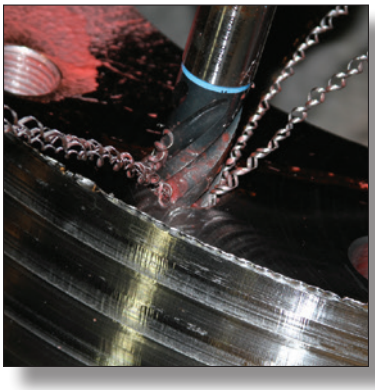
SCV VALVE

(281) 482-4728 · www.scvvalve.com

Thru Conduit Slab & Expanding Gate Valves - API 6A & API 6D

Class: 150 - 1500
Sizes: 2" - 36"

SCV VALVE



SCV VALVE manufactures some of the most dependable cast steel Thru Conduit Slab and Expanding Gate Valves in the industry. Both designs utilize flanged and butt-weld end connections, and are manufactured and tested in accordance with API 6D. The full port design minimizes pressure drop and turbulence. The SCV design offers many features and options beneficial for oil, gas, and liquid applications making it the most demanded Thru Conduit Gate on the market.

Innovative Valve Solutions.®

SCV Thru Conduit Slab & Expanding Gate Valves

[Product Preview]

For more information call us @ (281) 482-4728 or visit our website @ www.scvvalve.com

SCV Thru Conduit Slab & Expanding Gate Valves

- Basic Design: API 6D
- Face-to-Face Dimension: ANSI B16.10
- Flange End Dimension: ANSI/ASME B16.5 (2" to 24"), ANSI/ASME B16.47 & MSS SP-44 (26" & up)
- Butt-Weld End Dimension: ANSI/ASME B16.25
- Inspection & Testing: API 6D
- Fire Safe Design: API 6FA

SCV Thru Conduit Slab Gate (Bi-Directional)

- Pressure assisted seats for high pressure sealing
- Spring loaded seat for low pressure sealing
- Double block and bleed capabilities
- Internal pressure relieving through self relieving seats
- Secondary sealant injection at seats and stems
- Full port thru conduit for passage of pigs

SCV Thru Conduit Expanding Gate (Bi-Directional) with Preferred Pressure Side

- Expanding mechanical gate forms positive tight sealing
- Seals at low and high pressure
- Double block and bleed capabilities
- Secondary sealant injections at seats and stems
- Optional by-pass system for thermal cavity relief venting
- Full port thru conduit for passage of pigs

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

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.

Table of Contents

Complete Product Line

Call SCV Valve today @ (281) 482-4728 for all your valve needs or visit us on the web @ www.scvvalve.com.

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.

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.

Bore Coating: Scotchkote™ 134

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

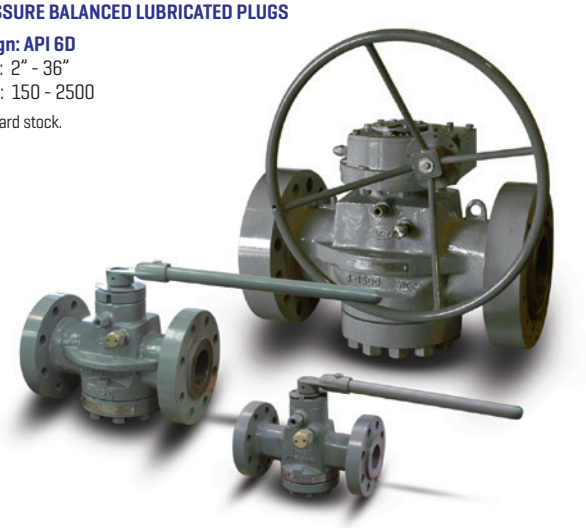
Design: B16.34
Sizes: 1/2" - 12"
Class: 150 - 1500

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

Certificate of Authority to use the Official API Monogram
License Number: 6A-1190 ORIGINAL

The American Petroleum Institute hereby grants to

SCV VALVE
3521 FM 646 Road North
Santa Fe, TX

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API-6A and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: 6A-1190

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Valves at PSL 1, PSL 2

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: DECEMBER 6, 2019
Expiration Date: DECEMBER 6, 2022

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Global Industry Services

Note: Extension letter availavle on our website.

API 6D Certification

Certificate of Authority to use the Official API Monogram
License Number: 6D-1099 ORIGINAL

The American Petroleum Institute hereby grants to

SCV VALVE
3521 FM 646 Road North
Santa Fe, TX

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and API-6D and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: 6D-1099

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Check Valves, Ball Valves, Plug Valves and Gate Valves

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: DECEMBER 6, 2019
Expiration Date: DECEMBER 6, 2022

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President of Global Industry Services

Note: Extension letter availavle on our website.

ISO 9001:2015 Certificate

ABS Quality Evaluations
Certificate Of Conformance
This is to certify that the Quality Management System of:

SCV Valve, LLC
3521 FM 646 Road North
Santa Fe, TX 77510
U.S.A.

has been assessed by ABS Quality Evaluations, Inc. and found to be in conformance with the requirements set forth by:

ISO 9001:2015

The Quality Management System is applicable to:

ENGINEERING, MANUFACTURING, SALES, AND SERVICE OF HIGH PERFORMANCE VALVE PRODUCTS.
PRODUCT RANGE INCLUDES ALL SEVERE SERVICE & HIGH PRESSURE APPLICATIONS

This certificate may be found on the ABS QE Website (www.abs-qe.com). For certificates issued in the People's Republic of China information may also be verified on the CNCA website (www.cnca.gov.cn)

Certificate No: 44703
Certification Date: 16 June 2010
Effective Date: 16 May 2019
Expiration Date: 15 June 2022
Revision Date: 16 May 2019

Dominic Townsend, President

Validity of this certificate is based on the successful completion of the periodic surveillance audits of the management system defined by the above scope and is contingent upon prompt written notification to ABS Quality Evaluations, Inc. of significant changes to the management system or components thereof.

ABS Quality Evaluations, Inc. 3701 City Plaza Drive, Spring, TX 77389, U.S.A.
Validity of this certificate may be confirmed at www.abs-qe.com/cert_validation.

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CE PED Certificate

HPi VS
HPi Verification Services

Certificate of Quality System Approval

This is to certify that the product listed below conforms to the requirements of the
Pressure Equipment Directive 2014/68/EU
Annex III Module H

Certificate Number: HPiVS/P1012-055-Q-04
Date of Issue: 17-Jul-2019
Date of Expiry: 23-Jun-2022
Surveillance due: 23-Jun-2020
Manufacturer: SCV Valve LLC
3521 FM 646 Road North, Santa Fe
Texas 77510

Description of Pressure Equipment: Ball valves, Check valves, Gate valves, Globe valves and Plug valves – Range: 1/2" – 48" Class 150 through 2500
Equipment Identification: CE plate for Cat.I to III
Other Certification Standards Applied: ABSQE ISO 9001 cert 44703
API 6A:2010, API 6D:2014
Report Reference: HPiVS/P1012-055-4

This Certificate is valid in any European Economic Area Member State.

This Report has been issued by HPi Verification Services Ltd. which is a body notified to the European Commission according to the provisions of the Pressure Equipment Directive (Notified Body number 1521).

This Report is issued following the assessment of the documentation and implementation of the Quality System in accordance with the provisions of the quoted Conformity Assessment Module of the above directive. The CE Mark may be affixed to the Pressure Equipment within the scope of approval as described above once the EU 'declaration of conformity' has been signed by the responsible person. The number '1521', being HPi Verification Services Ltd. Notified Body number should also be placed on the equipment dataplate.

Managing Director
Technical Manager

CE

EU Notified Body No. 1521
Company registered in England #7217086

HPi Verification Services Ltd. 2019

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enquiries@hpivs.com
www.eucertification.com

HPi Verification Services Ltd.
The Manor House
Howbery Park, Wallingford
OX10 8BA, United Kingdom

Canadian Registration Number

- Alberta
  - 0C07063.2
- British Columbia
  - 0C07063.21
- New Brunswick
  - 0C07063.27
- New Foundland & Laborador
  - 0C07063.20
- Northwest Territory
  - 0C07063.25
- Novascotia
  - 0C07063.27
- Nunavut
  - 0C07063.2N
- Manitoba
  - 0C07063.24
- Ontario
  - 0C07063.25
- Prince Edward island
  - 0C07063.29
- Yukon
  - 0C07063.2

SCV Figure Number Chart

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

1	2	3	4	5	6	7	8
Valve Type	**Bore Size**	**Pressure Class**	**Body/Bonnet**	**Body Material**	**Trim Material**	**Ends**	**Operator**
BAL = Trunnion Ball Valve	49 = 1/4"	01 = 150	B = Bolted	02 = A352 LCC	02 = A352 LCC + ENP	A = RF x WE	B = Bare Stem
DBV = Double Ball Valve	50 = 1/2"	02 = 200	L = Lug Style	04 = A351 CF8	04 = A352 LCB + ENP	B = RTJ x WE	D = Dual Acting Actuator
DCK = Dual Plate Check Valve	75 = 3/4"	03 = 300	P = Pressure Seal	05 = A351 CF8C	06 = A216 WCC + ENP	C = Clamp	E = Electric Actuator
EPG = Expanding Gate Valve	01 = 1"	04 = 400	S = Seal Weld	06 = A351 CF8M	08 = A216 WCB + ENP	D = RF x RTJ	G = Gear
FBV = Floating Ball Valve	15 = 1-1/2"	06 = 600	T = Top Entry	08 = A216 WCC	09 = A351 CF8M	E = RTJ x RF	H = Handwheel
FCK = Full Port Swing Check Valve	02 = 2"	08 = 800	U = Union	09 = A217 WC9	10 = CR13	F = Flat	L = Lever
GAT = Wedge Gate Valve	21 = 2-1/16"	09 = 900	W = Wafer	10 = A216 WCB	11 = CR13 HF	H = Hub	O = Oil/Gas Actuator
GLB = Globe Valve	25 = 2-1/2"	11= 1000		11 = A352 LCB	12 = CR13 HF + HF	J = RTJ	S = Spring Return Actuator
PCK = Piston Check Valve	27 = 2-9/16"	15 = 1500		12 = A350 LF2	13 = A105 + ENP	K = WE x RF	Y = Hydraulic Actuator
PLG = Lubricated Plug Valve	03 = 3"	20 = 2000		13 = A105	15 = A350 LF2 + ENP	L = WE x RTJ	
RSB = Rising Stem Ball Valve	31 = 3-1/8"	25 = 2500		14 = A352 LC3	16 = A216 WCC + 316	N = TH x SW	
SCK = Conv. Port Swing Check Valve	37 = 3-9/16"	30 = 3000		15 = A217 C5	17 = 17-4 PH	M = SW x TH	
TCG = Slab Gate Valve	04 = 4"	37 = 3705		16 = A217 WC6	18 = A350 LF3 + ENP	R = RF	
	41 = 4-1/16"	45 = 4500		17 = 17-4 PH	20 = Alloy 20	S = SW	
	05 = 5"	50 = 5000		19 = A350 LF4	21 = Alloy 20 HF	T = TH	
	51 = 5-1/8"	60 = 6000		20 = Alloy 20	22 = A182 F22	W = WE	
	06 = 6"	10 = 10000		21 = A182 F11	30 = A29 4130		
	71 = 7-1/16"	05 = 15000		22 = A182 F22	31 = A182 321		
	08 = 8"	50 = 5000		23 = A350 LF3	32 = A182 316L		
	09 = 9"	60 = 6000		26 = A182 F91	33 = A182 304 HF		
	10 = 10"	10 = 10000		28 = A182 F9	34 = A182 304		
	11 = 11"	05 = 15000		29 = A217 C12	35 = A182 316 HF		
	12 = 12"			30 = A29 4130	36 = A182 316		
	13 = 13-5/8"			31 = A182 321	37 = A182 317 HF		
	14 = 14"			32 = A182 321L	38 = A182 317		
	16 = 16"			33 = A182 304L	39 = A29 1040		
	17 = 16-3/4"			34 = A182 304	40 = A29 4140		
	18 = 18"			35 = A182 316L	41 = A182 F6a Class 2		
	20 = 20"			36 = A182 316	44 = A182 F44 Duplex		
	22 = 22"			37 = A182 317L	47 = A182 347		
	24 = 24"			38 = A182 317	48 = A182 347 HF		
	26 = 26"			40 = A29 4140	50 = Monel		
	30 = 30"			41 = A182 F6A Class 2	51 = A182 F51 Duplex		
	32 = 32"			44 = A182 F44 Duplex	53 = A182 F53 Duplex		
	36 = 36"			47 = A182 347	55 = A182 F55 Duplex		
	40 = 40"			48 = A182 347L	57 = A537 Class 1 + ENP		
	42 = 42"			50 = Monel	60 = A105 + HF		
	48 = 48"			51 = A182 F51 Duplex	61 = A105 + Nitride + HF		
	52 = 52"			53 = A182 F53 Duplex	62 = Inconel 625		
	56 = 56"			55 = A182 F55 Duplex	63 = A352 LCC + Tungsten Carbide		
	60 = 60"			62 = Inconel 625	64 = A352 LCC + Nickel Boron		
				83 = Hastelloy B	65 = A216 WCC + Tungsten Carbide		
				84 = Hastelloy C	66 = A216 WCC + Nickel Boron		
				87 = A487 4C	67 = A105 + Tungsten Carbide		
				88 = A890-4A	68 = A105 + Nickel Boron		
				89 = A890-5A	69 = A350 LF2 + Tungsten Carbide		
				90 = Titanium	70 = A350 LF2 + Nickel Boron		
					71 = CR13 + Tungsten Carbide		
					72 = CR13 + Nickel Boron		
					73 = A182 410 +Tungsten Carbide		
					74 = A182 410 + Nickel Boron		
					78 = Inconel 718		
					81 = A350 LF2 + Nitride + HF		
					84 = A743 CA15		
					87 = A487 4C		
					88 = A890-4A		
					89 = A890-5A		
					90 = Titanium		
					92 = Inconel 925		
					99 = A105+NI+TRID-ST.6		

9	10	11	12	13	14	15
Bore Type	**Seal Material**	**Seat Material**	**Seat Insert/Overlay Material**	**Stem Material**	**Packing Material**	**Service**
F = Full Port	A = Aflas	08 = A216 WCB	B = Nickel Boron	A = A350 LF2 + ENP	B = Braided Graphoil	A = Stem Extension
R = Reduced Port	B = Buna	10 = CR13	D = Devlon	B = A105 + ENP	G = Graphite	B = By Pass
C = Conventional	E = EPDM	11 = CR13 HF	F = PTFE	C = A182 F6a Class 2	T = Teflon	C = Cryogenic
T = Regular Pattern	F = Fluorosilicone	13 = A105 + ENP	G = RTFE - Glass filled	D = 17-4 PH	V = Viton Duck	D = Double Piston Effect
U = Short Pattern	G = Graphite	14 = A105	H = Hard Face (Stellite 6)	E = 4130 + ENP		E = External Coating
V = Venturi Pattern	H = HNBR	15 = A350 LF2 + ENP	K = PCTFE	F = A182 F316		F = Dampener
	K = Kalrez	16 = A350 LF2	N = Nylon	G = A182 F51 Duplex		G = Geothermal
	L = Lip Seal	17 = 17-4 PH	P = Peek	H = A182 F56 Duplex		H = High Temperature
	N = Neoprene	20 = Alloy 20	R = RTFE - Carbon Filled	I = Inconel 625		I = Internal Coating
	P = Polyuerethane	30 = A29 4130	T = Tungsten Carbide			J = Linear Actuator (short yoke)
	R = NBR	31 = A182 321	V = Viton			L = Lock Open Device
	S = Silicone	32 = A182 316L	3 = 316			P = Pipe Pups
	T = Teflon	34 = A182 304	W = UHMWE			S = Standard Service
	U = Floursint	36 = A182 316				T = Special Thermal Relief
	V = Viton	37 = A182 317				W = Sub Sea
	3 = 304 Ring	38 = A182 317L				X = Special
	4 = 304 / Graphite	41 = A182 F6a Class 2				Y = Teflon Bolting
	5 = 316 Ring	47 = A182 347				Z = Zinc Bolting
	6 = 316 / Graphite	50 = Monel				
	7 = Soft Iron Ring	51 = F51 Duplex				
		53 = F53 Duplex				
		55 = F55 Duplex				
		62 = Inconel 625				
		78 = Inconel 718				
		84 = Hastelloy C				
		90 = Titanium				

