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O nama...

TC Energy je specijalizovan za nabavku svih vrsta cevi, cevne armature, kao i fitinga. Uz isporučenu robu obezbeđujemo sertifikate prema EN 10204/3.1, a na zahtev kupca možemo obezbediti i sertifikate EN 10204/3.2 od SGS i Lloyd's. Takođe, obezbeđujemo tehničku podršku pri izradi tehničkih zadataka, kao i pri izradi projekata.

Naš cilj je da obezbedimo klijentima proizvode vrhunskog kvaliteta i da garantujemo najviši nivo usluge svakom našem partneru. Ovaj cilj je moguće ostvariti uz poštovanje individualnih potreba klijenata tokom svake faze saradnje, uključujući isporuku proizvoda, poštovanje dogovorenih tehničkih specifikacija, cene, vremena i mesta isporuke. Dosadašnje zadovoljstvo naših klijenata je pokazatelj da smo u potpunosti ostvarili cilj.

Zahvaljujući našem vrhunskom menadžmentu u nabavci i tehničkoj ekspertizi, mi održavamo efikasnost i efektivnost kako bi obezvedili maksimalnu korist našim klijentima. Ukratko, možete imati poverenja da ćemo uvek obaviti posao kako treba.

ZASUNI
CAST STEEL GATA VALVE

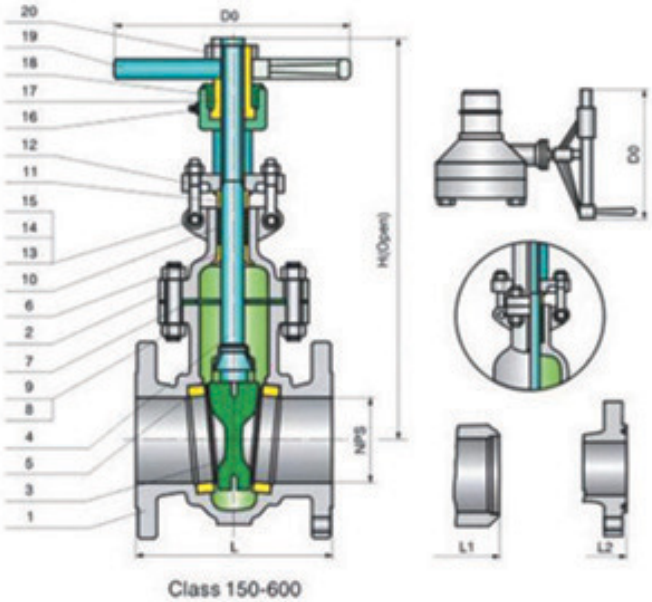
STANDARD IZRADE: API 600 (ISO 10434)
DN 50 (2") – DN 1200 (48")
CLASS 150 – CLASS 2500
STANDARD IZRADE: EN 1984
DN 40 – DN 1200
PN 10 – PN 100

Primena standarda za API izvedbe:

BW end dimension (krajevi za zavarivanje)	ASME B 16.25
SW end dimension (krajevi za zavarivanje)	ASME B 16.11
End flanges dimension (prirubnički spoj)	ASME B 16.5
pressure-temperature ratings	ASME B 16.34
Ispection and test	API 598

Primena standarda za EN izvedbe:

BW end dimension (krajevi za zavarivanje)	EN 12982
Ugradne dužine sa prirubničkim priključkom prema	EN 558-1
Priključne mere prirubnica prema	EN 1092-1 TipB1
Oblik krajeva za zavarivanje prema	EN 12627
pressure-temperature ratings	EN 12516-1
Ispection and test	EN 12266, Deo1 i Deo2

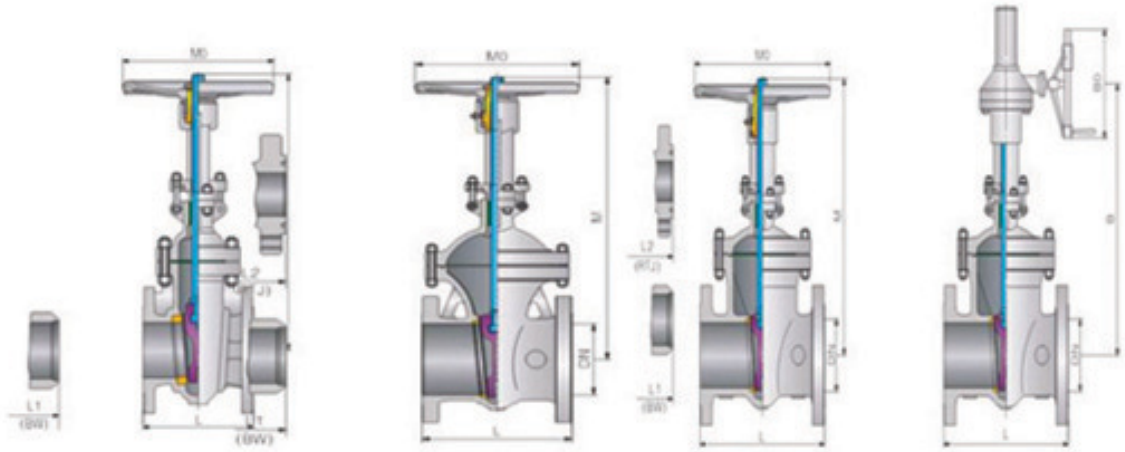


Class 150-600

Trim code	Seat ring surface	Wedge seat surface	Stem&Back seat bushing
1	13Cr	13Cr	A182 F6a
2	18Cr-8Ni	18Cr-8Ni	A182 F304
3	25Cr-20Ni	25Cr-20Ni	A182 F310
4	Hard 13Cr	Hard 13Cr	A182 F6a
5	Stellite	Stellite	A182 F6a
6	13Cr	Cu-Ni Alloy	Monel
7	13Cr	Hard 13Cr	A182 F6a
8	Stellite	13Cr	A182 F6a
9	Cu-Ni Alloy	Cu-Ni Alloy	Monel
10	18Cr-8Ni-Mo	18Cr-8Ni-Mo	A182 F316
11	Cu-Ni Alloy	Cu-Ni Alloy	Monel
12	Stellite	18Cr-8Ni-Mo	A182 F316
13	19Cr-29Ni	19Cr-29Ni	20 Alloy

Legenda

No	Part name	No	Part name	No	Part name
1	Body	8	Bonnet stud	15	Eyebolt nut
2	Bonnet	9	Bonnet stud nut	16	Grease fitting
3	Wedge	10	Packing	17	Yokesleeve
4	Stem	11	Gland	18	Yokesleeve jam nut
5	Seat ring	12	Glabd flange	19	Handwheel
6	Stem backseat	13	Eyebolt pin	20	Handwheel nut
7	Bonnet gasket	14	Eyebolt		



Class 150 Class 300 Class 600

ASTM Material list of API 600 Rising Stem Cast Steel Gate valve											
No	Part name	Carbon Steel to ASTM						Alloy Steel to ASTM			
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
2	Bonnet	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
3	Wedge	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
4	Stem	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F316L	A182 F316L	A182 F304			
5	Seat ring	A105N	A350LF2	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A182 F11	A182 F22	A182 F5	
6	Stem backseat	A276-420	A276-420	A276-420	A276-420	A276-420	A276-420	A276-304	A276-304	A276-304	
7	Bonnet gasket	Graphite+SS304,PTFE									
8	Bonnet stud	A193B7	A320L7	A193 B8				A193 B16			
9	Bonnet stud nut	A193ZH	A194 4	A194 8				A194 7			
10	Packing	Flexibile Graphite									
11	Gland	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F316L	A182 F316L	A182 F304			
12	Glabd flange	A216 WCB	A352 LCB	A351 CF8	A351 CF8	A351 CF8	A351 CF8	A217 WC6	A217 WC9	A217 C5	
13	Eyebolt pin	ANSI 1045		A182 F304				ANSI 1045			
14	Eyebolt	A193B7	A320L7	A193 B8				A193 B16			
15	Eyebolt nut	A193ZH	A194 4	A194 8				A194 7			
16	Grease fitting	Brass+steel									
17	Yokesleeve	Aluminium-Bronza/A439-D2									
18	Yokesleeve jam nut	Carbon steel									
19	Handwheel	A216 WCB									
20	Handwheel nut	Carbon steel									

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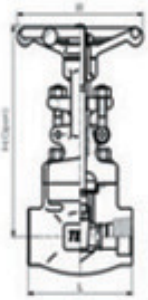
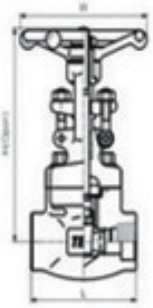
ZASUNI
CAST STEEL GATA VALVE

STANDARD IZRADE: API 602 (ISO 10434)
1/2" – 2"
CLASS 150 - CLASS 2500

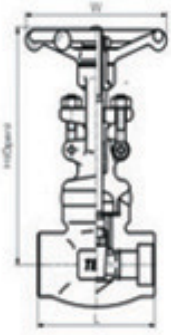
Primena standarda za API izvedbe:	
BW end dimension (krajevi za zavarivanje)	ASME B 16.25
SW end dimension (krajevi za zavarivanje)	ASME B 1.20.1
End flanges dimension (prirubnički spoj)	ASME B 16.5
pressure-temperature ratings	ASME B 16.34
pressure-temperature ratings	API 598
Main material	A105; LF2; F5; F22; F304F304L; F316; F316L; F321; F51; F53; Monel; Alloy Steel



Class 800							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	79	92	111	120	140	178	180
handwheel diametar W	100	100	125	160	180	200	220
Height H	161	163	196	223	290	333	370
Flow port dimenzion d	10,5	13,5	18	24	38,5	45	51
Weight (Kg)	2,22	2,39	4,24	5,7	10,9	16,8	24

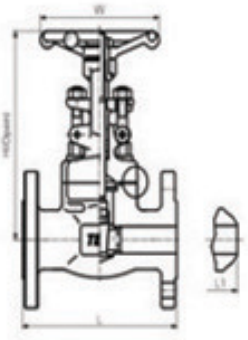


Class 900 - Class 1500							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	111	111	120	120	140	178	180
handwheel diametar W	125	125	160	160	180	200	220
Height H	191	192	219	243	296	316	370
Flow port dimenzion d	10,5	13,5	18	24	29	36,5	45
Weight (Kg)	4,4	4,3	6	7,2	11,4	16	23

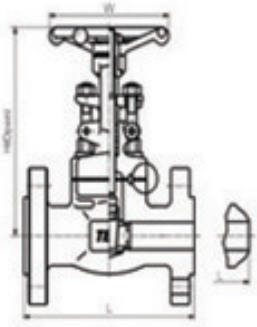


Class 1500 - Class 2500							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	186	186	186	232	232	279	/
handwheel diametar W	200	200	200	280	280	300	/
Height H	325	325	327	467	468	540	/
Flow port dimenzion d	14	14	19	25	30	36,5	/
Weight (Kg)	12,3	11,6	10,8	26,0	28,4	60,0	/

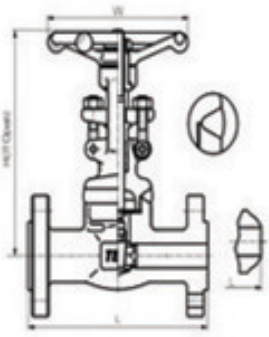
Forget steel gate valve RF (flange)



Class 800								
specification			1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face (L)	Class 150		108	117	127	140	165	178	190
	Class 300		140	152	165	178	190	216	241
	Class 600		165	190	216	229	241	292	330
handwheel diametar (W)			100	100	125	160	160	180	200
Height (H)	Class 150		176	184	217	226	250	290	357
	Class 300 Class 600		161	163	196	226	250	290	357
Flow port dimenzion (d)			10	13,5	18	24	29	36,5	45
Weight (kg)	Class 150	RF	3,1	3,98	10,1	7,2	10,1	15,5	24,5
		BW	2,8	3,3	8,2	7,1	8,2	12,5	20
	Class 300	RF	3,77	4,89	12,6	9,6	12,6	18	26,2
		BW	3,5	4,1	9,2	8,1	9,2	15,1	22
	Class 600	RF	4,2	5,8	15,6	12,1	15,6	19,5	32
		BW	4,5	5,1	12,1	10,5	12,1	20,1	28



Class 900 - Class 1500								
specification		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face (L)	RF; BW	216	229	254	279	305	368	/
	RTJ	216	229	254	279	305	371	/
handwheel diametar (W)		125	125	160	180	200	220	/
Height (H)		191	192	219	257	296	316	/
Flow port dimenzion (d)		13,5	18	24	29	36,5	45	/
Weight (kg)		7,2	11,5	15,6	16,2	22,5	28,2	/



