SCV VALVE
Innovative Valve Solutions®

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API 6D Thru Conduit Slab & Expanding Gate Installation, Operation & Maintenance Manual

SCV Valve
3521 FM 646 Rd. North
Santa Fe, TX 77510

An API 6D & API 6A Monogrammed Company

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.

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Meet the Family

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The "Go-To Source" For All Your Valve Needs

SCV Valve's product family has you covered for all of you upstream, midstream and downstream applications. Take advantage of ourlarge ready-to-ship inventory of standard and hard-to-find valves. Call us today @ **(281) 482-4728**, for fast delivery!

API 6D Piston Checks
- Size: 2" - 24"
- Class: 150 - 2500

API 6D Trunnion Balls
- Size: 2" - 42"
- Class: 150 - 2500

API 6D Thru Conduit Gates
- Size: 2" - 42"
- Class: 150 - 2500

API 6A Trunnion Balls
- Size: 2-1/16" - 13-5/8"
- Pressure: 2K, 3K, & 5K

API 623 Globes
- Size: 2" - 24"
- Class: 150 - 2500

API 600 Gates
- Size: 2" - 48"
- Class: 150 - 2500

API 6D Lubricated Plugs
- Size: 2" - 36"
- Class: 150 - 2500

API 594 Dual Plate Checks
- Size: 1.5" - 36"
- Class: 150 - 2500

B16.34 Floating Balls
- Size: 1/2" - 12"
- Class: 150 - 2500

API 6D Full Port Swing Checks
- Size: 2" - 36"
- Class: 150 - 2500

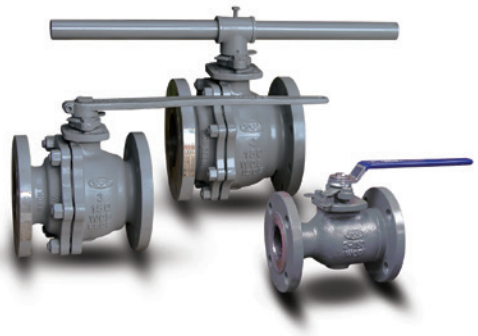
SCV VALVE
Innovative Valve Solutions®

Complete Product Line

BOLTED BONNET OS&Y WEDGE GATES
Carbon & Stainless
Sizes: 2" - 48"
Class: 150 - 2500
Design: API 600

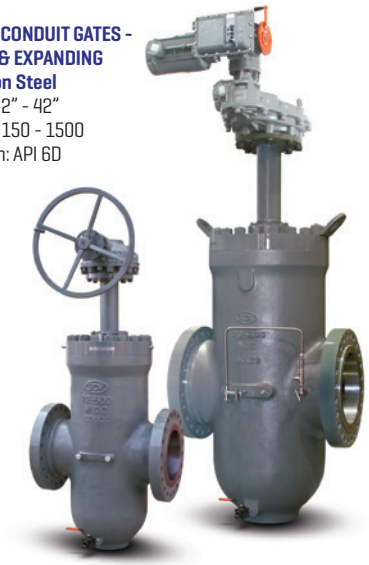
BOLTED COVER FULL PORT SWING CHECKS
Carbon & Stainless
Sizes: 2" - 36"
Class: 150 - 2500
Design: API 6D
Exterior Coating: Epoxy

FLOATING BALL VALVES -
1-PIECE REDUCED PORT & 2-PIECE FULL PORT
Carbon & Stainless
Sizes: 1/2" - 12"
Class: 150 - 1500
Design: B16.34

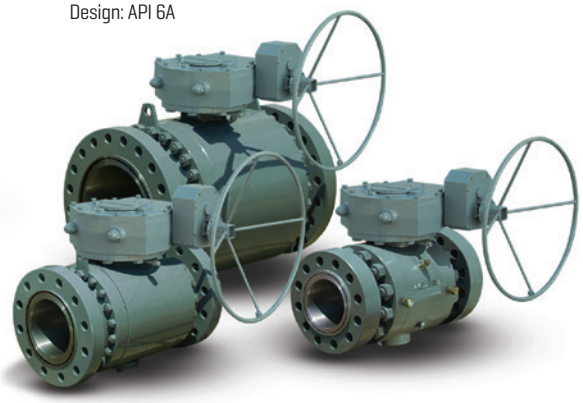


COVER PISTON CHECKS
Carbon Steel
Sizes: 2" - 24"
Class: 150 - 2500
Design: API 6D