Sample Figure Numbers & Descriptions

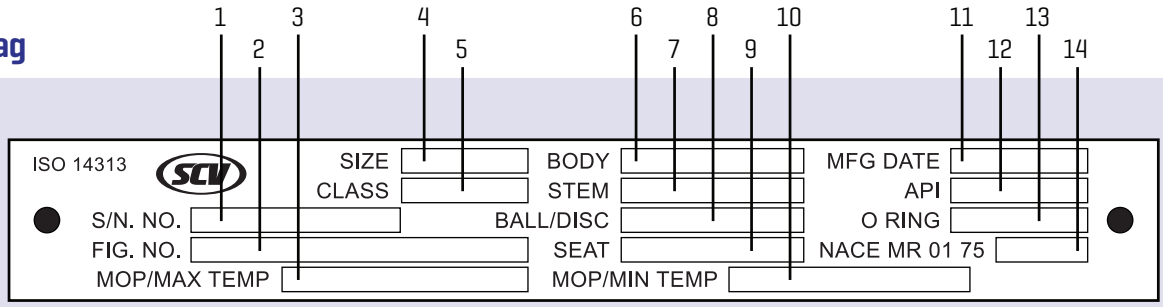
	Figure No. Chart Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Pressure Classes	**Type**	**Size**	**Class**	**Body Conf.**	**Body**	**Obturator**	**End**	**Oper**	**Bore Type**	**Seal**	**Seat.base**	**Seat/Insert**	**Stem**	**Packing**	**Service**
TRUNNION BALL	150, 300, 600	BAL	12	06	B	12	15	R	G	F	H	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															
	900, 1500, 2500	BAL	12	15	B	12	41	J	G	F	H	41	D	C	/	S
	12" 1500 Trunnion 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															
FLOATING BALL	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															
DUAL PLATE WAFER CHECK	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															
SLAB 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															
EXPANDING GATE	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															
FULL PORT SWING CHECK	ALL	FCK	12	06	B	08	16	R	/	F	V	11	V	/	/	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															
PISTON CHECK	150, 300, 600, 900	PCK	12	06	B	08	61	R	/	C	V	14	H	/	/	S
	12" 600 Piston Check Valve, Bolted A216 WCC Body, A105 + Nitride + HF Obturator, RF Ends, Coventional Bore, Viton AED Seals, A105 Seat Base Material, Hardface Seat Overlay, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
	1500, 2500	PCK	12	15	B	08	61	R	/	C	V	41	H	/	/	S
	12" 1500 Piston Check Valve, Bolted A216 WCC Body, A105 + Nitride + HF Obturator, RF Ends, Coventional Bore, Viton AED Seals, A182 F6a Class 2 Seat Base Material, Hardface Seat Overlay, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
LUBRICATED PLUG	ALL	PLG	12	06	B	10	84	R	L	C	V	/	/	/	G	S
	12" 600 Lubricated Plug Valve, Bolted A216 WCB Body, A743 CA15 Obturator, RF Ends, Lever Operated, Coventional Bore, Viton AED Seals, Standard Service, API 6D Design and Test, NACE MR-01-75 Compliant															
WEDGE GATE	ALL	GAT	12	06	B	10	7	R	H	C	4	14	H	C	G	S
	12" 600 Wedge Gate Valve, Bolted A216 WCB Body, A216 WCB + 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 GlobeValve, Bolted A216 WCB 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 12

Valve ID Tag & Valve Markings Identification

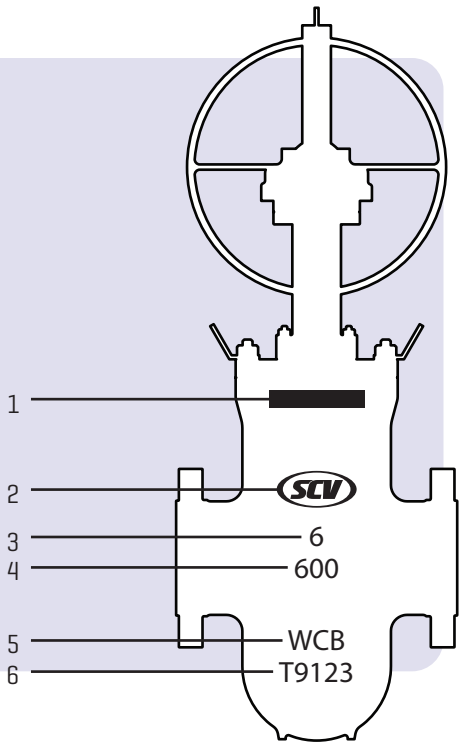
Valve ID Tag



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

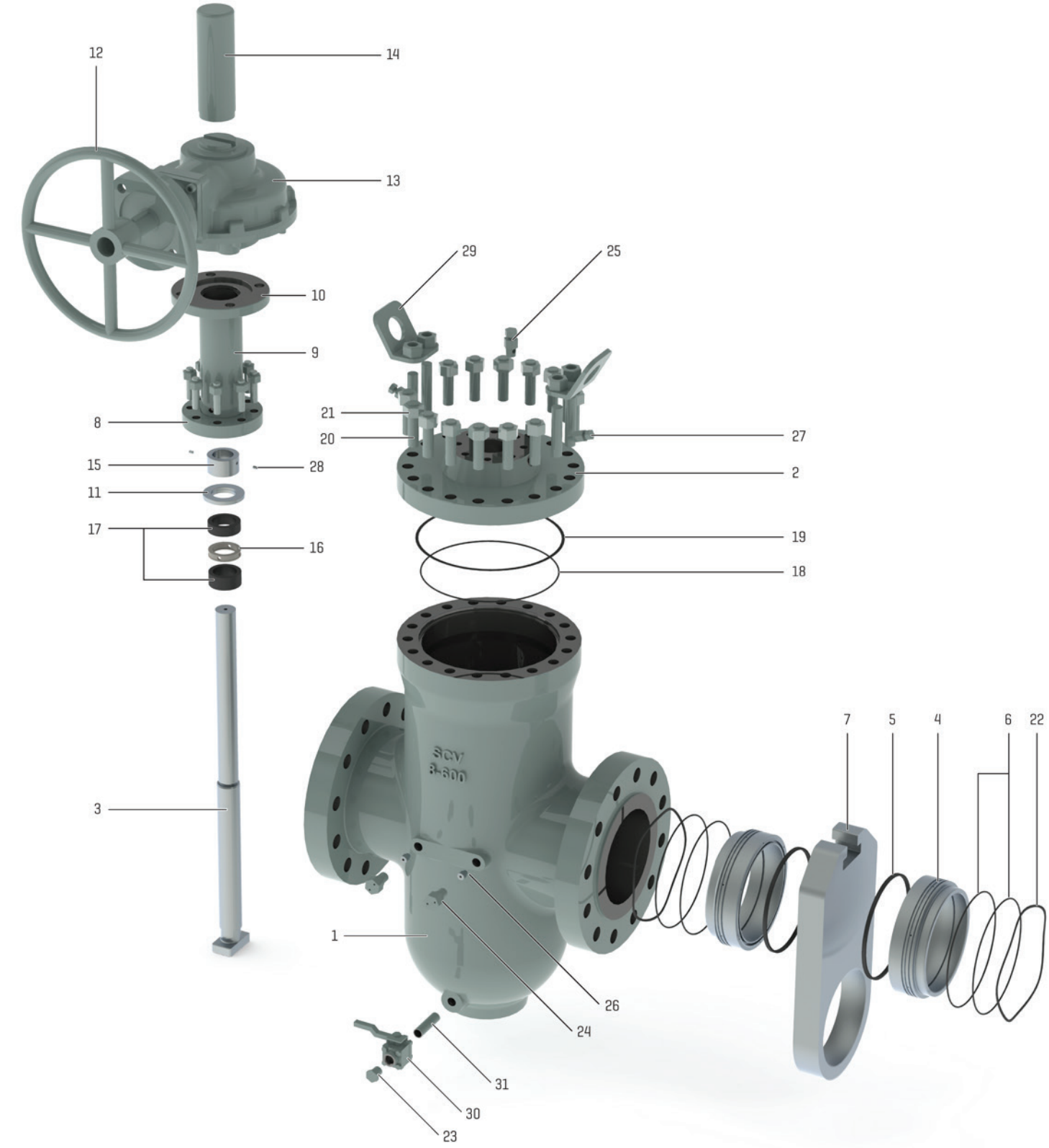
Thru Conduit Slab & Expanding Gate Valves

Class: 150 - 1500/Sizes: 2" - 36"

Design and Manufacturing Standards	
Basic Design	API 6D
Face-to-Face Dimension	ANSI B16.10
Flange End Dimension	ANSI/ASME B16.5 (2" to 24") ANSI/ASME B16.47 & MSS SP-44 (26" & up)
Butt-Weld End Dimension	ANSI/ASME B16.25
Inspection & Testing	API 6D
Fire Safe Design	API 6FA

Thru Conduit Slab Gate Valve (Bi-Directional)

[Expanded View]



Thru Conduit Slab Gate Valve (Bi-Directional)

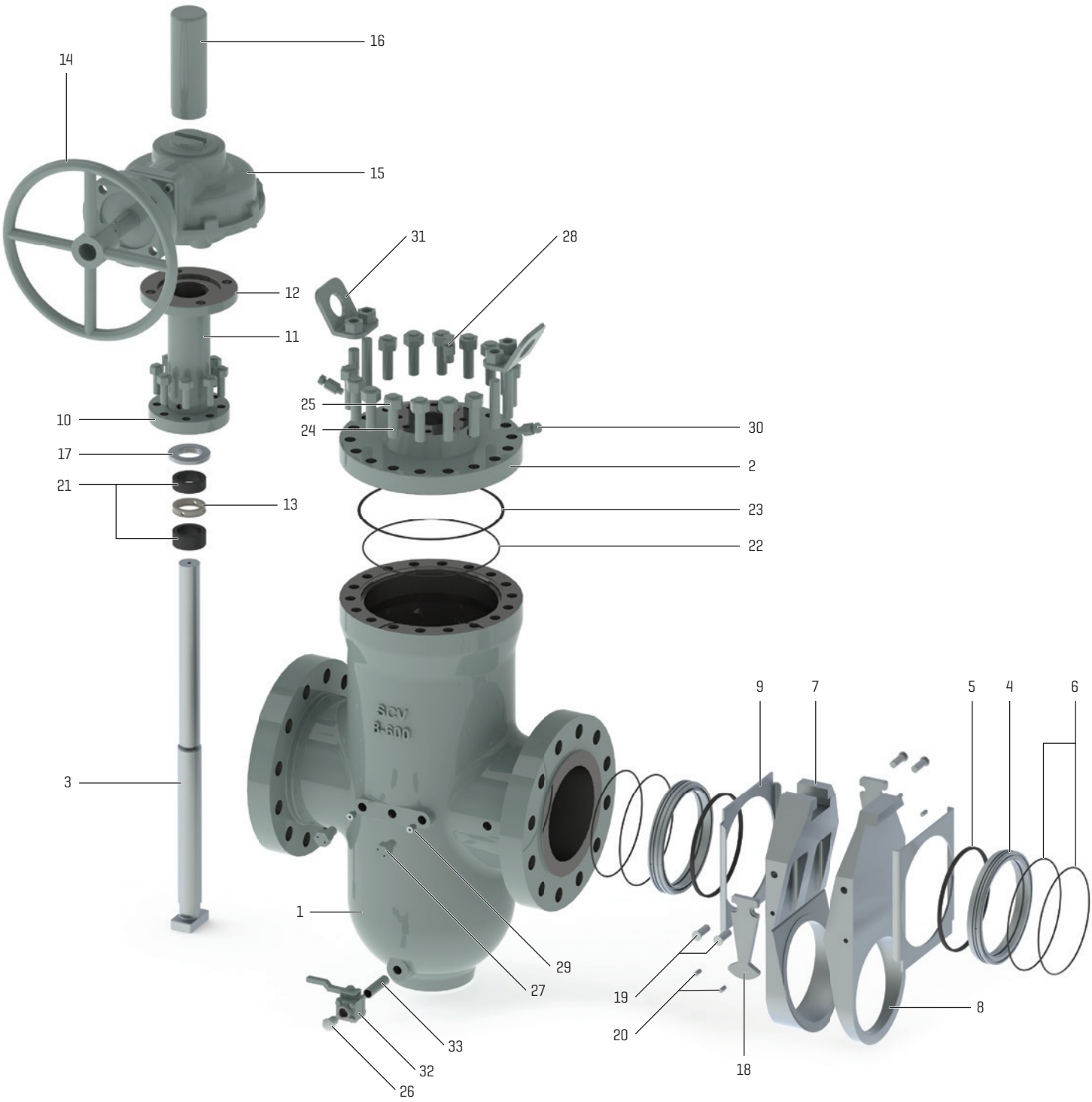
[Bill of Materials]

No.	Part	Material		
		Figure Number: 0813-VN	Figure Number: 0813-VR	Figure Number: 0215-HD
1	Body	ASTM A216 WCC		ASTM A352 LCC
2	Bonnet	ASTM A105		ASTM A350 LF2
3	Stem	ASTM A564 T Type 630, 17-4		
4	Seat	ASTM A105 + ENP		ASTM A350 LF2 + ENP
5	Seat Insert	Nylon	RTFE	Devlon
6	Seat O-Rings	Viton AED		HNBR
7	Gate	ASTM A105 + ENP		ASTM A350 LF2 + ENP
8	Yoke Base	ASTM A105		
9	Yoke Tube	ASTM A106 Gr. B Pipe		
10	Yoke Top	ASTM A105		
11	Lantern Ring	PEEK		
12	Handwheel	Carbon Steel		
13	Gear	Carbon Steel		
14	Stem Protector	Clear Plastic		
15	Internal Stop Nut	ASTM A105		
16	Gland	ASTM A105		
17	Packing	Viton/Duck		
18	Bonnet O-Ring	Viton AED		HNBR
19	Gasket	Stainless Steel/Graphite - GHE		
20	Stud	ASTM A193 B7M		ASTM A320 L7M
21	Heavy Hex Nut	ASTM A194 2HM		ASTM A320 L7M
22	Wavespring	17-7 Stainless Steel		
23	NPT Plug	316 Stainless Steel		
24	Grease Fitting, GBH	316 Stainless Steel		
25	Vent Fitting	316 Stainless Steel		
26	Ball Check	316 Stainless Steel		
27	Packing Injection Fitting	316 Stainless Steel		
28	Set Screw	B7M		
29	Lift Plate	A36		
30	Ball Valve	Carbon Steel		
31	Pipe Nipple	ASTM A106		