Class 2500								
specification		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face (L)	RF; BW	264	273	308	/	384	451	/
	RTJ	264	273	308	/	387	371	/
handwheel diametar (W)		125	160	160	/	200	220	/
Height (H)		207	240	258	/	355	355	/
Flow port dimenzion (d)		13,5	13,5	19	/	30	36,5	/
Weight (kg)		19,5	21,5	42	/	65	95	/

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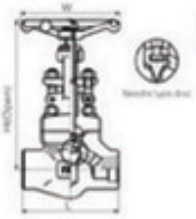
VENTILI

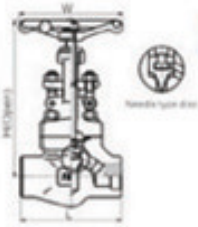
CAST STEEL GLOBE VALVE

STANDARD IZRADE: API 602 (ISO 10434)
1/2" - 2"
CLASS 150 - CLASS 2500

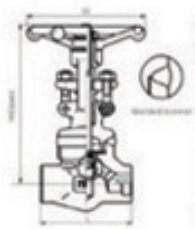
Forged steel globe valve NPT and SW



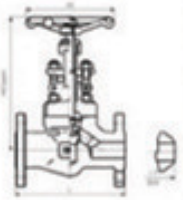
Class 800							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	79	92	111	120	152	172	200
handwheel diametar W	100	100	125	160	160	180	200
Height H	164	164	203	224	260	300	355
Flow port dimenzion d	9	13	14,5	23	30	35	46
Weight (Kg)	2,28	2,37	4,3	5,75	78	12,5	17,5



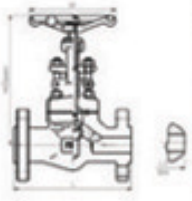
Class 900 - Class 1500							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	111	111	120	152	172	200	220
handwheel diametar W	125	125	160	160	180	200	240
Height H	207	207	240	256	330	355	370
Flow port dimenzion d	12	15	1820	28	32	40	45
Weight (Kg)	3,7	3,6	66,8	76	11,6	15	219



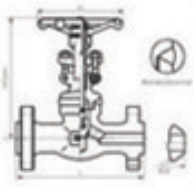
Class 1500 - Class 2500							
Specification	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	186	186	186	232	232	279	/
handwheel diametar W	200	200	200	280	280	300	/
Height H	375	378	380	490	490	540	/
Flow port dimenzion d	11	14	19	25	28	35	/
Weight (Kg)	12,3	11,6	10,8	26,0	28,4	60,0	/



Class 800									
Specification			1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
Face to face (L)	Class 150		108	117	127	140	165	203	/
	Class 300		152	178	203	216	229	267	/
	Class 600		165	190	216	229	241	292	/
handwheel diametar W			100	100	125	160	160	180	/
Height H	Class 150		180	184	217	224	260	300	/
	Class 300 Class 600		164	164	203	224	260	300	/
Flow port dimenzion d			9	13	17,5	23	30	35	/
Weight (kg)	Class 150	RF	3,45	9,6	6,19	9,6	10,5	17	/
		BW	2,3	8,2	7,8	8,2	12,0	15,0	/
	Class 300	RF	3,8	12	7,2	12	13,5	19,7	/
		BW	2,8	9,2	8,5	9,2	12,6	16,8	/
	Class 600	RF	5,6	17	12,5	17	23,5	38,8	/
		BW	3,1	10,5	9,2	10,5	13,3	18,9	/



Class 800								
Specification		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	RF; BW	216	229	254	279	305	368	/
	RTJ	216	229	254	279	305	371	/
handwheel diametar W		125	125	160	160	180	200	/
Height H		207	207	230	160	300	355	/
Flow port dimenzion d		12	15	20	28	32	40	/
Weight (Kg)		11	13,2	17,4	19	24,5	31	/



Class 800								
Specification		1/2	3/4	1	1 1/4	1 1/2	2	2 1/2
face to face L	RF; BW	264	273	308	349	384	451	/
	RTJ	264	273	308	349	387	454	/
handwheel diametar W		200	200	280	280	280	300	/
Height H		320	320	320	440	440	490	/
Flow port dimenzion d		11	14	19	25	28	35	/
Weight (Kg)		21,5	24,7	30,4	48,1	56,1	130	/

VENTILI
CAST STEEL GLOBE VALVE

STANDARD IZRADE: API 600 (ISO 10434)
DN 50 (2") - DN 1200 (48")
CLASS 150 - CLASS 2500

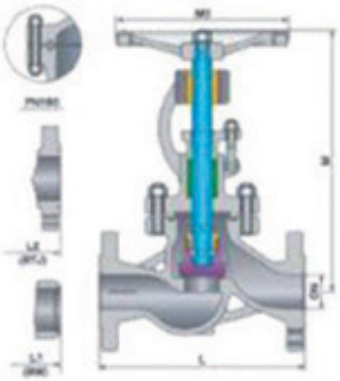
STANDARD IZRADE: EN 13709
DN 15 - DN 1200

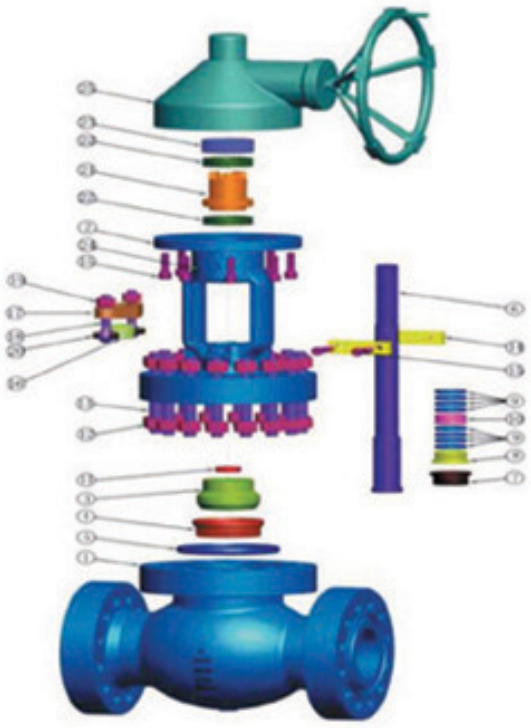
Primena standarda za API izvedbe:

BW end dimension (krajevi za zavarivanje)	ASME B 16.25
SW end dimension (krajevi za zavarivanje)	ASME B 16.11
End flanges dimension (prirubnički spoj)	ASME B 16.5
pressure-temperature ratings	ASME B 16.34
Ispection and test	API 598

Primena standarda za EN izvedbe:

BW end dimension (krajevi za zavarivanje)	EN 12982
Ugradne dužine sa prirubničkim priključkom prema	EN 558-1
Priključne mere prirubnica prema	EN 1092-1 TipB1
Oblik krajeva za zavarivanje prema	EN 12627
pressure-temperature ratings	EN 12516-1
Ispection and test	EN 12266, Deo1 i Deo2

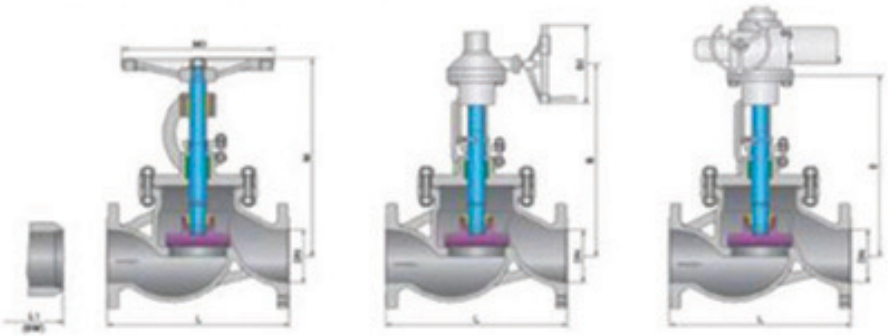




Trim code	Seat ring surface	Wedge seat surface	Stem&Back seat bushing
1	13Cr	13Cr	A182 F6a
2	18Cr-8Ni	18Cr-8Ni	A182 F304
3	25Cr-20Ni	25Cr-20Ni	A182 F310
4	Hard 13Cr	Hard 13Cr	A182 F6a
5	Stellite	Stellite	A182 F6a
6	13Cr	Cu-Ni Alloy	Monel
7	13Cr	Hard 13Cr	A182 F6a
8	Stellite	13Cr	A182 F6a
9	Cu-Ni Alloy	Cu-Ni Alloy	Monel
10	18Cr-8Ni-Mo	18Cr-8Ni-Mo	A182 F316
11	Cu-Ni Alloy	Cu-Ni Alloy	Monel
12	Stellite	18Cr-8Ni-Mo	A182 F316
13	19Cr-29Ni	19Cr-29Ni	20 Alloy

Legenda

No	Part name	No	Part name	No	Part name
1	Body	10	Lantern Ring	19	Gland Nut
2	Bonnet	11	Thrust Washer	20	Pin
3	Disc	12	Nut	21	Stem Nut
4	Seat Ring	13	Bolt	22	Bearing
5	Gasket	14	Anti-rotating Device	23	Retaining Nut
6	Stem	15	Screw	24	Nipple
7	Disc Nut	16	Gland	25	Bevel gearbox
8	Backseat Bushing	17	Gland Flange		
9	Stem Packing	18	Gland Eyebolt		



ASTM Material list of API 600 Rising Stem Cast Steel Gate valve											
No	Part Name	Carbon Steel to ASTM		Stainless to ASTM				Alloy Steel to ASTM			
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
2	Bonnet	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
3	Disc	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
4	Seat Ring	A105/A350LF2		A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A182 F11	A182 F22	A182 F5	
5	Gasket	Graphite+SS304,PTFE		Graphite+SS304,PTFE							
6	Stem	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
7	Disc Nut	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
8	Backseat Bushing	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
9	Stem Packing	Flexible Graphite		Flexible Graphite							
10	Lantern Ring	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
11	Thrust Washer	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
12	Nut	A194 2H	A194 4	A194 8				A194 7	A217 WC9	A217 C5	
13	Bolt	A193 B7	A320L7	A193 B8				A193 B16			
14	Anti-rotating Device	ANSI 1020		A182 F304				ANSI 1020			
15	Screw	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
16	Gland	A194 2H		A194 8							
17	Gland flange	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
18	Gland Eyebolt	A193 B7		A193 B8				A193 B16			
19	Gland Nut	A194 2H		A194 8				A194 7			
20	Pin	ANSI 1045		A182 F304				ANSI 1045			
21	Stem Nut	A439D2/B148 952A									
22	Bearing	/									
23	Retaining Nut	ANSI 1020									
24	Nipple	Copper Alloy									
25	Bevel gearbox	/									

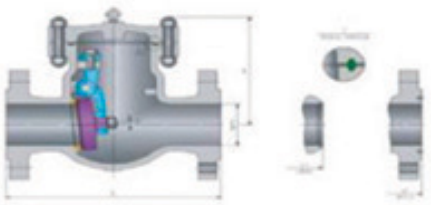
NEPOVRATNI VENTILI

STEEL CHECK VALVE

STANDARD IZRADE: API 6D, ASME B 16.34
DN 50 (2") - DDN 900 (36")
CLASS 150 - CLASS 1500

Trim code	Seat ring surface	Wedge seat surface	Stem&Back seat bushing
1	13Cr	13Cr	A182 F6a
2	18Cr-8Ni	18Cr-8Ni	A182 F304
3	25Cr-20Ni	25Cr-20Ni	A182 F310
4	Hard 13Cr	Hard 13Cr	A182 F6a
5	Stellite	Stellite	A182 F6a
6	13Cr	Cu-Ni Alloy	Monel
7	13Cr	Hard 13Cr	A182 F6a
8	Stellite	13Cr	A182 F6a
9	Cu-Ni Alloy	Cu-Ni Alloy	Monel
10	18Cr-8Ni-Mo	18Cr-8Ni-Mo	A182 F316
11	Cu-Ni Alloy	Cu-Ni Alloy	Monel
12	Stellite	18Cr-8Ni-Mo	A182 F316
13	19Cr-29Ni	19Cr-29Ni	20 Alloy

