

Descrição / Características

Válvula de bloqueio de fluxo, indicada para utilização em diversos líquidos, gases e vapores em ampla faixa de temperatura e pressão conforme norma ASME B16.34.

Construção tripartida (um corpo e duas tampas), facilitando a manutenção sem a necessidade de desconectar as extremidades da linha.

Haste à prova de expulsão.

Disponível na construção com dupla vedação, o que proporciona maior segurança quando utilizadas em linha de vapor.

Acionamento manual por alavanca com ou sem trava para cadeado ou lacre, disponível também com acionamento por atuador pneumático, elétrico ou caixa de redução.

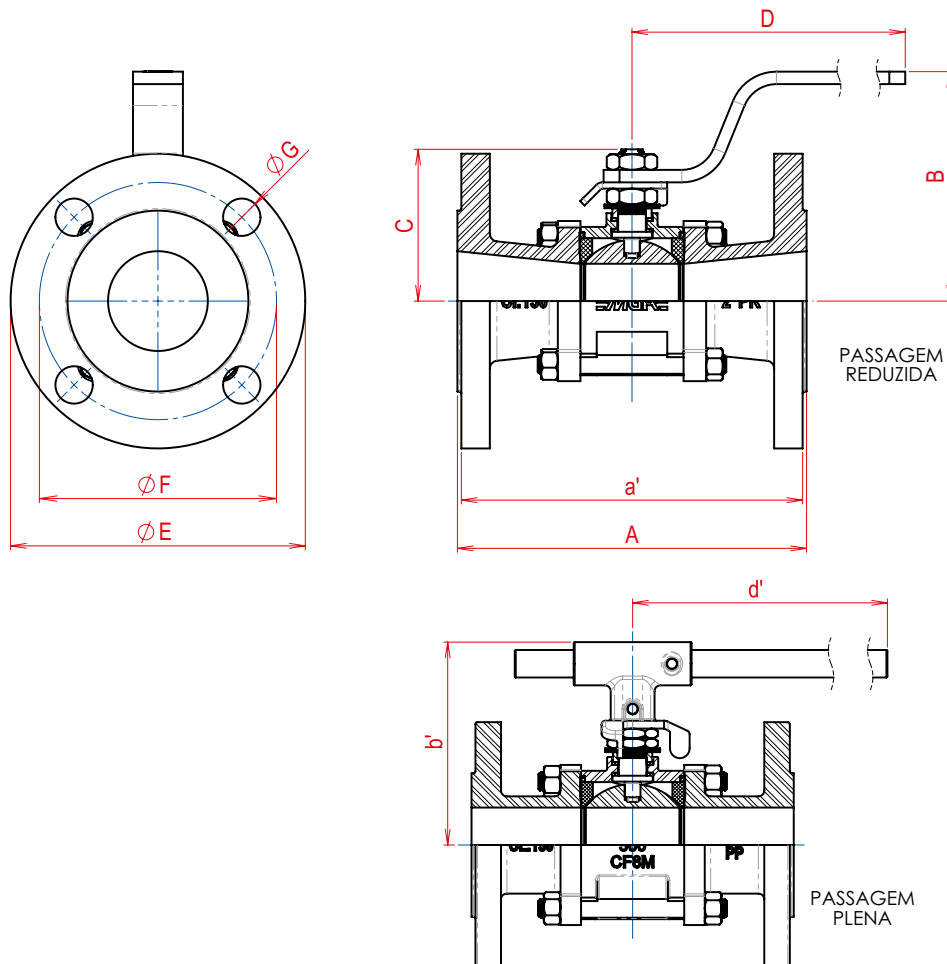
Dados Técnicos

EDIÇÃO 02 - 09 / 2021

Normas de Referência

Construção: **ASME B 16.34 | ISO 17292
API 608**

Testes: **API 598 | ISO 5208**



VÁLVULA DE ESFERA TRIPARTIDA FLANGE PASSAGEM REDUZIDA (PR)															
BITOLA		PASS.	A	a'	B	b'	C	D	D'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)
POL.	DN														
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 DE ESFERA TRIPARTIDA FLANGE PASSAGEM PLENA (PP)															
BITOLA		PASS.	A	a'	B	b'	C	D	D'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)
POL.	DN														
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

• Modelo VET S1000

A vazão apresentada em Kv (m³/h) corresponde a um diferencial de pressão (Δp) de 1 bar utilizando água como fluido de teste.
a' - (medida para fabricação de conexões face plana).



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Haste à prova de expulsão.

Válvula tripartida com exclusivo sistema de vedações enclausuradas que aumenta a resistência das sedes de vedação, melhorando o desempenho da válvula.

Acionamento manual por alavanca com ou sem trava para cadeado ou lacre, disponível também com acionamento por atuador pneumático, elétrico ou caixa de redução.

