BPE # DT-4.1.2-11

Redução Concêntrica Solda

Redução Concêntrica Solda

⌀	Dimensões	
	A pol	A mm
	Comprimento Total	
3/8' x 1/4"	1.625	41,275
1/2" x 1/4"	1.875	47,675
1/2" x 3/8"	1,875	47,675
3/4" x 3/8"	2.000	50,8
3/4" x 1/2"	2.125	53,975
1" x 1/2"	2.500	63,5
1" x 3/4"	2.125	53,975
1.1/2 x 3/4"	3.000	76,2
1.1/2" x 1"	2.500	63,5
2" x 1"	3.375	85,725
2" x 1.1/2"	2.500	63,5
2.1/2" x 1.1/2"	3.375	85,725
2.1/2" x 2"	2.500	63,5
3" x 1.1/2"	4.250	107,95
3" x 2"	3.375	85,725
3" x 2.1/2"	2.625	66,675
4" x 2"	5.125	130,175
4" x 2.1/2"	4.250	107,95
4" x 3"	3.875	98,425
6" x 3"	7.250	184,15
6" x 4"	5.625	142,875

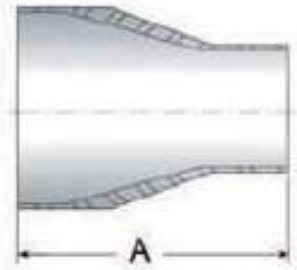


TABELA BPE # DT-4.1.3-1

Redução Concêntrica TC X Solda

⌀	Dimensões	
	A pol	A mm
	Comprimento Total	
3/8' x 1/4"	2.125	53,975
1/2" x 1/4"	2.375	60,325
1/2" x 3/8"	2.375	60,325
3/4" x 3/8"	2.500	63,5
3/4" x 1/2"	2.625	66,675
1" x 1/2"	3.000	76,2
1" x 3/4"	2.625	66,675
1.1/2 x 3/4"	3.500	88,9
1.1/2" x 1"	3.500	76,2
2" x 1"	3.875	98,425
2" x 1.1/2"	3.000	76,2
2.1/2" x 1.1/2"	2.875	98,425
2.1/2" x 2"	3.000	76,2
3" x 1.1/2"	4.750	120,65
3" x 2"	3.875	98,425
3" x 2.1/2"	3.125	79,375
4" x 2"	5.750	146,05
4" x 2.1/2"	4.875	123,825
4" x 3"	4.500	114,3
6" x 3"	8.000	203,2
6" x 4"	6.375	161,925

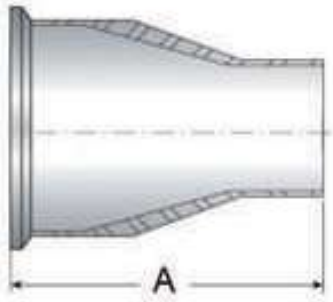


TABELA BPE # DT-4.1.3-2

Redução Concêntrica Solda

Redução Concêntrica Solda TC

Ø	Dimensões	
	A pol	A mm
	Comprimento Total	
3/8' x 1/4"	2.625	66,675
1/2" x 1/4"	2.875	73,025
1/2" x 3/8"	2.875	73,025
3/4" x 3/8"	3.000	76,2
3/4" x 1/2"	3.125	79,375
1" x 1/2"	3.500	88,9
1" x 3/4"	3.125	79,375
1.1/2 x 3/4"	4.000	101,6
1.1/2" x 1"	3.500	88,9
2" x 1"	4.375	111,125
2" x 1.1/2"	3.500	88,9
2.1/2" x 1.1/2"	4.375	111,125
2.1/2" x 2"	3.500	88,9
3" x 1.1/2"	5.250	133,35
3" x 2"	4.375	111,125
3" x 2.1/2"	3.625	92,075
4" x 2"	6.250	158,75
4" x 2.1/2"	5.375	136,525
4" x 3"	5.000	127,0
6" x 3"	8.500	215,9
6" x 4"	7.000	177,8

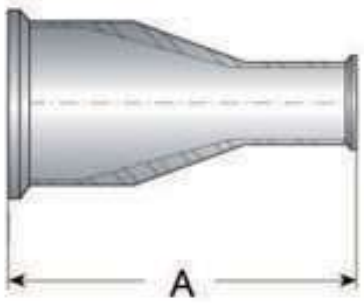


TABELA BPE # DT-4.1.3-3

Redução Excêntrica Solda

Redução Excêntrica Solda

Ø	Dimensões	
	A pol	A mm
	Comprimento Total	
3/8' x 1/4"	1.625	41,275
1/2" x 1/4"	1.875	47,675
1/2" x 3/8"	1,875	47,675
3/4" x 3/8"	2.000	50,8
3/4" x 1/2"	2.125	53,975
1" x 1/2"	2.500	63,5
1" x 3/4"	2.125	53,975
1.1/2" x 3/4"	3.000	76,2
1.1/2" x 1"	2.500	63,5
2" x 1"	3.375	85,725
2" x 1.1/2"	2.500	63,5
2.1/2" x 1.1/2"	3.375	85,725
2.1/2" x 2"	2.500	63,5
3" x 1.1/2"	4.250	107,95
3" x 2"	3.375	85,725
3" x 2.1/2"	2.625	66,675
4" x 2"	5.125	130,175
4" x 2.1/2"	4.250	107,95
4" x 3"	3.875	98,425
6" x 3"	7.250	184,15
6" x 4"	5.625	142,875

TABELA BPE # DT-4.1.3-3

Redução Excêntrica TC x Solda

Ø	Dimensões	
	A pol	A mm
	Comprimento Total	
3/8' x 1/4"	2.125	53,975
1/2" x 1/4"	2.375	60,325
1/2" x 3/8"	2.375	60,325
3/4" x 3/8"	2.000	63,5
3/4" x 1/2"	2.500	66,675
1" x 1/2"	3.000	76,2
1" x 3/4"	2.625	66,675
1.1/2" x 3/4"	3.500	88,9
1.1/2" x 1"	3.000	76,2
2" x 1"	3.875	98,425
2" x 1.1/2"	3.000	76,2
2.1/2" x 1.1/2"	3.875	98,425
2.1/2" x 2"	3.000	76,2
3" x 1.1/2"	4.750	120,65
3" x 2"	3.875	98,425
3" x 2.1/2"	3.125	79,375
4" x 2"	5.750	146,05
4" x 2.1/2"	4.875	123,825
4" x 3"	4.500	144,3
6" x 3"	8.000	203,2
6" x 4"	6.375	161,925

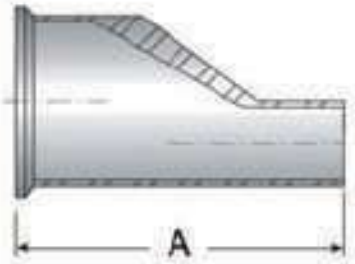


TABELA BPE # DT-4.1.3-2

Cruzeta

Cruzeta Solda

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	1.750	44,5	3.500	89,0
3/8"	1.750	44,5	3.500	89,0
1/2"	1.875	47,6	3.750	95,2
3/4" 1"	2.000	50,8	4.000	101,6
1.1/2"	2.125	54,0	4.250	108,0
2"	2.375	60,3	4.750	120,6
2.1/2"	2.875	73,0	5.750	146,0
3"	3.125	79,4	6.250	158,8
4"	3.375	85,7	6.750	171,4
6"	4.125	104,8	8.250	209,6
	5.625	142,9	11.250	285,8

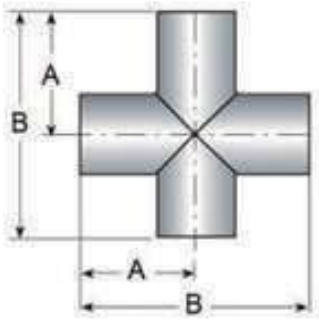


TABELA BPE # DT-4.1.2-1

Cruzeta TC

Ø	Dimensões			
	A pol	A mm	B pol	B mm
1/4"	2.250	57,2	4.500	114,3
3/8"	2.250	57,2	4.500	114,3
1/2"	2.375	60,33	4.500	114,3
3/4"	2.500	63,50	4.750	120,6
1"	2.625	66,7	5.250	133,4
1.1/2"	2.875	73,0	5.750	146,0
2"	3.375	85,7	6.750	171,4
2.1/2"	3.625	92,1	7.250	184,2
3"	3.875	98,4	7.750	196,8
4"	4.750	120,7	9.500	241,4
6"	7.125	181,0	14.250	362,0

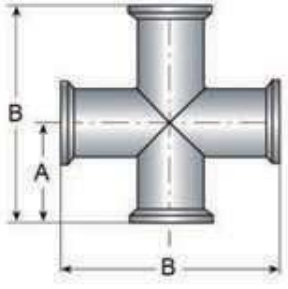
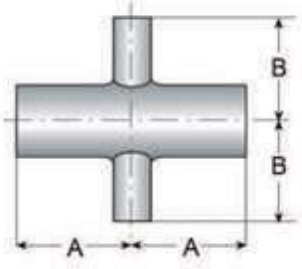


TABELA BPE # DT-4.1.2-4

Cruzeta de Redução Solda

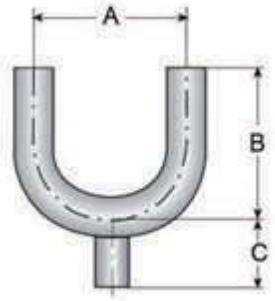
Ø	Dimensões			
	A pol	A mm	B pol	B mm
3/8" x 1/4"	1.750	44,5	1.750	44,5
1/2" x 1/4"	1.875	47,6	1.875	47,6
1/2" x 3/8"	1.875	47,6	1.875	47,6
3/4" x 1/4"	2.000	50,8	2.000	50,8
3/4" x 3/8"	2.000	50,8	2.000	50,8
3/4" x 1/2"	2.000	50,8	2.000	50,8
1" x 1/4"	2.125	54,0	2.125	54,0
1" x 3/8"	2.125	54,0	2.125	54,0
1" x 1/2"	2.125	54,0	2.125	54,0
1" x 3/4"	2.125	54,0	2.125	54,0
1.1/2" x 1/2"	2.375	60,3	2.375	60,3
1.1/2" x 3/4"	2.375	60,3	2.375	60,3
1.1/2" x 1" 2"	2.375	60,3	2.375	60,3
x 1/2"	2.875	73,0	2.625	66,7
2 x 3/4" 2" x	3.875	73,0	2.625	66,7
1"	2.875	73,0	2.625	66,7
2" x 1.1/2"	2.875	73,0	2.625	66,7
2.1/2" x 1/2"	3.125	79,4	2.875	73,0
2.1/2" x 3/4"	3.125	79,4	2.875	73,0
2.1/2" x 1"	3.125	79,4	2.875	73,0
2.1/2" x	3.125	79,4	2.875	73,0
1.1/2"	3.125	79,4	2.875	73,0
2.1/2" x 2"	3.375	79,4	2.875	73,0
3" x 1/2" 3" x	3.375	85,7	3.125	79,4
3/4" 3" x 1"	3.375	85,7	3.125	79,4
3" x 1.1/2" 3"	3.375	85,7	3.125	79,4
x 2"	3.375	85,7	3.125	79,4
3" x 2.1/2"	3.375	85,7	3.125	79,4
4" x 1/2"	4.125	104,8	3.625	92,1
4" x 3/4"	4.125	104,8	3.625	92,1
4" x 1"	4.125	104,8	3.625	92,1
4" x 1.1/2"	4.125	104,8	3.625	92,1
4" x 2"	4.125	104,8	3.875	98,4
4" x 2.1/2"	4.125	104,8	3.875	98,4
4" x 3"	4.750	104,8	3.875	98,4
6" x 3"	5.625	104,8	4.875	123,8
6" x 4"	5.625	104,8	5.125	130,2



Pontos de Uso

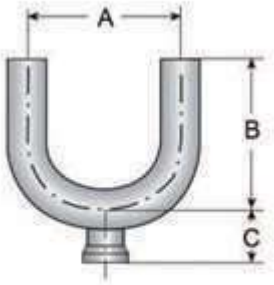
Ponto de Uso 180° Solda

⌀	Dimensões					
	A pol	A mm	B pol	B mm	C pol	C mm
3/4" x 1/2"	4.500	114,3	3.000	76,2	1.875	47,6
3/4" x 3/4"	4.500	144,3	3.000	76,2	1.875	47,6
1" x 1/2"	3.000	76,2	3.000	76,2	2.062	52,4
1.1/2" x 1/2"	4.500	114,3	4.500	114,3	2.312	58,7
2" x 1/2"	6.000	152,4	5.000	127,0	2.562	65,1
2.1/2" x 1/2"	7.500	190,5	5.750	146,1	2.812	77,8
3" x 1/2"	9.000	228,6	6.500	165,1	3.062	77,8
4" x 3/8"	12.000	304,8	8.500	215,9	3.562	90,5



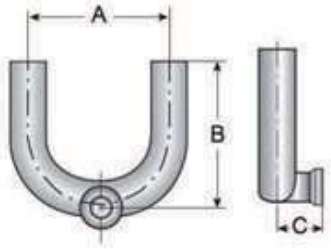
Ponto de Uso 180° Solda X TC X SOLDA

⌀	Dimensões					
	A pol	A mm	B pol	B mm	C pol	C mm
3/4" x 1/2"	4.500	114,3	3.000	76,2	0.875	22,2
3/4" x 3/4"	4.500	144,3	3.000	76,2	0.875	22,2
1" x 1/2"	3.000	76,2	3.000	76,2	1.062	27,0
1.1/2" x 1/2"	4.500	114,3	4.500	114,3	1.312	33,3
2" x 1/2"	6.000	152,4	5.000	127,0	1.562	39,7
2.1/2" x 1/2"	7.500	190,5	5.750	146,1	1.812	46,0
3" x 1/2"	9.000	228,6	6.500	165,1	2.062	52,4
4" x 3/8"	12.000	304,8	8.500	215,9	2.562	65,1



Ponto de Uso Saída Lateral 180° Solda X TC X Solda

⌀	Dimensões					
	A pol	A mm	B pol	B mm	C pol	C mm
3/4" x 1/2"	4.500	114,3	3.000	76,2	0.875	22,2
3/4" x 3/4"	4.500	144,3	3.000	76,2	0.875	22,2
1" x 1/2"	3.000	76,2	3.000	76,2	1.062	27,0
1.1/2" x 1/2"	4.500	114,3	4.500	114,3	1.312	33,3
2" x 1/2"	6.000	152,4	5.000	127,0	1.562	39,7
2.1/2" x 1/2"	7.500	190,5	5.750	146,1	1.812	46,0
3" x 1/2"	9.000	228,6	6.500	165,1	2.062	52,4
4" x 3/8"	12.000	304,8	8.500	215,9	2.562	65,1



Niples

Niple Longo TC

ϴ	Dimensões			
	A pol	A mm	D pol	D mm
1/4"	1.750	44,5	0.984	24,9
3/8"	1.750	44,5	0.984	24,9
1/2"	1.750	44,5	0.984	24,9
3/4"	1.750	44,5	0.984	24,9
1"	1.750	44,5	1.984	50,3
1.1/2"	1.750	44,5	1.984	50,3
2"	2.250	57,2	2.516	63,9
2.1/2"	2.250	57,2	3.047	77,3
3"	2.250	57,2	3.579	90,9
4"	2.250	57,2	4.682	118,9
6"	3.000	76,2	6.570	166,8

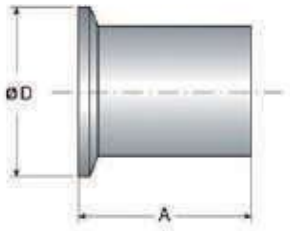


TABELA BPE # DT-4.1.4-1

Niple Curto TC

ϴ	Dimensões			
	A pol	A mm	D pol	D mm
1/4"	0.500	12,7	0.984	24,9
3/8"	0.500	12,7	0.984	24,9
1/2"	0.500	12,7	0.984	24,9
3/4"	0.500	12,7	0.984	24,9
1"	0.500	12,7	1.984	50,3
1.1/2"	0.500	12,7	1.984	50,3
2"	0.500	12,7	2.516	63,9
2.1/2"	0.500	12,7	3.047	77,3
3"	0.500	12,7	3.579	90,9
4"	0.625	15,9	4.682	118,9
6"	0.750	19,1	6.570	166,8

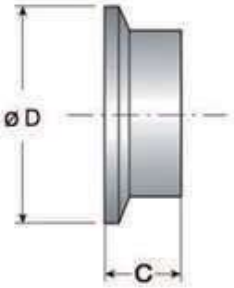


TABELA BPE # DT-4.1.4-1

Niple Médio TC

ϴ	Dimensões			
	A pol	A mm	D pol	D mm
1/4"	1.130	28,7	0.984	24,9
3/8"	1.130	28,7	0.984	24,9
1/2"	1.130	28,7	0.984	24,9
3/4"	1.130	28,7	0.984	24,9
1"	1.130	28,7	1.984	50,3
1.1/2"	1.130	28,7	1.984	50,3
2"	1.130	28,7	2.516	63,9
2.1/2"	1.130	28,7	3.047	77,3
3"	1.130	28,7	3.579	90,9
4"	1.130	28,7	4.682	118,9
6"	1.500	38,1	6.570	166,8

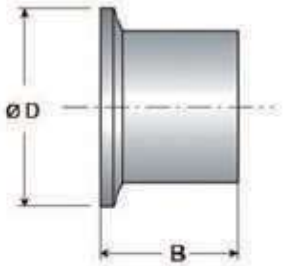


TABELA BPE # DT-4.1.4-1

Tampões, Caps e Abraçadeiras

Tampão TC

Ø	Dimensões			
	A pol	A mm	D pol	D mm
1/4"	0.187	4,7	0.984	24,9
3/8"	0.187	4,7	0.984	24,9
1/2"	0.187	4,7	0.984	24,9
3/4"	0.187	4,7	0.984	24,9
1"	0.250	6,4	1.984	50,3
1.1/2"	0.250	6,4	1.984	50,3
2"	0.250	6,4	2.516	63,9
2.1/2"	0.250	6,4	3.047	77,3
3"	0.250	6,4	3.579	90,9
4"	0.312	7,9	4.682	118,9
6"	0.437	11,1	6.570	166,8

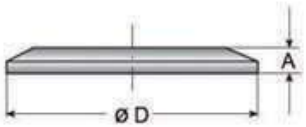
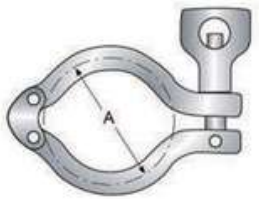


TABELA BPE # DT-4.1.5-2

Abraçadeira TC Pino Duplo

Ø	Dimensões	
	A pol	A mm
1.1/2"	2.122	53,9
2"	2.654	67,4
2.1/2"	3.185	80,8
3" 4"	3.717	94,4
	4.820	108,7



Cap Tubular Solda

Ø	Dimensões	
	A pol	A mm
1/2"	1.500	38,1
3/4"	1.500	38,1
1"	1.500	38,1
1.1/2"	1.500	38,1
2"	1.500	38,1
2.1/2"	1.500	38,1
3"	1.750	44,5
4"	2.000	50,8
6"	2.500	63,5

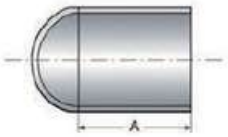
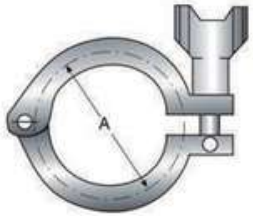


TABELA BPE # DT-4.1.5-1

Nota: Comprimento mínimo para B ø 0.375 pol. (9,53 mm) para todos os tamanhos

Abraçadeira TC Pino Duplo

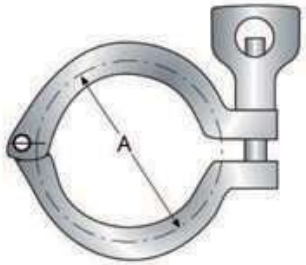
Ø	Dimensões	
	A pol	A mm
1/2" e	1.125	28,5
3/4" 1" e	2.122	53,9
1.1/2" 2"	2.654	64,5
2.1/2" 3"	3.185	80,8
4"	3.717	94,4
6"	4.820	122,42
	6.695	170,05



Abraçadeiras

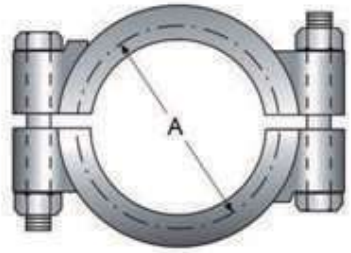
Abraçadeira TC Bipartida

⌀	Dimensões	
	A pol	A mm
1/2" e 3/4"	1.125	28,5
1" e 1.1/2"	2.122	53,9
2" 2.1/2"	2.654	64,5
3"	3.185	80,8
4"	3.717	94,4
6"	4.820	122,42
	6.695	170,05



Abraçadeira TC Alta Pressão

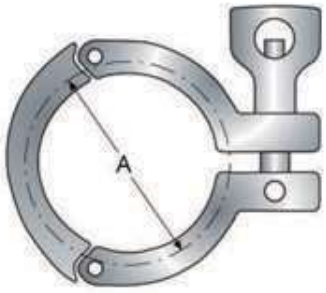
⌀	Dimensões	
	A pol	A mm
1/2" e	1.062	26,97
3/4" 1" e	2.046	51,97
1.1/2" 2"	2.578	65,48
2.1/2" 3"	3.110	78,99
4"	3.640	92,46
6"	4.744	120,50
	6.632	168,45



Abraçadeira TC Pino Duplo

⌀

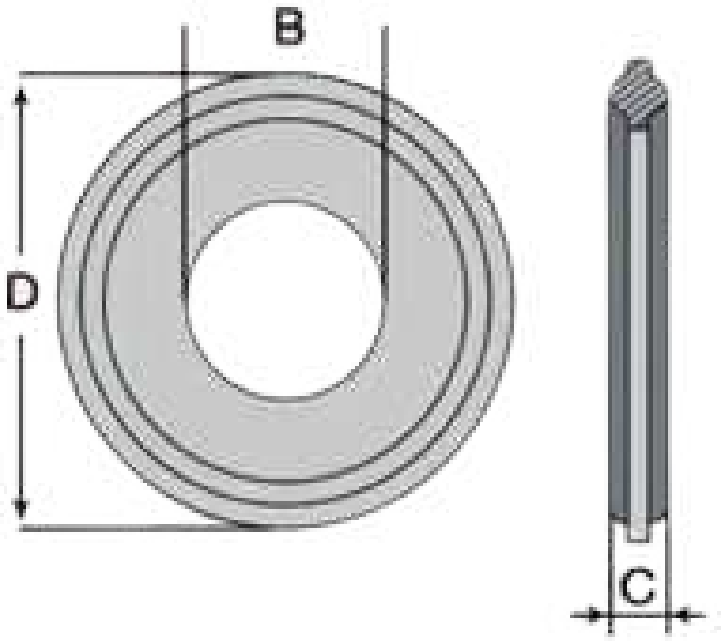
1.1/2" 2" 2.1/2	Dimensões	
	A pol	A mm
1"	2.122	53,9
3" 4"	2.654	67,4
	3.185	80,8
	3.717	94,4
	4,820	108,7



Aneis de Vedação

Anel de vedação em Silicone FDA
Anel de vedação em EPDM FDA
Anel de vedação em FKM FDA
Anel de vedação Envelope PTFE/EPDM

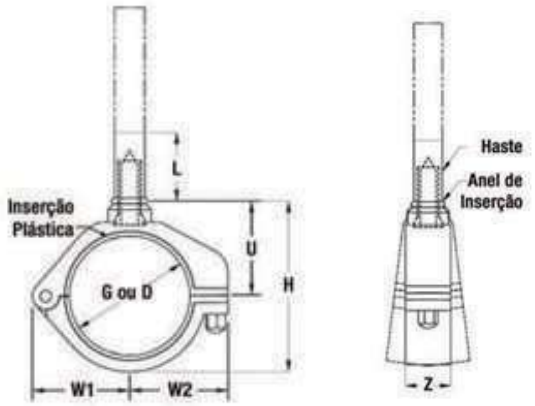
ø	Dimensões					
	D pol	D mm	B pol	B mm	C pol	C mm
1/2"	0.984	24,9	0.370	9,4	0.178	4,6
3/4"	0.984	24,9	0.620	15,8	0.178	4,6
1"	1.984	50,3	0.870	22,1	0.203	5,2
1.1/2"	1.984	50,3	1.370	34,8	0.203	5,2
2"	2.516	63,9	1.870	47,5	0.203	5,2
2.1/2"	3.047	77,3	2.370	60,2	0.203	5,2
3"	3.579	90,9	2.870	73,0	0.203	5,2
4"	4.682	118,9	3.834	97,4	0.203	5,2
6"	6.570	166,8	7.782	197,7	0.203	5,2



Abraçadeiras - Suporte

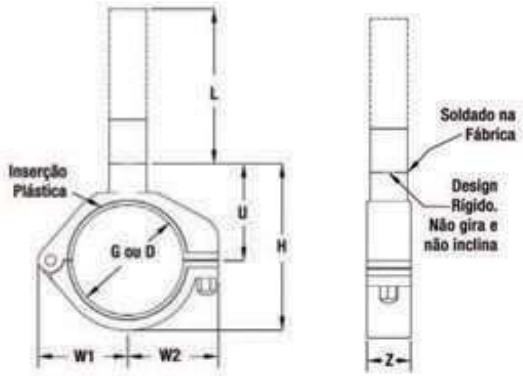
CHR-PS/CH-PG - Abraçadeira TC Alta Pressão

ϴ	Fixador	Guia	Dimensões							
	D	G	W1	W2	Z	L min	U	H	ϴ Haste	Peso kg
1/4"	0.25	0.29	0.93	1.02	0.75	1.26	0.95	1.54	0.63	0,34
3/8"	0.38	0.40	0.93	1.02	0.75	1.26	0.95	1.54	0.63	0,34
1/2"	0.50	0.54	0.93	1.02	0.75	1.26	0.95	1.54	0.63	0,34
3/4"	0.75	0.79	1.06	1.15	0.75	1.26	1.07	1.77	0.63	0,36
1"	1.00	1.04	1.20	1.28	0.75	1.26	1.20	2.04	0.63	0,37
1.1/2"	1.50	1.54	1.45	1.56	0.75	1.26	1.45	2.53	0.63	0,39
2"	2.00	2.04	1.74	1.79	0.75	1.26	1.70	3.03	0.63	0,44
2.1/2"	2.50	2.55	2.02	2.04	1.00	1.36	2.04	3.63	0.75	0,62
3"	3.00	3.05	2.27	2.29	1.00	1.36	2.29	4.13	0.75	0,64
4"	4.00	4.05	2.76	2.79	1.00	1.36	2.79	5.13	0.75	0,73
6"	6.00	6.05	3.98	4.46	1.50	1.78	4.16	7,74	1.00	2,42



CHR-PS/CH-PG - Abraçadeira Suporte Rígida

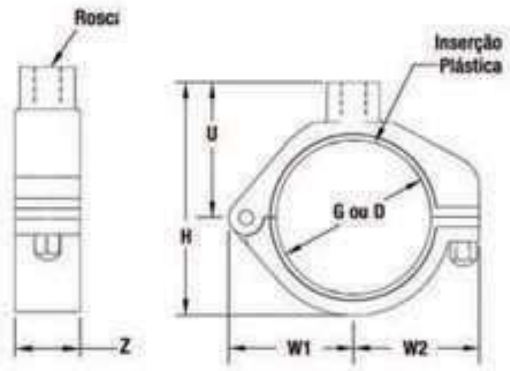
ϴ	Fixador	Guia	Dimensões							
	D	G	W1	W2	Z	U min	H	L	ϴ Haste	Peso kg
1/4"	0.25	0.29	0.93	1.02	0.75	1.08	1.67	??	1/2"	0,26
3/8"	0.38	0.40	0.93	1.02	0.75	1.08	1.67	??	1/2"	0,26
1/2"	0.50	0.54	0.93	1.02	0.75	1.08	1.67	??	1/2"	0,26
3/4"	0.75	0.79	1.06	1.15	0.75	1.23	1.93	??	1/2"	0,27
1"	1.00	1.04	1.20	1.28	0.75	1.35	2.19	??	1/2"	0,30
1.1/2"	1.50	1.54	1.45	1.56	0.75	1.66	2.74	??	1/2"	0,33
2"	2.00	2.04	1.74	1.79	0.75	1.85	3.18	??	1/2"	0,36
2.1/2"	2.50	2.55	2.02	2.04	1.00	2.18	3.77	??	5/8"	0,73
3"	3.00	3.05	2.27	2.29	1.00	2.34	4.18	??	5/8"	0,73
4"	4.00	4.05	2.76	2.79	1.00	3.08	5.42	??	3/4"	0,84
6"	6.00	6.05	3.98	4.46	1.50	4.45	8.03	??	1"	2,81



