



**SCV VALVE**  
Innovative Valve Solutions®



## Bolted Bonnet OS&Y Wedge Gate Valves - API 600

Class: 150 - 2500  
Sizes: 2" - 48"





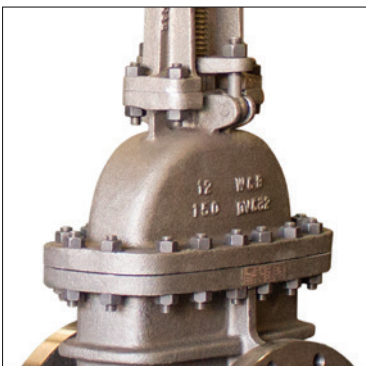
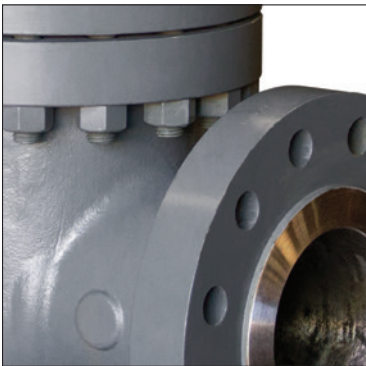
**SCV VALVE**



**SCV VALVE** manufactures superior cast body, bolted bonnet OS&Y gate valves in a variety of materials, trims, packing types, sizes [2" thru 48"] and pressure classes [150 thru 2500]. The mechanical characteristics make the SCV wedge gate valve are ideal for bi-directional "total flow system open/shut-off" applications with minimal turbulence and pressure drop.



The valve design conforms to API 600 and B16.34. Face-to-face and end-to-end dimensions conform to ANSI B16.5 and B16.25.



**Innovative Valve Solutions.®**

# Bolted Bonnet OS&Y Wedge Gate Valves

[ Product Preview ]

## Bolted Bonnet OS&Y Wedge Gate Valves - API 600

- Basic Design: API 600 & ANSI/ASME B 16.34
- Wall Thickness: ASME B 16.34
- Face-to-Face Dimensions: ANSI/ASME B16.10
- Flange End Dimensions: ANSI/ASME B16.5 [2" to 24"] MSS SP-44 [26" & up]
- Butt-Weld End Dimensions: ANSI/ASME 16.34
- Pressure/Temperature Rating I/A/W: ANSI/ASME B16.34
- Inspection & Testing: API 598

**Note:** Not recommended for throttling applications.

**Note:** SCV reserves the right to change any technical design and dimensional data without prior notice. Please contact SCV to confirm all Dimensions and Data offered in this catalog.





SCV Valve’s product lines include commodity valves as well as specialty valves in all sizes, pressure classes & metallurgy; including carbon steel, stainless steel & exotic alloys. The valve types include:

- Thru Conduit Gates - Slab & Expanding Gate Designs
- 3-Piece Trunnion Mounted Balls
- Floating Balls
- Wedge Gates
- Globes
- Full Port Swing Checks
- Piston Checks
- Dual Plate Checks - Wafer & Lug Designs
- Pressure Balanced Lubricated Plugs

SCV Valve’s high quality standards demand 100% pressure testing of every valve to insure its reliability and full customer satisfaction. We pride ourselves with high quality products, timely deliveries, and competitive prices.

## Company History

The SCV valve brand was established in 1972. The primary focus of the Company was to provide full inline field service for valve maintenance as well as in house valve modifications. While serving the Power Industry, Paper & Pulp, Oil & Gas, and the Petro Chemical Industry; through years of dedication and commitment to quality and service, SCV had become one of the largest full range, field service companies, with a reputation for superior quality.

In the mid 1970s, the SCV brand entered the valve manufacturing industry, primarily serving the Power Industry. Since that time, the SCV brand has expanded its products to cover a broad range of valves. SCV Valve holds the API 6A & API 6D Monogram, API Q1 Quality Management System, and ASME “R” stamp. The manufacturing facility, sales and projects office is located in Santa Fe, Texas.

## Mission Statement

SCV Valve is committed to consistently providing products that meet or exceed customer and regulatory specifications. SCV Valve aims to enhance customer satisfaction through implementing the highest levels of quality standards while assuring full conformity to those requirements.

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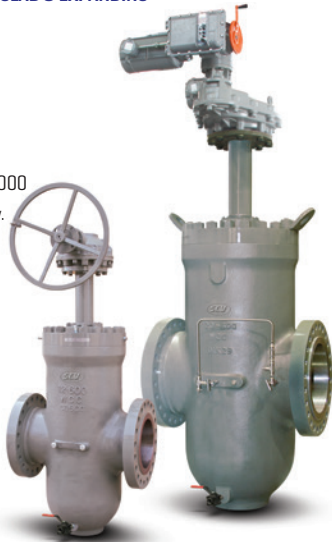


# Complete Product Line

## THRU CONDUIT GATES - SLAB & EXPANDING

**Design: API 6D**  
 Sizes: 2" - 42"  
 Class: 150 - 1500  
 Standard stock.

**Design: API 6A**  
 Sizes: 9", 11" & 13-5/8"  
 Pressure: 2000, 3000, 5000  
 Limited inventory availability.  
 All sizes and pressure classes made to order.



## PISTON CHECKS

**Design: API 6D**  
 Sizes: 2" - 24"  
 Class: 150 - 2500  
 Standard stock.



## GLOBES

**Design: API 623**  
 Sizes: 2" - 24"  
 Class: 150 - 2500  
 Limited inventory availability.  
 All sizes and pressure classes made to order.



## 3-PIECE TRUNNION BALLS

**Design: API 6D**  
 Sizes: 2" - 42"  
 Class: 150 - 2500  
 Standard stock.

Bore Coating: Scotchkote™ 134

**Design: API 6A**  
 Sizes: 2-1/16" - 7-1/6"  
 Pressure: 2000, 3000, 5000  
 Limited inventory availability.  
 All sizes and pressure classes made to order.



## FULL PORT SWING CHECKS

**Design: API 6D**  
 Sizes: 2" - 36"  
 Class: 150 - 2500  
 Standard stock.



Exterior Coating: Epoxy

## WEDGE GATES

**Design: API 600**  
 Sizes: 2" - 48"  
 Class: 150 - 2500  
 Limited inventory availability. All sizes and pressure classes made to order.



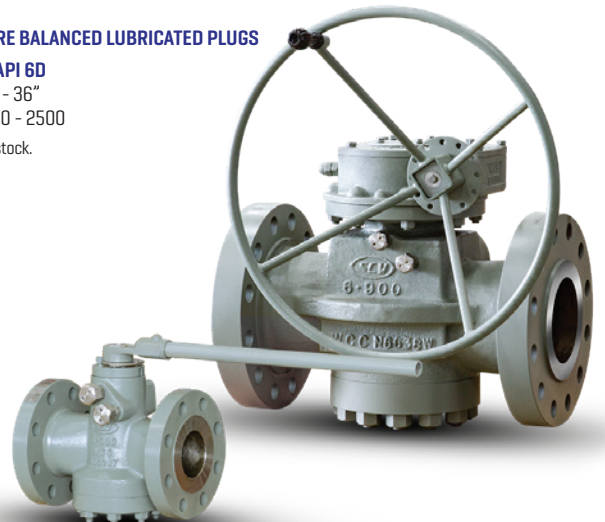
## FLOATING BALL VALVES

**Design: B16.34**  
 Sizes: 1/2" - 12"  
 Class: 150 - 1500  
 Standard stock.



## PRESSURE BALANCED LUBRICATED PLUGS

**Design: API 6D**  
 Sizes: 2" - 36"  
 Class: 150 - 2500  
 Standard stock.



# Certifications & Registrations

## American Petroleum Institute (API)

### API 6A Certification



Note: Extension letter available on our website.

### API 6D Certification



Note: Extension letter available on our website.

### ISO 9001:2015 Certificate



### CE PED Certificate



### Canadian Registration Number

- Alberta  
- OC07063.2
- New Brunswick  
- OC07063.27
- Northwest Territory  
- OC07063.25
- Nunavut  
- OC07063.2N
- Ontario  
- OC07063.25
- Yukon  
- OC07063.2
- British Columbia  
- OC07063.21
- New Foundland & Labrador  
- OC07063.20
- Novascotia  
- OC07063.27
- Manitoba  
- OC07063.24
- Prince Edward Island  
- OC07063.29

# SCV Figure Number Chart

Note: SCV Figure Chart is subject to change without notice.

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Valve Type	Bore Size	Class	Body/Bonnet Conf.	Body Material	Obturator Material	Ends	Operator
BAL = Trunnion Ball Valve	50 = 1/2"	01 = 150	B = Bolted	02 = A352 LCC	01 = A352 LLC + 410	A = RF x WE	/ = N/A
CEG = Compact Expanding Gate Valve	75 = 3/4"	03 = 300	L = Lug Style	06 = A351 CF8M	02 = A352 LCC + ENP	B = RTJ x WE	B = Bare Stem
DCK = Dual Plate Check Valve	01 = 1"	04 = 400	P = Pressure Seal	08 = A216 WCC	06 = A216 WCC + ENP	D = RF x RTJ	D = Dual Acting Actuator
EPG = Expanding Gate Valve	15 = 1-1/2"	06 = 600	S = Seal Weld	10 = A216 WCB	09 = A351 CF8M	E = RTJ x RF	E = Electric Actuator
FBV = Floating Ball Valve	02 = 2"	09 = 900	T = Top Entry	11 = A352 LCB	10 = A216 + CR13	J = RTJ	G = Gear
FCK = Full Port Swing Check Valve	21 = 2-1/16"	15 = 1500	U = Union	12 = A350 LF2	11 = CR13 HF	K = WE x RF	H = Handwheel
GAT = Wedge Gate Valve	25 = 2-1/2"	20 = 2000		13 = A105	12 = A105 + CR13	L = WE x RTJ	I = Linear Actuator
GLB = Globe Valve	27 = 2-9/16"	25 = 2500		16 = A217 WCG	13 = A105 + ENP	R = RF	L = Lever
PCK = Piston Check Valve	03 = 3"	30 = 3000		30 = A29 4130	14 = A694 Gr. F60 + ENP	W = WE	
PLG = Lubricated Plug Valve	31 = 3-1/8"	50 = 5000		36 = A182 316	15 = A350 LF2 + ENP		
PSG = Parallel Slide Gate Valve	37 = 3-9/16"	10 = 10000		51 = A182 F51 Duplex	16 = A216 WCC + 316		
RSB = Rising Stem Ball Valve	04 = 4"			55 = A182 F55 Duplex	17 = 17-4 PH		
SCK = Conv. Port Swing Check Valve	41 = 4-1/16"			60 = A216 WCC + Inconel 625	20 = A216 WCB + Ni65		
TCG = Slab Gate Valve	05 = 5"			87 = A487 4C	23 = A182 316L + Stellite 21		
	51 = 5-1/8"			88 = A890-4A	34 = A182 304		
	06 = 6"				35 = A182 316 HF		
	71 = 7-1/16"				36 = A182 316		
	08 = 8"				41 = A182 F6A Class 2		
	09 = 9"				42 = A182 F6A + Nitride		
	10 = 10"				51 = A182 F51 Duplex		
	23 = 10-3/8"				52 = A351 CF8M + Stellite 6		
	11 = 11"				54 = A182 F51 Duplex + CoCr-A		
	12 = 12"				59 = A352 LCC + Stellite 6		
	19 = 12-3/8"				60 = A105 + HF		
	13 = 13-5/8"				61 = A105 + Nitride + Stellite 6		
	14 = 14"				62 = A105 + Inconel 625		
	16 = 16"				69 = A350 LF2 + Tungsten Carbide		
	17 = 16-3/4"				73 = A182 410 + Tungsten Carbide		
	18 = 18"				81 = A350 LF2 + Nitride + HF		
	20 = 20"				85 = A743 CA15 + Nitride		
	22 = 22"				88 = A890-4A		
	24 = 24"				96 = A216 WCB + CR13		
	26 = 26"						
	28 = 28"						
	30 = 30"						
	32 = 32"						
	34 = 34"						
	36 = 36"						
	38 = 38"						
	40 = 40"						
	42 = 42"						
	48 = 48"						
	52 = 52"						
	56 = 56"						
	60 = 60"						



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Bore Type	Seal Material	Seat Material	Seat Insert/Overlay Material	Stem Material	Packing Material	Service
F = Full Port	A = Aflax	/ = N/A	B = Nickel Boron	/ = N/A	/ = N/A	A = Stem Extension
R = Reduced Port	B = Buna	08 = A216 WCB	D = Devlon	A = A350 LF2 + ENP	B = Braided Graphoil	C = Cryogenic
C = Conventional	E = EPDM	09 = A351 CF8M	F = PTFE	B = A105 + ENP	G = Graphite	D = *DPE x DPE
T = Regular Pattern	F = Fluorosilicone	11 = CR13 HF	G = RTFE - Glass filled	C = A182 F6a Class 2	T = Teflon	E = External Coating
U = Short Pattern	G = Graphite	13 = A105 + ENP	H = Hard Face (Stellite 6)	D = 17-4 PH	V = Viton Duck	F = Dampener
V = Venturi Pattern	H = HNBR	14 = A105 + HF	K = PCTFE	F = A182 F316		G = Geothermal
	K = Kalrez	15 = A350 LF2 + ENP	N = Nylon	G = A182 F51 Duplex		H = High Temperature
	L = Lip Seal	16 = A350 LF2 + HF	P = Peek	H = A182 F56 Duplex		I = Internal Coating
	N = Neoprene	17 = 17-4 PH	R = RTFE - Carbon Filled	I = Inconel 625		J = **SPE x DPE
	P = Polyurethane	30 = A29 4130	T = Tungsten Carbide	J = 17-4 + QPQ		L = Lock Open Device
	R = NBR	32 = A182 316L + HF	V = Viton			P = Pipe Pups
	S = Silicone	35 = A182 316/HF	3 = 316			S = Standard Service
	T = Teflon	36 = A182 316	W = UHMWE			X = Special
	U = Floursint	41 = A182 F6a Class 2				
	V = Viton	42 = A182 F6a Class 2 + HF				
	3 = 304 Ring	51 = F51 Duplex				
	4 = 304 / Graphite	52 = A182 F51 Duplex + HF				
	5 = 316 Ring	54 = A182 F51 Duplex + CoCr-A				
	6 = 316 / Graphite	55 = F55 Duplex				
	7 = Soft Iron Ring	91 = A105/HF				