THRU CONDUIT GATES -
SLAB & EXPANDING
Carbon Steel
Sizes: 2" - 42"
Class: 150 - 1500
Design: API 6D



3-PIECE TRUNNION BALLS
Carbon & Stainless
Sizes: 2-1/16" - 13-5/8"
Pressure: 2000, 3000 & 5000
Design: API 6A



DUAL PLATE CHECKS - WAFER & LUG
Carbon & Stainless
Wafer Sizes: 1.5" - 36"
Wafer Class: 150 - 2500
Lug Sizes: 2" - 36"
Lug Class: 150 - 900
Design: API 594

BOLTED BONNET GLOBES
Carbon & Stainless
Sizes: 2" - 24"
Class: 150 - 2500
Design: API 623

PRESSURE BALANCED
LUBRICATED PLUGS
Carbon Steel
Sizes: 2" - 36"
Class: 150 - 2500
Design: API 6D

3-PIECE TRUNNION BALLS
BOLTED & WELDED BODY
Carbon & Stainless
Sizes: 2" - 42"
Class: 150 - 2500
Design: API 6D
Bore Coating: Scotchkote™ 134

Table of Contents

1. APPLICATION AND PERFORMANCE SPECIFICATIONS

1.1 Application

The product can be used in transportation piping systems, vent systems and storage equipment of kinds of medium, such as natural gas, petroleum, and finished oil, as an opening and closing device.

1.2 Performance specifications

Nominal Pressure (Class)	Test Pressure at Normal Temperature (PSI)			
	Hydrostatic Shell Test	Hydrostatic Seat Test	High/Low Pressure Back Seat	Gas Seat Test
CL150	450	325	325/80	80
CL300	1125	825	825/80	80
CL600	2225	1650	1650/80	80
CL900	3350	2450	2450/80	80
CL1500	5575	4075	4075/80	80
CL2500	9275	6800	6800/80	80

2. MATERIALS FOR MAIN PARTS

Part Name	Material	
	Standard Type Soft Seat	Standard Type Metal Seat
Body	Carbon Steel	Carbon Steel
Bonnet	Carbon Steel	Carbon Steel
Yoke	Carbon Steel	Carbon Steel
Stem	Stainless Steel	Stainless Steel
Seat	Stainless Steel	Carbon Steel + Stellite
Gate	Stainless Steel	Carbon Steel + Stellite
Packing	Viton+PTFE + Expanded Graphite	Viton + PTFE + Expanded Graphite
Gland Flange	Carbon Steel	Carbon Steel
Stem Nut	Casting Copper Alloy	Casting Copper Alloy
Sealing Face	Soft, Hard Sealing	Metal to Metal
Seat Insert	PTFE	Stellite
Gasket	304+ Flexible Graphite	304 + Flexible Graphite

The materials can be selected upon customers' different requirements and product design specifications.

3. REMOVING VALVE FROM STORAGE

3.1 When removing the valve from storage, inspect it for damage.

3.2 Just prior to installing the valve, remove the protective covering and end-caps to ensure the serrations on flange face are not damaged and the bore is clean. Clean the valve with approved solutions as necessary.

4. INSTALLATION

Caution: SCV expanding gate valves in liquid service must be equipped with a thermal relief system (if the thermal relief system utilizes needle valves, they must be in the OPEN position prior to valve operation). Failure to do so may result in a catastrophic malfunction. In the event the expanding gate valve body cavity needs to be depressurized, please refer to step 11, Thru Conduit Expanding Gate Valve Body Bleed Procedure.