SWING CHECK VALVE



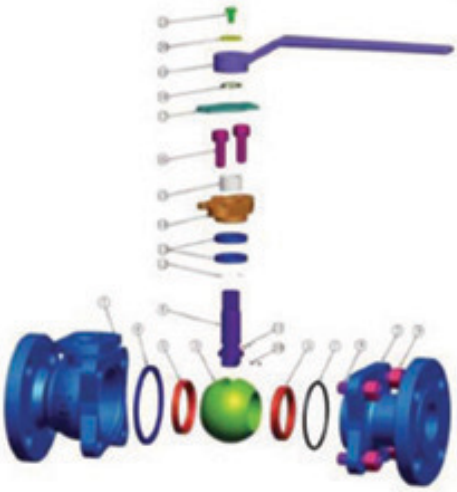
No	Part name	No	Part name
1	Body	8	Disc Washer
2	Cover	9	Disc Nut
3	Seat ring	10	Pin
4	Disc	11	Nut
5	Hinge	12	Bolt
6	Yoke	13	Screw
7	Gasket	14	Lifting Lug

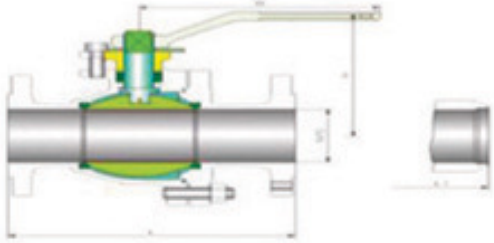
ASTM Material list of API 600 Rising Stem Cast Steel Gate valve											
No	Part Name	Carbon Steel to ASTM		Stainless stee to ASTM				Alloy Steel to ASTM			
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
2	Cover	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
3	Seat Ring	A105N	A350LF2	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A182 F11	A182 F22	A182 F5	
4	Disc	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
5	Hinge	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M	A217 WC6	A217 WC9	A217 C5	
6	Yoke	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
7	Gasket	Graphite+SS304,PTFE									
8	Disc Washer	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
9	Disc Nut	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
10	Pin	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L	A182 F304			
11	Nut	A194 2H	A194 4	A 194 8				A194 7			
12	Bolt	A193 B7	A320L7	A 193 B8				A193 B16			
13	Screw	A193 B7	A320L7	A182 F304	A182 F316	A182 F304L	A182 F316L	A193 B16			
14	Lifting Lug	A194 2H									

LOPTASTE SLAVINE

FLOATING BALL VALVE

STANDARD IZRADE: API 6D,ASME B 16.34
DN 50 (2") – DN 900 (36")
CLASS 150 – CLASS 1500





Legenda

No	Part name	No	Part name	No	Part name
1	Body	8	Bolt	15	Shaft sleeve
2	Bonnet	9	Nut	16	Screw
3	Ball	10	Small spring	17	Positioning plate
4	Stem	11	Small Ball	18	Rataining ring
5	Seat ring	12	Thrust Washer	19	Level
6	Gasket	13	Stem packing	20	Gasket
7	O-ring	14	Packing gland	21	Screw

No	Part Name	Carbon Steel to ASTM		Stainless steel to ASTM			
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Bonnet	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3	Ball	A351 CF8	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Seat ring	PTFE,RTFE,PEEK,DWLRIN					
6	Gasket	Graphite+SS304,PTFE					
7	O-ring	Fluororubber					
8	Bolt	A193 B7/B7M	A193 L7/L7M	A193 B8/B8M			
9	Nut	A194 2H/2HM	A194 4/4M	A194 8/8M			
10	Small spring	SS304					
11	Small Ball	SS304					
12	Thrust Washer	PTFE					
13	Stem packing	Flexible Graphite/PTFE					
14	Packing gland	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF8M
15	Shaft sleeve	PTFE					
16	Screw	A193 B7	A320 LCB	A193 B8/B8M			
17	Positioning plate	Galvanized Steel					
18	Rataining ring	Carbon steel					
19	Level	Carbon steel					
20	Gasket	Carbon steel					
21	Screw	Carbon steel					

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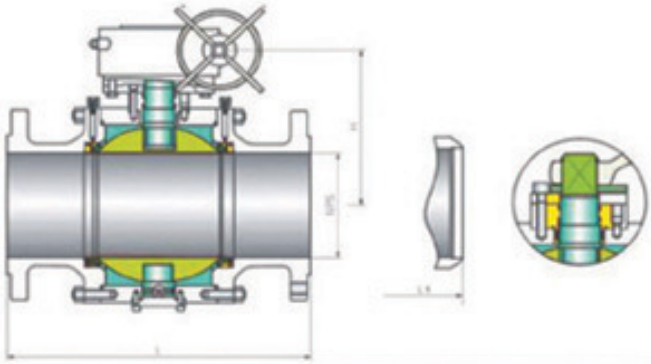
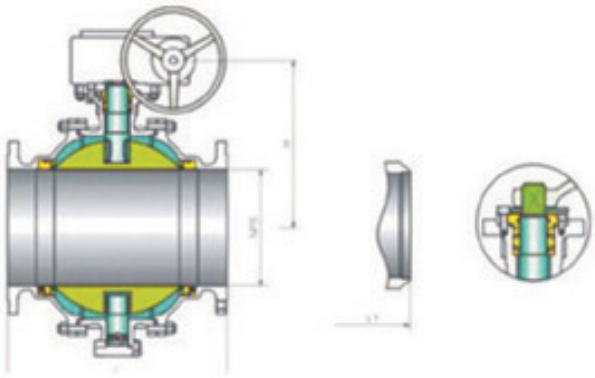
LOPTASTE SLAVINE

FLOATING BALL VALVE

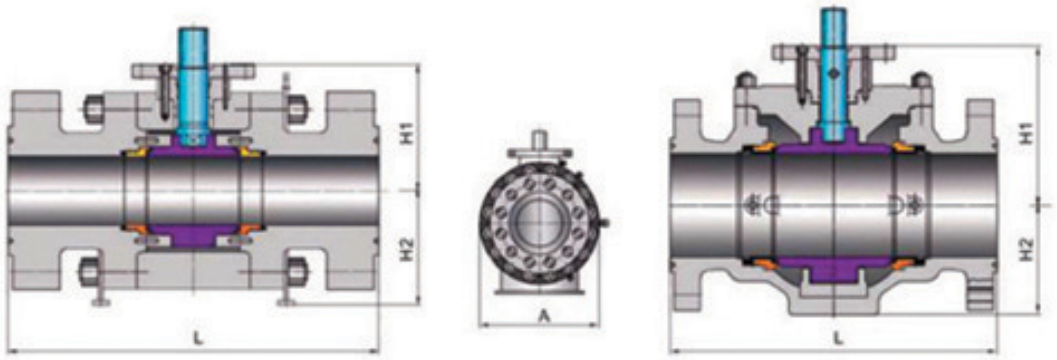
Cast Steel Trunion Ball Valve



Forged Steel Trunion Ball Valve



API 6A, Rated Working Pressure 5000 psi (34,5Mpa)

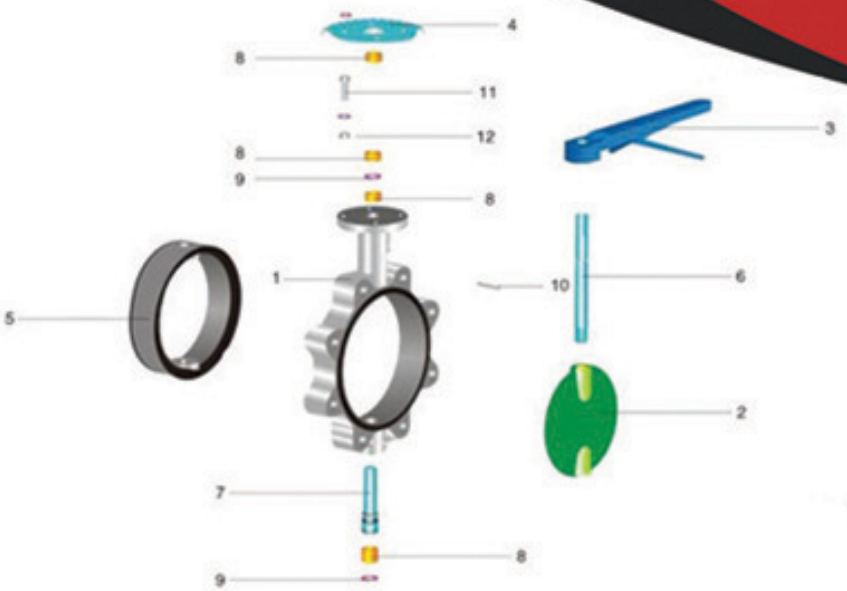


SIDE ENTRY

TOP ENTRY

LEPTIRASTI VENTIL
BUTTERFLY VALVE

STANDARD IZRADE : API 6D, ASME B 16.34
DN 50 (2") – DN 1000 (40")
CLASS 150 – CLASS 600



No	Part	Material Series			
		Cast iron	Ductile iron	Cast steel	Stainless steel
1	Body	ASTM A126-B	ASTM A339-80-45-10	ASTM A216-WCB	ASTM A351-CF8M ASTM A351-CF8
2	Disc	ASTM A339-80-45-10	ASTM A339-80-45-10	ASTM A351-CF8	ASTM A351-CF3
		ASTM A351-CF8	ASTM A351-CF8	ASTM A351-CF8M	ASTM A351-CF3M
		ASTM A351-CF8M	ASTM A351-CF8M	ASTM B148	ASTM B148
		ASTM B148	ASTM B148	MONEL	MONEL
		MONEL	MONEL		
3	Handle	ASTM A126B	ASTM A126-B	ASTM A126-B	ASTM A126-B
4	Indicate Plate	CARBON STEEL	CARBON STEEL	CARBON STEEL	S.S.
5	Seat	EPDM	EPDM	EPDM	EPDM
		NBR	NBR	NBR	NBR
		VITON	VITON	VITON	VITON
		NEOPRENE	NEOPRENE	NEOPRENE	NEOPRENE
		HYPALON	HYPALON	HYPALON	HYPALON
		PTFE	PTFE	PTFE	PTFE
6	Shaft	ASTM A182-F6a	ASTM A182-F6a	ASTM A182-F6a	ASTM A182-F6a
		ASTM A182-F304	ASTM A182-F304	ASTM A182-F304	ASTM A182-F304
		ASTM A182-F316	ASTM A182F-316	ASTM A182F-316	ASTM A182F-316
		MONEL K500	MONEL K500	MONEL K500	MONEL K500
		17-4PH	17-4PH	17-4PH	17-4PH
7	Hub Shaft	ASTM A182-F6a	ASTM A182-F6a	ASTM A182-F6a	ASTM A182-F6a
		ASTM A182-F304	ASTM A182-F304	ASTM A182-F304	ASTM A182-F304
		ASTM A182-F316	ASTM A182-F316	ASTM A182-F316	ASTM A182-F316
		MONEL K500	MONEL K500	MONEL K500	MONEL K500
		17-4PH	17-4PH	17-4PH	17-4PH
8	Bushing	PTFE	PTFE	PTFE	PTFE
9	O-Ring	EPDM	EPDM	EPDM	EPDM
		NBR	NBR	NBR	NBR
		VITON	VITON	VITON	VITON
10	Retaining Pin	S.S.	S.S.	S.S.	S.S.
11	Bolt	CARBON STEEL	CARBON STEEL	CARBON STEEL	S.S.
12	Nut	CARBON STEEL	CARBON STEEL	CARBON STEEL	S.S.