## Sample Figure Numbers & Descriptions

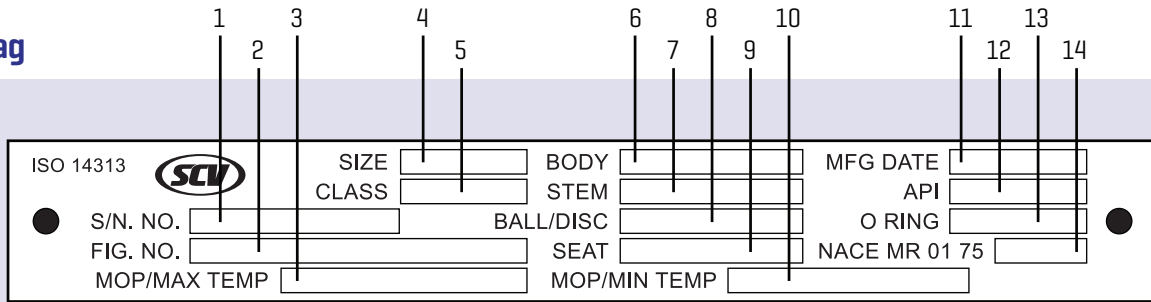
	Figure No. Chart Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Pressure Classes	Type	Size	Class	Body Conf.	Body	Obturator	End	Oper	Bore Type	Seal	Seat,base	Seat/Insert	Stem	Packing	Service
TRUNNION BALL	150, 300, 600	BAL	12	06	B	12	15	R	G	F	H	15	D	A	/	S
	12" 600 Trunnion Ball Valve, Bolted A350 LF2 Body, LF2 + ENP Obturator, RF Ends, Gear Operated, Full Bore, HNBR AED Seals, A350 LF2 + ENP Seat Base Material, Devlon Seat Inserts, A350 LF2 + ENP Stem, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
FLOATING BALL	900, 1500, 2500	BAL	12	15	B	12	41	J	G	F	H	41	D	C	/	S
	12" 1500 Floating Ball Valve, Bolted Configuration, A350 LF2 Body, A182 F6a Class 2 Obturator, RTJ Ends, Gear Operated, Full Bore, HNBR AED Seals, A182 F6a Class 2 Seat Base Material, Devlon Seat Inserts, A182 F6a Class 2 Stem, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
DUAL PLATE WAFER CHECK	ALL	FBV	12	01	B	10	36	R	L	F	3	36	R	F	/	S
	12" 150 Floating Ball Valve, Bolted Configuration, A216 WCB Body, A182 F316 Obturator, RF Ends, Lever Operated, Full Bore, A182 F316 Seat Base Material, Devlon Seat Inserts, A182 F316 Stem, Standard Service, API 608 Design, API 598 Test, NACE MR-01-75 Compliant															
SLAB GATE	ALL	DCK	12	06	W	10	09	R	/	C	/	08	H	/	/	S
	12" 600 Dual Plate Check Valve, Wafer Configuration, A216 WCB Body, A351 CF8M Obturator, RF Ends, Conventional Bore, A216 WCB Seat Base Material, Hardface Seat Overlay, Standard Service, API 594 Design, API 598 Test, NACE MR-01-75 Compliant															
EXPANDING GATE	ALL	TCG	12	06	B	08	13	R	B	F	V	13	R	D	V	S
	12" 600 Thru Conduit Slab Gate Valve, Bolted A216 WCC Body, A105 + ENP Obturator, RF Ends, Bare Stem, Full Bore, Viton AED Seals, A105 + ENP Seat Base Material, RTFE Seat Inserts, 17-4 PH Stem, Viton Duck Packing, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
FULL PORT SWING CHECK	ALL	EPG	12	06	B	08	06	R	B	F	V	13	R	D	V	S
	12" 600 Thru Conduit Expanding Gate Valve, Bolted A216 WCC Body, A216 WCC + ENP Obturator, RF Ends, Bare Stem, Full Bore, Viton AED Seals, A105 + ENP Seat Base Material, RTFE Seat Inserts, 17-4 PH Stem, Viton Duck Packing, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
PISTON CHECK	ALL	FCK	12	06	B	08	16	R	/	F	V	11	V	/	/	S
	150, 300, 600, 900	PCK	12	06	B	08	61	R	/	C	V	14	H	/	/	S
	12" 600 Full Port Swing Check Valve, Bolted A216 WCC Body, A216 WCC + 316 Obturator, RF Ends, Full Bore, Viton AED Seals, CR13 HF Seat Base Material, Viton Seat Inserts, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
LUBRICATED PLUG	ALL	GAT	12	06	B	10	7	R	H	C	4	14	H	C	G	S
	12" 1500 Piston Check Valve, Bolted A216 WCC Body, A105 + Nitride + HF Obturator, RF Ends, Conventional Bore, Viton AED Seals, A105 Seat Base Material, Hardface Seat Overlay, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
WEDGE GATE	ALL	PLG	12	06	B	10	84	R	L	C	V	/	/	/	G	S
	12" 600 Lubricated Plug Valve, Bolted A216 WCC Body, A743 CA15 Obturator, RF Ends, Lever Operated, Conventional Bore, Viton AED Seals, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
GLOBE	ALL	GAT	12	06	B	10	7	R	H	C	4	14	H	C	G	S
	12" 600 Wedge Gate Valve, Bolted A216 WCC Body, A216 WCC + Hardface Obturator, RF Ends, Handwheel Operated, Conventional Bore, 304 + Graphite Gasket, A105 Seat Base Material, Hardface Seat Overlay, A182 F6a Class 2 Stem, Graphite Packing, Standard Service, API 600 Design, API 598 Test, NACE MR-01-75 Compliant															
GLOBE	ALL	GLB	12	06	B	10	60	R	H	C	4	14	H	C	G	S
	12" 600 Globe Valve, Bolted A216 WCC Body, A105+ Hardface Obturator, RF Ends, Handwheel Operated, Conventional Bore, 304 + Graphite Gasket, A105 Seat Base Material, Hardface Seat Overlay, A182 F6a Class 2 Stem, Graphite Packing, Standard Service, API 623 Design, API 598 Test, NACE MR-01-75 Compliant															

Note: Subject to change without notice.

Control #: MSF 3.5-16 rev 17

# Valve ID Tag & Valve Markings Identification

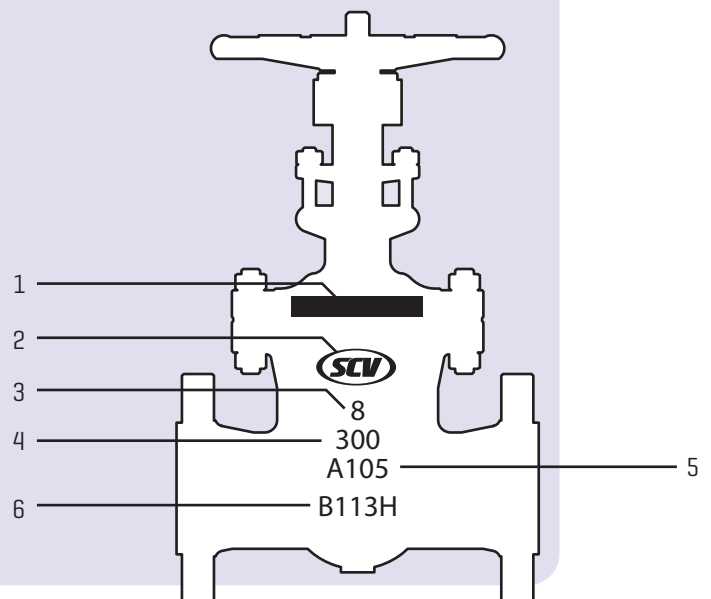
## Valve ID Tag



No.	Figure Number Code	Description
1	Serial Number	Identifies certified manufacturers serial number
2	Figure Number	Identifies the detailed valve configuration (valve type, bore size, pressure class, materials, etc.)
3	MOP/Max. Temp.	Identifies the maximum operating pressure in PSI and maximum operating temperature in Fahrenheit
4	Size	Identifies bore size
5	Pressure Class	Identifies pressure classifications per API requirements
6	Body Material	Identifies body metal material composition (A105, WCB, F51, CF8M, etc.)
7	Stem Material	Identifies stem material composition (A105, 410SS, 17-4pH, etc.)
8	Ball/Disc Material	Identifies ball/disc material composition (A105, 316SS, ENP, etc.)
9	Seat Material	Identifies seat material composition (PEEK, Teflon, Nylon, etc.)
10	MOP/Min. Temp.	Identifies the maximum operating pressure in PSI and minimum operating temperature in Fahrenheit
11	Manufacturing Date	Identifies the date the valve manufacturing completion date
12	API Conformance	Identifies API conformance (600, 6D, 6A, etc.)
13	O Ring	Identifies the O Ring material composition (Viton, Viton GLT, etc.)
14	NACE MR 01 75	Identifies corrosion resistance

## Valve Markings

No.	Valve ID Components
1	Tag
2	Brand
3	Size
4	Pressure Class
5	Body Material
6	Heat Number



**Note:** SCV reserves the right to modify our products for improvement without prior notice.



**SCV VALVE**

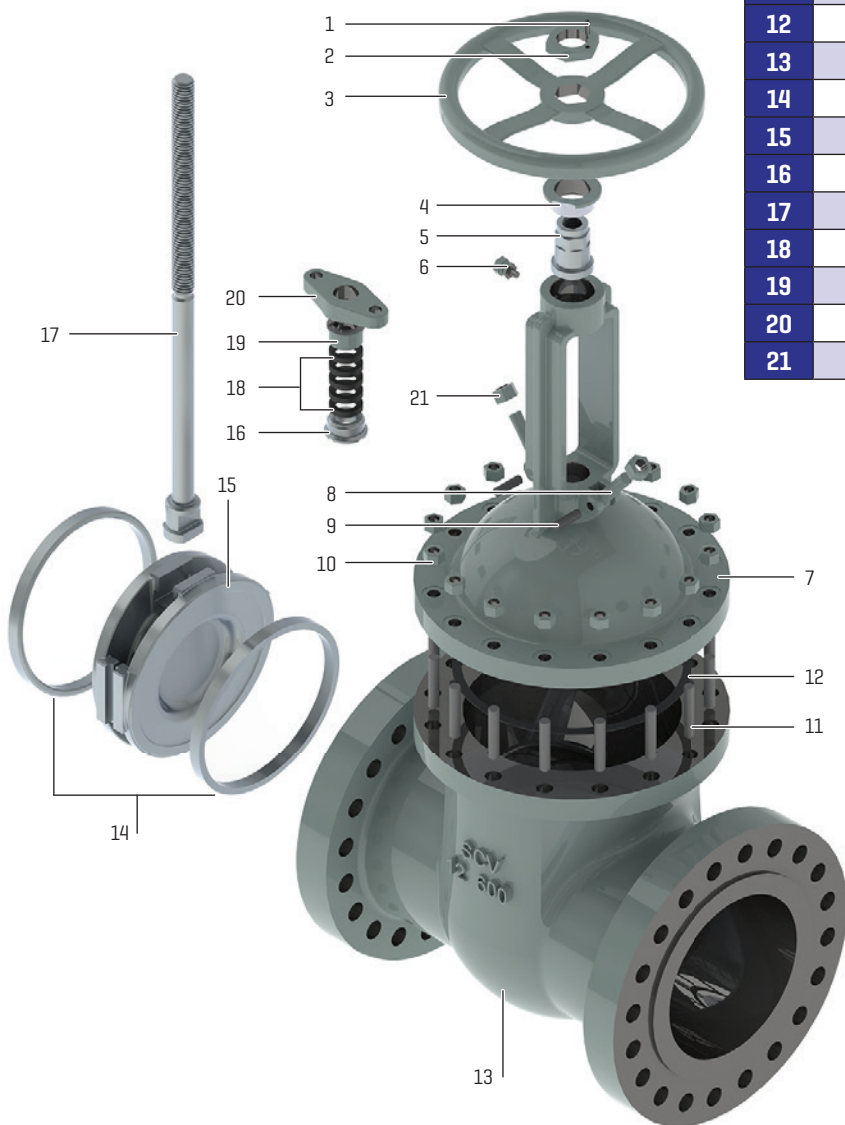


## **Bolted Bonnet OS&Y Wedge Gate Valves - API 600** Class: 150 - 1500/Sizes: 2" - 48"

Design and Manufacturing Standards	
Basic Design	API 600 & ANSI/ASME B 16.34
Wall Thickness	ASME B 16.34
Face-to-Face Dimension	ANSI/ASME B16.10
Flange End Dimension	ANSI/ASME B16.5 [2" to 24"] MSS SP-44 [26" & up]
Butt-Weld End Dimension	ANSI/ASME B16.25
Pressure/Temperature Rating I/A/W	ANSI/ASME B16.34
Inspection & Testing	API 598