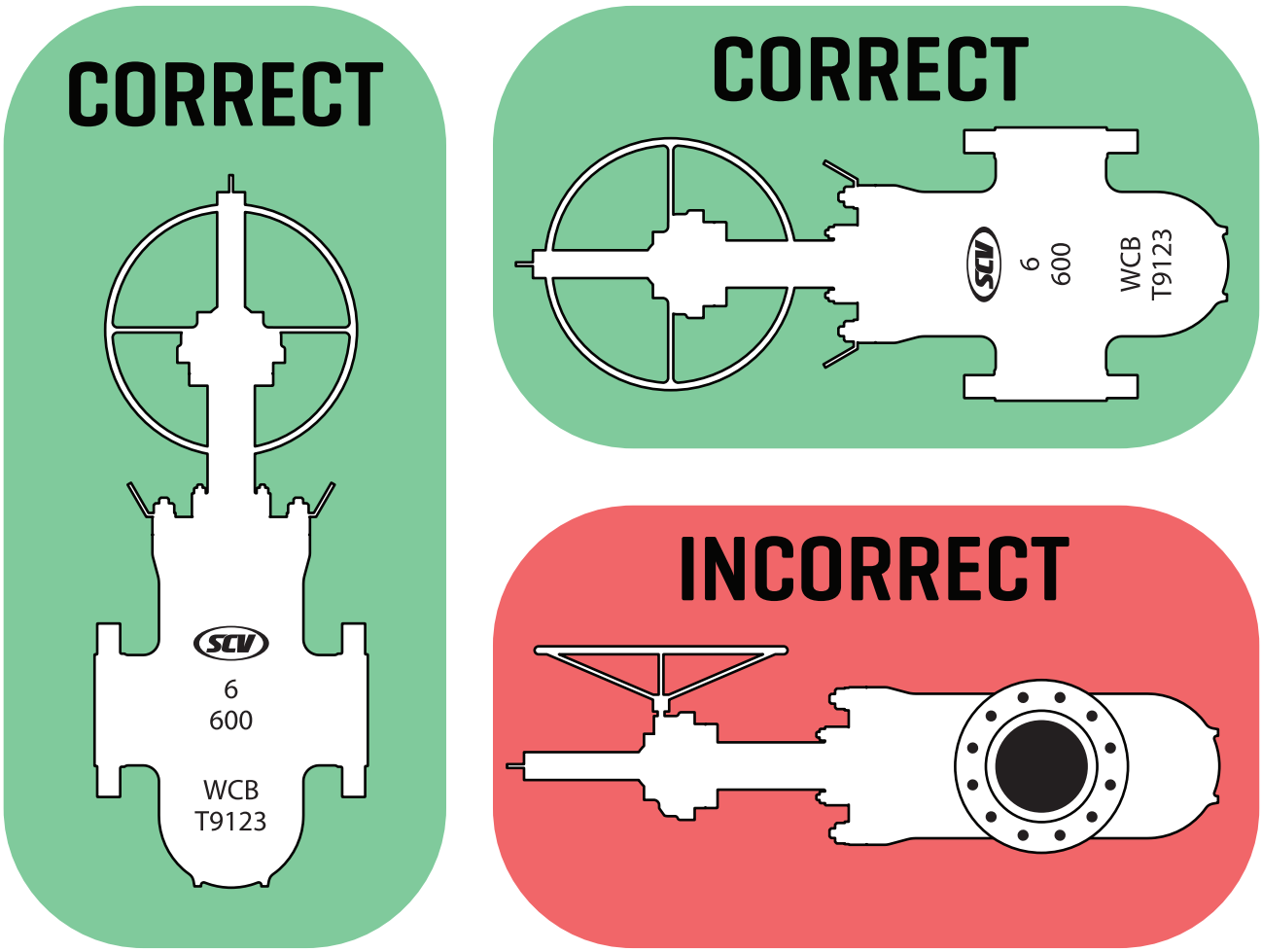
4.1 Before installing a new valve, confirm that the specifications of the valve matches those of the intended installation area. The nameplate will provide the necessary information. If this information is missing, consult SCV.

Important: If the valve and actuator are delivered separately, SCV recommends utilizing a qualified technician to mount the actuator to the valve, make all necessary adjustments, fully test and debugged the unit before installing the valve in the pipeline.

Caution: Prior to valve installation, ensure the pipeline is clean. Pipeline foreign debris, scaling, etc. will damage the soft seat inserts of the valve and cause seat leakage during commissioning.