Note: Backup Rings (PEEK) are utilized on Class 1500 and 2500

Thru Conduit Expanding Gate Valve (Bi-Directional) with Preferred Pressure Side

[Expanded View]



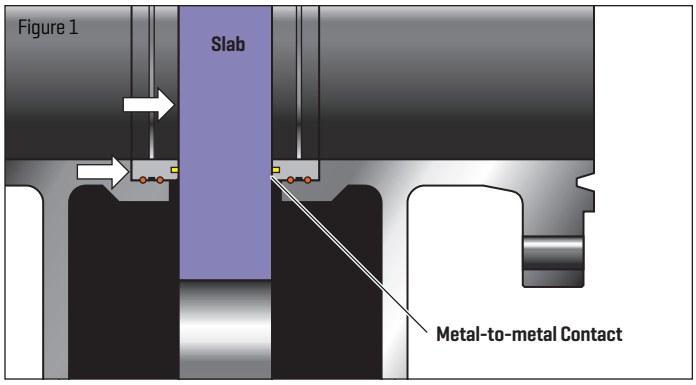
Thru Conduit Expanding Gate Valve (Bi-Directional) with Preferred Pressure Side

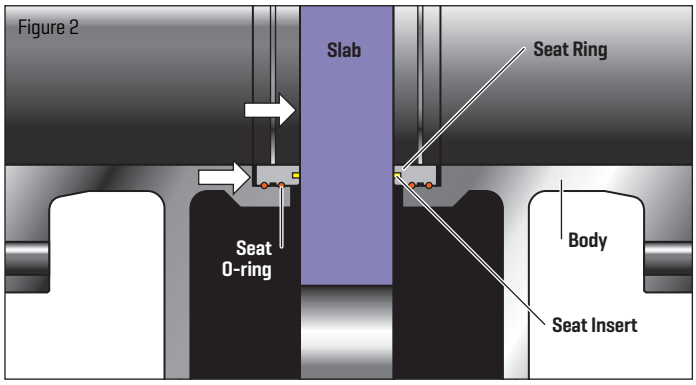
[Bill of Materials]

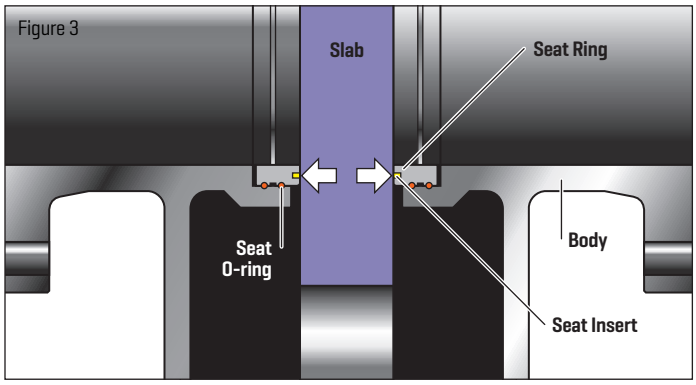
No.	Part	Material		
		Figure Number: 0813-VN	Figure Number: 0813-VR	Figure Number: 0215-HD
1	Body	ASTM A216 WCC		ASTM A352 LCC
2	Bonnet	ASTM A105		ASTM A350 LF2
3	Stem	ASTM A564 TType 630, 17-4		
4	Seat	ASTM A105 + ENP		ASTM A350 LF2 + ENP
5	Seat Insert	Nylon	RTFE	Devlon
6	Seat O-Rings	Viton AED		HNBR
7	Gate	ASTM A216 WCC + ENP		ASTM A352 LCC + ENP
8	Segment	ASTM A216 WCC + ENP		ASTM A352 LCC + ENP
9	Skirt	ASTM A573 Gr. 50		
10	Yoke Base	ASTM A105		
11	Yoke Tube	ASTM A106 Gr. B Pipe		
12	Yoke Top	ASTM A105		
13	Lantern Ring	PEEK		
14	Handwheel	Carbon Steel		
15	Gear	Carbon Steel		
16	Stem Protector	Clear Plastic		
17	Gland	ASTM A105		
18	Lever Lock Arm	ASTM A514 Gr. B		
19	Lever Arm Pins	4130 Alloy Steel		
20	Gate Pins	ASTM A105		
21	Packing	Viton/Duck		
22	Bonnet O-Ring	Viton AED		HNBR
23	Gasket	Stainless Steel/Graphite - GHE		
24	Stud	ASTM A193 B7M		ASTM A320 L7M
25	Heavy Hex Nut	ASTM A194 2HM		ASTM A320 L7M
26	NPT Plug	316 Stainless Steel		
27	Grease Fitting, GBH	316 Stainless Steel		
28	Vent Fitting	316 Stainless Steel		
29	Ball Check	316 Stainless Steel		
30	Packing Injection Fitting	316 Stainless Steel		
31	Lift Plate	A36		
32	Ball Valve	Carbon Steel		
33	Pipe Nipple	ASTM A106		

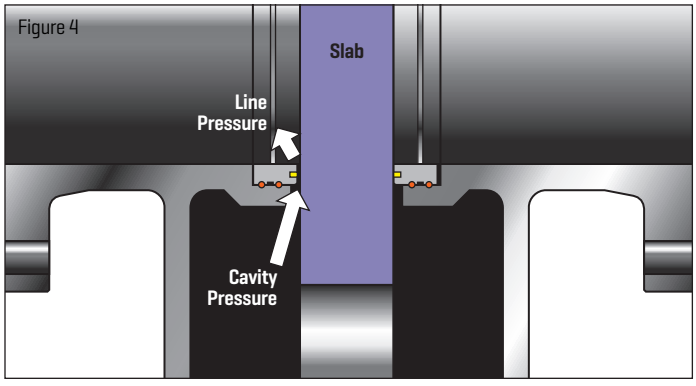
Slab Gate Advanced Mechanical Details

Through its simple design and efficient performance, the slab gate's two spring loaded floating seats are pressure energized. This allows for complete sealing, both upstream and downstream.









Seats – Soft & Metal

The spring loaded double O-ring design seats maintain a perfect seal with the gate in both low and high pressure applications. The soft seat inserts help to ensure that the primary sealing occurs at the gate. In the event of soft seat damage, the seating of metal to metal will function as a secondary seal. **(Figure 1)**

Double Block

When the valve is in the closed position and also has equal or no pressure, both spring loaded seats can shut off line pressure independently of upstream and downstream pressure. This creates a double block scenario. **(Figure 2)**

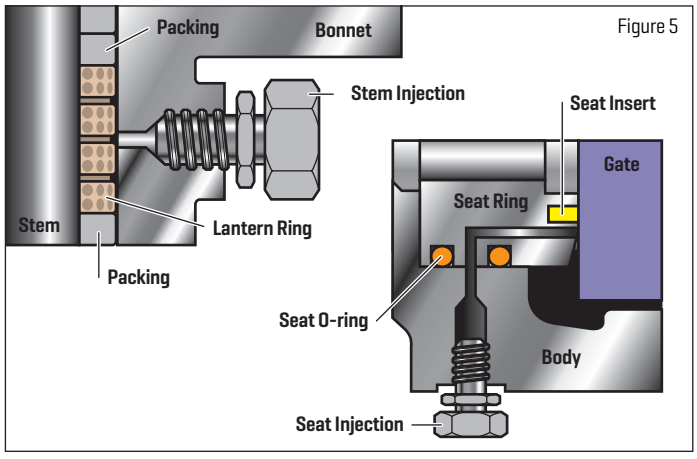
When line pressure is applied, the pressure forces the slab gate to float against the downstream seat and form a tight seal. At the same time, the upstream line pressure forces the upstream seat on the slab gate to form an upstream seal. **(Figure 3)**

Self Relieving Cavity

The double block and bleed slab gate design, in the closed position, may experience an increase in cavity pressure due to thermal expansion. When the cavity pressure exceeds the line pressure, the seat is forced away from the gate surface allowing the excess cavity pressure to be vented into the line. This allows for a pressure balance between the body cavity and the line. The valve body presure will relieve to the lower differential side. **(Figure 4)**

Secondary Sealant and Packing Injection System

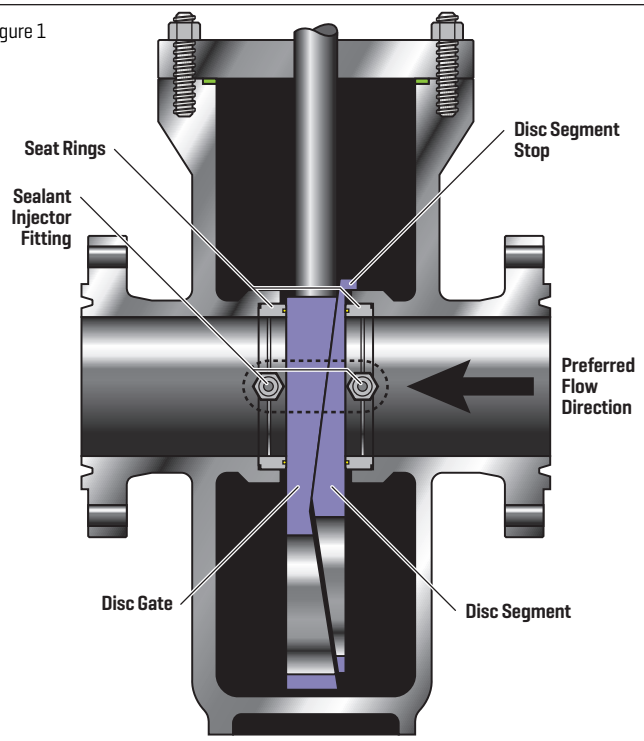
All valves will have secondary sealant injection fittings for the stem and seats. If the seat inserts or O-rings become damaged, leakage from the seat can be prevented by injecting sealant into the fittings. **(Figure 5)**



Expanding Gate Advanced Mechanical Details

The SCV Expanding Gate valve design provides a mechanical seal between the seats and the gate in both high and low pressure applications. The expanding gate valve does not require line pressure to seal and is recommended when a tight mechanical seal is required.

Figure 1



Full Expanded Closed

In the full expanded closed position, the segment stop has engaged with the lower body stop and the gate is wedged downward, expanding the gate and segment to form a tight seal against the upstream and downstream seats. Body cavity venting will assist to provide tight shut off. **(Figure 1)**

Mid Position

When operating towards the open position, the gate travels across the wedge angle of the segment. This retracts the assembly so that is will slide freely between the seat faces. **(Figure 2)**

Full Expanded Open

In the full expanded open position, the segment stop has engaged the upper body stop and the gate is wedged upward. This expands the segment and the gate into the seats, isolating the flow from the cavity. **(Figure 3)**

Figure 2

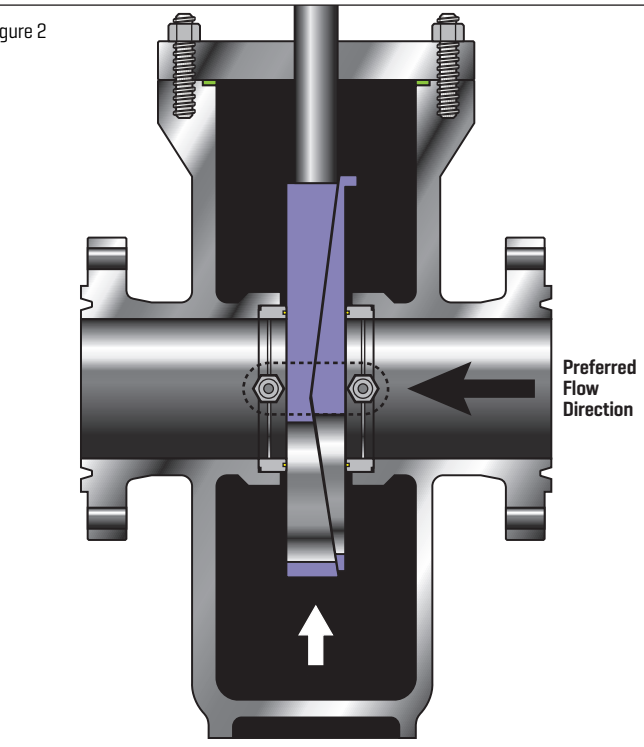
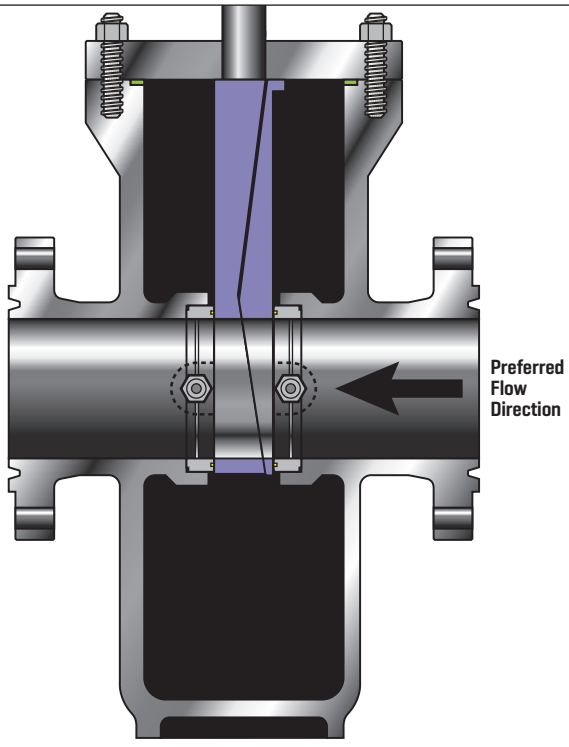
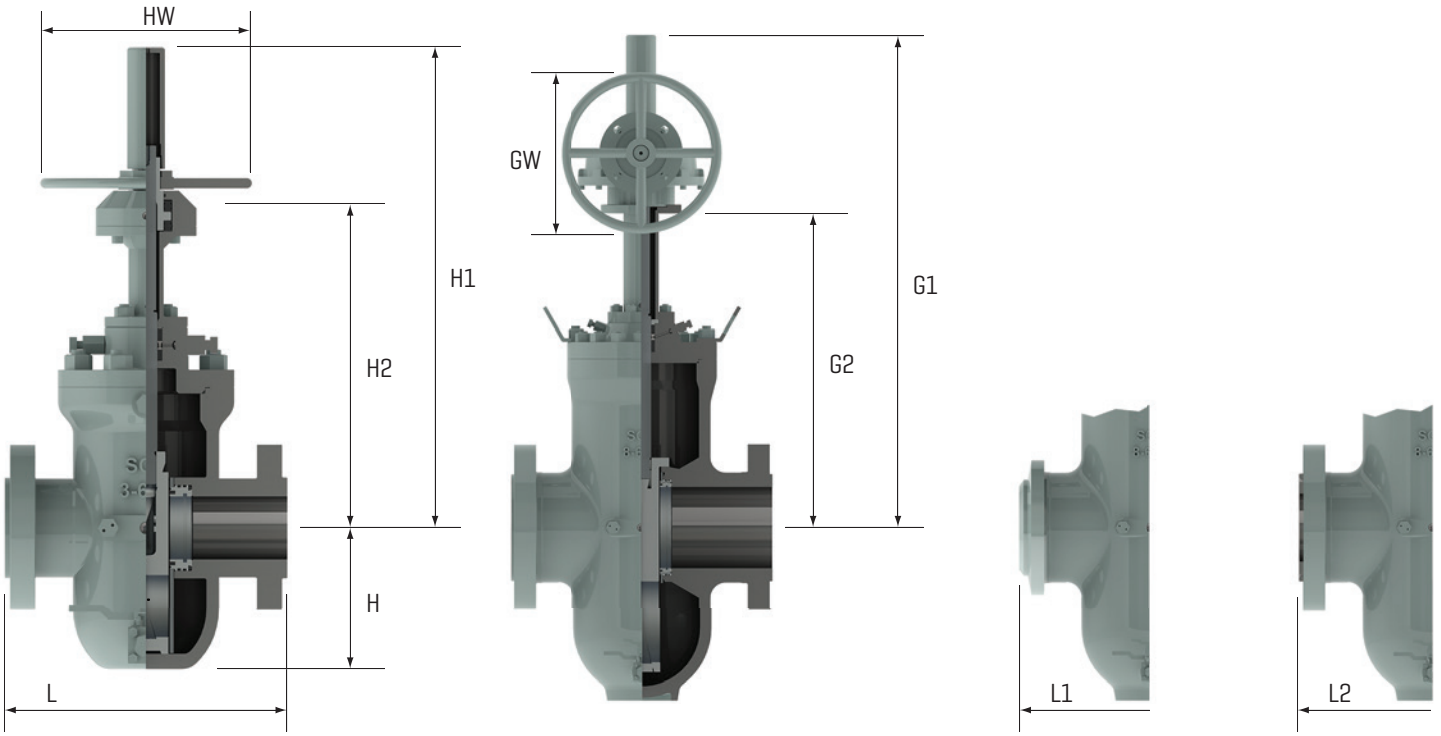