Abraçadeiras - Suporte

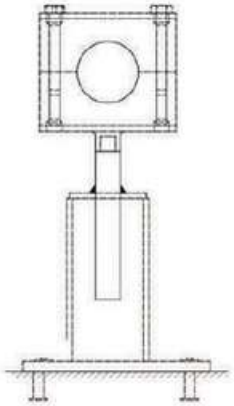
CHT - Abraçadeira Suporte Rosca

ϴ	Fixador	Guia	Dimensões							
	D	G	W1	W2	Z	U	H	Rosca	ϴ Haste	Peso kg
1/4"	0.25	0.29	0.93	1.02	0.75	1.08	1.54	5/16"-18	1/2"	0,26
3/8"	0.38	0.40	0.93	1.02	0.75	1.08	1.54	5/16"-18	1/2"	0,26
1/2"	0.50	0.54	0.93	1.02	0.75	1.08	1.54	5/16"-18	1/2"	0,26
3/4"	0.75	0.79	1.06	1.15	0.75	1.23	1.77	5/16"-18	1/2"	0,28
1"	1.00	1.04	1.20	1.28	0.75	1.35	2.04	5/16"-18	1/2"	0,33
1.1/2"	1.50	1.54	1.45	1.56	0.75	1.66	2.53	5/16"-18	1/2"	0,40
2"	2.00	2.04	1.74	1.79	0.75	1.85	3.03	5/16"-18	1/2"	0,48
2.1/2"	2.50	2.55	2.02	2.04	1.00	2.18	3.63	3/8"-16	5/8"	0,70
3"	3.00	3.05	2.27	2.29	1.00	2.34	4.13	3/8"-16	5/8"	0,76
4"	4.00	4.05	2.76	2.79	1.00	3.08	5.13	1/2"-13	3/4"	0,95
6"	6.00	6.05	3.98	4.46	1.50	4.46	7.74	3/4"-10	1"	4,20



ROD - Haste Roscada para Suporte

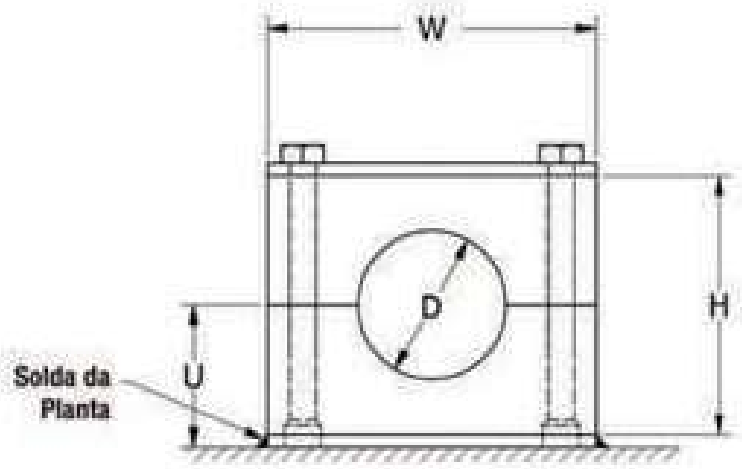
ϴ	Serie CH		SB ou Estilo Bloco	
	Rosca	ϴ Haste	Rosca	ϴ Haste
1/4"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
3/8"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
1/2"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
3/4"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
1"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
1.1/2"	5/16"-18	1/2" (B)	3/8"-16	5/8" (C)
2"	3/8"-16	1/2" (B)	3/8"-16	5/8" (C)
2.1/2"	3/8"-16	5/8" (C)	3/8"-16	5/8" (C)
3"	3/4"-16	5/8" (C)	3/8"-16	5/8" (C)
4"	1/2"-13	3/4" (D)	3/8"-16	5/8" (C)
6"	3/4"-10	1" (E)	5/8"-11	



Abraçadeiras - Suporte

SB - Abraçadeira Suporte Estilo Bloco Solda

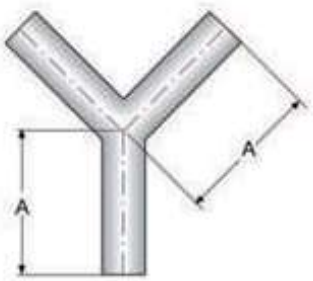
Número Grupo	Ø Tubo em pol.	Dimensões					Tamanho	
		D	W	H	Z	U	Parafuso	Peso Kg
3	1/4"	0.250	1.88	1.38	1.19	0.81	1/4" - 20	0.18
	3/8"	0.375	1.88	1.38	1.19	0.81	1/4" - 20	0.18
	1/4"	0.500	1.88	1.38	1.19	0.81	1/4" - 20	0.18
	3/4"	0.750	1.88	1.38	1.19	0.81	1/4" - 20	0.18
	1"	1.000	1.88	1.38	1.19	0.81	1/4" - 20	0.18
6	1/4"	0.250	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	3/8"	0.375	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	1/2"	0.500	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	3/4"	0.750	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	1"	1.000	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	1.1/2"	1.500	3.34	2.63	1.19	1.44	1/4" - 20	0.27
	2"	2.000	3.34	2.63	1.19	1.44	1/4" - 20	0.27
7	2"	2.000	5.00	4.38	1.19	2.31	1/4" - 20	0.50
	2.1/2"	2.500	5.00	4.38	1.19	2.31	1/4" - 20	0.50
	3"	3.000	5.00	4.38	1.19	2.31	1/4" - 20	0.50
7A	4"	4.000	5.77	4.80	1.19	2.54	1/4" - 20	0.68
8	6"	6.000	8.88	7.65	1.50	4.01	3/8" - 16	1.99



Tês Y

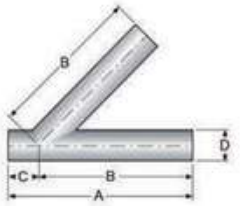
Tê Y Solda

⌀	Dimensões		
	A pol	A mm	Parede
1/2"	2.00	50,8	.065
3/4"	2.00	50,8	.065
1"	3.00	76,2	.065
1.1/2"	3.00	76,2	.065
2"	4.00	101,6	.065
2.1/2"	5.00	127,0	.065
3"	6.00	152,4	.065
4"	8.00	302,2	.083
6"	8.00	302,2	.109



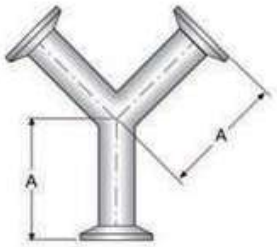
Tê 45° Solda

⌀	Dimensões							
	A pol	A mm	B pol	B mm	C pol	C mm	D pol	D mm
1/2"	6.00	152,4	5.00	127,0	1.00	25,4	0.50	12,7
3/4"	6.00	152,4	5.00	127,0	1.00	25,4	0.75	19,1
1"	6.00	152,4	5.00	127,0	1.00	25,4	1.00	25,4
1.1/2"	7.38	187,45	6.19	157,2	1.19	30,2	1.50	38,1
2"	8.75	222,3	7.12	181,0	1.63	41,4	2.00	50,8
2.1/2"	10.00	254,0	8.50	215,9	1.50	38,1	2.50	63,50
3"	10.75	270,1	8.87	225,4	1.87	47,5	3.00	76,2
4"	12.81	325,4	10.75	273,1	2.06	52,4	4.00	101,6
6"	16.50	419,1	12.50	317,5	4.0	101,6	6.00	152,4



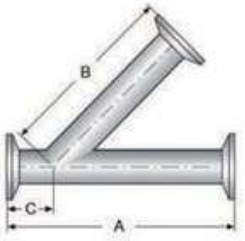
Tê Y TC

⌀	Dimensões	
	A pol	A mm
1/2"	250	63,5
3/4"	2.50	63,5
1"	3.50	88,9
1.1/2"	3.50	88,9
2"	4.50	114,9
2.1/2"	5.50	139,7
3"	6.50	165,1
4"	8.625	219,1
6"	8.875	225,4



Tê 45° TC

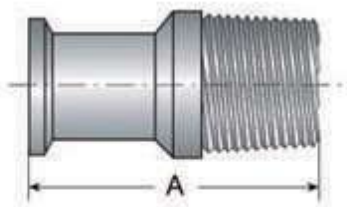
⌀	Dimensões					
	A pol	A mm	B pol	B mm	C pol	C mm
1/2"	7.000	177,8	5.500	139,7	1.500	38,1
3/4"	7.000	177,8	5.500	139,7	1.500	38,1
1"	7.000	177,8	5.500	139,7	1.500	38,1
1.1/2"	8.375	212,7	6.687	169,9	1.687	42,9
2"	9.750	247,7	7.625	193,7	2.125	54,0
2.1/2"	11.000	279,4	9.000	228,6	2.000	50,8
3"	11.750	298,5	9.375	238,1	2.375	60,3
4"	14.062	357,2	11.375	288,9	2.687	68,3
6"	18.250	479,4	15.375	390,5	4.875	111,1



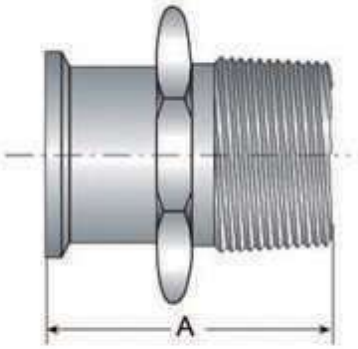
Adaptadores e Pestanas

Adaptador TC X Rosca Macho

ϴ	Dimensões	
	A pol	A mm
1/2" x 1/8"	2.00	50,8
1/2" x 1/4"	2.00	50,8
1/2" x 3/8"	2.00	50,8
1/2" x 1/2"	2.00	50,8
1/2" x 3/4"	2.00	50,8
3/4" x 1/8"	2.00	50,8
3/4" x 1/4"	2.00	50,8
3/4" x 3/8"	2.00	50,8
3/4" x 1/2"	2.00	50,8
3/4" x 3/4"	2.00	50,8
1"	2.25	57,1
1.1/2"	2.44	61,9
2"	2.66	67,5
2.1/2"	3.28	83,3
3"	3.50	88,9
4"	3.81	96,7



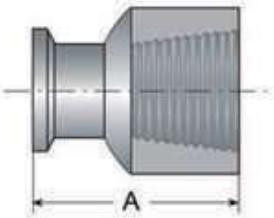
LISO



SEXTAVADO

Adaptador TC X Rosca Fêmea

Ø	Dimensões	
	A pol	A mm
1/2" x 1/8"	1.25	31,7
1/2" x 1/4"	1.50	38,1
1/2" x 3/8"	1.50	38,1
1/2" x 1/2"	1.50	38,1
1/2" x 3/4"	1.62	41,1
3/4" x 1/8"	1.25	31,7
3/4" x 1/4"	1.50	38,1
3/4" x 3/8"	1.50	38,1
3/4" x 1/2"	150	38,1
3/4" x 3/4"	1.62	41,1
1"	1.62	41,1
1.1/2"	2.25	57,1
2"	2.34	59,4
2.1/2"	2.09	53,08
3"	2.19	55,6
4"	2.66	67,5



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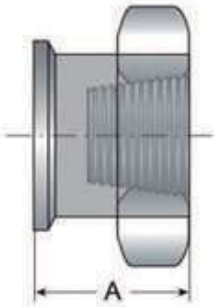
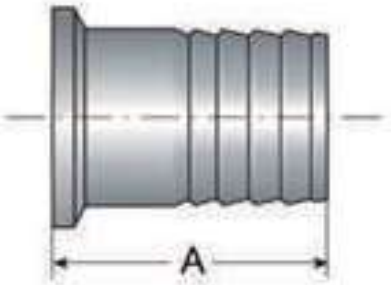


SEXTAVADO

Adaptadores e Pestanas

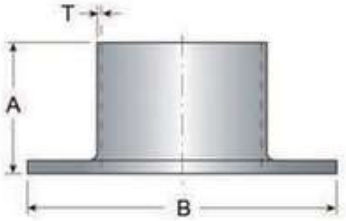
Adaptador TC X Mangueira

∅	Dimensões	
	A pol	A mm
1/2" x 1/4"	1.500	38,1
1/2" x 3/8"	1.500	38,1
1/2" x 1/2"	1.500	38,1
1/2" x 3/4"	1.500	38,1
3/4" x 1/4"	1.500	38,1
3/4" x 3/8"	1.500	38,1
3/4" x 1/2"	1.750	44,5
3/4" x 3/4"	1.750	44,5
1"	1.750	44,5
1.1/2"	1.750	44,5
2"	2.250	57,15
2.1/2"	2.250	57,15
3"	3.090	78,6
4"	3.410	86,5



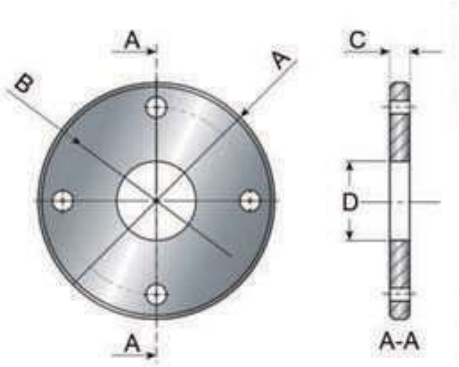
Pestana Tipo "A" Ranhura

∅	Dimensões					
	A pol	A mm	B pol	B mm	T pol	T mm
1/2"	2.000	50,80	1.625	41,3	0.065	1,65
3/4"	2.000	50,80	1.687	42,9	0.065	1,65
1"	2.000	50,80	2.000	50,8	0.065	1,65
1.1/2"	2.000	50,80	2.875	73,0	0.065	1,65
2"	2.500	2.500	3.265	92,1	0.65	1,65
2.1/2"	2.500	2.500	4.125	104,8	0.065	1,65
3"	2.500	2.500	5.000	127,0	0.065	1,65
4"	2.500	2.500	6.187	157,2	0.083	2,11
6"	3.000	3.000	8.500	215,9	0.109	2,77



Flange Lisa

∅	Dimensões							
	A pol	A mm	B pol	B mm	C pol	C mm	D pol	D mm
1"	4.250	108,0	3.125	79,4	0.375	9,5	1.010	25,7
1.1/2"	5.000	127,0	3.875	98,4	0.437	11,1	1.510	38,4
2"	6.000	152,4	4.750	120,7	0.500	12,7	2.010	51,1
2.1/2"	7.000	177,8	5.500	139,7	0.562	14,3	2.510	63,8
3"	7.500	190,5	6.000	152,4	0.625	15,9	3.010	76,5
4"	9.000	228,6	7.500	190,5	0.689	17,5	4.010	101,9
6"	11.000	297,4	9.500	241,3	0.811	20,6	6.010	152,9



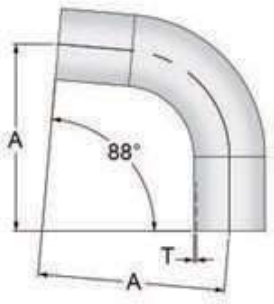
Curvas - 88° e 92°

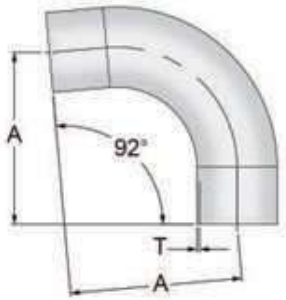
Curva 88° Solda

ø	Dimensões a = 88°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	3.06	77,72	2.96	77,18
3/4"	0.65	1,65	3.06	77,72	2.96	75,18
1"	0.65	1,65	3.05	87,12	2.95	74,93
1.1/2"	0.65	1,65	3.80	96,52	3.67	93,22
2"	0.65	1,65	4.81	122,17	4.64	117,86
2.1/2"	0.65	1,65	5.56	141,22	5.37	139,40
3"	0.65	1,65	6.31	160,27	6.09	154,69
4"	0.83	2,11	8.07	204,98	7.79	197,87

Curva 92° Solda

ø	Dimensões a = 92°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	2.94	74,68	3.04	77,22
3/4"	0.65	1,65	2.95	74,93	3.04	77,22
1"	0.65	1,65	2.95	84,93	3.05	77,22
1.1/2"	0.65	1,65	3.74	95,00	3.83	97,28
2"	0.65	1,65	4.73	120,14	4.85	123,19
2.1/2"	0.65	1,65	5.44	130,18	5.63	143,00
3"	0.65	1,65	6.19	157,23	6.41	162,81
4"	0.83	2,11	7.93	201,42	8.21	208,53



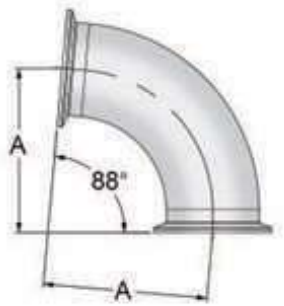


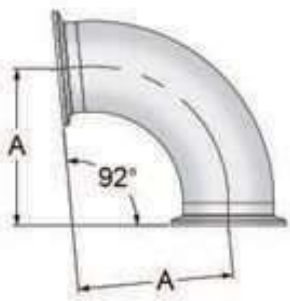
Curva 88° TC

ø	Dimensões a = 88°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	1.64	41,66	1.59	40,39
3/4"	0.65	1,65	1.64	41,66	1.59	40,39
1"	0.65	1,65	2.02	51,31	1.95	40,39
1.1/2"	0.65	1,65	2.77	70,36	2.69	67,82
2"	0.65	1,65	3.52	89,41	3.40	86,36
2.1/2"	0.65	1,65	4.26	108,20	4.12	104,65
3"	0.65	1,65	5.02	127,51	4.84	122,94
4"	0.83	2,11	6.64	168,66	6.42	163,07

Curva 92° TC

ø	Dimensões a = 92°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	1.63	41,40	1.66	42,16
3/4"	0.65	1,65	1.63	41,40	1.66	42,16
1"	0.65	1,65	2.00	50,80	2.05	52,07
1.1/2"	0.65	1,65	2.75	69,85	2.83	71,88
2"	0.65	1,65	3.50	88,90	3.60	91,44
2.1/2"	0.65	1,65	4.25	107,95	4.38	122,62
3"	0.65	1,65	5.00	127,00	5.16	131,06
4"	0.83	2,11	6.62	168,15	6.83	173,48



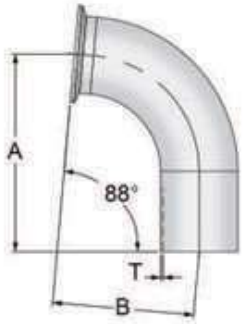


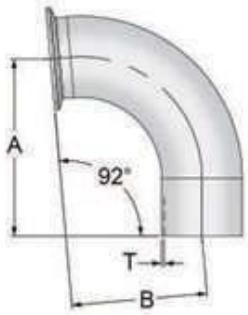
Curva 88° TC

ø	Dimensões a = 88°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	3.02	76,71	1.59	40,39
3/4"	0.65	1,65	3.02	76,71	1.59	40,39
1"	0.65	1,65	3.02	76,71	1.95	40,39
1.1/2"	0.65	1,65	3.77	95,76	2.69	67,82
2"	0.65	1,65	4.77	121,16	3.40	86,36
2.1/2"	0.65	1,65	5.52	140,21	4.12	104,65
3"	0.65	1,65	6.27	159,26	4.84	122,94
4"	0.83	2,11	8.02	203,71	6.42	163,07

Curva 92° Solda XTC

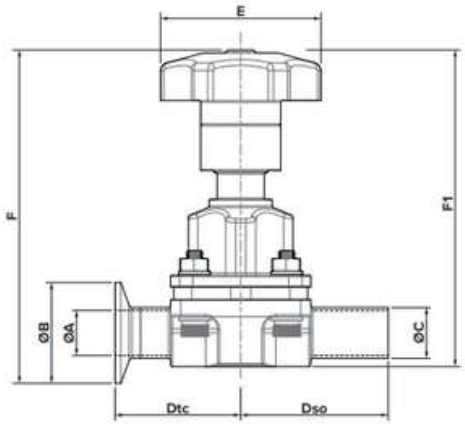
ø	Dimensões a = 92°					
	T pol	T mm	A pol	A mm	B pol	B mm
1/2"	0.65	1,65	2.98	75,69	1.66	42,16
3/4"	0.65	1,65	2.98	75,69	1.66	42,16
1"	0.65	1,65	2.98	75,69	2.05	52,07
1.1/2"	0.65	1,65	3.73	94,74	2.83	71,88
2"	0.65	1,65	4.73	120,14	3.60	91,44
2.1/2"	0.65	1,65	5.48	139,19	4.38	122,62
3"	0.65	1,65	6.25	158,75	5.16	131,06
4"	0.83	2,11	6.62	202,69	6.83	173,48





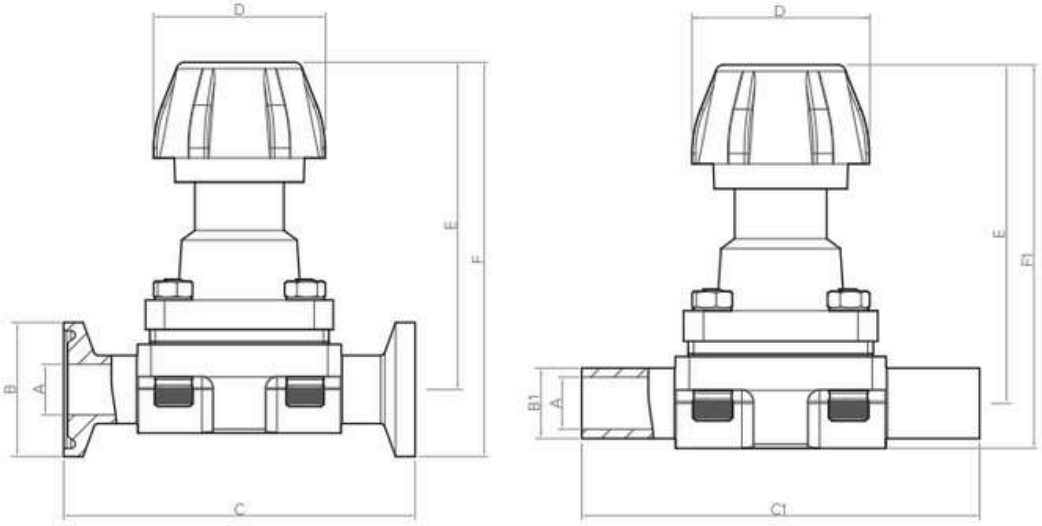
Válvulas Diafragma

Válvula Diafragma Standard



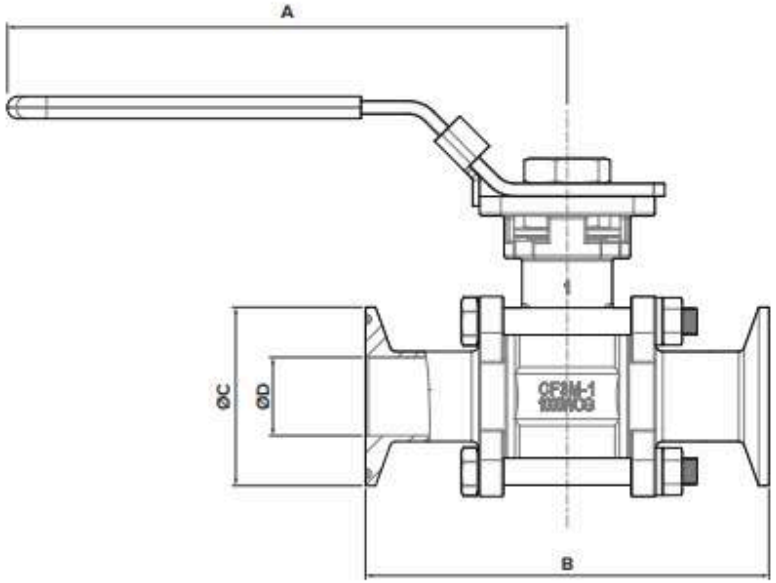
ø	øA	øB	øC	Dtc	Dso	E	F	F1
1/2"	9,4	24,9	12,7	45,7	61,0	65,0	103,2	102,6
3/4"	15,8	24,9	19,1	45,7	61,0	65,0	103,2	102,.6
1"	22,1	50,4	25,4	57,7	73,0	80,0	166,7	158,3
1.1/2"	34,8	50,4	38,1	69,2	84,5	99,5	184,7	184,6
2"	47,5	63,9	50,8	69,2	84,5	99,5	198,0	194,5
2.1/2								

Válvula de Diafragma Fracionária

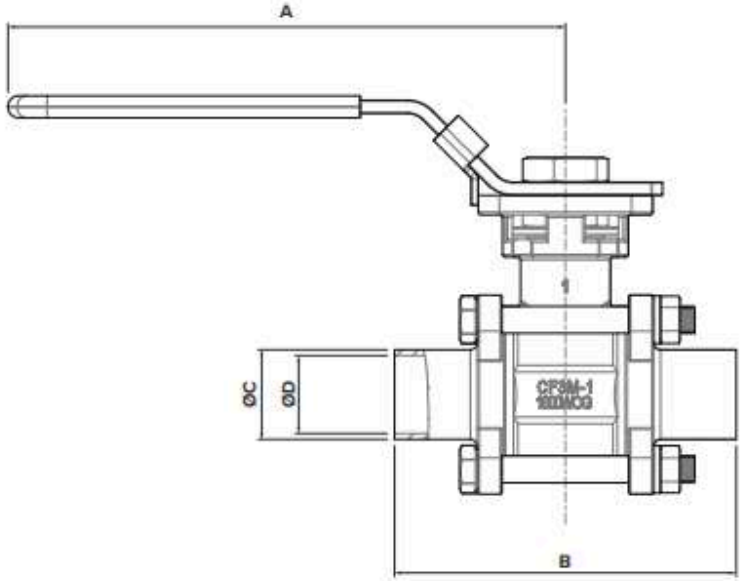


ø	A	B	B1	C	C1	D	E	F	F1
1/4"	4,6	25,2	6,4	64,5	76,0	32,0	61,0	73,5	69,15
3/8"	7,8	25,2	9,5	64,5	76,0	32,0	61,0	73,5	69,15
1/2"	9,4	25,2]	12,7	64,5	76,0	32,0	61,0	73,5	69,15

Válvula Esfera

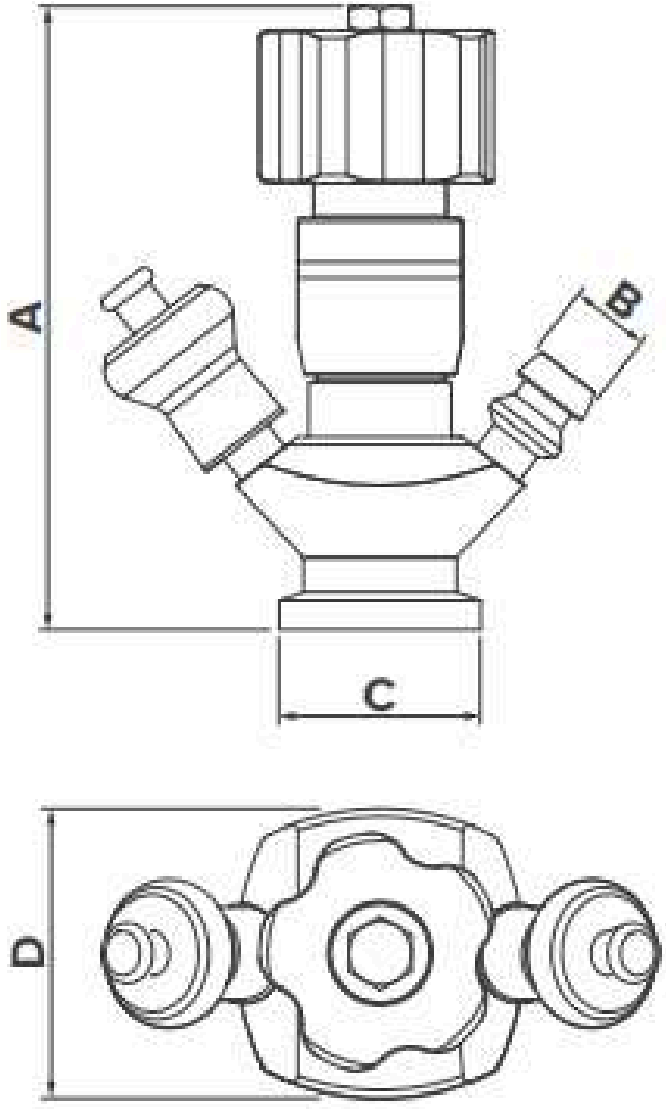


Ø	A	B	ØC	ØD	TORQUE NM
1/2"	143,0	89,0	25,4	9,5	11
3/4"	143,0	101,0	25,4	15,9	12
1"	160,0	114,0	50,4	22,2	16
1.1/2"	187,0	140,0	50,4	35,0	28
2"	187,0	156,0	63,8	47,6	55
2.1/2"	310,0	197,0	77,6	60,3	74
3"	310,0	229,0	91,0	73,0	130
4"	400,0	241,0	119,0	97,4	160



Ø	A	B	ØC	ØD	TORQUE NM
1/2"	143,0	112,0	12,7	9,5	11
3/4"	143,0	118,0	19,05	15,9	12
1"	160,0	126,5	25,4	22,2	16
1.1/2"	187,0	140,0	38,1	35,0	28
2"	187,0	156,0	50,8	47,6	55
2.1/2"	310,0	196,0	63,5	60,3	74
3"	310,0	219,0	76,2	73,0	130
4"	400,0	240,0	101,6	97,4	160

Válvula de Amostragem



Modelos	A	B	C	D
E4	77,6	9,8	25,0	36,0
E6	77,6	9,8	50,4	36,0
E9	113,5	12,9	50,4	30,0

Produtos Complementares

Mangueiras Farmacêuticas

As mangueiras sanitárias da ACE SANITARY atendem aos requisitos da FDA e USP com materiais como silicone, PTFE, EPDM e diversos outros. Vários tipos de reforços permitem que os flexíveis sejam utilizados em um largo range de pressão.