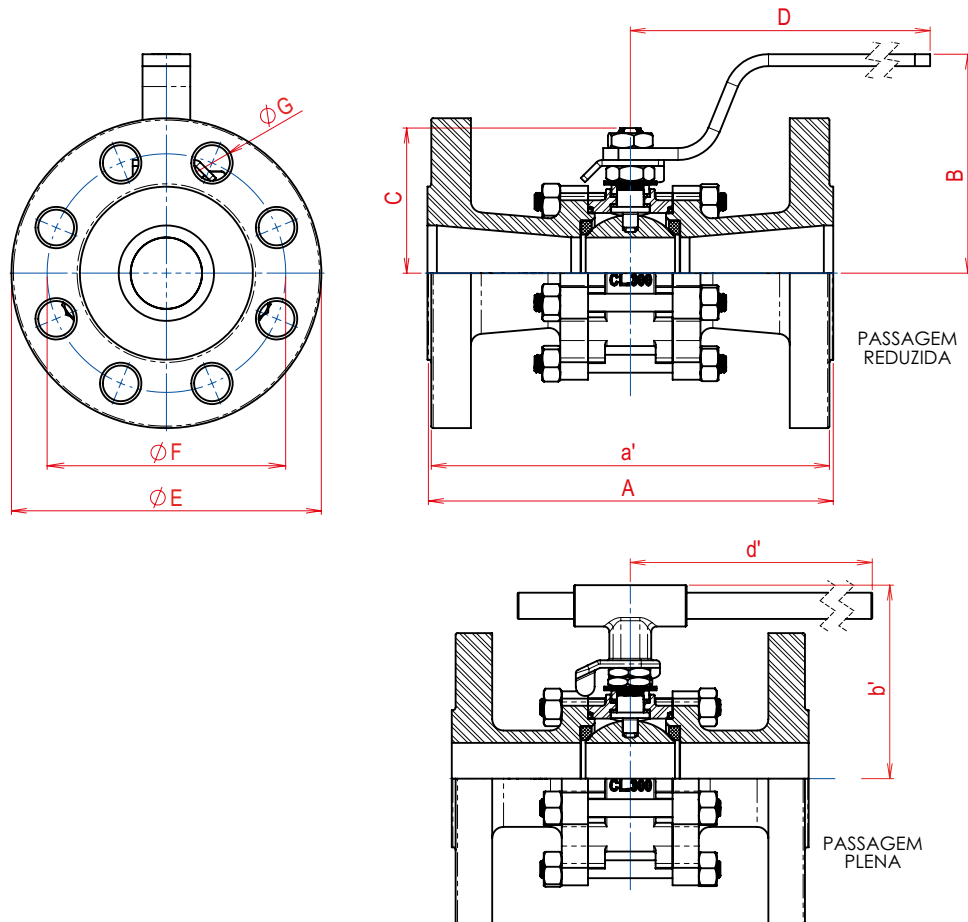
Dados Técnicos

EDIÇÃO 02 - 12 / 2019

Normas de Referência

Construção: **ASME B 16.34 | ISO 17292
API 608**

Testes: **API 598 | ISO 5208**



VÁLVULA DE ESFERA TRIPARTIDA FLANGE PASSAGEM REDUZIDA (PR)

BITOLA		PASS.	A	a'	B	b'	C	D	d'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)
POL.	DN														
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 PLENA (PP)

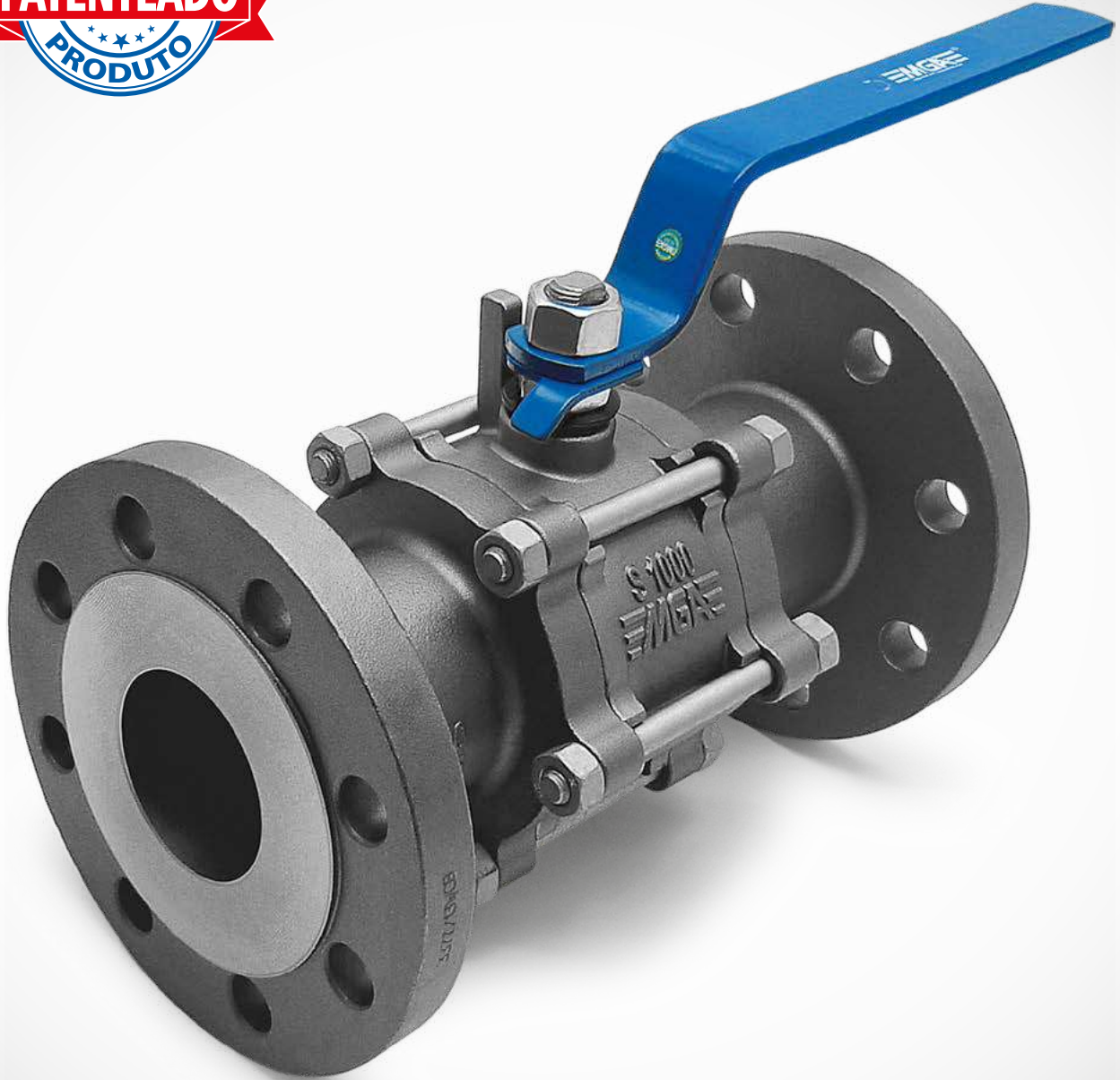
BITOLA		PASS.	A	a'	B	b'	C	D	d'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)
POL.	DN														
1/2"	15	14,0	140,0	136,0	62,0	76,0	41,5	125,0	225,0	95,0	66,7	15,9	4	1,96	14,6
3/4"	20	20,4	152,0	148,0	78,2	87,0	55,4	165,0	225,0	115,0	82,6	19,1	4	3,17	27,8
1"	25	25,4	165,0	161,0	82,0	90,5	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

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

- Disponíveis em duas opções de esfera, maciça ou oca. Na tabela acima o peso indicado é da válvula montada com esfera maciça.

a' - (medida para fabricação de conexões face plana).

* As válvulas de 4" PP nas configurações "AC" e "TI" e, a válvula de 3" PP na configuração "TI", com acionamento manual estão disponíveis somente por tubo.



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Construção tripartida (um corpo e duas tampas), facilitando a manutenção sem a necessidade de desconectar as extremidades da linha.

Haste à prova de expulsão.

Válvula tripartida com exclusivo sistema de vedações enclausuradas que aumenta a resistência das sedes de vedação, melhorando o desempenho da válvula.

Acionamento manual por alavanca com ou sem trava para cadeado ou lacre, disponível também com acionamento por atuador pneumático, elétrico ou caixa de redução.