Figure 3



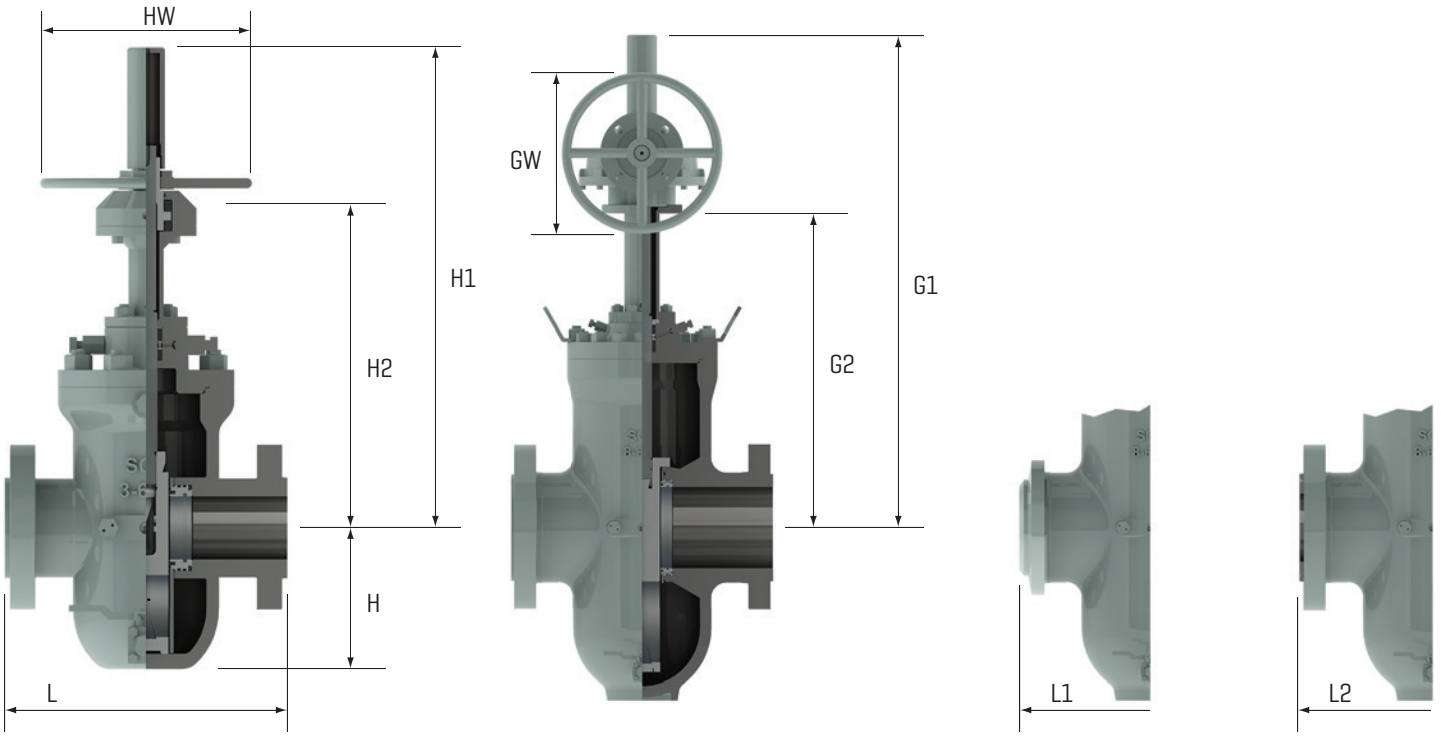
Slab & Expanding Gate Valve Dimensions
Size: 2” - 36”
Class: 150



CLASS 150	SIZE		END-TO-END		CENTER-TO-BOTTOM	HANDWHEEL OPERATED			GEAR OPERATED			ADAPTER	WEIGHTS LBS/KG
			RF - L	BW - L1	H	H1	H2	HW	G1	G2	GW		
	IN	2	7	/	5.50	19.04	11.72	10	/	/	/	/	84
	MM	50	178	/	140	484	298	254	/	/	/		38
	IN	3	8	/	7.25	23.28	14.45	10.00	/	/	/	/	113
	MM	80	203	/	184	591	367	254	/	/	/		51
	IN	4	9	/	8.50	25.4	16.90	10.00	25.4	16.90	10.00	FA10 MTG	125
	MM	100	229	/	216	645	429	254	645	429	254		57
	IN	6	10.5	/	11.50	32.3	21.70	18.00	32.3	21.70	12.00	FA10 MTG	226
	MM	150	267	/	292	820	551	457	820	551	305		102
	IN	8	11.5	/	15.25	41.48	27.88	18.00	41.48	27.88	12.00	FA14 MTG	426
	MM	200	292	/	387	1054	708	457	1054	708	305		193
	IN	10	13	/	18.13	49.84	33.54	24.00	49.84	33.54	12.00	FA14 MTG	707
	MM	250	330	/	461	1266	852	610	1266	852	305		321
	IN	12	14	/	22.00	57.6	39.11	24.00	57.6	39.11	18.00	FA14 MTG	850
	MM	300	356	/	559	1463	993	610	1463	993	457		386
	IN	14	15	/	25.25	/	/	/	60.81	41.42	18.00	FA14 MTG	1115
	MM	350	381	/	641	/	/	/	1545	1052	457		506
	IN	16	16	/	26.70	/	/	/	70.39	47.89	18.00	FA14 MTG	1816
	MM	400	406	/	678	/	/	/	1788	1216	457		869
	IN	18	17	/	31.375	/	/	/	76.21	51.31	18.00	FA16 MTG	1910
	MM	450	432	/	797	/	/	/	1936	1303	457		866
	IN	20	18	/	33.68	/	/	/	84.49	57.99	18.00	FA16 MTG	3244
	MM	500	457	/	855	/	/	/	2146	1473	457		1471
	IN	24	20	/	40.00	/	/	/	100.3	69.30	24.00	FA16 MTG	4867
	MM	600	508	/	1016	/	/	/	2548	1760	610		1935
	IN	30	26	/	50.38	/	/	/	121.13	83.93	24.00	FA16 MTG	9175
	MM	750	660	/	1280	/	/	/	3077	2132	610		4162
	IN	36	32	/	58.18	/	/	/	140.99	97.23	24.00	FA19 MTG	11727
	MM	900	813	/	1478	/	/	/	3581	2470	610		5319

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.

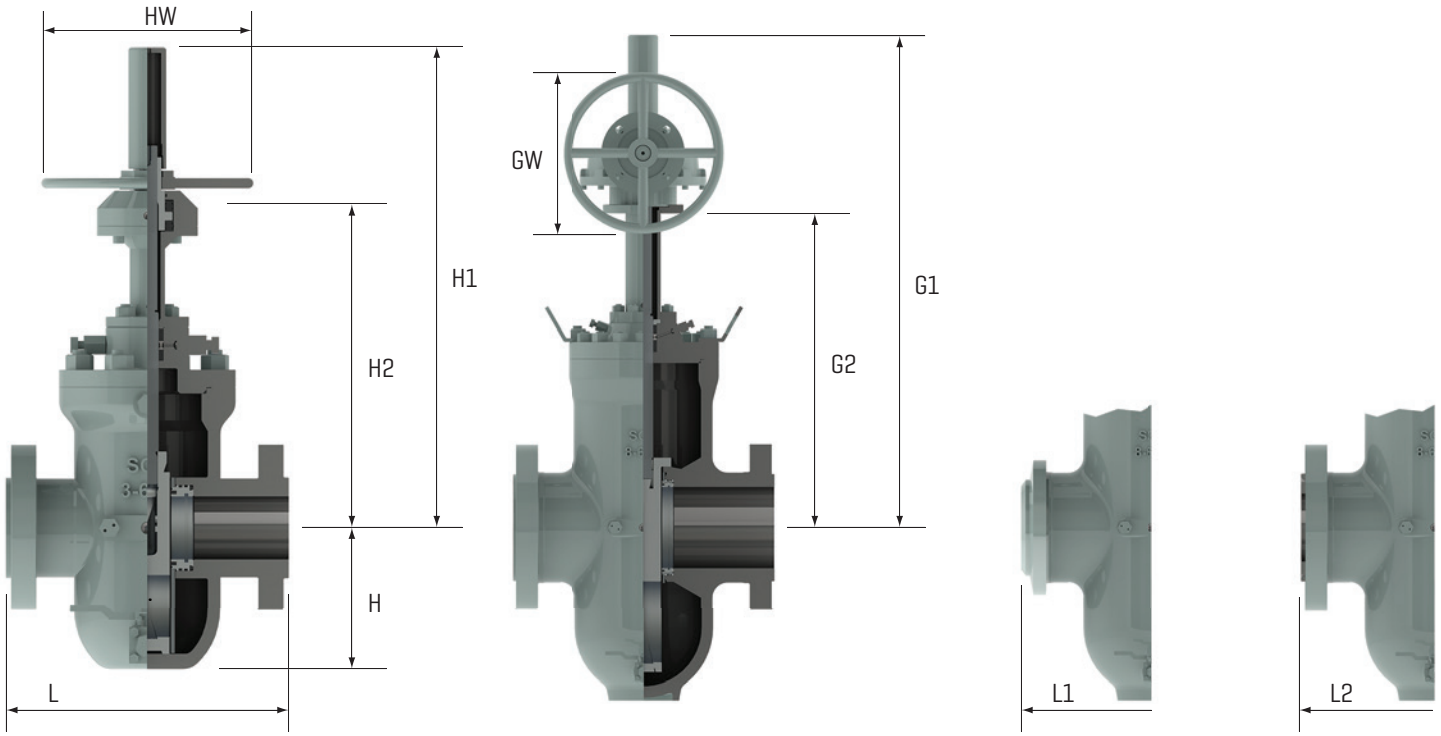
Slab & Expanding Gate Valve Dimensions
Size: 2”- 30”
Class: 300



CLASS 300	SIZE		END-TO-END		CENTER-TO-BOTTOM	HANDWHEEL OPERATED			GEAR OPERATED			ADAPTER	WEIGHTS LBS/KG
			RF - L	BW - L1	H	H1	H2	HW	G1	G2	GW		
	IN	2	8.50	/	5.70	19.04	11.72	10.00	/	/	/	/	90
	MM	50	216	/	145	484	298	254	/	/	/		41
	IN	3	11.12	/	7.04	23.71	14.94	10.00	/	/	/	/	160
	MM	80	282	/	179	602	379	254	/	/	/		73
	IN	4	12.00	/	8.63	26.21	16.63	10.00	/	/	/	/	180
	MM	100	304.8	/	219	666	422	254	/	/	/		82
	IN	6	15.88	/	11.73	32.13	21.63	18.00	32.13	21.63	12.00	FA10 MTG	297
	MM	150	403	/	298	816	549	457	816	549	305		135
	IN	8	16.50	/	15.13	40.52	27.69	18.00	40.52	27.69	18.00	FA14 MTG	532
	MM	200	419	/	384	1029	703	457	1029	703	457		241
	IN	10	18.00	/	18.25	49.04	33.14	24.00	33.14	49.04	18.00	FA14 MTG	725
	MM	250	457	/	464	1246	842	610	1246	842	457		329
	IN	12	19.75	/	21.88	56.73	38.63	24.00	56.73	38.63	18.00	FA14 MTG	1280
	MM	300	502	/	556	1441	981	610	1441	981	457		581
	IN	14	30.00	/	23.79	/	/	/	60.82	41.42	18.00	FA14 MTG	1731
	MM	350	762	/	604	/	/	/	1545	1052	457		785
	IN	16	33.00	/	27.50	/	/	/	67.92	46.72	24.00	FA14 MTG	2262
	MM	400	838	/	699	/	/	/	1725	1187	610		1026
	IN	18	36.00	/	30.50	/	/	/	76.49	51.79	24.00	FA16 MTG	3184
	MM	450	914	/	775	/	/	/	1943	1315	610		1444
	IN	20	39.00	/	34.40	/	/	/	83.26	57.21	24.00	FA16 MTG	3825
	MM	500	991	/	874	/	/	/	2114	1453	610		1735
	IN	24	45.00	/	40.75	/	/	/	99.58	69.24	24.00	FA16 MTG	6090
	MM	600	1143	/	1035	/	/	/	2529	1759	610		2762
	IN	30	55.00	/	50.00	/	/	/	122.44	85.44	24.00	FA19 MTG	10180
	MM	750	1397	/	1270	/	/	/	3110	2170	610		4618

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.