Válvulas Diafragma

A SAMSON SED fabrica válvulas diafragma sanitárias em aço inoxidável forjado 316L com diafragmas em EPDM ou PTFE aprovados pelo FDA. Fornece também uma ampla linha para sistemas de controle de fluídos em ambientes sanitários. Válvulas e ilhas de solenóides, atuadores pneumáticos e possibilidade de utilização em Device Net e Profibus DP.

Válvulas de Amostragem

O design das válvulas Keofitt permite que mostras físicas, químicas e microbiológicas sejam tiradas da linha com total esterilidade quando a sanitização da válvula for feita com vapor. Os diversos tipos de materiais das membranas também permitem que sanitizantes sejam utilizados. As válvulas tem aprovação 3A e EHEDG.

Trocadores de Calor

A YULA fabrica trocadores de calor sanitários farmacêuticos tipos feixe tubular. Esses trocadores de calor mantém mantém a pureza do fluído e são extremamente versáteis em função das dimensões compactas e flexibilidade de montagem, tanto na horizontal quando na vertical, são fabricados com tubulações da ASME-BPE

Anéis de Vedação

A RUBBER FAB oferece uma linha completa e anéis tri-clamp e vedações disponíveis em diversos tamanhos e materiais como: EPDM, FKM, SILICONE curado com platina e PTFE (todos em conformidade com o FDA). SPossui uma linha de anéis inteligentes, placas de orificios, anéis mesh, todos com rastreabilidade.

Diafragmas de Resposição

Toda a linha DIAPHRAGM DIRECT foi projetada para atender aos mais altos padrões de qualidade e confiabilidade. Para os diafragmas de EPDM e PTFE/EPDM a qualidade é total. Cada diafragma é montado com o número de identificação e entregue com certificado de conformidade com FDA 21 CRF 17.260 e USP classe VI.

Conexões

A MaxPure produz com excelência e máxima pureza tubos e conexões sanitárias em aço inoxidável em ligas especiais e máxima resistência a corrosão. Com aplicação na indústria de biotecnologia, faarmacêutica, alimentos, lacticínios e bebidas.

Bombas Sanitárias

O design das válvulas Keofitt permite que mostras físicas, químicas e microbiológicas sejam tiradas da linha com total esterilidade quando a sanitização da válvula for feita com vapor. Os diversos tipos de materiais das membranas também permitem que sanitizantes sejam utilizados. As válvulas tem aprovação 3A e EHEDG.

Mercado Inox

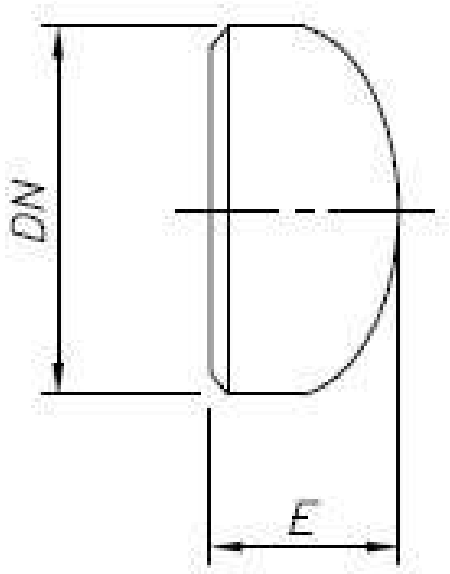
Catálogo de produtos

4. Conexões e Válvulas

Padrões Industriais

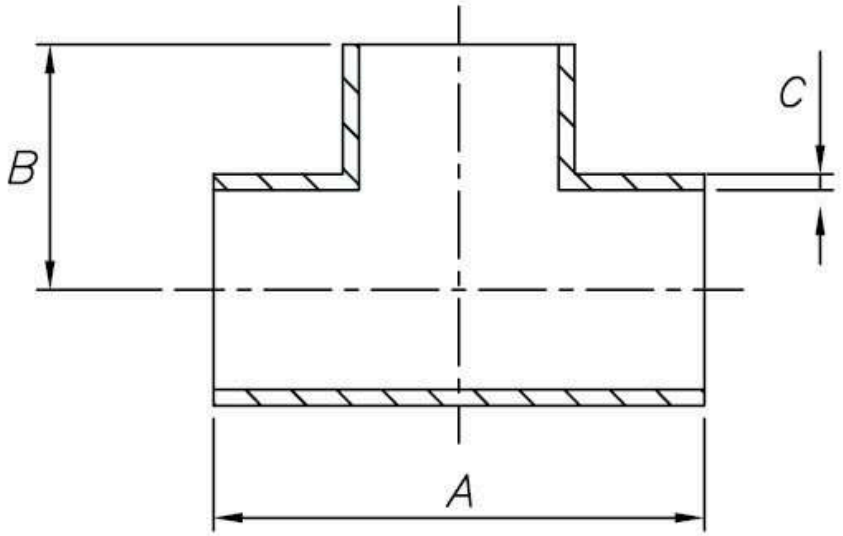
Caps

Ø	DN			E (Até esp. limite)			Esp. limite	E1 (Acima esp. limite)		
	Min	Nom	Max	Min	Nom	Ma		Min	Nom	Ma
1/2”	20,5	21,3	22,9	22,0	25,0	x	4,57	22,0	25,0	x
3/4”	25,9	26,7	28,3	22,0	25,0	22,9	3,81	22,0	25,0	28,0
1”	32,6	33,4	35,0	35,0	38,0	28,3	4,57	35,0	38,0	28,0
1.1/4”	41,4	42,2	43,8	35,0	38,0	35,0	4,83	35,0	38,0	41,0
1.1/2”	47,5	48,3	49,9	35,0	38,0	43,8	5,08	35,0	38,0	41,0
2”	59,5	60,3	61,9	35,0	38,0	49,9	5,59	41,0	44,0	41,0
2.1/2”	72,2	73,0	74,6	35,0	38,0	61,9	7,11	48,0	51,0	47,0
3”	87,3	88,9	90,5	48,0	51,0	74,6	7,62	61,0	64,0	54,0
3.1/2”	100,0	101,6	103,2	61,0	64,0	90,5 103,2	8,13	73,0	76,0	67,0 79,0
4”	112,7	114,3	115,9	61,0	64,0	115,9	8,64	73,0	76,0	79,0
5”	139,47	141,3	143,7	70,0	76,0	82,0	9,65	83,0	89,0	95,0
6”	166,7	168,3	170,7	83,0	89,0	95,0	10,92	96,0	102,0	108,0
8”	217,5	219,1	221,5	96,0	102,0	108,0	12,70	121,0	127,0	133,0
10”	269,8	273,0	277,0	121,0	127,0	133,0	12,70	146,0	152,0	158,0
12”	320,6	323,8	327,8	146,0	152,0	158,0	12,70	172,0	178,0	184,0
14”	352,4	355,6	359,6	159,0	165,0	171,0	12,70	185,0	191,0	197,0
16”	403,2	406,4	410,4	172,0	178,0	184,0	12,70	197,0	203,0	206,0
18”	403,2	457,0	410,4	197,0	203,0	209,0	12,70	223,0	229,0	235,0
20”	503,2	508,0	514,4	223,0	229,0	235,0	12,70	248,0	254,0	260,0
22”	554,2	559,0	565,4	248,0	254,0	260,0	12,70	248,0	254,0	260,0
24”	605,22	610,0	616,4	261,0	267,0	273,0	12,70	299,0	305,0	311,0
26”	655,6	660,4	666,8	257,0	267,0	277,0				
28”	706,4	711,2	717,6	257,0	267,0	277,0				
30”	757,2	762,0	768,4	257,0	267,0	277,0				
32”	808,2	813,0	819,4	257,0	267,0	277,0				
36”	909,2	914,0	920,4	257,0	267,0	277,0				
40”	1011,2	1016,0	1022,4	295,0	305,0	315,0				
42”	1062,2	1067,0	1073,4	295,0	305,0	315,0				



Equal Tee Schedule 5

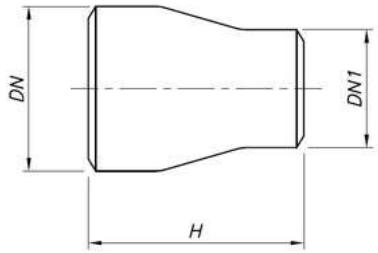
	Ø	A	B	C
1/2”	21,34	50,00	25,00	1,65
3/4”	26,67	58,00	29,00	1,65
1”	33,40	76,00	38,00	1,65
1.1/4”	42,16	96,00	48,00	1,65
1.1/2”	48,26	114,00	57,00	1,65
2”	60,33	128,00	64,00	1,65
2.1/2”	73,03	152,00	76,00	2,11
3”	88,90	172,00	86,00	2,11
4”	114,30	210,00	105,00	2,11
6”	168,28	286,00	143,00	2,77
8”	219,08	356,00	178,00	2,77



Redução Concêntrica
Redução Excêntrica

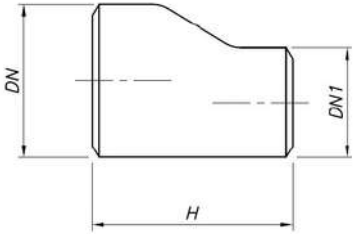
Redução Concêntrica

Ø	Dimensões		
	Min	Nom	Max
1/2”	20,5	21,3	22,9
3/4”	25,9	26,7	28,3
1”	32,6	33,4	35,0
1.1/4”	41,4	42,2	43,8
1.1/2”	47,5	48,8	49,9
2”	59,5	60,3	61,9
2.1/2”	72,2	73,0	74,6
3”	87,3	88,9	90,5
3.1/2”	100,0	101,6	103,2
4”	112,7	114,3	115,9
5”	139,7	141,3	143,7
6”	166,7	168,3	170,7
8”	217,5	219,1	221,5
10”	269,8	273,0	277,0
12”	320,6	323,8	327,8
14”	352,4	355,6	359,6
16”	403,2	406,4	410,4
18”	403,2	457,0	410,4
20”	503,2	508,0	514,4
22”	554,2	559,0	565,4
24”	605,2	610,0	616,4
26”	655,6	660,4	666,8
28”	706,4	711,2	717,6
30”	757,2	762,0	768,4
32”	808,2	813,0	819,4
36”	909,2	914,0	920,4
40”	1011,2	1016,0	1022,4
42”	1062,2	1067,0	1073,4



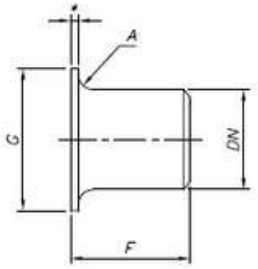
Redução Excêntrica

Ø	H		
	Min	Nom	Max
3/4” x 1/2” A 3/4 x 3/8”	36,0	38,0	40,0
1” x 3/4” A 1“ x 1.1/2”	49,0	51,0	53,0
1.1/4” x 1” A 1.1/4“ x 1/2”	49,0	51,0	53,0
1.1/2” x 1.1/4“ A 1.1/2 x 1/2”	62,0	64,0	66,0
2” x 1.1/2” A 2 x 3/4”	74,0	76,0	78,0
2.1/2” x 2” A 2.1/2 x 1”	87,0	89,0	91,0
3” x 2.1/2” A 3“ x 1.1/4”	87,0	89,0	91,0
4” x 3“ A 4” x 1.1/2”	100,0	102,0	104,0
5” x 4“ A 5” x 2”	125,0	127,0	129,0
6” x 5’’ A 6” x 2.1/2”	138,0	140,0	142,0
8” x 6“ A 8” x 3.1/2”	150,0	152,0	152,0
10” x 8” A 10“ x 4”	176,0	178,0	180,0
14” x 12” A 14“ x 6”	201,0	203,0	205,0
16” x 14” A 16” x 8”	328,0	330,0	332,0
18” x 16“ A 18” x 10”	354,0	356,0	358,0
20” x 18’’ A 20’’ x 12”	379,0	381,0	383,0
22” x 20” A 22” x 14”	506,0	508,0	510,0
24” x 22” A 26” x 18”	506,0	508,0	510,0
26” x 24” x 26’’ x 18”	605,0	510,0	615,0
28” x 26” A 28” x 18”	605,0	610,0	615,0
30” x 28” A 30’’ x 20”	605,0	610,0	615,0
32” x 30” A 32” x 24”	605,0	610,0	615,0
36” x 32” A 36” x 24”	605,0	610,0	615,0
40” x 36” A 40” x 30”	605,0	610,0	615,0
42” x 40” x 42” x 30”	605,0	610,0	615,0

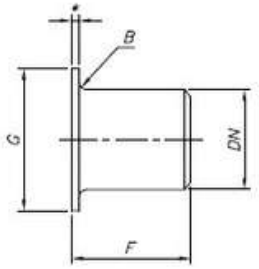


Pestana Lap Joint

Ø	DN			A		B	F			G	
	Mi	Nom	Max	Min	Max	Max	Mi	Nom	Max	Min	Nom
1/2”	n 20,6	21,3	22,1	2,3	3,1	0.8	n 49,2	50,8	52,4	34,3	35,1
3/4”	25,9	26,7	27,4	2,3	3,1	0.8	49,2	50,8	52,4	42,1	42,9
1”	32,8	33,5	34,3	2,3	3,1	0.8	49,2	50,8	52,4	50,0	50,8
1.1/4”	41,4	42,2	42,9	4,0	4,8	0.8	49,2	50,8	52,4	62,7	63,5
1.1/2”	47,5	48,3	49,0	5,6	6,4	0.8	42,2	50,8	52,4	72,4	73,2
2”	59,7	60,5	61,3	7,1	7,9	0.8	61,9	63,5	65,1	91,1	91,9
2.1/2”	72,4	73,2	74,0	7,1	7,9	0.8	61,9	63,5	65,1	103,8	104,6
3”	88,1	88,9	89,7	8,9	9,7	0.8	61,9	63,5	65,1	126,2	127,0
4”	113,5	114,3	115,1	10,4	11,2	0.8	74,6	76,2	77,8	156,4	157,2
5”	140,5	141,2	142,8	9,6	11,2	1.6	74,6	76,2	77,8	184,9	185,7
6”	167,4	168,2	169,8	11,1	12,7	1.6	87,3	88,9	90,5	215,1	215,9
8”	218,2	219,0	220,6	11,1	12,7	1.6	100,0	101,6	103,2	268,9	269,7
10”	272,3	273,1	275,4	11,1	12,7	1.6	124,7	127,0	129,3	322,3	323,9
12”	323,1	323,9	326,2	11,1	12,7	1.6	150,1	152,4	154,7	379,4	381,0
14”	354,8	355,6	357,9	11,1	12,7	1.6	150,1	152,4	154,7	411,2	412,8
16”	405,6	406,4	408,7	11,1	12,7	1.6	150,1	152,4	154,7	468,3	469,9
18”	456,4	457,2	459,5	11,1	12,7	1.6	150,1	152,4	154,7	531,8	533,4
20”	507,2	508,0	511,1	11,1	12,7	1.6	150,1	152,4	154,7	582,6	584,2
24”	608,8	609,6	512,7	11,1	12,7	1.6	150,1	152,4	154,7	690,6	692,2



TIPO A

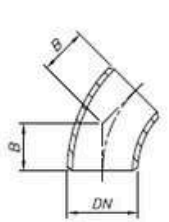


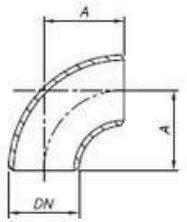
TIPO B

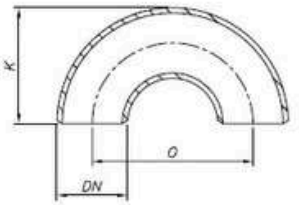
* – A espessura da aba não deve ser menor do que a espessura nominal de parede.

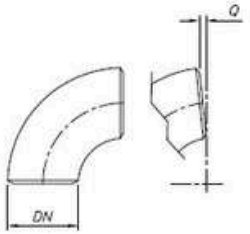
Curva 45° / 90° / 180° Raio longo

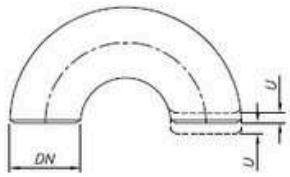
Ø	Diâmetro Externo			A			B			K			O			P	Q	R
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Tolerância	Tolerância	Tolerância
1/2"	20,5	21,3	22,9	36	38	40	14	16	18	42	48	54	70	76	82	+/- 2 mm	+/- 1 mm	+/- 1 mm
3/4"	25,9	26,7	28,3	36	38	40	17	19	21	45	51	57	70	76	82			
1"	32,6	33,4	35,0	36	38	40	20	22	24	50	56	62	70	76	82			
1.1/4"	41,4	42,2	43,8	46	48	50	23	25	27	64	70	76	89	95	101			
1.1/2"	47,5	48,8	49,9	55	57	59	27	29	31	77	83	79	108	114	120			
2"	59,5	60,3	61,9	74	76	78	33	35	37	100	106	112	146	152	158			
2.1/2"	72,2	73,0	74,6	93	95	97	42	44	46	126	132	138	184	190	196			
3"	87,3	88,9	90,5	112	114	116	49	51	53	153	159	165	223	229	235			
3.1/2"	100,0	101,6	103,2	131	133	135	55	57	59	178	184	192	261	267	273			
4"	112,7	114,3	115,9	150	152	154	62	64	66	204	210	216	299	305	311			
5"	139,7	141,3	143,7	188	190	192	77	79	81	256	262	268	375	381	387			
6"	166,7	168,3	170,7	227	229	231	93	95	97	307	313	319	451	457	463	+/- 4 mm	+/- 2 mm	
8"	217,5	219,1	221,5	303	305	307	125	127	129	408	414	420	604	610	616			
10"	269,8	273,0	277,0	379	381	383	157	159	161	512	518	524	752	762	772			
12"	320,6	323,8	327,8	455	457	459	188	190	192	613	619	625	904	914	924	+/- 5 mm	+/- 3 mm	+/- 2 mm
14"	352,4	355,6	359,6	532	533	535	220	222	224	705	711	717	1057	1067	1077			
16"	403,2	406,4	410,4	608	610	612	252	254	256	807	813	819	1209	1219	1229	+/- 6 mm	+/- 3 mm	
18"	403,2	457,0	410,4	684	686	688	184	286	288	908	914	920	1362	1372	1382			
20"	503,2	508,0	514,4	760	762	764	316	318	320	1010	1016	1022	1514	1524	1534	+/- 10 mm	+/- 4 mm	
22"	554,2	559,0	565,4	836	838	840	341	343	345	1112	1118	1124	1666	1676	1686			
24"	605,2	610,0	616,4	912	914	916	379	381	283	1213	1219	1225	1819	1829	1839			
26"	655,6	660,4	666,8	988	991	994	402	405	408									
28"	706,4	711,2	717,6	1064	1067	1070	435	438	441							+/- 10 mm	+/- 5 mm	
30"	757,2	762,0	768,4	1140	1143	1146	467	470	473									
32"	808,2	813,0	819,4	1214	1219	1224	497	502	507									
36"	909,2	914,0	920,4	1367	1372	1377	560	565	570									
40"	1011,2	1016,0	1022,4	1519	1524	1529	627	632	637							+/- 13 mm	+/- 5 mm	
42"	1062,2	1067,0	1073,4	1595	1600	1605	655	660	665									

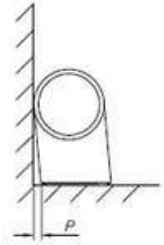




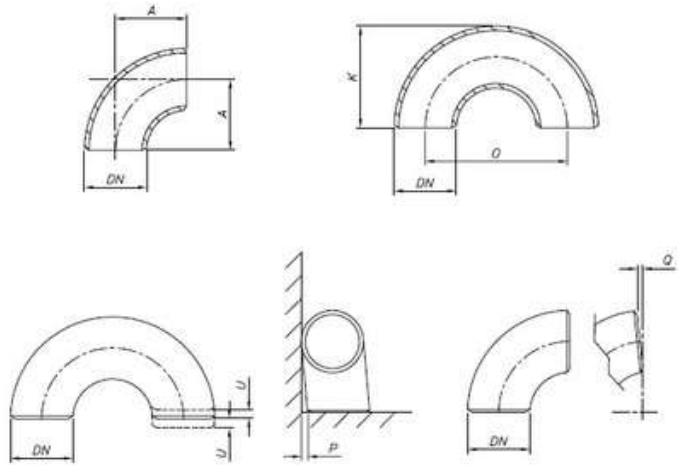








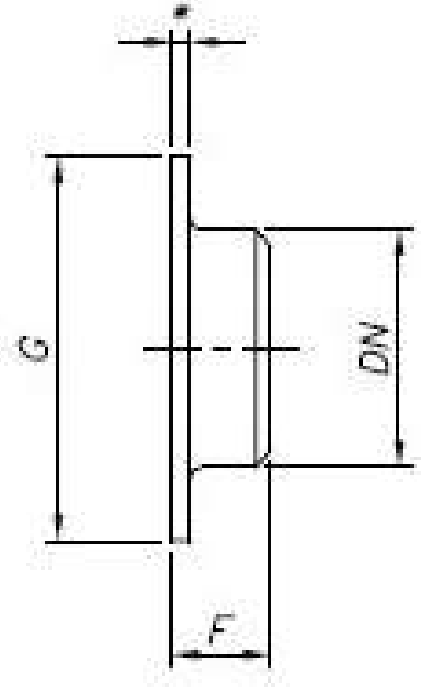
Curva 90° / 180° Raio Curto



Ø	Diâmetro Externo			A			K			O			P	Q	R
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Tolerância	Tolerância	Tolerância
1”	32,6	33,4	35,0	23	25	27	35	41	47	45,0	51	57,8	± 2 mm	± 1 mm	± 1 mm
1.1/4”	41,4	42,2	43,8	30	32	34	46	52	58	58,0	64	70,0			
1.1/2”	47,5	48,3	49,9	36	38	40	56	62	68	70,0	76	82,0			
2”	59,5	60,3	61,9	49	51	53	75	81	87	96,0	102	108,0			
2.1/2”	72,2	73,0	74,6	62	64	66	94	100	106	121,0	127	133,0			
3”	87,3	88,9	90,5	74	76	78	115	121	127	146	152	158			
3.1/2”	100,0	101,6	103,2	87	89	91	134	140	146	172	178	184			
4”	112,7	114,3	115,9	100	102	104	153	159	165	197	203	209			
5”	139,7	141,3	143,7	125	127	129	191	197	203	248	254	260,0			
6”	166,7	168,3	170,7	150	152	154	231	237	243	299	305	311	± 4 mm	± 2 mm	
8”	217,5	219,1	221,5	201	203	205	307	313	319	400	406	412			
10”	269,8	273,0	277,0	252	254	256	385	391	397	498	508	518			
12”	320,6	323,8	327,8	303	305	307	461	467	473	600	610	620	± 5 mm	± 3 mm	± 2 mm
14”	352,4	355,6	359,6	354	356	258	527	533	539	701	711	721			
16”	403,2	406,4	410,4	404	406	408	604	610	616	803	813	823	± 6 mm	± 3 mm	
18”	453,8	457,0	461,0	455	457	459	680	686	692	904	914	924			
20”	503,2	508,0	514,4	506	508	510	756	762	768	1006	1016	1026	±10 mm	± 4 mm	
22”	554,2	559,0	565,4	557	559	561	832	838	844	1108	1118	1128			
24”	605,2	610,0	616,4	608	610	612	908	914	920	1209	1219	1229			

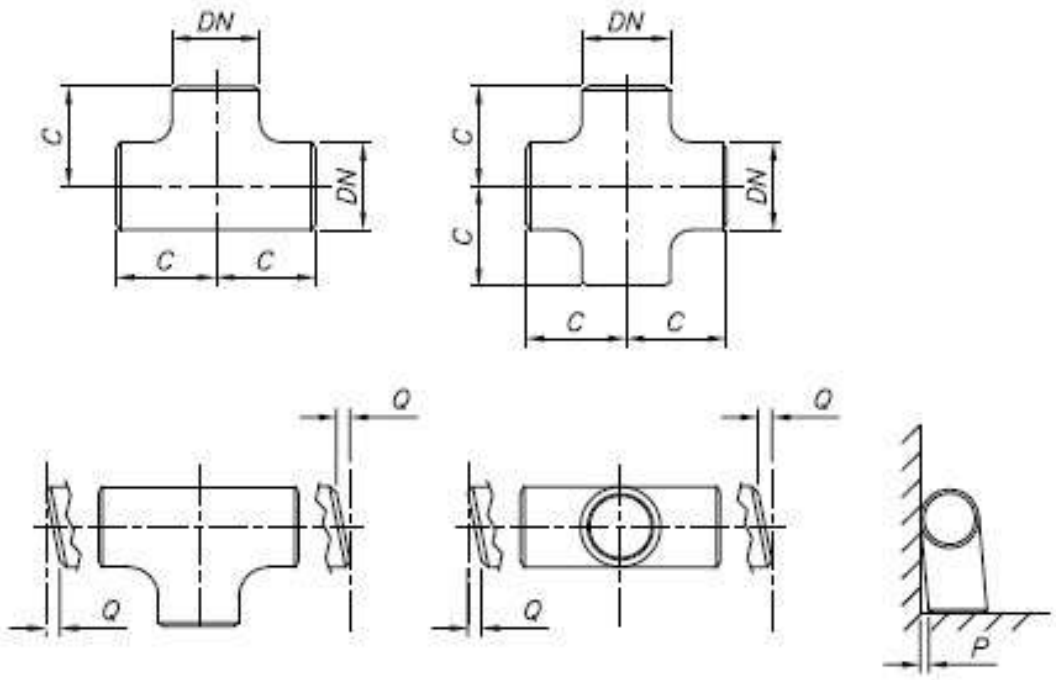
Pestana Curta Schedule

Ø	DN			F			G		
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
1/2”	20,5	21,3	22,0	6	7	8	43	45	47
3/4”	25,9	26,7	27,5	7	8	9	53	55	57
1”	32,7	33,5	34,3	8	9	10	60	62	64
1.1/4”	41,4	42,2	43,0	9	10	11	70	72	74
1.1/2”	47,5	48,3	49,1	11	12	13	78	80	82
2”	59,7	60,5	61,3	12	13	14	98	100	102
2.1/2”	72,4	73,2	74,0	13	14	15	116	118	120
3”	88,1	88,9	89,7	14	15	16	128	130	132
3.1/2”	100,8	101,6	102,4	15	16	17	148	150	152
4”	113,5	144,3	115,1	17	18	19	160	162	164
5”	140,4	141,2	142,8	18	20	22	187	190	193
6”	167,4	168,2	159,8	22	24	26	213	216	219
8”	218,2	219,0	220,6	24	26	28	271	274	277
10”	272,3	273,1	275,5	24	26	28	330	333	336
12”	323,1	323,9	326,3	26	28	30	386	389	392



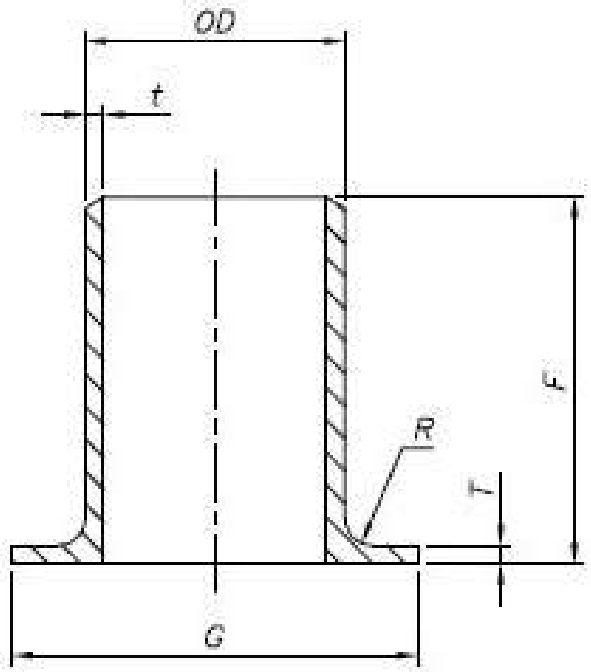
Tê Reto
Cruzeta

Ø	DN Nom	C			P	Q
		Min	Nom	Max	Tolerância	Tolerância
1/2"	21,3	20,5	22,9	23,0	25,0	27	± 2 mm	± 1 mm
3/4"	26,7	25,9	28,3	29,0	29,0	34		
1"	33,4	32,6	35,0	36,0	38,0	40		
1.1/4"	42,2	41,5	43,8	46,0	48,0	53		
1.1/2"	48,3	47,5	49,9	55,0	57,0	59,0		
2"	60,3	59,5	61,9	62,0	64,0	66,0		
2.1/2"	73,0	72,2	74,6	74,0	76,0	78,0		
3"	88,9	87,3	90,5	84,0	86,0	88,0	± 4 mm	± 2 mm
4"	114,3	112,7	115,9	103,0	105,0	107,0	± 5 mm	± 3 mm
5"	141,3	139,7	143,7	122,0	124,0	126,0	± 6 mm	± 3 mm
6"	168,3	166,7	170,7	141,0	143,0	145,0		
8"	219,1	217,5	221,5	176,0	178,0	180,0		
10"	273,0	269,8	277,0	214,0	216,0	218,0		
12"	323,8	320,6	327,8	252,0	254,0	256,0	±10 mm	± 4 mm
14"	355,6	352,4	359,6	277,0	279,0	281,0		
16"	406,4	403,2	410,4	303,0	305,0	307,0		
18"	457,0	453,8	461,0	341,0	343,0	345,0		
20"	508,0	503,2	514,4	379,0	381,0	383,0		
24"	610,0	605,2	616,4	430,0	432,0	434,0	±10 mm	± 5 mm
30"	762,0	757,2	768,4	556,0	559,0	562,0		
32"	813,0	808,2	819,4	592,0	597,0	602,0	±13 mm	± 5 mm
36"	914,0	909,2	920,4	668,0	673,0	678,0	±19 mm	± 5 mm
40"	1016,0	1011,2	1022,4	744,0	749,0	754,0		
42"	1067,0	1062,2	1073,4	757,0	762,0	767		

