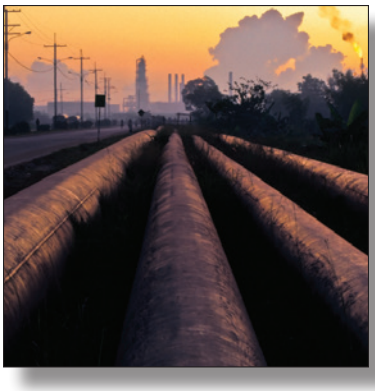
SCV VALVE

(281) 482-4728 · www.scvvalve.com



3-Piece Trunnion Ball Valves - API 6D
Full & Reduced Port

Class: 150 - 2500
Sizes: 1” - 42”

API 6D Trunnion Ball Valve
Size: 36”
Class: 600
Bore Coating: Scotchkote™ 134

SCV VALVE

SCV VALVE manufactures some of the most dependable cast and forged steel Ball Valves in the industry. Our products are manufactured and tested in accordance with respective API, ASME, and ANSI standards. With features such as double block and bleed capabilities, secondary sealant injections, and spring energized self relieving seats, the SCV design offers many features and options beneficial for oil, gas, and liquid applications making it one of the most preferred ball valves on the market.

Innovative Valve Solutions.®

SCV Ball Valves

[Product Preview]

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

3-Piece Trunnion Ball Valves - API 6D - Full & Reduced Port

- Basic Design: API 6D
- Wall Thickness: API 6D
- Face-to-Face Dimension: API 6D
- Flange End Dimension: ANSI/ASME B16.5 (1" to 24"), ANSI/ASME B16.47 (26" & up)
- Butt-Weld End Dimension: ANSI/ASME B16.25
- Inspection & Testing: API 6D
- Fire Safe Design: API 607/BS 6755

API 6D Trunnion Ball Valve
Size: 36"
Class: 600
Bore Coating: Scotchkote™ 134

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

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

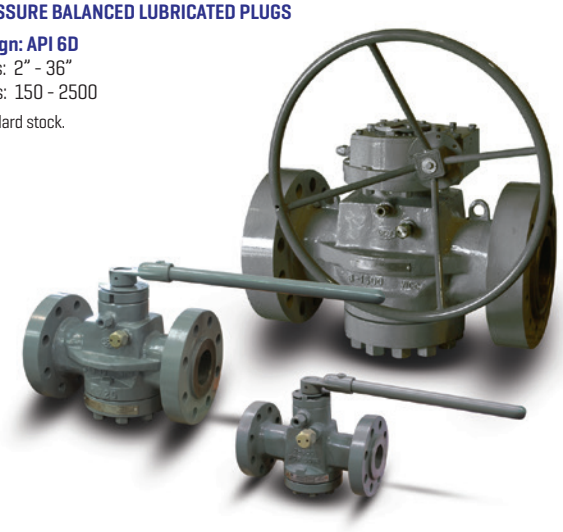
Design: API 600
Sizes: 2" - 48"
Class: 150 - 2500
Limited inventory availability. All sizes
and pressure classes made to order.

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

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

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. 1701 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: HPWS/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 44673
API 6A:2010, API 6D:2014
Report Reference: HPWS/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

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HPi Verification Services Ltd.
The Manor House
Hawbery 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

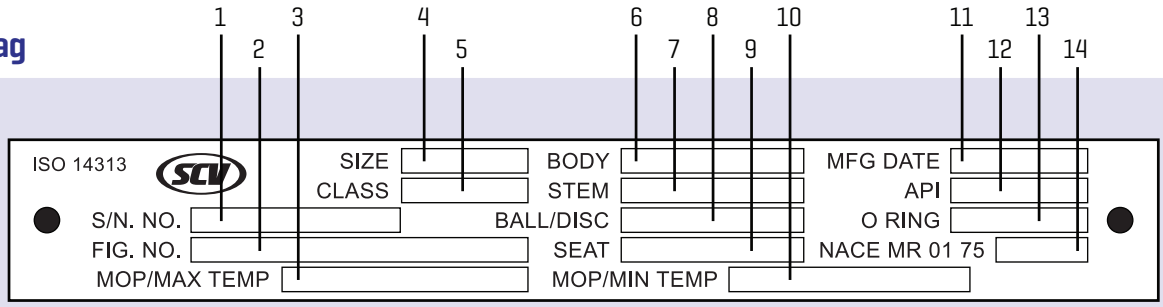
	Figure No. Chart Column	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Pressure Classes	**Type**	**Size**	**Class**	**Body Conf.**	**Body**	**Obturator**	**End**	**Oper**	**Bore Type**	**Seal**	**Seat.base**	**Seat/Insert**	**Stem**	**Packing**	**Service**
TRUNNION BALL	150, 300, 600	BAL	12	06	B	12	15	R	G	F	H	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

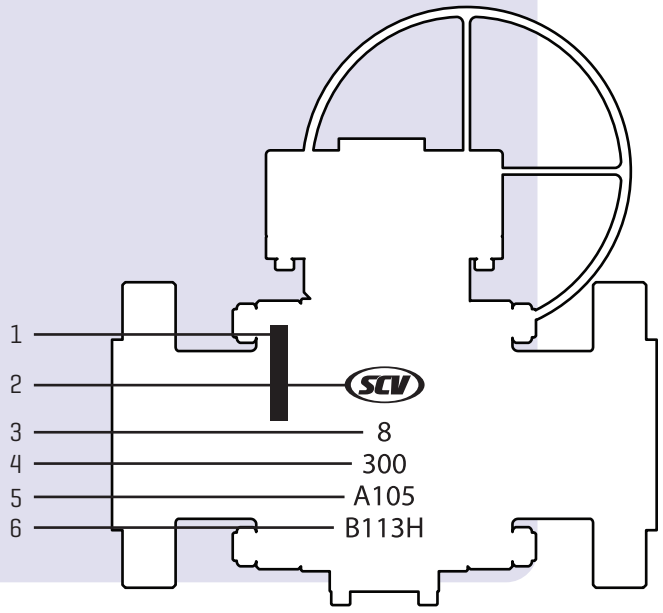
Valve ID Tag



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

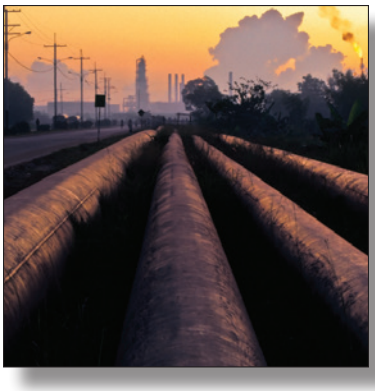
Valve Markings

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



3-Piece Trunnion Ball Valves - API 6D
Full & Reduced Port
Class: 150 - 2500/Sizes: 1" - 42"

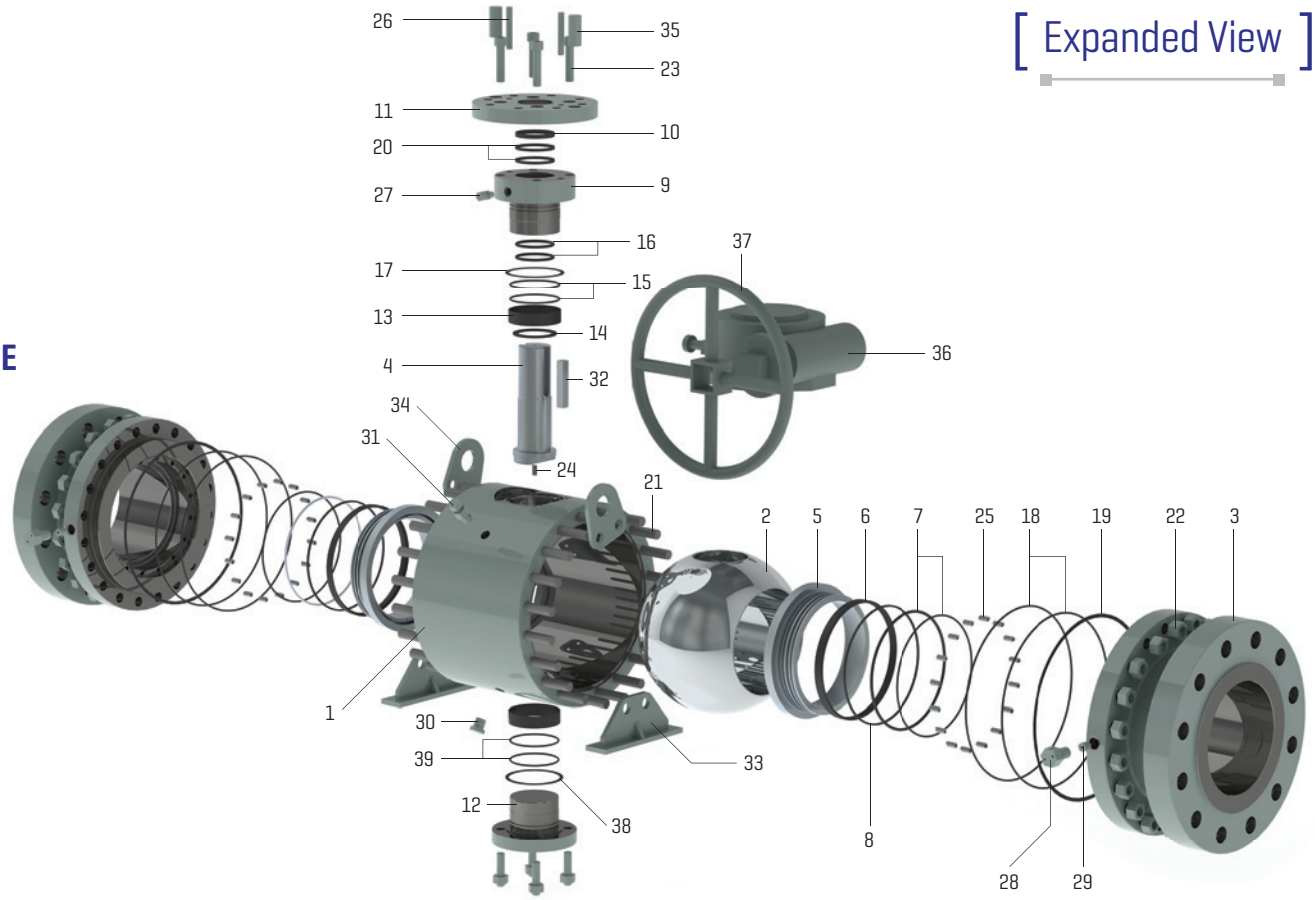
Design and Manufacturing Standards	
Basic Design	API 6D
Wall Thickness	API 6D
Face-to-Face Dimension	API 6D
Flange End Dimension	ANSI/ASME B16.5 (1" to 24") ANSI/ASME B16.47 (26" & up)
Butt-Weld End Dimension	ANSI/ASME B16.25
Inspection & Testing	API 6D
Fire Safe Design	API 607/BS 6755

API 6D Trunnion Ball Valve
Size: 36"
Class: 600
Bore Coating: Scotchkote™ 134

3-Piece Trunnion Ball Valves - API 6D
Model E & I: Full & Reduced Port

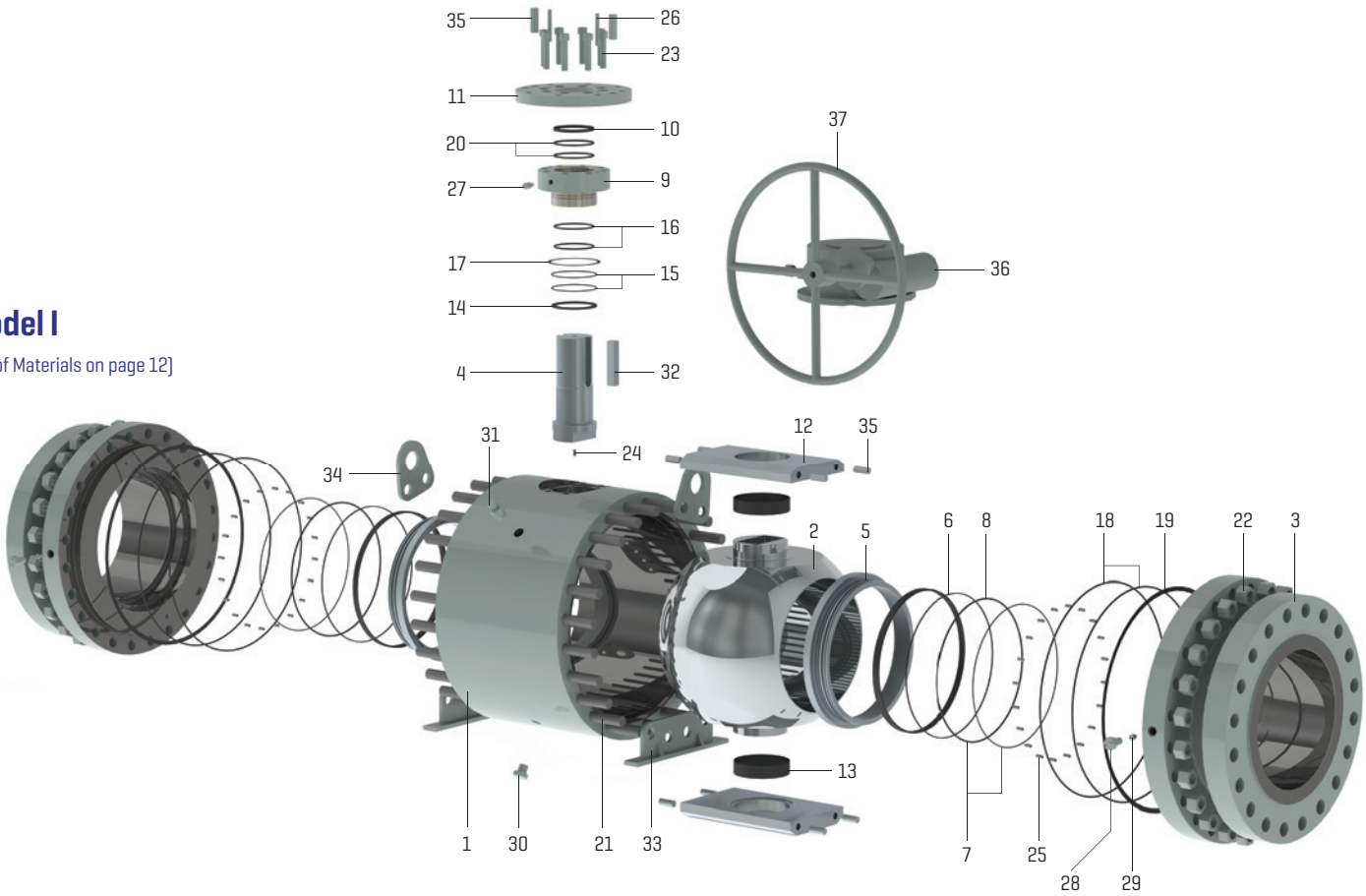
[Expanded View]

Model E



Model I

[Bill of Materials on page 12]



3-Piece Trunnion Ball Valves - API 6D
Model E: Full & Reduced Port

[Bill of Materials]

No	Name Of Part	Materials	
1	Body	A350 LF2	A182 F316
2	Ball	A350 LF2+ENP	A182, F316, A351, CF8M, 410 SS
3	Adapter	A350 LF2	A182, F316, A351, CF8M
4	Stem	A350 LF2+ENP	316 SS, 17-4 PHSS, 410 SS
5	Seat Ring	A350 LF2+ENP	316 SS, 410 SS
6	Seat Insert	Devlon, Nylon, PEEK, RTFE	
7	Seat O-ring (2)	Low Temp HNBR /Viton AED	
8	Seat Seal	Graphite	
9	Gland	A350 LF2	316 SS, 410 SS
10	Gland Ring	A350 LF2	316 SS, 410 SS
11	Mounting Plate	A350 LF2	316 SS, 410 SS
12	Trunnion	A350 LF2	316 SS, 410 SS
13	Trunnion Bearing (2)	PTFE, Carbon Steel	PTFE, 316 SS
14	Thrust Washer	PTFE, Carbon Steel	PTFE, 316 SS
15	Gland O-ring (2)	Low Temp HNBR /Viton AED	
16	Stem O-ring (2)	Low Temp HNBR /Viton AED	
17	Gland Gasket	Graphite	
18	Adapter O-ring (2)	Low Temp HNBR /Viton AED	
19	Adapter Gasket	Graphite	
20	Mounting Plate Gasket (2)	Graphoil	
21	Stud Bolt	A320 L7M	A193 B8
22	Hex Nut	A194 7M	A194 8
23	SHCS	A320 L7M	A193 B8
24	Anti-Static Spring	Inconel X-750	
25	Seat Spring	Inconel X-750	
26	Dowel Pin	Carbon Steel	Stainless Steel
27	Grease Fitting	Carbon Steel	316 SS
28	Grease Fitting, BGH	Carbon Steel	316 SS
29	Ball Check	Stainless Steel	
30	NPT Plug	Carbon Steel	316 SS
31	Vent Fitting	Carbon Steel	316 SS
32	Stem Key	Carbon Steel	Stainless Steel
33	Foot Plate	Carbon Steel	Stainless Steel
34	Lift Plate	Carbon Steel	Stainless Steel
35	Body Dowel Pin	Carbon Steel	Stainless Steel
36	Gear Operator	Ductile Iron, Carbon Steel Worm Gear	
37	Handwheel	Carbon Steel, Ductile Iron	
38	Trunnion Gasket	Graphite	
39	Trunnion O-ring (2)	Low Temp HNBR /Viton AED	

Note: Materials also available in F321, F347, F51, F53, monel, inconel, incolloy and hastelloy. Metal-to-metal seated ball valve designs are available upon request.