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SLEEVE TYPE PLUG VALVE

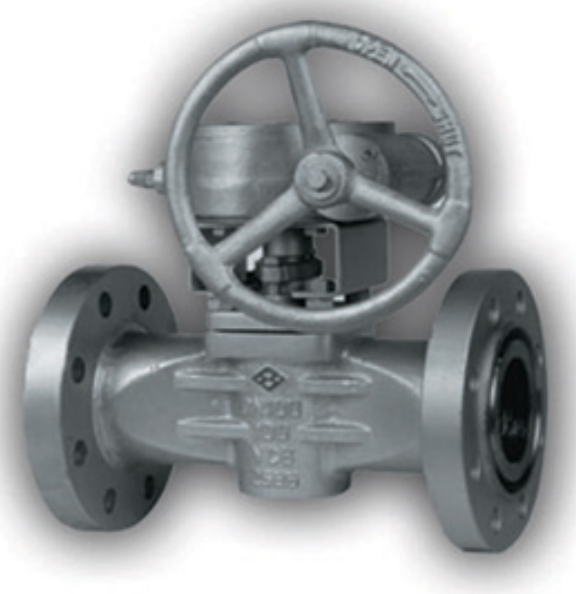
STANDARD IZRADE: API 6D, ASME B 16.34
DN 15 (1/2") – DN 380 (14")
CLASS 150 – CLASS 600

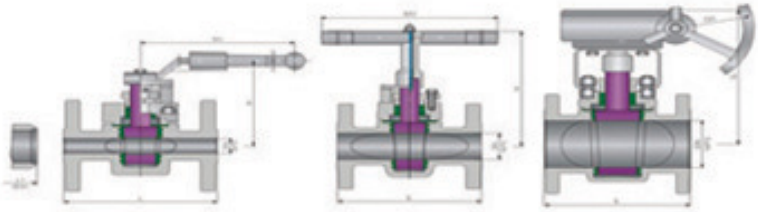
Primena standarda za API izvedbe:

BW end dimension (krajevi za zavarivanje)	ASME B 16.25
Face-to-face	ASME B 16.10
End flanges dimension (prirubnički spoj)	ASME B 16.5
pressure-temperature ratings	ASME B 16.34
Ispection and test	API 598/API 6D

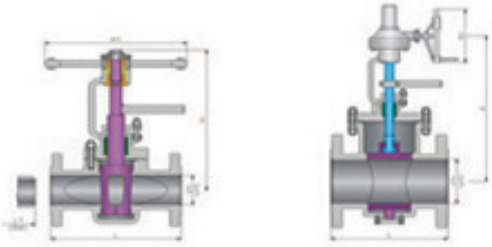
Primena standarda za EN izvedbe:

BW end dimension (krajevi za zavarivanje)	EN 12982
Ugradne dužine sa prirubničkim priključkom prema	EN 558-1
Priključne mere prirubnica prema	EN 1092-1 TipB1
Oblik krajeva za zavarivanje prema	EN 12627
pressure-temperature ratings	EN 12516-1
Ispection and test	EN 12266, Deo1 i Deo2



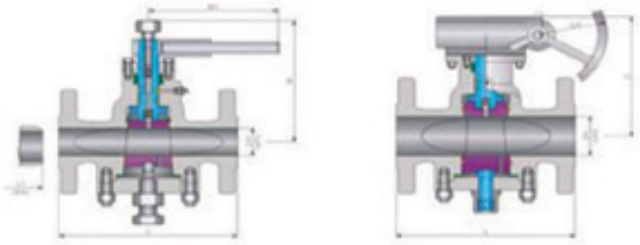


ASTM Material list of API 600 Rising Stem Cast Steel Gate valve							
No	Part Name	Carbon Steel to ASTM		Stainless stee to ASTM			
1	Body	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Bonnet	A216 WCB	A352 LCB	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
3	Sleeve	PTFE,RTFE,PPL					
4	Plug	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Bonnet Gasket	A182 F6a	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Bonnet Stud	A193 B7	A193 L7	A193 B8			
7	Bonnet Stud Nut	A194 2H	A194 4	A194 8			
8	Adjasting Gasket	Flexibile Graphite					
9	Wrench	Zine coating					

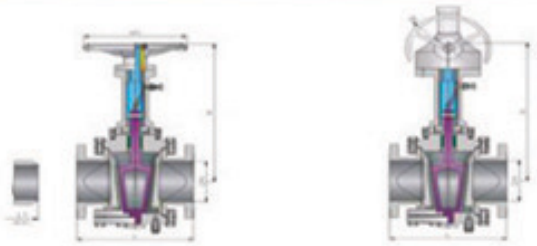


SLEEVE TYPE PLUG VALVE

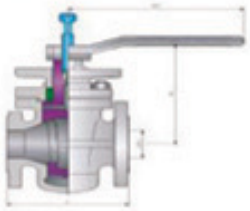
Pressure Balanced Plug Valve



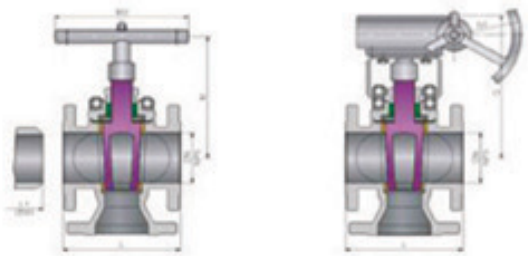
Orbital Plug Valve



Lubricated Plug Valve



T-way Plug Valve



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STRAHMAN USA

Generalni zastupnik za Srbiju
i zemlje ex-Jugoslavije

STRAHMAN je svetski lider u dizajniranju i proizvodnji najsavremenijih ventila najvišeg kvaliteta. Od 1921. Strahman kompanija je započela kao distributer evropskih proizvoda ventila na tržištu SAD-a. Kako je kompanija rasla, u Strahmanu su počeli da dizajniraju i izrađuju sopstvenu liniju proizvoda ventila. Njihov cilj bio je pružiti vrhunsku opremu koja je mogla zadovoljiti potrošače strožijih zahtjeve u naftnoj i petrohemijskoj industriji. Nekoliko godina kasnije u proizvodnju je dodata i kompletna linija visokokvalitetne opreme za ispiranje.

Proizvodi

Strahman Line blind valves
Double disk slab gate valves

Trunion Mounted seated ball valves
In-line dick and piston valves

Double disk slab gate valves

In-line dick and piston valves

Strahman

Ventili za izolaciju opreme nikada nisu 100% pouzdani. Iz tog razloga, većina sigurnosnih propisa zahtevaju uređaje novije generacije (ventile i zasune) koji mogu da regulišu protoke, bez zaustavljanja procesa rada i demontaže zasuna, (kao što je do sada bio slučaj), kao što su Line Blinds. Ovo je posebno važno kod visoko-temperaturnih, kritičnih uslova.

Strahman Line Blinds u jednoj varijenti služe kao standarni ventil, a u drugoj mogu da izigravaju osmicu, bez skidanja ventila, da bi se izvršila intervencija na liniji cevovoda na kojoj su ugrađeni. Time se smanjuje potreba za spektakle blind (osmice). Oni su specijalno dizajnirani za širok spektar temperatura, a na raspolaganju su i dizajni koji odgovaraju API 607 rev.4 standardima protiv požara.

Strahman je pionir u razvoju nepropusnih Blinds ventila i bila je prva kompanija koja je primila Lloid's of London sertifikat za Line Blinds koji se koriste u kriogenim aplikacijama kao što su LNG.
Naša tehnologija i stručnost pružaju vam širok spektar standardnih Line Blinds i mogućnost dizajniranja rešenja koje odgovara vašoj jedinstvenoj aplikaciji.

Trunion mounted ball valves su jedinstveni loptasti ventili visokih performansi posebno dizajnirani za teške uslove rada i za rukovanje visokim pritiskom. Lopta i sedišta mogu imati specijalne odabrane površinske premaze. Ova kombinacija čini je pogodnom za teške uslužne delatnosti. Opcija dizajna donjeg ulaza omogućava veoma brzu i jednostavnu zamenu ventila bez uklanjanja samog ventila. Ovi ventili su takođe dostupni sa punim i smanjenim otvorom.

Moguće aplikacije uključuju polimerne, energetske i rudarske industrije.

Gate valve se koriste za izolaciju (prekid protoka kroz cevovod) linije procesa u hemijskoj i petrohemijskoj industriji. Bezbednost procesne opreme često zavisi od pouzdanosti ovih ventila kao "ključne opreme". Većina Strahmanovih ventila se prilagođava potrebama posebnih procesa.
Kao alternativa ball valve, plug or gate valve Strahman nudi in-line diskove i piston valves.

Za više informacija posetite sajt www.strahmanvalves.com

Posluje u sastavu STRAHMAN VALVES, proizvodni program im je :
- Ball valves,
- Butterfly valves,
- Safety valves,

Fire Safe Ball Valve with Automatic Thermal Shut-off Device

Spring Return Deadman Handles

Ako su zahtevi fabrika takvi gde se ventil mora vratiti u zatvorenu poziciju nakon rada, onda su naši Spring return deadman handle idealno rešenje. Za razliku od standardne ručice koja će ostati na poslednjoj poziciji, naši ventili osiguravaju da će drška uvek vratiti na prvobitnu, unapred određenu početnu poziciju.
Naši loptasti ventili sa povratnim oprugama dizajnirani su za svakodnevnu industrijsku upotrebu. Nudimo i mogućnost zaključavanja ručice za naše loptaste ventile sa ručnim vretenom.

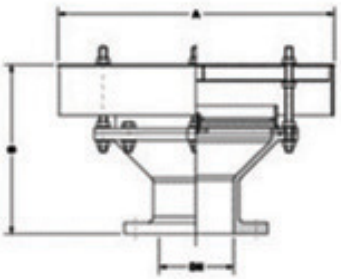
Za više informacija posetite sajt http://www.bitorq.com

ZAUSTAVLJAČI PLAMENA

1. Flame arresters End-of-line
2. Bidirectional flame arrester In-line deflagration

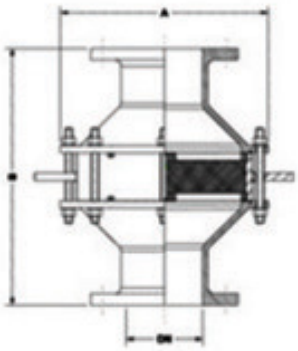
Flame arresters End-of-line - Zaustavljač plamena sa jednom komorom

Flame Arrestor je uređaj koji dozvoljava gasu da prolazi kroz njega, ali zaustavlja plamen kako bi sprečio veće vatre ili eksploziju.



SIZE: 1 " (25 mm) through 16" (400 mm)
CONSTRUCTED: carbon steel, stainless steel, additional metals and coatings
FLANGE RATING: ANSI 150, PN16
EXPLOSION GROUPS: I - IIA - IIB - IIBI - IIB2 - IIB3
Manufacturing comply with the requirements of Directive 94/9/EC
TESTED ISO16852

Bidirectional flame arrester In-line deflagration - Zaustavljač plamena sa dve komore



SIZE: 1 " (25 mm) through 20" (500 mm)
CONSTRUCTED: carbon steel, stainless steel, additional metals and coatings
FLANGE RATING: ANSI 150, PN16
EXPLOSION GROUPS: I - IIA - IIB - IIBI - IIB2 - IIB3
Manufacturing comply with the requirements of Directive 94/9/EC
TESTED ISO16852

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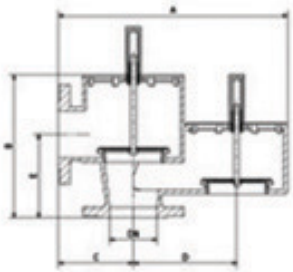
SIGURNOSNI VENTILI

1. Breather valves
2. Emergency vents Roof Manhole Cover
3. Vent-line / In-line flame arresters

Breather valves / Dišni ventil

Breather valves dozvoljava da tečnost pod pritiskom izlazi iz pomoćnog prolaza iz sistema. Dizajniran je tako da je postavljen da se otvara na unapred određenom (zadatom) pritisku kako bi se zaštitile posude pod pritiskom i druga oprema izložena pritiscima koji premašuju njihove proračunate pritiske za datu vrstu opreme (rezervoare).



SIZE: 4" (100 mm) through 8" (200 mm)
CONSTRUCTED: aluminium, carbon steel, stainless steel, additional metals and coatings
SETTING PRESSURE: +2,5 mbar to +50 mbar
SETTING VACUUM: -2,5 mbar to -30 mbar
FLANGE RATING: ANSI 150, PN16

Emergency vents Roof Manhole Cover

Pruža rasterećenje pritiska u slučaju požara u rezervoaru ili drugo nenormalno povećanje pritiska iz bilo kog razloga u rezervoaru.
Pošto fluid u rezervoaru povećava temperaturu, sistem za odzračivanje omogućava potreban ventilacioni kapacitet (za rasterećenje temperature ili pritiska), sprečavajući deformaciju rezervoara. Sprečava da rezervoar procuri (deformiše se) zbog previsokog pritiska. Funkcioniše tako da kada pritisak u rezervoaru prelazi radne vrednosti za dati rezervoar - ventil se otvara.
Dostupan u varijanti pritisku / vakuum.
Veće veličine dozvoljavaju pristup (ulaz) u rezervoar.

SIZE: 10" - 20" - 24"
CONSTRUCTED: carbon steel, stainless steel, additional metals and coatings
SETTING PRESSURE: +30 mbar max
FLANGE RATING: ANSI 150, PN10, PN16

Vent-line / In-line flame arresters

In-lane flame arresters se postavlja direktno uzvodno ili na vakuumskom dovodu otvora za odzračivanje.

SIZE: 2" (50 mm) through 14" (350 mm)

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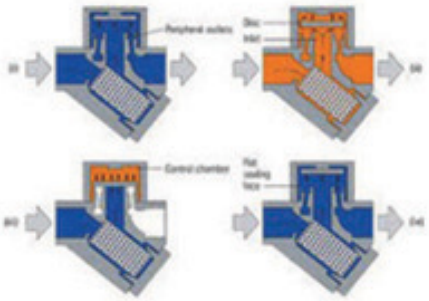
STEAM TRAP
ODVAJAČ KONDENZATA

1. Thermodynamic steam traps
2. Thermostatic steam traps
3. Bimetallic steam trap
4. Inverted bucket type steam trap

Steam trap je uređaj koji se koristi za pražnjenje kondenzata i nekondenzivnih gasova sa zanemarljivom potrošnjom ili gubitkom žive pare. Većina odvajača kondenzata nije ništa više od automatskih ventila. Otvaraju, zatvaraju ili modulišu automatski pražnjenje.