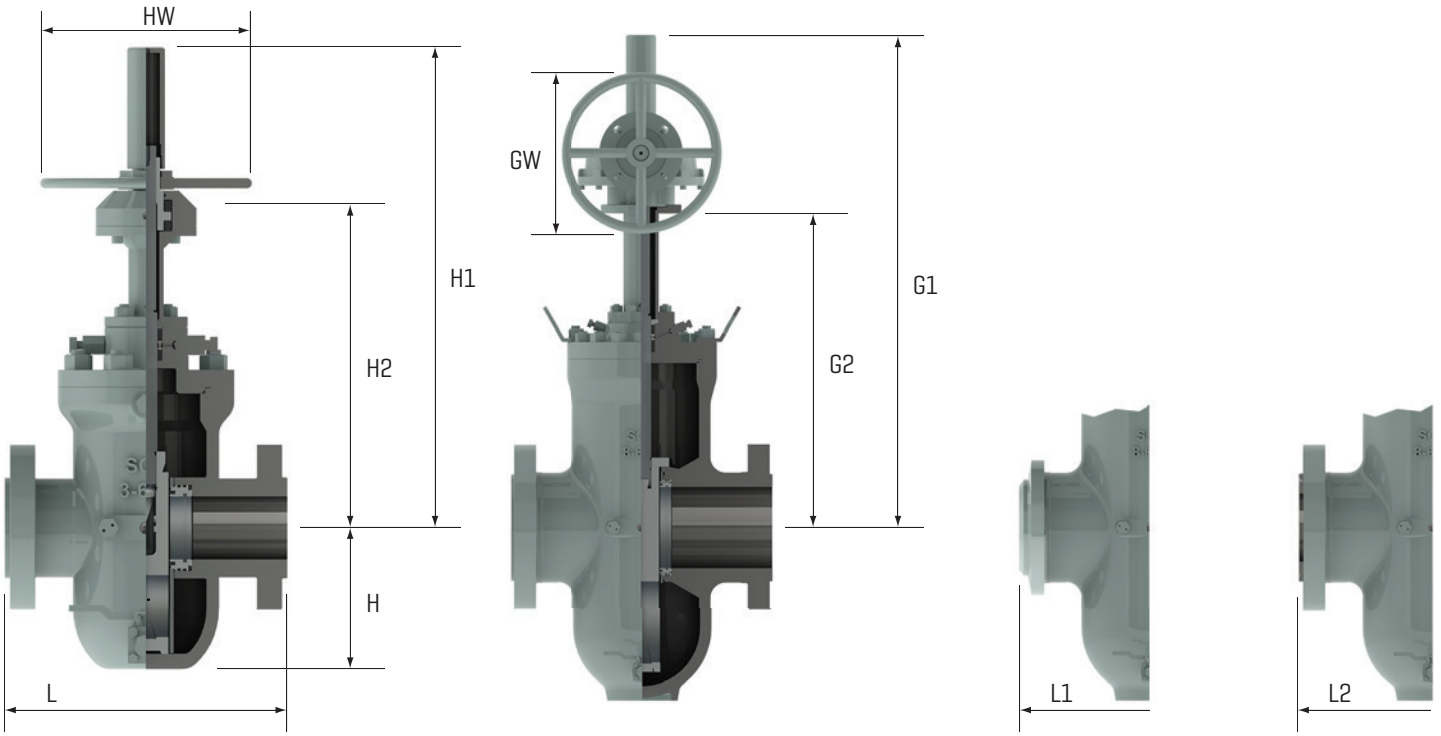
Slab & Expanding Gate Valve Dimensions
Size: 2” - 36”
Class: 600



CLASS 600	SIZE		END-TO-END			CNTR-TO-BTM	HANDWHEEL OPERATED			GEAR OPERATED				WEIGHTS LBS/KG
			RF - L	BW - L1	RTJ - L2	H	H1	H2	HW	G1	G2	GW	ADAPTER	
	IN	2	11.50	11.50	11.875	5.41	19.39	12.07	12.00	/	/	/	/	124
	MM	50	292	292	302	137	493	307	305	/	/	/		56
	IN	3	14.00	14.00	14.12	7.03	23.76	14.94	12.00	/	/	/	/	190
	MM	80	356	356	359	178	604	379	305	/	/	/		86
	IN	4	17.00	17.00	17.12	10.13	28.33	20.03	12.00	/	/	/	/	335
	MM	100	432	432	435	257	720	509	305	/	/	/		152
	IN	6	22.00	22.00	22.12	12.75	36.52	25.16	18.00	/	/	18.00	FA14 MTG	600
	MM	150	559	559	562	323	928	639	457	/	/	457		272
	IN	8	26.00	26.00	26.12	17.13	46.44	31.94	24.00	/	/	24.00	FA16 MTG	1050
	MM	200	660	660	664	435	1180	811	610	/	/	610		476
	IN	10	31.00	31.00	31.12	21.25	75.14	37.74	24.00	/	/	24.00	FA16 MTG	1920
	MM	250	787	787	791	540	1909	959	610	/	/	610		871
	IN	12	33.00	33.00	33.12	23.50	/	/	/	62.82	43.12	24.00	FA25 MTG	2410
	MM	300	838	838	841	597	/	/	/	1596	1095	610		1093
	IN	14	35.00	35.00	35.12	26.75	/	/	/	68.02	46.02	30.00	FA25 MTG	3408
	MM	350	889	889	892	679	/	/	/	1728	1169	762		1546
	IN	16	39.00	39.00	39.12	29.50	/	/	/	74.95	51.75	30.00	FA25 MTG	4350
	MM	400	991	991	994	749	/	/	/	1904	1314	762		1973
	IN	18	43.00	43.00	43.12	33.12	/	/	/	80.13	56.93	30.00	FA25 MTG	5988
	MM	450	1092	1092	1095	841	/	/	/	2035	1446	762		2716
	IN	20	47.00	47.00	47.25	36.76	/	/	/	94.20	63.70	36.00	FA30 MTG	8458
	MM	500	1194	1194	1200	934	/	/	/	2393	1618	914		3836
	IN	22	51.00	51.00	51.38	40.75	/	/	/	103.83	70.53	36.00	FA35 MTG	10810
	MM	550	1295	1295	1305	1035	/	/	/	2637	1791	914		4903
	IN	24	55.00	55.00	55.38	44.50	/	/	/	111.20	76.30	36.00	FA35 MTG	13250
	MM	600	1397	1397	1407	1130	/	/	/	2824	1938	914		6010
	IN	26	57.00	57.00	57.5	48.63	/	/	/	117.94	81.34	36	FA35 MTG	16194
	MM	650	1448	1448	1461	1235	/	/	/	2996	2066	914		7345
	IN	30	65.00	65.00	65.5	54.00	/	/	/	131.66	91.66	36.00	FA35 MTG	21475
	MM	750	1651	1651	1664	1372	/	/	/	3344	2328	914		9741
	IN	36	82.00	82.00	85.62	63.50	/	/	/	180.76	105.88	36.00	FA35 MTG	34350
	MM	900	2083	2083	2175	1613	/	/	/	4591	2689	914		15581

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.

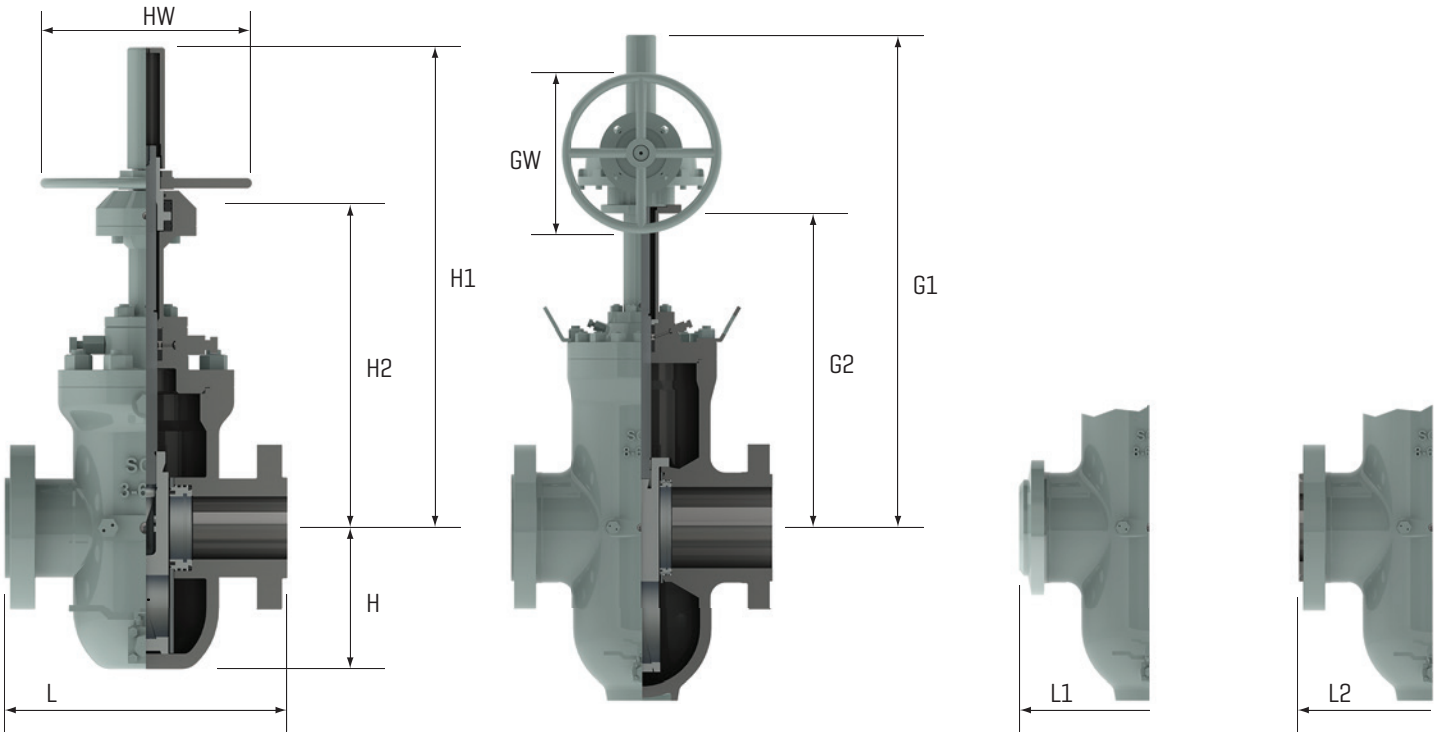
Slab & Expanding Gate Valve Dimensions
Size: 2” - 24”
Class: 900



CLASS 900	SIZE		END-TO-END			CNTR-TO-BTM	HANDWHEEL OPERATED			GEAR OPERATED				WEIGHTS LBS/KG
			RF - L	BW - L1	RTJ - L2	H	H1	H2	HW	G1	G2	GW	ADAPTER	
	IN	2	14.5	14.5	14.875	5.063	17.75	18.44	12.00	/	/	/	/	185
	MM	50	368	368	378	129	451	468	305	/	/	/		84
	IN	3	15	15	15.12	7.04	23.76	14.94	18.00	/	/	/	/	220
	MM	80	381	381	384	179	604	379	457	/	/	/		100
	IN	4	18	18	18.12	10.02	29.42	20.03	18.00	/	/	/	FA14 MTG	400
	MM	100	457	457	460	255	747	509	457	/	/	/		181
	IN	6	24	24	24.12	13.13	36.56	25.16	18.00	/	/	/	FA14 MTG	790
	MM	150	610	610	613	334	929	639	457	/	/	/		358
	IN	8	29	29	29.12	17.50	46.29	31.94	24.00	/	/	/	FA16 MTG	1350
	MM	200	737	737	740	445	1176	811	610	/	/	/		612
	IN	10	33	33	33.12	21.75	/	/	/	55.14	37.74	24.00	FA16 MTG	2375
	MM	250	838	838	841	552	/	/	/	1401	959	610		1077
	IN	12	38	38	38.12	24.38	/	/	/	62.83	43.13	24.00	FA25 MTG	3394
	MM	300	965	965	968	619	/	/	/	1596	1096	610		1539
	IN	14	40.5	40.5	40.88	27.88	/	/	/	67.44	45.94	30.00	FA25 MTG	4170
	MM	350	1029	1029	1038	708	/	/	/	1713	1167	762		1891
	IN	16	44.5	44.5	44.88	30.00	/	/	/	74.95	51.75	30.00	FA25 MTG	5530
	MM	400	1130	1130	1140	762	/	/	/	1904	1314	762		2508
	IN	18	48	48	48.5	33.62	/	/	/	84.73	56.93	30.00	FA25 MTG	7294
	MM	450	1219	1219	1232	854	/	/	/	2152	1446	762		3309
	IN	20	52	52	52.5	37.90	/	/	/	97.11	70.56	36.00	FA30 MTG	11518
	MM	500	1321	1321	1334	963	/	/	/	2467	1792	914		5224
	IN	24	61	61	61.75	45.50	/	/	/	111.70	76.80	36.00	FA35 MTG	17673
	MM	600	1549	1549	1568	1156	/	/	/	2837	1951	914		8016

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.

Slab & Expanding Gate Valve Dimensions
Size: 2” - 12”
Class: 1500

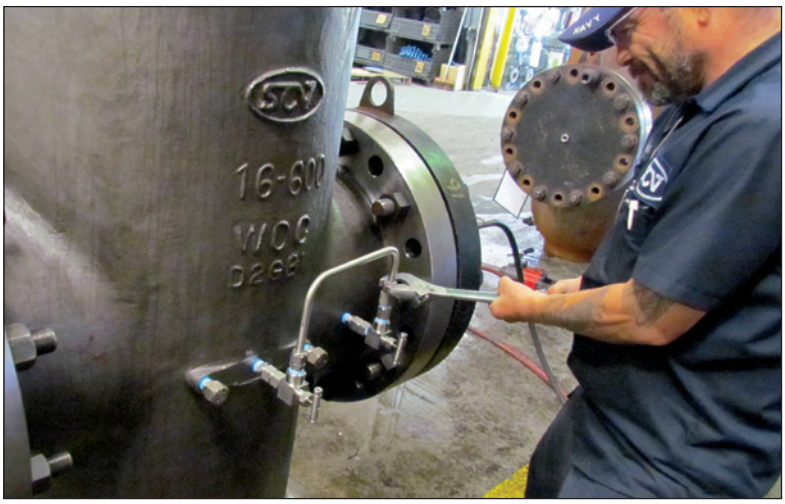


CLASS 1500	SIZE		END-TO-END			CNTR-TO-BTM	HANDWHEEL OPERATED			GEAR OPERATED				WEIGHTS LBS/KG
			RF - L	BW - L1	RTJ - L2	H	H1	H2	HW	G1	G2	GW	ADAPTER	
	IN	2	14.5	14.5	14.875	5.062	17.75	18.44	12.00	/	/	/	/	108
	MM	50	368	368	378	129	451	468	305	/	/	/		49
	IN	3	18.5	18.5	18.875	7.313	23.875	19.56	12.00	/	/	/	/	248
	MM	80	356	356	479	186	606	470	305	/	/	/		112
	IN	4	21.5	21.5	21.875	9.062	28.50	24.75	18.00	/	/	/	/	332
	MM	100	546	546	556	230	724	629	457	/	/	/		151
	IN	6	27.75	27.75	28	12.88	/	/	/	31.50	29.13	24.00	/	998
	MM	150	705	705	711	327	/	/	/	800	740	610		453
	IN	8	32.75	32.75	33.125	18.25	/	/	/	44.38	41.06	24.00	/	2435
	MM	200	832	832	842	464	/	/	/	1127	1043	610		1104
	IN	10	39.00	39.00	39.625	21.75	/	/	/	53.22	46.16	24.00	/	4002
	MM	250	991	991	1000	552	/	/	/	1352	1172	610		1815
	IN	12	44.50	44.50	45.00	24.56	/	/	/	57.72	53.41	30.00	/	5875
	MM	300	1130	1130	1146	624	/	/	/	1466	1357	762		2667

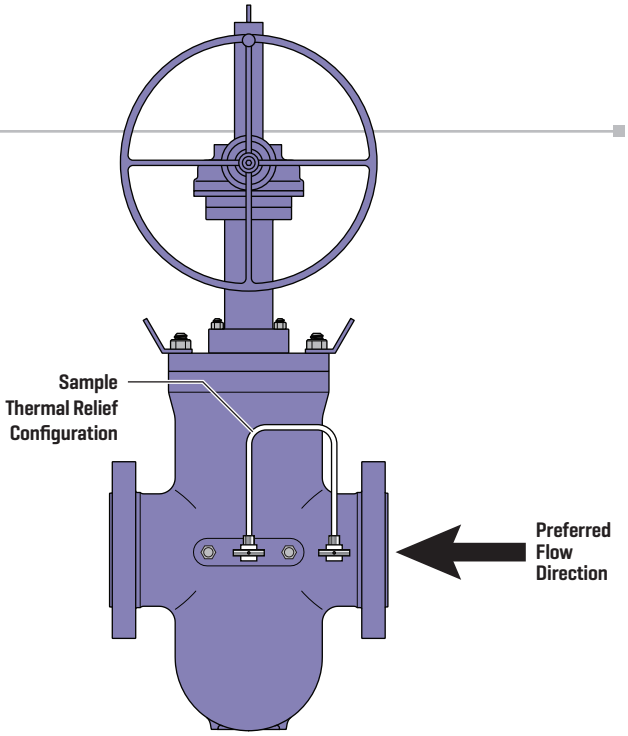
Note: SCV reserves the right to change any technical design and dimensional data without prior notice. Please contact SCV to confirm all Dimensions and Data offered in this catalog. Adapter information available upon request.