Note: Additional materials available upon request.
*= Used only with bolted body construction.

3-Piece Trunnion Ball Valves - API 6D
Model I: Full & Reduced Port

[Bill of Materials]

No	Name Of Part	Materials	
1	Body	A350 LF2	A182 F316
2	Ball	A350 LF2+ENP	A182, F316, A351, CF8M, 410 SS
3	Adapter	A350 LF2	A182, F316, A351, CF8M
4	Stem	A350 LF2+ENP	316 SS, 17-4 PHSS, 410 SS
5	Seat Ring	A350 LF2+ENP	316 SS, 410 SS
6	Seat Insert	Devlon, Nylon, PEEK, RTFE	
7	Seat O-ring (2)	Low Temp HNBR /Viton AED	
8	Seat Seal	Graphite	
9	Gland	A350 LF2	316 SS, 410 SS
10	Gland Ring	A350 LF2	316 SS, 410 SS
11	Mounting Plate	A350 LF2	316 SS, 410 SS
12	Trunnion	A350 LF2	316 SS, 410 SS
13	Trunnion Bearing (2)	PTFE, Carbon Steel	PTFE, 316 SS
14	Thrust Washer	PTFE, Carbon Steel	PTFE, 316 SS
15	Gland O-ring (2)	Low Temp HNBR /Viton AED	
16	Stem O-ring (2)	Low Temp HNBR /Viton AED	
17	Gland Gasket	Graphite	
18	Adapter O-ring (2)	Low Temp HNBR /Viton AED	
19	Adapter Gasket	Graphite	
20	Mounting Plate Gasket	Graphoil	
21	Stud Bolt	A320 L7M	A193 B8
22	Hex Nut	A194 7M	A194 8
23	SHCS	A320 L7M	A193 B8
24	Anti-Static Spring	Inconel X-750	
25	Seat Spring	Inconel X-750	
26	Dowel Pin	Carbon Steel	Stainless Steel
27	Grease Fitting	Carbon Steel	316 SS
28	Grease Fitting, BGH	Carbon Steel	316 SS
29	Ball Check	Stainless Steel	
30	NPT Plug	Carbon Steel	316 SS
31	Vent Fitting	Carbon Steel	316 SS
32	Stem Key	Carbon Steel	Stainless Steel
33	Foot Plate	Carbon Steel	Stainless Steel
34	Lift Plate	Carbon Steel	Stainless Steel
35	Trunnion Dowel Pin	Carbon Steel	Stainless Steel
36	Gear Operator	Ductile Iron, Carbon Steel Worm Gear	
37	Handwheel	Carbon Steel, Ductile Iron	

Note: Materials also available in F321, F347, F51, F53, monel, inconel, incolloy and hastelloy. Metal-to-metal seated ball valve designs are available upon request.

Note: Additional materials available upon request.

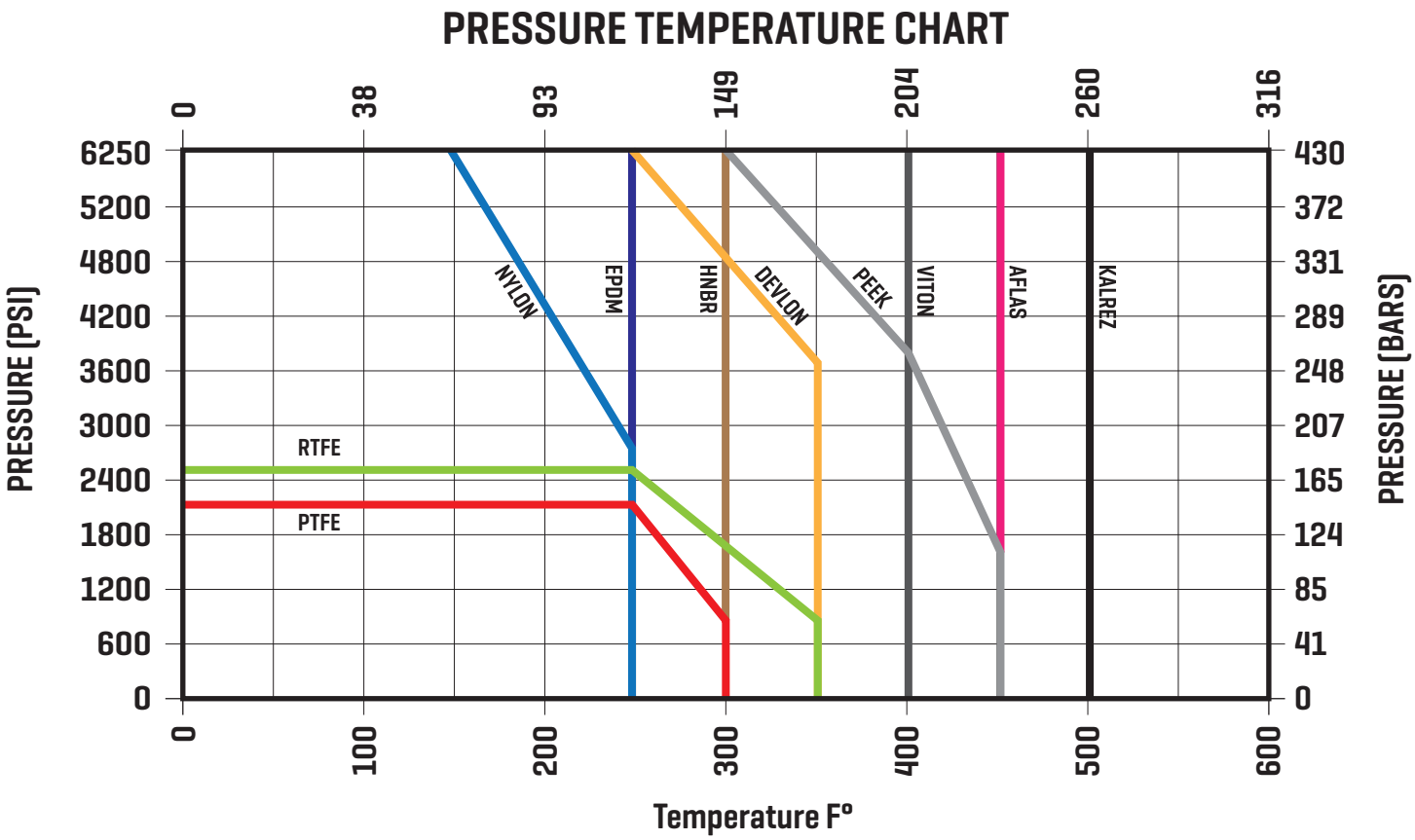
Seal & Seat Pressure Temperature Chart

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.



3-Piece Trunnion Ball Valves - API 6D
Full & Reduced Port Design Features & Applications

The SCV 3-piece forged body Trunnion Mounted ball valves are designed to meet API`s highest industry standards. SCV manufactures these trunnion ball valves in bolted body construction to meet the most stringent requirements for industries such as oil, gas, gathering, transmission, distribution, storage, LNG and Petrochemical.

Seal Feature

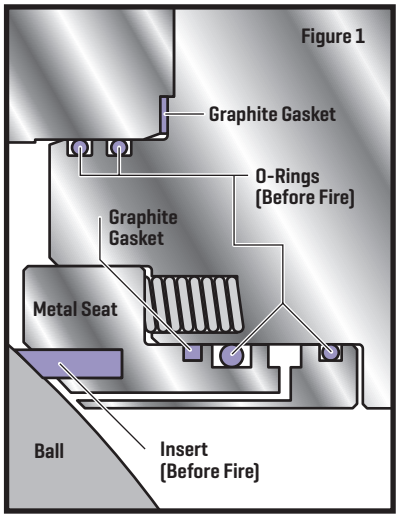
The SCV trunnion mounted ball valves are produced with spring loaded seats. This spring load keep the seats in constant contact with the ball, even in the absence of line pressure and makes a very effective seal at low line pressure. As the pressure increases the seat ring is forced onto the ball and a tight seal becomes effective. The higher the line pressure the greater the force exerted by the seat against the ball.

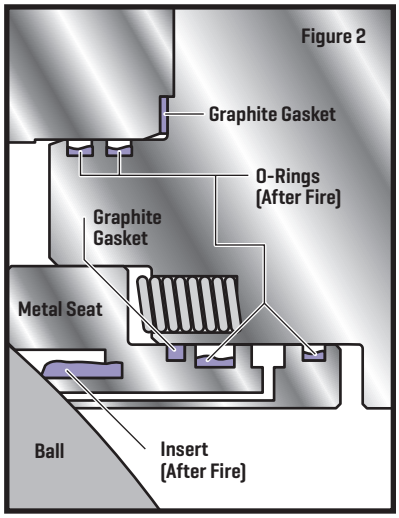
Self Lubrication

SCV uses seat insert material that provides self lubrication . The seat insert material choices consist of PTFE. Nylon, Devlon, Peek, or any other low friction material that that may be required to meet the application. The self-lubrication insert materials help support the predictable operating torque.

Fire Safe Construction with Secondary Metal Seat

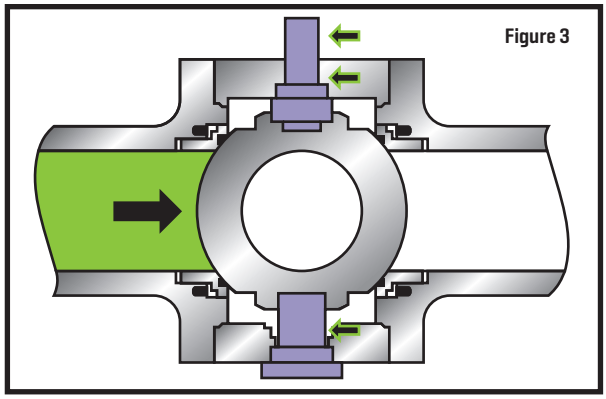
SCV ball valves have been fire tested and can be supplied to API 6FA and API 607. The soft seat inserts, irrespective of their materials, will possibly fail when subjected to fire conditions. SCV provides a fire-safe design which may substantially prevent leakages through seals when damaged by fire. The function of the seats before and after the fire test are as shown. If the seat inserts are destroyed, a metal to metal seal is formed between seat and ball. The seat to body graphite seals, graphite stem packing, and graphite gasket end closures are designed to resist high temperature and will remain undamaged. **(Figures 1 & 2)**

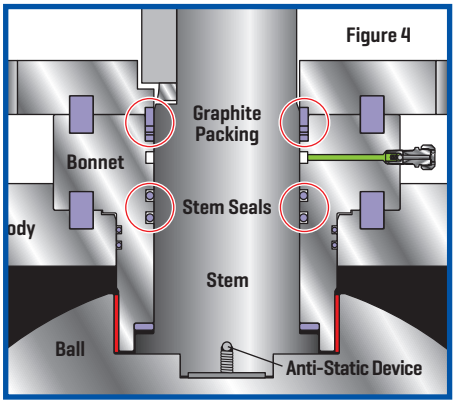




Trunnion Mounting

Trunnion mounted TEFLON coated bearings on the stems absorb the thrust from line pressure, preventing excess friction between the ball and seats, so even at full rated working pressure, operating torque stays low. **(Figure 3)**





Anti-Static Device

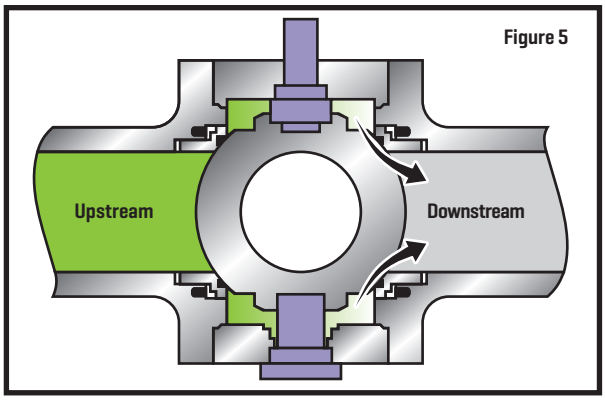
The ball/spring assembly provided at the stem allows the static charges to be discharged to the piping. In this way, an electrostatic charging of the ball is eliminated. **(Figure 4)**

Blow Out Proof Stem with Stem Seals

The stem has been designed with a lower flange. The valve body bonnet retains the stem in place and prevent any possible blowout. The stem is sealed with 2 orings, this feature allows for the stem packing to be replaced while the valve is in line and under pressure. **(Figure 4)**

Single Piston Effect (SPE) - Self Relieving Seats

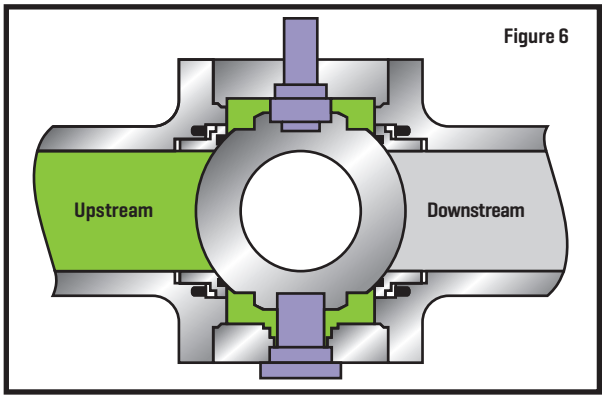
With the ball in the closed position, media pressure builds on the upstream side of the ball. This pressure forces the upstream seat ring against the ball for a tight seal. With only spring pressure sealing the downstream side, excess body cavity pressure pushes the downstream seat rings away from the ball relieving overpressure in the body cavity. This seat arrangement meets **Block & Bleed** requirements. Single Piston Effect (SPE) seat rings are "self-relieving." **(Figure 5)**



Double Piston Effect (DPE)

With the ball in the closed position and pressure from a single source, in the event the upstream seat fails, pressure will increase in the body cavity.The cavity pressure activates the downstream seat's double piston effect creating a second seal on the ball. This seat arrangement meets **Double Isolation & Bleed** requirements. **(Figure 6)**

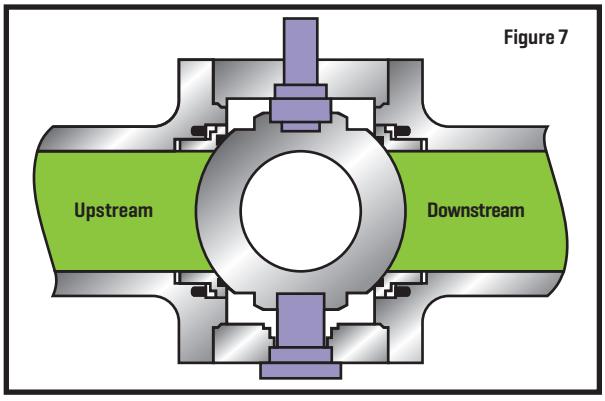
Definition of Double Isolation and Bleed (DIB): A single valve with two seating surfaces, each of which, in the closed position, provides a seal against pressure from a single source, with a means of venting/bleeding the cavity between the seating surfaces. This feature can be provided in one direction or both directions.