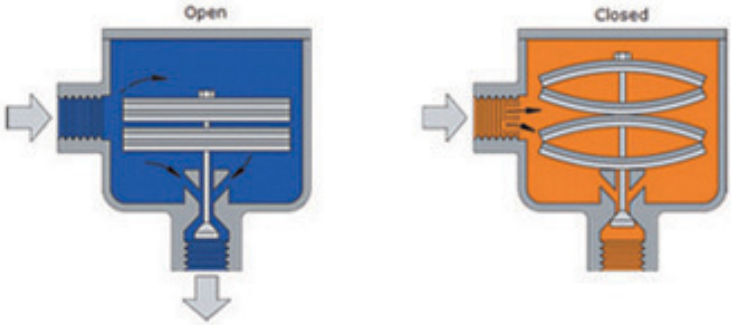
Thermodynamic steam traps

Termodinamičkl odvajači konenzata pare rade po principu Bernoulli, u zavisnosti od veze između brzine i pritiska kondenzata i pare unutar odvajača kondenzata. Imaju samo jedan pokretni deo - disk.



Thermostatic steam traps

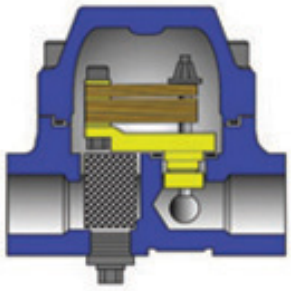
Tri važne funkcije odvajača kondenzata su: Isprazniti kondenzat čim se formira (osim ako nije poželjno koristiti toplotu tečnog kondenzata); Imati zanemarivu potrošnju pare (tj. Biti energetski efikasan); Imati sposobnost pražnjenja vazduha i drugih ne-kondenzabilnih gasova.



Bimetallic steam trap

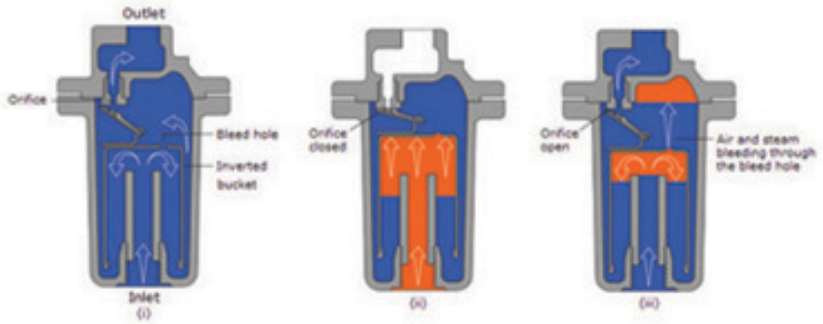
Bimetalni odvajač kondenzata klasificira se kao temperaturni odvajač kondenzata (Thermostatic Trap). Bimetalni odvajač je najrobusnog dizajna među različitim vrstama odvajača koji se nalaze u upotrebi.

Koristi bimetalne trake različitih metala (različitih temperatura) spojenih u parovima.



Inverted bucket type steam trap

Invert bucket je najpouzdaniji odvajač kondenzata, omogućava efikasnu odvodnju kondenzata pare. Pošto se mehanizam nalazi na vrhu odvajača, na otvoru se ne može skupljati prljavština. Automatsko odzračivanje vazduha je obezbeđeno malim otvorom za ventilaciju u korpi, što omogućava kontinualno automatsko izduvavanje vazduha i CO2 na radnoj temperaturi pare.



UGLJENIČNE I LEGIRANE CEVI-CARBON

SEAMLESS AND STAINLESS PIPE

MATERIJAL:
Carbon steel: ASTM/ASME A106 Gr.B, API 5L Gr.B
Alloy steel: ASTM/ASME A234 WP 1-WP 12-WP 11-WP 22-WP 5-WP 91-WP 911
Stanless steel: ASTM/ASME A403 WP 304-304L-304H-304LN, 304N
ASTM/ASME A403 WP 316-316L-316H-316LN-316N-316Ti
ASTM/ASME A403 WP 321-321H ASTM/ASME A403 WP 347-347H
Low-temperature steel:ASTM/ASME A402 WPL 3-WPL 6
High performance: ASTM/ASME A860 WPHY 42-46-52-60-65-70

API 5LSeamless Steel Pipe

Product	Seamless Line Pipe
Process	Hot Rolled/Cold Drawn
Standard	API 5L PSL1, API 5L PSL2
Material	GR.B,X42,X46,X52,X56,X60,X65,X70
O.D	1/2"--30"(21.3--762mm)
W.T	0.055"--2"(1.65--50mm)
Length	As per customer's requirement
Surface Treatment	Bared,Black painted,Corrosion Resistant Coating + Cap
Application	Used for gas,water and oil transportation in oil and gas industry. Suitable for ordinary fluid transportation and structure pipe.

ASTM ERW Steel Pipe

Product	ERW Steel Pipe
Process	Electrical Resistance Weld
Standard	ASTM A106,ASTM A53,ASTM A252,ASTM A139,ASTM A36,etc
Material	GR.A,GR.B
O.D	2"--24"(60.3--610mm)
W.T	0.055"--1.602"(1.65--26.97mm)
Length	As per customer's requirement
Surface Treatment	Bared,Black painted,Corrosion Resistant Coating + Cap
Application	Used for gas,water and oil transportation in oil and gas industry.

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API 5L Spiral Welded Line Pipe

Product	Spiral Welded Line Pipe
Process	Submerged Arc Weld
Standard	API 5L PSL1, API 5L PSL2
Material	GR.B,X42,X46,X52,X56,X60,X65,X70
O.D	8"--80"(219--2030mm)
W.T	0.322"--1.602"(8.1--26.97mm)
Length	As per customer's requirement
Surface Treatment	Bared,Black painted,Corrosion Resistant Coating + Cap
Application	Used for gas, water and oil transportation in oil and gas industry, such as l and line pipe and submarine pipeline.

FITTINGS
ANSBI B 16.11

Carbon steel: ASTM/ASME A 105N, A106 Gr.B, API 5L Gr.B
Alloy steel: ASTM/ASME A234 WP1;WP12;WP11;WP22;WP5;WP91;WP911
Stanless steel: ASTM A182 F304, F304L, F306, F316L, F304H, F309S ,F309H, F310S, F310H, F316Ti, F316H, F316LN, F317, F317L, F321, F321H, F11, F22, F91, F347, F347H, F904L ASTM A312/A403 TP304, TP304L, TP316, TP316L
Low-temperature steel: ASTM/ASME A402 WPL 3-WPL 6
High performance: ASTM/ASME A860 WPHY 42-46-52-60-65-70

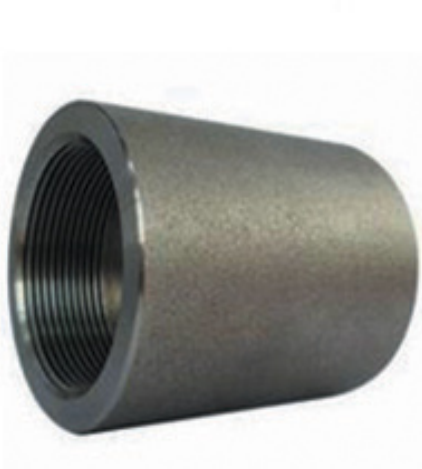
Elbow SW

Elbow NPT

Tee NPT

Weldolet

Coupling



Cap

FITTINGS
ANSI B 16.11

Carbon steel: ASTM/ASME A106 Gr.B, API 5L Gr.B
Alloy steel: ASTM/ASME A234 WP 1-WP 12-WP 11-WP 22-WP 5-WP 91-WP 911
Stanless steel: ASTM A182 F304, F304L, F306, F316L, F304H, F309S ,F309H, F310S, F310H, F316Ti, F316H, F316LN, F317, F317L, F321, F321H, F11, F22, F91, F347, F347H, F904L ASTM A312/A403 TP304, TP304L, TP316, TP316L
Low-temperature steel: ASTM/ASME A402 WPL 3-WPL 6
High performance: ASTM/ASME A860 WPHY 42-46-52-60-65-70

Long Radius Pipe Elbow

ANSI B16.9, B16.28,DIN,JIS
Carbon steel: ASTM A234 WPB-WPC, ST37
Alloy steel: A234 WP5, WP9, WP11, WP12, WP22, WP91

Short Radius Pipe Elbow

ANSI B16.9, B16.28,DIN,JIS
Carbon steel: ASTM A234 WPB-WPC, ST37
Alloy steel:A234 WP5, WP9, WP11, WP12, WP22, WP91

180 Degree Pipe Elbow

ANSI B16.9, B16.28,DIN,JIS
Carbon steel: ASTM/ANSI A234 WPB-WPC, ST37
Alloy steel: A234 WP5, WP9, WP11, WP12, WP22, WP91

45 Degree Pipe Elbow

ANSI B16.9, B16.28,DIN,JIS
Carbon steel: ASTM/ANSI A234 WPB-WPC, ST37
Alloy steel: A234 WP5, WP9, WP11, WP12, WP22, WP91

Equal Tee

1. sch10-sch160
2. size:1/2"-72"
3. ASTM/JIS/DIN/GOST

Reducing Tee

1. sch10-sch160
2. size:1/2"-72"
3. ASTM/JIS/DIN/GOST

Concentric Reducer

1. sch10-sch160
2. size:1/2"-72"
3. ASTM/JIS/DIN/GOST

Eccentric Reducer

1. sch10-sch160
2. size:1/2"-72"
3. ASTM/JIS/DIN/GOST

Pipe elbows are mainly used for connecting two pipes or tubes, allowing a change of direction.
We can provide short radius elbows and long radius elbows.
Usually, pipe elbows are made of carbon steels, alloy steels, stainless steel, and more.

Size
Seamless elbow:1/2"~24" DN15~DN600
Welded Elbow: 4"~72" DN150~DN1800

Wall Thickness
sch10, sch20, sch30, std, sch40, sch60, xs, sch80, sch100, sch120, sch140, sch160, xxs, std,sch5s, sch20s, sch40s, sch80s
Maximum thickness: 120mm
Bending radius R=1D~10D

FLANGE
ANSI B 16.5

Weld-Neck | Slip-On | Socket weld | Lap-Joint | Threaded | Blind

We provides ASME and Non code Industrial pipe flanges for the Petrochemical, Process, and Waterworks industries in Stainless Steel Industrial Flanges, Alloy Steel Industrial Flanges and Carbon Steel Industrial Flanges.
ANSI, API, AWWA pipe flanges in carbon steel, stainless steel, alloys and chrome steel.
Our steel flanges can be Weld Neck, Slip on, Blind, Threaded, Socket Weld, Lap Joint, Orifice Flanges, Ring, and custom steel flanges in sizes 1/2" to 203".
Pressure classes – 75, 125, 150, 175, 250, 300, 350, 400, 600, 900, 1500, 2500, 5K, 10K, 15K, 20K. High Yield – Low Temp.