Expanding Gate Thermal Relief System

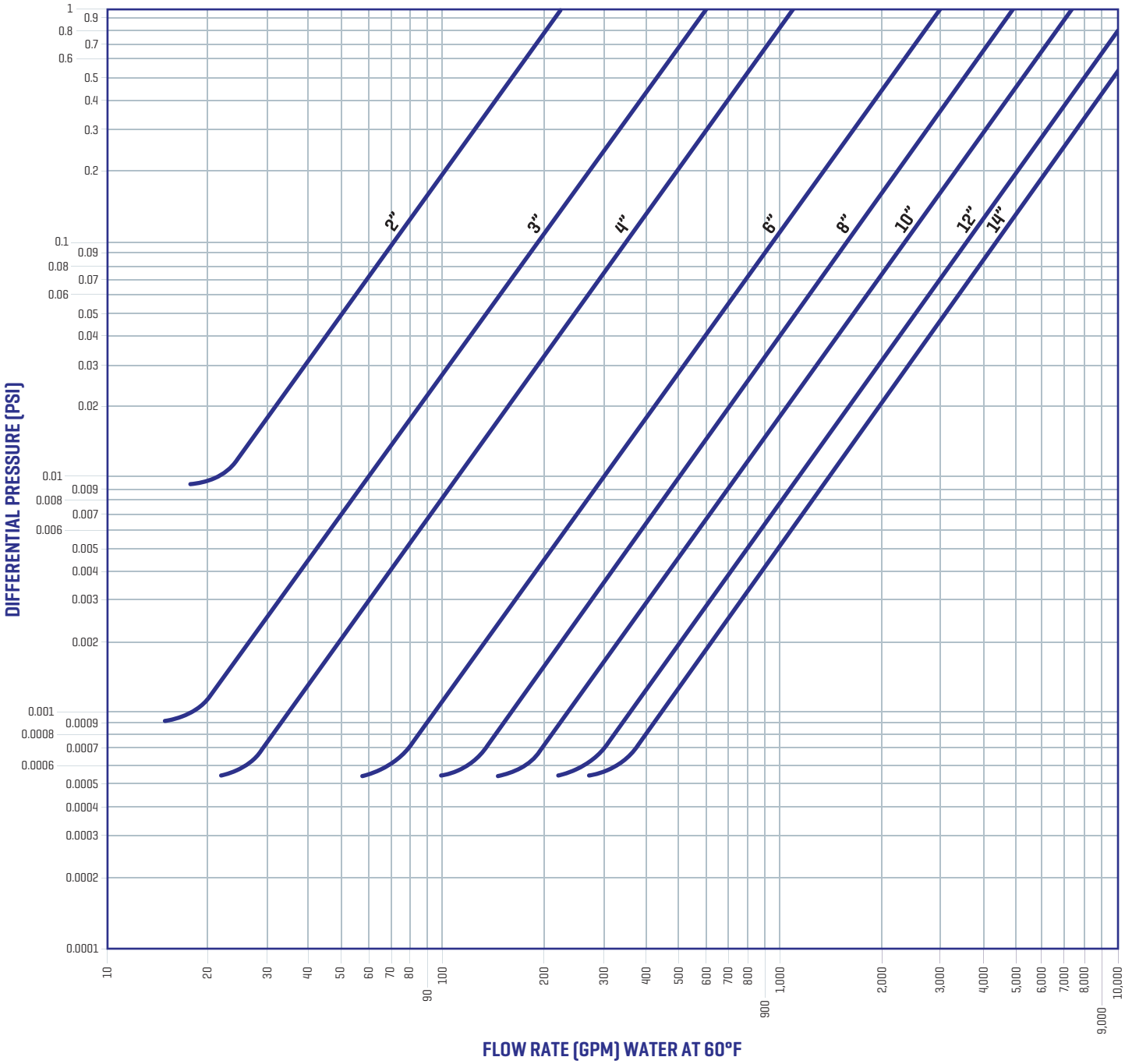
With the expanding gate design, it is possible for Thermal Expansion to occur within the body cavity while the valve is in the closed position. A Thermal Relief system allows the body cavity to relieve into the upstream side of the valve.



SCV Valve installed Thermal Relief system on 16" Class 600 Thru Conduit Expanding Gate Valve.



Liquid: Pressure Loss Curves for TCG Valves - 2” thru 14”



The above graph is based on simulations. Results may differ due to uncertainty within the pipeline or flow conditions. The formulas can be used to find the actual flow coefficient for a given condition of flow. The equations are valid only for incompressible flow.

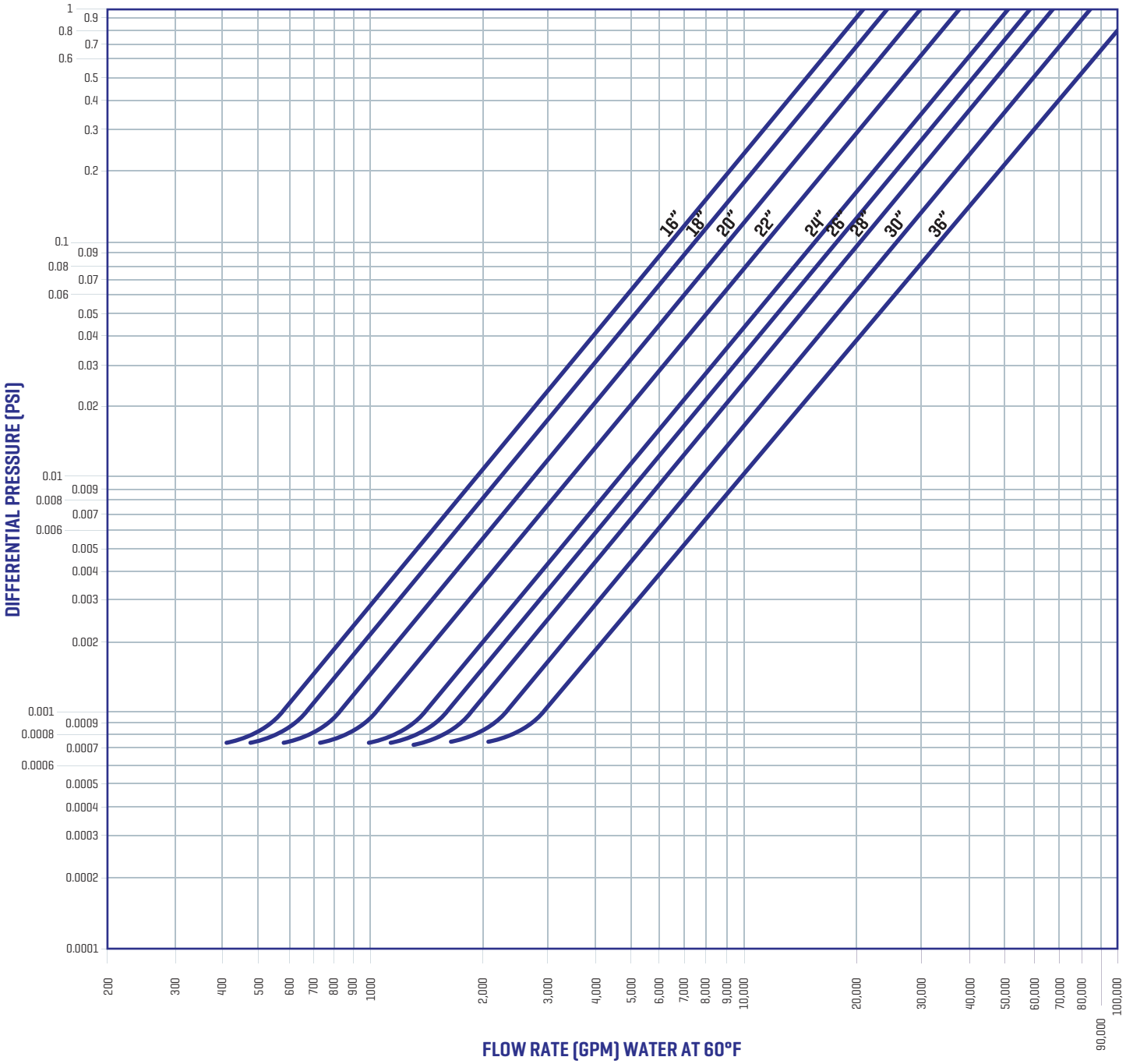
Flow Coefficient for Fully Open Valves	
2	228
3	601
4	1,108
6	3,000
8	5,000
10	7,560
12	11,547
14	13,416

Glossary of Terms	
Q	Flow Rate, Liquids - GPM
Cv	Flow Coefficient
P_1	Inlet Pressure
P_2	Outlet Pressure
▪P	Pressure Drop (P_1 - P_2)
G	Specific Gravity (Water = 1)

Liquid (Incompressible Flow)

$$C_v = Q\sqrt{\frac{G}{\Delta P}} \qquad Q = C_v\sqrt{\frac{\Delta P}{G}} \qquad \Delta P = \left[\frac{Q}{C_v}\right]^2 G$$

Liquid: Pressure Loss Curves for TCG Valves - 16” thru 36”



The above graph is based on simulations. Results may differ due to uncertainty within the pipeline or flow conditions. The formulas can be used to find the actual flow coefficient for a given condition of flow. The equations are valid only for incompressible flow.

Flow Coefficient for Fully Open Valves	
16	21,213
18	25,000
20	30,237
22	37,187
24	50,709
26	58,423
28	67,131
30	80,041
36	109,888

Glossary of Terms	
Q	Flow Rate, Liquids - GPM
Cv	Flow Coefficient
P_1	Inlet Pressure
P_2	Outlet Pressure
▪P	Pressure Drop (P_1 - P_2)
G	Specific Gravity (Water = 1)

Liquid (Incompressible Flow)

$$C_v = Q\sqrt{\frac{G}{\Delta P}} \qquad Q = C_v\sqrt{\frac{\Delta P}{G}} \qquad \Delta P = \left[\frac{Q}{C_v}\right]^2 G$$

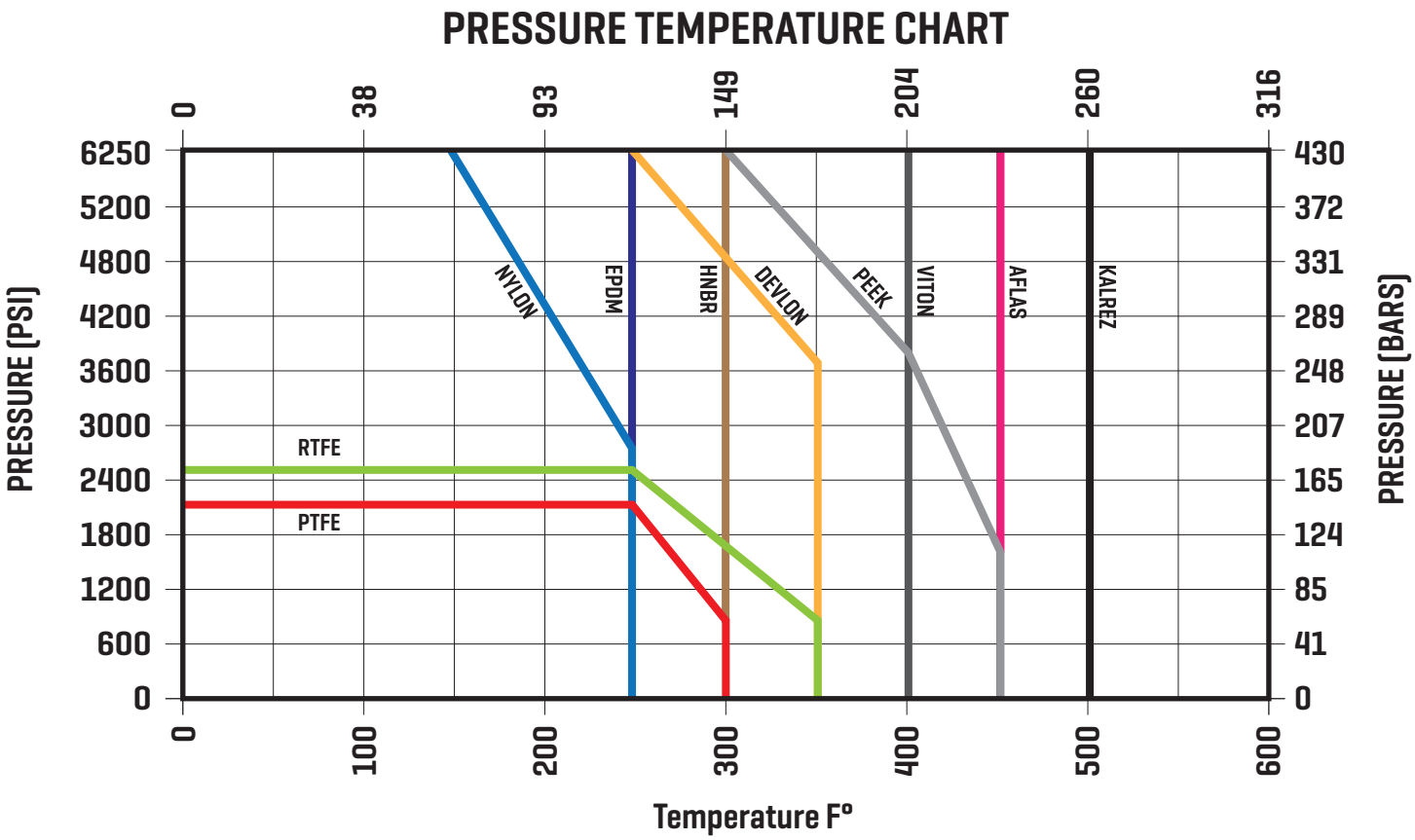
Seal & Seat Pressure Temperature Chart

This chart depicts pressure and temperature ratings for common plastics and elastomers used in SCV Valve products.