Double Block and Bleed (DBB)

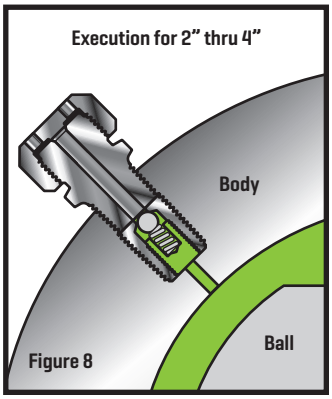
The Double Block and Bleed feature is offered with both seat ring configurations (SPE & DPE). When the ball is closed, pressure is "blocked" from the body cavity by the pressure activated seats. The body cavity can then be vented/bled. **(Figure 7)**

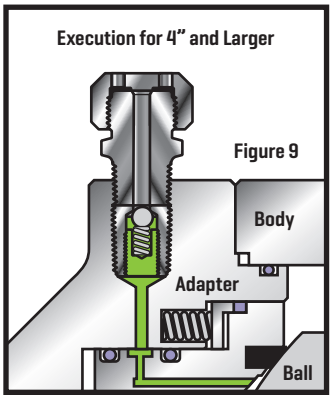
Definition of Double Block and Bleed: A single valve with two seating surfaces that, in the closed position, provides a seal against pressure from both ends of the valve with a means of venting/bleeding the cavity between the seating surfaces.

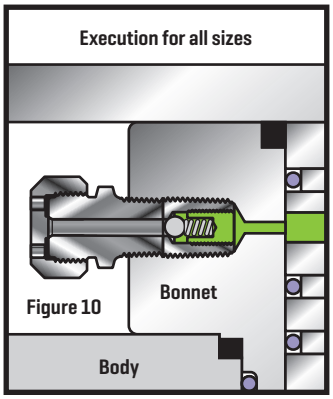


Sealant Fitting

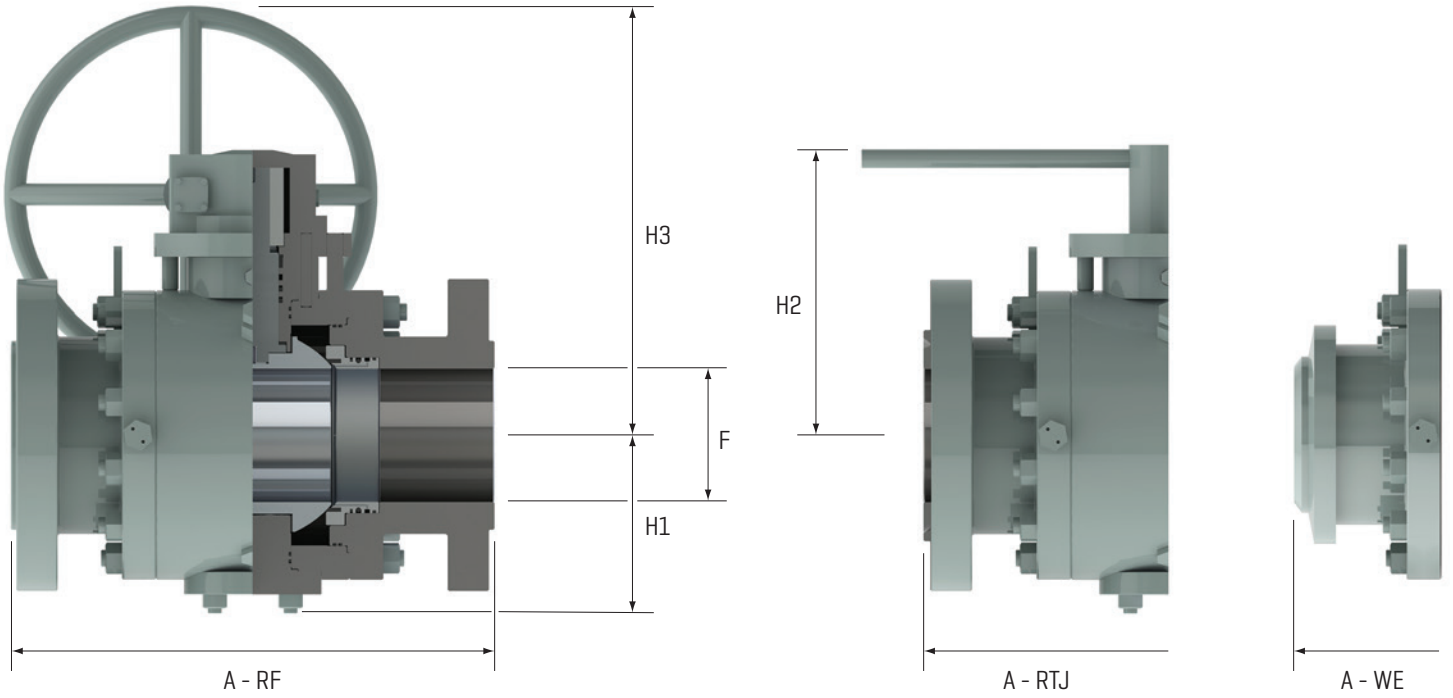
Sealant lubrication fittings are standard on this SCV design. In the event of seat insert or stem seal damage, leakage can occur. Emergency sealant/lubricant injection can save the integrity of the valve by incorporating a seal around the stem or between the seat and the ball until properly serviced. These fittings also act as a lubrication port for regular maintenance. **(Figures 8, 9 & 10)**







3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 2” - 42” Class: 150

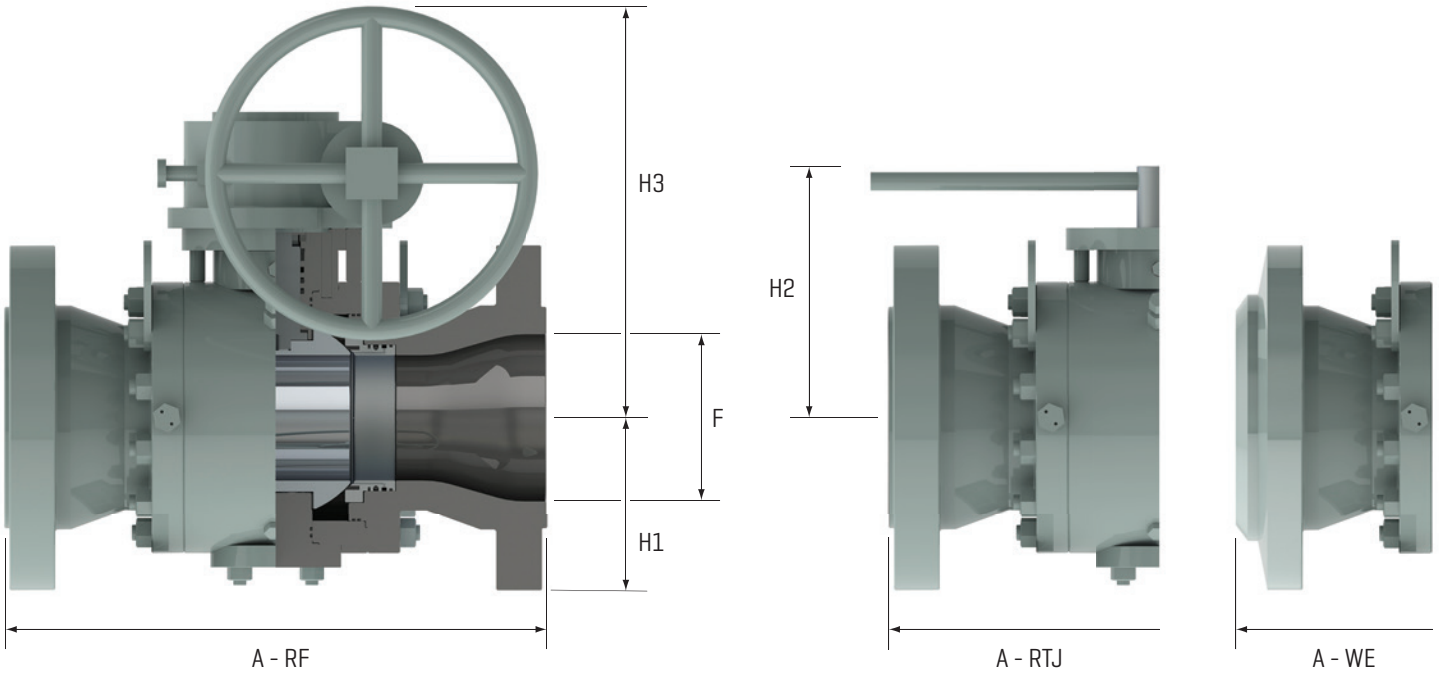


CLASS 150	Size	Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
		F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
IN	2 x 2*	2.00	7.00	/	8.50	4.44	6.50	8.90	●		39.6	28.6
MM	50 x 50	51	178	/	216	113	165	226			18	13
IN	3 x 3*	3.00	8.00	/	11.125	5.56	8.69	11.09	●		68.2	52.8
MM	80 x 80	76	203	/	283	141	221	282			31	24
IN	4 x 4*	4.00	9.00	/	12.00	6.50	9.56	11.96	●		118.8	94.6
MM	100 x 100	102	229	/	305	165	243	304			54	43
IN	6 x 6	6.00	15.50	/	18.00	8.69	12.19	14.59	●		497.2	398.2
MM	150 x 150	152	394	/	547	221	310	371			226	181
IN	8 x 8	8.00	18.00	/	20.50	10.38	14.80	17.20	●		748	646.8
MM	200 x 200	203	457	/	521	264	376	437			340	294
IN	10 x 10	10.00	21.00	/	22.00	12.13	16.63	19.78	●		1196.8	1047.2
MM	250 x 250	254	533	/	559	308	422	502			544	476
IN	12 x 12	12.00	24.00	/	25.00	13.88	18.69	21.84	●		1696.2	1546.6
MM	300 x 300	305	610	/	635	353	475	555			771	703
IN	14 x 14	13.25	27.00	/	30.00	15.50	21.00	24.15	●		2343	2145
MM	350 x 350	337	686	/	762	394	533	613			1065	975
IN	16 x 16	15.25	30.00	/	33.00	17.19	22.75	26.75		●	3042.6	2743.4
MM	400 x 400	387	762	/	838	437	578	680			1383	1247
IN	18 x 18	17.25	34.00	/	36.00	18.75	25.75	29.80		●	4389	3940.2
MM	450 x 450	438	864	/	914	476	654	757			1995	1791
IN	20 x 20	19.25	36.00	/	39.00	20.50	27.05	32.50		●	5288.8	4789.4
MM	500 x 500	489	914	/	991	521	687	826			2404	2177
IN	24 x 24	23.25	42.00	/	45.00	24.38	32.80	36.67		●	8681.2	7933.2
MM	600 x 600	591	1067	/	1143	619	833	931			3946	3606
IN	26 x 26	25.00	45.00	/	49.00	34.83	50.00	55.91		●	10476.4	9429.2
MM	650 x 650	635	1143	/	1247	885	1270	1420			4762	4286
IN	28 x 28	27.00	49.00	/	53.00	36.40	52.45	58.36		●	11974.6	10775.6
MM	700 x 700	686	1247	/	1346	925	1332	1482			5443	4898
IN	30 x 30	29.00	51.00	/	55.00	38.77	55.75	61.95		●	14966.6	13470.6
MM	800 x 800	737	1295	/	1397	985	1416	1574			6803	6123
IN	36 x 36	34.50	60.00	/	68.00	44.54	63.90	70.10		●	24945.8	22451
MM	900 x 900	876	1524	/	1727	1131	1623	1781			11339	10205
IN	42 x 42	34.50	73.00	/	82.00	44.54	63.90	70.10		●	24945.8	22451
MM	1050 x 1050	876	1854	/	2083	1131	1623	1781			11339	10205

* = Lever operated

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.

3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 42” Class: 150



	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
CLASS 150	IN	3 x 2*	2.00	8.00	/	11.125	5.22	7.28	9.68	●		48.4	33
	MM	80 x 50	51	203	/	283	133	185	246			22	15
	IN	4 x 3*	3.00	9.00	/	12.00	6.34	9.47	11.87	●		88	74.8
	MM	100 x 80	76	229	/	305	161	241	301			40	34
	IN	6 x 4*	4.00	15.50	/	18.00	7.28	10.34	12.74	●		149.9	118.8
	MM	150 x 100	102	394	/	457	185	263	324			68	54
	IN	8 x 6	6.00	18.00	/	20.50	9.47	13.29	15.59	●		598.4	497.2
	MM	200 x 150	152	457	/	521	541	338	396			272	226
	IN	10 x 8	8.00	21.00	/	22.00	11.16	15.90	18.30	●		847	748
	MM	250 x 200	203	533	/	559	283	404	465			385	340
	IN	12 x 10	10.00	24.00	/	25.00	13.23	17.84	20.98	●		1496	1346.4
	MM	300 x 250	254	610	/	635	336	453	533			680	612
	IN	14 x 12	12.00	27.00	/	30.00	14.98	20.00	23.04	●		1845.8	1645.6
	MM	350 x 300	305	686	/	762	380	508	585			839	748
	IN	16 x 14	13.25	30.00	/	33.00	16.60	22.30	25.45		●	2593.8	2343
	MM	400 x 350	337	762	/	838	422	566	646			1179	1065
	IN	18 x 16	15.25	34.00	/	36.00	18.39	24.05	28.05		●	3440.8	3093.2
	MM	450 x 400	387	864	/	914	467	611	712			1564	1406
	IN	20 x 18	17.25	36.00	/	39.00	20.05	27.05	31.10		●	7139	4439.6
	MM	500 x 450	438	914	/	991	509	687	790			3245	2018
	IN	24 x 20	19.25	42.00	/	45.00	21.90	28.80	33.90		●	5588	5137
	MM	600 x 500	489	1067	/	1143	556	732	861			2540	2335
	IN	30 X 24	23.25	51.00	/	55.00	21.06	/	26.1		●	7562	6731
	MM	600 x	591	1295	/	1397	535	/	663			3430	3053
	IN	36 X 30	28.97	60.00	/	68.03	27.75	/	30.59		●	14220	12655
	MM	900 x 800	736	1524	/	1728	705	/	777			6450	5740
	IN	42 X 36	34.48	73.00	/	82.00	37.00	/	43.03		●	30820	27430
	MM	1050 x 900	876	1854	/	2083	940	/	1093			13980	12442