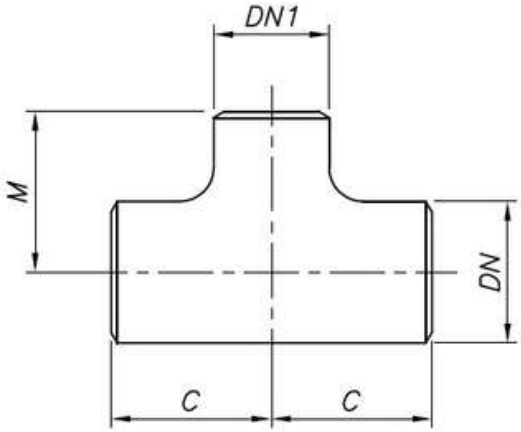


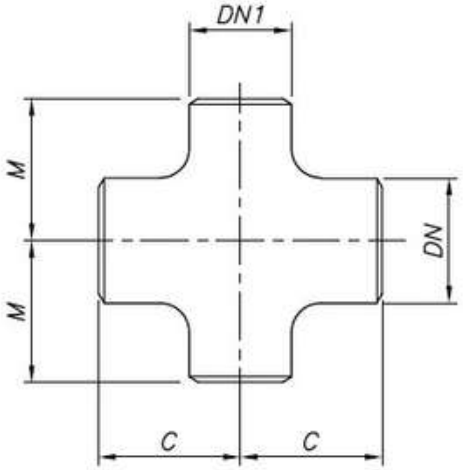
Pestana Stub End

Ø	Diâmetro Externo	Espessura da Parece			G	F		R (máx)	
		SCH 5S	SCH 10S	SCH 40S	Max	ASME	MSS	Tipo A	Tipo B
1/2”	21.3	1.65	2.11	2.77	35.1	76.0	50.8	3.1	0.8
3/4”	26.7	1.65	2.11	2.87	42.9	76.0	50.8	3.1	0.8
1”	33.5	1.65	2.77	3.38	50.8	102.0	50.8	3.1	0.8
1.1/4”	42.2	1.65	2.77	3.56	63.5	102.0	50.8	4.8	0.8
1.1/2”	48.3	1.65	2.77	3.68	73.2	102.0	50.8	6.4	0.8
2”	60.5	1.65	2.77	3.91	91.9	152.0	63.5	7.9	0.8
2.1/2”	73.2	2.11	3.05	5.16	104.6	152.0	63.5	7.9	0.8
3”	88.9	2.11	3.05	5.49	127.0	152.0	63.5	9.7	0.8
4”	114.3	2.11	3.05	6.02	139.7	152.0	76.2	9.7	0.8
5”	141.2	2.77	3.40	6.55	185.7	152.0	76.2	11.2	1.6
6”	168.2	2.77	3.40	7.11	215.9	203.0	88.9	12.7	1.6
8”	219.0	2.77	3.76	8.18	259.7	203.0	101.6	12.7	1.6
10”	273.1	3.40	4.19	9.27	323.9	203.0	127.0	12.7	1.6
12”	323.9	3.96	4.57	9.53	381.0	254.0	152.4	12.7	1.6
14”	355.6	3.96	4.78	11.13	412.8	254.0	152.4	12.7	1.6
16”	406.4	4.20	4.78	12.70	469.9	305.0	152.4	12.7	1.6
18”	457.2	4.20	4.78	14.27	533.4	305.0	152.4	12.7	1.6
20”	508.0	4.78	5.54	15.01	584.2	305.0	152.4	12.7	1.6
24”	609.6	5.54	6.35	17.48	692.2	305.0	152.4	12.7	1.6



Tê Reto
Cruzeta de Redução





Tê Reto

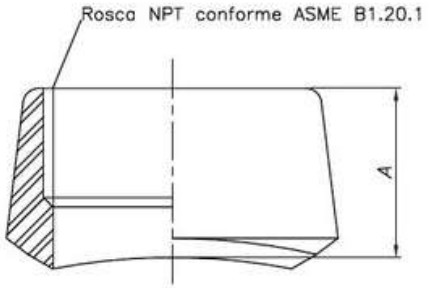
Ø	DN			DN1			C			M		
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
1/2" x 3/8"	20,5	21,3	22,9	16,5	17,3	18,9	23,0	25,0	27,0	23,0	25,0	27,0
1/2" x 1/4"	20,5	21,3	22,9	20,5	21,3	22,9	23,0	25,0	27,0	23,0	25,0	27,0
3/4" x 1/2"	25,9	26,7	28,3	20,5	21,3	22,9	27,0	29,0	31,0	27,0	29,0	31,0
3/4" x 3/8"	25,9	26,7	28,3	16,5	17,3	18,9	27,0	29,0	31,0	27,0	29,0	31,0
1" x 3/4"	32,6	33,4	35,0	25,9	26,7	28,3	36,0	38,0	40,0	36,0	38,0	40,0
1" x 1/2"	32,6	33,4	35,0	20,5	21,3	22,9	36,0	38,0	40,0	36,0	38,0	40,0
1.1/4" x 1"	41,4	42,2	43,8	32,6	33,4	35,0	46,0	48,0	50,0	46,0	48,0	50,0
1.1/4" x 3/4"	41,4	42,2	43,8	25,9	26,7	28,3	46,0	48,0	50,0	46,0	48,0	50,0
1.1/4" x 1/2"	41,4	42,2	43,8	20,5	21,3	22,9	46,0	48,0	50,0	46,0	48,0	50,0
1.1/2" x1.1/4"	47,5	48,3	49,9	41,4	42,2	43,8	55,0	57,0	59,0	55,0	57,0	59,0
1.1/2" x 1"	47,5	48,3	143,7	32,6	33,4	35,0	55,0	57,0	59,0	55,0	57,0	59,0
1.1/2" x 3/4"	47,5	48,3	170,7	25,9	26,7	28,3	55,0	57,0	59,0	55,0	57,0	59,0
1.1/2" x 1/2"	47,5	48,3	49,9	20,5	21,3	22,9	55,0	57,0	59,0	55,0	57,0	59,0
2" x 1.1/2"	59,5	603	61,9	47,5	48,3	49,9	62,0	64,0	66,0	58,0	60,0	62,0
2" x 1.1/4"	59,5	60,3	61,9	41,4	42,2	43,8	62,0	64,0	66,0	55,0	57,0	59,0
2" x 1"	59,5	60,3	61,9	32,6	33,4	35,0	62,0	64,0	66,0	49,0	51,0	53,0
2" x 3/4"	59,5	60,3	61,9	25,9	26,7	28,3	62,0	64,0	66,0	42,0	44,0	46,0
2.1/2" x 2"	72,2	73,0	74,6	59,5	60,3	61,9	74,0	76,0	78,0	68,0	70,0	72,0
2.1/2" x 1.1/2"	72,2	73,0	74,6	47,5	48,3	49,9	74,0	76,0	78,0	65,0	67,0	69,0
2.1/2" x 1.1/4"	72,2	73,0	74,6	41,4	42,2	43,8	74,0	76,0	78,0	62,0	64,0	66,0
2.1/2" x 1"	72,2	73,0	74,6	32,6	33,4	35,0	74,0	76,0	78,0	55,0	57,0	59,0
3" x 2.1/2"	87,3	88,9	90,5	72,2	73,0	74,6	84,0	86,0	88,0	81,0	83,0	85,0
3" x 2"	87,3	88,9	90,5	59,5	60,3	61,9	84,0	86,0	88,0	74,0	76,0	78,0
3" x 1.1/2"	87,3	88,9	90,5	47,5	48,3	49,9	84,0	86,0	88,0	71,0	73,0	75,0

Cruzeta

Ø	DN			DN1			C			M		
	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max	Min	Nom	Max
3" x 1.1/4"	87,3	88,9	90,5	41,4	42,2	43,8	84,0	86,0	88,0	68,0	70,0	72,0
4" x 3" 4"	112,7	114,3	115,9	87,3	88,9	90,5	103,0	105,0	107,0	96,0	98,0	100,0
x 2.1/2"	112,7	114,3	115,9	72,2	73,0	74,6	103,0	105,0	107,0	93,0	95,0	97,0
4" x 2" 4"	112,7	114,3	115,9	59,5	60,3	61,9	103,0	105,0	107,0	87,0	89,0	91,0
x 1.1/2"	112,7	114,3	115,9	47,5	48,3	49,9	103,0	105,0	107,0	84,0	86,0	88,0
5" x 4"	139,7	141,3	143,7	112,7	114,3	115,9	122,0	124,0	126,0	115,0	117,0	119,0
5" x 3"	139,7	141,3	143,7	87,3	88,9	90,5	122,0	124,0	126,0	109,0	111,0	113,0
5" x 2.1/2"	139,7	141,3	143,7	72,2	73,0	74,6	122,0	124,0	126,0	106,0	108,0	110,0
5" x 2"	139,7	141,3	143,7	59,5	60,3	61,9	122,0	124,0	126,0	103,0	105,0	107,0
6" x 5"	166,7	168,3	170,7	139,7	141,3	143,7	141,0	143,0	145,0	135,0	137,0	139,0
6" x 4"	166,7	168,3	170,7	112,7	114,3	115,9	141,0	143,0	145,0	128,0	130,0	132,0
6" x 3" 6"	166,7	168,3	170,7	87,3	88,9	90,,5	141,0	143,0	145,0	122,0	124,0	126,0
x 2.1/2" 8"	166,7	168,3	170,7	72,2	73,0	74,6	141,0	143,0	145,0	119,0	121,0	123,0
x 6"	217,5	219,1	221,5	166,7	168,3	170,7	176,0	178,0	180,0	166,0	168,0	170,0
8" x 5" 8"	217,5	219,1	221,5	139,7	141,3	143,7	176,0	178,0	180,0	160,0	162,0	164,0
x 4"	217,5	219,1	221,5	112,7	114,3	115,9	176,0	178,0	180,0	154,0	156,0	158,0
10" x 8"	269,8	273,0	277,0	217,5	219,1	221,5	214,0	216,0	218,0	201,0	203,0	205,0
10" x 6"	269,8	273,0	277,0	166,7	168,3	170,7	214,0	216,0	218,0	192,0	194,0	196,0
10" x 5"	269,8	273,0	277,0	139,7	141,3	143,7	214,0	216,0	218,0	189,0	191,0	193,0
10" x 4"	269,8	273,0	277,0	112,7	114,3	115,9	214,0	216,0	218,0	182,0	184,0	186,0
12" x 10"	320,6	323,8	327,8	269,8	273,0	277,0	252,0	254,0	256,0	239,0	241,0	243,0
12" x 8"	320,6	323,8	327,8	217,5	219,1	221,5	252,0	254,0	256,0	227,0	229,0	231,0
12" x 6"	320,6	323,8	327,8	166,7	168,3	170,7	252,0	254,0	256,0	217,0	219,0	221,0
12" x 5"	320,6	323,8	327,8	139,7	141,3	143,7	252,0	254,0	256,0	214,0	216,0	218,0

Colar Reto Roscado 3000#/6000#
Colar Reto Socketwelding 3000#/6000#

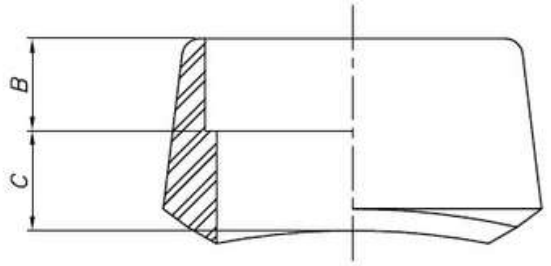
Colar Reto Roscado 3000#/6000#



Ø Ext. DN. (mm)	Ø Nom. Pol. (inch)	Medida "A"	
		Classe 3000	Classe 6000
6	1/8	19,1	
8	1/4	19,1	
10	3/8	20,6	
15	1/2	25,4	31,8
20	3/4 1	26,9	36,6
25	1.1/4	33,3	39,6
32	1.1/2	33,3	41,1
40	2	35,1	42,9
50	2.1/2	38,1	52,3
65	3	46,0	
80	4	50,8	
100		57,2	

Tolerância para medida "A": 6 - 20 +/- 0,8mm
25 - 100 +/- 1,6 mm

Colar Reto Socketwlding 3000#/6000#

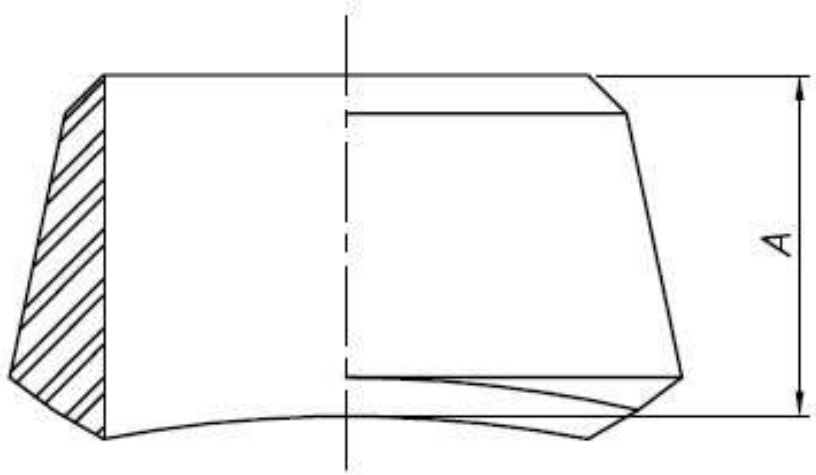


Ø Ext. DN. (mm)	Ø Nom. Pol. (inch)	B Min. (a)	Medida "C"	
			Classe 3000	Classe 6000
6	1/8	9,7	10,4	
8	1/4	9,7	10,4	
10	3/8	9,7	12,7	
15	1/2	9,7	15,7	23,9
20	3/4	12,7	15,7	25,4
25	1	12,7	22,4	28,7
32	1.1/4	12,7	22,4	30,2
40	1.1/2	12,7	23,9	31,8
50	2	15,7	23,9	36,6
65	2.1/2	15,7	25,4	
80	3	15,7	30,2	
100	4	19,1	30,2	

"a": Medica "B", encaixe mínimo conforme ASME B16.11

Colar Reto para Solda de Topo

Ø Ext. DN. (mm)	Ø Nom. Pol. (inch)	Medida "A"					
		Standard		Extra-Forte		SCH 160	
		Curto	Completo	Curto	Completo	Curto	Completo
6	1/8	15,7		15,7			
8	1/4	15,7		15,7			
10	3/8	19,1		19,1			
15	1/2	19,1	19,1	19,1	19,1	28,4	28,4
20	3/4	22,4	22,4	22,4	22,4	31,8	31,8
25	1	26,9	26,9	26,9	26,9	38,1	38,1
32	1.1/4	31,8	31,8	31,8	31,8	44,5	44,5
40	1.1/2	33,3	33,3	33,3	33,3	50,8	50,8
50	2	38,1	38,1	38,1	38,1	55,4	55,4
65	2.1/2	41,1	41,1	41,1	41,1	62,0	62,0
80	3	44,5	44,5	44,5	44,5	73,2	73,2
90	3.1/2	47,8	47,8	47,8	50,8		
100	4	50,8	50,8	50,8	50,8	84,1	84,1
125	5	57,2	57,2	57,2	57,2	93,7	93,7
150	6	60,5	60,5	77,7	77,7	104,6	104,6
200	8	69,9	69,9	98,6	98,6		
250	10	77,7	77,7	93,7	88,9		
300	12	85,9	85,9	103,1	100,1		
350	14	88,9	88,9	100,1	104,6		
400	16	93,7	93,7	106,2	112,8		
450	18	96,8	103,1	111,3	119,1		
500	20	101,6	117,3	119,1	127,0		
600	24	115,8	136,7	115,8	139,7		



Tolerancias para medida "A":

6 - 20 +/- 0,8 mm
25 - 100 +/- 1,6 mm
125 - 300 +/- 3,2 mm
350 - 600 +/- 4,8 mm

Flanges 150# /300# /600#

Dimensões Comuns

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
A	21.3	26.7	33.4	42.2	48.3	60.3	73.0	88.9	101.6	114.3	141.3	168.3	219.1	273.0	323.8	355.6	406.4	457.0	508.0	558.8	610.0	103.4	116.1
C	22.2	27.7	34.5	43.2	49.5	61.9	74.6	90.7	143.8	170.7	221.5	276.0	276.2	327.0	410.5	461.8	513.1	564.4	616.0				
F	De acordo com o schedule solicitado pelo cliente																				
G	34.9	42.9	50.8	63.5	73.0"	92.1	104.8	127.0	139.7	157.2	185.7	215.9	269.9	323.8	381.0	412.8	469.9	533.4	584.2	641.4	692.2		
R	3	3	3	5	6	8	8	10	10	11	11	13	13	13	13	13	13	13	13	13	13		
U	10	11	13	14	16	17	19	21	43.2	49.5	22.2	27.7	34.5	43.2	49.5	22.2	27.7	34.5	43.2	49.5	49.5		

150#

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	9.6	11.2	12.7	14.3	15.9	17.5	20.7	22.3	22.3	22.3	22.3	23.9	27.0	28.6	30.2	33.4	35.0	38.1	41.3	44.5	46.1
D	90	100	110	115	125	150	180	190	215	230	255	280	345	405	485	535	595	635	700	750	815
H	48	53	56	58	62	64	70	72	77	89	89	102	102	115	127	127	140	145	150	153	
K	60.3	69.9	79.4	88.9	98.4	120.7	139.7	152.4	177.8	190.5	215.9	241.3	298.5	362.0	431.8	476.3	539.8	577.9	635.0	692.2	749.3
L	15.9	15.9	15.9	15.9	15.9	19.1	19.1	19.1	19.1	19.1	22.2	22.2	22.2	25.4	25.4	28.6	28.6	31.8	31.8	34.9	34.9
M	30	38	49	59	65	78	90	108	122	135	164	192	246	305	365	400	447	505	559	610	663
N	16	16	18	21	23	26	29	31	32	34	37	40	45	50	56	58	64	69	73	80	83
Q	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Furos	4	4	4	4	4	4	4	4	8	8	8	8	8	12	12	12	16	16	20	20	20

300#

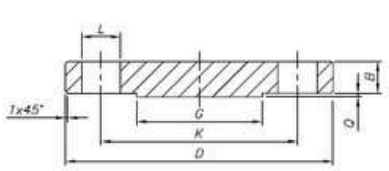
Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	12.7	14.3	15.9	17.5	19.1	20.7	23.9	27.0	28.6	30.2	33.4	35.0	39.7	46.1	49.3	52.4	55.6	58.8	62.0	65.1	68.3
D	95	115	125	135	155	165	190	210	230	255	280	320	380	445	520	585	650	710	775	840	915
E (min)	23.6	29.0	35.8	44.4	50.3	63.5	76.2	92.2		104.9	177.6	144.4	171.4	222.2	276.2	328.6	360.4	411.2	462.0	512.8			614.4
H	53	58	62	66	69	70	77	80	81	86	99	99	112	118	131	143	146	159	162	166	169
K	66.7	82.6	88.9	98.4	114.3	127.0	149.2	168.3	184.2	200.0	235.0	269.9	330.2	387.4	450.8	514.4	571.5	628.6	685.8	743.0	812.8
L	15.9	19.1	19.1	19.1	22.2	19.1	22.2	22.2	22.2	22.2	22.2	22.2	25.4	28.6	31.8	31.8	34.9	34.9	34.9	41.3	41.3
M	38	48	54	64	70	84	100	117	133	146	178	206	260	321	375	425	483	533	587	640	702
N	23	26	27	27	31	34	39	43	45	48	51	53	62	67	73	77	83	89	96	102	107
Q	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
T	16	16	18	21	23	29	32	32	37	37	43	47	51	56	61	64	69	70	74		83
Furos	4	4	4	4	4	8	8	8	8	8	8	12	12	16	16	20	20	24	24	24	24

600#

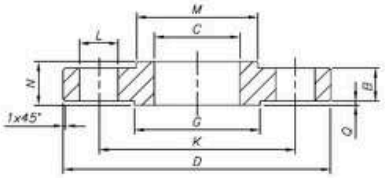
Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	14.3	15.9	17.5	20.7	22.3	25.4	28.6	31.8	35.0	38.1	44.5	47.7	55.6	63.5	66.7	69.9	76.2	82.6	88.9	95.2	101.6
D	95	115	125	135	155	165	190	210	230	275	330	355	420	510	560	605	685	745	815	870	940
E (min)	23.6	29.0	35.8	44.4	50.6	63.5	76.2	92.2		104.9	177.6	144.4	171.4	222.2	276.2	328.6	360.4	411.2	462.0	512.8			614.4
H	59	64	69	74	77	80	86	90	93	109	121	124	140	159	163	172.0	185	191	197	204	210
K	66.7	82.6	88.9	98.4	114.3	127.0	149.2	168.3	184.2	215.9	266.7	292.1	349.2	431.8	489.0	527.0	603.2	654.0	723.9	777.7	838.2
L	15.9	19.1	19.1	19.1	22.2	19.1	22.2	22.2	25.4	25.4	28.6	28.6	31.8	34.9	34.9	38.1	41.3	44.5	44.5	47.6	50.8
M	38	48	54	64	70	84	100	117	133	152	189	222	273	343	400	432	495	546	610	663	718
N	29	32	34	36	39	44	48	53	56	61	67	74	83	93	99	101	113	124	134	140	147
Q	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
T	16	16	18	21	23	29	32	35	40	42	48	51	58	66	70	74	78	70	74		83
Furos	4	4	4	4	4	8	8	8	8	8	8	12	12	16	20	20	20	24	24	24	24

Tolerâncias

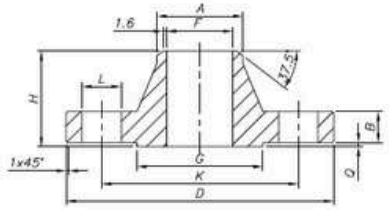
Ø Nom.	A	B	C	F	G (150#/300#)	G (600#)	H	K
Até 4"	+ 2.0 - 1.0	+ 3.0 - 0.0	+ 1.0 - 1.0	+ 1.0 - 1.0	+ 1.0 - 1.0	+ 0.5 - 0.5	+ 1.5 - 1.5	+ 1.5 - 1.5
Até 5"								
6" A 10"	+ 4.0 - 1.0						+ 1.5 - 3.0	
12" A 18"			+ 1.5 - 1.5	+ 1.5 - 1.5			+ 3.0 - 5.0	
20" e ACIMA		+ 5.0 - 1.0	+ 3.0 - 1.5	+ 3.0 - 1.5				



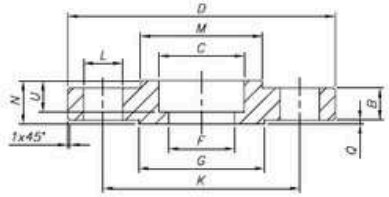
FLANGE CEGO



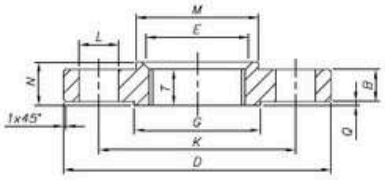
FLANGE SOBREPOSTO



FLANGE COM PESCOÇO



FLANGE DE ENCAIXE



FLANGE ROSCADO

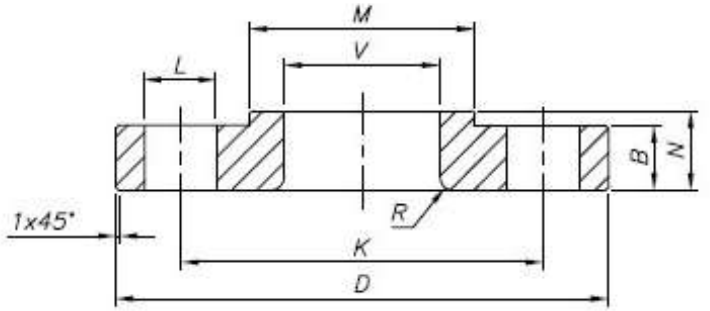
Flanges Solto 150# /300# /600#

Dimensões Comuns

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
R	3	3	3	5	6	8	8	10	10	11	11	13	13	13	13	13	13	13	13	13	13
V	22.9	28.2	34.9	43.7	50.0	62.5	75.4	91.4	104.1	116.8	144.4	171.4	222.2	277.4	328.2	360.2	411.2	462.3	514.4	565.2	616.0

150#

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	11.2	12.7	14.3	15.9	17.5	19.1	22.3	23.9	23.9	23.9	23.9	25.4	28.6	30.2	31.8	35.0	36.6	39.7	42.9	46.1	47.7
D	90	100	110	115	125	150	180	190	215	230	255	280	345	405	485	535	595	635	700	750	815
K	60.3	69.9	79.4	88.9	98.4	120.7	139.7	152.4	177.8	190.5	215.9	241.3	298.5	362.0	431.8	476.3	539.8	577.9	635.0			635	749.3
L	15.9	15.9	15.9	15.9	15.9	19.1	19.1	19.1	19.1	19.1	22.2	22.2	22.2	25.4	25.4	28.6	28.6	31.8	31.8	34.9	34.9
M	30	38	49	59	65	78	90	108	122	135	164	192	246	305	365	400	457	505	559	610	663
N	16	16	17	21	22	25	29	30	32	33	36	40	44	49	56	79	87	97	103	108	111
Furos	4	4	4	4	4	4	4	4	8	8	8	8	8	12	12	12	16	16	20	20	20



300#

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	14.3	15.9	17.5	20.7	20.7	22.3	25.4	28.6	30.2	31.8	35.0	36.6	41.3	47.7	50.8	54.0	57.2	60.4	63.5	66.7	69.9
D	95	115	125	135	155	165	190	210	230	255	280	320	380	445	520	585	650	710	775	840	915
K	66.7	82.6	88.9	98.4	114.3	127	149.2	168.3	184.2	200	235	269.9	330.2	387.4	450.8	514.4	571.5	628.6	685.8	743.0	812.8
L	15.9	19.1	19.1	19.1	22.2	19.1	22.2	22.2	22.2	22.2	22.2	22.2	25.4	28.6	31.8	31.8	34.9	34.9	34.9	41.3	41.3
M	38	48	54	64	70	84	100	117	133	146	178	206	260	321	375	425	483	533	587	640	702
N	22	25	27	30	30	33	38	43	44	48	51	52	62	95	102	111	121	130	140	145	152
Furos	4	4	4	4	4	8	8	8	8	8	8	12	12	16	16	20	20	24	24	24	24

Dimensão	B	K	M	V	Diâm. furo do parafuso	L
Até 4"	+ 3.0 - 0.0	+ 1.5 - 1.5	+ 3.0 - 0.0	+ 1.0 - 0.0	De 15,87 até 22,22	+ 0.38 - 0.0
Até 6"						
6" Até 10"				+ 1.5 - 0.0	Acima de 25,4	+ 0.79 - 0.0
12" e acima						

600#

Ø	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	3.1/2"	4"	5"	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"
B	14.3	15.9	17.5	20.7	22.3	25.4	28.6	31.8	35.0	38.1	44.5	47.7	55.6	63.5	66.7	69.9	76.2	82.6	88.9	95.2	101.6
D	95	115	125	135	155	165	190	210	230	275	330	355	420	510	560	605	685	745	815	870	940
K	66.7	82.6	88.9	98.4	114.3	127.0	149.2	168.3	184.2	215.9	266.7	292.1	349.2	431.8		489	527	603.2	654.0	723.9	777.7	838.2
L	15.9	19.1	19.1	19.1	22.2	19.1	22.2	22.2	25.4	25.4	28.6	28.6	31.8	34.9	34.9	38.1	41.3	44.5	44.5	47.6	50.8
M	38	48	54	64	70	84	100	117	133	152	189	222	273	343	400	432	495	546	610	663	718
N	22	25	27	29	32	37	41	46	49	54	60	67	76	111	117	127	140	152	165	175	184
Furos	4	4	4	4	4	8	8	8	8	8	8	12	12	16	20	20	20	20	24	24	24