# Bolted Bonnet OS&Y Wedge Gate Valves - API 600

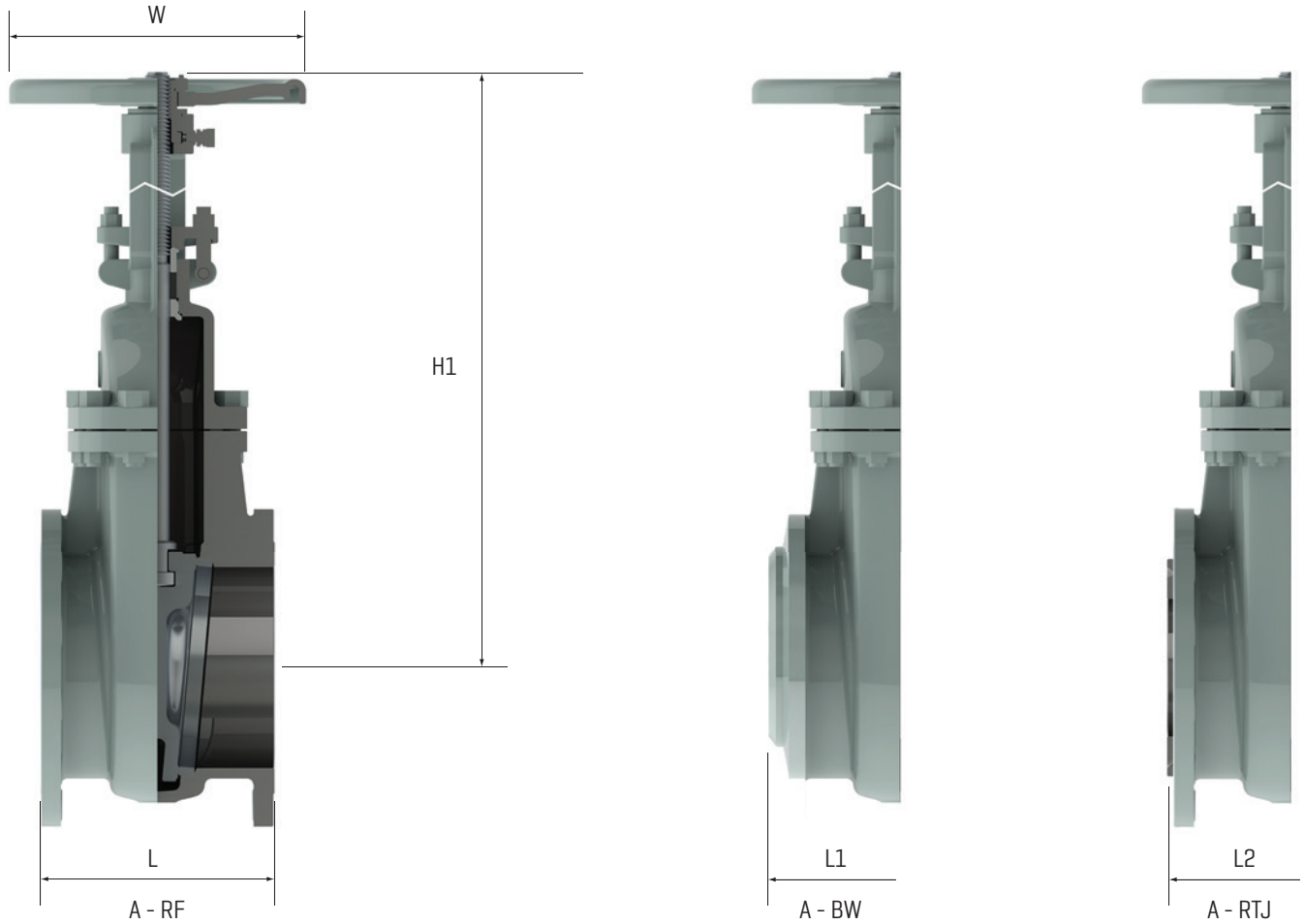


No	Part	Material
1	Set Screw	Cast Steel
2	Handwheel Nut	Cast Steel
3	Handwheel	Malleable Iron
4	Stem Bushing Lock Nut	Cast Steel
5	Yoke Sleeve	A439 D-2
6	Grease Nipple	Cast Steel
7	Bonnet	A216 WCB
8	Gland Bolt Nut	A194 2H
9	Gland Bolt Pin	Cast Steel
10	Bonnet Bolt Nut	A194 2H
11	Bonnet Bolt	A193 B7
12	Gasket	304 Spiral Wound GR
13	Body	A216 WCB
14	Seat Ring	A105 + STL 6 Faced
15	Wedge	A105 + 410 Faced
16	Backseat Bushing	A276 Type 410
17	Stem	A182 F6a
18	Packing	Braided GR/Die Formed GR
19	Gland	A276 Type 410
20	Gland Flange	A216 WCB
21	Gland Bolt	A193 B7



# Bolted Bonnet OS&Y Wedge Gate Valves

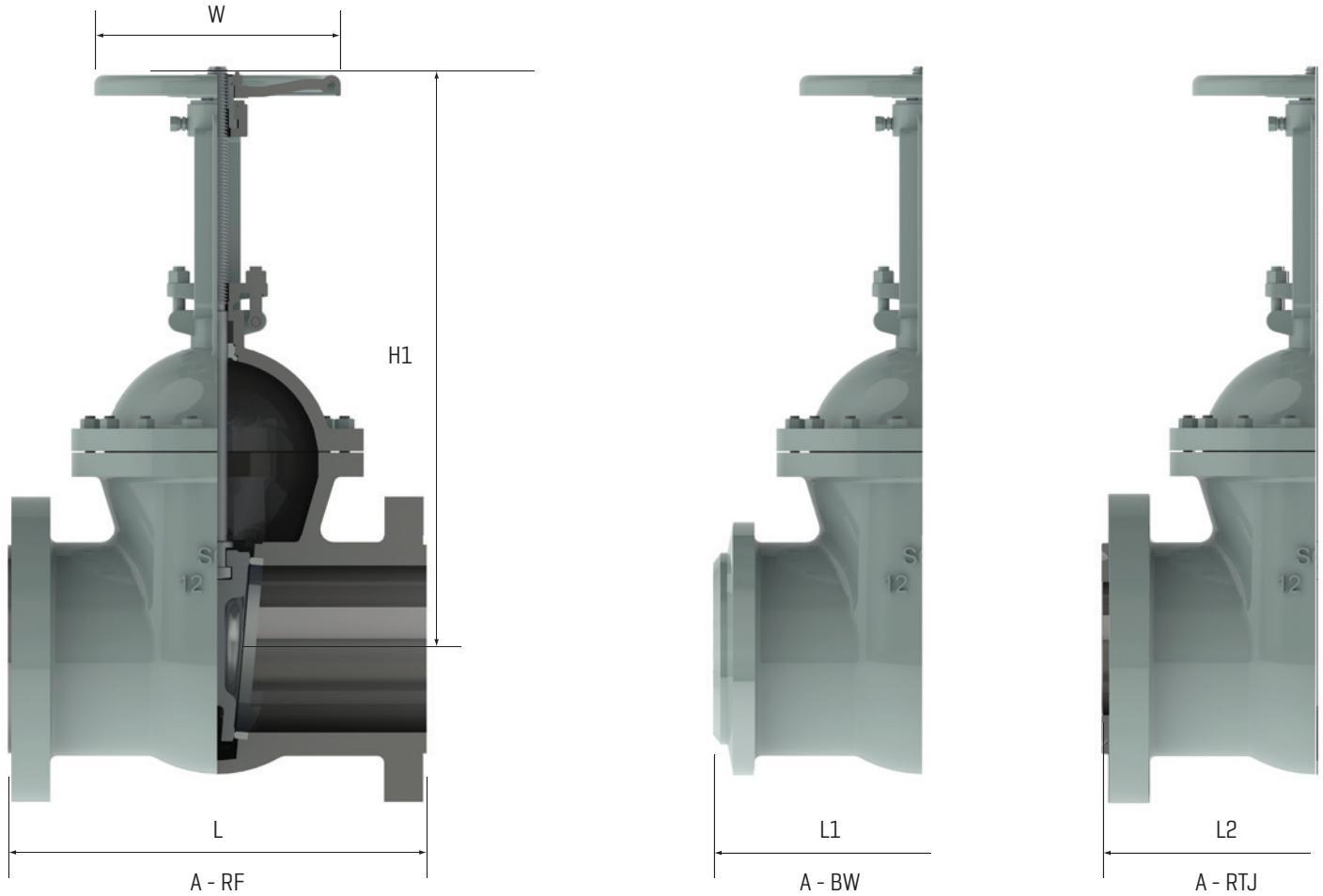
Size: 2" - 48"  
Class: 150



CLASS 150	Size	NPS	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	32	34	36	40	42	48
		DN	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	800	850	900	1000	1050	1200
L [RF]	IN	7.0	7.5	8.0	9.0	10.5	11.5	13.0	14.0	15.0	16.0	17.0	18.0	20.0	24.0	24.0	26.0	28.0	28.0	30.0	31.0	34.0	
	MM	178	191	203	229	267	292	330	356	381	406	432	457	508	610	610	660	711	711	762	813	864	
L1 [BW]	IN	8.5	9.5	11.12	12.0	15.87	16.5	18.0	19.8	22.5	24.0	26.0	28.0	32.0	36.0	36.0	38.0	40.0	40.0	42.0	43.0	46.0	
	MM	216	241	282	305	403	419	457	503	572	610	660	711	813	914	914	965	1016	1016	1067	1092	1168	
L2 [RTJ]	IN	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
	MM	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	
H1	IN	15.4	16.7	18.1	22.8	30.6	38.4	46.4	54.6	60.0	68.7	79.1	91.7	109.6	127.4	134.5	143.7	155	161.8	183.9	174.4	217.5	
	MM	390	425	461	580	776	976	1178	1387	1523	1745	2010	2330	2784	3236	3417	3650	3950	4109	4670	4430	5525	
W	IN	7.9	7.9	7.9	9.8	11.8	14.0	17.7	17.7	19.7	22.0	13.8	17.7	17.7	22.0	22.0	22.0	27.9	27.9	31.5	31.5	35.4	
	MM	200	200	200	250	300	355	450	450	500	560	350	450	450	560	560	560	710	710	800	800	900	
WGT [RF]	IB	49	55	66	99	187	295.5	445	639	816	1177	1475	1786	3153	4558	4827	5351	5481	7856	10370	10143	15677	
	KG	22	25	30	45	85	134	202	290	370	534	669	810	1430	2067	2189	2427	2486	3563	4703	4600	7110	
WGT [BW]	IB	44	46	62	92.6	161	244	399	584	750	1111	1365	1697	3336	4756	4981	5458	5596	8011	10436	10198	15545	
	KG	20	21	28	42	73	111	181	265	340	504	619	770	1513	2157	2259	2476	2538	3633	4733	4625	7050	

# Bolted Bonnet OS&Y Wedge Gate Valves

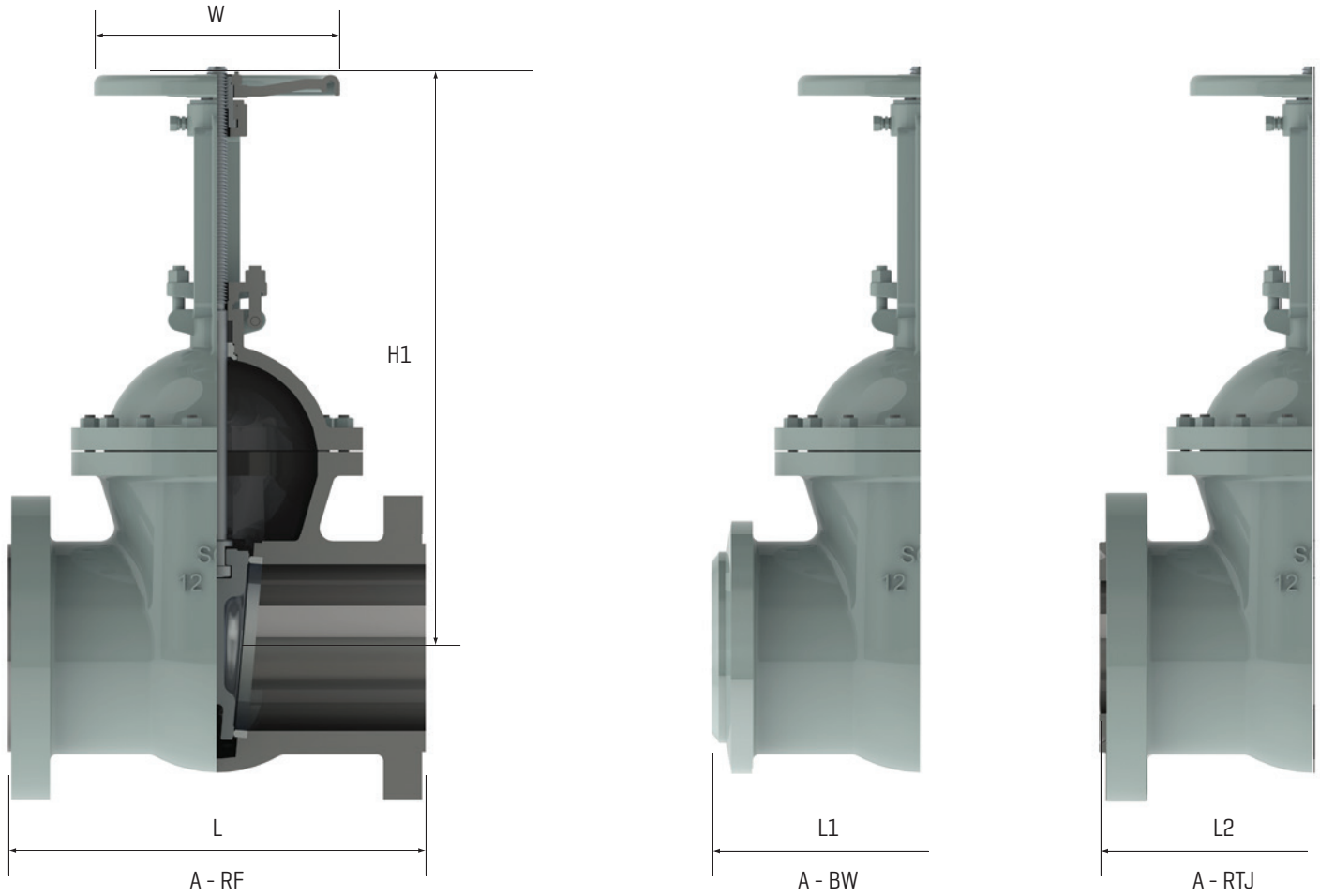
Size: 2" - 48"  
Class: 300



CLASS 300	Size	NPS	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42	48
		DN	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050	1200
L [RF]	IN	8.5	9.5	11.12	12.0	15.9	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0	87.2	
	MM	216	241	282	305	404	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981	2215	
L1 [BW]	IN	9.12	10.12	11.75	12.62	16.5	17.12	18.62	20.37	30.62	33.62	36.62	39.75	45.88	54.0	56.0	69.12	/	/	/	
	MM	232	257	298	321	419	435	473	518	778	854	930	1010	1165	1372	1422	1756	/	/	/	
L2 [RTJ]	IN	8.5	9.5	11.12	12.0	15.9	16.5	18.0	19.75	30.0	33.0	36.0	39.0	45.0	53.0	55.0	68.0	76.0	78.0	87.2	
	MM	216	241	282	305	404	419	457	502	762	838	914	991	1143	1346	1397	1727	1930	1981	2215	
H1	IN	16.2	17.7	19.0	23.7	32.0	40.2	48.8	56.8	66.1	78.4	85.9	93.5	112.6	130.0	148.5	169.8	188.6	198.1	217.4	
	MM	412	450	483	601	813	1020	1239	1443	1679	1993	2181	2376	2860	3302	3772	4312	4791	5032	5522	
W	IN	7.9	7.9	8.8	9.8	14.0	15.7	17.7	19.7	17.7	17.7	22.0	22.0	27.9	35.4	35.4	30.0	30.0	30.0	30.0	
	MM	200	200	224	250	355	400	450	500	450	450	560	560	710	900	900	760	760	760	760	
WGT [RF]	IB	64	88	106	163	313	485	721	1094	1530	2170	2880	3409	5204	8070	9592	15104	18654	20947	27342	
	KG	29	40	48	74	142	220	327	496	694	984	1306	1546	2360	3660	4350	6850	8460	9500	12400	
WGT [BW]	IB	52.9	77	82	141	269	379	512	862	1420	1839	2317	2703	4212	6637	7629	11003	13583	14994	19845	
	KG	24	35	37	64	122	172	232	391	644	834	1051	1226	1910	3010	3460	4990	6160	6800	9000	