Face a face conforme norma DIN 3202 - F1

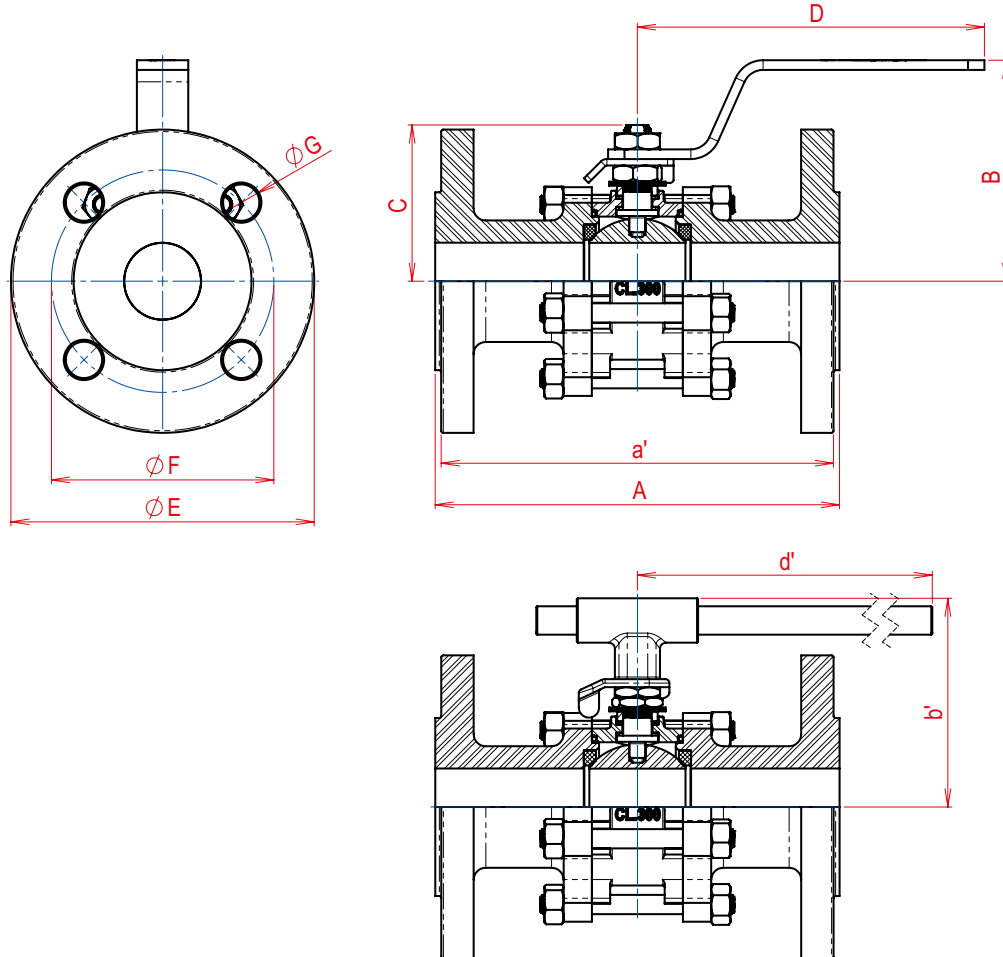
Dados Técnicos

EDIÇÃO 01 - 04 / 2019

Normas de Referência

Construção: **ASME B 16.34 | ISO 17292
API 608**

Testes: **API 598 | ISO 5208**



VÁLVULA DE ESFERA TRIPARTIDA FLANGE DIN PN 16 PASSAGEM PLENA (PP)																
BITOLA		PASS.	A	a'	B	b'	C	D	d'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)	
POL.	DN															
•	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 DE ESFERA TRIPARTIDA FLANGE DIN PN 40 PASSAGEM PLENA (PP)																
BITOLA		PASS.	A	a'	B	b'	C	D	d'	E	F	G	N.º DE FUROS	PESO kg	Coeficiente de Fluxo Kv (m³/h)	
POL.	DN															
	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

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

• Disponíveis em duas opções de esfera, maciça ou oca. Na tabela acima o peso indicado é da válvula montada com esfera maciça.

a' - (medida para fabricação de conexões face plana).

* As válvulas de 4" PP nas configurações "AC" e "TI" e, a válvula de 3" PP na configuração "TI", com acionamento manual estão disponíveis somente por tubo.

INSTALAÇÃO

- Verificar se a válvula está adequada às condições de pressão e temperatura do fluido.
- Inspeccionar a tubulação antes da instalação da válvula, a fim de assegurar que não haja qualquer detrito proveniente da montagem da rede.
- Colocar a válvula na posição "aberta" durante a instalação, para evitar dano à esfera.
- Verificar o correto alinhamento da tubulação e da furação dos flanges. O alinhamento axial também é importante para válvulas roscadas. Não corrija o alinhamento da tubulação utilizando a instalação da válvula.
- Observar o alinhamento do atuador nas válvulas automatizadas, pois o descuido neste item resulta em aumento de torque e funcionamento incorreto do atuador.
- Para válvulas MGA automatizadas através de atuador pneumático, a pressão da rede de ar comprimido deve ser de no mínimo 6 bar, para seu perfeito funcionamento, exceto casos onde o atuador esteja redimensionado para pressões inferiores.
- Desmontar as válvulas Tripartidas com conexões soldadas para efetuar a soldagem na tubulação, pois o calor gerado pela solda poderá danificar a vedação.
- Remover substâncias estranhas das superfícies de assentamento das válvulas com sedes em PTFE, tais como: escórias de solda, resíduos arenosos da limpeza por jato de areia, aparas de metal, pois estes danificam a vedação da válvula.
 - O aço ASTM A 216 WCB tem como característica excelentes propriedades mecânicas, porém apresenta baixa resistência química, sendo indicado a aplicação de uma proteção contra corrosão após instalação.

TRANSPORTE E ARMAZENAGEM

Manter as válvulas fora da ação do sol, chuva e maresia, sem retirar as suas proteções.

Para transportar as válvulas acima de 2", faça-o sem levantar pela alavanca ou atuador.

OPERAÇÃO

As válvulas de esfera MGA são projetadas para fluxo bidirecional, a menos que a esfera seja dotada de furo de alívio ou contato.

A abertura e fechamento das válvulas operadas manualmente são feitas mediante giro de ¼ de volta (90°) no sentido horário para o fechamento e anti-horário para abertura.

As válvulas MGA são válvulas de bloqueio on/off, isto é, trabalham somente em duas posições: totalmente abertas ou totalmente fechadas, portanto, não podem ser utilizadas para regular a vazão do fluido.