***** = Lever operated

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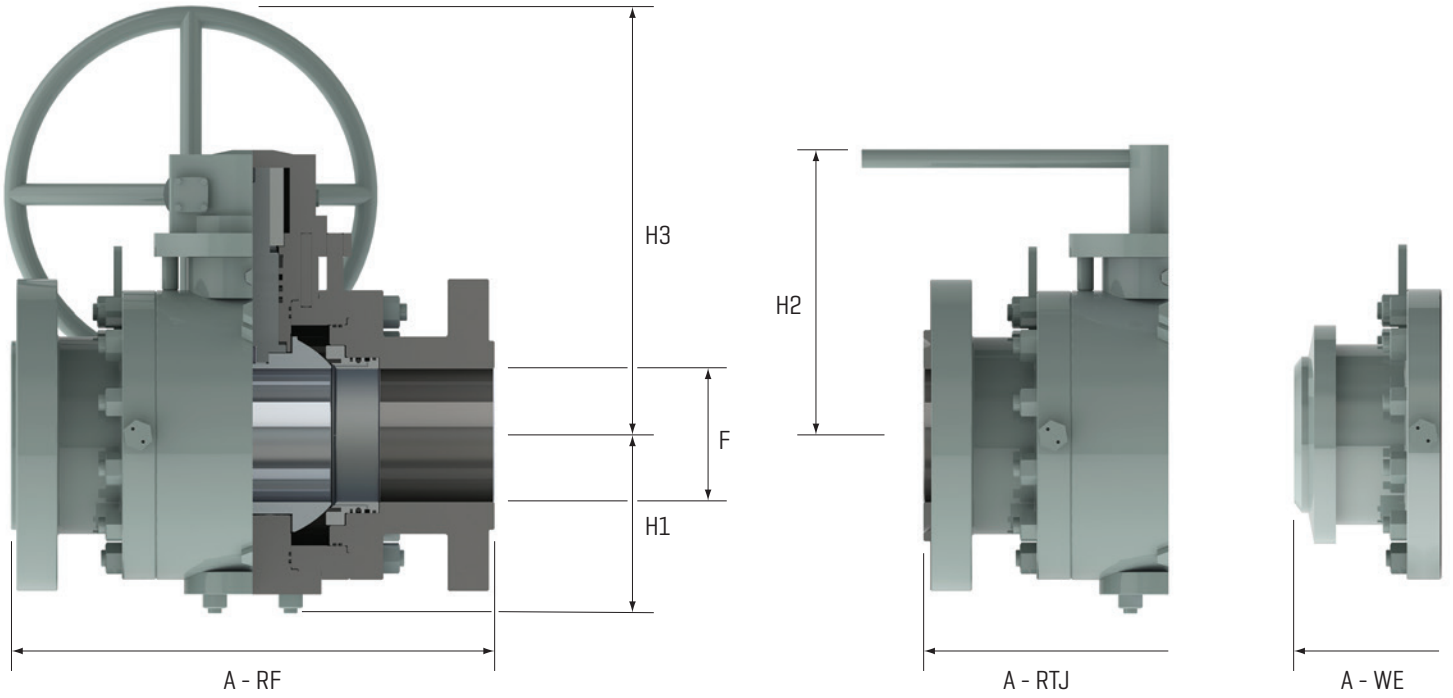
3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 2” - 42” Class: 300



	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights	BW Weights
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT	LBS/KG	LBS/KG
CLASS 300	IN	2 x 2*	2.00	8.50	9.125	8.50	4.44	6.50	8.90	●		59.40	44
	MM	50 x 50	51	216	232	216	113	165	226			27	20
	IN	3 x 3*	3.00	11.125	11.75	11.125	5.56	8.69	11.09	●		99	79.2
	MM	80 x 80	76	283	299	283	141	221	282			45	36
	IN	4 x 4*	4.00	12.00	12.625	12.00	6.50	9.56	11.96	●		158.4	134.2
	MM	100 x 100	102	305	321	305	165	243	304			72	61
	IN	6 x 6	6.00	15.875	16.50	15.88	8.69	12.19	14.59	●		547.8	468.6
	MM	150 x 150	152	403	419	403	221	310	371			249	213
	IN	8 x 8	8.00	19.75	20.375	20.50	10.38	14.80	17.20	●		847	737
	MM	200 x 200	203	502	518	521	264	376	437			385	335
	IN	10 x 10	10.00	22.375	23.00	22.00	12.13	16.63	19.78	●		1245.2	1075.8
	MM	250 x 250	254	568	584	559	308	422	502			566	489
	IN	12 x 12	12.00	25.50	26.125	25.00	13.88	18.69	21.84	●		1894.2	1705
	MM	300 x 300	305	648	664	635	340	475	555			861	775
	IN	14 x 14	13.25	30.00	30.625	30.00	15.50	21.00	24.15	●		2593.8	2294.6
	MM	350 x 350	337	762	778	762	394	533	613			1179	1043
	IN	16 x 16	15.25	33.00	33.625	33.00	17.19	22.75	26.75		●	3440.8	3093.2
	MM	400 x 400	387	838	854	838	437	578	679			1564	1406
	IN	18 x 18	17.25	36.00	36.625	36.00	18.75	25.75	29.80		●	4987.4	4490.2
	MM	450 x 450	438	914	930	914	476	654	757			2267	2041
	IN	20 x 20	19.25	39.00	39.75	39.00	20.50	27.05	32.50		●	5486.8	4987.4
	MM	500 x 500	489	991	1010	991	521	687	826			2494	2267
	IN	24 x 24	23.25	45.00	45.875	45.00	24.38	32.80	36.67		●	9229	8430.4
	MM	600 x 600	591	1143	1165	1143	619	833	931			4195	3832
	IN	26 x 26	25.00	49.00	50.00	49.00	34.83	50.00	55.91		●	11675.4	10476.4
	MM	650 x 650	635	1245	1270	1245	885	1270	1420			5307	4762
	IN	28 x 28	27.00	53.00	54.00	53.00	36.40	52.45	58.36		●	13970	12573
	MM	700 x 700	686	1346	1372	1346	925	1332	1482			6350	5715
	IN	30 x 30	29.00	55.00	56.00	55.00	38.77	55.75	61 .95		●	16964.2	15265.8
	MM	800 x 500	737	1397	1422	1397	985	1416	1574			7711	6939
	IN	36 x 36	34.50	68.00	69.125	68.00	44.54	63.90	70.10		●	25944.6	23350.8
	MM	900 x 900	876	1727	1756	1727	1727	1623	1781			11793	10614
	IN	42 X 42	40.23	82.00	/	82.00	37.36	/	43.26		●	35935	32701
	MM	1050 x 1050	1022	2083	/	2083	949	/	1099			16300	14833

***** = Lever operated

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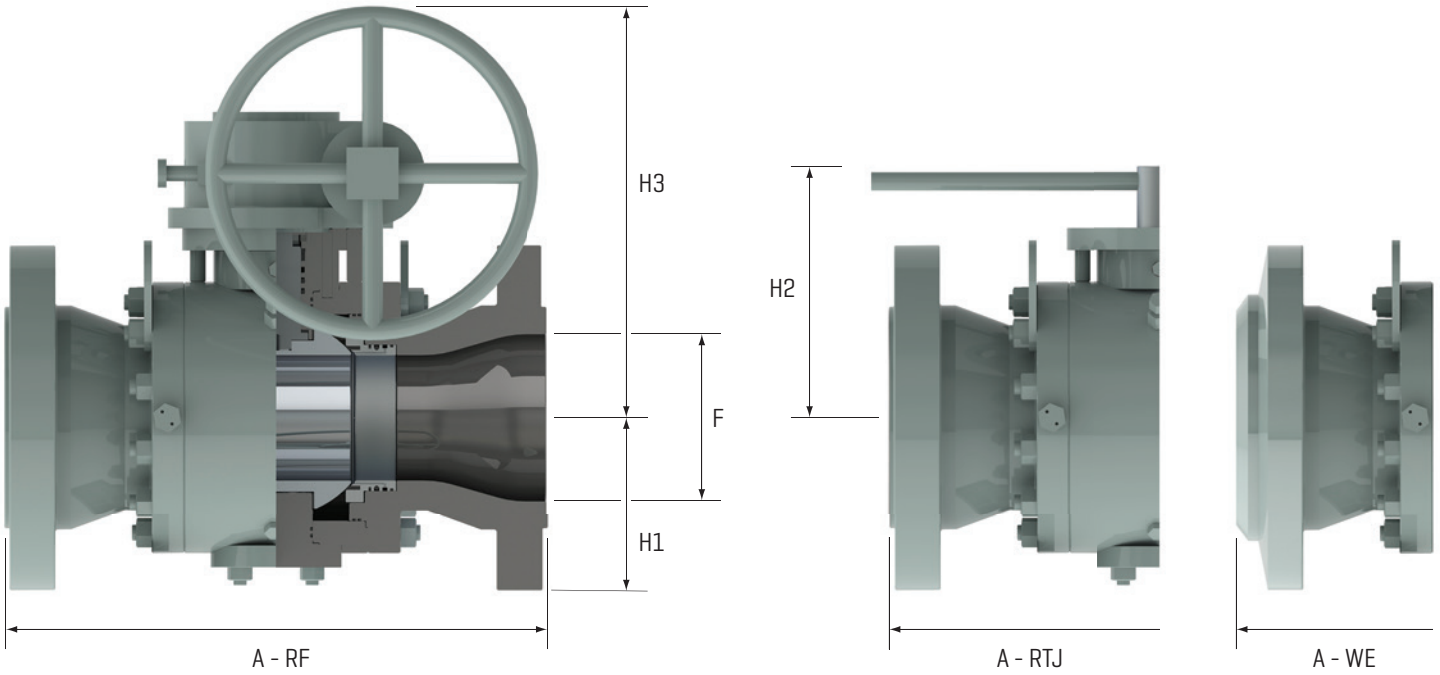
3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 42” Class: 300



CLASS 300	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
	IN	3 x 2*	2.00	11.125	11.75	11.125	5.22	7.28	9.68	●		68.2	52.8
	MM	80 x 50	51	283	299	283	133	185	279			31	24
	IN	4 x 3*	3.00	12.00	12.625	12.00	6.34	9.47	11.87	●		118.8	88
	MM	100 x 80	76	305	321	305	161	241	301			54	40
	IN	6 x 4	4.00	15.875	16.50	15.88	7.28	10.34	12.74	●		217.8	178.2
	MM	150 x 100	102	403	419	403	185	263	324			99	81
	IN	8 x 6	6.00	19.75	20.375	19.75	9.47	13.29	15.59	●		646.8	558.8
	MM	200 x 150	152	502	518	502	241	338	396			294	254
	IN	10 x 8	8.00	22.375	23.00	22.00	11.16	15.90	18.30	●		897.6	776.6
	MM	250 x 200	203	568	584	559	283	404	465			408	353
	IN	12 x 10	10.00	25.50	26.125	25.00	13.23	17.84	20.98	●		1645.6	1445.4
	MM	300 x 250	254	648	664	635	336	453	533			748	657
	IN	14 x 12	12.00	30.00	30.625	30.00	14.98	20.00	23.04	●		1995.4	1795.2
	MM	350 x 300	305	762	778	762	380	508	585			907	816
	IN	16 x 14	13.25	33.00	33.625	33.00	16.60	22.30	25.45		●	2893	2644.4
	MM	400 x 350	337	838	854	838	422	566	646			1315	1202
	IN	18 x 16	15.25	36.00	36.625	36.00	18.39	24.05	28.05		●	3940.2	3542
	MM	450 x 400	387	914	930	914	467	611	713			1791	1610
	IN	20 x 18	17.25	39.00	39.75	39.00	20.05	27.05	31.10		●	5288.8	4789.4
	MM	500 x 450	438	991	1010	991	509	687	790			2404	2177
	IN	24 x 20	19.25	45.00	45.875	43.00	21.90	28.80	33.90		●	5915.8	5337.2
	MM	600 x 500	489	1143	1165	1092	556	732	861			2698	2426
	IN	30 X 24	23.25	55	55.98	55	23.7	/	26.53		●	10207	9187
	MM	800 x 600	591	1397	1422	1397	602	/	674			4630	4167
	IN	36 X 30	28.97	68.00	69.13	68.00	28.3	/	84.09		●	18365	16345
	MM	900 x 800	736	1727	1756	1727	719	/	866			8330	7414
	IN	42 X 36	34.48	82.00	/	82.00	37.36	/	43.26		●	35935	32701
	MM	1050 x 900	876	2083	/	2083	949	/	1099			16300	14833

***** = Lever operated

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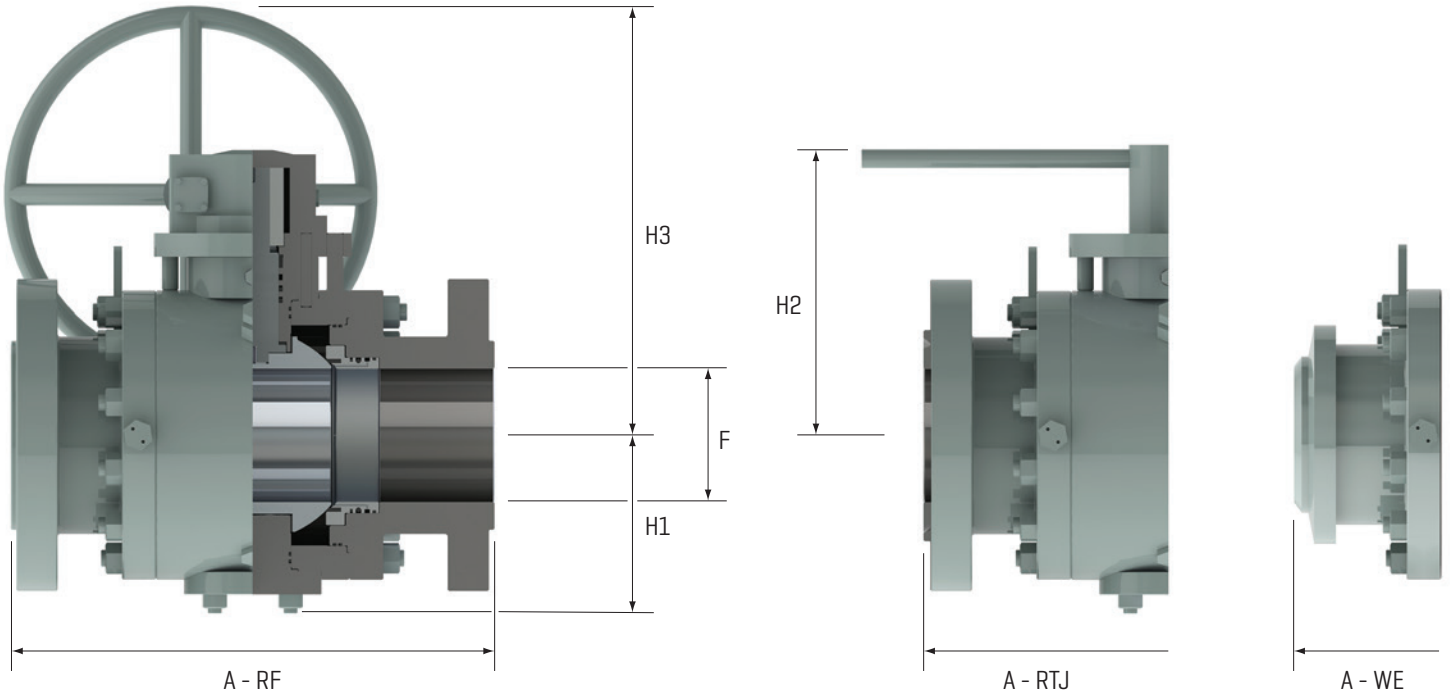
3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 2” - 42” Class: 600