# Bolted Bonnet OS&Y Wedge Gate Valves

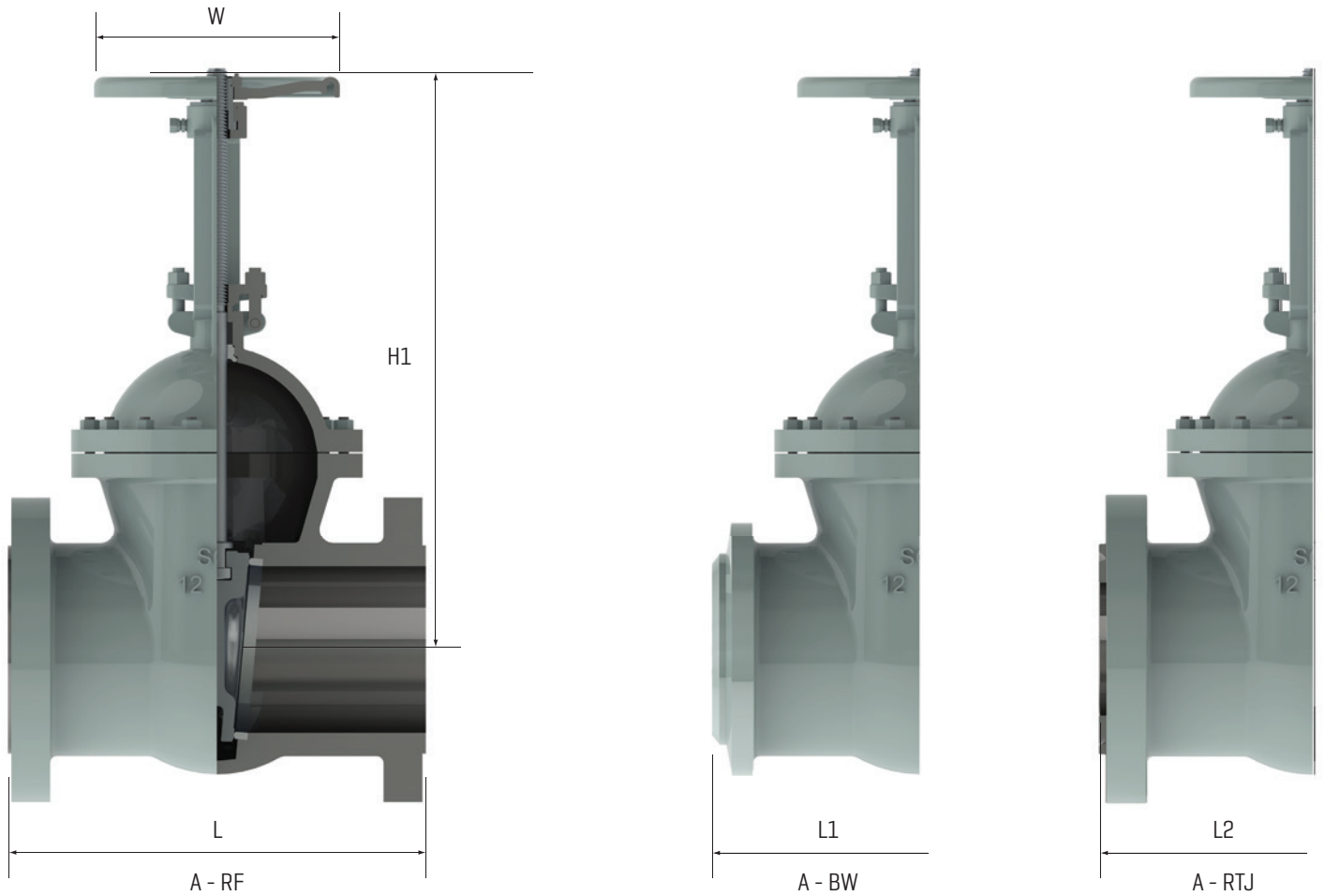
Size: 2" - 42"  
Class: 600



CLASS 600	Size	NPS	2	2.5	3	4	6	8	10	12	14	16	18	20	24	28	30	36	40	42
		DN	50	65	80	100	150	200	250	300	350	400	450	500	600	700	750	900	1000	1050
L [RF]	IN	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	61.0	65.0	82.0	94.0	98.0	
	MM	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1594	1651	2083	2387	2489	
L1 [BW]	IN	11.62	13.12	14.12	17.12	22.12	26.12	31.12	33.12	35.12	39.12	43.12	47.25	55.38	61.5	65.5	82.62	/	/	
	MM	295	333	359	435	562	664	791	841	892	994	1095	1200	1406	1562	1664	2098	/	/	
L2 [RTJ]	IN	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	39.0	43.0	47.0	55.0	61.0	65.0	82.0	94.0	98.0	
	MM	292	330	356	432	559	660	787	838	889	991	1092	1194	1397	1594	1651	2083	2387	2489	
H1	IN	18.5	19.5	22.1	26.7	37.2	43.7	52.1	65.9	72.1	82.9	98.0	104.8	116.9	140.2	152.8	179.5	207.6	240.0	
	MM	471	495	561	677	944	1110	1323	1675	1832	2106	2489	2662	2970	3562	3880	4560	5273	6098	
W	IN	8.8	8.8	9.8	11.8	17.7	19.7	24.8	22.0	22.0	27.9	27.9	31.5	35.4	30.0	30.0	30.0	30.0	30.0	
	MM	224	224	250	300	450	500	630	560	560	710	710	800	900	760	760	760	760	760	
WGT [RF]	IB	95	132	154	296	628	988	1499	2355	2836	4059	5700	6853	10337	13340	15313	21476	23262	24144	
	KG	43	60	70	134	285	448	680	1068	1286	1841	2585	3108	4688	6050	6945	9740	10550	10950	
WGT [BW]	IB	62	99	132	229	452	690	1180	2145	2571	3332	4741	5640	8595	10980	12590	17948	18830	19337	
	KG	28	45	60	104	205	313	535	973	1166	1511	2150	2558	3898	4980	5710	8140	8540	8770	

# Bolted Bonnet OS&Y Wedge Gate Valves

Size: 2" - 24"  
Class: 900

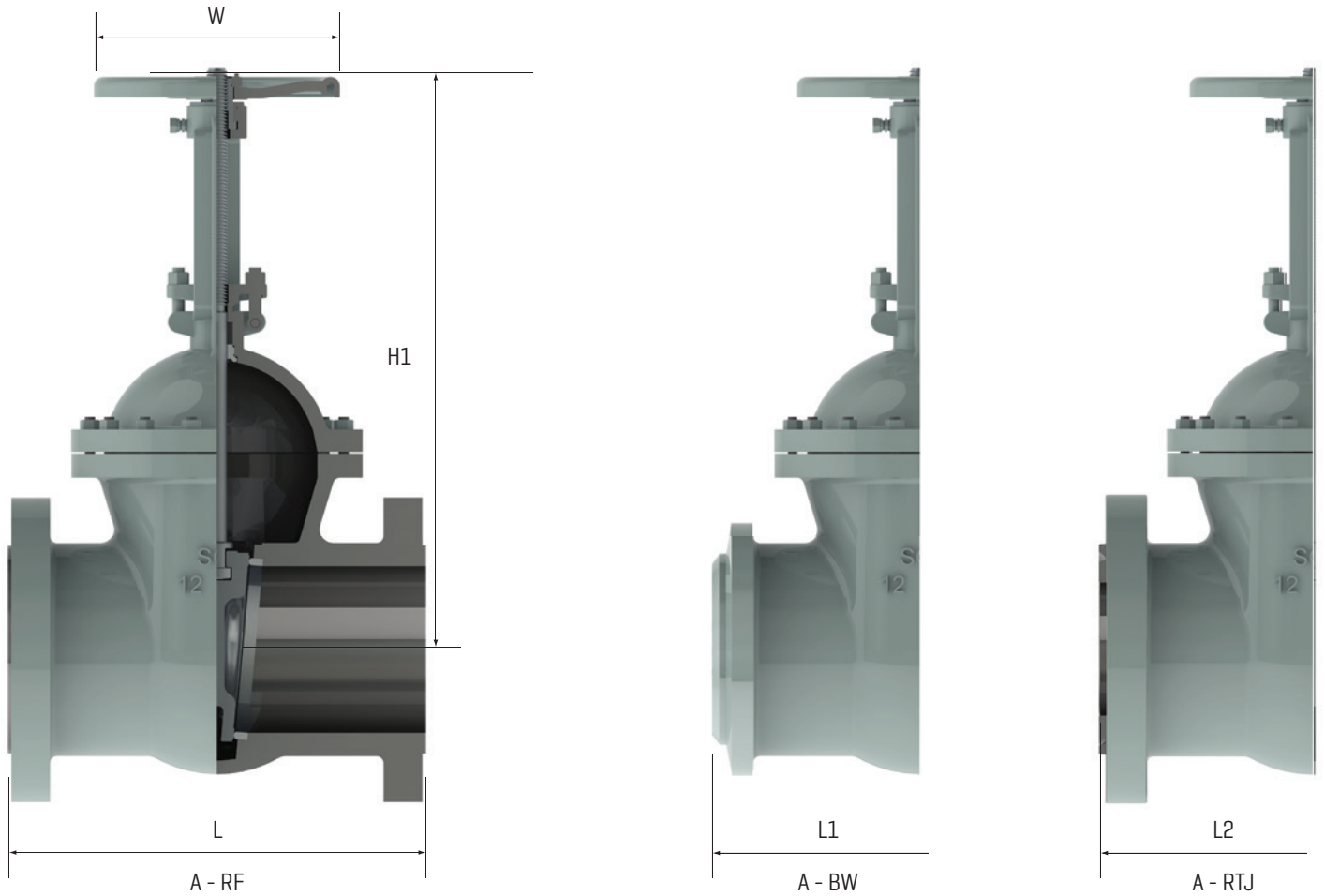


CLASS 900	Size	NPS	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		DN	50	65	80	100	150	200	250	300	350	400	450	500	600
L [RF]	IN	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	
	MM	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	
L1 [BW]	IN	14.62	16.62	15.12	18.12	24.12	29.12	33.12	38.12	40.88	44.88	48.5	52.5	61.75	
	MM	371	422	384	460	612	740	841	968	1038	1140	1232	1333	1568	
L2 [RTJ]	IN	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	
	MM	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	
H1	IN	21.2	26.4	26.4	30.8	42.4	55.5	67.7	77.4	74.9	80.7	88.8	110.2	124.0	
	MM	539	670	672	782	1076	1411	1720	1965	1902	2051	2256	2800	3150	
W	IN	11.8	11.8	14.0	15.7	22.0	17.7	22.0	22.0	24.0	24.0	30.0	30.0	24.0	
	MM	300	300	355	400	560	450	560	560	610	610	760	760	610	
WGT [RF]	IB	181	342	364	384	999	1720	2752	3400	4895.1	6615.0	8533.4	10716.3	16096.5	
	KG	82	155	165	174	453	780	1248	1542	2220	3000	3870	4860	7300	
WGT [BW]	IB	130	375	287	295	789	1378	2267	2844	4167.5	5655.8	7276.5	8730.3	13494.6	
	KG	59	170	130	134	358	625	1028	1290	1890	2565	3300	4050	6120	