SCV VALVE SOFT GOOD CHEMICAL COMPATIBILITY

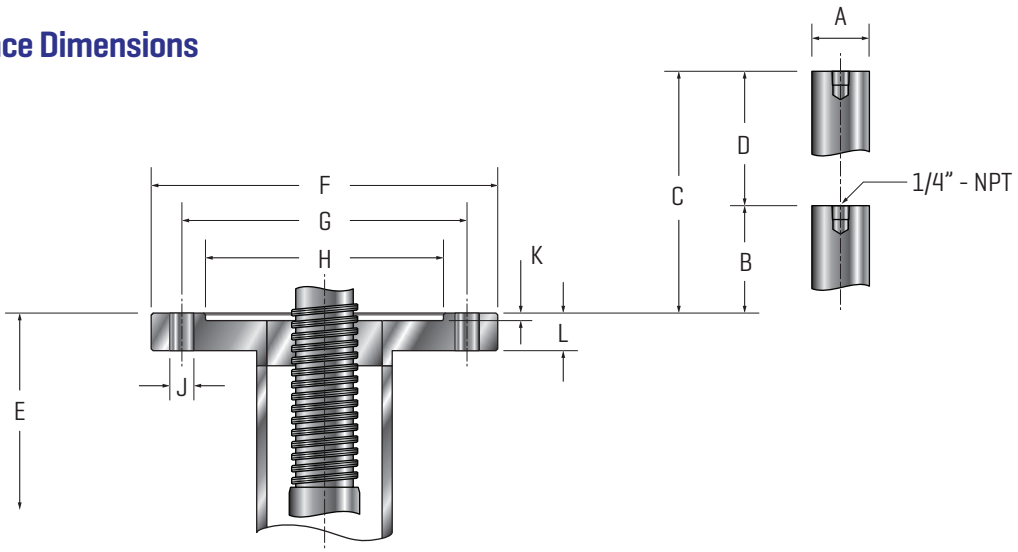
	SEAL MATERIAL			SEAT MATERIAL			
	Viton	HNBR	Kalrez	RTFE	Nylon	Devlon	PEEK
Amines	X	X	●	●	X	X	●
Ammonia	X	X	●	●	●	●	●
Butane	●	●	●	●	●	●	●
Carbon Dioxide	●	●	●	●	●	●	●
Crude Oil	●	●	●	●	●	●	●
Ethane	●	●	●	●	X	X	●
Ethylene	●	●	●	●	●	●	●
Glycol	●	●	●	●	●	X	●
Hydrocarbon	●	●	●	●	●	●	●
Hydrogen	●	●	●	●	●	●	●
Jet Fuel	*	*	●	●	X	X	●
Methane	●	●	●	●	●	●	●
Natural Gas	●	●	●	●	●	●	●
Nitrogen	●	●	●	●	●	●	●
Propane	●	●	●	●	●	●	●
Propylene	●	X	●	●	●	●	●

* Viton OK for JP-3/4/5/6/8/9/10. * HNBR OK for JP-3/4/5/6.



Expanding Gate Valve Operator Interface

Operator Interface Dimensions



Valve Size	ANSI Class	Stem Thread	Top of Stem Closed	Top of Stem Open	Total Travel	To Center of Valve	Mtg Plt O.D.	Bolt Circle	Flange Pilot Dia.	Mounting Holes	Flange Pilot Depth	Mtg Plt Thickness	ISO/MSS Mtg Pattern
		A	B	C	D	E	F	G	H	J	K	L	
4	600	1-1/4-5TPI-2G-LH	4.70	9.58	4.88	20.03	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
4	900	1-1/4-5TPI-2G-LH	4.60	9.48	4.88	20.15	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
6	150	1-5TPI-2G-LH	4.00	10.90	6.90	21.70	5.00	4.02	2.78	4 X 0.50	0.15	0.43	FA10
6	600	1-1/2-4TPI-2G-LH	4.50	11.35	6.85	25.42	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
6	900	1-1/2-4TPI-2G-LH	4.50	11.35	6.85	25.42	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
8	150	1-1/2-4TPI-2G-LH	4.40	13.65	9.25	27.88	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
8	600	1-3/4-4TPI-2G-LH	5.20	14.58	9.38	32.27	8.00	6.50	5.15	4 X 0.81	0.23	1.15	FA16
8	900	1-3/4-4TPI-2G-LH	4.90	14.28	9.38	32.57	8.00	6.50	5.15	4 X 0.81	0.23	1.15	FA16
10	150	1-1/2-4TPI-2G-LH	5.10	16.40	11.30	33.54	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
10	600	2-4TPI-2G-LH	5.70	17.40	11.70	37.74	8.50	6.50	5.15	4 X 0.88	0.25	1.13	FA16
10	900	2-4TPI-2G-LH	5.70	17.40	11.70	37.74	8.50	6.50	5.15	4 X 0.88	0.25	1.13	FA16
12	150	1-1/2-4TPI-2G-LH	5.40	18.60	13.20	39.11	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
12	600	2-1/4-3TPI-2G-LH	6.10	19.70	13.60	43.13	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
12	900	2-1/4-3TPI-2G-LH	6.10	19.70	13.60	43.13	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
14	600	2-1/2-3TPI-2G-LH	6.70	21.85	15.15	46.02	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
14	900	2-1/2-3TPI-2G-LH	6.70	21.50	15.20	45.94	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
16	150	*1.5-0.2P-0.40L-ACME-2G-LH	6.00	22.64	16.64	47.89	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
16	600	2-1/2-3TPI-2G-LH	6.50	23.15	16.65	51.75	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
16	900	2-1/2-3TPI-2G-LH	6.50	23.15	16.65	51.75	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
18	600	3-2TPI-2G-LH	9.20	28.23	19.03	56.93	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
18	900	3-2TPI-2G-LH	9.20	28.23	19.03	56.93	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
20	150	*2.0-0.25P-0.50L-ACME-2G-LH	6.00	26.50	20.50	57.99	8.25	6.50	5.15	4 X 0.81	0.23	1.15	FA16
20	600	3-1/4-2.5TPI-2G-LH	9.50	30.50	21.00	63.70	14.00	11.75	9.10	8 X 0.88	0.25	1.39	FA30
20	900	3-1/4-2.5TPI-2G-LH	8.90	29.90	21.00	64.20	14.00	11.75	9.10	8 X 0.88	0.25	1.39	FA30
22	600	3-1/4-2.5TPI-2G-LH	9.50	32.80	23.30	70.54	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
24	150	*2.0-0.25P-0.50L-ACME-2G-LH	6.50	31.30	24.80	69.30	8.25	6.50	5.15	4 X 0.81	0.23	0.75	FA16
24	600	4-2TPI-2G-LH	9.60	34.90	25.30	76.30	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
24	900	4-2TPI-2G-LH	9.10	34.40	25.30	76.80	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
26	600	4-2TPI-2G-LH	9.70	36.60	26.90	81.35	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
30	150	*2.5-0.25P-0.50L-ACME-2G-LH	6.90	37.65	30.75	83.93	8.25	6.50	5.15	4 X 0.81	0.23	0.75	FA16
30	600	4-2TPI-2G-LH	8.90	39.70	30.80	91.66	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
36	150	*2.5-0.25P-0.50L-ACME-2G-LH	6.70	42.70	36.00	97.89	9.00	7.50	5.64	8 X 0.69	0.23	0.75	FA19
36	600	4-2TPI-2G-LH	11.40	47.50	36.10	105.88	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
		*Double Lead Thread											

Slab Gate Valve Operator Interface

Valve Size	ANSI Class	Stem Thread	Top of Stem Closed	Top of Stem Open	Total Travel	To Center of Valve	Mtg Plt O.D.	Bolt Circle	Flange Pilot Dia.	Mounting Holes	Flange Pilot Depth	Mtg Plt Thickness	ISO/MSS Mtg Pattern
		A	B	C	D	E	F	G	H	J	K	L	
4	600	1-1/4-5TPI-2G-LH	4.92	9.82	4.90	20.03	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
4	900	1-1/4-5TPI-2G-LH	4.92	9.70	4.78	20.15	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
6	150	1-5TPI-2G-LH	3.70	10.45	6.75	21.63	5.00	4.02	2.78	4 X 0.50	0.15	0.43	FA10
6	300	1-5TPI-2G-LH	3.70	10.45	6.75	21.63	5.00	4.02	2.78	4 X 0.50	0.15	0.43	FA10
6	600	1-1/2-4TPI-2G-LH	5.00	11.85	6.85	25.42	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
6	900	1-1/2-4TPI-2G-LH	5.00	11.58	6.85	25.42	7.00	5.50	3.98	4 X 0.75	0.18	1.00	FA14
8	150	1-1/2-4TPI-2G-LH	4.30	13.13	8.83	27.69	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
8	300	1-1/2-4TPI-2G-LH	4.30	13.13	8.83	27.69	6.75	5.50	3.98	4 X 0.69	0.18	0.70	FA14
8	600	1-3/4-4TPI-2G-LH	5.80	15.18	9.38	32.27	8.00	6.50	5.15	4 X 0.81	0.23	1.15	FA16
8	900	1-3/4-4TPI-2G-LH	5.50	14.88	9.38	32.57	8.00	6.50	5.15	4 X 0.81	0.23	1.15	FA16
10	150	1-1/2-4TPI-2G-LH	5.10	15.98	10.88	33.14	6.75	5.50	3.98	4 X 0.69	0.19	0.70	FA14
10	300	1-1/2-4TPI-2G-LH	5.10	15.98	10.88	33.14	6.75	5.50	3.96	4 X 0.69	0.19	0.70	FA14
10	600	2-4TPI-2G-LH	6.50	18.00	11.50	37.74	8.50	6.50	5.15	4 X 0.88	0.25	1.13	FA16
10	900	2-4TPI-2G-LH	6.50	18.00	11.50	33.74	8.50	6.50	5.15	4 X 0.88	0.25	1.13	FA16
12	150	1-1/2-4TPI-2G-LH	5.10	18.10	13.00	38.63	6.75	5.50	3.98	4 X 0.69	0.19	0.70	FA14
12	300	1-1/2-4TPI-2G-LH	5.10	18.10	13.00	38.63	6.75	5.50	3.98	4 X 0.69	0.19	0.70	FA14
12	600	2-1/4-3TPI-2G-LH	6.90	20.15	13.25	43.13	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
12	900	2-1/4-3TPI-2G-LH	6.90	20.15	13.25	43.13	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
14	150	*1.5-0.20P-040L-ACME-2G-LH	5.10	19.39	14.29	41.42	6.75	5.50	3.98	4 X 0.69	0.23	0.70	FA14
14	600	2-1/2-3TPI-2G-LH	7.30	22.30	15.00	45.94	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
14	900	2-1/2-3TPI-2G-LH	7.30	22.30	15.00	45.94	11.50	10.00	7.90	8 X 0.75	0.25	1.25	FA25
16	150	*1.5-0.20P-0.40L-ACME-2G-LH	6.10	22.28	16.18	46.73	6.75	5.50	3.98	4 X 0.69	0.19	0.70	FA14
16	300	*1.5-0.20P-040L-ACME2G-LH	6.10	21.28	16.18	46.79	6.75	5.50	3.98	4 X 0.69	0.19	0.70	FA14
16	600	2-1/2-3TPI-2G-LH	7.30	23.80	16.50	51.75	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
16	900	2-1/2-3TPI-2G-LH	7.30	23.80	16.50	51.75	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
18	600	3-2TPI-2G-LH	10.20	28.86	18.66	56.56	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
18	900	3-2TPI-2G-LH	10.20	28.86	18.66	56.56	12.00	10.00	7.90	8 X 0.75	0.25	1.25	FA25
20	150	*2.0-0.25P-0.50L-ACME-2G-LH	6.00	26.25	20.25	57.09	8.25	6.50	5.15	4 X 0.81	0.25	0.75	FA16
20	300	*2.0-0.25P-0.50L-ACME-2G-LH	5.80	26.05	20.25	57.21	8.25	6.50	5.15	4 X 0.81	0.25	0.75	FA16
20	600	3-1/4-2.5TPI-2G-LH	9.40	30.50	21.10	63.70	14.00	11.75	9.10	8 X 0.88	0.25	1.39	FA30
20	900	3-1/4-2.5TPI-2G-LH	9.50	30.00	20.50	64.20	14.00	11.75	9.10	8 X 0.88	0.25	1.39	FA30
22	600	3-1/4-2.5TPI-2G-LH	10.00	33.30	23.30	70.54	16.00	14.02	10.28	8 X 1.13	0.25	1.25	FA35
24	150	*2.0-0.25P-0.50L-ACME-2G-LH	6.50	31.00	24.50	68.61	8.25	6.50	5.15	4 X 0.81	0.23	0.75	FA16
24	300	*2.0-0.25P-0.50L-ACME-2G-LH	5.90	30.35	24.45	69.24	8.25	6.50	5.15	4 X 0.81	0.23	0.75	FA16
24	600	4-2TPI-2G-LH	10.10	35.43	25.33	76.30	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
24	900	4-2TPI-2G-LH	9.10	34.40	25.30	76.80	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
26	600	4-2TPI-2G-LH	11.00	37.86	26.86	81.35	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
30	150	*2.5-0.25P-0.50L-ACME-2G-LH	6.70	37.00	30.30	83.98	8.25	6.50	5.15	4 X 0.81	0.23	0.75	FA16
30	300	*2.5-0.25P-0.50L-ACME-2G-LH	6.70	37.00	30.30	85.44	9.00	7.50	5.64	8 X 0.69	0.23	0.75	FA19
30	600	4-2TPI-2G-LH	9.50	40.50	31.00	91.66	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
36	150	*2.5-0.25P-0.50L-ACME-2G-LH	6.40	42.15	35.75	97.23	9.00	7.50	5.64	8 X 0.69	0.23	0.75	FA19
36	600	4-2TPI-2G-LH	11.70	48.20	36.50	105.88	16.00	14.00	10.28	8 X 1.13	0.25	1.25	FA35
		*Double Lead Thread											