CLASS 600	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
	IN	2 x 2*	2.00	11.50	11.625	11.50	4.44	6.50	8.90	●		68.2	52.8
	MM	50 x 50	51	292	295	292	113	165	226			31	24
	IN	3 x 3*	3.00	14.00	14.125	14.00	5.56	8.69	11.09	●		118.8	94.6
	MM	80 x 80	76	356	359	356	141	221	282			54	43
	IN	4 x 4*	4.00	17.00	17.125	17.00	6.50	9.56	11.96	●		217.8	178.2
	MM	100 x 100	102	432	435	432	165	243	304			99	81
	IN	6 x 6	6.00	22.00	22.125	22.00	8.69	12.19	14.59	●		598.4	497.2
	MM	150 x 150	152	559	562	559	221	310	371			272	226
	IN	8 x 8	8.00	26.00	26.125	26.00	10.38	14.80	17.20	●		1196.8	976.8
	MM	200 x 200	203	660	664	660	264	376	437			544	444
	IN	10 x 10	10.00	31.00	31.125	31.00	12.13	16.63	19.78	●		1696.2	1375
	MM	250 x 250	254	787	791	787	308	422	502			771	625
	IN	12 x 12	12.00	33.00	33.125	33.00	13.88	18.69	21.84	●		2193.4	1775.4
	MM	300 x 300	305	838	841	838	353	475	555			997	807
	IN	14 x 14	13.25	35.00	35.125	35.00	15.50	21.00	24.15		●	2943.6	2393.6
	MM	350 x 350	337	889	892	889	394	533	613			1338	1088
	IN	16 x 16	15.25	39.00	39.125	39.00	17.19	22.75	26.75		●	4538.6	3740
	MM	400 x 400	387	991	994	991	437	578	680			2063	1700
	IN	18 x 18	17.25	43.00	43.125	43.00	18.75	25.75	29.80		●	5876.2	4809.2
	MM	450 x 450	438	1092	1095	1092	476	654	757			2671	2186
	IN	20 x 20	19.25	47.00	47.25	47.00	20.50	27.05	32.50		●	6635.2	5438.4
	MM	500 x 500	489	1194	1200	1194	521	687	826			3016	2472
	IN	24 x 24	23.25	55.00	55.325	55.00	24.38	32.38	36.67		●	11523.6	10227.8
	MM	600 x 600	591	1397	1405	1397	619	822	931			5238	4649
	IN	26 x 26	25.00	57.00	57.50	57.00	31.74	40.74	45.64		●	13670.8	11475.2
	MM	650 x 650	635	1448	1461	1448	806	1035	1159			6214	5216
	IN	28 x 28	27.00	61.00	61.50	61.00	38.85	44.76	50.67		●	22451	20207
	MM	700 x 700	686	1549	1562	1549	987	1137	1287			10205	9185
	IN	30 x 30	29.00	65.00	65.50	65.00	42.00	48.20	54.40		●	23949.2	21553.4
	MM	750 x 750	737	1651	1664	1651	1067	1224	1382			10886	9797
	IN	36 x 36	34.50	82.00	82.625	82.00	47.34	53.54	59.74		●	37620	33827
	MM	900 x 900	876	2083	2099	2083	1202	1360	1517			17100	15376
	IN	42 X 42	40.23	96.00	/	96.00	38.46	/	53.3		●	47598	42362
	MM	1050 x 1050	1022	2438	/	2438	977	/	1354			21590	19215

***** = Lever operated

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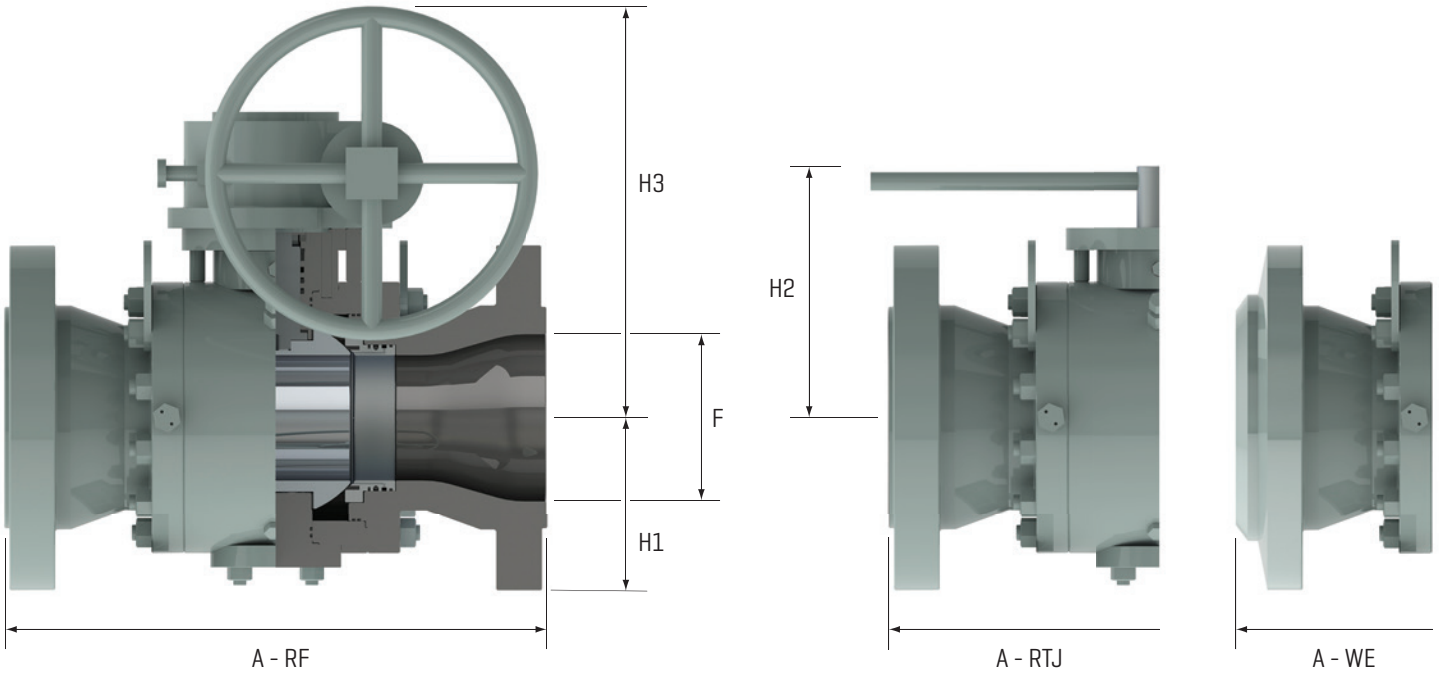
3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 42” Class: 600



	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
CLASS 600	IN	3 x 2*	2.00	14.00	14.125	14.00	5.22	7.28	9.68	●		79.2	63.8
	MM	80 x 50	51	356	359	356	133	185	279			36	29
	IN	4 x 3*	3.00	17.00	17.125	17.00	6.34	9.47	11.87	●		138.6	114.4
	MM	100 x 80	76	432	435	432	161	241	301			63	52
	IN	6 x 4	4.00	22.00	22.125	22.00	7.28	10.34	12.74	●		299.2	248.6
	MM	150 x 100	102	559	562	559	185	263	324			136	113
	IN	8 x 6	6.00	26.00	26.125	26.00	9.47	13.29	15.59	●		697.4	578.6
	MM	200 x 150	152	660	664	660	241	338	396			317	263
	IN	10 x 8	8.00	31.00	31.125	31.00	11.16	15.90	18.30	●		1346.4	1075.8
	MM	250 x 200	203	787	791	787	283	404	465			612	489
	IN	12 x 10	10.00	33.00	33.125	33.00	13.23	17.84	20.98	●		1894.2	1535.6
	MM	300 x 250	254	838	841	838	336	453	533			861	698
	IN	14 x 12	12.00	35.00	35.125	35.00	14.98	20.00	23.04		●	2593.8	2145
	MM	350 x 300	305	889	892	889	380	508	585			1179	975
	IN	16 x 14	13.25	39.00	39.125	39.00	16.60	22.30	25.45		●	3291.2	2743.4
	MM	400 x 350	337	991	994	991	422	566	646			1496	1247
	IN	18 x 16	15.25	43.00	43.125	43.00	18.39	24.05	28.05		●	5088.6	4180
	MM	450 x 400	387	1092	1095	1092	467	611	713			2313	1900
	IN	20 x 18	17.25	47.00	47.25	47.00	20.05	27.05	31.10		●	6536.2	5337.2
	MM	500 x 450	438	1194	1200	1194	509	687	790			2971	2426
	IN	24 x 20	19.25	55.00	55.325	55.00	21.90	28.80	33.90		●	7383.2	6036.8
	MM	600 x 500	489	1397	1405	1397	556	732	861			3356	2744
	IN	30 X 24	23.25	65.00	65.50	65.00	24.09	/	29.88		●	13030	11987
	MM	800 x 600	591	1651	1664	1651	612	/	759			5910	5437
	IN	36 X 30	28.97	82.00	82.625	82.00	28.58	/	34.92		●	23281	21186
	MM	900 x 800	736	2083	2098	2083	726	/	887			10560	9610
	IN	42 X 36	34.48	96.00	/	96.00	38.46	/	53.3		●	47598	42362
	MM	1050 x 900	876	2438	/	2438	977	/	1354			21590	19215

***** = Lever operated

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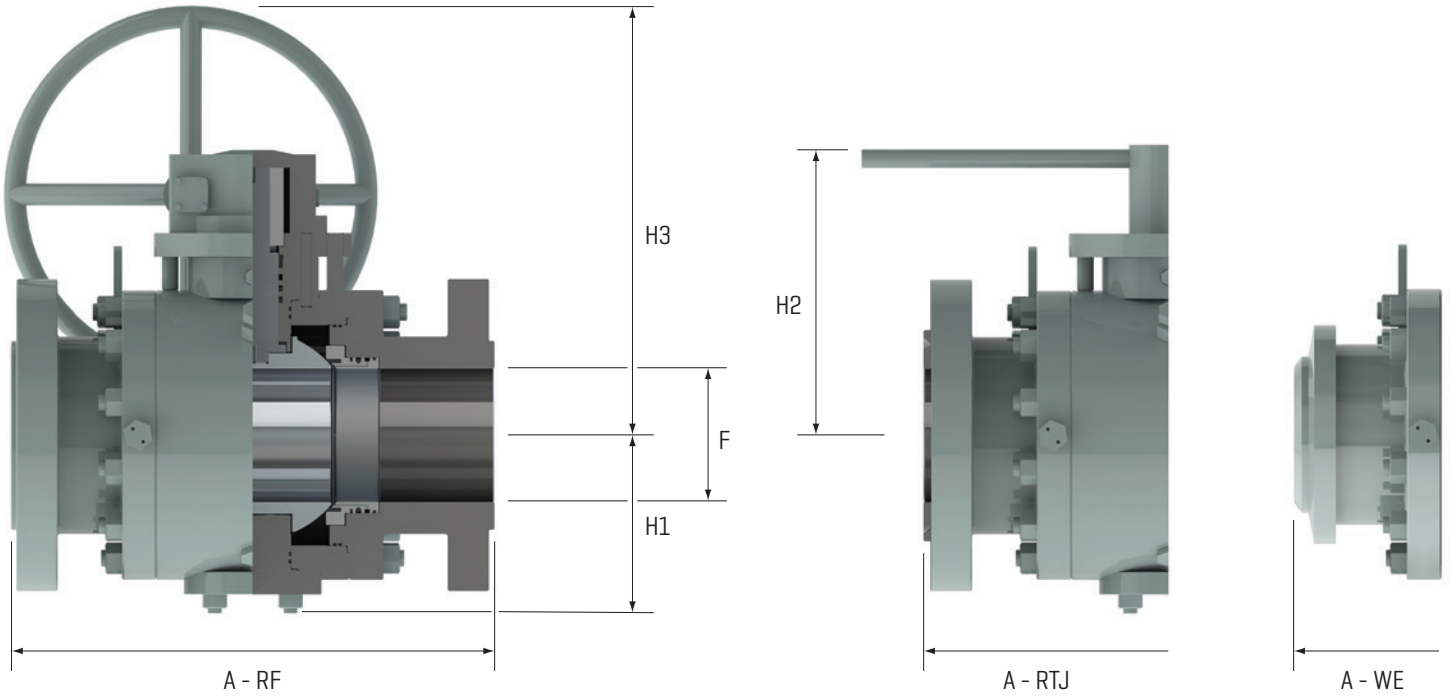
3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 2” - 36” Class: 900