# Bolted Bonnet OS&Y Wedge Gate Valves

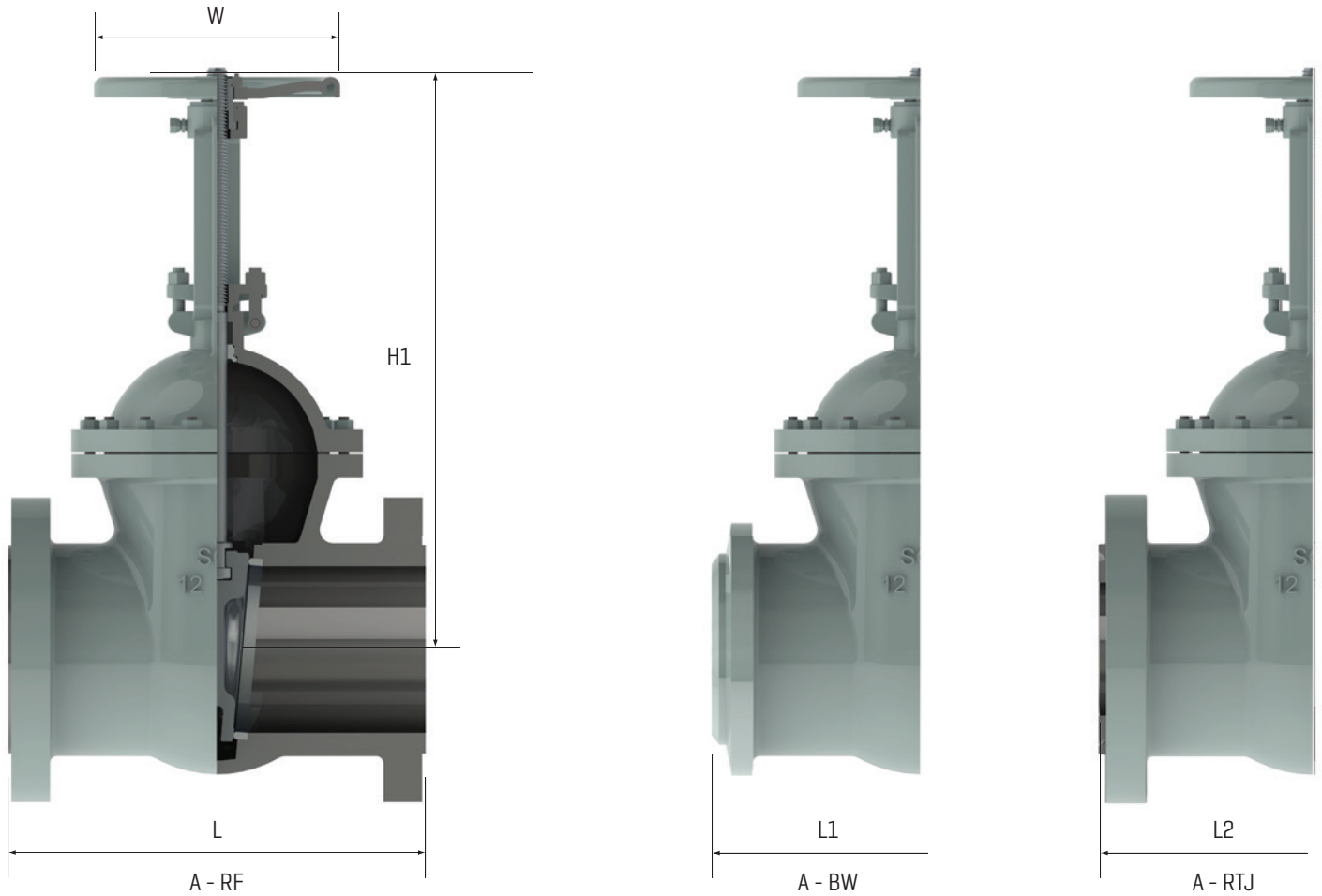
Size: 2" - 24"  
Class: 1500



CLASS 1500	Size	NPS	2	2.5	3	4	6	8	10	12	14	16	18	20	24
		DN	50	65	80	100	150	200	250	300	350	400	450	500	600
L [RF]	IN	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5	
	MM	368	419	470	546	706	832	991	1130	1257	1384	1536	1664	1943	
L1 [BW]	IN	14.62	16.62	18.62	21.62	28.0	33.13	39.38	45.12	50.25	55.38	61.38	66.38	77.62	
	MM	371	422	473	549	711	841	1000	1146	1276	1406	1559	1686	1972	
L2 [RTJ]	IN	14.5	16.5	18.5	21.5	27.75	32.75	39.0	44.5	49.5	54.5	60.5	65.5	76.5	
	MM	368	419	470	546	706	832	991	1130	1257	1384	1536	1664	1943	
H1	IN	21.2	26.4	29.1	30.8	47.1	60.8	66.5	82.3	85.1	97.9	108.7	122.1	146.5	
	MM	539	670	738	783	1196	1546	1688	2090	2162	2486	2762	3102	3721	
W	IN	11.8	11.8	15.7	19.7	13.8	22.0	27.9	27.9	30.0	30.0	30.0	24.0	24.0	
	MM	300	300	400	500	350	560	710	710	760	760	760	610	610	
WGT [RF]	IB	181	341.8	401	573	1360	3175	4412	8414	9073.6	15324.8	19845	24541.7	35875.4	
	KG	82	155	182	260	617	1440	2001	3816	4115	6950	9000	11130	16270	
WGT [BW]	IB	130	286.7	324	353	975	2646	3541	7080	7056	13230	17066.7	21079.8	30362.9	
	KG	59	130	147	160	442	1200	1606	3211	3200	6000	7740	9560	13770	

# Bolted Bonnet OS&Y Wedge Gate Valves

Size: 2" - 12"  
Class: 2500



CLASS 2500	Size	NPS	2	2.5	3	4	6	8	10	12
		DN	50	65	80	100	150	200	250	300
	L [RF]	IN	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
		MM	451	508	578	673	914	1022	1270	1422
	L1 [BW]	IN	17.87	20.25	23.0	26.8	36.5	40.87	50.88	56.88
		MM	454	514	584	683	927	1038	1292	1445
	L2 [RTJ]	IN	17.75	20.0	22.75	26.5	36.0	40.25	50.0	56.0
		MM	451	508	578	673	914	1022	1270	1422
	H1	IN	24.4	31.9	31.9	42.2	57.1	63.0	82.5	90.2
		MM	619	809	809	1073	1451	1600	2096	2292
W	IN	11.8	17.7	17.7	24.8	24.0	24.0	24.0	30.0	
	MM	300	450	450	630	610	610	610	760	
WGT [RF]	IB	205	331	443	1336	3506	5380.2	10085.7	15831.9	
	KG	93	150	201	606	1590	2440	4574	7180	
WGT [BW]	IB	128	221	289	1083	2866.5	4410	8379	13230	
	KG	58	100	131	491	1300	2000	3800	6000	

# Pressure Temperature Ratings - ASME B16.34 ■■■■■■■■■■

Note: Pressures in PSI

	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
	150	-20 to 100	285	285	285	290	265	290	290	290	290	290	275	275	290
200	260	260	260	260	260	255	260	260	260	260	260	235	235	260	260
300	230	230	230	230	230	230	230	230	230	230	230	215	215	230	230
400	200	200	200	200	200	200	200	200	200	200	200	195	195	200	200
500	170	170	170	170	170	170	170	170	170	170	170	170	170	170	170
600	140	140	140	140	140	140	140	140	140	140	140	140	140	140	140
650	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
700	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110
750	95	95	95	95	95	95	95	95	95	95	95	95	95	95	95
800	80	80	80	80	80	80	80	80	80	80	80	80	80	/	/
850	65	65	65	65	65	65	65	65	65	65	65	65	65	/	/
900	50	50	50	50	50	50	50	50	50	50	50	50	50	/	/
950	35	35	35	35	35	35	35	35	35	35	35	35	35	/	/
1000	20	20	20	20	20	20	20	20	20	20	20	20	20	/	/
1050	/	/	/	/	/	/	20	/	20	20	20	20	20	/	/
1100	/	/	/	/	/	/	20	/	20	20	20	20	20	/	/
1150	/	/	/	/	/	/	20	/	20	20	20	20	20	/	/
1200	/	/	/	/	/	/	15	/	15	20	20	20	20	/	/
1250	/	/	/	/	/	/	/	/	/	/	/	20	20	/	/
1300	/	/	/	/	/	/	/	/	/	/	/	20	20	/	/
1350	/	/	/	/	/	/	/	/	/	/	/	20	20	/	/
1400	/	/	/	/	/	/	/	/	/	/	/	20	20	/	/
1450	/	/	/	/	/	/	/	/	/	/	/	20	20	/	/
1500	/	/	/	/	/	/	/	/	/	/	/	15	15	/	/
300	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
	-20 to 100	740	740	740	750	695	750	750	750	750	750	720	720	750	750
200	680	680	680	680	750	660	750	750	750	750	750	620	620	745	745
300	655	655	655	655	730	640	720	730	730	730	730	560	560	665	665
400	635	635	635	635	705	615	695	705	705	705	705	515	515	615	615
500	605	605	605	605	665	585	665	665	665	665	665	480	480	580	580
600	570	570	570	570	605	550	605	605	605	605	605	450	450	555	555
650	550	550	550	550	590	535	590	590	590	590	590	440	440	545	545
700	530	530	530	530	555	510	570	555	570	570	570	435	435	540	540
750	505	505	505	505	505	475	530	505	530	530	530	425	425	530	530
800	410	410	410	410	410	390	510	410	510	510	510	420	420	/	/
850	320	320	320	320	320	300	485	320	485	485	485	420	420	/	/
900	230	230	230	230	225	200	450	225	375	450	450	415	415	/	/
950	135	135	135	135	135	135	320	135	275	375	385	385	385	/	/
1000	85	85	85	85	85	85	215	85	200	255	365	365	365	/	/
1050	/	/	/	/	/	/	145	/	145	170	360	160	160	/	/
1100	/	/	/	/	/	/	95	/	100	115	300	305	305	/	/
1150	/	/	/	/	/	/	65	/	60	75	225	235	235	/	/
1200	/	/	/	/	/	/	40	/	35	50	145	185	185	/	/
1250	/	/	/	/	/	/	/	/	/	/	/	145	145	/	/
1300	/	/	/	/	/	/	/	/	/	/	/	115	115	/	/
1350	/	/	/	/	/	/	/	/	/	/	/	95	95	/	/
1400	/	/	/	/	/	/	/	/	/	/	/	75	75	/	/
1450	/	/	/	/	/	/	/	/	/	/	/	60	60	/	/
1500	/	/	/	/	/	/	/	/	/	/	/	40	40	/	/

# Pressure Temperature Ratings - ASME B16.34 ■■■■■■■■■■

Note: Pressures in PSI

600	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53	
	-20 to 100	1480	1480	1480	1500	1395	1500	1500	1500	1500	1500	1500	1440	1440	1500	1500
	200	1360	1360	1360	1500	1320	1500	1500	1500	1500	1500	1500	1240	1240	1490	1490
	300	1310	1310	1310	1455	1275	1445	1455	1455	1455	1455	1455	1120	1120	1335	1335
	400	1265	1265	1265	1405	1230	1385	1405	1410	1410	1410	1410	1025	1025	1230	1230
	500	1205	1205	1205	1330	1175	1330	1330	1330	1330	1330	1330	995	995	1160	1160
	600	1135	1135	1135	1210	1105	1210	1210	1210	1210	1210	1210	900	900	1115	1115
	650	1100	1100	1100	1175	1065	1175	1175	1175	1175	1175	1175	885	885	1095	1095
	700	1060	1060	1060	1110	1025	1135	1110	1135	1135	1135	1135	870	870	1085	1085
	750	1015	1015	1015	1015	955	1065	1015	1065	1065	1065	1065	855	855	1065	1065
	800	825	825	825	825	780	1015	825	1015	1015	1015	1015	845	845	/	/
	850	640	640	640	640	595	975	640	975	975	975	975	835	835	/	/
	900	460	460	460	445	405	900	445	745	900	900	900	830	830	/	/
	950	275	275	275	275	275	640	275	550	755	775	775	775	775	/	/
	1000	170	170	170	170	170	430	170	400	505	725	725	725	725	/	/
	1050	/	/	/	/	/	290	/	290	345	720	720	720	720	/	/
	1100	/	/	/	/	/	190	/	200	225	605	610	610	610	/	/
	1150	/	/	/	/	/	130	/	125	150	445	475	475	475	/	/
	1200	/	/	/	/	/	80	/	70	105	290	370	370	370	/	/
	1250	/	/	/	/	/	/	/	/	/	/	295	295	295	/	/
1300	/	/	/	/	/	/	/	/	/	/	235	235	235	/	/	
1350	/	/	/	/	/	/	/	/	/	/	190	190	190	/	/	
1400	/	/	/	/	/	/	/	/	/	/	150	150	150	/	/	
1450	/	/	/	/	/	/	/	/	/	/	115	115	115	/	/	
1500	/	/	/	/	/	/	/	/	/	/	85	85	85	/	/	
900	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53	
	-20 to 100	2220	2220	2220	2250	2090	2250	2250	2250	2250	2250	2160	2160	2250	2250	
	200	2035	2035	2035	2250	1980	2250	2250	2250	2250	2250	1860	1860	2230	2230	
	300	1965	1965	1965	2185	1915	2165	2185	2185	2185	2185	1680	1680	2000	2000	
	400	1900	1900	1900	2110	1845	2080	2110	2115	2115	2115	1540	1540	1845	1845	
	500	1810	1810	1810	1995	1760	1995	1995	1995	1995	1995	1435	1435	1740	1740	
	600	1705	1705	1705	1815	1655	1815	1815	1815	1815	1815	1355	1355	1670	1670	
	650	1650	1650	1650	1765	1600	1765	1765	1765	1765	1765	1325	1325	1640	1640	
	700	1590	1590	1590	1665	1535	1705	1665	1705	1705	1705	1305	1305	1625	1625	
	750	1520	1520	1520	1520	1430	1595	1520	1595	1595	1595	1280	1280	1595	1595	
	800	1235	1235	1235	1235	1175	1525	1235	1525	1525	1525	1265	1265	/	/	
	850	955	955	955	955	895	1460	955	1460	1460	1460	1255	1255	/	/	
	900	690	690	690	670	605	1350	670	1120	1350	1350	1245	1245	/	/	
	950	410	410	410	410	410	955	410	825	1130	1160	1160	1160	1160	/	/
	1000	255	255	255	255	255	650	255	595	760	1090	1090	1090	1090	/	/
	1050	/	/	/	/	/	430	/	430	515	1080	1080	1080	1080	/	/
	1100	/	/	/	/	/	290	/	300	340	905	915	915	915	/	/
	1150	/	/	/	/	/	195	/	185	225	670	710	710	710	/	/
	1200	/	/	/	/	/	125	/	105	155	430	555	555	555	/	/
	1250	/	/	/	/	/	/	/	/	/	/	440	440	440	/	/
1300	/	/	/	/	/	/	/	/	/	/	350	350	350	/	/	
1350	/	/	/	/	/	/	/	/	/	/	290	290	290	/	/	
1400	/	/	/	/	/	/	/	/	/	/	225	225	225	/	/	
1450	/	/	/	/	/	/	/	/	/	/	175	175	175	/	/	
1500	/	/	/	/	/	/	/	/	/	/	125	125	125	/	/	