Manufacture Specification:
ISO7005-1, ASME/ASNI B16.5/16.36/1647A/1647B, MSS SP44, JIS B2220
DIN2527/2636/2637/2638/2566/2576/2632/2633/2635/2642/2653/2655/2656
BS 1560-3.1, BS4504-3.1
API 7S-15, API 7S-43, API 605, NFE 29-203 EN1092

Type:
ASME : Weld Neck, Slip on, Blind, Socket Weld, Threaded, Lap Joint
EN 1092.1: 01 (Plate), 05 (Blank), 11 (Weld Neck), 12 (Hubbed Slip on), 13 (Hubbed Threaded)

Flange Facing:
ASME:Raised Face, Flat Face, Ring Type Joint, Male and Famle, Tongue and Groove
EN1092.1: A-Flat Face, B-Raised Face, C-Tongue, D-Groove, E-Spigot, F-Recess, G-O-Ring Spigot, H-O-Ring Groove

Rating:
ASME: Class 150/300/400/600/900/1500/2500
EN1092.1: PN 2.5/6/10/16/25/40/63/100/160/250/320/400

Materials:
Stainless Steel: ASTM A182-F304, F304L, F304H, F316, F316L, F321, F321H, F347H, F317 Super Stainless Steel: ASTM 904L, B625-N08904, 317, 317L, 254SMO
Duplex&Super Duplex Steel: ASTM A182-F51(S31803) Low Temp Steel: ASTM A350-LF2, LF3
Carbon Steel: ASTM A105

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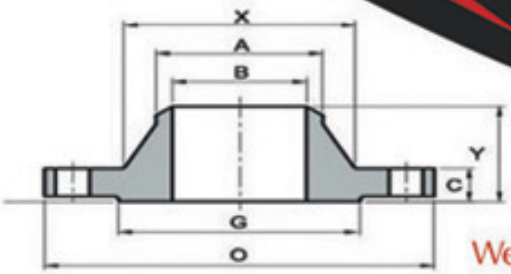
FITTINGS
ANSI B 16.5

Summary of flange sizes specified by common standards

Flange Type	Specifications				
	ASME/ANSI B16.5	ASME B1647 Series A (or MSS SP-44)	ASME B1647 Series B (or API 605)	BS 4504 (ISO 7005-1)	BS 3293
	Nominal Pipe Sizes				
	< NPS 26	≥NPS 26	≥NPS 26	DN 10 to DN 4000	≥NPS 26
	Nominal Pressure (Class)				
	Class (lb)	Class (lb)	Class (lb)	PN (bar)	Class (lb)
Weld Neck	150-2500	150-900	75-900	2.5-40	150-600
Slip-on	150-1500	-	-	2.5-40	150-600
Blind flange	150-2500	300-900	300-900	2.5-40	-
Lap Joint	150-2500	-	-	6-40	-
Socket Weld	150-1500	-	-	N/A	-
Threaded	150-2500	-	-	6-40	-
Flat/Raised Facings	As above	As above	As above	As above	As above
Ring Joint Facings	150-2500	300-900	300-900	2.5-40	300-600
Other Facings	150-2500	-	-	2.5-40	-



Welding Neck

ASME/ANSI B16.5 300LB WN Flange/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Hub Diam. Chamfer of W.N	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	Approx. Weight	
inch	dn	O	C	X	G	A	Y	B	BC	BH	BN	BD	KG/PCS	LB/PCS
1/2"	15	95.5	14.2	38.1	35.1	21.3	52.3	15.7	66.5	15.7	4	1/2"	0.8	1.8
3/4"	20	117. 5	15.7	47.8	42.9	26.7	57.2	20.8	82.6	19.1	4	5/8"	1.4	3.1
1"	25	124. 0	17.5	53.8	50.8	33.5	62	26.7	88.9	19.1	4	5/8"	1.7	3.7
1-1/4"	32	133. 5	19.1	63.5	63.5	42.2	65	35.1	98.6	19.1	4	5/8"	2.2	4.8
1-1/2"	40	155. 5	20.6	69.9	73.2	48.3	68.3	40.9	114.3	22.4	4	5/8"	3.2	7
2"	50	165. 0	22.4	84.1	91.9	60.5	69.9	52.6	127	19.1	8	5/8"	3.6	7.9
2-1/2"	65	190. 5	25.4	100.1	104.6	73.2	76.2	62.7	149.4	22.4	8	3/4"	5.4	12
3"	80	209. 5	28.4	117.3	127	88.9	79.2	78	168.1	22.4	8	3/4"	7.3	16.1
3-1/2"	90	228. 5	30.2	133.4	139.7	101.6	81	90.2	184.2	22.4	8	3/4"	8.9	19.6
4"	100	254. 0	31.8	146.1	157.2	114.3	85.9	102.4	200.2	22.4	8	3/4"	11.8	26
5"	125	279. 5	35.1	177.8	185.7	141.2	98.6	128.3	235	22.4	8	3/4"	16	35.2
6"	150	317. 5	36.6	206.2	215.9	168.4	98.6	154.2	269.7	22.4	12	3/4"	20.2	44.6
8"	200	381. 0	41.1	260.4	269.7	219.2	111. 3	202.7	330.2	25.4	12	7/8"	31.2	68.8
10"	250	444. 5	47.8	320.5	323.9	273.1	117. 3	254.5	387.4	28.4	16	1"	44.3	97.5
12"	300	520. 5	50.8	374.7	381	323.9	130. 0	304.8	450.9	31.8	16	1 1/8"	63.5	140
14"	350	584. 0	53.8	425.5	412.8	355.6	142. 7		514..4	31.8	20	1 1/8"	86	190
16"	400	647. 5	57.2	482.6	469.9	406.4	146. 1		571.5	35.1	20	1 1/4"	112	247
18"	450	711. 0	60.5	533.4	533.4	457.2	158. 8		628.7	35.1	24	1 1/4"	141	310
20"	500	774. 5	63.5	587.2	584.2	508	162. 1		685.8	35.1	24	1 1/4"	173	382
24"	600	914. 5	69.9	701.5	692.2	609.6	168. 1		812.8	41.1	24	1 1/2"	248	546

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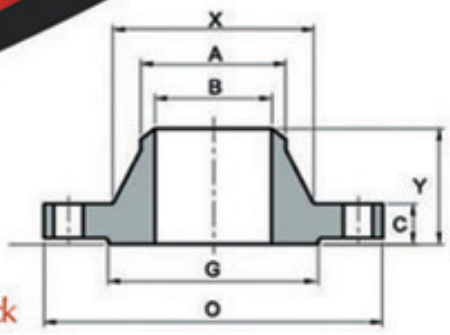
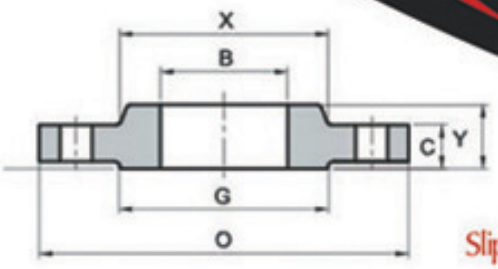
FITTINGS
ANSI B 16.5



Welding Neck

ASME/ANSI B16.5 150LB WN Flange/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Hub Diam. Chamfer of W.N	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	A	Y	B	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	21.30	47.80	15.80	60.50	15.80	4	1/2"	0.7	1.5
3/4"	20	98.50	12.70	38.10	42.90	26.70	52.30	20.80	69.90	15.80	4	1/2"	0.8	1.8
1"	25	108.00	14.20	49.30	50.80	33.50	55.60	26.70	79.30	15.80	4	1/2"	1.1	2.4
1-1/4"	32	117.50	15.70	58.70	63.50	42.20	57.20	35.10	88.90	15.80	4	1/2"	1.5	3.3
1-1/2"	40	127.00	17.50	65.00	73.20	48.30	62.00	40.90	98.60	15.80	4	1/2"	1.8	4
2"	50	152.50	19.10	77.70	91.90	60.50	63.50	52.60	120.70	19.10	4	5/8"	2.7	6
2-1/2"	65	178.00	22.40	90.40	104.60	73.20	69.90	62.70	139.70	19.10	4	5/8"	4.4	9.8
3"	80	190.50	23.90	108.00	127.00	88.90	69.90	78.00	152.40	19.10	4	5/8"	5.2	11.5
3-1/2"	90	216.00	23.90	122.20	139.70	101.60	71.40	90.20	177.80	19.10	8	5/8"	6.4	14.2
4"	100	228.50	23.90	134.90	157.20	114.30	76.20	102.40	190.50	19.10	8	5/8"	7.5	16.6
5"	125	254.00	23.90	163.60	185.70	141.20	88.90	128.30	215.90	22.40	8	3/4"	9.2	20.2
6"	150	279.50	25.40	192.00	215.90	168.40	88.90	154.20	241.30	22.40	8	3/4"	11	24.3
8"	200	343.00	28.40	246.10	269.70	219.20	101.60	202.70	298.50	22.40	8	3/4"	18.4	40.6
10"	250	406.50	30.20	304.80	323.90	273.10	101.60	254.50	362.00	25.40	12	7/8"	25.5	56.2
12"	300	482.50	31.80	365.30	381.00	323.90	114.30	304.80	431.80	25.40	12	7/8"	37	81.4
14"	350	533.50	35.10	400.10	412.80	355.60	127.00		476.30	28.50	12	1"	51	113
16"	400	597.00	36.60	457.20	469.90	406.40	127.00		539.80	28.50	16	1"	61.5	136
18"	450	635.00	39.60	505.00	533.40	457.20	139.70		577.90	31.80	16	1 1/8"	71.5	158
20"	500	698.50	42.90	558.80	584.20	508.00	144.50		635.00	31.80	20	1 1/8"	85	187
24"	600	813.00	47.80	663.40	692.20									



Slip-On

ASME/ANSI B16.5 150lb Slip on Flange/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	Y	B	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	15.70	22.40	60.50	15.80	4	1/2"	0.4	0.9
3/4"	20	98.50	12.70	38.10	42.90	15.70	27.70	69.90	15.80	4	1/2"	0.7	1.5
1"	25	108.00	14.20	49.30	50.80	17.50	34.50	79.30	15.80	4	1/2"	0.8	1.8
1-1/4"	32	117.50	15.70	58.70	63.50	20.60	43.20	88.90	15.80	4	1/2"	1.2	2.6
1-1/2"	40	127.00	17.50	65.00	73.20	22.40	49.50	98.60	15.80	4	1/2"	1.4	3.1
2"	50	152.50	19.10	77.70	91.90	25.40	62.00	120.70	19.10	4	5/8"	2.2	4.8
2-1/2"	65	178.00	22.40	90.40	104.60	28.40	74.70	139.70	19.10	4	5/8"	3.5	7.7
3"	80	190.50	23.90	108.00	127.00	30.20	90.70	152.40	19.10	4	5/8"	3.8	8.4
3-1/2"	90	216.00	23.90	122.20	139.70	31.80	103.40	177.80	19.10	8	5/8"	5	11
4"	100	228.50	23.90	134.90	157.20	33.30	116.10	190.50	19.10	8	5/8"	5.6	12.3
5"	125	254.00	23.90	163.60	185.70	36.60	143.80	215.90	22.40	8	3/4"	6.5	14.3
6"	150	279.50	25.40	192.00	215.90	39.60	170.70	241.30	22.40	8	3/4"	8.1	18
8"	200	343.00	28.40	246.10	269.70	44.50	221.50	298.50	22.40	8	3/4"	13	28.6
10"	250	406.50	30.20	304.80	323.90	49.30	276.40	362.00	25.40	12	7/8"	18.4	40
12"	300	482.50	31.80	365.30	381.00	55.60	327.20	431.80	25.40	12	7/8"	28.5	63
14"	350	533.50	35.10	400.10	412.80	57.20	359.20	476.30	28.50	12	1"	37.5	83
16"	400	597.00	36.60	457.20	469.90	63.50	410.50	539.80	28.50	16	1"	44.5	98
18"	450	635.00	39.60	505.00	533.40	68.30	461.80	577.90	31.80	16	1 1/8"	54	119
20"	500	698.50	42.90	558.80	584.20	73.20	513.10	635.00	31.80	20	1 1/8"	72	158
24"	600	813.00	47.80	663.40	692.20	82.60	616.00	749.30	35.10	20	1 1/4"	95	20

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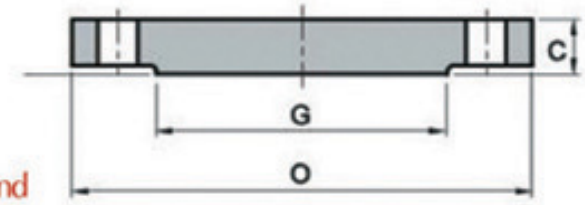
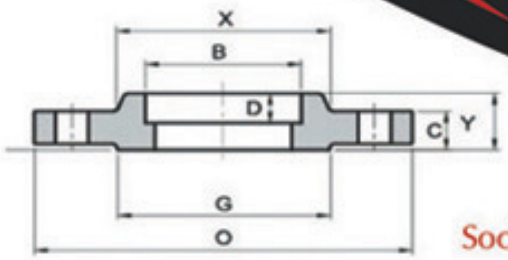
FITTINGS
ANSI B 16.5