4.2 SCV's preference is that thu-conduit gate valves be installed in the vertical orientation. The horizontal orientation is acceptable as shown below.

Note: It may be necessary to adequately support valve actuation in order to protect the valve and/or actuator from improper weight distribution and excess stress. To ensure actuation mounting and supports are adequate during operation, please contact SCV before mounting and installation.



4.3 Install the expanding thru conduit gate valve with the gate segments in the OPEN POSITION. The preffered pressure side of the valve MUST BE INSTALLED TO THE UPSTREAM PIPE as show below.

Figure 1: Upstream Pressure Side of Valve

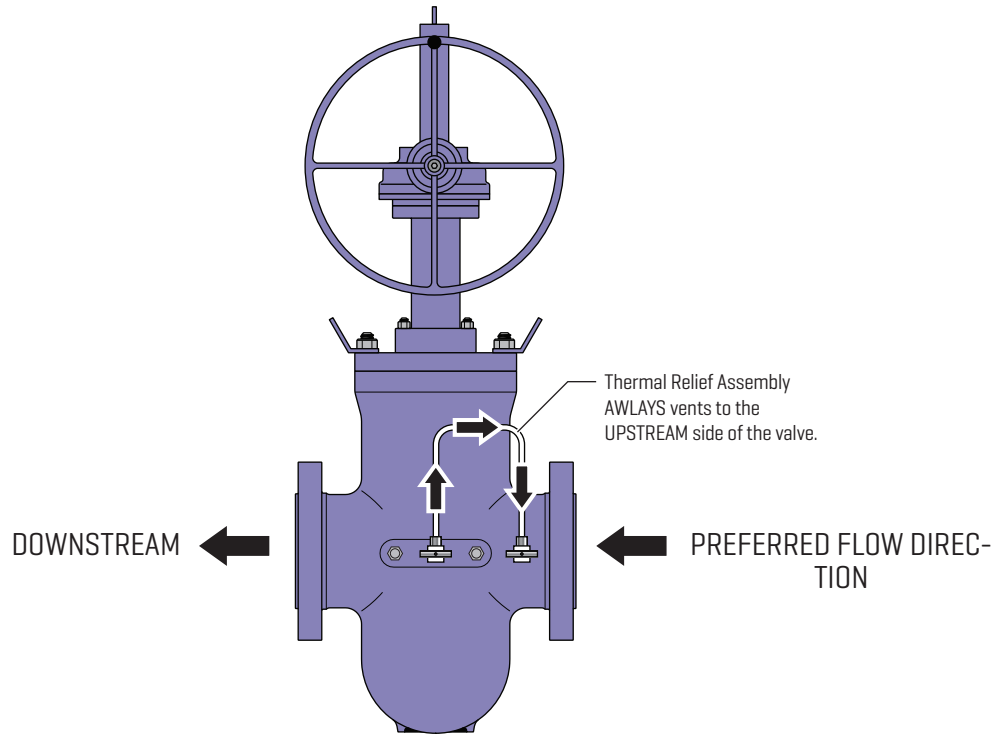


Figure 1

4.4 During commissioning and pipeline flushing, the valve must remain in the full-OPEN position to prevent damage to internal parts. Impurities and foreign debris entering the valve body may cause damage to sealing surfaces resulting in malfunction.

Caution: To prevent damage to the valve, SCV recommends first installing a spool piece instead of the valve while flushing the pipeline. If a spool piece is not an option, install strainers at critical locations upstream from the location to remove foreign debris. It is pertinent that the valve remain in the full-OPEN position during flushing.

5. INSTALLATION OF VALVE WITH WELDING ENDS

5.1 When preparing the valve for installation, clean the bore free of grease and rust inhibitor using an approved solvent.

5.2 To ensure proper valve operation, maintain proper line and weld bevel alignment during the welding process.

5.3 Ensure the valve is in the FULL OPEN position during the welding process.

5.4 Do not allow the body/seat area to exceed 250° F during the welding process. While the temperature is rising, use the cooling water to cool the outside surface of the valve bore. Use a Tempil stick to check temperature during welding process.