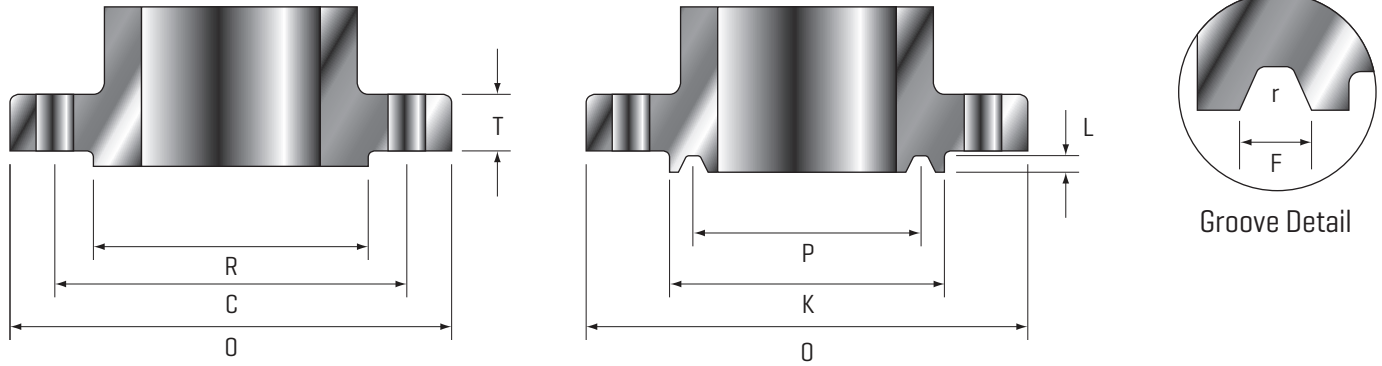


# Pressure Temperature Ratings - ASME B16.34 ■■■■■■■■■■

Note: Pressures in PSI

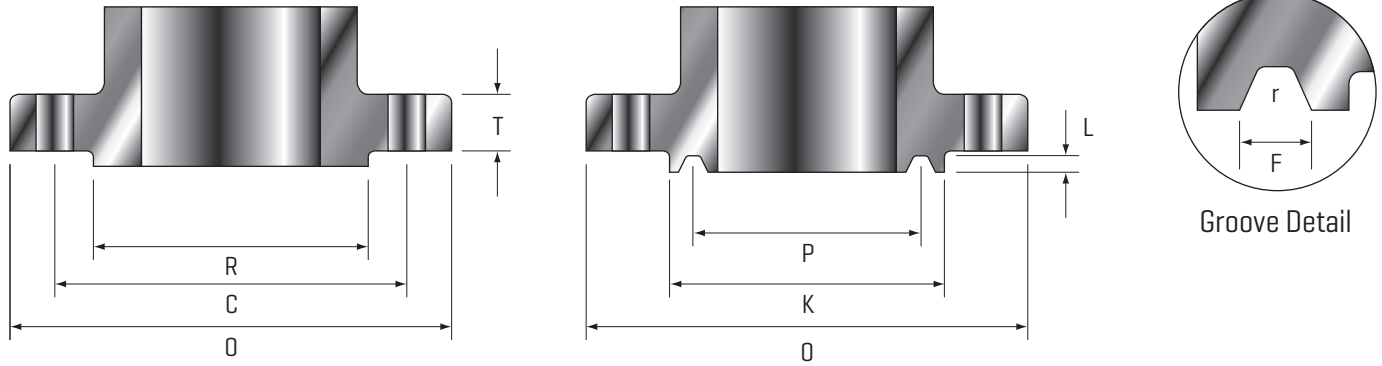
1500	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
	-20 to 100	3705	3705	3705	3750	3480	3750	3750	3750	3750	3750	3750	3600	3600	3750
200	3395	3395	3395	3750	3300	3750	3750	3750	3750	3750	3750	3095	3095	3720	3720
300	3270	3270	3270	3640	3190	3610	3640	3640	3640	3640	3640	2795	2795	3335	3335
400	3170	3170	3170	3520	3075	3465	3520	3530	3530	3530	3530	2570	2570	3070	3070
500	3015	3015	3015	3325	2930	3325	3325	3325	3325	3325	3325	2390	2390	2905	2905
600	2840	2840	2840	3025	2755	3025	3025	3025	3025	3025	3025	2255	2255	2785	2785
650	2745	2745	2745	2940	2665	2940	2940	2940	2940	2940	2940	2210	2210	2735	2735
700	2665	2665	2665	2775	2560	2840	2775	2840	2840	2840	2840	2170	2170	2710	2710
750	2535	2535	2535	2535	2385	2660	2535	2660	2660	2660	2660	2135	2135	2660	2660
800	2055	2055	2055	2055	1955	2540	2055	2540	2540	2540	2540	2110	2110	/	/
850	1595	1595	1595	1595	1490	2435	1595	2435	2435	2435	2435	2090	2090	/	/
900	1150	1150	1150	1115	1010	2245	1115	1870	2245	2245	2245	2075	2075	/	/
950	685	685	685	685	685	1591	685	1370	1885	1930	1930	1930	1930	/	/
1000	430	430	430	430	430	1080	430	995	1270	1820	1820	1820	1820	/	/
1050	/	/	/	/	/	720	/	720	855	1800	1800	1800	1800	/	/
1100	/	/	/	/	/	480	/	495	565	1510	1525	1525	1525	/	/
1150	/	/	/	/	/	325	/	310	375	1115	1185	1185	1185	/	/
1200	/	/	/	/	/	205	/	170	255	720	925	925	925	/	/
1250	/	/	/	/	/	/	/	/	/	/	735	735	735	/	/
1300	/	/	/	/	/	/	/	/	/	/	585	585	585	/	/
1350	/	/	/	/	/	/	/	/	/	/	480	480	480	/	/
1400	/	/	/	/	/	/	/	/	/	/	380	380	380	/	/
1450	/	/	/	/	/	/	/	/	/	/	290	290	290	/	/
1500	/	/	/	/	/	/	/	/	/	/	205	205	205	/	/
2500	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
	-20 to 100	6170	6170	6170	6250	5805	6250	6250	6250	3250	6250	6000	6000	6250	6250
200	5655	5655	5655	6250	5505	6250	6250	6250	6250	6250	6250	5160	5160	6200	6200
300	5450	5450	5450	6070	5315	6015	6070	6070	6070	6070	6070	4660	4660	5560	5560
400	5280	5280	5280	5865	5125	5775	5865	5880	5880	5880	5880	4280	4280	5120	5120
500	5025	5025	5025	5540	4885	5540	5540	5540	5540	5540	5540	3980	3980	4840	4840
600	4730	4730	4730	5040	4595	5040	5040	5040	5040	5040	5040	3760	3760	4640	4640
650	4575	4575	4575	4905	4440	4905	4905	4905	4905	4905	4905	3680	3680	4560	4560
700	4425	4425	4425	4630	4270	4730	4630	4730	4730	4730	4730	3620	3620	4520	4520
750	4230	4230	4230	4230	3970	4430	4230	4430	4430	4430	4430	3560	3560	4430	4430
800	3430	3430	3430	3430	3255	4230	3430	4230	4230	4230	4230	3520	3520	/	/
850	2655	2655	2655	2655	2485	4060	2655	4060	4060	4060	4060	3480	3480	/	/
900	1915	1915	1915	1855	1685	3745	1855	3115	3745	3745	3745	3460	3460	/	/
950	1145	1145	1145	1145	1145	3655	1145	2285	3145	3220	3220	3220	3220	/	/
1000	715	715	715	715	715	1800	715	1655	2115	3030	3030	3030	3030	/	/
1050	/	/	/	/	/	1200	/	1200	1430	3000	3000	3000	3000	/	/
1100	/	/	/	/	/	800	/	830	945	2515	2545	2545	2545	/	/
1150	/	/	/	/	/	545	/	515	630	1855	1970	1970	1970	/	/
1200	/	/	/	/	/	345	/	285	770	1200	1545	1545	1545	/	/
1250	/	/	/	/	/	/	/	/	/	/	1230	1230	1230	/	/
1300	/	/	/	/	/	/	/	/	/	/	970	970	970	/	/
1350	/	/	/	/	/	/	/	/	/	/	800	800	800	/	/
1400	/	/	/	/	/	/	/	/	/	/	630	630	630	/	/
1450	/	/	/	/	/	/	/	/	/	/	485	485	485	/	/
1500	/	/	/	/	/	/	/	/	/	/	345	345	345	/	/

# Flange Dimensions - ANSI B16.5 & B16.47



Class	Size	Flg. Dia. O	Flg. Thick. T	Raised Face Dia. R	Drilling			Face Dia. K	Ring Joint				
					Bolt Circle Dia. C	# of Bolts	Hole Dia.		Pitch Dia. P	Grv. Depth L	Grv. Width F	Btm. Radius r	Ring No.
150	2	6.00	0.75	3.62	4.75	4	0.75	4.00	3.250	0.250	0.344	0.03	R22
	2.5	7.00	0.88	4.12	5.50	4	0.75	4.75	4.000	0.250	0.344	0.03	R25
	3	7.50	0.94	5.00	6.00	4	0.75	5.25	4.500	0.250	0.344	0.03	R29
	4	9.00	0.94	6.19	7.50	8	0.75	6.75	5.875	0.250	0.344	0.03	R36
	6	11.00	1.00	8.50	9.50	8	0.88	8.62	7.625	0.250	0.344	0.03	R43
	8	13.50	1.12	10.62	11.75	8	0.88	10.75	9.750	0.250	0.344	0.03	R48
	10	16.00	1.19	12.75	14.25	12	1.00	13.00	12.000	0.250	0.344	0.03	R52
	12	19.00	1.25	15.00	17.00	12	1.00	16.00	15.000	0.250	0.344	0.03	R56
	14	21.00	1.38	16.25	18.75	12	1.12	16.75	15.625	0.250	0.344	0.03	R59
	16	23.50	1.44	18.50	21.25	16	1.12	19.00	17.875	0.250	0.344	0.03	R64
	18	25.00	1.56	21.00	22.75	16	1.25	21.50	20.375	0.250	0.344	0.03	R68
	20	27.50	1.69	23.00	25.00	20	1.25	23.50	22.000	0.250	0.344	0.03	R72
	22	29.50	1.81	25.25	27.25	20	1.38	/	/	/	/	/	/
	24	32.00	1.88	27.25	29.50	20	1.38	28.00	26.500	0.250	0.344	0.03	R76
	26	34.25	2.69	29.50	31.75	24	1.38	/	29.500	0.500	0.781	0.060	R93
	28	36.50	2.81	31.50	34.00	28	1.38	/	31.500	0.500	0.781	0.060	R94
30	38.75	2.94	33.75	36.00	28	1.38	/	33.750	0.500	0.781	0.060	R95	
32	41.75	3.19	36.00	38.50	28	1.62	/	36.000	0.562	0.906	0.060	R96	
34	43.75	3.25	38.00	40.50	32	1.62	/	38.000	0.562	0.906	0.060	R97	
36	46.00	3.56	40.25	42.75	32	1.62	/	40.250	0.562	0.906	0.060	R98	
300	2	6.50	0.88	3.62	5.00	8	0.75	4.25	3.250	0.312	0.469	0.03	R23
	2.5	7.50	1.00	4.12	5.88	8	0.88	5.00	4.000	0.312	0.469	0.03	R26
	3	8.25	1.12	5.00	6.62	8	0.88	5.75	4.875	0.312	0.469	0.03	R31
	4	10.00	1.25	6.19	7.88	8	0.88	6.88	5.875	0.312	0.469	0.03	R37
	6	12.50	1.44	8.50	10.62	12	0.88	9.50	8.312	0.312	0.469	0.03	R45
	8	15.00	1.62	10.62	13.00	12	1.00	11.88	10.625	0.312	0.469	0.03	R49
	10	17.50	1.88	12.75	15.25	16	1.12	14.00	12.750	0.312	0.469	0.03	R53
	12	20.50	2.00	15.00	17.75	16	1.25	16.25	15.000	0.312	0.469	0.03	R57
	14	23.00	2.12	16.25	20.25	20	1.25	18.00	16.500	0.312	0.469	0.03	R61
	16	25.50	2.25	18.50	22.50	20	1.38	20.00	18.500	0.312	0.469	0.03	R65
	18	28.00	2.38	21.00	24.75	24	1.38	22.62	21.000	0.312	0.469	0.03	R69
	20	30.50	2.50	23.00	27.00	24	1.38	25.00	23.000	0.375	0.531	0.06	R73
	22	33.00	2.62	25.25	29.25	24	1.62	27.00	25.000	0.438	0.594	0.06	R81
	24	36.00	2.75	27.25	32.00	24	1.62	29.50	27.250	0.438	0.656	0.06	R77
	26	38.25	3.31	29.50	34.50	28	1.75	31.88	29.500	0.500	0.781	0.06	R93
	28	40.75	3.56	31.50	37.00	28	1.75	33.88	31.500	0.500	0.781	0.06	R94
30	43.00	3.75	33.75	39.25	28	1.88	36.12	33.750	0.500	0.781	0.06	R95	
32	45.25	3.94	36.00	41.50	28	2.00	38.75	36.000	0.562	0.906	0.06	R96	
34	47.50	4.12	38.00	43.50	28	2.00	40.75	38.000	0.562	0.906	0.06	R97	
36	50.00	4.38	40.25	46.00	32	2.12	43.00	40.250	0.562	0.906	0.06	R98	