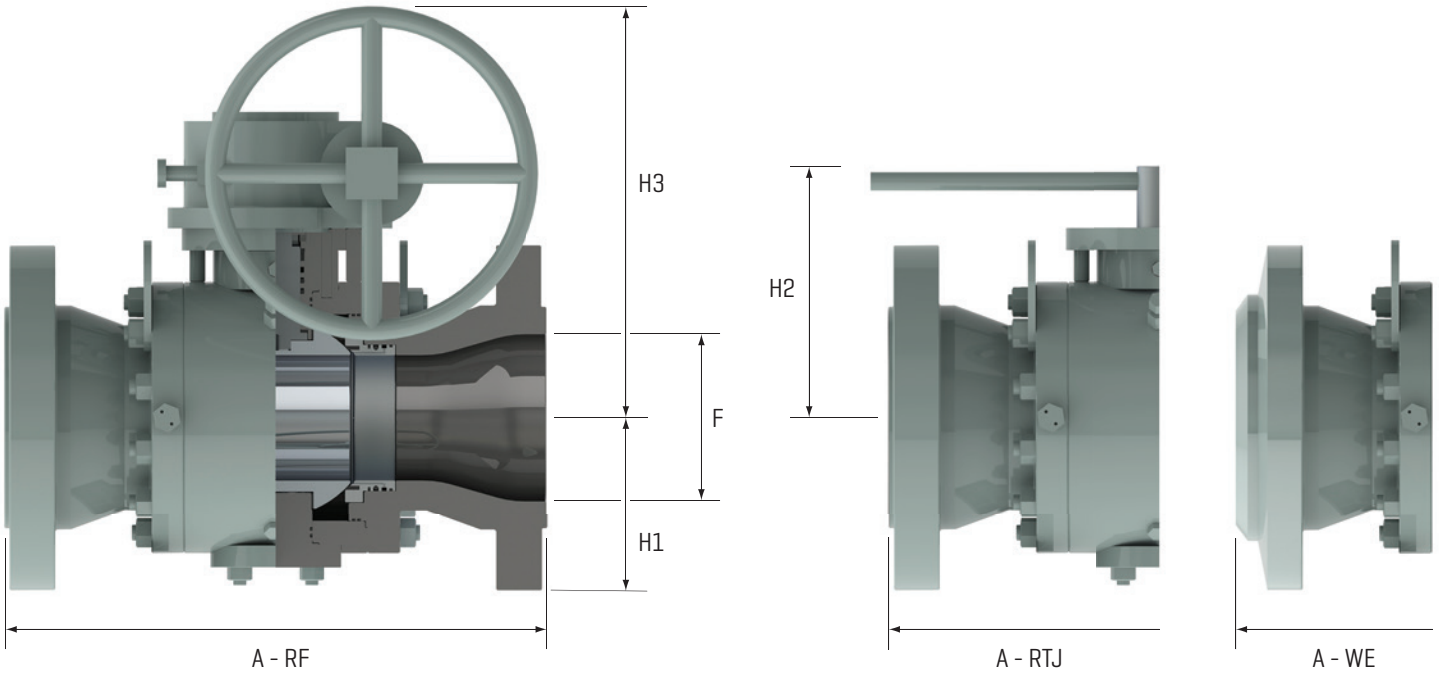


CLASS 900	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
	IN	2 x 2*	2.00	14.50	14.625	14.50	4.44	7.28	10.90	●		118.8	94.6
	MM	50 x 50	51	368	372	368	113	185	277			54	43
	IN	3 x 3*	3.00	15.00	15.125	15.00	5.56	9.47	13.05	●		178.2	143
	MM	80 x 80	76	381	384	381	141	241	332			81	65
	IN	4 x 4	4.00	18.00	18.125	18.00	6.50	10.34	13.92	●		319	224.4
	MM	100 x 100	102	457	460	457	165	263	354			145	102
	IN	6 x 6	6.00	24.00	24.125	24.00	8.69	12.97	16.55	●		697.4	558.8
	MM	150 x 150	152	610	613	610	221	329	420			317	254
	IN	8 x 8	8.00	29.00	29.125	29.00	10.38	15.58	19.10	●		1546.6	1236
	MM	200 x 200	203	737	740	737	264	396	485			703	562
	IN	10 x 10	10.00	33.00	33.125	33.00	12.13	17.41	21.74	●		1846	1476
	MM	250 x 250	254	838	841	838	308	442	552			839	671
	IN	12 x 12	12.00	38.00	38.125	38.00	13.88	19.47	23.80	●		2593	2343
	MM	300 x 300	305	965	968	965	353	495	605			1315	1065
	IN	14 x 14	12.75	40.50	40.875	40.50	15.50	21.78	26.11		●	3841	3093
	MM	350 x 350	337	1029	1038	1029	394	553	663			1746	1406
	IN	16 x 16	14.75	44.50	44.875	44.50	17.19	23.53	28.71		●	4739	3791
	MM	400 x 400	387	1130	1140	1130	437	598	729			2154	1723
	IN	18 x 18	14.75	48.00	48.50	48.00	18.39	24.83	30.01		●	5438	4239
	MM	450 x 450	438	1219	1232	1219	467	631	762			3197	2562
	IN	20 x 20	18.625	52.00	52.50	52.00	20.50	28.30	34.46		●	10027.6	8032
	MM	500 x 500	489	1321	1334	1321	521	719	875			4558	3651
	IN	24 x 24	22.50	61.00	61.75	61.00	24.38	33.20	38.63		●	13372	10727
	MM	600 x 600	591	1549	1569	1549	619	843	981			6078	4876
	IN	30 x 30	28.11	74.00	74.88	74.00	31.06	/	41.18		●	27426	24410
	MM	750 x 750	714	1880	1902	1880	789	/	1046			12440	11072
	IN	36 x 36	33.74	90.00	91.14	90.00	35.43	/	46.1		●	44423	40426
	MM	900 x 900	857	2286	2315	2286	900	/	1171			20150	18337

***** = Lever operated

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.

3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 42” Class: 900

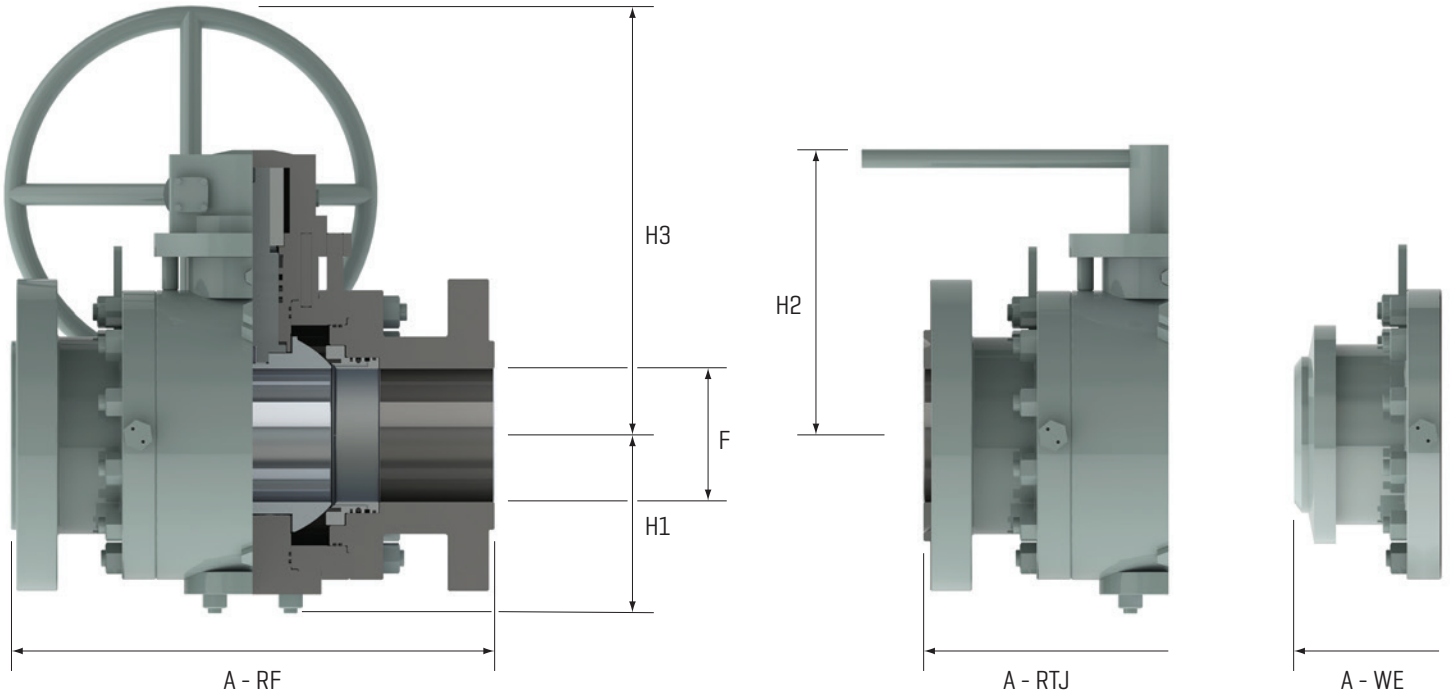


	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights	BW Weights
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT	LBS/KG	LBS/KG
CLASS 900	IN	3 x 2*	2.00	15.00	15.125	15.00	5.22	8.06	11.64	●		138.6	107.8
	MM	80 x 50	51	381	384	381	133	205	296			63	49
	IN	4 x 3*	3.00	18.00	18.125	18.00	6.34	10.25	13.84	●		217.8	173.8
	MM	100 x 80	76	457	460	457	161	260	352			99	79
	IN	6 x 4	4.00	24.00	24.125	24.00	7.28	11.12	14.70	●		437.8	347.6
	MM	150 x 100	102	610	613	610	185	283	373			199	158
	IN	8 x 6	6.00	29.00	29.125	29.00	9.47	14.07	17.65	●		897.6	717.2
	MM	200 x 150	152	737	740	737	241	357	448			408	326
	IN	10 x 8	8.00	33.00	33.125	33.00	11.16	16.68	20.26	●		1595	1276
	MM	250 x 200	203	838	841	838	283	424	515			725	580
	IN	12 x 10	10.00	38.00	38.125	38.00	13.23	18.62	22.94	●		2295	1846
	MM	300 x 250	254	965	968	965	336	473	583			1043	839
	IN	14 x 12	12.00	40.50	40.875	40.50	14.98	20.77	25.00		●	3392	2743
	MM	350 x 300	305	1029	1038	1029	380	528	635			1542	1247
	IN	16 x 14	12.75	44.50	44.875	44.50	16.60	23.10	27.41		●	3991	3192
	MM	400 x 350	337	1130	1140	1130	422	587	696			1814	1451
	IN	18 x 16	14.75	48.00	48.50	48.00	18.39	24.83	30.01		●	5438	4239
	MM	450 x 400	387	1219	1231	1219	467	631	763			2472	1927
	IN	20 x 18	16.75	52.00	52.50	52.00	18.75	26.53	31.75		●	7031	5636
	MM	500 x 450	438	1321	1334	1321	509	674	807			3878	3107
	IN	24 x 20	18.625	61.00	61.75	61.00	21.90	29.58	35.86		●	11436	9130
	MM	600 x 500	489	1549	1569	1549	556	751	911			5198	4150
	IN	30 X 24	22.48	74.00	74.88	74.00	27.08	/	32.87		●	18232	16773
	MM	750 x 600	571	1880	1902	1880	688	/	835			8270	7608
	IN	36 X 30	28.11	90.00	91.14	90.00	35.43	/	46.1		●	44423	40426
	MM	900 x750	714	2286	2315	2286	900	/	1171			20150	18337
	IN	42 X 36	33.74	105.00	106.14	105.00	41.73	/	48.03		●	52073	47388
	MM	1050 x 900	857	2667	2696	2667	1060	/	1220			23620	21495

* = Lever operated

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.

3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 1” - 24” Class: 1500

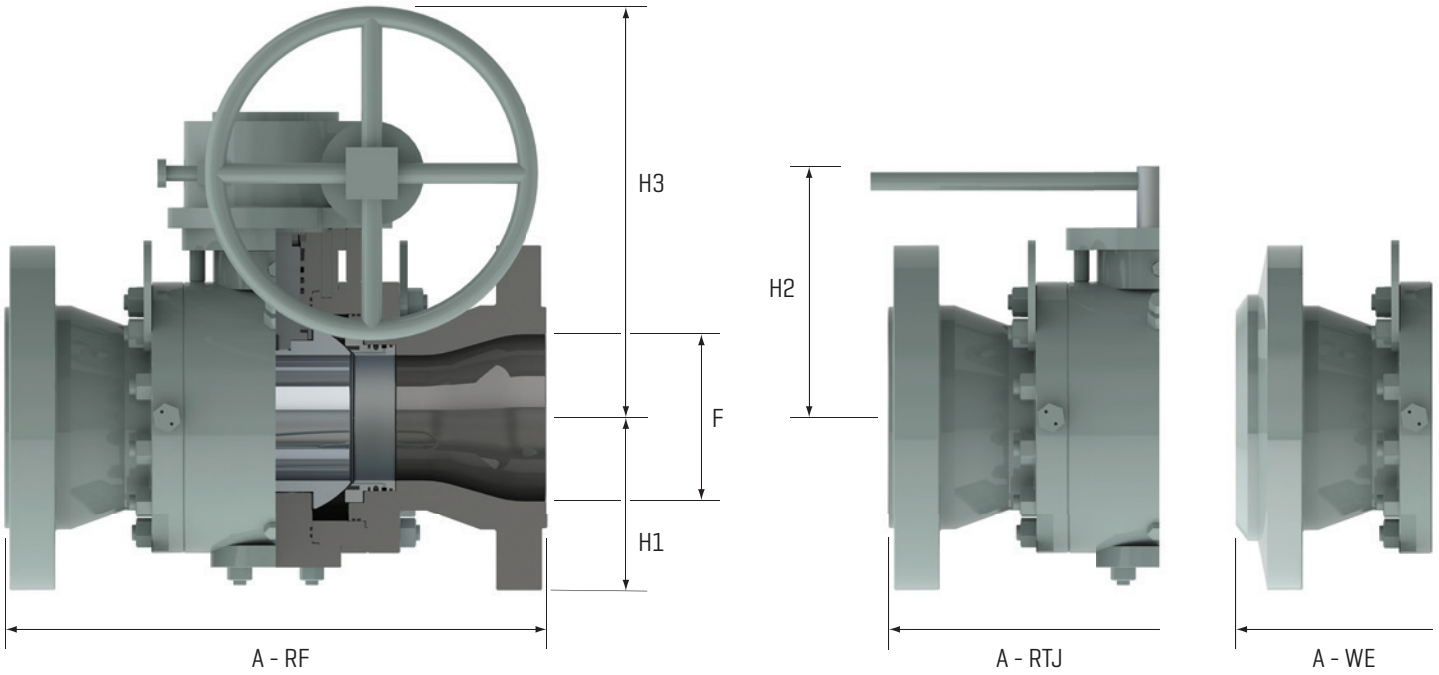


CLASS 1500	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
	IN	1 x 1*	1.00	/	10.0	/	3.15	5.90	7.64	●		70	/
	MM	25 x 25	25	/	254	/	80	150	194			26	/
	IN	1.5 x 1.5*	1.50	/	12	/	4	7.56	7.91	●		107	/
	MM	38 x 38	38	/	305	/	100	192	201			40	/
	IN	2 x 2*	2.00	14.50	14.625	14.49	4.44	6.50	8.90	●		119	95
	MM	50 x 50	51	368	371	368	113	265	226			54	43
	IN	3 x 3*	3.00	18.50	18.625	18.50	5.56	8.69	11.09	●		240	185
	MM	80 x 80	76	470	473	470	141	221	282			109	84
	IN	4 x 4	4.00	21.50	21.625	21.50	6.50	9.56	11.96	●		420	280
	MM	100 x 100	102	546	549	546	165	243	304			191	127
	IN	6 x 6	5.75	27.75	28.00	27.75	8.69	12.19	14.59		●	1190	900
	MM	150 x 150	152	705	711	705	221	310	371			541	409
	IN	8 x 8	8.00	32.75	33.125	32.75	10.38	14.80	17.20		●	1936	1355
	MM	200 x 200	203	832	841	832	264	376	437			880	616
	IN	10 x 10	10.00	39.00	39.375	39.02	12.13	16.63	19.78		●	3420	2394
	MM	250 x 250	254	991	1000	991	308	422	502			1555	1088
	IN	12 x 12	12.00	44.50	45.125	44.50	13.88	18.69	21.84		●	5120	3500
	MM	300 x 300	305	1130	1146	1130	353	475	555			2327	682
	IN	14 x 14	13.25	49.50	50.25	49.50	15.50	21.00	24.15		●	6259	4310
	MM	350 x 350	337	1257	1276	1257	394	533	613			2845	1959
	IN	16 x 16	15.25	54.50	55.375	54.50	17.19	22.75	26.75		●	9210	7668
	MM	400 x 400	387	1384	1407	1384	437	578	680			4186	3485
	IN	18 x 18	17.25	60.50	61.4	60.50	18.75	25.75	29.80		●	14260	11420
	MM	450 x 450	438	1537	1559	1537	467	654	757			6482	5191
	IN	20 x 20	19.25	65.50	66.375	65.50	20.50	27.05	32.50		●	20550	17467
	MM	500 x 500	489	1664	1686	1664	521	687	826			9341	7940
	IN	24 x 24	23.25	76.50	77.625	76.50	24.38	32.38	36.67		●	27590	23450
	MM	600 x 600	591	1943	1972	1943	619	823	931			12540	10660

***** = Lever operated

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.