Blind

ASME/ANSI B16.5 150lb Blind Flange /Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diameter of Raised Face	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	G	BC	BH	BN	BD		
1/2"	15	89.00	11.20	35.10	60.50	15.80	4	1/2"	0.5	1.1
3/4"	20	98.50	12.70	42.90	69.90	15.80	4	1/2"	0.8	1.8
1"	25	108.00	14.20	50.80	79.30	15.80	4	1/2"	0.9	2
1-1/4"	32	117.50	15.70	63.50	88.90	15.80	4	1/2"	1.3	2.9
1-1/2"	40	127.00	17.50	73.20	98.60	15.80	4	1/2"	1.6	3.5
2"	50	152.50	19.10	91.90	120.70	19.10	4	5/8"	2.6	5.7
2-1/2"	65	178.00	22.40	104.60	139.70	19.10	4	5/8"	4.1	9
3"	80	190.50	23.90	127.00	152.40	19.10	4	5/8"	5..1	11.2
3-1/2"	90	216.00	23.90	139.70	177.80	19.10	8	5/8"	6.5	14.3
4"	100	228.50	23.90	157.20	190.50	19.10	8	5/8"	7.5	16.5
5"	125	254.00	23.90	185.70	215.90	22.40	8	3/4"	9.2	20.3
6"	150	279.50	25.40	215.90	241.30	22.40	8	3/4"	11.8	26
8"	200	343.00	28.40	269.70	298.50	22.40	8	3/4"	20.4	45
10"	250	406.50	30.20	323.90	362.00	25.40	12	7/8"	31	68
12"	300	482.50	31.80	381.00	431.80	25.40	12	7/8"	47	103
14"	350	533.50	35.10	412.80	476.30	28.50	12	1"	60	132
16"	400	597.00	36.60	469.90	539.80	28.50	16	1"	81	178
18"	450	635.00	39.60	533.40	577.90	31.80	16	1 1/8"	93	205
20"	500	698.50	42.90	584.20	635.00	31.80	20	1 1/8"	127	280
24"	600	813.00	47.80	692.20	749.30	35.10	20	1 1/4"	190	419

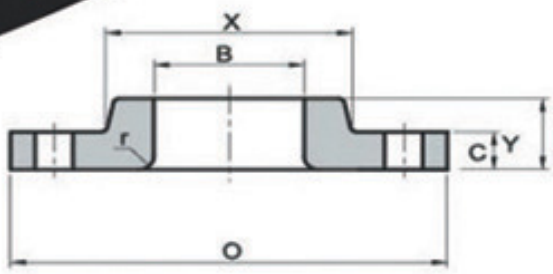


Socket Welding

150lb Socket Welding Flange-ASME/ANSI B16.5/Standards, Dimensions & Weight

Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Depth of Socket.D	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	Y	B	D	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	15.70	22.40	9.70	60.50	15.80	4	1/2"	0.4	0.9
3/4"	20	98.50	12.70	38.10	42.90	15.70	27.70	11.20	69.90	15.80	4	1/2"	0.7	1.5
1"	25	108.00	14.20	49.30	50.80	17.50	34.50	12.70	79.30	15.80	4	1/2"	0.9	2
1-1/4"	32	117.50	15.70	58.70	63.50	20.60	43.20	14.20	88.90	15.80	4	1/2"	1.2	2.6
1-1/2"	40	127.00	17.50	65.00	73.20	22.40	49.50	15.80	98.60	15.80	4	1/2"	1.5	3.3
2"	50	152.50	19.10	77.70	91.90	25.40	62.00	17.50	120.70	19.10	4	5/8"	2.3	5.1
2-1/2"	65	178.00	22.40	90.40	104.60	28.40	74.70	19.10	139.70	19.10	4	5/8"	3.7	8.1
3"	80	190.50	23.90	108.00	127.00	30.20	90.70	20.60	152.40	19.10	4	5/8"	4.2	9.2
3-1/2"	90	216.00	23.90	122.20	139.70	31.80	103.40		177.80	19.10	8	5/8"	5.2	11.4
4"	100	228.50	23.90	134.90	157.20	33.30	116.10		190.50	19.10	8	5/8"	5.9	13
5"	125	254.00	23.90	163.60	185.70	36.60	143.80		215.90	22.40	8	3/4"	7	15.4
6"	150	279.50	25.40	192.00	215.90	39.60	170.70		241.30	22.40	8	3/4"	8.4	18.5
8"	200	343.00	28.40	246.10	269.70	44.50	221.50		298.50	22.40	8	3/4"	12.6	27.7
10"	250	406.50	30.20	304.80	323.90	49.30	276.40		362.00	25.40	12	7/8"	18	39.6
12"	300	482.50	31.80	365.30	381.00	55.60	327.20		431.80	25.40	12	7/8"	29.5	65
14"	350	533.50	35.10	400.10	412.80	57.20	359.20		476.30	28.50	12	1"	38	84
16"	400	597.00	36.60	457.20	469.90	63.50	410.50		539.80	28.50	16	1"	42	93
18"	450	635.00	39.60	505.00	533.40	68.30	461.80		577.90	31.80	16	1 1/8"	54	120
20"	500	698.50	42.90	558.80	584.20	73.20	513.10		635.00	31.80	20	1 1/8"	70	155
24"	600	813.00	47.80	663.40	692.20	82.60	616.00		749.30	35.10	20	1 1/4"	94	207

FITTINGS
ANSI B 16.5

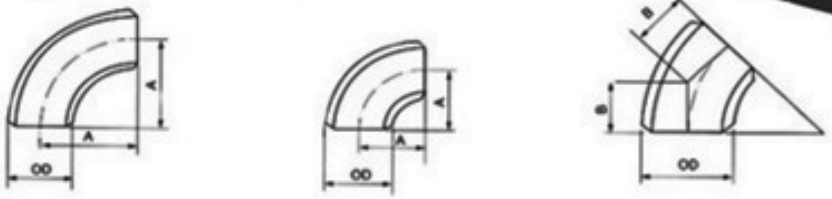


Lap Joint (Lapped)

150lb Lap Joint Flange-ASME/ANSI B16.5/Standards, Dimensions & Weight

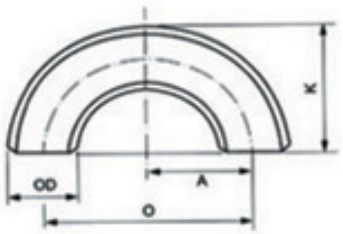
Pipe Normal Diam.		O.D. Flange	Thk. Of Flange Min	Diam. of Hub	Diameter of Raised Face	Length Hub.Y	Bore	Corner Radius of Bore of lapped Flange	Diam. of Bolt Circle	Diam. of Bolt Holes	Number of Bolts	Diam. of Bolts (inch)	KG	LB
inch	dn	O	C	X	G	Y	B	R	BC	BH	BN	BD		
1/2"	15	89.00	11.20	30.20	35.10	15.70	22.90	3.00	60.50	15.80	4	1/2"	0.4	0.9
3/4"	20	98.50	12.70	38.10	42.90	15.70	28.20	3.00	69.90	15.80	4	1/2"	0.7	1.5
1"	25	108.00	14.20	49.30	50.80	17.50	35.10	3.00	79.30	15.80	4	1/2"	0.8	1.8
1-1/4"	32	117.50	15.70	58.70	63.50	20.60	43.70	4.80	88.90	15.80	4	1/2"	1.1	2.4
1-1/2"	40	127.00	17.50	65.00	73.20	22.40	50.00	6.40	98.60	15.80	4	1/2"	1.4	3.1
2"	50	152.50	19.10	77.70	91.90	25.40	62.50	7.90	120.70	19.10	4	5/8"	2.2	4.8
2-1/2"	65	178.00	22.40	90.40	104.60	28.40	75.40	7.90	139.70	19.10	4	5/8"	3.5	7.7
3"	80	190.50	23.90	108.00	127.00	30.20	91.40	9.70	152.40	19.10	4	5/8"	3.8	8.4
3-1/2"	90	216.00	23.90	122.20	139.70	31.80	104.10	9.70	177.80	19.10	8	5/8"	5	11
4"	100	228.50	23.90	134.90	157.20	33.30	116.80	11.20	190.50	19.10	8	5/8"	5.6	12.3
5"	125	254.00	23.90	163.60	185.70	36.60	144.50	11.20	215.90	22.40	8	3/4"	6.5	14.3
6"	150	279.50	25.40	192.00	215.90	39.60	171.50	12.70	241.30	22.40	8	3/4"	8.1	18
8"	200	343.00	28.40	246.10	269.70	44.50	222.30	12.70	298.50	22.40	8	3/4"	13	28.6
10"	250	406.50	30.20	304.80	323.90	49.30	277.40	12.70	362.00	25.40	12	7/8"	18.4	40
12"	300	482.50	31.80	365.30	381.00	55.60	328.20	12.70	431.80	25.40	12	7/8"	28.5	63
14"	350	533.50	35.10	400.10	412.80	79.20	360.20	12.70	476.30	28.50	12	1"	41.5	91.5
16"	400	597.00	36.60	457.20	469.90	87.40	411.20	12.70	539.80	28.50	16	1"	53	117
18"	450	635.00	39.60	505.00	533.40	96.80	462.30	12.70	577.90	31.80	16	1 1/8"	59	130
20"	500	698.50	42.90	558.80	584.20	103.10	514.40	12.70	635.00	31.80	20	1 1/8"	74	163
24"	600	813.00	47.80	663.40	692.20	111.30	616.00	12.70	749.30	35.10	20	1 1/4"	99	218

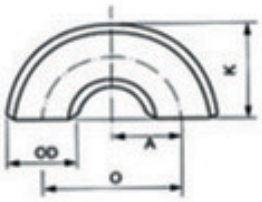
Wrought Steel Buttwelding Fittungs (ASTM)
Long and Short Radius Elbows



Nominal pipe size(NPS)	Outside Diameter at bevel OD		Center-to-End							
			90° Elbows A				45° Elbows B			
			Long Radius		Short Radius		Long Radius		Short Radius	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1/2	0.84	21.3	1.5	38	-	-	0.62	16	-	-
3/4	1.05	26.7	1.12	29	-	-	0.44	11	-	-
1	1.32	33.4	1.5	38	1	25	0.88	22	0.41	10
1 1/4	1.66	42.2	1.88	48	1.25	32	1	25	0.52	13
1 1/2	1.9	48.3	2.25	57	1.5	38	1.12	29	0.62	16
2	2.38	60.3	3	76	2	51	1.38	35	0.83	21
2 1/2	2.88	73.0	3.75	95	2.5	64	1.75	44	1.04	26
3	3.5	88.9	4.5	114	3	76	2	51	1.24	32
3 1/2	4	101.6	5.25	133	3.5	89	2.25	57	1.45	37
4	4.5	114.3	6	152	4	102	2.5	64	1.66	42
5	5.56	141.3	7.5	190	5	127	3.12	79	2.07	53
6	6.62	168.3	9	229	6	152	3.75	95	2.50	63
8	8.62	219.1	12	305	8	203	5	127	3.31	84
10	10.75	273.0	15	381	10	254	6.25	159	4.14	105
12	12.75	323.8	18	457	12	305	7.5	190	4.97	126
14	14	355.6	21	533	14	356	8.75	222	5.80	147
16	16	406.4	24	610	16	406	10	254	6.63	168
18	18	457	27	686	18	457	11.25	286	7.46	189
20	20	508	30	762	20	508	12.5	318	8.28	210
22	22	559	33	838	22	559	13.5	343	9.11	232
24	24	610	36	914	24	610	15	381	9.94	253
26	26	660	39	991	26	660	16	405	10.77	274
28	28	711	42	1067	28	711	17.25	438	11.60	295
30	30	762	45	1143	30	762	18.5	470	12.43	316
32	32	813	48	1219	32	813	19.75	502	14.89	378
34	34	864	51	1295	34	864	21	533	14.08	358
36	36	914	54	1372	36	914	22.25	565	14.91	379
38	38	965	57	1448	38	965	23.62	600	15.74	400
40	40	1016	60	1524	40	1016	24.88	632	16.57	421
42	42	1067	63	1600	42	1067	26	660	17.40	442
44	44	1118	66	1676	44	1118	27.38	695	18.23	463
46	46	1168	69	1753	46	1168	28.62	727	19.05	484
48	48	1219	72	1829	48	1219	29.88	759	19.88	505