As válvulas de esfera com sedes resilientes (sedes macias) são projetadas para aplicações em fluidos limpos, isentos de sedimentos e sólidos em suspensão.

CUIDADOS QUE DEVEM SER TOMADOS COM AS VÁLVULAS MGA

GARANTIA E ASSISTÊNCIA TÉCNICA

Assegura-se aos produtos fabricados pela MGA, garantia contra qualquer defeito de material ou fabricação que neles se apresentem, no período de 6 (seis) meses contados a partir da emissão da nota fiscal.

Os serviços de garantia a serem prestados são restritos unicamente a substituição ou reparo de peças defeituosas.

O processo será livre de custos desde que o produto retorne acompanhado da nota fiscal de compra.

A garantia torna-se nula e sem efeitos se a peça sofrer qualquer dano provocado por acidentes, apresentar sinais de violação, mau uso, aplicações fora do especificado ou alterações do projeto inicial.

A MGA somente garante válvulas com conexões encaixe solda que forem com Niple 100mm e ou detectado problema de fabricação.

A MGA somente garante válvulas automatizadas, montadas pela própria MGA ou Filiais.

Para obter qualquer informação sobre sua válvula, ou se necessitar assistência técnica, favor informar diâmetro e o código de rastreabilidade que se encontra gravado no corpo da válvula.

CONDIÇÕES GERAIS DE MANUTENÇÃO

A manutenção normal consiste em trocar as vedações e apertar os parafusos não mais que o suficiente.

Apertar excessivamente resultará em um torque de acionamento elevado e no desgaste prematuro das vedações, podendo comprometer o bom funcionamento da válvula.

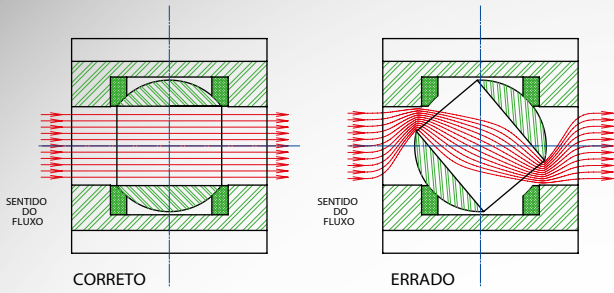
Para eliminar vazamentos na haste aperte os parafusos do preme gaxeta com oitavo de volta a cada vez.

Se necessário abrir a válvula para manutenção dos componentes internos, certifique-se que a mesma esteja despressurizada.

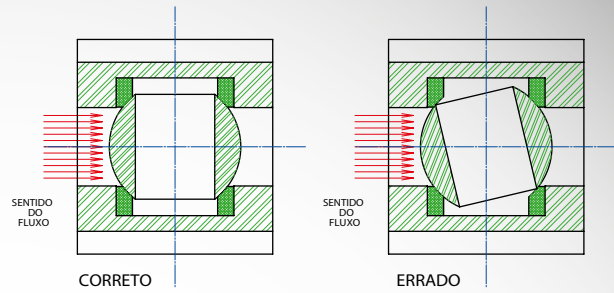
Utilize sempre peças de reposição originais, que são sua garantia de segurança.

Os torques apropriados para o aperto dos parafusos estão disponíveis no site da MGA.

Modo de Abertura



Modo de Fechamento



Construção da Esfera

A esfera oca não é indicada para a utilização em fluidos com altas pressões e/ou velocidades.

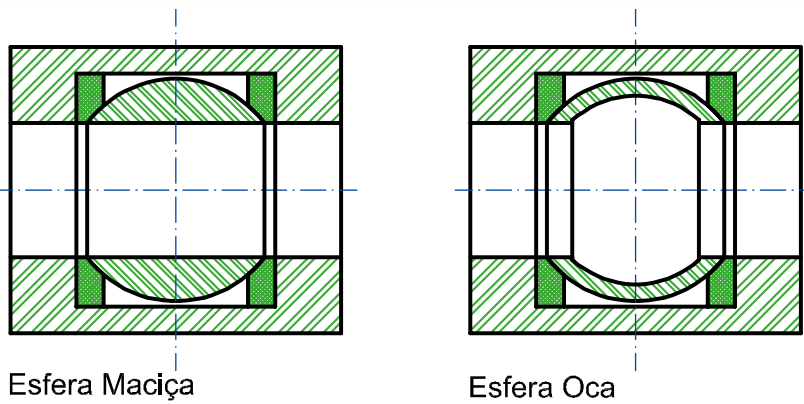
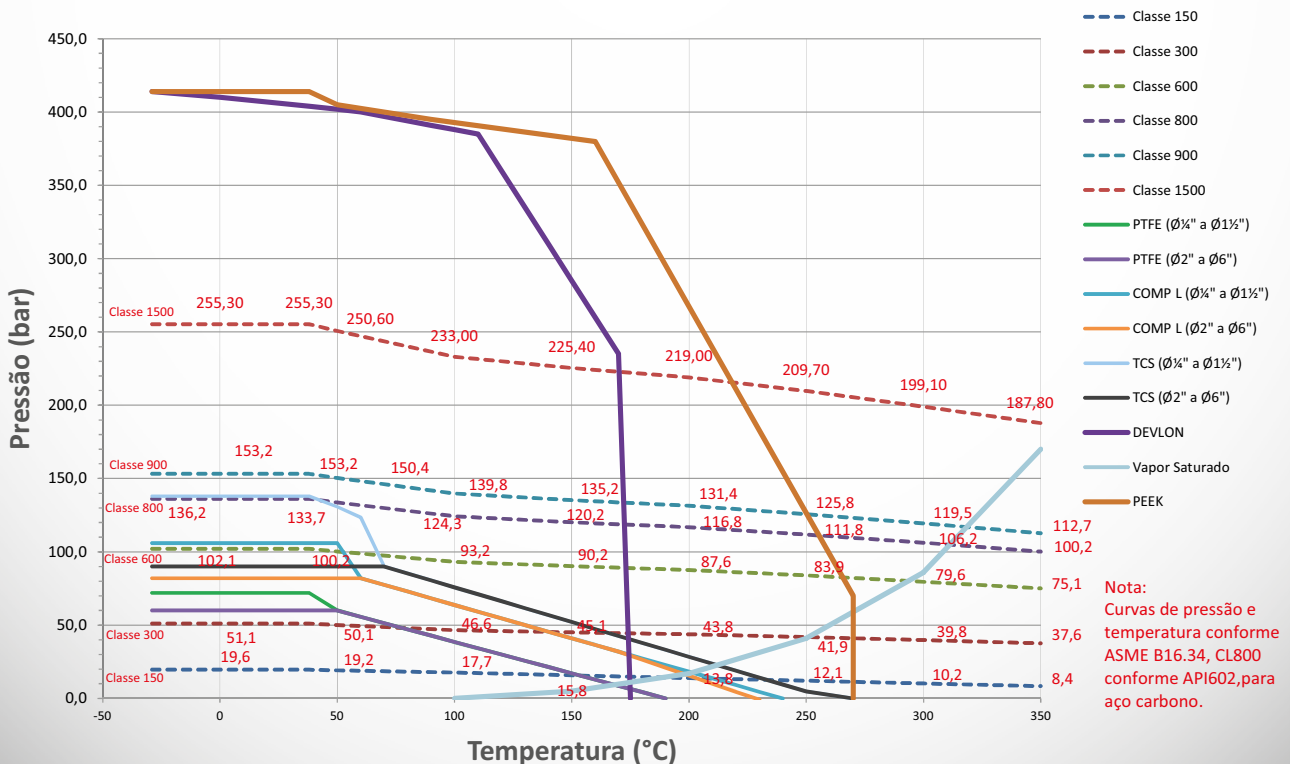