Flanges Grandes Serie A 150# /300# /600#

Mercado Inox

150#

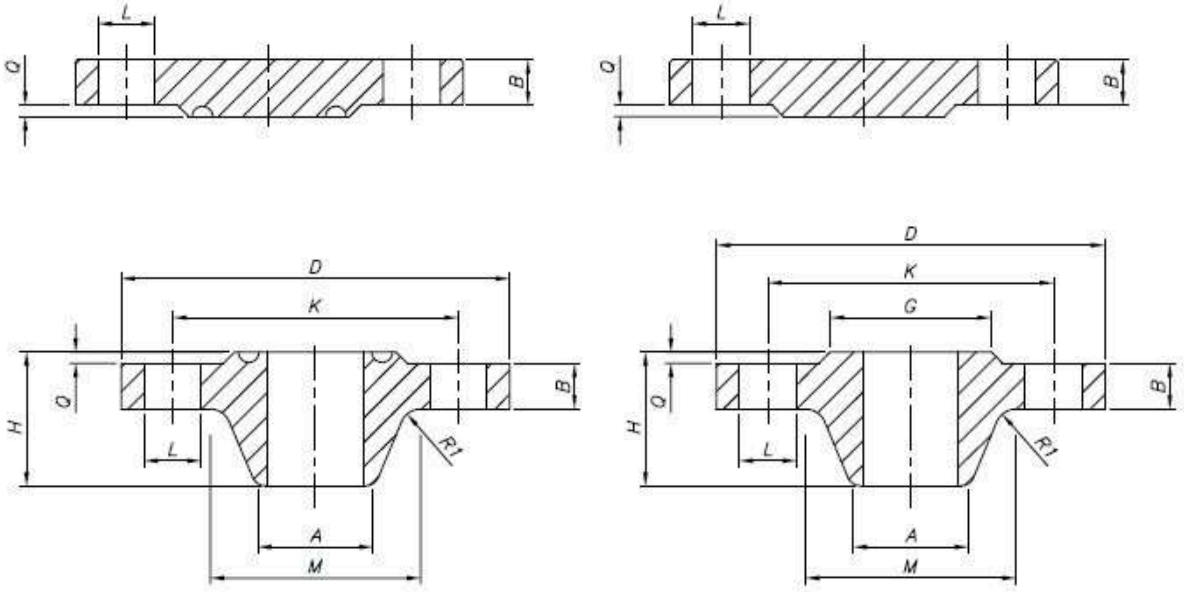
Ø	26”	28”	30”	32”	34”	36”	38”	40”	42”	44”	46”	48”
A	660.4	711.2	762.0	812.8	863.6	914.4	965.2	1016.0	1066.8	1117.6	1168.4	1219.2
B (win)	66.7	69.9	73.1	79.4	81.0	88.9	85.8	112.8	117.5	122.3	127.0	131.8
B (cego)	66.7	69.9	73.1	79.4	81.0	88.9	85.8	112.8	117.5	122.3	127.0	131.8
D	870	925	985	1060	1110	1170	1240	1240	1290	1355	1415	1465
G	749	800	857	914	965	1022	1073	1086	1137	1194	1245	1302
H	121	126	137	145	150	158	158	194	200	207	216	224
K	806.4	863.6	914.4	977.9	1028.7	1085.8	1149.4	1155.7	1206.5	1263.6	1320.8	1371.6
L	34.93	34.93	34.93	41.28	41.28	41.28	41.28	44.45	44.45	47.63	50.80	50.80
Furos	24	28	28	28	32	32	32	32	32	32	28	32
M	676	727	781	832	883	933	991	1048	1099	1149	1203	1254
Q	2	2	2	2	2	2	2	2	2	2	2	2
R1	10	11	11	11	13	13	13	13	13	13	13	13

300#

Ø	26”	28”	30”	32”	34”	36”	38”	40”	42”	44”	46”	48”
A	660.4	711.2	762.0	812.8	863.6	914.4	965.2	1016.0	1066.8	1117.6	1168.4	1219.2
B (wn)	77.8	84.2	90.5	96.9	100.1	103.2	106.4	112.8	117.5	122.3	127.0	131.8	103.2
B (cego)	82.6	88.9	93.7	98.5	109.6	106.4	112.8	117.5	122.3	127.0	131.8		
D	970	1035	1090	1150	1205	1270	1170	1240	1290	1355	1415	1465
G	749	800	857	914	965	1022	1029	1086	1137	1194	1245	1302
H	185	197	210	223	232	242	181	194	200	207	216	224
K	876.3	939.8	997.0	1054.1	1104.9	1168.4	1092.0	1155.7	1206.5	1263.6	1320.8	1371.6
L	44.45	44.45	47.63	50.80	50.80	53.98	41.28	44.45	44.45	47.63	50.80	50.80
Furos	28	28	28	28	28	32	32	32	32	32	28	32
M	721	775	827	881	937	991	994	1048	1099	1149	1203	1254
Q	2	2	2	2	2	2	2	2	2	2	2	2
R1	10	11	11	11	13	13	13	13	13	13	13	13

600#

Ø	26”	28”	30”	32”	34”	36”	38”	40”	42”	44”	46”	48”
A	660.4	711.2	762.0	812.8	863.6	914.4	965.2	1016.0	1066.8	1117.6	1168.4	1219.2
B (wn)	108.0	111.2	114.3	117.5	100.1	123.9	152.4	158.8	168.3	173.1	179.4	189.0	
B (cego)	125.5	131.8	139.7	147.7	103.2	162.0	155.0		162	171.5	177.8	185.8	195.3
D	1015	1035	1130	1195	1205	1315	1270	1320	1405	1455	1510	1595
G	749	800	857	914	965	1022	1054	1111	1168	1226	1276	1334
H	229	242	255	267	232	290	261	271	286	296	307	323
K	914.4	965.2	1022.4	1079.5	1104.9	1193.8	1162	1212.8	1282.7	1333.5	1390.6	1460.5
L	50.80	53.98	53.98	60.33	50.80	66.68	60.33	60.33	66.68	66.68	66.68		7303
Furos	28	28	28	28	28	28	28	32	28	32	32	32
M	748	775	862	918	937	1032	1022	1073	1127	1181	1235	1289
Q	7	7	7	7	7	7	7	7	7	7	2	2
R1	13	13	13	13	14	14	14	14	14	14	14	13



RING JOINT

RAISED FACE

Tolerâncias

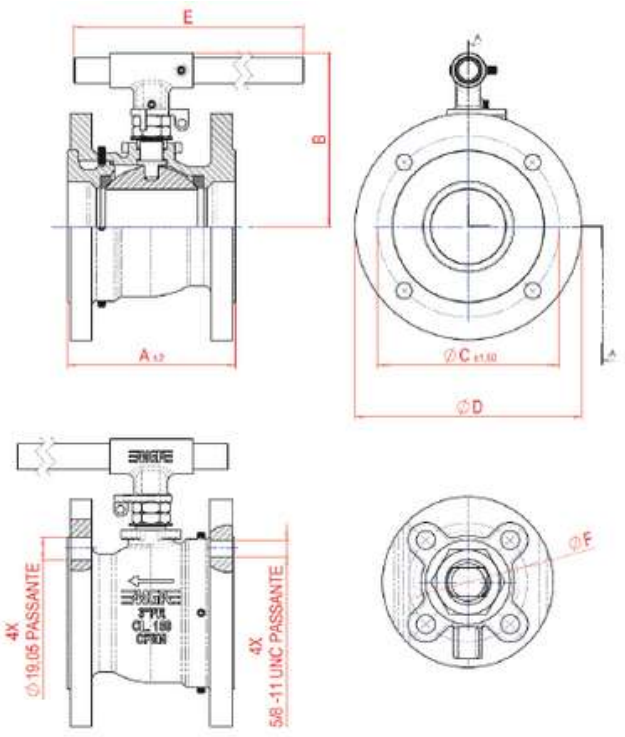
Dimensão	A	B		G	H	K	Q	
26 a 48”	+ 5.0 - 2.0	B < = 25	B < = 25	+ 2.0 - 2.0	+ 3.0 - 5.0	+ 1.5 - 1.5	150# E 300#	+ 0.5 / - 0.5
		25 < B < = 50	25 < B < = 50				600#	+ 2.0 / - 2.0
		50 < B < = 75	50 < B < = 75					
		B > 75	B > 75					

Válvula de Esfera Flange

POL.	DN	A	B	C	D	E	F	NÚMERO DE FUROS	PESO (KG)	COEFICIENTE DE FLUXO KV (m3/h)
3"	80	140,8	146,0	152,4	190,0	480,0	50,0	4	12,0	305,0

A vazão apresentada em KV (m3/h) corresponde a um diferencial de pressão de 1 bar utilizando água como fluido de teste

Válvula para montagem entre flanges, de estrutura compacta e robusta, ideal para aplicação em instalações com limitações físicas de espaço para monta- gem e operação. Construção monobloco com vedação de alto desempenho, favorecida pela montagem da válvula na rede. Unidirecional quando não instalada entre flanges, conforme seta indicadora de fluxo. Acionamento por alavanca tubular móvel, ideal para aplicações com restrição de espaço físico e acionamento automático por atuador pneumático ou elétri- co. De fácil instalação, favorecendo a montagem e desmontagem na rede, facili- tando a manutenção. Haste à prova de expulsão. Padrão com trava para cadeado.

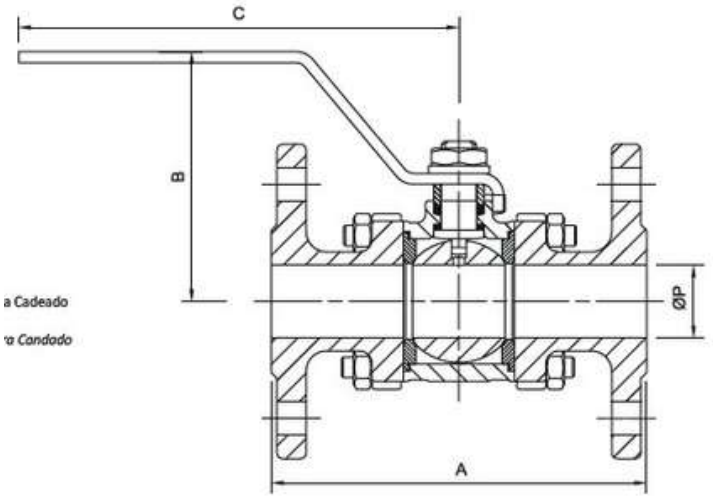


Válvula Tripartida Roscada Flangeada

Bitola (PR)		Linha 9315 - Dimensões mm/(Polegadas)				
DIN	NPS	A	B	C	ØP	PESO (KG)
15	1/2"	108,10/(4,25)	67,80/(2,66)	109,00/(4,,29)	9,10/(0,35)	1,10/(2,42)
20	3/4"	117,10/(4,61)	69,20/(2,72)	109,00/(4,29)	12,70/(0,50)	1,46/(3,21)
25	1"	127,10/(5,00)	74,90/(2,94)	126,,80/(4,99)	17,00/(0,66)	2,17/(4,78)
40	1.1/2"	165,10/(6,50)	103,70/(4,08)	149,50/(5,88)	30,50/(1,21)	4,29/(9,45)
50	2"	178,10/(7,01)	112,10/(4,08)	191,00/(7,51)	38,00/(1,49)	6,68/(14,72)

Bitola (PR)		Linha 9315 - Dimensões mm/(Polegadas)				
DIN	NPS	A	B	C	ØP	PESO (KG)
15	1/2"	108,10/(4,25)	69,20/(2,72)	109,00/(4,,29)	12,70/(0,50)	1,19/(2,62)
20	3/4"	117,10/(4,61)	74,90/(2,94)	126,,80/(4,99)	17,00/(0,66)	1,82/(4,01)
25	1"	127,10/(5,00)	103,70/(4,08)	149,50/(5,88)	30,50/(1,21)	2,49/(5,48)
40	1.1/2"	165,10/(6,50)	112,10/(4,08)	191,00/(7,51)	38,00/(1,49)	5,16/(11,37)

Bitola (PR)		Linha 9315 - Dimensões mm/(Polegadas)				
DIN	NPS	A	B	C	ØP	PESO (KG)
15	1/2"	139,90/(5,50)	69,20/(2,72)	109,00/(4,29)	12,70/(0,50)	1,51/(3,32)
20	3/4"	152,10/(5,98)	75,20/(2,96)	126,80/(4.,99)	17,00/(0,66)	2,49/(5,48)
25	1"	165,00/(6,50)	97,20/(3,82)	149,50/(5,88)	24,00/(0,94)	3,27/(7,20)
40	1.1/2"	190,10/(7,48)	112,30/(4,42)	191,00/(7,51)	38,00/(1,49)	6,59/(14,52)
50	2"	216,00/(8,5)	120,00/(4,72)	191,00/(7,51)	49,50/(1,94)	9,80/(21,58)



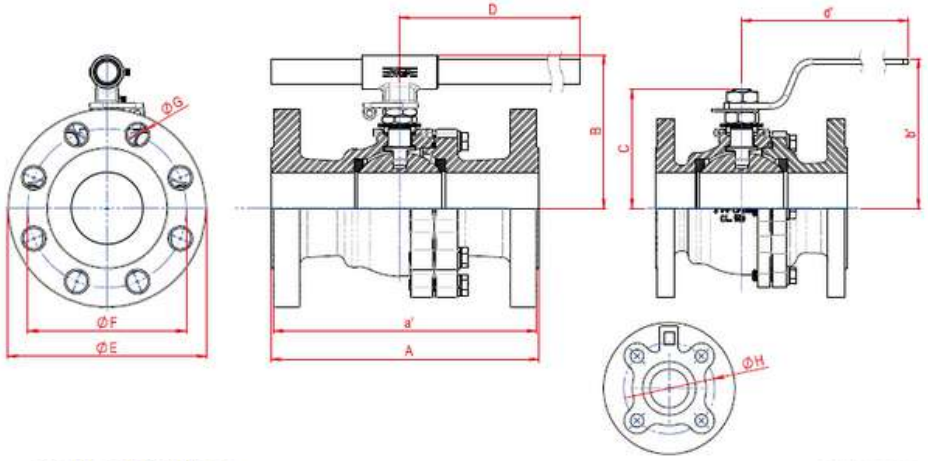
Válvula Esfera Bipartida

Flange Classe150

Bitola (PR)															
POL	DN	A	a"	B	b	C	D	d"	E	F	G	H	N° DE FUROS	PESO KG	Coeficiente de Fluxo KV (m1/h)
1/2"	15	14,0	108,0	104,0	79,0	65,0	47,0	225,0	90,0	60,3	15,9	-	4	1,220	14,6
3/4"	20	20,4	117,0	113,0	90,0	81,0	59,0	225,0	100,0	69,9	15,9	34,0	4	1,.960	27,8
1"	25	25,4	127,0	123,0	95,5	86,5	63,5	225,0	110,0	79,4	15,9	34,0	4	2,610	56,5
1.1/4"	32	31,7	140,0	136,0	100,0	106,0	73,0	225,0	115,0	88,9	15,9	40,0	4	3,600	104,0
1.1/2"	40	38,0	165,0	161,0	108,5	114,5	84,5	225,0	125,0	98,,4	15,9	40,0	4	4,920	161,0
2"	50	50,8	178,0	174,0	138,0	132,0	105,5	430,0	150,0	120,,7	19.,1	50,0	4	9,600	420,0
2.1/2"	65	63,0	190,0	186,0	146,0	141,0	141,0	430,0	180,0	139,7	19,1	50,0	4	13,700	650,0
3"	80	76,2	203,0	199,0	162,0	158,5	158,5	490,0	190,0	152,4	19,,1	58,0	4	18,500	1.120,0
4"	100	101,6	229,0	225,0	185,0			490,0	230,0	190,5	19,1	-	8	31,000	1.980,0
6	150	152,4	267,0	264,0	251,0			490,0	280,0	241,3	22,2	94,0	8	60,000	4.600,0
8"	200	203,2	457,0	-					345,0	298,5	22,2	-	8	142,000	8,996,0
10"	250	254,0	533,0	-					405,0	362,0	25,4	-	12	303,000	14.964,0
12"	300	304,8	610,0	-					485,0	431,8	25,4	-	12	476,000	22..576,0

Flange Classe 300

Bitola (PR)		VÁLVULA DE ESFERA BIPARTIDA PASSAGEM PLENA (PP) CLASSE 300													
POL	DN	PASS	A"	a"	B	b"	C	D	d"	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo KV
2"	50	50,8	216,0	212,0	138,0	_	_	430,0	-	165,0	127,0	19,1	8	9,600	420,0
2.1/2"	65	63,0	241,0	237,0	148,0	-	-	550,0	-	190,0	149,2	22,2	8	13,700	650,0
3"	80	76,2	282,0	278,0	166,0	-	-	550,0	-	210,0	168,0	22,2	8	18,500	1.120,0
4"	100	101,6	305,0	301,0	188,0	-	-	550,0	-	255,0	200,0	22,2	8	31,000	1,980,0
6"	150	152,4	403,0	399,0	284,5	-	-	880,0	-	320.0	269,9	22,2	12	110,000	4,600,0
8"	200	203,2	502,0	-	-	-	-	-	-	380,0	330,2	25,4	12	262,000	8,563,0
10"	250	254,0	568,0	-	-	-	-	-	-	445,0	387,4	28,6	16	384,000	14,532,0
12"	300	304,8	648	-	-	-	-	-	-	520,0	450,8	31,8	16	565,000	21,971,0



Dados Técnicos

EDIÇÃO 01 - 04 / 2019

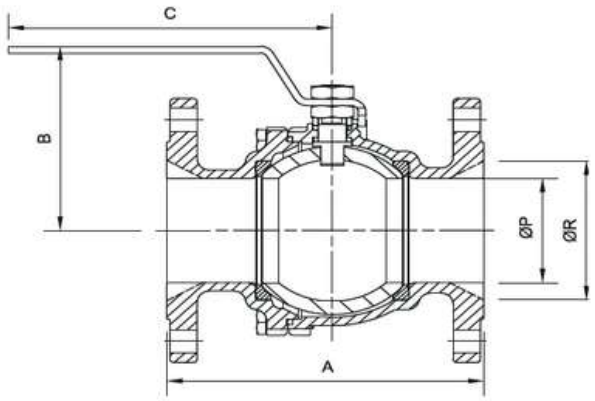
Normas de Referência

Construção: ASME B 16.34 | API 608 | ISO 17292
API Spec 6D (Sob Consulta)
NBR 15827 (Sob Consulta)

Testes: API 598 | ISO 5208
ISO 10497 | API 607 (Fire Safe)

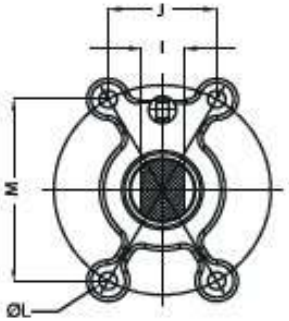
Válvula Bipartida Flangeada

Linha 9215 • *Line 9215* • *Línea 9215*							
Bitola *Size* *Medida*		Dimensões mm/(polegadas) *Dimensions mm/(inches)* • *Dimensiones mm/(pulgada)*					
DN	NPS	A	B	C	ØP	ØR	Peso kg/(lb) *Weight kg/(lb)* *Peso kg/(lb)*
50	2"	178,00/(7,00)	119,00/(4,68)	191,00/(7,51)	49,50/(1,94)	49,50/(1,94)	7,20/(15,84)
65	2 1/2"	190,00/(7,48)	129,20/(5,08)	191,00/(7,51)	60,00/(2,36)	60,00/(2,36)	11,00/(24,25)
80	3"	203,00/(8,00)	158,70/(6,24)	222,20/(8,74)	75,00/(2,95)	75,00/(2,95)	14,65/(32,29)
100	4"	229,00/(9,00)	168,30/(6,62)	253,00/(9,96)	100,60/(3,96)	100,60/(3,96)	26,15/(57,65)
150	6"	267,00(10,51)	208,20/(8,19)	299,50/(11,79)	127,00/(5,00)	148,00/(5,82)	43,60/(96,12)

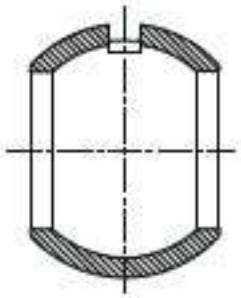


Válvula Bipartida Flangeada

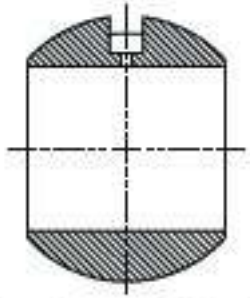
Linha 9220 • *Line 9220* • *Linea 9220*											
Bitola *Size* *Medida*		Dimensões mm/(polegadas) *Dimensions mm/(inches)* • *Dimensiones mm/(pulgada)*									
DN	NPS	A	B	C	ØP	ØR	I	J	ØL	M	Peso kg/(lb) *Weight kg/(lb)* *Peso kg/(lb)*
50	2"	178,00/(7,00)	111,20/(4,37)	335,00/(13,18)	49,50/(1,94)	49,50/(1,94)	10,00/(0,39)	35,50/(1,40)	M6X6	35,50/(1,40)	8,50/(18,74)
65	2 1/2"	191,00/(7,51)	120,70/(4,75)	335,00/(13,18)	60,00/(2,36)	60,00/(2,36)	10,00/(0,39)	35,50/(1,40)	M6X6	35,50/(1,40)	11,20/(24,69)
80	3"	203,00/(8,00)	136,20/(5,36)	335,00/(13,18)	75,00/(2,95)	75,00/(2,95)	13,00/(0,51)	35,50/(1,40)	M6X6	35,50/(1,40)	14,80/(32,63)
100	4"	229,00/(9,00)	168,70/(6,64)	407,00/(16,02)	100,60/(3,96)	100,60/(3,96)	16,00/(063)	49,50/(1,95)	M8X8	49,50/(1,95)	30,00/(66,14)
150	6"	267,00(10,51)	196,00/(7,71)	570,00/(22,44)	127,00/(5,00)	148,00/(5,82)	20,00/(0,78)	51,00/(2,01)	M10X12	88,30/(3,47)	44,20/(97,44)



Detalhe da Base para Acessórios (Furação Opcional)
Base detail accessories (Drilling Optional)
Accesorios detalle Base (Opcional) Perforación



Detalhe da esfera para as bitolas de 2" a 6"
Detail of the ball for size 2" up to 6"
Detalle de la esfera para los tamaños 2" hasta 6"



Detalhe da esfera para as bitolas de 2" a 6"[1]
Detail of the ball for size 2" up to 6"[1]
Detalle de la esfera para los tamaños 2" hasta 6"[1]

1: Ver tabela de observação página 16;
See observation table page 16;
Ver tabla de observación página 16.

Válvula de Esfera Tripardida Roscada/ SW (Sem rosca)

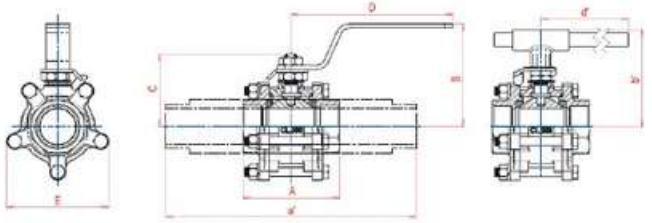
Mercado Inox

VÁLVULA DE ESFERA TRIPARTIDA PASSAGEM REDUZIDA (PR)

BITOLA POL.	BITOLA DN	PASS.	A*	a*	B	b*	C	D	d*	E	F	G	H	I	J	K	L	Nº DE PARAF.	PESO kg	Coeficiente de Fluxo Kv (m³/h)
1/2"	15	11,1	55,0	-	44,0	-	39,5	125,0	-	44,5	9,5	22,0	12,0	15,8	21,8	-	2,0	4	0,433	5,0
3/4"	20	14,0	64,0	-	46,5	76,0	41,5	125,0	225,0	48,5	12,5	27,4	14,0	20,9	27,1	-	2,0	4	0,546	9,8
1"	25	20,4	73,0	-	78,2	87,0	55,4	165,0	225,0	57,0	12,5	34,1	15,0	26,4	33,8	-	2,0	4	0,920	18,7
1.1/4"	32	25,4	84,0	-	82,0	90,5	59,0	165,0	225,0	83,0	12,5	42,9	16,0	35,0	42,6	-	2,0	5	1,360	42,0
1.1/2"	40	31,7	93,7	-	102,0	98,5	72,5	182,0	225,0	93,0	12,5	49,0	18,0	41,0	48,7	-	2,0	5	2,155	72,0
2"	50	38,0	108,7	-	109,0	103,0	77,0	182,0	225,0	108,2	16,0	61,4	20,0	52,5	61,4	-	3,0	5	2,855	107,0
2.1/2"	65	50,8	130,4	-	126,0	112,5	86,0	255,0	225,0	130,5	16,0	74,1	25,0	62,7	73,8	-	3,0	6	4,710	185,0
3"	80	63,0	160,2	-	146,0	147,5	114,0	267,0	415,0	153,0	16,0	90,1	26,0	78,0	90,1	-	3,0	6	8,015	305,0
4"	100	76,0	178,0	-	154,4	163,0	126,7	335,0	490,0	177,0	19,0	115,4	34,0	106,5	115,5	-	3,0	6	11,450	1050,0
5"	127	101,6	243,0	-	-	185,0	-	-	490,0	222,0	25,0	142,0	46,0	133,0	141,5	-	3,0	8	25,600	1980,0

VÁLVULA DE ESFERA TRIPARTIDA PASSAGEM PLENA (PP)

BITOLA POL.	BITOLA DN	PASS.	A*	a*	B	b*	C	D	d*	E	F	G	H	I	J	K	L	Nº DE PARAF.	PESO kg	Coeficiente de Fluxo Kv (m³/h)
1/4"	8	11,1	51,0	-	44,0	-	39,5	125,0	-	44,5	9,5	14,4	11,0	11,1	14,0	-	2,0	4	0,425	5,0
3/8"	10	11,1	51,0	-	44,0	-	39,5	125,0	-	44,5	9,5	17,8	11,0	14,5	17,6	-	2,0	4	0,421	5,0
1/2"	15	14,0	60,0	239,0	46,5	76,0	41,5	125,0	225,0	48,5	9,5	22,0	12,0	18,0	21,8	21,3	2,0	4	0,508	9,8
3/4"	20	20,4	70,0	247,0	78,2	87,0	55,4	165,0	225,0	57,0	12,5	27,4	15,0	23,0	27,1	26,7	2,0	4	0,866	18,7
1"	25	25,4	82,0	252,5	82,0	90,5	59,0	165,0	225,0	83,0	12,5	34,1	16,0	29,6	33,8	33,4	2,0	5	1,310	42,0
1.1/4"	32	31,7	90,7	262,7	102,0	98,5	72,5	182,0	225,0	93,0	12,5	42,9	18,0	38,0	42,6	42,2	2,0	5	2,079	72,0
1.1/2"	40	38,0	102,7	267,0	109,0	103,0	77,0	182,0	225,0	108,2	12,5	49,0	19,0	44,1	48,7	48,3	3,0	5	2,717	107,0
2"	50	50,8	120,1	279,0	126,0	112,5	86,0	255,0	225,0	130,5	16,0	61,4	22,0	56,2	61,4	60,3	3,0	6	4,258	185,0
2.1/2"	65	63,0	152,4	-	146,0	147,5	114,0	267,0	415,0	153,0	16,0	74,1	27,5	70,0	73,8	-	3,0	6	7,593	305,0
3"	80	76,0	169,4	-	154,4	163,0	126,7	335,0	490,0	177,0	16,0	90,1	29,0	84,0	90,1	-	3,0	6	10,110	1050,0
4"	100	101,6	209,0	-	182,0	185,0	-	-	490,0	210,0	19,0	115,4	35,0	112,5	115,5	-	3,0	8	21,900	1980,0



Para válvulas com conexão soldada, exceto niple 100mm, recomenda-se a instalação de um novo conjunto de vedação após a soldagem da válvula na rede.

Estrutura tubular desenvolvida com maior número de parafusos, proporcionando maior segurança a vazamentos externos, aumentando a robustez da válvula.
Dotada de guias de apoio para alojamento dos parafusos, o que proporciona maior resistência, eliminando empenamento das tampas.
Válvula

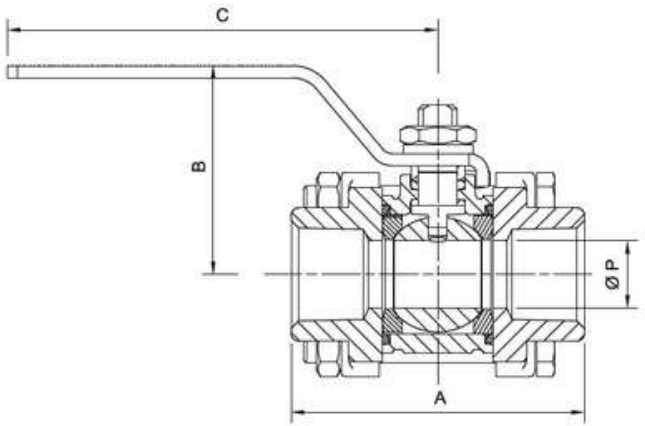
vedações tripartida com exclusivo sistema de enclausuradas que aumenta a resistência das sedes de vedação, melhorando o desempenho da válvula.
De fácil aplicação para trava de cadeado..