3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 24” Class: 1500

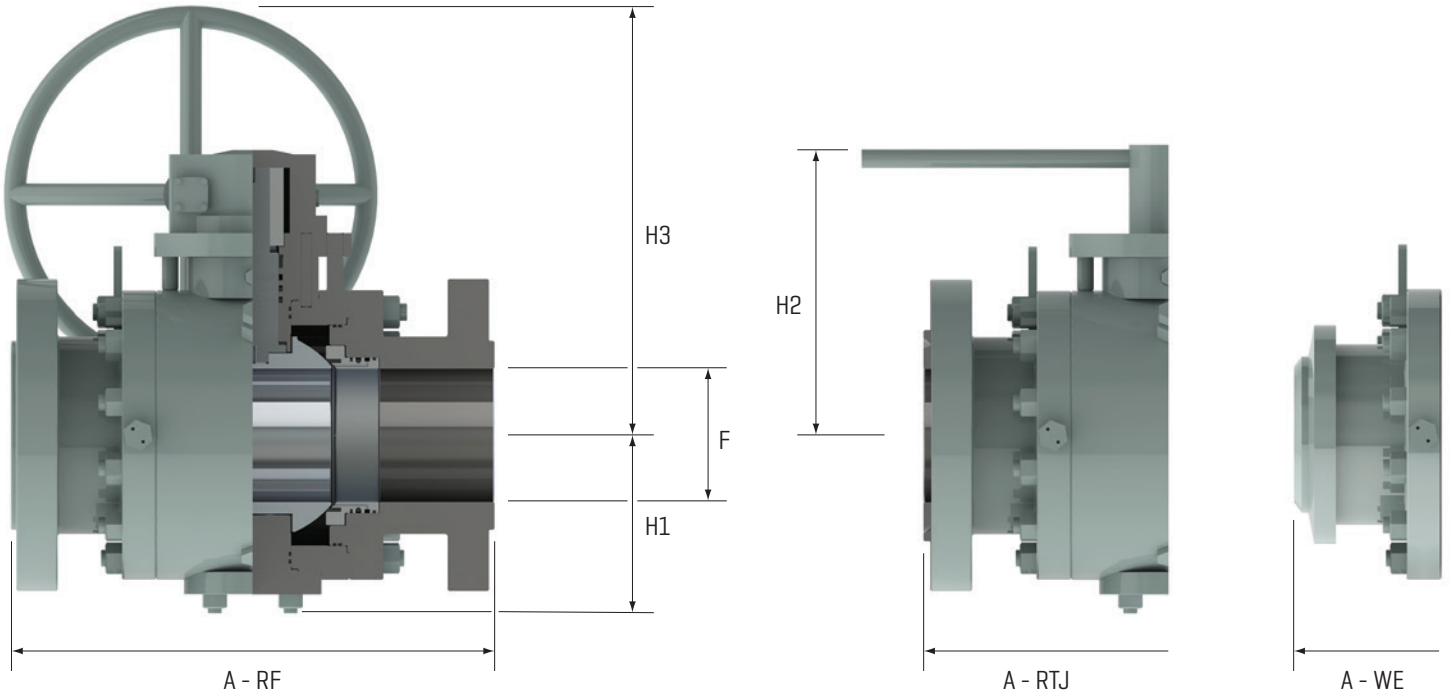


CLASS 1500	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
	IN	3 x 2*	2.00	18.50	18.625	18.50	5.22	7.28	9.68	●		170	155
	MM	80 x 50	51	470	473	470	133	185	246			77	71
	IN	4 x 3	3.00	21.50	21.625	21.50	6.34	9.47	11.87	●		320	265
	MM	100 x 80	76	546	549	546	161	241	301			145	120
	IN	6 x 4	4.00	27.75	28.00	27.75	7.28	10.34	12.74		●	650	540
	MM	150 x 100	102	705	711	705	185	263	324			295	245
	IN	8 x 6	6.00	32.75	33.125	32.75	9.47	13.29	15.59		●	1450	980
	MM	200 x 150	152	832	841	832	241	338	396			659	445
	IN	10 x 8	8.00	39.00	39.375	39.00	11.16	15.90	18.30		●	2380	1666
	MM	250 x 200	203	991	1000	991	283	404	465			1082	757
	IN	12 x 10	10.00	44.50	45.125	44.50	13.23	17.84	20.98		●	4070	2849
	MM	300 x 250	254	1130	1146	1130	336	453	533			1850	1295
	IN	14 x 12	12.00	49.50	50.25	49.50	14.98	20.00	23.04		●	5741	4020
	MM	350 x 300	305	1257	1276	1257	381	508	585			2606	1827
	IN	16 x 14	13.25	54.50	55.375	54.50	16.60	22.30	25.45		●	6678	5640
	MM	400 x 350	337	1384	1407	1384	422	566	646			2845	1959
	IN	18 x 16	15.25	60.50	61.375	60.50	18.39	24.05	28.05		●	12180	9740
	MM	450 x 400	387	1537	1559	1219	467	611	712			5536	4427
	IN	20 x 18	17.25	65.50	66.375	65.50	20.05	27.05	31.10		●	17360	14800
	MM	500 x 450	438	1664	1686	1321	509	687	790			7891	6727
	IN	24 x 20	19.25	76.50	77.625	76.50	21.90	28.80	33.90		●	23820	19120
	MM	600 x 500	489	1943	1972	1943	556	732	861			10830	8690

***** = Lever operated

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.

3-Piece Trunnion Ball Valves Full Port - API 6D
Size: 1” - 12” Class: 2500

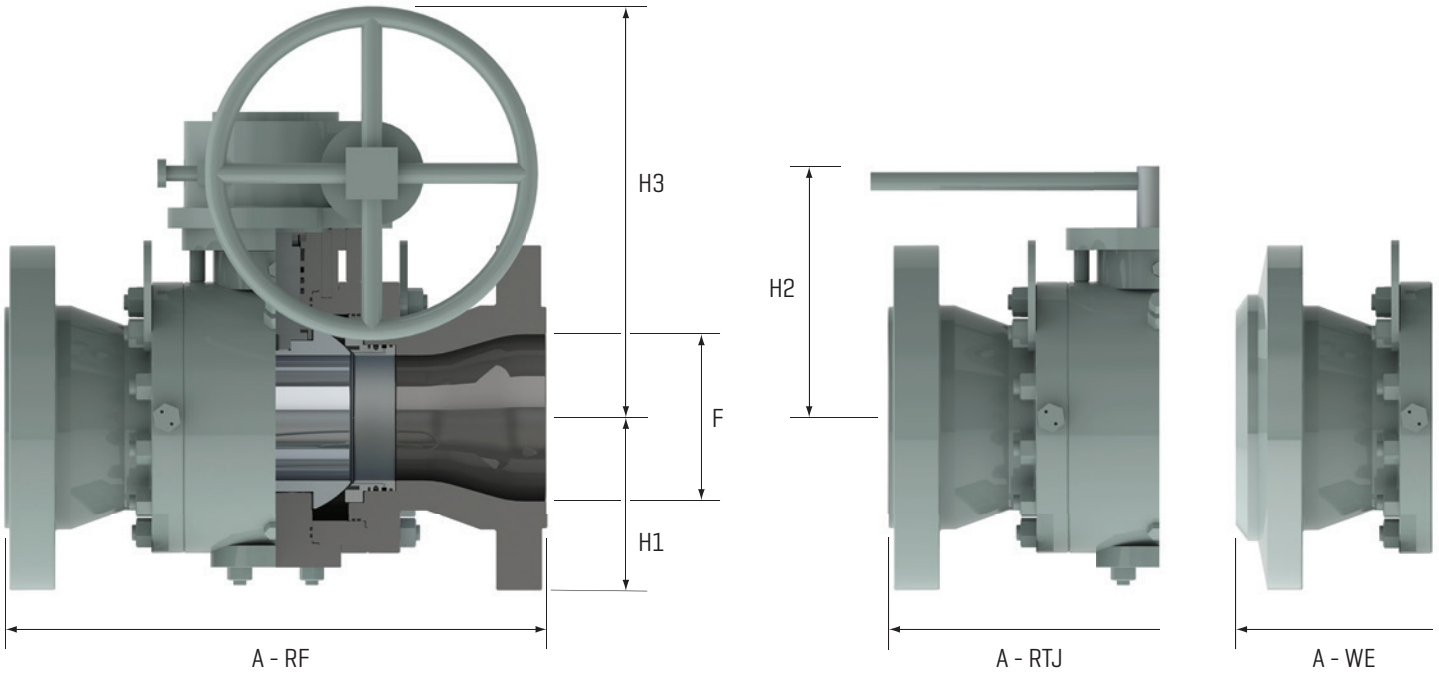


	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
CLASS 2500	IN	1 x 1*	1.00	/	14.0	/	3.78	7.56	/	●		97	/
	MM	25 x 25	25	/	356	/	96	192	/			36	/
	IN	1.5 x 1.5*	1.50	/	15.24	/	4.30	8.15	/	●		130	/
	MM	38 x 38	38	/	387	/	109	209	/			48	/
	IN	2 x 2*	2.00	17.75	17.875	17.75	4.44	7.28	10.90	●		225	216
	MM	50 x 50	51	451	454	451	113	185	277			115	98
	IN	3 x 3*	3.00	22.75	23.00	22.75	5.56	9.47	13.05	●		440	374
	MM	80 x 80	76	578	584	578	141	241	331			200	170
	IN	4 x 4	4.00	26.50	26.875	26.50	6.50	10.34	13.92	●		825	701
	MM	100 x 100	102	673	682	673	165	263	354			370	314
	IN	6 x 6	6.00	36.00	36.50	36.00	8.69	12.97	16.55		●	1790	1521
	MM	150 x 150	152	914	927	914	220	329	420			800	680
	IN	8 x 8	8.00	40.25	40.875	40.25	10.38	15.58	19.10		●	3500	2975
	MM	200 x 200	203	1022	1038	1022	264	396	485			1600	1360
	IN	10 x 10	10.00	50.00	50.875	50.00	12.13	17.41	21.74		●	5400	4590
	MM	250 x 250	254	1270	1292	1270	308	442	552			2500	2940
	IN	12 x 12	12.00	56.00	56.875	56.00	13.88	19.47	23.80		●	8300	7055
	MM	300 x 300	305	1422	1444	1422	353	495	605			4000	3400

* = Lever operated

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.

3-Piece Trunnion Ball Valves Reduced Port - API 6D
Size: 3” - 12” Class: 2500



	Size		Bore	End-to-End			Body Dimensions			Trunnion		FLG Weights LBS/KG	BW Weights LBS/KG
			F	A - RF	A - RTJ	A - WE	H1	H2	H3	EXT	INT		
CLASS 2500	IN	3 x 2*	2.00	22.75	23.00	22.75	5.22	8.06	11.64	●		305	260
	MM	80 x 50	50	51	578	584	578	133	205			296	120
	IN	4 x 3	3.00	26.50	26.875	26.50	6.34	10.25	13.84	●		620	527
	MM	100 x 80	80	76	673	683	673	161	260			352	240
	IN	6 x 4	4.00	36.00	36.50	36.00	7.28	11.12	14.70		●	1270	1080
	MM	150 x 100	102	914	927	914	185	282	373			373	490
	IN	8 x 6	6.00	40.25	40.875	40.25	9.47	14.07	17.65		●	2630	2235
	MM	200 x 150	152	1022	1038	1022	241	357	448			1195	995
	IN	10 x 8	8.00	50.00	50.875	50.00	11.16	16.68	20.26		●	4750	4030
	MM	250 x 200	203	1270	1292	1270	283	424	515			2160	1830
	IN	12 x 10	10.00	56.00	56.875	56.00	13.23	18.62	22.94		●	6620	5620
	MM	300 x 250	254	1422	1445	1422	336	473	583			3010	2550

***** = Lever operated

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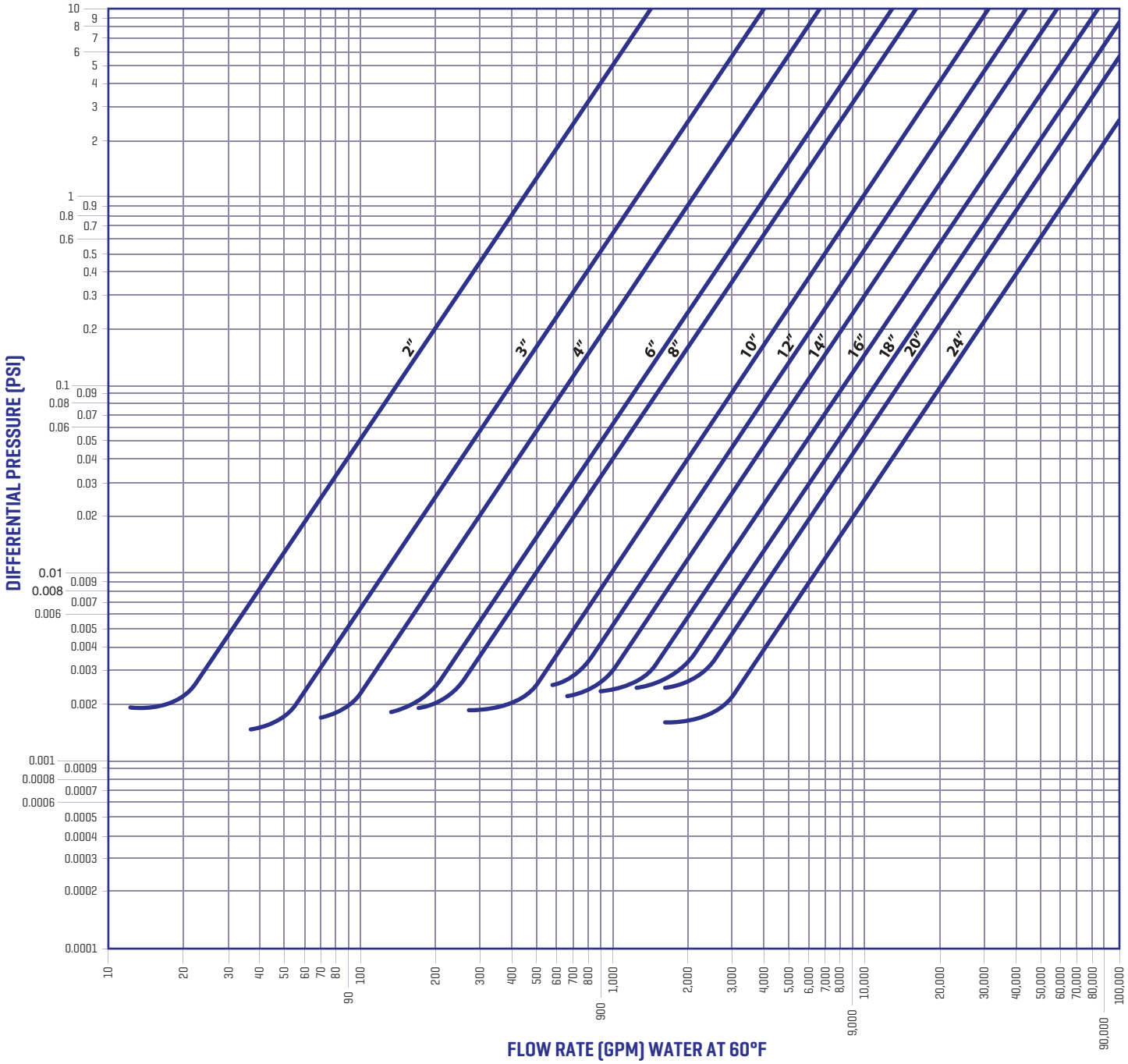
Liquid: Pressure Loss Curves for Trunnion Ball Valves



Flow Coefficient for Fully Open Valves	
2	447
3	1,264
4	2,121
6	4,082
8	5,000
10	10,000
12	14,000
14	18,584
16	26,516
18	35,172
20	44,008
24	64,616