Gráfico Pressão x Temperatura



Para aplicação em vapor saturado, a temperatura máxima de operação é de 200°C e a pressão máxima de operação é de 16 bar g.
Para esta aplicação **NÃO** deve ser utilizado material PTFE (PURO).

TORQUE DE OPERAÇÃO À PRESSÃO MÁXIMA DE TRABALHO (PMT)

CLASSE 150 FLUTUANTE															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP E 2.1/2"PR	2.1/2"PP E 3"PR	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	20	8	8	10	12	21	30	48	68	80	115	230	750	-	-	PTFE
		-	20	35	40	-	50	70	90	200	280	-	-	-	-	METÁLICA

CLASSE 300 FLUTUANTE															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP E 2.1/2"PR	2.1/2"PP E 3"PR	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	50	8	8	12	13	23	30	48	68	90	120	550	-	-	-	PTFE
		-	-	-	-	-	-	-	140	180	320	650	-	-	-	METÁLICA

CLASSE 150 TRUNNION															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP E 2.1/2"PR	2.1/2"PP E 3"PR	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	20	-	-	-	-	-	-	-	-	-	-	505	800	1000	1500	PTFE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CLASSE 300 TRUNNION															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP E 2.1/2"PR	2.1/2"PP E 3"PR	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	50	-	-	-	-	-	-	-	-	-	-	550	1200	1500	2200	PTFE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

CLASSE 600 TRUNNION															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	100	-	-	-	-	-	-	110	-	199	339	820	-	-	-	PTFE
		-	-	-	-	-	-	157	-	360	430	1100	-	-	-	DEVLON
		-	-	-	-	-	-	180	-	300	462	1300	-	-	-	PEEK

CLASSE 800 FLUTUANTE															Unidade: N.m	
BITOLA		1/4"PP E 3/8"PP	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	130	10	10	18	23	-	48	80	-	-	-	-	-	-	-	PTFE
		20	20	35	50	-	120	250	-	-	-	-	-	-	-	METÁLICA

CLASSE 900 TRUNNION															Unidade: N.m	
BITOLA		1/4"PP 3/8"PP E 1/2"PR	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	150	-	-	-	-	-	-	179	-	299	535	-	-	-	-	DEVLON
		-	-	-	-	-	-	212	-	353	632	-	-	-	-	PEEK

CLASSE 1500 TRUNNION															Unidade: N.m	
BITOLA		1/4"PP E 3/8"PP	1/2"PP E 3/4"PR	3/4"PP E 1"PR	1"PP E 1.1/4"PR	1.1/4"PP E 1.1/2"PR	1.1/2"PP E 2"PR	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	250	-	20	45	60	-	-	248	-	472	864	-	-	-	-	DEVLON
		-	24	54	72	-	-	292	-	557	1020	-	-	-	-	PEEK

CLASSE 1500 FLUTUANTE															Unidade: N.m	
BITOLA		1/4"PP E 3/8"PP	1/2"PP	3/4"PP	1"PP	1.1/4"PP	1.1/2"PP	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	250	25	25	44	53	-	126	170	-	-	-	-	-	-	-	DEVLON
		30	30	54	65	-	156	210	-	-	-	-	-	-	-	PEEK

VED-M CLASSE 300															Unidade: N.m	
BITOLA		1/4"PP E 3/8"PP	1/2"PP	3/4"PP	1"PP	1.1/4"PP	1.1/2"PP	2"PP	2.1/2"PP	3"PP	4"PP	6"PP	8"PP	10"PP	12"PP	VEDAÇÃO
PRESSÃO (bar)	50	18	18	25	30	55	55	70	120	180	230	550	-	-	-	PTFE
		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTAS:

- (1) TODOS OS TORQUES ESTÃO COM UM FATOR DE SEGURANÇA DE 30%. VALORES PARA ÁGUA ESTÁTICA E LIMPA À TEMPERATURA AMBIENTE
- (2) EM CASO DE USO DE FATORES SUPERIORES A 30%, POR FAVOR CONFIRME A MÁXIMA TENSÃO ADMISSÍVEL PARA A HASTE.
- (3) É DE EXTREMA IMPORTÂNCIA QUE VÁLVULAS, MESMO QUE FORA DE SERVIÇO (ESTOQUE), SEJAM ACIONADAS PERIODICAMENTE PARA EVITAR TRAVAMENTOS ANTES DO SEU USO. FORAM COMPROVADOS EM TESTES PELA NOSSA ENGENHARIA QUE VÁLVULAS INOPERADAS POR CERCA DE 30 DIAS CHEGAM, EM ALGUNS CASOS, A AUMENTAR EM 50% OU MAIS O SEU TORQUE DE ACIONAMENTO.