Válvulas de Esfera Tripartida Roscada

Mercado Inox

PMT Aço / *MWP Steel / PMT Acero:* 1000 psi / (69 bar)

Bitola (PR) *Size (RB) Medida (PR)*		Dimensões mm/(polegadas) *Dimensions mm/(inches) • Dimensiones mm/(pulgada)*				
DN	NPS	A	B	C	ØP	Peso kg/(lb) *Weight kg/(lb) Peso kg/(lb)*
15	1/2"	60,10/(2,36)	43,70/(1,72)	99,40/(3,91)	9,10/(0,35)	0,26/(0,57)
20	3/4"	66,60/(2,62)	45,40/(1,78)	99,40/(3,91)	12,70/(0,50)	0,38/(0,83)
25	1"	79,60/(3,13)	54,90/(2,16)	111,80/(4,40)	17,00/(0,66)	0,58/(1,27)
32	1.1/4"	93,50/(3,68)	70,60/(2,77)	134,80/(5,30)	24,00/(0,94)	1,13/(2,49)
40	1.1/2"	104,50/(4,11)	75,10/(2,95)	134,80/(5,30)	30,50/(1,20)	1,74/(3,83)
50	2"	123,70/(4,87)	89,20/(3,51)	175,50/(6,90)	38,00/(1,49)	2,75/(6,06)
65	2.1/2"	144,80/(5,70)	96,60/(3,80)	175,50/(6,90)	49,50/(1,94)	4,64/(10,22)
80	3"	173,80/(6,84)	116,50/(4,58)	197,70/(7,78)	60,00/(2,45)	6,80/(14,96)
100	4"	194,70/(7,66)	160,90/(6,33)	222,20/(8,74)	75,00/(2,95)	10,87/(23,96)

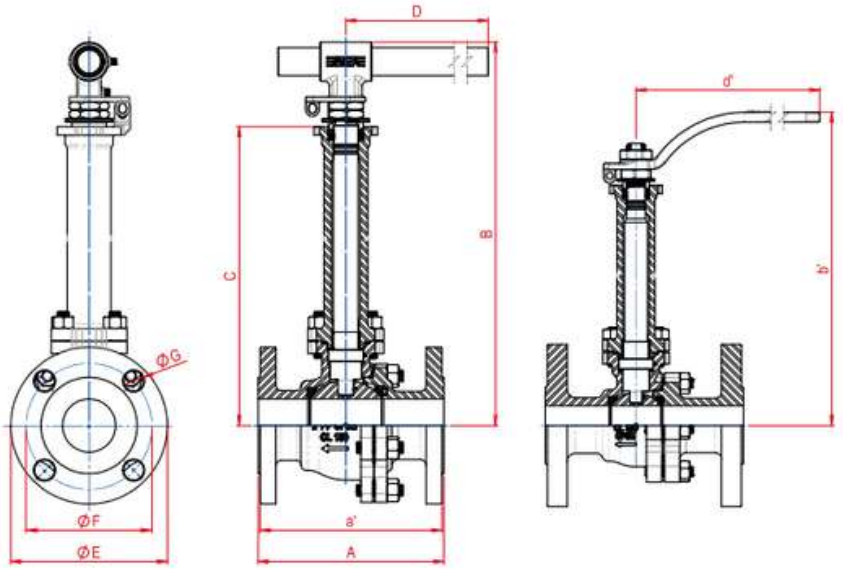


Bitola (PP) *Size (FB) Medida (PT)*		Dimensões mm/(polegadas) *Dimensions mm/(inches) • Dimensiones mm/(pulgada)*				
DN	NPS	A	B	C	ØP	Peso kg/(lb) *Weight kg/(lb) Peso kg/(lb)*
6	1/4"	60,10/(2,36)	43,70/(1,72)	99,40/(3,91)	9,10/(0,35)	0,31/(0,68)
10	3/8"	60,10/(2,36)	43,70/(1,72)	99,40/(3,91)	9,10/(0,35)	0,29/(0,63)
15	1/2"	64,00/(2,51)	45,40/(1,78)	99,40/(3,91)	12,70/(0,50)	0,35/(0,77)
20	3/4"	75,60/(2,97)	54,90/(2,16)	111,80(4,40)	17,00/(0,66)	0,53/(1,16)
25	1"	87,10/(3,42)	70,60/(2,77)	134,80/(5,30)	24,00/(0,94)	1,05/(2,31)
32	1.1/4"	103,10/(4,05)	75,10/(2,95)	134,80/(5,30)	30,50/(1,20)	1,68/(3,69)
40	1.1/2"	112,70/(4,43)	89,20/(3,51)	175,50/(6,90)	38,00/(1,49)	2,56/(5,64)
50	2"	137,80/(5,42)	96,60/(3,80)	175,50/(6,90)	49,50/(1,94)	4,00/(8,81)
65	2.1/2"	157,80/(6,21)	116,50/(4,58)	197,70/(7,78)	60,00/(2,36)	6,87/(15,14)
80	3"	175,70(6,91)	160,90/(6,33)	222,20/(8,74)	75,00/(2,95)	10,43/(22,99)

Válvula Esfera Bipartida

Válvula de Esfera Bipartida Passagem Plena (PP) CLASSE 150

POL.	DN	PASS	A	a'	B	b'	C	D	d'	E	F	G	N°DE FUROS	PESO KG	FLUÇO KV (m³/h)
1/2"	15	14,0	108,0	104,0	270,0	258,0	209,0	225,0	175,0	90,0	60,3	15,9	4	2,340	14,6
3/4"	20	20,4	117,0	113,0	266,0	272,0	206,0	225,0	185,0	100,0	69,9	15,9	4	3,400	27,8
1"	25	25,4	127,0	123,0	270,0	276,0	209,0	225,0	185,0	110,0	79,4	15,9	4	4,140	56,5
1.1/2	40	38,0	165,0	161,0	308,0	300,0	230,0	430,0	270,0	125,0	98,4	15,9	4	6,450	161,0
2"	50	50,8	178,0	174,0	367,0	-	286,0	490,0	-	150,0	120,7	19,1	4	12,850	420,0
2.1/2"	65	63,0	190,0	186,0	383,0	-	302,0	490,0	-	180,0	139,7	19,1	4	19,260	650,0
3"	80	76,2	203,0	199,0	383,0	-	302,0	490,0	-	190,0	152,4	19,1	4	20,323	1,120,0
4"	100	101,6	229,0	225,0	455,0	-	352,0	490,0	-	230,0	190,5	19,1	8	37,270	1,980,0



Válvula de Esfera Bipartida Passagem Plena (PP) CLASSE 300

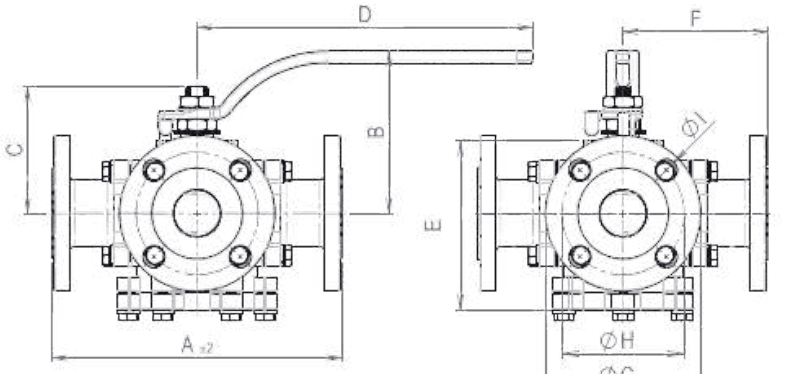
POL.	DN	PASS	A	a'	B	b'	C	D	d'	E	F	G	N°DE FUROS	PESO KG	FLUÇO KV (m³/h)
1/2"	15	14,0	140,0	136,0	270,0	258,0	209,0	225,0	175,0	95,0	66,7	15,9	4	3,024	14,6
3/4"	20	20,4	152,0	148,0	266,0	272,0	206,0	225,0	185,0	115,0	82,6	19,1	4	4,790	27,8
1"	25	25,4	165,0	161,0	270,0	276,0	209,0	225,0	185,0	125,0	88,5	19,1	4	6,070	56,5
1.1/2	40	38,0	190,0	186,0	308,0	300,0	230,0	430,0	270,0	155,0	114,3	22,2	4	10,830	161,0
2"	50	50,8	216,0	212,0	367,0	-	286,0	490,0	-	165,0	127,0	19,1	8	16,430	420,0
2.1/2"	65	63,0	241,0	237,0	383,0	-	302,0	490,0	-	190,0	149,2	22,2	8	24,420	650,0
3"	80	76,2	282,0	278,0	383,0	-	302,0	490,0	-	210,0	168,3	22,2	8	32,960	1,120,0
4"	100	101,6	305,0	301,0	455,0	-	352,0	490,0	-	255,0	200,0	22,2	8	53,890	1,980,0

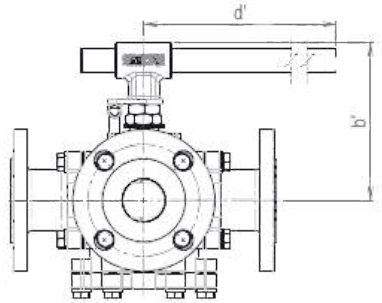
NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | API 608 | ISO 17292 MSS SP-134	Testes: API 598 | ISO 5208

Válvula Esfera Direcional Multivias
04 Vias Flange Classe 150 / 300 / DIM

Válvula de Esfera Multivias 04 Vias Flange CL150 Passagem Plena PP

POL.	DN	PASS	A	B	b'	C	D	d'	E	F	G	H	I	N° DE FUROS	PESO KG
1/2"	15	14,0	154,0	82,5	93,5	61,5	165,0	225,0	83,0	77,0	90,0	60,3	15,9	4	3,960
3/4"	20	20,4	170,0	105,0	99,0	69,0	184,0	225,0	94,5	85,0	100,0	69,9	15,9	4	5,780
1"	25	25,4	188,0	112,5	105,5	74,5	184,0	225,0	110,0	94,0	110,0	79,4	15,9	4	8,230
1.1/2	40	38,0	234,0	129,5	137,5	103,0	270,0	415,0	135,5	117,0	125,0	98,4	15,9	4	14,730
2"	50	50,8	266,0	135,0	143,5	108,5	270,0	415,0	145,5	133,0	150,0	120,7	19,1	4	21,440
2.1/2"	65	63,0	335,0	-	162,5	124,5	-	480,0	190,5	167,5	180,0	139,7	19,1	4	43,250
3"	80	76,2	380,0	-	176,5	143,0	-	480,0	223,5	190,0	190,0	152,4	19,1	4	54,100
4"	100	101,6	410,0	-	197,5	165,0	-	560,0	263,5	205,0	200,0	190,5	19,1	8	90,270
6"	150	152,4	540,0	-	279,0	231,5	-	900,0	366,0	270,0	280,0	241,3	22,2	8	237,050





Válvula de Esfera Multivias 04 Vias Flange CL300 Passagem Plena PP

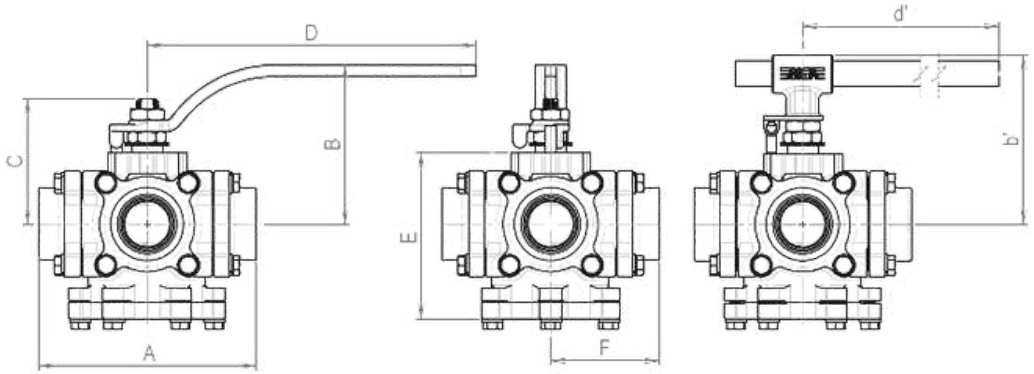
POL.	DN	PASS	A	B	b'	C	D	d'	E	F	G	H	I	N° DE FUROS	PESO KG
1/2"	15	14,0	172,0	82,5	93,5	61,5	165,0	225,0	83,0	86,0	90,0	66,7	15,9	4	5,100
3/4"	20	20,4	192,0	105,0	99,0	69,0	184,0	225,0	94,5	96,0	115,0	82,6	19,1	4	8,230
1"	25	25,4	203,0	112,5	105,5	74,5	184,0	225,0	110,0	101,5	125,0	88,5	19,1	4	11,070
1.1/2	40	38,0	264,0	129,5	137,5	103,0	270,0	415,0	135,5	132,0	155,0	114,3	22,2	4	20,870
2"	50	50,8	302,0	135,0	143,5	108,5	270,0	415,0	145,5	151,0	165,0	1127,0	19,1	8	26,870
2.1/2"	65	63,0	335,0	-	162,5	124,5	-	480,0	190,5	177,5	190,0	149,2	22,2	8	49,650
3"	80	76,2	400,0	-	176,5	143,0	-	480,0	223,5	200,0	210,0	168,3	22,2	8	67,960
4"	100	101,6	440,0	-	197,5	165,0	-	560,0	263,5	220,0	255,0	200,0	22,2	8	109,490

NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

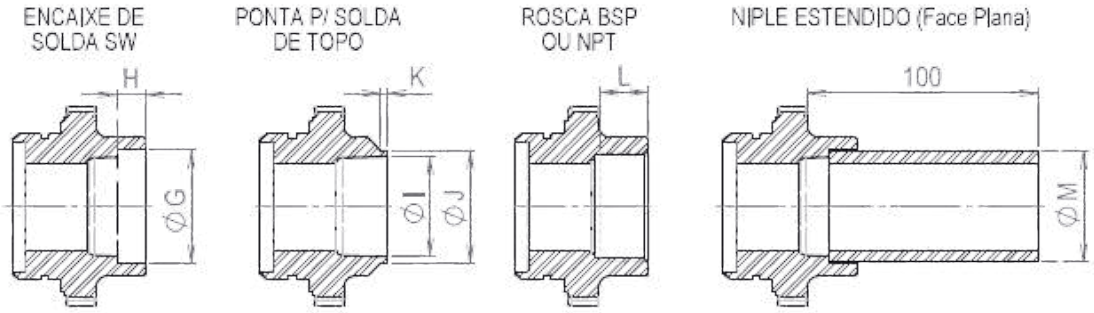
Válvula Esfera Direcional

Válvula de Esfera Muiltvias Flange CL 150 Passagem Plena (PP)

POL.	DN	PASS	A	B	b'	C	D	d'	E	F	G	H	I	J	K	L	M	PESO KG
1/2"	15	14,0	107,0	82,5	93,5	61,5	165,0	225,0	83,0	53,5	22,0	9,5	21,8	21,8	2,0	17,0	21,3	2,380
3/4"	20	20,4	128,0	105,0	99,0	69,0	184,0	225,0	94,5	64,0	27,4	12,5	27,1	27,1	2,0	20,0	26,7	3,730
1"	25	25,4	143,0	112,5	105,5	74,5	184,0	225,0	110,0	71,5	34,1	12,5	33,8	33,8	2,0	23,0	33,4	5,540
1.1/2	40	38,0	178,0	129,5	137,5	103,0	270,0	415,0	135,5	89,0	49,0	12,5	48,7	48,7	3,0	26,0	48,3	10,100
2"	50	50,8	196,0	135,0	143,5	108,5	270,0	415,0	145,5	98,0	61,4	16,0	61,0	61,0	3,0	28,0	60,3	13,950
2.1/2"	65	63,0	250,0	-	162,5	124,5	-	480,0	190,5	124,5	74,1	16,0	73,8	73,8	3,0	30,0	73,0	29,100
3"	80	76,2	290,0	-	176,5	143,0	-	480,0	223,5	145,0	90,1	16,0	90,1	90,1	3,0	34,0	88,9	40,200
4"	100	101,6	327,0	-	197,5	165,0	-	560,0	263,5	163,5	115,4	19,0	112,5	115,5	3,0	38,0	114,3	66,650



TIPOS DE CONEXÕES



NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

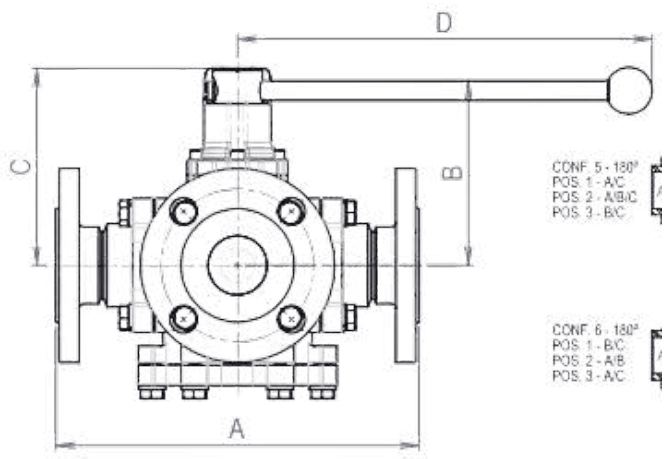
Direcional Multivias 180°
Flange 150|300|DIN

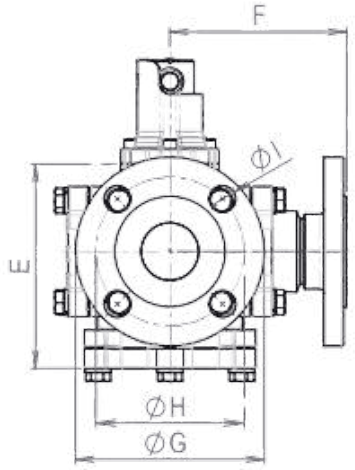
Válvula de Esfera Muiltvias Flange CL 150 Passagem Plena (PP)

POL.	DN	PASS	A	B	C	D	E	F	G	H	I	Nº DE FUROS	PESO KG
1/2"	15	11,1	154,0	75,0	79,5	210,0	83,0	77,0	90,0	60,3	15,9	4	3,560
3/4"	20	14,0	170,0	83,0	89,5	210,0	94,5	85,0	100,0	69,9	15,9	4	5,240
1"	25	20,4	188,0	90,5	97,0	220,0	110,0	94,0	110,0	79,4	15,9	4	7,600
1.1/2	40	31,7	234,0	120,0	127,0	265,0	135,5	117,0	125,0	98,4	15,9	4	14,000
2"	50	38,0	266,0	124,0	132,0	365,0	145,5	133,0	150,0	120,7	19,1	4	19,700
2.1/2"	65	50,8	335,0	148,0	157,0	500,0	190,5	167,5	180,0	139,7	19,1	4	39,765
3"	80	63,0	380,0	190,5	128,0	500,0	223,5	190,0	190,0	152,4	19,1	4	53,790
4"	100	101,6	410,0	219,0	229,5	580,0	263,5	205,0	230,0	190,5	19,1	8	90,040

Válvula de Esfera Muiltvias Flange CL 300 Passagem Plena (PP)

POL.	DN	PASS	A	B	C	D	E	F	G	H	I	Nº DE FUROS	PESO KG
1/2"	15	14,0	172,0	75,0	79,5	210,0	83,0	86,0	95,0	66,7	15,9	4	4,400
3/4"	20	20,4	192,0	83,0	89,5	210,0	94,5	96,0	115,0	82,6	19,1	4	7,100
1"	25	25,4	203,0	90,5	97,0	220,0	110,0	101,5	125,0	88,5	19,1	4	9,700
1.1/2	40	38,0	264,0	120,0	127,0	265,0	135,5	132,0	155,0	114,3	22,2	4	18,600
2"	50	50,8	302,0	124,0	132,0	365,0	145,5	151,0	165,0	127,0	19,1	4	23,700
2.1/2"	65	63,0	335,0	148,0	157,0	500,0	190,5	177,5	190,0	149,2	22,2	4	44,670
3"	80	76,0	400,0	190,5	128,0	500,0	223,5	200,0	210,0	168,3	22,2	4	63,890
4"	100	101,6	440,0	219,0	229,5	580,0	263,5	220,0	255,0	200,0	22,4	8	103,500





NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

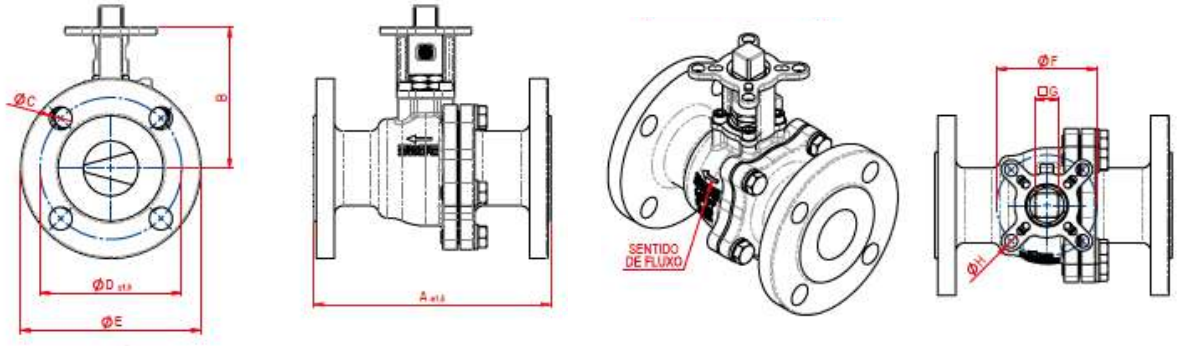
Válvula Esfera Bipartida

Válvula de Esfera Bipartida Passagem Plena (PP) CLASSE 150

POL.	DN	PASS	A	B	C	D	E	F	G	H	N° DE FUROS	PESO KG
1/2"	15	14,0	108,0	62,0	15,9	60,3	90,0	F05	14/17	M6	4	1,390
3/4"	20	20,4	117,0	71,5	15,9	69,9	100,0	F05/F07	17	M6/M8	4	2,120
1"	25	25,4	127,0	76,5	15,9	79,4	110,0	F05/F07	17	M6/M8	4	2,720
1.1/2	40	38,0	165,0	98,0	15,9	98,4	125,0	F07	17/22	M8	4	5,240
2"	50	50,8	178,0	122,0	19,1	120,7	150,0	F07	17/22	M8	4	9,465
2.1/2"	65	63,0	190,0	130,0	19,1	139,7	180,0	F07	17/22	M8	4	13,214
3"	80	76,0	203,0	149,0	19,1	152,4	190,0	F10	22/27	M10	4	17,760
4"	100	101,6	229,0	170,5	19,1	190,5	230,0	F10	27/36	M10	8	30,700

Válvula de Esfera Bipartida Passagem Plena (PP) CLASSE 300

POL.	DN	PASS	A	B	C	D	E	F	G	H	N° DE FUROS	PESO KG
2"	50	50,8	216,0	126,0	19,1	127,0	90,0	F07/F10	17/22	M8/M10	8	14,120
2.1/2"	65	63,0	241,0	131,5	22,4	149,2	100,0	F10	22/27	M10	8	18,900
3"	80	76,2	282,0	149,0	22,4	168,0	210,0	F10	22/36	M10	8	28,190
4"	100	101,6	305,0	168,5	22,4	200,0	255,0	F10/F16	27/46	M10/M20	8	45,520

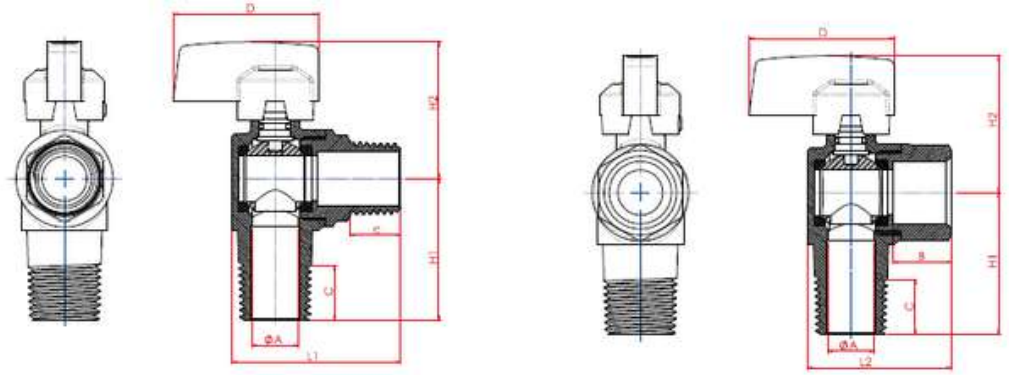


NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Válvula Esfera Monobloco

Válvula de Esfera Monobloco Angular Latão Forjado
PN 40 Acionamento por Borboleta

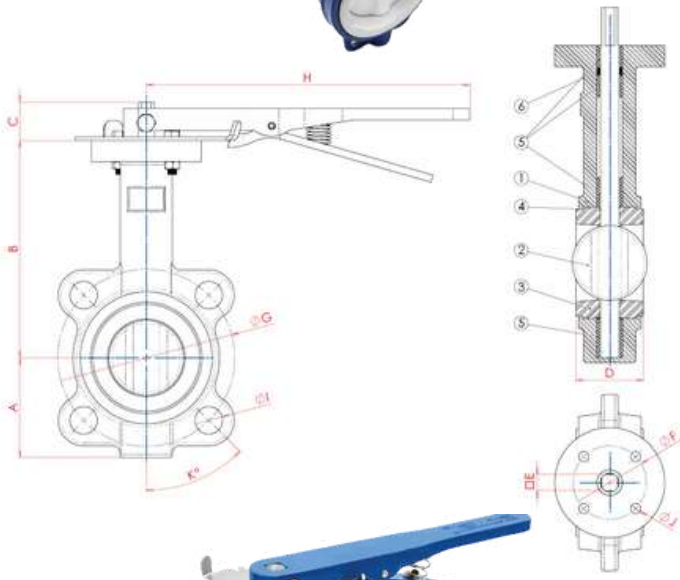
POL	DN	A	B	C	L1	L2	M1	M2	D	PESO KG
1/2"	15	13,5	17,0	16,0	49,7	41,7	41,0	41,0	42,0	0,180



Válvula Borboleta

Válvula Borboleta Tipo Wafer Revista em PTFE

POL.	DN	A	B	C	D	E	F	G	H	I	J	K	TORQUE (N.m)	PESO KG
2"	50	70,0	149,0	21,0	45,0	11,0	50,0	120,65	215,0	N-4 Ø 19	7,5	45,0	**	2,9
2.1/2"	65	87,0	165,0	21,0	48,0	11,0	50,0	139,7	215,0	N-4 Ø 19	7,5	45,0	**	3,6
3"	80	101,0	165,0	21,0	49,0	11,0	50,0	152,4	215,0	N-4 Ø 19	7,5	45,0	**	3,9
4"	100	110,0	180,0	24,0	55,0	11,0	70,0	190,5	260,0	N-4 Ø 19	10,0	22,5	**	5,5
5"	125	124,0	205,0	27,0	58,0	14,0	70,0	215,9	260,0	N-4 Ø 22,4	10,0	22,5	**	6,2
6"	150	137,0	219,0	27,0	59,0	14,0	70,0	241,3	260,0	N-4 Ø 22,4	10,0	22,5	**	8,0
8	200	173,0	252,0	27,0	64,0	17,0	102,0	298,45	363,0	N-4 Ø 22,4	12,0	22,5	**	14,3
10"	250	204,0	283,0	32,0	70,0	22,0	102,0	361,95	363,0	N- Ø 25,4	12,0	15,0	**	21,8
10"	300	245,0	332,0	32,0	80,0	24,0	102,0	431,8	363,0	N- Ø 25,4	12,0	15,0	**	30,8



Válvula Borboleta Tipo Wafer

N.°	Descrição	S100	S200
1	Corpo	Ferro Nodular	Ferro Cinzento
2	Disco	CF8	Nodular+Níquel
3	Sede	EPDM/BUNA-IN	EPDM/BUNA-N
4	Haste	304	420
5	Bucha	PTFE	PTFE
6	O´ring	EPDM	EPDM

NORMAS DE REFERÊNCIA	
Construção: API 609	Testes: API 598

Válvula Borboleta Classe 150

POL.	DN	A	B	C	D	E	F	G	H	I	Ø J	K°	Torque (N.m)	PESO KG
1.1/2"	40	66,0	105,0	21,0	36,0	11,0	50,0	98,6	215,0	N-4 Ø 16	7,5	45,0	13,0	2,6
2"	50	70,0	149,0	21,0	45,0	11,0	50,0	120,65	215,0	N-4 Ø 19	7,5	45,0	13,0	2,9
2.1/2"	65	87,0	165,0	21,0	48,0	11,0	50,0	139,7	215,0	N-4 Ø 19	7,5	45,0	21,0	3,6
3"	80	101,0	165,0	21,0	49,0	11,0	50,0	152,4	215,0	N-4 Ø 19	7,5	45,0	28,0	3,9
4"	100	110,0	180,0	24,0	55,0	11,0	70,0	190,5	260,0	N-4 Ø 19	10,0	22,5	34,0	5,5
5"	125	124,0	205,0	27,0	58,0	14,0	70,0	215,9	260,0	N-4 Ø 22,4	10,0	22,5	65,0	6,2
6"	150	137,0	219,0	27,0	59,0	14,0	70,0	241,3	260,0	N-4 Ø 22,4	10,0	22,5	72,0	8,0
8"	200	1730	252,0	27,0	64,0	17,0	102,0	298,45	363,0	N-4 Ø 22,4	12,0	22,5	161,0	14,3
10"	250	204,0	283,0	32,0	70,0	22,0	102,0	316,95	363,0	N-4 Ø 25,4	12,0	15,0	260,0	21,8
12"	300	245,0	332,0	32,0	80,0	24,0	102,0	431,8	363,0	N-4 Ø 25,4	12,0	15,0	370,0	30,8