5.5 Due the risk of slag and debris damaging the valve, it must remain in the FULL OPEN position until the product line cleaning process (flushing and/or pigging) is complete.

Caution: After hydro testing, the valve must be CLOSED, and any water left in the body must be drained out through the body drain plugs.

6. OPERATION

6.1 Clockwise rotate the handwheel to CLOSE the valve, rotate counter-clockwise to OPEN the valve.

6.2 When operating a slab or expanding gate valve, SCV does not recommend the use of any leverage tool to opening or closing the valve. Carefully observe the position of indicator during operation. When the position indicator shows OPEN or CLOSED, rotate the handwheel in the opposite direction one half turn to release the pressure between the stem and drive nut.

6.3 The SCV slab or expanding gate valve is not designed to be used as a throttle valve.

6.4 If necessary, with the valve fully CLOSED, cavity pressure can be relieved through the bonnet vent fitting.

Important: In the event the expanding gate valve body cavity needs to be depressurized, please refer to step 11, Thru Conduit Expanding Gate Valve Body Bleed Procedure.

Safety Precaution: Always wear approved safety gear and face away from the bonnet vent when relieving pressure from the valve.

6.5 To remove the foreign debris from the valve, remove the drain plug from the bottom of the valve body. Reinstall the drain plug when cleaning is complete.

7. MAINTENANCE

7.1 Clean and Lubricate the Stem

7.1.1 IF LINE CONDITIONS PERMIT, cycle the valve to the full OPEN position.

7.1.2 Remove stem protector when applicable.

7.1.3 Clean the stem threads to remove and dust, dirt or foreign particles. Use a wire brush if required.

7.1.4 Inspect the threads for wear or damage.

7.1.5 Lubricate the threads with a lithium based general purpose grease with a minimum 150 viscosity grease.

7.1.6 Cycle the gate OPEN and CLOSED several times to insure grease distribution over the stem and drive nut.

7.1.7 Return valve to desired operating position.

7.1.8 Replace stem protector.

(Please refer to manufacturers recommended lubrication frequency and procedure for the actuators.)

7.2 Seat Lubrication/Sealant

7.2.1 Two secondary sealant injection ports (See Figure 1) are fitted in the middle of the valve body. In the event the seat sealing surfaces are damaged and leaking, a grease gun can be used to inject the seats with an approved sealant.

7.2.2 The pressure required to fully inject sealant into the seat/gate surfaces should not exceed 300 psi over the line pressure. 8.2.3. There will be some pressure required to pump the grease through the gun, hose and extended piping. In cold weather, the amount could be several pounds of pressure. Please note the following example:

Pressure to pump grease: 2000 psi

Line pressure: 1000 psi

Amount required above: 300 psi

Total amount in cold weather: 3200 psi

7.2.4 The thru conduit gate valve does not required lubrication to operate. However, lubricating the seats will provide smooth operation. When lubricating the seats and gate surfaces, operate the valve several times OPEN to CLOSED to spread the lubricant evenly on to both surfaces.

7.2.5 Return the gate to either the full OPEN or full CLOSED position and inject an additional amount of lubricant to complete the process.

7.2.6 For buried valves, SCV recommends a minimum of 1 quart of lubricant per valve once extended lines are filled.

7.2.7 While SCV does not generally recommend a lubricant, we do recommend contacting Climax Valve Lubricants with the specifics of the product in the line for a lubricant best suited for the service intended.