# Flange Dimensions - ANSI B16.5 & B16.47



Class	Size	Flg. Dia.	Flg. Thick.	Raised Face Dia.	Drilling			Face Dia.	Ring Joint				
					Bolt Circle Dia.	# of Bolts	Hole Dia.		Pitch Dia.	Grv. Depth	Grv. Width	Btm. Radius	Ring No.
					O	T	R	C	K	P	L	F	
600	2	6.50	1.00	3.62	5.00	8	0.75	4.25	3.250	0.312	0.469	0.03	R23
	2.5	7.50	1.12	4.12	5.88	8	0.88	5.00	4.000	0.312	0.469	0.03	R26
	3	8.25	1.25	5.00	6.62	8	0.88	5.75	4.875	0.312	0.469	0.03	R31
	4	10.75	1.50	6.19	8.50	8	1.00	6.88	5.875	0.312	0.469	0.03	R37
	6	14.00	1.88	8.50	11.50	12	1.12	9.50	8.312	0.312	0.469	0.03	R45
	8	16.50	2.19	10.62	13.75	12	1.25	11.88	10.625	0.312	0.469	0.03	R49
	10	20.00	2.50	12.75	17.00	16	1.38	14.00	12.750	0.312	0.469	0.03	R53
	12	22.00	2.62	15.00	19.25	20	1.38	16.25	15.000	0.312	0.469	0.03	R57
	14	23.75	2.75	16.25	20.75	20	1.5	18.00	16.500	0.312	0.469	0.03	R61
	16	27.00	3.00	18.50	23.75	20	1.62	20.00	18.500	0.312	0.469	0.03	R65
	18	29.25	3.25	21.00	25.75	20	1.75	22.62	21.000	0.312	0.469	0.03	R69
	20	32.00	3.50	23.00	28.50	24	1.75	25.00	23.000	0.375	0.531	0.06	R73
22	34.25	3.75	25.25	30.62	24	1.88	27.00	25.000	0.438	0.594	0.06	R81	
24	37.00	4.00	27.25	33.00	24	2.00	29.50	27.250	0.438	0.659	0.06	R77	
900	2	8.5	1.5	3.62	6.5	8	1	4.88	3.75	0.312	0.469	0.03	R24
	2.5	9.62	1.62	4.12	7.50	8	1.12	5.39	4.250	0.312	0.469	0.03	R27
	3	9.50	1.50	5.00	7.50	8	1.00	6.12	4.875	0.312	0.469	0.03	R31
	4	11.50	1.75	6.19	9.25	8	1.25	7.12	5.875	0.312	0.469	0.03	R37
	6	15.50	2.19	8.50	12.50	12	1.25	9.50	8.312	0.312	0.469	0.03	R45
	8	18.50	2.50	10.62	15.50	12	1.50	12.12	10.625	0.312	0.469	0.03	R49
	10	21.50	2.75	12.75	18.50	16	1.50	14.25	12.750	0.312	0.469	0.03	R53
	12	24.00	3.12	15.00	21.00	20	1.50	16.50	15.000	0.312	0.469	0.03	R57
	14	25.25	3.38	16.25	22.00	20	1.62	18.38	16.500	0.438	0.656	0.06	R62
	16	27.75	3.50	18.50	24.25	20	1.75	20.62	18.500	0.438	0.656	0.06	R66
	18	31.00	4.00	21.00	27.00	20	2.00	23.38	21.000	0.500	0.781	0.06	R70
	20	33.75	4.25	23.00	29.50	20	2.12	25.50	23.000	0.500	0.781	0.06	R74
24	41.00	5.50	27.25	35.50	20	2.62	30.38	27.250	0.625	1.062	0.09	R78	
1500	2	8.50	1.50	3.62	6.50	8	1.00	4.88	3.750	0.312	0.469	0.03	R24
	2.5	9.62	1.62	4.12	7.50	8	1.12	5.38	4.250	0.312	0.469	0.03	R27
	3	10.50	1.88	5.00	8.00	8	1.25	6.62	5.375	0.312	0.469	0.03	R35
	4	12.25	2.12	6.19	9.50	8	1.38	7.62	6.375	0.312	0.469	0.03	R39
	6	15.50	3.25	8.50	12.50	12	1.50	9.75	8.312	0.375	0.531	0.06	R46
	8	19.00	3.62	10.62	15.50	12	1.75	12.50	10.625	0.438	0.656	0.06	R50
	10	23.00	4.25	12.75	19.00	12	2.00	14.62	12.750	0.438	0.656	0.06	R54
	12	26.00	4.88	15.00	22.50	16	2.12	17.25	15.000	0.562	0.906	0.06	R58
	14	29.50	5.25	16.25	25.00	16	2.38	19.25	16.500	0.625	1.062	0.09	R63
	16	32.50	5.75	18.50	27.75	16	2.62	21.50	18.500	0.688	1.188	0.09	R67
	18	36.00	6.38	21.00	30.50	16	2.88	24.12	21.000	0.688	1.188	0.09	R71
	20	38.75	7.00	23.00	32.75	16	3.12	26.50	23.000	0.688	1.312	0.09	R75
24	46.00	8.00	27.25	39.00	16	3.62	31.25	27.250	0.812	1.438	0.09	R79	
2500	2	9.25	2.00	3.62	6.75	8	1.00	4.48	4.000	0.312	0.469	0.030	R26
	2.5	10.50	2.25	4.12	7.75	8	1.13	5.86	4.375	0.375	0.531	0.060	R28
	3	12.00	2.62	5.00	9.00	8	1.25	6.61	5.000	0.375	0.531	0.060	R32
	4	14.00	3.00	6.19	10.75	8	1.50	7.99	6.188	0.438	0.656	0.060	R38
	5	16.50	3.62	7.31	12.75	8	1.75	9.48	7.500	0.500	0.781	0.060	R40
	6	19.00	4.25	8.50	14.50	8	2.00	10.98	9.000	0.500	0.781	0.060	R47
	8	21.75	5.00	10.62	17.25	12	2.00	13.38	11.000	0.562	0.906	0.060	R51
	10	26.50	6.50	12.75	21.75	12	2.50	16.73	13.500	0.688	1.188	0.090	R55
12	30.00	7.25	15.00	24.38	12	2.75	19.48	16.000	0.688	1.312	0.090	R60	

# Auxiliary Bypass/Drain Boss Locations

## By-Passes

- Utilized in steam service to warm a flow system prior to opening the main valve.
- Utilized to balance line pressure on both sides of a main valve to reduce the torque demands.
- Cast steel valves can be fitted with all welded by-passes. \
- The standard by-pass configuration consists of a single OS&Y globe valve by-pass attached to the side of the main valve with the stems of both valves parallel.
- The piping and OS&Y globe by-pass valve have a pressure-temperature rating and corrosion resistance equal to or exceeding that of the main valve.
- A comprehensive arrangement drawing must be submitted by the customer for other by-pass configurations.

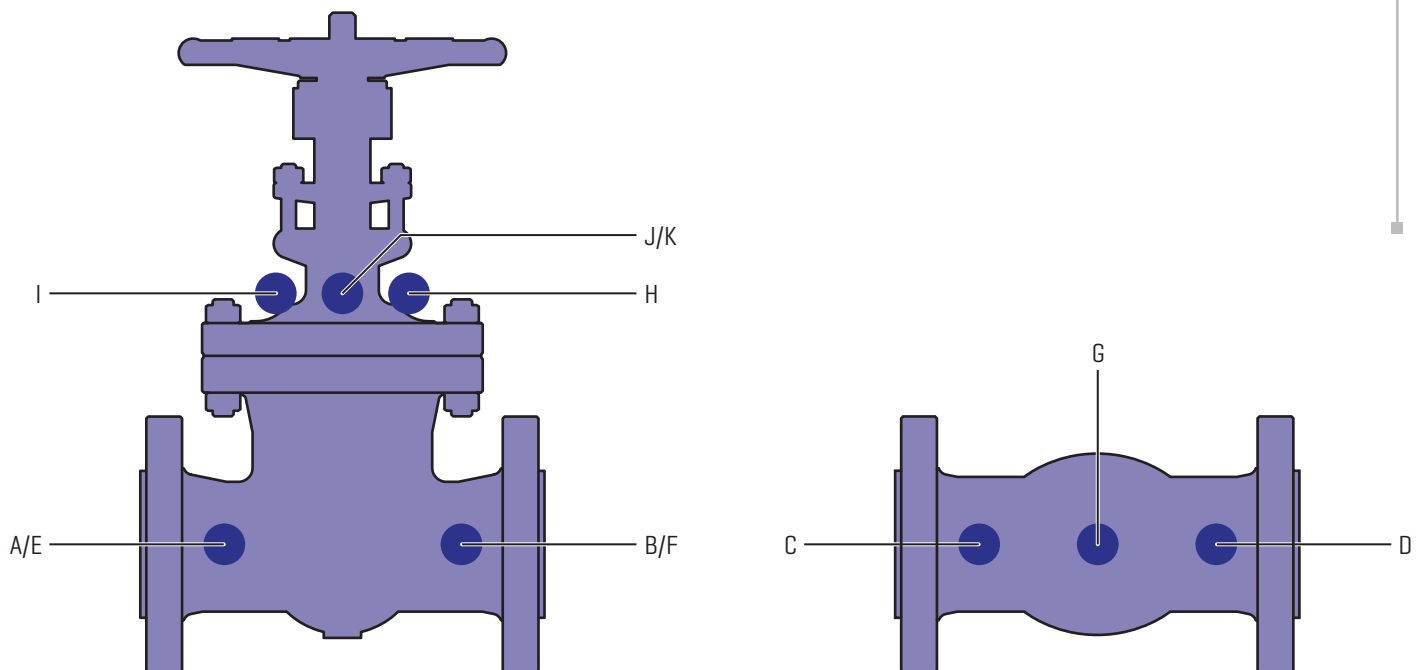
## Drains

- Cast steel valves can be fitted with drains at any of the locations shown.
- Standard drain connections consist of a drilled, tapped, and plugged hole at the specified location(s) by the customer.
- Other types of drains include welded or threaded nipples with/without shut-off valves, are available at the customer's request.

## Auxiliary Bypass/Drain Boss Locations

- Please refer to ASME B16.34 for exact auxiliary connection locations, sizes, and threading information.
- Each letter identifies a possible hole location for auxiliary connection(s) and are for reference only.
- Standard auxiliary connection hole sizes shall be drilled and tapped as follows, (unless specified otherwise by the customer):
  - 2" thru 4" utilizes a .50" hole
  - 5" thru 8" utilizes a .75" hole
  - 10" and larger utilizes a 1" hole

**Note:** Locations E, F, & K are on opposite side of valve.





# Superior Performance Plug Valves

**Available Sizes: 2" thru 12" | Class: 150 thru 2500**

SCV Valve Pressure Balanced Lubricated Plug Valves are ideal for the following applications:

- Oil & Gas Distribution, Processing, & Transmission
- Wastewater Collection & Treatment
- Crude Handling & Treatment
- Petro Chemical & Refineries
- Waste Transfer & Processing
- Slurry Transfer & Processing
- Steam Systems
- General Industries



API 6D | Pressure Balanced | Lubricated | Metal-to-Metal Seal | API 6FA Firesafe Design | 410SS Trim | NACE MR 01 75

SCV is Certified: API 6A, API 6D, CE PED, CRN (Alberta, Manitoba, & Ontario)





# Industry Standards for Valve Manufacturing

This information is for reference only.

## American Society of Mechanical Engineers (ASME)

ASME Code - Boiler & pressure vessel code  
ASME A13.1 - Scheme for the identification of piping systems  
ASME B1.1 - Unified inch screw threads, UN, & UNR thread form  
ASME B1.5 - ACME screw threads  
ASME B1.7M - Nomenclature, definitions, & letter symbols for screw threads  
ASME B1.8 - Stub ACME screw threads  
ASME B1.12 - Class 5 interference - fit thread  
ASME B1.20.1 - Pipe threads, general purpose, inch  
ASME B1.20.3 - Dry-seal pipe threads, inch  
ANSI/ASME B16.1 - Cast iron pipe flanges & flanged fittings  
ANSI/ASME B16.5 - Pipe flanges & flanged fittings: NPS 1/2" - 24"  
ASME B16.9 - Factory made wrought steel buttwelding fittings  
ANSI/ASME B16.10 - Face-to-face & end-to-end dimensions of valves  
ASME B16.11 - Forged fittings, socket welding & threaded  
ASME B16.20 - Metallic gaskets for pipe flanges: ring joint spiral wound & jacketed  
ASME B16.21 - Non-metallic flat gaskets for pipe flanges  
ASME B16.25 - Butt welding ends  
ANSI/ASME B16.33 - Manually operated metallic gas valves for use in gas piping systems up to 125 PSI (sizes NPS 1/2" - 2")  
ANSI/ASME B31.1 - Power piping  
ANSI/ASME B31.3 - Process piping  
ANSI/ASME B16.34 - Valves flanged, threaded & welding end  
ANSI/ASME B16.36 - Orifice flanges  
ANSI/ASME B16.38 - Large metallic valves for gas distribution (manually operated, NPS 2-1/2" - 12", 125 PSIG maximum)  
ANSI/ASME B16.42 - Ductile iron pipe flanges & flanged fittings: classes 150 & 300  
ANSI/ASME B16.47 - Large diameter steel flanges  
ANSI B17.1 - Keys & keyseats  
ANSI B18.2.2 - Square & hex nuts  
ASME B31.4 - Pipeline transportation systems for liquid hydrocarbons & other ammonia & alcohols  
ANSI/ASME B31.8 - Gas transmission & distribution piping systems  
ANSI/ASME B36.10 - Welded & seamless wrought steel pipe  
ANSI/ASME B36.19 - Stainless steel pipe  
ANSI FCI-2 - Control valve seat leakage

## American Society Non-destructive Test (ASNT)

ASNT-TC-1A - Recommended practice no. SNT-TC-1A 1996

## American Society for Testing and Materials (ASTM)

### American Petroleum Institute (API)

API RP 574 - Inspection practices for piping system components  
API 589 - Fire test for evaluation of valve stem packing  
API RP 591 - Process valve qualification procedure  
API 594 - Check valves-flanged, lug, wafer & buttwelding  
API 597 - Steel venturi gate valves, flanged, buttwelding ends  
API 598 - Valve inspection & testing  
API 599 - Metal plug valves - flanged, welding ends  
API 601 - Metallic gaskets for raised-face pipe flanges & flanged connections (double-jacketed corrugated & spiral wound)  
API 600 - Bolted bonnet steel gate valves for petroleum & natural gas industries "ISO adoption from ISO 10434"  
API 602 - Steel gate, globe, & check valves for sizes DN100 and smaller for the petroleum & natural gas industries  
API 603 - Corrosion-resistant, bolted bonnet gate valves-flanged & buttweld ends  
API 604 - Ductile iron gate valves, flanged ends  
API 605 - Large-diameter carbon steel flanges (nominal pipe sizes 26" - 60", classes 75, 150, 300, 400, 600, & 900 (replaced by ANSI/ASME B16.47)  
API 606 - Compact steel gate valves, extended body (included in API 602) fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"  
API 607 - Fire test for soft-seated quarter-turn valves "ISO adoption from ISO 10497-5 2004"  
API 608 - Metal ball valves, flanged, threaded, & welding ends  
API 609 - Butterfly valves-double flanged, lug- & wafer-type  
API RP 941 - Steel for hydrogen service at elevated temperatures & pressures in petroleum refineries & petrochemical plants  
API RP 520, Part 1 - Sizing, selection & installation of pressure relieving devices in refineries  
API RP 520, Part 2 - Sizing, selection & installation of pressure relieving devices in refineries  
API Spec 6A - Specification for wellhead & christmas tree equipment  
API Spec 6D - Specifications for pipeline valves  
API Spec 14D - Specifications for wellhead surface safety valves & underwater safety valves for offshore service  
API 5B - Threading, gauging thread inspection of coring, tubing, & line pipe threads  
API 6AM - Material toughness  
API 6FA - Fire test for valves  
API 6FC - Fire test for valves with backseats  
API 6FD - Specification for fire test for check valves  
API Q1 - Specification for quality programs for the petroleum, petrochemical, & natural gas