Válvula de Esfera Direcional de Fluxo
Flange Classe 150 “T” e “L”

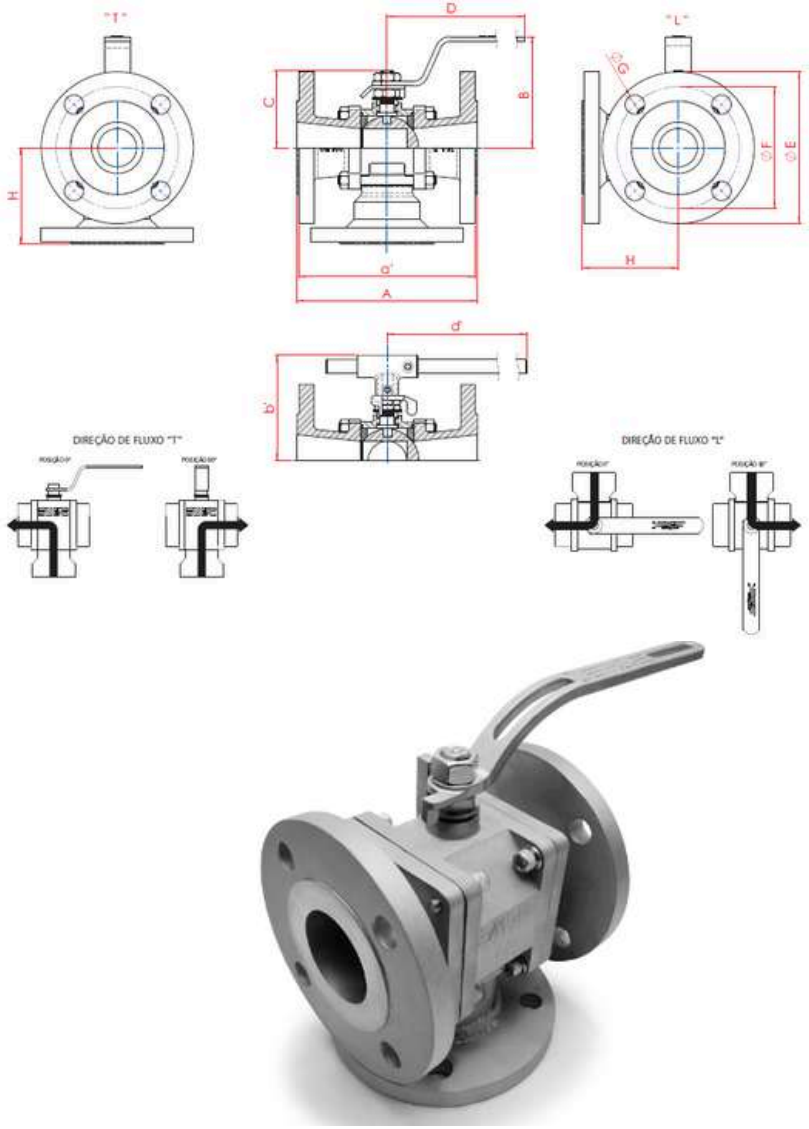
Válvulas de Esfera Direcional Passagem Reduzida (PP)

POL.	DN	PASS	A	a’	B	b	C	D	d’	E	F	G	H	N° DE FUROS	PESO KG
1/2"	15	11,1	108,0	104,0	46,0	73,5	39,0	125,0	225,0	90,0	60,3	15,8	59,6	4	1,923
3/4"	20	14,0	117,0	113,0	48,0	75,0	41,0	125,0	225,0	100,0	69,9	15,8	65,2	4	2690
1"	25	20,4	127,0	123,0	82,0	87,0	51,0	165,0	225,0	110,0	79,4	15,8	69,6	4	3,682
1.1/4"	32	25,4	140,0	136,0	86,0	90,5	60,0	165,0	225,0	115,0	88,9	15,8	74,5	4	4,373
1.1/2"	40	31,7	165,0	161,0	110,0	98,5	73,0	170,0	225,0	125,0	98,4	15,8	83,4	4	6,958
2"	50	38,0	178,0	174,0	113,0	103,0	77,0	170,0	225,0	150,0	120,7	19,1	95,5	4	10,030
2.1/2"	65	50,8	190,0	186,0	125,0	112,5	86,0	256,0	225,0	180,0	139,7	19,1	113,7	4	15,058
3"	80	63,0	203,0	199,0	145,0	147,5	116,0	267,0	415,0	190,0	152,4	19,1	130,0	4	19,642

Válvulas de Esfera Direcional Passagem Plena (PP)

POL.	DN	PASS	A	a’	B	b”	C	D	d’	E	F	G	N° DE FUROS	PESO KG
1/2"	15	14,0	108,0	104,0	46,0	75,0	41,0	125,0	225,0	90,0	60,3	15,8	4	2,080
3/4"	20	20,4	117,0	113,0	48,0	87,0	51,0	165,0	225,0	100,0	69,9	15,8	4	3,067
1"	25	25,4	127,0	123,0	82,0	90,5	60,0	165,0	225,0	110,0	79,4	15,8	4	3,905
1.1/4"	32	31,7	140,0	136,0	86,0	98,5	73,0	170,0	225,0	115,0	88,9	15,8	4	5,377
1.1/2"	40	38,0	165,0	161,0	110,0	103,0	77,0	170,0	225,0	125,0	98,4	15,8	4	7,392
2"	50	50,8	178,0	174,0	113,0	112,5	86,0	256,0	225,0	150,0	120,7	19,1	4	11,873
2.1/2"	65	63,0	190,0	186,0	125,0	147,5	116,0	267,0	415,0	180,0	139,7	19,1	4	19,140

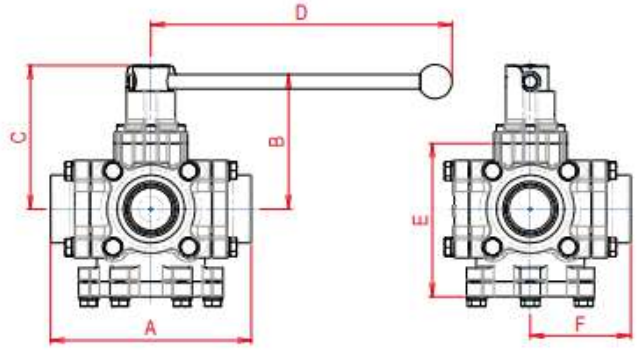
NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

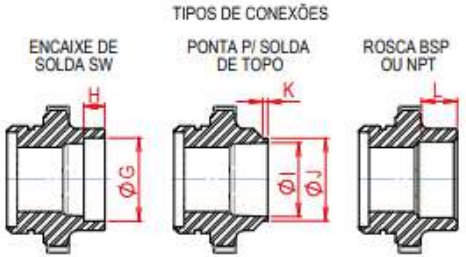


Válvula Esfera Direcional

Válvula de Esfera Multivias CL300 Passagem Plena (PP)

POL.	DN	PASS	A	B	C	D	E	F	G	H	I	J	K	L	PESO KG
1/2"	15	14,0	107,0	75,5	79,5	210,0	83,0	53,5	22,0	9,5	15,8	21,8	2,0	17,0	2,380
3/4"	20	20,4	128,0	83,0	89,5	210,0	94,5	64,0	27,4	12,5	20,9	27,1	2,0	20,0	3,685
1"	25	25,4	143,0	90,5	97,0	220,0	110,0	71,5	34,1	12,5	26,4	33,8	2,0	23,0	5,535
1.1/2"	40	38,0	178,0	120,0	127,0	265,0	135,5	89,0	49,0	12,5	41,0	48,7	3,0	26,0	10,390
2	50	50,8	196,0	124,0	132,0	365,0	145,5	98,0	61,4	16,0	52,5	61,0	3,0	28,0	13,900
2.1/2"	65	63,0	250,0	148,0	157,0	500,0	190,5	124,5	74,1	16,0	62,7	73,8	3,0	30,0	29,430
3"	80	76,0	290,0	190,5	128,0	500,0	223,5	145,0	90,1	16,0	87,1	90,1	3,0	24,0	42,890
4"	100	101,6	327,0	219,0	229,5]	580,0	263,5	163,5	115,4	16,0	112,5	115,5	3,0	38,0	71,595



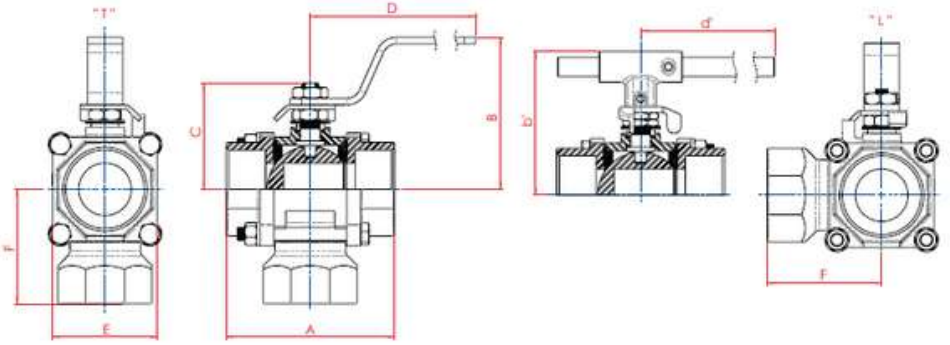


NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Válvula Esfera Direcional

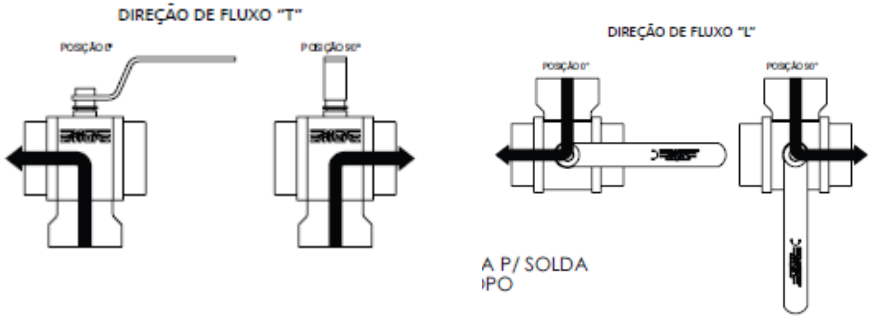
Válvulas de Esfera Direcional Passagem Reduzida (PR)

POL.	DN	PASS	A	B	b'	C	D	d"	E'	F	G	H	I	J	K	L	PESO KG
1/2"	15	11,1	62,0	46,0	73,5	39,0	125.0	225,0	43,5	47,0	9,5	21,8	17,0	15,8	21,8	2,0	0,562
3/4"	20	14,0	71,6	48,0	75,0	41,0	125,0	225,0	48,0	51,8	12,5	27,1	17,0	20,9	27,1	2,0	0,699
1"	25	20,4	88,6	82,0	87,0	51,0	165,0	225,0	57,0	56,4	12,5	33,8	23,0	26,4	33,8	2,0	1,200
1.1/4"	32	25,4	101,0	86,0	90,5	60,0	165,0	225,0	64,0	67,0	12,5	42,6	23,0	35,0	42,6	2,0	1,552
1.1/2"	40	31,7	111,7	110,0	98,5	73,0	170,0	225,0	73,0	71,7	12,5	48,7	28,0	41,0	48,7	3,0	2,468
2"	50	38,0	121,5	113,0	103,0	77,0	170,0	225,0	81,5	82,8	16,0	61,0	28,0	52,5	61,0	3,0	3,204
2.1/2"	65	50,8	138,8	125,0	112,5	86,0	256,0	225,0	94,0	101,0	16,0	73,8	28,0	62,7	73,8	3,0	5,030
3"	80	63,0	176,5	145,0	147,5	116,0	267,0	415,0	116,0	121,8	16,0	90,1	37,0	78,1	90,1	3,0	8,870



Válvulas de Esfera Direcional Passagem Plena(PR)

POL.	DN	PASS	A	B	b'	C	D	d'	E	F	G	H	I	J	K	L	PESO KG
1/4"	8	11,1	62,0	46,0	73,5	39,0	125,0	225,0	43,5	47,0	9,5	14,0	11,0	9,3	14,0	2,0	0,584
3/8	10	11,1	62,0	46,0	75,0	39,0	125,0	225,0	43,5	47,0	9,5	17,6	11,0	12,3	17,6	2,0	0,575
1/2"	15	14,0	71,5	48,0	75,0	41,0	125,0	225,0	48,0	51,8	9,5	21,8	17,0	15,8	21,8	2,0	0,731
3/4	20	20,4	88,6	82,0	87,0	51,0	165,0	225,0	57,0	56,4	12,5	27,1	17,0	20,9	27,1	2,0	1,248
1"	25	25,4	101,0	86,0	90,5	60,0	165,0	225,0	64,0	67,0	12,5	33,8	23,0	26,4	33,8	2,0	1,557
1.1/4"	32	31,7	111,7	110,0	98,5	73,0	170,0	225,0	73,0	71,7	12,5	42,6	23,0	35,0	42,6	2,0	2,540
1.1/2"	40	38,0	121,5	113,0	103,0	77,0	170,0	225,0	81,5	82,8	12,5	48,7	28,0	41,0	48,7	3,0	3,431
2"	50	50,8	138,8	125,0	112,5	86,0	256,0	225,0	94,0	101,0	16,0	61,0	28,0	52,5	61,0	3,0	5,390
2.1/2"	65	63,0	176,5	145,0	147,5	116,0	267,0	415,0	116,0	121,8	16,0	73,8	28,0	62,7	73,8	3,0	9,320



NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

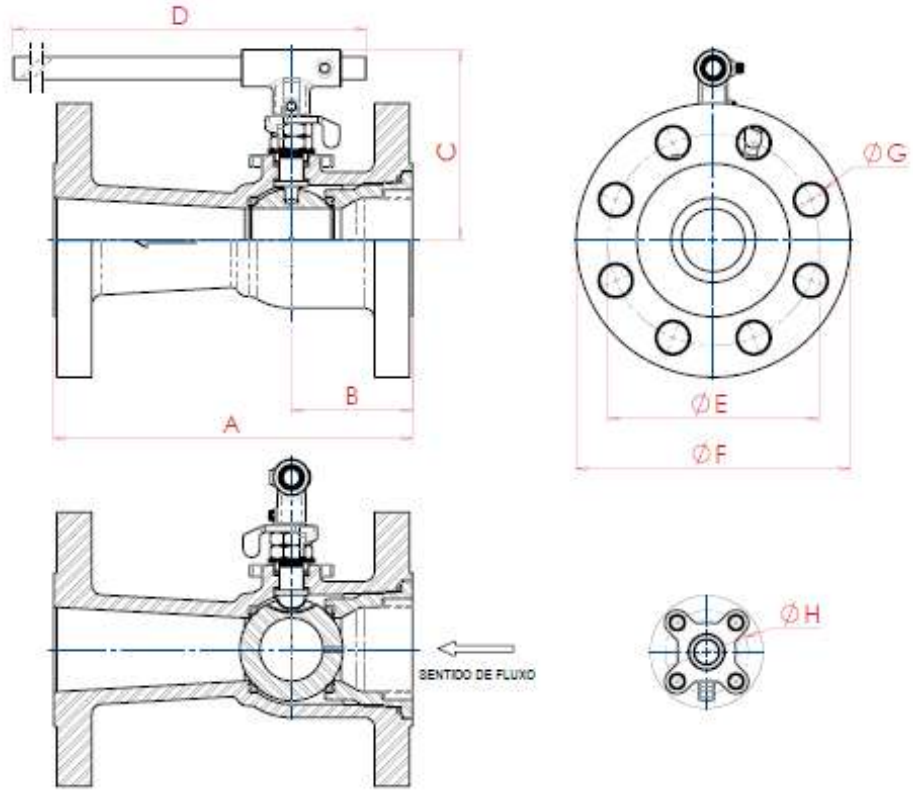
Válvula Esfera Monobloco

Válvula de Esfera Monobloco Passagem Reduzida (PR) Classe 150

POL.	DN	PASS	A	B	C	D	E	F	G	H	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1.1/2"	40	31,7	165,0	67,0	103,0	280,0	98,4	125,0	15,9	40,0	4,0	4,700	72,0
2"	50	38,0	178,0	73,0	112,0	280,0	120,7	150,0	19,1	50,0	4,0	7,000	107,0

Válvula de Esfera Monobloco Passagem Reduzida (PR) Classe 200

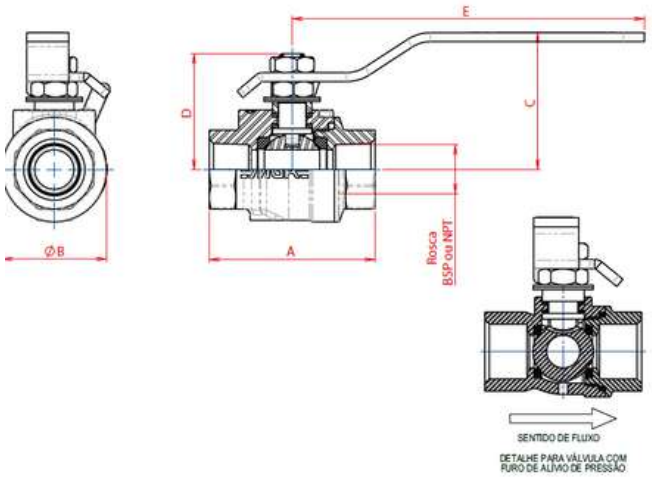
POL.	DN	PASS	A	B	C	D	E	F	G	H	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1.1/2"	40	31,7	190,0	67,0	103,0	280,0	114,3	155,0	22,2	40,0	4,0	7,690	72,0
2"	50	38,0	216,0	73,0	112,0	280,0	127,0	165,0	19,1	50,0	8,0	8,600	107,0



Válvula Esfera Monobloco

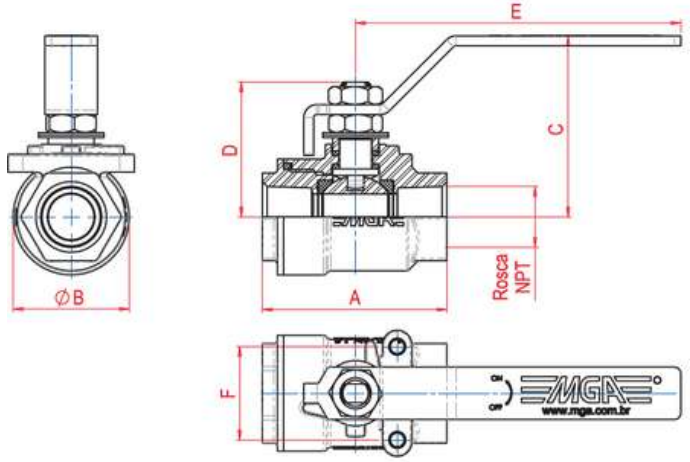
Válvula Esfera Monobloco Passagem Reduzida (PR)

POL.	DN	PASS	A	B	C	D	E	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	11,1	52,5	26,8	45,0	39,5	125,0	0,29	5,0
3/4"	20	14,0	59,0	32,8	48,0	42,0	125,0	0,38	9,7
1"	25	20,4	71,0	39,8	77,0	55,0	165,0	0,80	18,7
1.1/4"	32	25,4	91,0	48,5	86,0	60,0	165,0	1,43	42,0
1.1/2"	40	31,7	101,0	56,5	112,0	73,0	175,0	1,81	70,0
2"	50	38,0	113,0	68,0	117,0	78,0	175,0	2,55	106,0



Válvula Esfera Monobloco Passagem Plena (PP)

POL.	DN	PASS	A	B	C	D	E	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/4"	8	11,1	52,5	31,0	46,5	39,5	125,0	0,290	5,0
3/8"	10	11,1	52,5	31,0	46,5	39,5	125,0	0,310	5,0
1/2"	15	14,0	59,0	37,2	49,0	41,0	125,0	0,370	9,8
3/4"	20	20,4	71,0	48,6	78,0	55,5	165,0	0,740	18,7
1"	25	25,4	91,0	58,0	82,0	59,5	165,0	1,110	42,0
1.1/2"	40	38,0	113,0	83,4	112,0	77,0	175,0	2,400	107,0
2"	50	50,8	130,0	98,0	122,0	93,0	175,0	3,800	185,0
2.1/2"	65	63,0	156,2	122,0	141,5	113,5	256,0	6,520	460,0



Válvula Esfera Monobloco 2000 WOG

POL.	DN	PASS	A	B	C	D	E	F	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/4"	8	11,1	51,8	30,0	52,9	39,3	100,0	28,5	0,235	5,0
3/8"	10	11,1	51,8	30,0	52,9	39,3	100,0	28,5	0,218	5,0
1/2"	15	14,0	56,3	35,4	55,3	41,2	100,0	28,5	0,305	9,8

NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

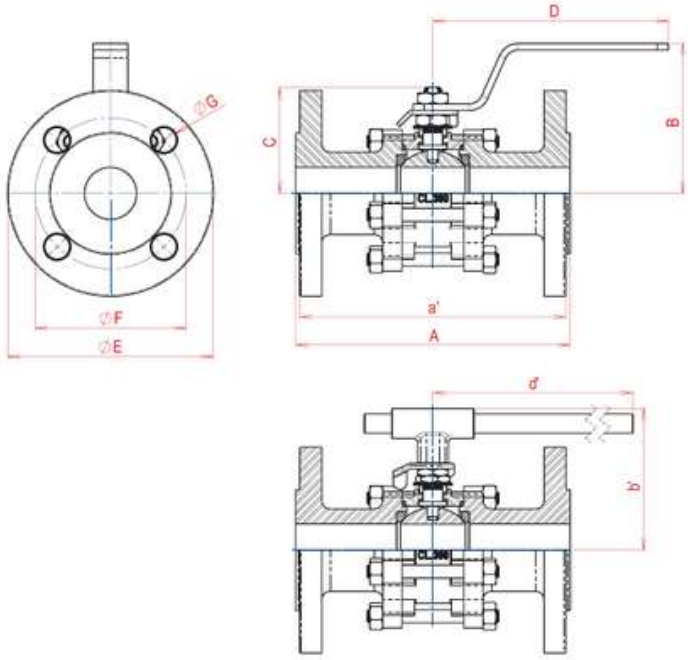
Válvula Esfera Tripartida

Válvula Esfera Tripartida Flange DIN PN 16 Passagem Plena (PP)

POL.	DN	PASS	A	a'	B	b"	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
2"	50	50,8	230,0	224,0	126,0	112,5	86,0	255,0	225,0	165,0	125,0	18,0	4	10,478	420,0
2.1/2"	65	63,0	290,0	284,0	146,0	147,5	114,0	267,0	415,0	185,0	145,0	18,0	4	16,296	650,0
3"	80	76,2	310,0	304,0	154,4	163,0	126,7	335,0	490,0	200,0	160,0	18,0	8	20,954	1120,0
4"	100	101,6	350,0	344,0	-	185,0	-	-	490,0	220,0	180,0	18,0	8	36,210	1980,0

Válvula Esfera Tripartida Flange DIN PN 40 Passagem Plena (PP)

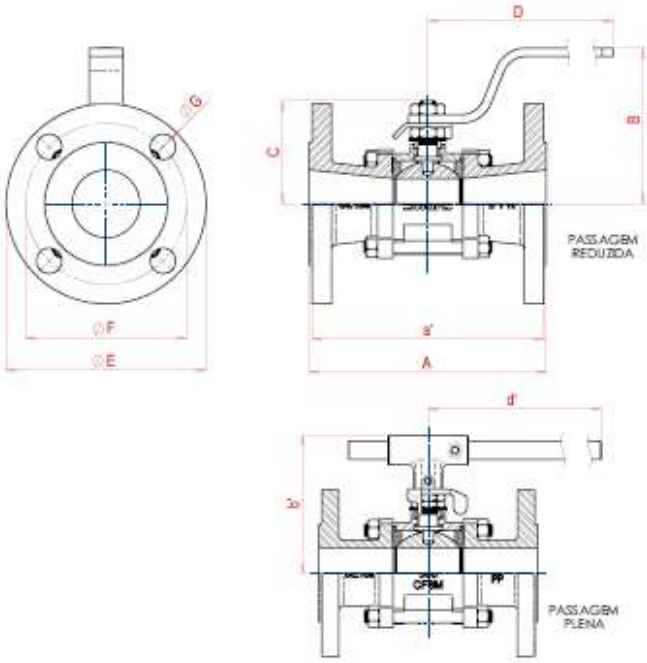
POL.	DN	PASS	A	a'	B	b"	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	14,0	130,0	126,0	62,0	76,0	41,5	125,0	225,0	95,0	65,0	14,0	4	2,190	14,6
3/4"	20	20,4	150,0	146,0	78,2	87,0	55,4	165,0	225,0	105,0	75,0	14,0	4	3,220	27,8
1"	25	25,4	160,0	156,0	82,0	90,5	59,0	165,0	225,0	115,0	85,0	14,0	4	4,290	56,5
1.1/4"	32	31,7	180,0	176,0	102,0	98,5	72,5	182,0	225,0	140,0	100,0	18,0	4	6,340	104,0
1.1/2"	40	38,0	200,0	194,0	109,0	103,0	77,0	182,0	225,0	150,0	110,0	18,0	4	7,508	161,0
2"	50	50,8	230,0	224,0	126,0	112,5	86,0	255,0	225,0	165,0	125,0	18,0	4	11,006	420,0
2.1/2"	65	63,0	290,0	284,0	146,0	147,5	114,0	267,0	415,0	185,0	145,0	18,0	8	17,258	650,0
3"	80	76,2	310,0	304,0	154,4	163,0	126,7	335,0	490,0	200,0	160,0	18,0	8	22,298	1120,0
4"	100	101,6	350,0	344,0	-	185,0	-	-	490,0	235,0	190,0	23,0	8	37,940	1980,0



Válvula Esfera Tripartida

Válvula Esfera Tripartida Flange Passagem Reduzida (PR)

POL.	DN	PASS	A	a'	B	b"	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	11,1	108,0	104,0	46,0	73,5	39,0	125,0	225,0	90,0	60,3	15,8	4	1,41	5,0
3/4"	20	14,0	117,0	113,0	48,0	75,0	41,0	125,0	225,0	100,0	69,9	15,8	4	1,98	9,8
1"	25	20,4	127,0	123,0	82,0	87,0	51,0	165,0	225,0	110,0	79,4	15,8	4	2,80	18,7
1.1/4"	32	25,4	140,0	136,0	86,0	90,5	60,0	165,0	225,0	115,0	88,9	15,8	4	3,44	42,0
1.1/2"	40	31,7	165,0	161,0	110,0	98,5	73,0	170,0	225,0	125,0	98,4	15,8	4	5,40	72,0
2"	50	38,0	178,0	174,0	113,0	103,0	77,0	256,0	225,0	150,0	120,7	19,1	4	7,90	107,0
2.1/2"	65	50,8	190,0	186,0	125,0	112,5	86,0	256,0	225,0	180,0	139,7	19,1	4	11,15	185,0
3"	80	63,0	203,0	199,0	145,0	147,5	116,0	267,0	415,0	190,0	152,4	19,1	4	15,40	305,0
5"	125	101,6	381,0	377,0	-	185,0	-	-	490,0	255,0	215,9	22,2	8	40,90	• 1980,0



Válvula Esfera Tripartida Flange Passagem Plena (PP)

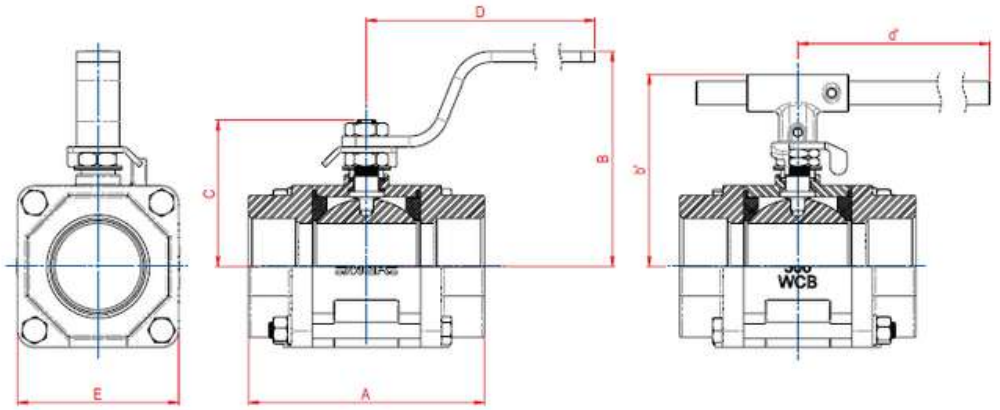
POL.	DN	PASS	A	a'	B	b"	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	14,0	108,0	104,0	46,0	75,0	41,0	125,0	225,0	90,0	60,3	15,8	4	1,56	14,6
3/4"	20	20,5	117,0	113,0	48,0	87,0	51,0	165,0	225,0	100,0	69,9	15,8	4	2,40	27,8
1"	25	25,4	127,0	123,0	82,0	90,5	60,0	165,0	225,0	110,0	79,4	15,8	4	3,05	56,5
1.1/4"	32	31,7	140,0	136,0	86,0	98,5	73,0	170,0	225,0	115,0	88,9	15,8	4	4,42	104,0
1.1/2"	40	38,0	165,0	161,0	110,0	103,0	77,0	170,0	225,0	125,0	98,4	15,8	4	6,00	161,0
2"	50	50,8	178,0	174,0	113,0	112,5	86,0	256,0	225,0	150,0	120,7	19,1	4	9,17	278,0
2.1/2"	65	63,0	190,0	186,0	125,0	147,5	116,0	267,0	415,0	180,0	139,7	19,1	4	14,5	460,0

NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Válvula Esfera Tripartida

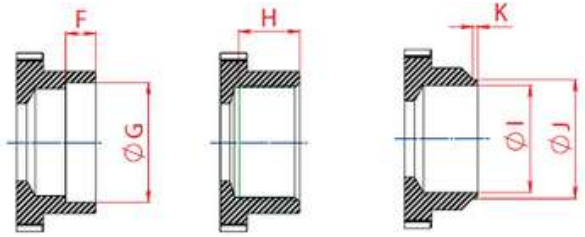
Válvula Esfera Tripartida Passagem Reduzida (PR)

POL.	DN	PASS	A*	B	b	C	D	d'	E	F	G	H	I	J	K	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	11,1	62,0	46,0	73,5	39,0	125,0	225,0	43,5	9,5	21,8	17,0	15,8	21,8	2,0	0,49	5,0
3/4"	20	14,0	71,6	48,0	75,0	41,0	125,0	225,0	48,0	12,5	27,1	17,0	20,9	27,1	2,0	0,61	9,8
1"	25	20,4	88,6	82,0	87,0	51,0	165,0	225,0	57,0	12,5	33,8	23,0	26,4	33,8	2,0	1,05	18,7
1.1/4"	32	25,4	101,0	86,0	90,5	60,0	165,0	225,0	64,0	12,5	42,6	23,0	35,0	42,6	2,0	1,40	42,0
1.1/2"	40	31,7	111,7	110,0	98,5	73,0	170,0	225,0	73,0	12,5	48,7	28,0	41,0	48,7	3,0	2,20	72,0
2"	50	38,0	121,5	113,0	103,0	77,0	170,0	225,0	81,5	16,0	61,0	28,0	52,5	61,0	3,0	2,90	107,0
2.1/2"	65	50,8	138,8	125,0	112,5	86,0	256,0	225,0	94,0	16,0	73,8	28,0	62,7	73,8	3,0	4,65	185,0
3"	80	63,0	176,5	145,0	147,5	116,0	267,0	415,0	116,0	16,0	90,1	37,0	78,1	90,1	3,0	8,70	305,0



Válvula Esfera Tripartida Passagem Plena (PP)

POL.	DN	PASS	A*	B	b	C	D	d'	E	F	G	H	I	J	K	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/4"	8	11,1	62,0	46,0	73,5	39,0	125,0	225,0	44,0	9,5	14,0	11,0	9,3	14,0	2,0	0,54	5,0
3/8"	10	11,1	62,0	46,0	75,0	39,0	125,0	225,0	44,0	9,5	17,6	11,0	12,3	17,6	2,0	0,52	5,0
1/2"	15	14,0	71,5	48,0	75,0	41,0	125,0	225,0	48,0	9,5	21,8	17,0	15,8	21,8	2,0	0,65	14,6
3/4"	20	20,4	88,6	82,0	87,0	51,0	165,0	225,0	57,0	12,5	27,1	17,0	20,9	27,1	2,0	1,13	27,8
1"	25	25,4	101,0	86,0	90,5	60,0	165,0	225,0	64,0	12,5	33,8	23,0	26,4	33,8	2,0	1,60	56,5
1.1/4"	32	31,7	111,7	110,0	98,5	73,0	170,0	225,0	73,0	12,5	42,6	23,0	35,0	42,6	2,0	2,55	104,0
1.1/2"	40	38,0	121,5	113,0	103,0	77,0	170,0	225,0	82,0	12,5	48,7	28,0	41,0	48,7	3,0	3,30	161,0
2"	50	50,8	138,8	125,0	112,5	86,0	256,0	225,0	94,0	16,0	61,0	28,0	52,5	61,0	3,0	5,20	278,0
2.1/2"	65	63,0	176,5	145,0	147,5	116,0	267,0	415,0	116,0	16,0	73,8	28,0	62,7	73,8	3,0	9,38	460,0

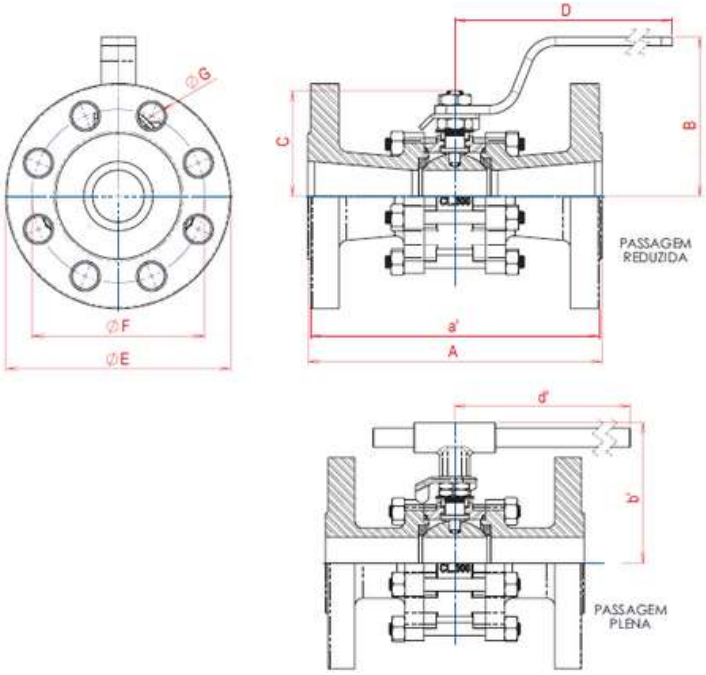


NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Válvula Esfera Tripartida

Válvula de Esfera Tripartida Flange Passagem Reduzida (PR)

POL.	DN	PASS	A	a'	B	b'	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	11,1	140,0	136,0	60,0	-	39,5	125,0	225,0	95,0	66,7	15,9	4	1,90	5,0
3/4"	20	14,0	152,0	148,0	62,0	76,0	41,5	125,0	225,0	115,0	82,6	19,1	4	2,78	9,8
1"	25	20,4	165,0	161,0	78,2	87,0	55,4	165,0	225,0	125,0	88,5	19,1	4	3,92	18,7
1.1/4"	32	25,4	178,0	174,0	82,0	90,5	59,0	165,0	225,0	135,0	98,4	19,1	4	5,25	42,0
1.1/2"	40	31,7	190,0	186,0	102,0	89,5	72,5	170,0	225,0	155,0	114,3	22,2	4	7,85	72,0
2"	50	38,0	216,0	212,0	109,0	103,0	77,0	256,0	225,0	165,0	127,0	19,1	8	9,42	107,0
2.1/2"	65	50,8	241,0	237,0	126,0	112,5	86,0	256,0	225,0	190,0	149,2	22,2	8	14,23	185,0
3"	80	63,0	282,0	278,0	146,0	147,5	114,0	267,0	415,0	210,0	168,3	22,2	8	21,17	305,0
4"	100	76,2	305,0	301,0	154,4	163,0	126,7	335,0	490,0	255,0	200,0	22,2	8	32,40	1050,0
5"	127	101,6	381,0	377,0	-	185,0	-	-	490,0	280,0	235,0	22,2	8	52,50	1980,0



Válvula de Esfera Tripartida Flange Passagem Passagem (PP)

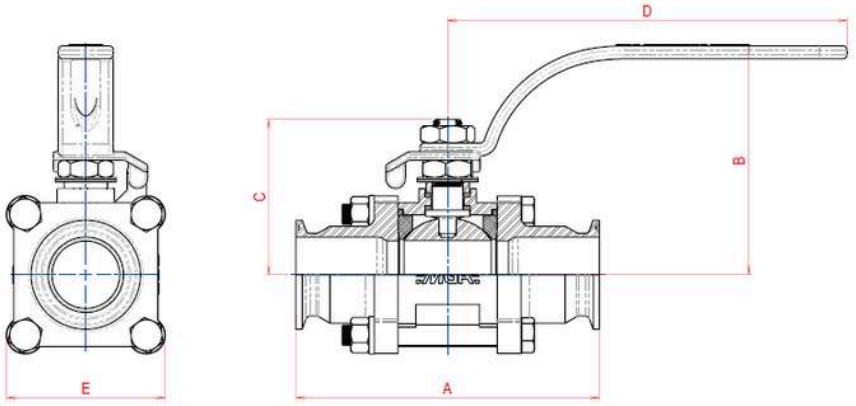
POL.	DN	PASS	A	a'	B	b'	C	D	d'	E	F	G	N° DE FUROS	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2"	15	14,0	140,0	136,0	62,0	76,0	41,5	125,0	225,0	95,0	66,7	15,9	4	1,96	14,6
3/4"	20	20,4	152,0	148,0	78,2	87,0	55,4	165,0	225,0	115,0	82,6	19,1	4	3,17	27,8
1"	25	25,4	165,0	161,0	82,0	90,5	59,0	165,0	225,0	125,0	88,5	19,1	4	4,43	56,5
1.1/4"	32	31,7	178,0	174,0	102,0	89,5	72,5	182,0	225,0	135,0	98,4	19,1	4	6,10	104,0
1.1/2"	40	38,0	190,0	186,0	109,0	103,0	77,0	182,0	225,0	155,0	114,3	22,2	4	8,28	161,0
2"	50	50,8	216,0	212,0	126,0	112,5	86,0	255,0	225,0	165,0	127,0	19,1	8	11,23	420,0
2.1/2"	65	63,0	241,0	237,0	146,0	147,5	114,0	267,0	415,0	190,0	149,2	22,2	8	17,51	650,0
3"	80	76,2	282,0	278,0	154,4	163,0	126,7	335,0	490,0	210,0	168,3	22,2	8	24,00	1120,0

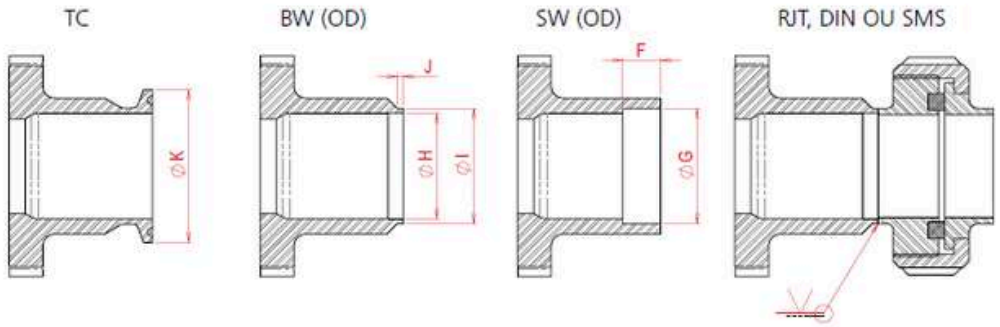
NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Válvula Esfera Tripartida

Válvula de Esfera Tripartida “OD”

POL.	DN	PASS	SWO	BWO	TC	RJT*	B	C	D	E	F	G	H	I	J	K	PESO KG	Coeficiente de Fluxo Kv (m3/h)
1/2”	8	11,1	85,0	85,0	85,0	-	46,0	39,0	125,0	44,0	9,5	13,0	11,0	12,9	2,0	25,4	0,438	5,0
3/4”	15	14,0	100,0	100,0	100,0	-	48,0	41,0	125,0	48,0	12,5	19,3	17,2	19,2	2,0	25,4	0,650	14,6
1”	20	20,4	110,0	110,0	110,0	117,2	82,0	51,0	156,0	57,0	12,5	25,7	23,0	25,6	2,0	50,5	1,110	27,8
1.1/4”	25	25,4	120,0	120,0	120,0	-	86,0	60,0	156,0	64,0	12,5	32,0	28,9	31,9	2,0	50,5	1,600	56,5
1.1/2”	32	31,7	140,0	140,0	140,0	207,2	110,0	73,0	170,0	73,0	12,5	38,4	35,1	38,1	2,0	50,5	2,430	104,0
2”	40	38,0	150,0	150,0	150,0	217,2	113,0	77,0	170,0	82,0	16,0	51,1	47,8	50,8	3,0	64,0	3,080	161,0
2.1/2”	50	50,8	160,0	160,0	160,0	227,2	125,0	86,0	256,0	94,0	16,0	63,8	60,7	63,7	3,0	77,5	4,630	278,0
3”	65	63,0	200,0	200,0	200,0	267,2	145,0	116,0	267,0	116,0	16,0	76,5	73,4	76,4	3,0	91,0	8,450	460,0
4”	80	76,2	200,0	200,0	200,0	318,0	164,0	164,0	560,0	177,0	19,0	101,9	97,6	101,6	3,0	119,0	12,300	1120,0



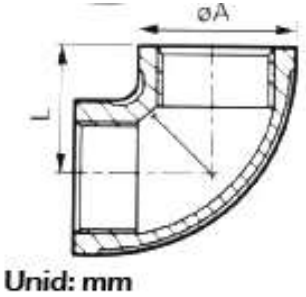


NORMAS DE REFERÊNCIA	
Construção: ASME B 16.34 | ISO 17292 API 608	Testes: API 598 | ISO 5208

Conexões Schedule

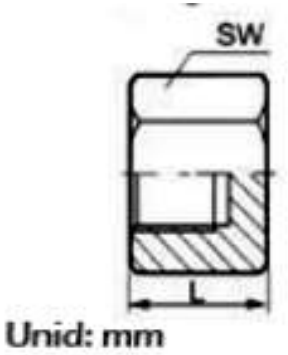
ACI-1 Cotovelo Aço Inox 316 90 Graus com Rosca Fêmea - BSP - 1/8

ø	ø	L
1/8"	18,0	17,6
1/4"	21,3	20,0
3/8"	23,5	21,3
1/2"	29,0	27,0
3/4"	35,0	33,0
1"	43,0	38,0
1.1/4"	52,0	45,0
1.1/2	58,0	50,0
2"	71,0	58,0
2.1/2"	86,0	69,3
3"	99,0	77,5
4"	125,0	97,3



ACI-10 Caps/Tampão Sextavado Aço Inox 316 - BSP - 1/8

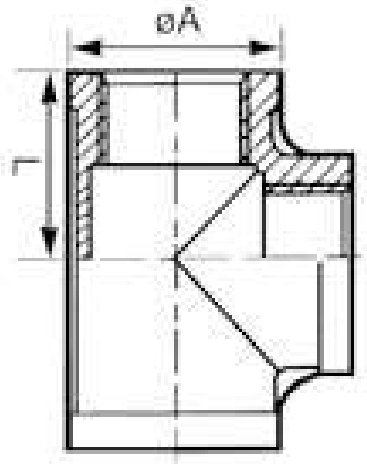
ø	ø	L
1/8"	13.0	15.0
1/4"	17.0	18.0
3/8"	19.0	21.0
1/2"	20.0	27.0
3/4"	24.0	30.0
1"	25.0	38.0
1.1/4"	28.0	50.0
1.1/2	28.0	55.0
2"	34.0	70.0
2.1/2"	40.0	92.0
3"	45.0	109.0
4"	50.0	132.0



ACI-2 TÊ Aço Inox 304 90 Graus Roscas Fêmea - BSP - 1/8

ACI-2 TÊ Aço Inox 304 90 Graus Rosca Fêmea - BSP - 1/8

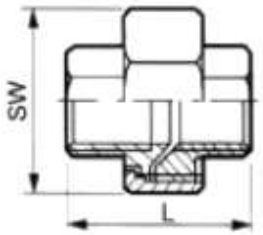
ø	L¹	L²	øA	øC	ø	L¹	L²	øA	øC
1/2"x1/8"	22,0	23,0	16,9	28,8	1.1/4"x3/4"	38,0	40,0	35,8	51,4
1/2"x1/4"	24,0	24,0	20,8	28,8	1.1/4"x1"	40,0	42,0	43,3	51,4
1/2"x3/8"	26,0	25,0	23,3	28,8	1.1/2"x3/8"	34,0	40,0	23,3	57,9
3/4"x1/4"	25,0	27,0	20,8	35,8	1.1/2"x1/2"	35,0	42,0	28,8	57,9
3/4"x3/8"	28,0	28,0	23,3	35,8	1.1/2"x3/4"	38,0	43,0	35,8	57,9
3/4"x1/2"	30,0	31,5	30,0	37,0	1.1/2"x1"	41,0	45,0	43,3	57,9
1"x1/4"	28,0	31,0	20,8	43,3	1.1/2"x1.1/4"	45,0	48,0	51.4	57,9
1"x3/8"	30,0	31,0	23,3	43,3	2"x1/2"	38,0	48,0	28,8	70,6
1"x1/2"	32,0	33,4	30,5	44,0	2"x3/4"	41,0	49,0	35,8	70,6
1"x3/4"	34,0	35,0	35,5	43,3	2"x1"	44,0	51,0	43,3	70,6
1.1/4"x3/8"	32,0	36,0	23,3	51,4	2"x1.1/4"	48,0	54,0	51,4	70,6
1.1/4x1/2"	34,0	38,0	28,8	61,4	2"x1.1/2"	52,0	55,0	57,9	70,6



Conexões Schedule

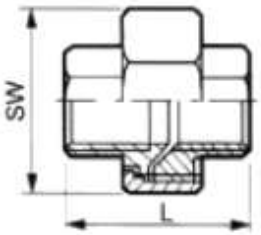
ACI-6A União Assento PTFE Puro Aço Inox 316 (Metal x PTFE) Rosca Fêmea - BSP - 3/8

ø	L	SW
1/8"	29.0	25.0
1/4"	37.5	30.0
3/8"	38.0	35.0
1/2"	42.0	42.0
3/4"	50.4	47.0
1"	48.0	53.0
1.1/4"	59.0	71.0
1.1/2	64.0	78.0
2"	69.0	92.0
2.1/2"	80.0	112.0
3"	88.0	126.0
4"	108.0	157.0



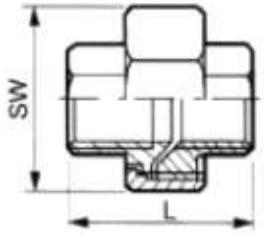
ACI-6RT União Assento PTFE Aço Inox 304 (Metal x PTFE) Encaixe para Solda (SW) - 3/8

ø	ø	L
1/8"	18,0	17,6
1/4"	21,3	20,0
3/8"	23,5	21,3
1/2"	29,0	27,0
3/4"	35,0	33,0
1"	43,0	38,0
1.1/4"	52,0	45,0
1.1/2	58,0	50,0
2"	71,0	58,0
2.1/2"	86,0	69,3
3"	99,0	77,5
4"	125,0	97,3



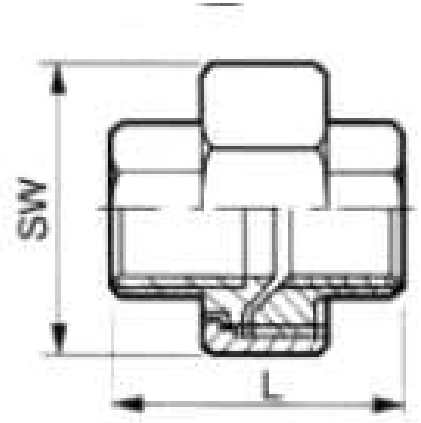
ACI-6RT União Assento PTFE Aço Inox 316 (Metal x PTFE) Encaixe para Solda (SW) - 1

ø	ø	L
1/8"	18,0	17,6
1/4"	21,3	20,0
3/8"	23,5	21,3
1/2"	29,0	27,0
3/4"	35,0	33,0
1"	43,0	38,0
1.1/4"	52,0	45,0
1.1/2	58,0	50,0
2"	71,0	58,0
2.1/2"	86,0	69,3
3"	99,0	77,5
4"	125,0	97,3



ACI-2 TÊ Aço Inox 304 90 Graus Rosca Fêmea - BSP - 1/8

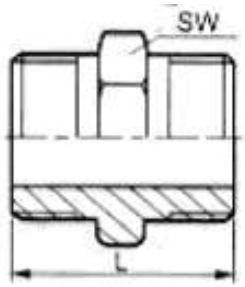
ø	L¹	L²	øA	øC	ø	L¹	L²	øA	øC
1/2"x1/8"	22,0	23,0	16,9	28,8	1.1/4"x3/4"	38,0	40,0	35,8	51,4
1/2"x1/4"	24,0	24,0	20,8	28,8	1.1/4"x1"	40,0	42,0	43,3	51,4
1/2"x3/8"	26,0	25,0	23,3	28,8	1.1/2"x3/8"	34,0	40,0	23,3	57,9
3/4"x1/4"	25,0	27,0	20,8	35,8	1.1/2"x1/2"	35,0	42,0	28,8	57,9
3/4"x3/8"	28,0	28,0	23,3	35,8	1.1/2"x3/4"	38,0	43,0	35,8	57,9
3/4"x1/2"	30,0	31,5	30,0	37,0	1.1/2"x1"	41,0	45,0	43,3	57,9
1"x1/4"	28,0	31,0	20,8	43,3	1.1/2"x1.1/4"	45,0	48,0	51.4	57,9
1"x3/8"	30,0	31,0	23,3	43,3	2"x1/2"	38,0	48,0	28,8	70,6
1"x1/2"	32,0	33,4	30,5	44,0	2"x3/4"	41,0	49,0	35,8	70,6
1"x3/4"	34,0	35,0	35,5	43,3	2"x1"	44,0	51,0	43,3	70,6
1.1/4"x3/8"	32,0	36,0	23,3	51,4	2"x1.1/4"	48,0	54,0	51,4	70,6
1.1/4x1/2"	34,0	38,0	28,8	61,4	2"x1.1/2"	52,0	55,0	57,9	70,6



Conexões Schedule

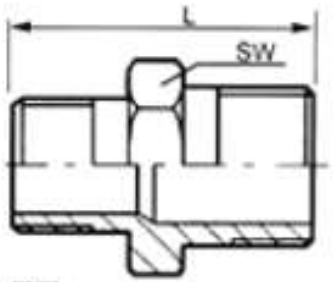
ACI-71 Niple Duplo Sextavado Aço Inox 316 - BSPT - 1/8

ø	L	SW
1/8"	23.6	12.0
1/4"	27.8	16.0
3/8"	28.0	19.0
1/2"	34.0	21.6
3/4"	40.0	30.0
1"	46.0	36.0
1.1/4"	52.5	46.0
1.1/2	54.0	50.0
2"	62.0	65.5
2.1/2"	70.0	79.5
3"	78.4	90.0
4"	94.0	120.0



ACI-7A Niple de Redução Aço Inox 304 - BSP - 2 x 1.1/4

ø	ø	L
1/4"x1/8"	34.0	18.0
3/8"x1/8"	36.0	21.0
3/8"x1/4"	34.0	21.0
1/2"x1/8"	34.0	26.0
1/2"x1/4"	34.0	26.0
1/2"x3/8"	41.0	26.0
1/2"x3/8"	37.0	30.0
3/4"x1/8	37.0	30.0
3/4"x1/4"	37.0	30.0
3/4"x3/8"	45.0	30.0
3/4"x1/2"	39.0	35.0
1"x3/8"	40.0	35.0
1"x1/2"	43.2	35.0
1"x3/4"	50.0	37.0
1.1/4"x3/8"	46.0	46.0
1.1/4"x1/2"	48.0	46.0
1.1/4"x3/4	52.0	46.0
1.1/4"x1"	54.0	46.0
1.1/2"x3/8"	48.0	50.0
1.1/2"x1/2"	49.0	50.0
1.1/2"x3/4"	53.0	50.0



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ACI-7A Niple de Redução Aço Inox 316 - BSP - 1/4 x 1/8

ø	ø	L
1/4"x1/8"	34.0	18.0
3/8"x1/8"	36.0	21.0
3/8"x1/4"	34.0	21.0
1/2"x1/8"	34.0	26.0
1/2"x1/4"	34.0	26.0
1/2"x3/8"	41.0	26.0
1/2"x3/8"	37.0	30.0
3/4"x1/8	37.0	30.0
3/4"x1/4"	37.0	30.0
3/4"x3/8"	45.0	30.0
3/4"x1/2"	39.0	35.0
1"x3/8"	40.0	35.0
1"x1/2"	43.2	35.0
1"x3/4"	50.0	37.0
1.1/4"x3/8"	46.0	46.0
1.1/4"x1/2"	48.0	46.0
1.1/4"x3/4	52.0	46.0
1.1/4"x1"	54.0	46.0
1.1/2"x3/8"	48.0	50.0
1.1/2"x1/2"	49.0	50.0
1.1/2"x3/4"	53.0	50.0

Conexões Schedule

Ponta Roscada

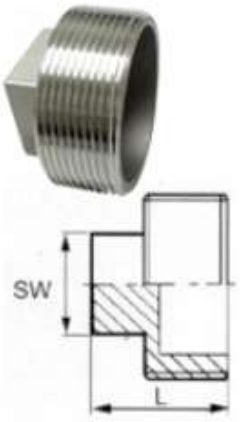
ø	L	SW
1/8"	10,2	30,0
1/4"	13,5	30,0
3/8"	17,2	30,0
1/2"	21,3	35,0
3/4"	26,9	40,0
1"	33,7	40,0
1.1/4"	42.4	50,0
1.1/2	48,3	50,0
2"	60,3	50,0
2.1/2"	76,1	60,0
3"	88,9	70,0
4"	114,3	80,0

ACI - 12B Luva Lisa com Rosca Fêmea

ø	L	SW
1/8"	15.0	17.0
1/4"	18.5	25.0
3/8"	21.3	26.0
1/2"	27.7	34.0
3/4"	33.6	36.0
1"	39.5	43.3
1.1/4"	49.0	48.0
1.1/2	55.0	48.0
2"	67.0	56.0
2.1/2"	83.1	65.6
3"	100.0	71.0
4"	123.5	83.5

K-8B Bujão Cabeça Quadrada

ø	L	SW
1/8"	15.0	17.0
1/4"	18.5	25.0
3/8"	21.3	26.0
1/2"	27.7	34.0
3/4"	33.6	36.0
1"	39.5	43.3
1.1/4"	49.0	48.0
1.1/2	55.0	48.0
2"	67.0	56.0
2.1/2"	83.1	65.6
3"	100.0	71.0
4"	123.5	83.5



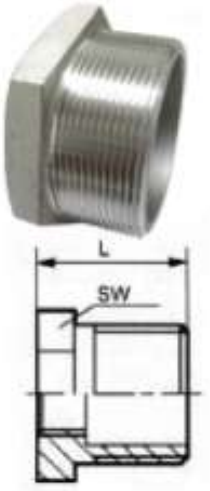
ACI - 12C Meia-Luva Rosca Solda

ø	L	SW
1/8"	19.0	6x6
1/4"	20.0	9x9
3/8"	22.0	11x11
1/2"	25.0	13x13
3/4"	27.0	16x16
1"	32.0	20x20
1-1/4"	35.0	24x24
1-1/2"	37.0	25x25
2"	38.0	32x32
2-1/2"	48.0	42x42
3"	52.0	46x46
4"	62.0	58x58

ACI - 9 Bucha de Redução Sextavada

ø	L	SW
1/4"x1/8"	15.2	16.0
3/8"x1/8"	16.5	18.0
3/8"x1/4"	16.5	18.0
1/2"x1/8"	21.0	26.0
1/2"x1/4"	21.0	26.0
1/2"x3/8"	21.0	26.0
3/4"x1/4"	24.0	30.0
3/4"x3/8"	24.0	30.0
3/4"x1/2"	24.0	30.0
1"x1/4"	27.0	35.0
1"x3/8"	27.0	35.0
1"x1/2"	27.0	35.0
1"x3/4"	27.0	35.0
1-1/4"x1/2"	30.0	45.0
1-1/4"x3/4"	30.0	45.0
1-1/4"x1"	30.0	45.0
1-1/2"x3/8"	36.0	52.0
1-1/2"x1/2"	36.0	52.0

ø	L	SW
1-1/2"x3/4"	36.0	52.0
1-1/2"x1"	36.0	52.0
1-1/2"x1-1/4"	36.0	52.0
2"x1/4"	36.0	63.0
2"x1/2"	36.0	63.0
2"x3/4"	36.0	63.0
2"x1"	36.0	63.0
2"x1-1/4"	36.0	63.0
2"x1-1/2"	36.0	63.0
2-1/2"x1"	45.0	63.0
2-1/2"x1-1/4"	45.0	81.0
2-1/2"x1-1/2"	45.0	81.0
2-1/2"x2"	45.0	81.0
3"x1-1/2"	47.0	81.0
3"x2"	47.0	95.0
3"x2-1/2"	47.0	95.0
4"x2	52.0	119.0
4"x2-1/2"	52.0	119.0
4"x3"	52.0	119.0



Mercado Inox

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