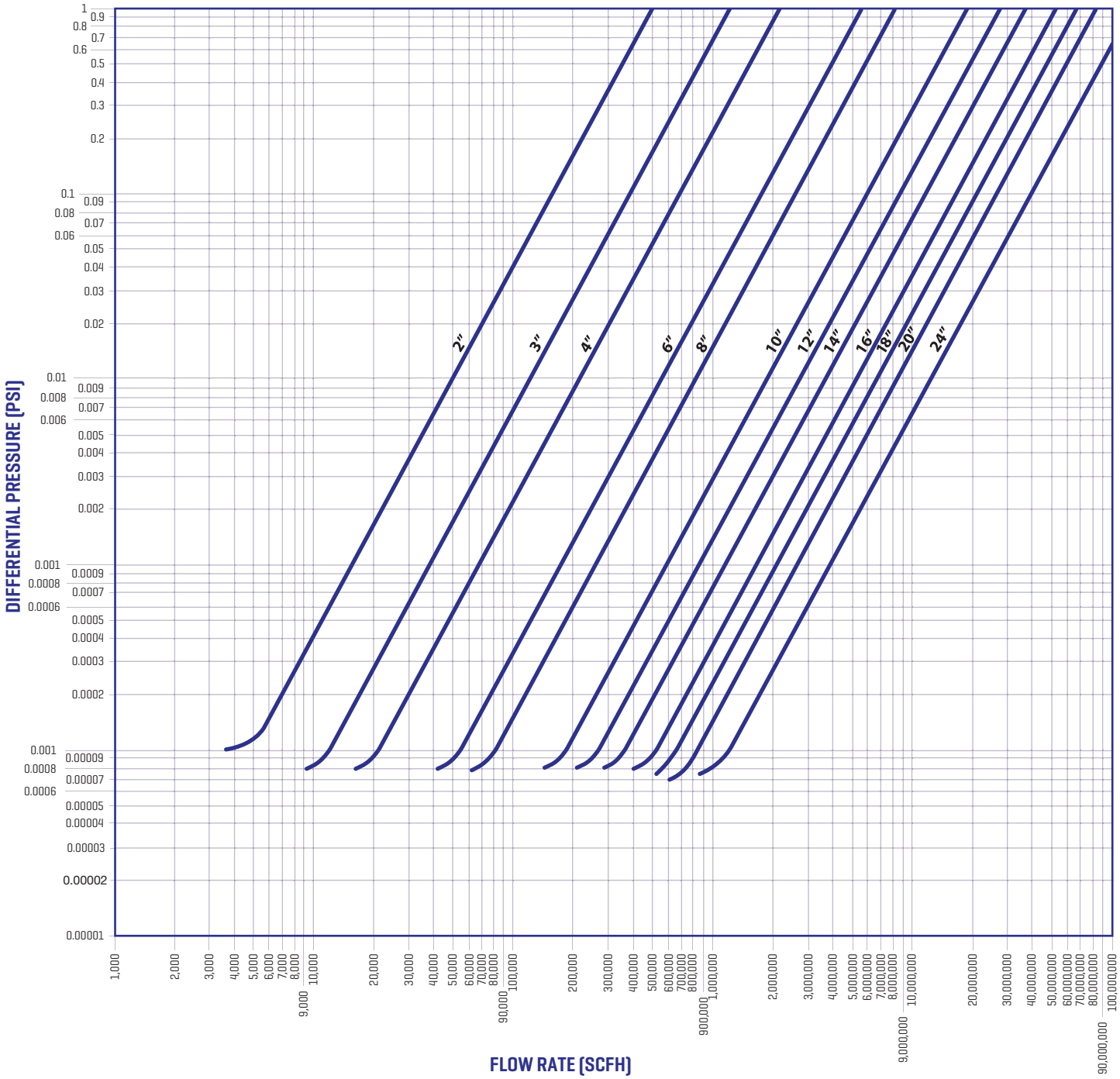
The equations listed are the basis for the above graph. The formulas can be used to find the actual flow coefficient for a given condition of flow.

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

Liquid (Incompressible Flow)

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

Gas: Pressure Loss Curves for Trunnion Ball Valves



Flow Coefficient for Fully Open Valves	
2	227
3	561
4	994
6	2,522
8	3,803
10	8,594
12	12,549
14	16,778
16	24,000
18	30,525
20	38,668
24	56,481

The equations listed are the basis for the above graph. The formulas can be used to find the actual flow coefficient for a given condition of flow.

Glossary of Terms	
Q	Flow Rate - (SCFH)
Cv	Flow Coefficient
P_1	Inlet Pressure - (psi)
P_2	Outlet Pressure - (psi)
ΔP	Pressure Drop (P_1 - P_2)
G	Specific Graqvity (Dry Air = 1)
T	Temperature (°F+460)

Gas (Compressible Flow)

$$C_v = \frac{Q}{963}\sqrt{\frac{GT}{P_1^2 - P_2^2}} \qquad Q = C_v 963 \sqrt{\frac{P_1^2 - P_2^2}{GT}}$$

Operating Torques

The operating torques are in inch pounds and are calculated based on Devlon seats and clean liquid service (no safety factor).

Torque Mulitpliers		Liquid Slurry 1.8		Lubtristic Fluids 0.8		Gas Clean Dry 1.2
Size		Class	Break to Open	Break to Close	Run Torque	Mast
IN / MM	2 / 50	150	540	432	270	1080
		300	772	618	386	1544
		600	1210	968	605	2420
		900	2652	2122	1326	5304
		1500	2652	2122	1326	5304
		2500	4501	3601	2251	9002
IN / MM	3 / 80	150	688	550	344	1376
		300	1122	898	561	2244
		600	2185	1748	1093	4370
		900	3228	2582	1614	6456
		1500	5649	4519	2825	11298
		2500	8607	6886	4304	17214
IN / MM	4 / 100	150	1110	888	555	2220
		300	1989	1591	995	3978
		600	4572	3658	2286	9144
		900	6422	5138	3211	12844
		1500	10128	8102	5064	20256
		2500	15300	12240	7650	30600
IN / MM	6 / 150	150	4071	3257	2036	8142
		300	5620	4656	2910	11640
		600	9660	7728	4830	19320
		900	15780	12624	7890	31560
		1500	25680	20544	12840	51360
		2500	43707	34966	21854	87414
IN / MM	8 / 200	150	7070	5656	3535	14140
		300	12772	10218	6386	25544
		600	19584	15667	9792	39168
		900	31824	25459	15912	63648
		1500	48720	38976	34360	97440
		2500	76176	60941	38088	152352
IN / MM	10 / 250	150	10504	8403	5252	21008
		300	19488	15590	9744	38976
		600	30540	24432	15270	61080
		900	44400	35520	22200	88800
		1500	74400	59520	3720	14880
		2500	125616	100493	62808	251232
IN / MM	12 / 300	150	13506	10805	6753	27012
		300	22344	17875	11172	44688
		600	51312	41050	25656	102624
		900	79716	63773	39858	159432
		1500	106284	85027	53142	212568
		2500	211884	169507	105942	423768
IN / MM	14 / 350	150	17373	13989	8687	34746
		300	28332	22666	14166	56664
		600	57456	45965	28728	114912
		900	97428	77942	48714	194856
		1500	144948	115958	72474	289896
IN / MM	16 / 400	150	25727	20582	12864	51454
		300	46860	37488	23430	93720
		600	78828	63062	39414	157656
		900	138804	111043	69402	277608
		1500	197472	157978	98736	394944
IN / MM	18 / 450	150	33543	26834	16772	67086
		300	54624	43699	27312	109248
		600	119568	95654	59784	239136
		900	194017	155214	97009	388034
IN / MM	20 / 500	150	42516	34013	21258	85032
		300	71186	56949	35593	142372
		600	158906	127125	79453	317812
		900	235887	188710	117944	471774
IN / MM	24 / 600	150	61992	49594	30996	123984
		300	109970	87976	54985	219940
		600	234886	187909	117443	469772
		900	365157	282126	182579	730314

Torques for larger sizes available upon request.

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

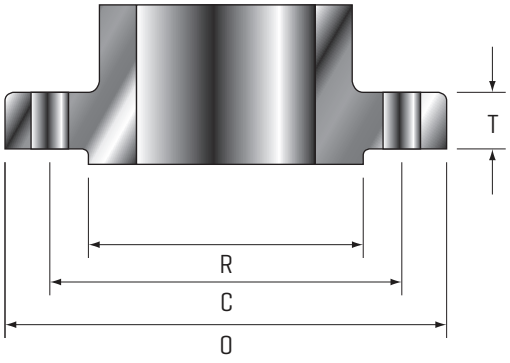
	Temp. F	A105	WCB	LF2	WCC	LCB	WC6	LCC	C5	C12	C12A	316	CF8M	F51	F53
600	-20 to 100	1480	1480	1480	1500	1395	1500	1500	1500	1500	1500	1440	1440	1500	1500
	200	1360	1360	1360	1500	1320	1500	1500	1500	1500	1500	1240	1240	1490	1490
	300	1310	1310	1310	1455	1275	1445	1455	1455	1455	1455	1120	1120	1335	1335
	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	/	/
	Temp. F	**A105**	**WCB**	**LF2**	**WCC**	**LCB**	**WC6**	**LCC**	**C5**	**C12**	**C12A**	**316**	**CF8M**	**F51**	**F53**
900	-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	/	/

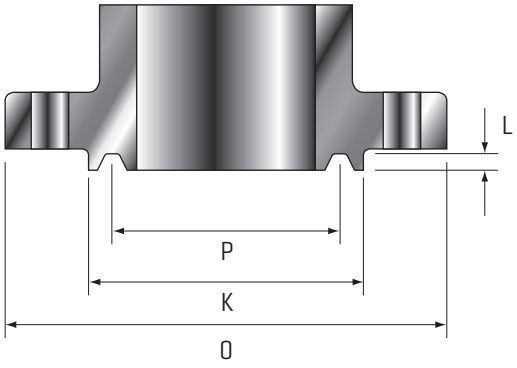
Pressure Temperature Ratings - ASME B16.34

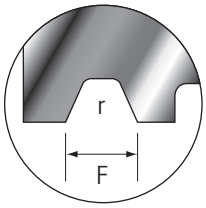
Note: Pressures in PSI

	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



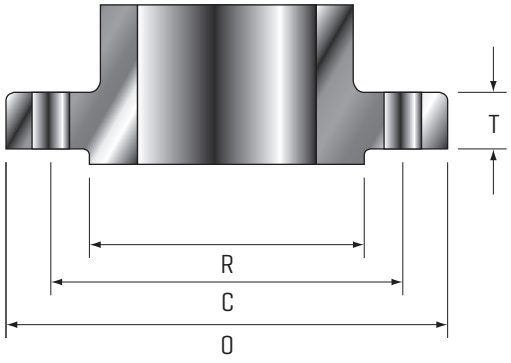


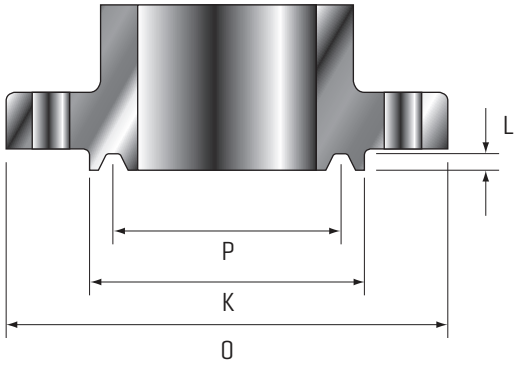


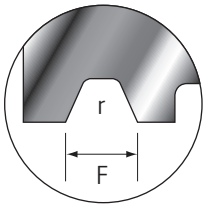
Groove Detail

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

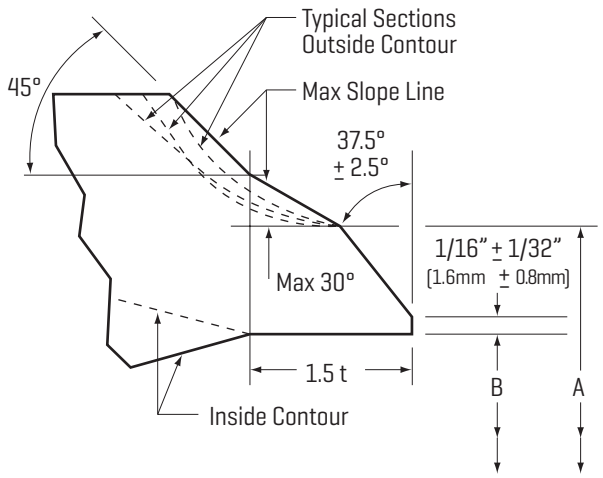
Butt-welding Dimensions - ANSI B16.25

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

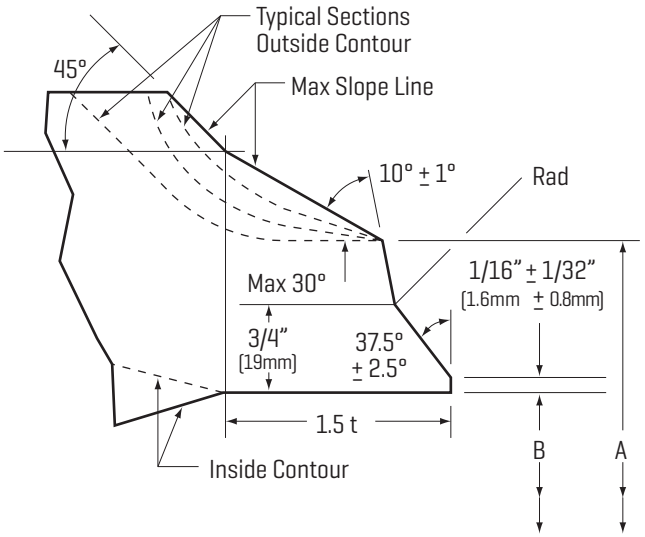
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

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



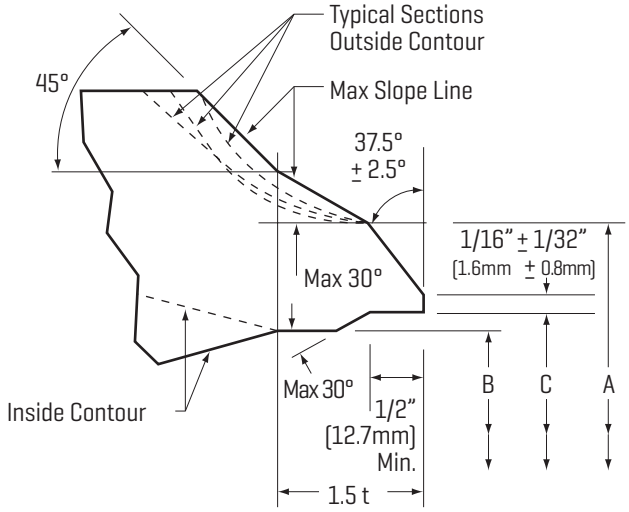
Compound Bevel Butt-welding End for Pipe Wall Thickness Greater than 7/8" (22.23mm).

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



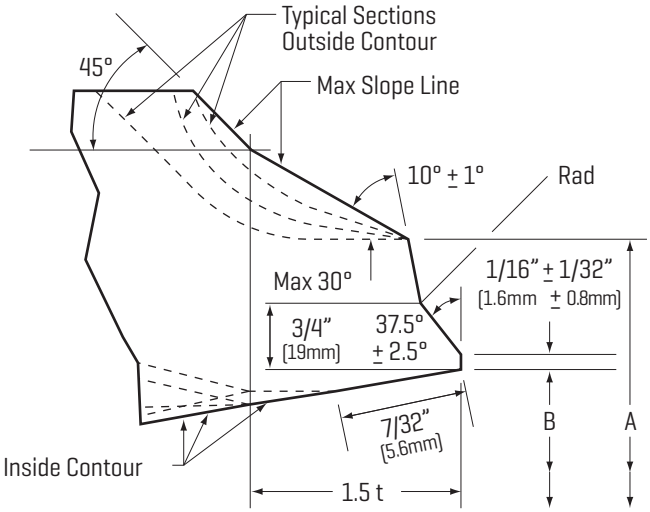
Plain Bevel Butt-welding End for Pipe Wall Thickness is 7/8" (22.23mm) or less.

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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