### National Association of Corrosion Engineers (NACE)

MR0175 - Sulfide stress cracking resistant metallic materials for oil field equipment  
MR0103 - Materials resistant to sulfide stress cracking in corrosive petroleum refining environments

### Canadian Standards Association

B51-97 - Boiler, pressure vessel, & pressure piping code  
Z245.15-96 - Steel valves  
CAN3-z299.4-85 - Quality assurance program - Category 4  
CAN3-z299.3-85 - Quality assurance program - Category 3

## British Standards Institute (BS)

BS 1414 - Gate, wedge & double disk valves: steel  
BS 1868 - Check valves: steel  
BS 1873 - Globe & check valves: steel  
BS 2080 - Flanged & butt weld end steel valves  
BS 5146 - (withdrawn) Replaced by BS 6755 p.1 steel valves testing [1986] & BS 6755 p.2 [1984]  
BS 5152 - Globe & check: cast iron  
BS 5153 - Check: cast iron  
BS 5159 - Ball: cast iron & carbon steel  
BS 5160 - Globe & check: steel  
BS 5163 - Gate, wedge & double disk: cast iron  
BS 5351 - Ball: steel  
BS 5352 - Globe & check: steel  
BS 5418 - (withdrawn) Replaced by BS EN 19 [1992] marking: general purpose industrial  
BS 5840 - Valve mating details for actuator operation  
BS 6364 - Cryogenic  
BS 6683 - Guide: installation & use of valves  
BS 6755: Part 1 - Specification for production pressure testing requirements  
BS 6755: Part 2 - Specification for fire type-testing requirements  
BS EN 19 - Marking of general purpose industrial valves

## International Organization for Standardization

ISO 5211/1 - Industrial valves- part-turn actuator attachments  
ISO 5211/2 - Part-turn valve actuator attachment-flange & coupling performance characteristics  
ISO 5211/3 - Part-turn valve actuator attachment-dimensions of driving components  
ISO 5752 - Metal valves for use in flanged pipe systems face-to-face & center-to-face dimensions  
ISO 9000 - Quality management systems and fundamentals & vocabulary  
ISO 10012-1 - Quality assurance requirements for measuring equipment

## Manufacturers Standardization Society

SP-6 - Standard finishes for contact faces of pipe flanges & connecting-end flanges of valves & fittings  
SP-9 - Spot facing for bronze, iron & steel flanges  
SP-25 - Standard marking system for valves, fittings, flanges & unions  
SP-42 - Class 150 corrosion resistant gate, globe, angle, & check valves with flanged & butt weld ends  
SP-44 - Steel pipeline flanges  
SP-45 - Bypass & drain connections  
SP-51 - Class 150/w corrosion resistant cast flanges & flanged fittings  
SP-53 - Quality standard for steel castings & forgings for valves, flanges, & fittings & other piping components: magnetic particle exam method  
SP-54 - Quality standard for steel castings for valves, flanges, & fittings and other piping components: radiographic examination method  
SP-55 - Quality standard for steel castings for valves, flanges other piping components-visual method for evaluation of surface irregularities  
SP-60 - Connecting flange joint between tapping sleeves & tapping valves  
SP-61 - Pressure testing of steel valves  
SP-65 - High pressure chemical industry flanges & threaded stubs for use with lens gaskets  
SP-67 - Butterfly valves  
SP-69 - ANSI/MSS edition pipe hangers & supports, selection & application  
SP-70 - Cast iron gate valves, flanged & threaded ends  
SP-71 - Gray iron swing check valves, flanged & threaded ends  
SP-72 - Ball valves with flanged or butt-welding ends for general service  
SP-79 - Socket-welding reducer inserts  
SP-81 - Stainless steel, bonnetless, flanged knife gate valves  
SP-82 - Valve pressure testing methods  
SP-84 - Valves - socket welding & threaded ends  
SP-85 - Cast iron globe & angle valves, flanged & threaded ends  
SP-86 - Guidelines for metric data in standards for valves, flanges, fittings & actuators  
SP-88 - Diaphragm valves  
SP-91 - Guidelines for manual operation of valves  
SP-92 - MSS valve user guide  
SP-93 - Quality standard for steel castings & forgings for valves, flanges & fittings & other piping components-liquid penetrant exam method  
SP-94 - Quality standard for ferritic & martensitic steel castings for valves, flanges, & fittings and others piping components - ultrasonic exam method  
SP-96 - Guidelines on terminology for valves & fittings  
SP-98 - Protective coatings for the interior of valves, hydrants, & fittings  
SP-99 - Instrument valves  
SP-101 - Part-turn valve actuator attachment-flange and driving component dimensions & performance characteristics  
SP-102 - Multi-turn valve actuator attachment: flange and driving component dimensions & performance characteristics  
SP-110 - Ball valves threaded, socket-welding, solder joint, grooved, & flared ends  
SP-117 - Bellows seals for globe & gate valves  
SP-118 - Compact steel globe and check valves-flanged, flangeless, threaded & welding ends (chemical & petroleum refinery service)  
SP-120 - Flexible graphite packing system for rising stem steel valves (design requirements)  
SP-121 - Qualification testing methods for stem packing for rising stem steel valves



# Terms & Conditions

## Quotation Validity

This quotation is valid for 30 days from the date quotation is sent. Validity on special metals, including Stainless Steel, is 14 days from the date the quotation is sent. All products offered from stock are subject to prior sale.

## Shipments

All items quoted are EXW our Dock - [Ex Works - SCV Valve Facility Santa Fe, Texas 77510] - unless otherwise noted and agreed to in writing. Shipment may be billed either third party billing to the buyer or freight collect. Shipment dates offered above are forecasted delivery lead times and are estimated from the date payment terms [acceptable to seller] are established, clarification is received on all technical information, and resolution of customer's written approval of drawings is received [when required]. The equipment quoted shall be packed in accordance with seller's standard packing procedure unless otherwise noted and agreed to in writing by the seller.

## Force Majeure

If in the case of an act of God, war, riot, fire, explosion, flood, or any other circumstances of whatsoever nature which are beyond the control of the seller and which in any way affect the ability of the seller to fulfill its delivery obligations, the delivery is hindered, impeded, or delayed the seller shall be exonerated from all responsibilities and reserves the right to postpone the delivery beyond the original schedule.

## Payment terms

All terms are to be negotiated. Credit cards accepted [Master Card, Visa, American Express].

## Purchase Orders

All buyer's purchase orders supplied to the seller are to be written in the English language.

## Prices

All prices quoted are in USD as per the preceding pricing schedule. The minimum order value is \$5,000.00 [five thousand dollars], unless otherwise agreed to by seller. If for some reason any items are changed or additions to the order required, seller reserves the right to adjust prices accordingly. All sales are subject to approval of seller's credit department. If buyer fails to meet the agreed upon and established commercial terms of the contract, the seller may with-hold all subsequent deliveries until such time that the original commercial terms of the contract have been met by the buyer [or subsequent commercial terms have been agreed upon by the seller with the buyer].

## Intellectual Property

All specifications, illustrations, drawings, certificates, and other particulars supplied by seller remain the intellectual property of the seller and should not be disclosed to any third party without the prior written consent of seller.

## Governing Law; Arbitration; Jurisdiction

The terms and conditions of this quotation and any subsequent purchase order shall be construed, interpreted, and performed exclusively according to the laws of the State of Texas, USA. The courts of such state shall have exclusive jurisdiction out of all controversies arising out of or in connection with this agreement. The parties consent that process may be served upon them in any such action by registered mail at the address stated for Buyer on its purchase order, and upon SCV Valve at the address noted above in Santa Fe, Texas, or personally within or without the State of Texas. Any legal action with respect to any agreement must be commenced within one year after the cause of action has accrued. The provisions of the Uniform Commercial Code as adopted by the State of Texas, and not under the United Nations Convention on Contracts for the International Sale of Goods, shall apply.

## Warranty

All seller's products are guaranteed against defects in workmanship for a period of twelve [12] months after being placed in service, but not exceeding eighteen [18] months after shipment, when products are properly installed per seller specifications and used within the service and pressure range for which they were manufactured. Full risk of loss shall pass to the buyer upon delivery at FOB point, or destination port in case of CIF. This guarantee is limited to the replacement of any valve parts/components found to be defective either in material or workmanship. This guarantee does not extend to costs of labor, freight, or any other consequential charges. The unauthorized use of third party components and workmanship in seller's products voids this warranty.

## Limitation of Liability

The liability of the seller under this agreement or with respect to any products supplied or services performed pursuant to this agreement, whether in contract, in tort, in strict liability or otherwise, shall not exceed the purchase price paid by the buyer with respect thereto. In no event will the seller be liable in contract, in tort, in strict liability or otherwise for any special, indirect, incidental, or consequential damages. This is including but not limited to loss of anticipated profits or revenues, loss of use, non-operation or increased expense of operation of equipment, cost of capital, or claims from customer or buyer for failure or delay in achieving anticipated profits or products.

## Cancellation

No contract may be canceled by the buyer except upon written notice to seller and upon payment to seller of all costs incurred by the contract arising out of, or in connection with, the contract. Export of goods covered hereby is subject to United States Customs Control. Standard stocking items will be subject to a twenty-five percent [25%] restocking and/or cancellation charge. Non-standard stocking items will be subject to a one-hundred percent [100%] restocking and/or cancellation charge.

## Cancellation Charge

The following indicates the rates of cancellation charge of contract value for project manufactured items and/or special engineered items at various stages of production:

- |  |                                  |
|--|----------------------------------|
| • <b>Time of cancellation: Order Acknowledgement and prior to Engineering engagement.</b>          | <b>Cancellation Charge: 10%</b>  |
| • <b>Time of cancellation: After start of engineering but prior to release to production.</b>      | <b>Cancellation Charge: 30%</b>  |
| • <b>Time of cancellation: After release to production but prior to completion of fabrication.</b> | <b>Cancellation Charge: 80%</b>  |
| • <b>Time of cancellation: After completion of fabrication.</b>                                    | <b>Cancellation Charge: 100%</b> |

## Return of Goods

No product shall be returned to seller without written authorization and shipping instructions having been obtained from seller. Products authorized for returns are to be shipped freight pre-paid to the SCV Valve Facility identified in writing, unless otherwise notified, and are subject to seller's standard re-stocking fees.

## Documentation

MTR's are available at no charge upon request. The seller's standard document package is per ISO 10474 3.1B requirements. Additional requested documentation is subject to charge.

## Inspection

The customer or his authorized representative may, with four [4] weeks prior notice given to seller, visually inspect products manufactured by seller. Such seller approved inspections will be carried out in accordance with seller's standard or seller approved customer inspection procedures. If any inspection or documentation requested by the customer is over and beyond the scope and criteria initially agreed to by the seller, any costs incurred by conducting such inspection or preparation of special documents shall be paid by the buyer prior to release of the items for shipment.

## Witness Hydro-testing

Witness hydro-testing is available at a cost. A scope of buyers inspection request is to be provided to seller at order placement. Late notice of such requested inspection is subject to additional costs. The cost associated with such witness hydro request is to be agreed on prior to any such testing taking place. Payment of this type of testing to be negotiated. Additionally, any costs associated with a third party inspector will not be at the sellers expense.

The SCV valve brand was established in 1972 as a maintenance and modification company with the ability to provide full in-line valve service and repair. In the mid-1970's, after experiencing many shortcomings of other valve products in the industry, the first SCV valve was manufactured. Since that time, the SCV brand has been expanded its manufactured products to cover a broad range of valves. Industries served include the power, paper and pulp, oil and gas, and petro-chemical sectors.

SCV Valve takes sincere pride in our ability to manufacture both commodity and specialty valves that meet and exceed the needs of our customers. All sizes, pressure classes, and metallurgical compositions are managed in house utilizing the strictest quality control measures to ensure the customer's total satisfaction.

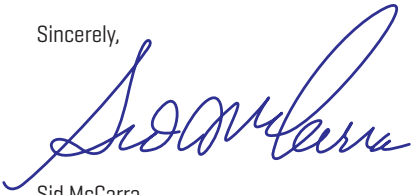
SCV Valve products include thru conduit gates, trunnion mounted balls, floating balls, wedge gates, full port swing checks, piston checks, and lubricated plugs. Valves utilized throughout the industry must meet rigorous quality and production standards.

SCV Valve has earned its API 6A, API 6D, ISO: 9001, CE-PED, and CRN certifications while operating under the API Q1 Quality Management System.

With years of dedication and commitment to quality, design, and service, SCV Valve has grown to be one of the premier valve manufacturers in the industry with the largest inventory of high pressure ball, gate, and check valves. We pride ourselves on our high quality products, timely delivery capabilities, and competitive prices.

On behalf of all of the members at SCV Valve, we thank you for the opportunity to earn your business.

Sincerely,



Sid McCarra  
President  
SCV Valve, LLC

Since 1972, the SCV brand has been committed to providing quality flow control products to the Power, Paper & Pulp, Oil & Gas, and Petro Chemical industries.

As one of the largest valve manufacturers, SCV Valve's reputation is unparalleled for producing high quality commodity and specialty valves. Products range in sizes 1/2" - 48", in pressure classes from 150# - 2500# and are backed by timely deliveries and competitive prices.

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