Wrought Steel Buttwelding Fittungs (ASTM)
Long and Short Radius Elbows





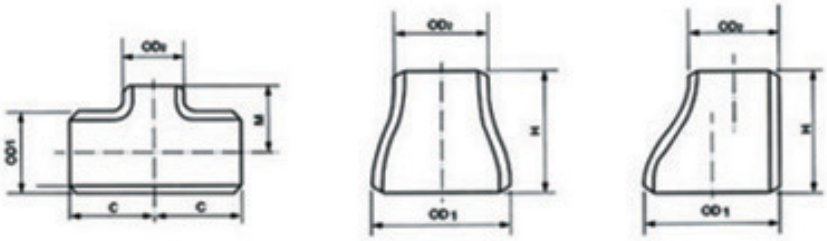
Nominal pipe size(NPS)	Outside Diameter at bevel OD		Center-to-End				End-to-End			
			180 Returns O				180 Returns K			
			Long Radius		Short Radius		Long Radius		Short Radius	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1/2	0.84	21.3	3	76	-	-	1.88	48	-	-
3/4	1.05	26.7	2.25	57	-	-	1.69	43	-	-
1	1.32	33.4	3	76	2	51	2.19	56	1.62	41
1 1/4	1.66	42.2	3.75	95	2.5	64	2.75	70	2.06	52
1 1/2	1.9	48.3	4.5	114	3	76	3.25	83	2.44	62
2	2.38	60.3	6	152	4	102	4.19	106	3.19	81
2 1/2	2.88	73.0	7.5	190	5	127	5.19	132	3.94	100
3	3.5	88.9	9	229	6	152	6.25	159	4.75	121
3 1/2	4	101.6	10.5	267	7	178	7.25	184	5.5	140
4	4.5	114.3	12	305	8	203	8.25	210	6.25	159
5	5.56	141.3	15	381	10	254	10.31	262	7.75	197
6	6.62	168.3	18	457	12	305	12.31	313	9.31	237
8	8.62	219.1	24	610	16	406	16.31	414	12.31	313
10	10.75	273.0	30	762	20	508	20.38	518	15.38	391
12	12.75	323.8	36	914	24	610	24.38	619	18.38	467
14	14	355.6	42	1067	28	711	28	711	21	533
16	16	406.4	48	1219	32	813	32	813	24	610
18	18	457	54	1372	36	914	36	914	27	686
20	20	508	60	1524	40	1016	40	1016	30	762
22	22	559	66	1676	44	1118	44	1118	33	838
24	24	610	72	1829	48	1219	48	1219	36	914

Wrought Steel Buttwelding Fittings (ASME)
Reducing Tees and Concentric & Eccentric Reducers

Nominal pipe size(NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End	
	OD1		OD2		C		M		H	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
3/4×1/2	1.05	26.7	0.84	21.3	1.12	29	1.12	29	1.5	38
1×3/4	1.32	33.4	1.05	26.7	1.5	38	1.5	38	2	51
1×1/2	1.32	33.4	0.84	21.3	1.5	38	1.5	38	2	51
1 1/4×1	1.66	42.2	1.32	33.4	1.88	48	1.88	48	2	51
1 1/4×3/4	1.66	42.2	1.05	26.7	1.88	48	1.88	48	2	51
1 1/4×1/2	1.66	42.2	0.84	21.3	1.88	48	1.88	48	2	51
1 1/2×1 1/4	1.9	48.3	1.66	42.2	2.25	57	2.25	57	2.5	64
1 1/2×1	1.9	48.3	1.32	33.4	2.25	57	2.25	57	2.5	64
1 1/2×3/4	1.9	48.3	1.05	26.7	2.25	57	2.25	57	2.5	64
1 1/2×1/2	1.9	48.3	0.84	21.3	2.25	57	2.25	57	2.5	64
2×1 1/2	2.38	60.3	1.9	48.3	2.5	64	2.38	60	3	76
2×1 1/4	2.38	60.3	1.66	42.2	2.5	64	2.25	57	3	76
2×1	2.38	60.3	1.32	33.4	2.5	64	2	51	3	76
2×3/4	2.38	60.3	1.05	26.7	2.5	64	1.75	44	3	76
2×1/2	2.38	60.3	0.84	21.3	2.5	64	-	-	3	76
2 1/2×2	2.88	73	2.38	60.3	3	76	2.75	70	3.5	89
2 1/2×1 1/2	2.88	73	1.9	48.3	3	76	2.62	67	3.5	89
2 1/2×1 1/4	2.88	73	1.66	42.2	3	76	2.5	64	3.5	89
2 1/2×1	2.88	73	1.32	33.4	3	76	2.25	57	3.5	89
2 1/2×3/4	2.88	73	1.05	26.7	3	76	-	-	3.5	89
2 1/2×1/2	2.88	73	0.84	21.3	3	76	-	-	3.5	89
3×2 1/2	3.5	88.9	2.88	73	3.38	86	3.25	83	3.5	89
3×2	3.5	88.9	2.38	60.3	3.38	86	3	76	3.5	89
3×1 1/2	3.5	88.9	1.9	48.3	3.38	86	2.88	73	3.5	89
3×1 1/4	3.5	88.9	1.66	42.2	3.38	86	2.75	70	3.5	89
3×1	3.5	88.9	1.32	33.4	3.38	86	-	-	3.5	89
3×3/4	3.5	88.9	1.05	26.7	3.38	86	-	-	3.5	89
3×1/2	3.5	88.9	0.84	21.3	3.38	86	-	-	3.5	89
3 1/2×3	4	101.6	3.5	88.9	3.75	95	3.62	92	4	102
3 1/2×2 1/2	4	101.6	2.88	73	3.75	95	3.5	89	4	102
3 1/2×2	4	101.6	2.38	60.3	3.75	95	3.25	83	4	102
3 1/2×1 1/2	4	101.6	1.9	48.3	3.75	95	3.12	79	4	102
3 1/2×1 1/4	4	101.6	1.66	42.2	3.75	95	-	-	4	102
4×3 1/2	4.5	114.3	4	101.6	4.12	105	4	102	4	102
4×3	4.5	114.3	3.5	88.9	4.12	105	3.88	98	4	102
4×2 1/2	4.5	114.3	2.88	73	4.12	105	3.75	95	4	102
4×2	4.5	114.3	2.38	60.3	4.12	105	3.5	89	4	102
4×1 1/2	4.5	114.3	1.9	48.3	4.12	105	3.38	86	4	102
4×1 1/4	4.5	114.3	1.66	42.2	4.12	105	-	-	4	102
4×1	4.5	114.3	1.32	33.4	4.12	105	-	-	4	102

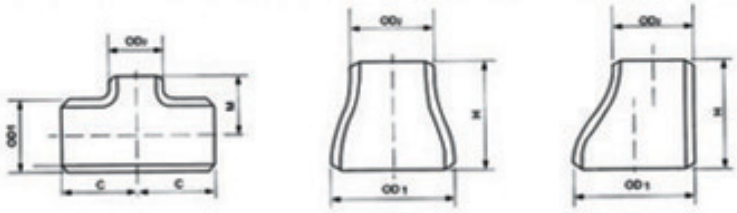
FITTINGS
ANSI B16.9

Wrought Steel Buttwelding Fittings (ASME)
Reducing Tees and Concentric & Eccentric Reducers



Nominal pipe size(NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End	
	OD1		OD2		C		M(1)		H	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
5×4	5.56	141.3	4.5	114.3	4.88	124	4.62	117	5	127
5×3½	5.56	141.3	4	101.6	4.88	124	4.5	114	5	127
5×3	5.56	141.3	3.5	88.9	4.88	124	4.38	111	5	127
5×2½	5.56	141.3	2.88	73	4.88	124	4.25	108	5	127
5×2	5.56	141.3	2.38	60.3	4.88	124	4.12	105	5	127
5×1½	5.56	141.3	1.9	48.3	4.88	124	*	*	5	127
5×1¼	5.56	141.3	1.66	42.2	4.88	124	*	*	5	127
6×5	6.62	168.3	4.56	141.3	5.62	143	5.38	137	5.5	140
6×4	6.62	168.3	4.5	114.3	5.62	143	5.12	130	5.5	140
6×3½	6.62	168.3	4	101.6	5.62	143	5	127	5.5	140
6×3	6.62	168.3	3.5	88.9	5.62	143	4.88	124	5.5	140
6×2½	6.62	168.3	2.88	73	5.62	143	4.75	121	5.5	140
6×2	6.62	168.3	2.38	60.3	5.62	143	*	*	5.5	140
8×6	8.62	219.1	6.62	168.3	7	178	6.62	168	6	152
8×5	8.62	219.1	5.56	141.3	7	178	6.38	162	6	152
8×4	8.62	219.1	4.5	114.3	7	178	6.12	156	6	152
8×3½	8.62	219.1	4	101.6	7	178	6	152	6	152
8×3	8.62	219.1	3.5	88.9	7	178	*	*	6	152
10×8	10.75	273	8.62	219.1	8.5	216	8	203	7	178
10×6	10.75	273	6.62	168.3	8.5	216	7.62	194	7	178
10×5	10.75	273	5.56	141.3	8.5	216	7.5	191	7	178
10×4	10.75	273	4.5	114.3	8.5	216	7.25	184	7	178
10×3	10.75	273	3.5	88.9	8.5	216	*	*	7	178
12×10	12.75	323.8	10.75	273	10	254	9.5	241	8	203
12×8	12.75	323.8	8.62	219.1	10	254	9	229	8	203
12×6	12.75	323.8	6.62	168.3	10	254	8.62	219	8	203
12×5	12.75	323.8	5.56	141.3	10	254	8.5	216	8	203
12×4	12.75	323.8	4.5	114.3	10	254	*	*	8	203
14×12	14	355.6	12.75	323.8	11	279	10.62	270	13	330
14×10	14	355.6	10.75	273	11	279	10.12	257	13	330
14×8	14	355.6	8.62	219.1	11	279	9.75	248	13	330
14×6	14	355.6	6.62	168.3	11	279	9.38	238	13	330
14×5	14	355.6	5.56	141.3	11	279	*	*	13	330
16×14	16	406.4	14	355.6	12	305	12	305	14	356
16×12	16	406.4	12.75	323.8	12	305	11.62	295	14	356
16×10	16	406.4	10.75	273	12	305	11.12	283	14	356
16×8	16	406.4	8.62	219.1	12	305	10.75	273	14	356
16×6	16	406.4	6.62	168.3	12	305	10.38	264	14	356
18×16	18	457	16	406.4	13.5	343	13	330	15	381

Wrought Steel Buttwelding Fittings (ASME)
Reducing Tees and Concentric & Eccentric Reducers



Nominal pipe size (NPS)	Outside Diameter at Bevel				Center-to-End				End-to-End	
	OD1		OD2		C		M(1)		H	
	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
18×14	18	457	14	355.6	13.5	343	13	330	15	381
18×12	18	457	12.75	323.8	13.5	343	12.62	321	15	381
18×10	18	457	10.75	273	13.5	343	12.12	308	15	381
18×8	18	457	8.62	219.1	13.5	343	11.75	298	15	381
20×18	20	508	18	457.2	15	381	14.5	368	20	508
20×16	20	508	16	406.4	15	381	14	356	20	508
20×14	20	508	14	355.6	15	381	14	356	20	508
20×12	20	508	12.75	323.8	15	381	13.62	346	20	508
20×10	20	508	10.75	273	15	381	13.12	333	20	508
20×8	20	508	8.62	219.1	15	381	12.75	324	20	508
22×20	22	559	20	508	16.5	419	16	406	20	508
22×18	22	559	18	457.2	16.5	419	15.5	394	20	508
22×16	22	559	16	406.4	16.5	419	15	381	20	508
22×14	22	559	14	355.6	16.5	419	15	381	20	508
22×12	22	559	12.75	323.8	16.5	419	14.62	371	20	508
22×10	22	559	10.75	273	16.5	419	14.12	359	20	508
24×22	24	610	22	558.8	17	432	17	432	20	508
24×20	24	610	20	508	17	432	17	432	20	508
24×18	24	610	18	457.2	17	432	16.5	419	20	508
24×16	24	610	16	406.4	17	432	16	406	20	508
24×14	24	610	14	355.6	17	432	16	406	20	508
24×12	24	610	12.75	323.8	17	432	15.62	397	20	508
24×10	24	610	10.75	273	17	432	15.12	384	20	508
26×24	26	660	24	609.6	19.5	495	19	483	24	610
26×22	26	660	22	558.6	19.5	495	18.5	470	24	610
26×20	26	660	20	508	19.5	495	18	457	24	610
26×18	26	660	18	457.2	19.5	495	17.5	444	24	610
26×16	26	660	16	406.4	19.5	495	17	432	24	610
26×14	26	660	14	355.6	19.5	495	17	432	24	610
26×12	26	660	12.75	323.8	19.5	495	16.62	422	24	610
28×26	28	711	26	660.4	20.5	52	20.5	521	24	610
28×24	28	711	24	609.6	20.5	152	20	508	24	610
28×22	28	711	22	558.8	20.5	152	19.5	495	24	610
28×20	28	711	20	508	20.5	1521	19	483	24	610
28×18	28	711	18	457.2	20.5	521	18.5	470	24	610
28×16	28	711	16	406.4	20.5	521	18	457	24	610
28×14	28	711	14	355.6	20.5	521	18	457	24	610
28×12	28	711	12.75	323.8	20.5	521	17.62	448	24	610
30×28	30	762	28	711.2	22	559	21.5	546	24	610

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