TABELA DE INFORMAÇÕES GERAIS



Modelo Válvula Descrição Classe	VEB CL150	VEB CL300	VET TRUNNION	VET TRUNNION	VET TRUNNION	VET TRUNNION	VET CL800	VET	VET	VET S1000 F300	VET S1000 EDIN	VET S1000	VET LF	VET OD 400Psi	VETD	VETD	
BITOLAS	1/2" PP a 12" PP	2" PP a 6" PP	6" PP	2" PP 3" PP 4" PP e 6" PP	2" PP 3" PP e 4" PP	1/2" PP a 1" PP	3/4" PR a 2 1/2" PR 1/4" PP a 2" PP	1/2" PR a 3" PR 1/4" PP a 2 1/2" PP	1/2" PR a 3" PR 1/2" PP a 2 1/2" PP	1/2" PR a 4" PR 1/2" PP a 3" PR	1/2" PR a 4" PR	1/2" PR a 4" PR 1/4" PP a 4" PP	1/2" PR a 2 1/2" PR 1/4" PP a 2" PP	1/2" a 4"	1/2" PR a 3" PR 1/4" PP a 2 1/2" PP	1/2" PR a 3" PR 1/2" PP a 2 1/2" PP	
MATERIAL (Corpo Extremidades)	ASTM A216 Gr. WCB ASTM A351 Gr. CF8 ASTM A351 Gr. CF8M ASTM A351 Gr. CF3 ASTM A351 Gr. CF3M ASTM A352 Gr. LCB ASTM A352 Gr. LCC ASTM A895 Gr. 1B ASTM A895 Gr. 4A ASTM A895 Gr. 6A ASTM A182 Gr. F51 ASTM A182 Gr. F55 ASTM A-105 ASTM A182 Gr. LF2 ASTM A182 Gr. 304 ASTM A182 Gr. 304L ASTM A182 Gr. 316 ASTM A182 Gr. 316L LF - Latão Forjado C 37700 FN Foto Nodular (GGG 50) FC Foto Cinzento (GG25) Cuz-40Ni2 LATÃO																
MATERIAL (Obturator)	ASTM A351 Gr. CF8 ASTM A216 Gr. 304 ASTM A351 Gr. CF8M ASTM A216 Gr. 316 ASTM A351 Gr. CF3 ASTM A216 Gr. 304L ASTM A351 Gr. CF3M ASTM A216 Gr. 316L ASTM A217 Gr. CA-15 ASTM A216 Gr. 410 LATÃO ASTM B16 - Liga 360 ASTM A895 Gr. 1B ASTM A895 Gr. 4A ASTM A895 Gr. 6A FN + Níquel Foto Nodular + Níquel WCB + 13CR LATÃO Cuz-40Ni2																
VEDAÇÕES	TP Teflon Puro TR Teflon Reforçado TRS Teflon Supering TCS Teflon Carbono Soft TP DV TP Dupla Vedação TR DV TR Dupla Vedação TRS DV TRS Dupla Vedação DEVLON PEEK STELLITE EPDM BUINA-N PCTFE																
EXTREMIDADES	BOSCA BSP ISO 228 BOSCA NPT ASME B 1.20.1 SOLDA SW ASME B16.11 SOLDA BW ASME B16.25 ASME B16.5 Raizura Espiral ASME B16.5 Raizura Convencional FLANGE DIN PN 10 / 16 / 25 / 40 RJT / FAJ SOLDA SWO SOLDA BWO NIPLE - TC UNÃO - DIN UNÃO - RTJ SMS NIPLE SCHEDULE Extremidade Estendida																
Aterramento Antiestático																	
Versão Fire Safe ISO 10497/API 607																	
Trava para Cadeado / Lacre																	
Placa de Identificação																	
Dispositivo Retorno por Mola																	
Cavidade Preenchida																	
Acionamento Automatizado																	

Legenda:

- Padrão
- Sob Consulta
- Padrão somente nas versões Fire Safe e Metal x Metal
- Disponível Somente