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**	**290**
	200	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	215	215	230	230
	400	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
	600	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
	700	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
	800	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	/	/
	900	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	/	/
	1000	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	750	660	750	750	750	750	750	620	620	745	745
	300	655	655	655	730	640	720	730	730	730	730	560	560	665	665
	400	635	635	635	705	615	695	705	705	705	705	515	515	615	615
	500	605	605	605	665	585	665	665	665	665	665	480	480	580	580
	600	570	570	570	605	550	605	605	605	605	605	450	450	555	555
	650	550	550	550	590	535	590	590	590	590	590	440	440	545	545
	700	530	530	530	555	510	570	555	570	570	570	435	435	540	540
	750	505	505	505	505	475	530	505	530	530	530	425	425	530	530
	800	410	410	410	410	390	510	410	510	510	510	420	420	/	/
	850	320	320	320	320	300	485	320	485	485	485	420	420	/	/
	900	230	230	230	225	200	450	225	375	450	450	415	415	/	/
	950	135	135	135	135	135	320	135	275	375	385	385	385	/	/
	1000	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	1440	1440	1500	1500
200	1360	1360	1360	1500	1320	1500	1500	1500	1500	1500	1240	1240	1490	1490
300	1310	1310	1310	1455	1275	1445	1455	1455	1455	1455	1120	1120	1335	1335
400	1265	1265	1265	1405	1230	1385	1405	1410	1410	1410	1025	1025	1230	1230
500	1205	1205	1205	1330	1175	1330	1330	1330	1330	1330	995	995	1160	1160
600	1135	1135	1135	1210	1105	1210	1210	1210	1210	1210	900	900	1115	1115
650	1100	1100	1100	1175	1065	1175	1175	1175	1175	1175	885	885	1095	1095
700	1060	1060	1060	1110	1025	1135	1110	1135	1135	1135	870	870	1085	1085
750	1015	1015	1015	1015	955	1065	1015	1065	1065	1065	855	855	1065	1065
800	825	825	825	825	780	1015	825	1015	1015	1015	845	845	/	/
850	640	640	640	640	595	975	640	975	975	975	835	835	/	/
900	460	460	460	445	405	900	445	745	900	900	830	830	/	/
950	275	275	275	275	275	640	275	550	755	775	775	775	/	/
1000	170	170	170	170	170	430	170	400	505	725	725	725	/	/
1050	/	/	/	/	/	290	/	290	345	720	720	720	/	/
1100	/	/	/	/	/	190	/	200	225	605	610	610	/	/
1150	/	/	/	/	/	130	/	125	150	445	475	475	/	/
1200	/	/	/	/	/	80	/	70	105	290	370	370	/	/
1250	/	/	/	/	/	/	/	/	/	/	295	295	/	/
1300	/	/	/	/	/	/	/	/	/	/	235	235	/	/
1350	/	/	/	/	/	/	/	/	/	/	190	190	/	/
1400	/	/	/	/	/	/	/	/	/	/	150	150	/	/
1450	/	/	/	/	/	/	/	/	/	/	115	115	/	/
1500	/	/	/	/	/	/	/	/	/	/	85	85	/	/

900

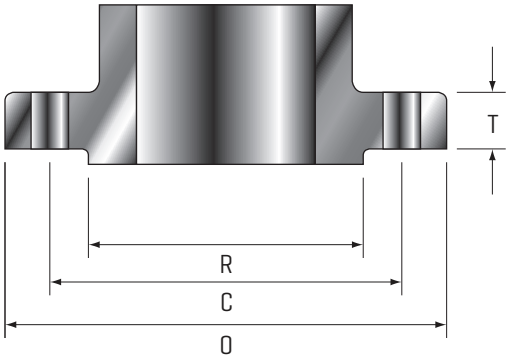
Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
-20 to 100	2220	2220	2220	2250	2090	2250	2250	2250	2250	2250	2160	2160	2250	2250
200	2035	2035	2035	2250	1980	2250	2250	2250	2250	2250	1860	1860	2230	2230
300	1965	1965	1965	2185	1915	2165	2185	2185	2185	2185	1680	1680	2000	2000
400	1900	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	/	/
1000	255	255	255	255	255	650	255	595	760	1090	1090	1090	/	/
1050	/	/	/	/	/	430	/	430	515	1080	1080	1080	/	/
1100	/	/	/	/	/	290	/	300	340	905	915	915	/	/
1150	/	/	/	/	/	195	/	185	225	670	710	710	/	/
1200	/	/	/	/	/	125	/	105	155	430	555	555	/	/
1250	/	/	/	/	/	/	/	/	/	/	440	440	/	/
1300	/	/	/	/	/	/	/	/	/	/	350	350	/	/
1350	/	/	/	/	/	/	/	/	/	/	290	290	/	/
1400	/	/	/	/	/	/	/	/	/	/	225	225	/	/
1450	/	/	/	/	/	/	/	/	/	/	175	175	/	/
1500	/	/	/	/	/	/	/	/	/	/	125	125	/	/

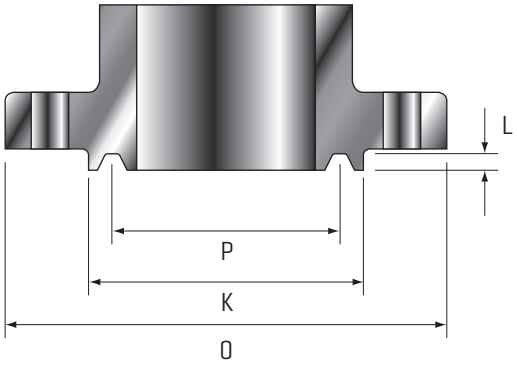
Pressure Temperature Ratings - ASME B16.34

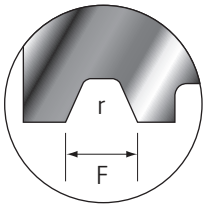
Note: Pressures in PSI

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

Flange Dimensions - ANSI B16.5 & B16.47



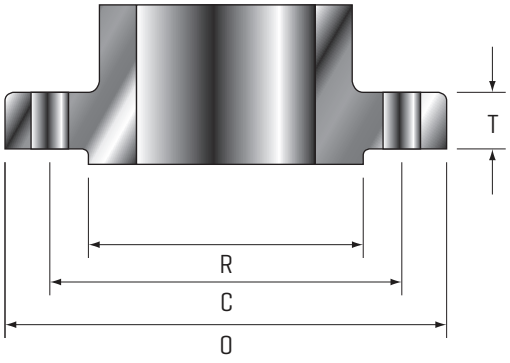


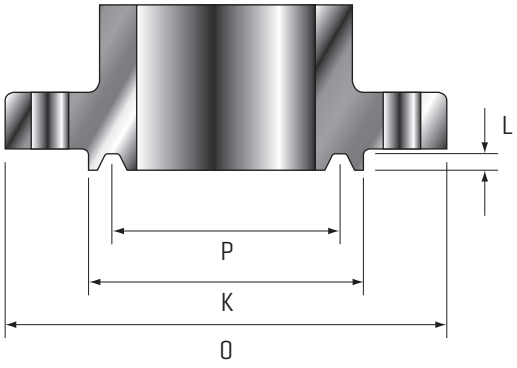


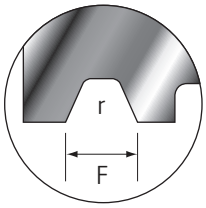
Groove Detail

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	r	
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







Groove Detail

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	r	
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	21.00	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

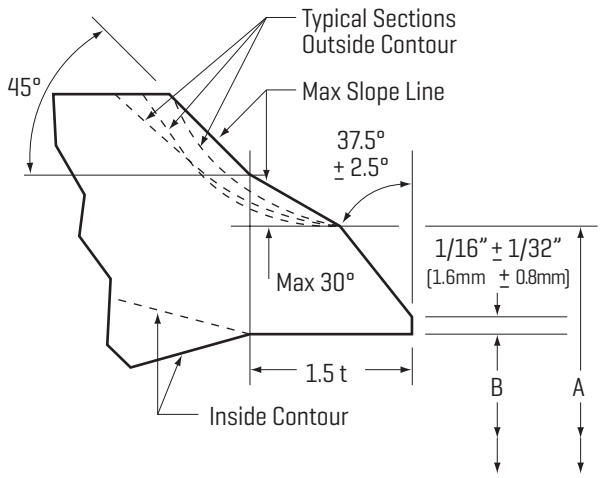
Butt-welding Dimensions - ANSI B16.25

Nominal Pipe Size	Schedule Number or Wall	Outside Diameter (Cast Steel Valves) A		Nominal Inside Diameter B		Machined Inside Diameter C		Nominal Wall Thickness t	
		Inches	mm	Inches	mm	Inches	mm	Inches	mm
3	xxs	3-19/32	91.282	2.300	58.42	2.409	61.19	0.600	15.24
4	xxs	4-5/8	117.48	3.152	80.06	3.279	83.29	0.674	17.12
5	160	5-11/16	144.46	4.313	109.55	4.428	112.47	0.625	15.88
	xxs			4.063	103.20	4.209	106.91	0.750	19.05
6	120	6-25/32	172.34	5.501	139.72	5.600	142.24	0.562	14.27
	160			5.189	131.80	5.327	135.31	0.719	18.26
	xxs			4.897	124.38	5.072	128.83	0.864	21.95
8	100	8-23/32	223.04	7.439	188.93	7.546	191.67	0.594	15.09
	120			7.189	182.60	7.327	186.11	0.719	18.26
	140			7.001	177.83	7.163	181.94	0.812	20.62
	xxs			6.875	174.63	7.053	179.15	0.875	22.23
	160			6.813	173.05	6.998	177.75	0.960	23.01
10	50	10-15/16	277.81	9.564	242.93	9.671	245.64	0.594	15.09
	100			9.314	236.58	9.452	240.08	0.719	18.26
	120			9.064	230.23	9.234	234.54	0.844	21.44
	140			8.750	222.25	8.959	227.56	1.000	25.40
	160			8.500	215.90	8.740	222.00	1.125	28.58
12	60	12-31/32	329.41	11.626	295.30	11.725	297.82	0.562	14.27
	80			11.376	288.95	11.507	292.28	0.688	17.48
	100			11.064	281.03	11.234	284.34	0.844	21.44
	120			10.750	273.05	10.959	278.36	1.000	25.40
	140			10.500	266.70	10.740	272.80	1.125	28.58
	160			10.126	257.20	10.413	264.49	1.312	33.32
14	60	14-1/4	361.95	12.814	352.48	12.921	328.19	0.594	15.09
	80			12.500	317.50	12.646	321.21	0.750	19.05
	100			12.126	308.00	12.319	312.90	0.938	23.83
	120			11.814	300.08	12.046	305.97	1.094	27.79
	140			11.500	292.10	11.771	298.98	1.250	31.75
	160			11.188	284.18	11.498	292.05	1.406	35.71
16	60	16-1/4	412.75	14.688	373.08	14.811	376.20	0.656	16.66
	80			14.314	363.58	14.484	367.89	0.844	21.44
	100			13.938	354.03	14.155	359.54	1.031	26.19
	120			13.564	344.53	13.827	351.21	1.219	30.96
	140			13.124	333.35	13.442	341.43	1.438	36.53
	160			12.814	325.48	13.171	334.54	1.594	40.49
18	40	18-9/32	464.34	16.876	428.65	16.975	431.17	0.562	14.27
	60			16.500	419.10	16.646	422.81	0.750	19.05
	80			16.126	409.60	16.319	414.50	0.938	23.83
	100			15.688	398.48	15.936	404.50	1.156	29.36
	120			15.250	387.35	15.553	395.05	1.375	34.93
	140			14.876	377.85	15.225	386.72	1.562	39.67
	160			14.438	366.73	14.842	376.99	1.781	45.24
20	40	20-5/16	515.94	18.814	477.88	18.921	480.59	0.594	15.09
	60			18.376	466.75	18.538	470.87	0.812	20.62
	80			17.938	455.63	18.155	461.14	1.031	26.19
	100			17.438	442.93	17.717	450.01	1.281	32.54
	120			17.000	431.80	17.334	440.28	1.500	38.10
	140			16.500	419.10	16.896	429.16	1.750	44.45
	160			16.064	408.03	16.515	419.48	1.969	50.01
24	30	24-3/8	619.13	22.876	581.05	22.975	583.57	0.562	14.27
	40			22.626	574.70	22.757	578.03	0.688	17.48
	60			22.064	560.43	22.265	565.53	0.969	24.61
	80			21.564	547.73	21.827	554.41	1.219	30.96
	100			20.938	531.83	21.280	540.51	1.531	38.89
	120			20.376	517.55	20.788	528.02	1.812	46.02
	140			19.876	504.85	20.350	516.89	2.062	52.37
	160			19.314	490.58	19.859	504.42	2.344	59.54

Butt-welding Dimensions - ANSI B16.25

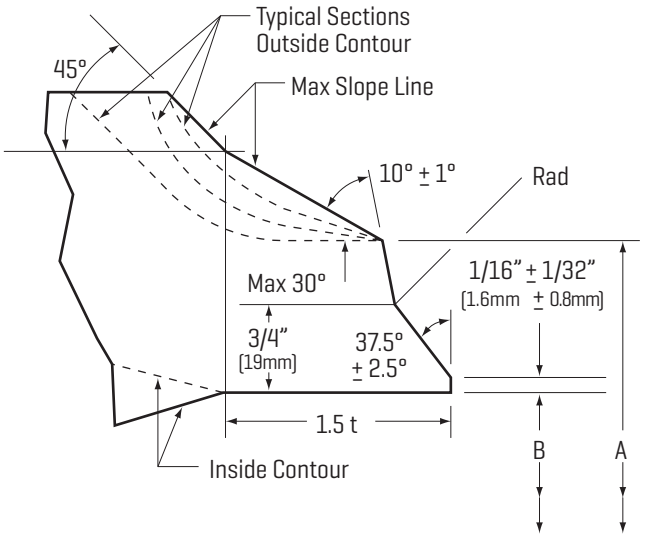
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

Welding end details for cast components for use without backing ring or with split backing ring.



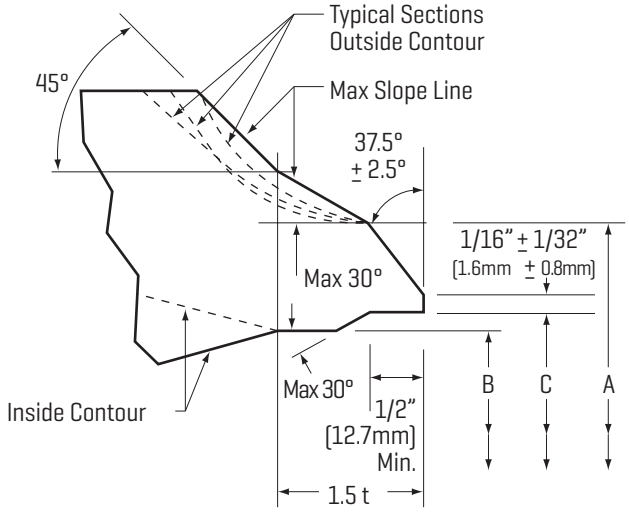
Compound Bevel Butt-welding End for Pipe Wall Thickness Greater than 7/8" (22.23mm).

Welding end details for cast components for use without backing ring or with split backing ring.



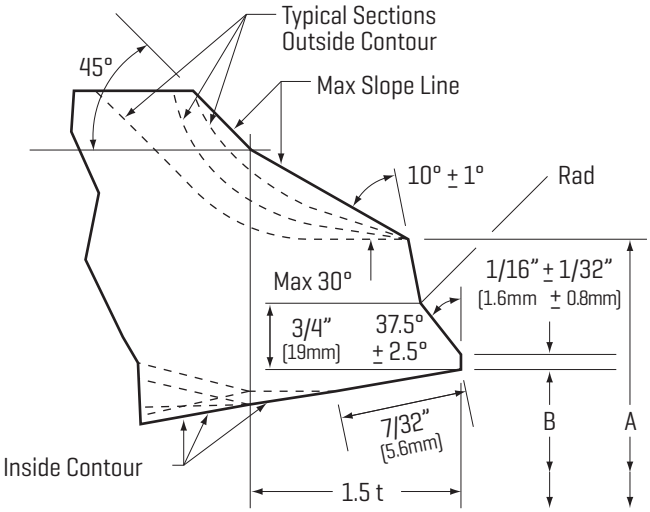
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

Welding end details for cast components for use with continuous rectangular or tapered backing ring.



Compound Bevel Butt-welding End for Pipe Wall Thickness Greater than 7/8" (22.23mm).

Welding end details for cast components for use with continuous rectangular or tapered backing ring.



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Sincerely,

Sid McCarra
President
SCV Valve, LLC

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