| Modelo
Válvula
Descrição
Classe | VED-M
 | VED-M FLG | VEM 100WOG | VEM FLG | VEM | VEM | VEM | VEM | VEM | VEW | VEW | VB | VG | VGL | VF | JE | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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BITOLAS	1/2" PP a 1" PP 1.1/2" PP a 4" PP																																																																																																																																																																																																																																																																																																																																																																			
 | 1/2" PP a 1" PP
1.1/2" PP a 6" PP | 1/2" PR a 2" PR
1/4" PP a 2" PP | 1.1/2" PR a 2" PR | 1/2" PR a 4" PR - PN25
1/4" PP a 4" PR - PN30 | 1/2" PR a 1" PR - PN25
1/4" PR a 3/8" PR - PN30 | 1/4", 3/8", 1/2"
e 3/4" | 1/4" PP a 2" PP | 2" PR | 2" PR, 3" PR e 4" PR | 3" PR FLG CL150 | 1.1/2" PP a 12" PP | 1.1/2" PP a 16" PP | 1/2" PR, 3/4" PR
1" PR e 1.1/2" PR | 1/2", 3/4" e 1" | 2" PP a 1/2" PP | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| MATERIAL (Corpo Extremidades) | <table border="1"> <tr><td>ASTM A216 Gr. WCB</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td></tr> <tr><td>ASTM A351 Gr. CF8</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>ASTM A351 Gr. CF8M</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>ASTM A351 Gr. CF3</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>ASTM A351 Gr. CF3M</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td><td></td></tr> <tr><td>ASTM A352 Gr. LCB</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A352 Gr. LCC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 1B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 4A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 6A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. F51</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. F55</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A-105</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. LF2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. 304</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. 304L</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. 316</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A182 Gr. 316L</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>LF - Latão Forjado C 37700</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>FN</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Foto Inoxidável (GGG 50)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>FC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Foto Cuscuta (GG25)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>LATÃO</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>CuZn40Pb2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>MATERIAL (Obturador)</td> <td colspan="16"> <table border="1"> <tr><td>ASTM A351 Gr. CF8</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 304</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF8M</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td></tr> <tr><td>ASTM A276 Gr. 316</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF3</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 304L</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF3M</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 316L</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A217 Gr. CA-15</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 410</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>LATÃO</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM B16 - Liga 360</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 1B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 4A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 6A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>FN + Níquel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Foto Inoxidável + Níquel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>WCB + 13CR</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>LATÃO</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>CuZn40Pb2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>VEDAÇÕES</td> <td colspan="16"> <table border="1"> <tr><td>TP</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Puro</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TR</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Reforçado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Superating</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TCS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Carbono Soft</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TP DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>TP Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TR DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TR Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DEVILON</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PEEK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>STELLITE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>EPDM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td></tr> <tr><td>BUINA-N</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>PCTFE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>EXTREMIDADES</td> <td colspan="16"> <table border="1"> <tr><td>BOSCA BSP ISO 228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME B16.11</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA BW ASME B16.25</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Espiral</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Convencional</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>FLANGE DIN PN 10 / 16 / 25 / 40</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>RJT / FAJ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table> </td> </tr> </table></td></tr></table></td></tr></table> | | | | | | | | | | | | | | | | ASTM A216 Gr. WCB | ● | ● | ● | ● | | | | | | | | | ● | | | ● | ASTM A351 Gr. CF8 | ● | ● | ● | ● | | | | | ● | ● | ● | | | ● | ● | | ASTM A351 Gr. CF8M | ● | ● | ● | ● | | | | | ● | ● | ● | | | ● | ● | | ASTM A351 Gr. CF3 | ● | ● | ● | ● | | | | | | ● | ● | | | ● | ● | | ASTM A351 Gr. CF3M | ● | ● | ● | ● | | | | | | ● | ● | | | ● | ● | | ASTM A352 Gr. LCB | | | | | | | | | | | | | | | | | ASTM A352 Gr. LCC | | | | | | | | | | | | | | | | | ASTM A995 Gr. 1B | | | | | | | | | | | | | | | | | ASTM A995 Gr. 4A | | | | | | | | | | | | | | | | | ASTM A995 Gr. 6A | | | | | | | | | | | | | | | | | ASTM A182 Gr. F51 | | | | | | | | | | | | | | | | | ASTM A182 Gr. F55 | | | | | | | | | | | | | | | | | ASTM A-105 | | | | | | | | | | | | | | | | | ASTM A182 Gr. LF2 | | | | | | | | | | | | | | | | | ASTM A182 Gr. 304 | | | | | | | | | | | | | | | | | ASTM A182 Gr. 304L | | | | | | | | | | | | | | | | | ASTM A182 Gr. 316 | | | | | | | | | | | | | | | | | ASTM A182 Gr. 316L | | | | | | | | | | | | | | | | | LF - Latão Forjado C 37700 | | | | | | | | | | | | | | | | | FN | | | | | | | | | | | | | | | | | Foto Inoxidável (GGG 50) |
 | | | | | | | | | | | ● | | | | | FC | | | | | | | | | | | | ● | | | | | Foto Cuscuta (GG25) | | | | | | | | | | | | | | | | | LATÃO | | | | | ● | ● | ● | ● | | | | | | | | | CuZn40Pb2 | | | | | | | | | | | | | | | | | MATERIAL (Obturador) | <table border="1"> <tr><td>ASTM A351 Gr. CF8</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 304</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF8M</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td></tr> <tr><td>ASTM A276 Gr. 316</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF3</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 304L</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A351 Gr. CF3M</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 316L</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A217 Gr. CA-15</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A276 Gr. 410</td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>LATÃO</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM B16 - Liga 360</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 1B</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 4A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>ASTM A995 Gr. 6A</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>FN + Níquel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Foto Inoxidável + Níquel</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>WCB + 13CR</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td></tr>
<tr><td>LATÃO</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>CuZn40Pb2</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>VEDAÇÕES</td> <td colspan="16"> <table border="1"> <tr><td>TP</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Puro</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TR</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Reforçado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Superating</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TCS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Carbono Soft</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TP DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TP Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TR DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TR Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS Dupla Vedação</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DEVILON</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>PEEK</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>STELLITE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>EPDM</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td>●</td></tr> <tr><td>BUINA-N</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>PCTFE</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr> <td>EXTREMIDADES</td> <td colspan="16"> <table border="1"> <tr><td>BOSCA BSP ISO 228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME B16.11</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA BW ASME B16.25</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Espiral</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Convencional</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>FLANGE DIN PN 10 / 16 / 25 / 40</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>RJT / FAJ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table> </td> </tr> </table></td></tr></table> | | | | | | | | | | | | | | | | ASTM A351 Gr. CF8 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A276 Gr. 304 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A351 Gr. CF8M | | | ● | ● | | | | | ● | ● | ● | ● | | | ● | | ASTM A276 Gr. 316 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A351 Gr. CF3 | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 304L | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A351 Gr. CF3M | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 316L | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A217 Gr. CA-15 | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 410 | | | ● | ● | | | | | | ● | ● | ● | | | | | LATÃO | | | | | | | | | | | | | | | | | ASTM B16 - Liga 360 | | | | | | | | | | | | | | | | | ASTM A995 Gr. 1B | | | | | | | | | | | | | | | | | ASTM A995 Gr. 4A | | | | | | | | | | | | | | | | | ASTM A995 Gr. 6A | | | | | | | | | | | | | | | | | FN + Níquel |
 | | | | | | | | | | | ● | | | | | Foto Inoxidável + Níquel | | | | | | | | | | | | | ● | | | | WCB + 13CR | | | | | | | | | | | | | | ● | | | LATÃO | | | | | ● | ● | ● | ● | | | | | | | | | CuZn40Pb2 | | | | | | | | | | | | | | | | | VEDAÇÕES | <table border="1"> <tr><td>TP</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Puro</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TR</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Reforçado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Superating</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TCS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Carbono Soft</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TP DV</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>TP Dupla 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| | | | | | | | | TP Dupla Vedação | | | | | | | | | | | | | | | | | TR DV | | | | | | | | | | | | | | | | | TR Dupla Vedação | | | | | | | | | | | | | | | | | TBS DV | | | | | | | | | | | | | | | | | TBS Dupla Vedação | | | | | | | | | | | | | | | | | DEVILON | | | | | | | | | | | | | | | | | PEEK | | | | | | | | | | | | | | | | | STELLITE | | | | | | | | | | | | | | | | | EPDM | | | | | | | | | | | | | ● | | | ● | BUINA-N | | | | | | | | | | | | | ● | | | | PCTFE | | | | | | | | | | | | | | | | | EXTREMIDADES | <table border="1"> <tr><td>BOSCA BSP ISO 228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME 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Estendida | | | | | | | | | | | | | | | | | Aterramento Antiestático | ● | ● | ● | ● | | | | | | ● | ● | | | ● | | | Versão Fire Safe ISO 10497/API 607 | | | | | | | | | | ● | ● | | | | | | Trava para Caldeado / Lacre | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | Placa de Identificação | ● | ● | ● | ● | | | | | | ● | ● | ● | | ● | | | Dispositivo Retorno por Mola | ● | ● | ● | ● | | | | | ● | ● | ● | ● | | | | | Cavidade Preenchida | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | Acionamento Automatizado | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | |
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SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr>
<tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table> </td> </tr> </table></td></tr></table> | | | | | | | | | | | | | | | | ASTM A351 Gr. CF8 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A276 Gr. 304 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A351 Gr. CF8M | | | ● | ● | | | | | ● | ● | ● | ● | | | ● | | ASTM A276 Gr. 316 | | | ● | ● | | | | | ● | ● | ● | ● | | | | | ASTM A351 Gr. CF3 | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 304L | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A351 Gr. CF3M | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 316L | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A217 Gr. CA-15 | | | ● | ● | | | | | | ● | ● | ● | | | | | ASTM A276 Gr. 410 | | | ● | ● | | | | | | ● | ● | ● | | | | | LATÃO | | | | | | | | | | | | | | | | | ASTM B16 - Liga 360 | | | | | | | | | | | | | | | | | ASTM A995 Gr. 1B | | | | | | | | | | | | | | | | | ASTM A995 Gr. 4A | | | | | | | | | | | | | | | | | ASTM A995 Gr. 6A | | | | | | | | | | | | | | | | | FN + Níquel | | | | | | | | | | | | ● | | | | | Foto Inoxidável + Níquel | | | | | | | | | | | | | ● | | | | WCB + 13CR | | | | | | | | | | | | | | ● | | | LATÃO | | | | | ● | ● | ● | ● | | | | | | | | | CuZn40Pb2 | | | | | | | | | | | | | | | | | VEDAÇÕES | <table border="1"> <tr><td>TP</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Puro</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TR</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Reforçado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Superating</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TCS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Carbono
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TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table> </td> </tr> </table> | | | | | | | | | | | | | | | | TP | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | Teflon Puro | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | TR | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | Teflon Reforçado | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | TBS | ●
 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | Teflon Superating | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | TCS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | Teflon Carbono Soft | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | TP DV | | | | | | | | | | | | | | | | | TP Dupla Vedação | | | | | | | | | | | | | | | | | TR DV | | | | | | | | | | | | | | | | | TR Dupla Vedação | | | | | | | | | | | | | | | | | TBS DV | | | | | | | | | | | | | | | | | TBS Dupla Vedação | | | | | | | | | | | | | | | | | DEVILON | | | | | | | | | | | | | | | | | PEEK | | | | | | | | | | | | | | | | | STELLITE | | | | | | | | | | | | | | | | | EPDM | | | | | | | | | | | | | ● | | | ● | BUINA-N | | | | | | | | | | | | | ● | | | | PCTFE | | | | | | | | | | | | | | | | | EXTREMIDADES | <table border="1"> <tr><td>BOSCA BSP ISO
228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME B16.11</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA BW ASME B16.25</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Espiral</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Convencional</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>FLANGE DIN PN 10 / 16 / 25 / 40</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>RJT / FAJ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table> | | | | | | | | | | | | | | | | BOSCA BSP ISO 228 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ROSCA NPT ASME B 1.20.1 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | SOLDA SW ASME B16.11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | SOLDA BW ASME B16.25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ASME B16.5 Ranhura Espiral |
 | ● | | ● | | | | | | ● | ● | | ● | | | | ASME B16.5 Ranhura Convencional | | ● | | ● | | | | | | ● | ● | | ● | | | | FLANGE DIN PN 10 / 16 / 25 / 40 | | ● | | ● | | | | | | ● | ● | | ● | | | | RJT / FAJ | | | | | | | | | | | | | | | | | SOLDA SWO | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | SOLDA BWO | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | NIPLE - TC | | | | | | | | | | | | | | | | | UNÃO - DIN | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | UNÃO - RTJ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | SMS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | NIPLE SCHEDULE Extremidade Estendida | | | | | | | | | | | | | | | | | Aterramento Antiestático | ● | ● | ● | ● | | | | | | ● | ● | | | ● | | | Versão Fire Safe ISO 10497/API 607 | | | | | | | | | | ● | ● | | | | | | Trava para Caldeado / Lacre | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | Placa de Identificação | ● | ● | ● | ● | | | | | | ● | ● | ● | | ● | | | Dispositivo Retorno por Mola | ● | ● | ● | ● | | | | | ● | ● | ● | ● | | | | | Cavidade Preenchida | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | Acionamento Automatizado | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| VEDAÇÕES | <table border="1"> <tr><td>TP</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Puro</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TR</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon Reforçado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>TBS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Teflon 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228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME B16.11</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA BW ASME B16.25</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Espiral</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Convencional</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>FLANGE DIN PN 10 / 16 / 25 / 40</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>RJT / FAJ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade 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| EXTREMIDADES | <table border="1"> <tr><td>BOSCA BSP ISO 228</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>ROSCA NPT ASME B 1.20.1</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA SW ASME B16.11</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA BW ASME B16.25</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Espiral</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>ASME B16.5 Ranhura Convencional</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>FLANGE DIN PN 10 / 16 / 25 / 40</td><td></td><td>●</td><td></td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td><td></td></tr> <tr><td>RJT / FAJ</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>SOLDA SWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>SOLDA BWO</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td>●</td><td>●</td></tr> <tr><td>NIPLE - TC</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - DIN</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>UNÃO - RTJ</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>SMS</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>NIPLE SCHEDULE Extremidade Estendida</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Aterramento Antiestático</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Versão Fire Safe ISO 10497/API 607</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>Trava para Caldeado / Lacre</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Placa de Identificação</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td>●</td><td></td><td></td></tr> <tr><td>Dispositivo Retorno por Mola</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Cavidade Preenchida</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td><td></td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td><td></td></tr> <tr><td>Acionamento Automatizado</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td></td><td></td><td></td></tr> </table>
 | | | | | | | | | | | | | | | | BOSCA BSP ISO 228 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | ROSCA NPT ASME B 1.20.1 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | SOLDA SW ASME B16.11 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | SOLDA BW ASME B16.25 | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | ASME B16.5 Ranhura Espiral | | ● | | ● | | | | | | ● | ● | | ● | | | | ASME B16.5 Ranhura Convencional | | ● | | ● | | | | | | ● | ● | | ● | | | | FLANGE DIN PN 10 / 16 / 25 / 40 | | ● | | ● | | | | | | ● | ● | | ● | | | | RJT / FAJ | | | | | | | | | | | | | | | | | SOLDA SWO | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | SOLDA BWO | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | ● | ● | NIPLE - TC | | | | | | | | | | | | | | | | | UNÃO - DIN | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | UNÃO - RTJ | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | SMS | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | NIPLE SCHEDULE Extremidade Estendida | | | | | | | | | | | | | | | | | Aterramento Antiestático | ● | ● | ● | ● | | | | | | ● | ● | | | ● | | | Versão Fire Safe ISO 10497/API 607 | | | | | | | | | | ● | ● | | | | | | Trava para Caldeado / Lacre | ● | ● | ● | ● | | | | | | ● | ● | ● | | | | | Placa de Identificação | ● | ● | ● | ● | | | | | | ● | ● | ● | | ● | | | Dispositivo Retorno por Mola | ● | ● | ● | ● | | | | | ● | ● | ● | ● | | | | | Cavidade Preenchida | ●
 | ● | ● | ● | | | | | | ● | ● | ● | | | | | Acionamento Automatizado | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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