Figure 2: Secondary Seat Lubricant/Sealant Injection System

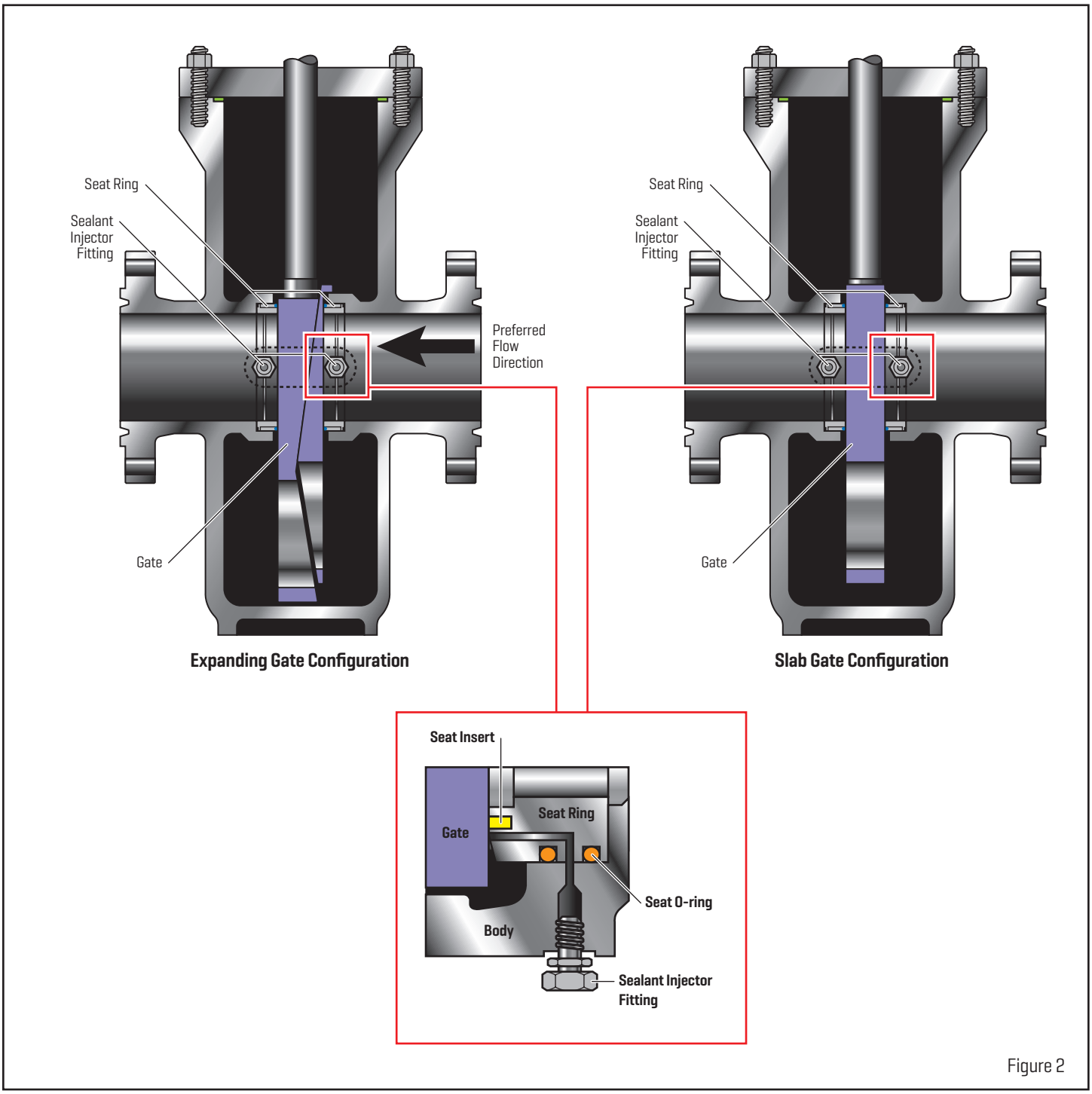


Figure 2

7.3 Stem Seal/Packing Maintenance

7.3.1 In the event of stem packing leakage, CLOSE the valve and release the cavity pressure.

7.3.2 Remove the stinger from the packing injection fitting. Insert the pressure relieving stinger tool to relieve any stem packing pressure.

7.3.3 Once pressure is removed and the relief tool has been removed. Remove the plug from the packing relief port.

7.3.4 Using a grease gun, inject stem seal packing into the packing injector fitting until fresh packing is seen coming thru the relief port.

7.3.5 Reinstall the relief port plug. Add additional packing until the pressure in the packing gland stabilizes then tighten the injector stinger. Please see the Packing Box Pressure PSIG Chart (on page 11) for required pressures.

Caution: Over pressurizing the injectable packing will distort packing, making the valve difficult to operate.

Figure 3: Packing Injection

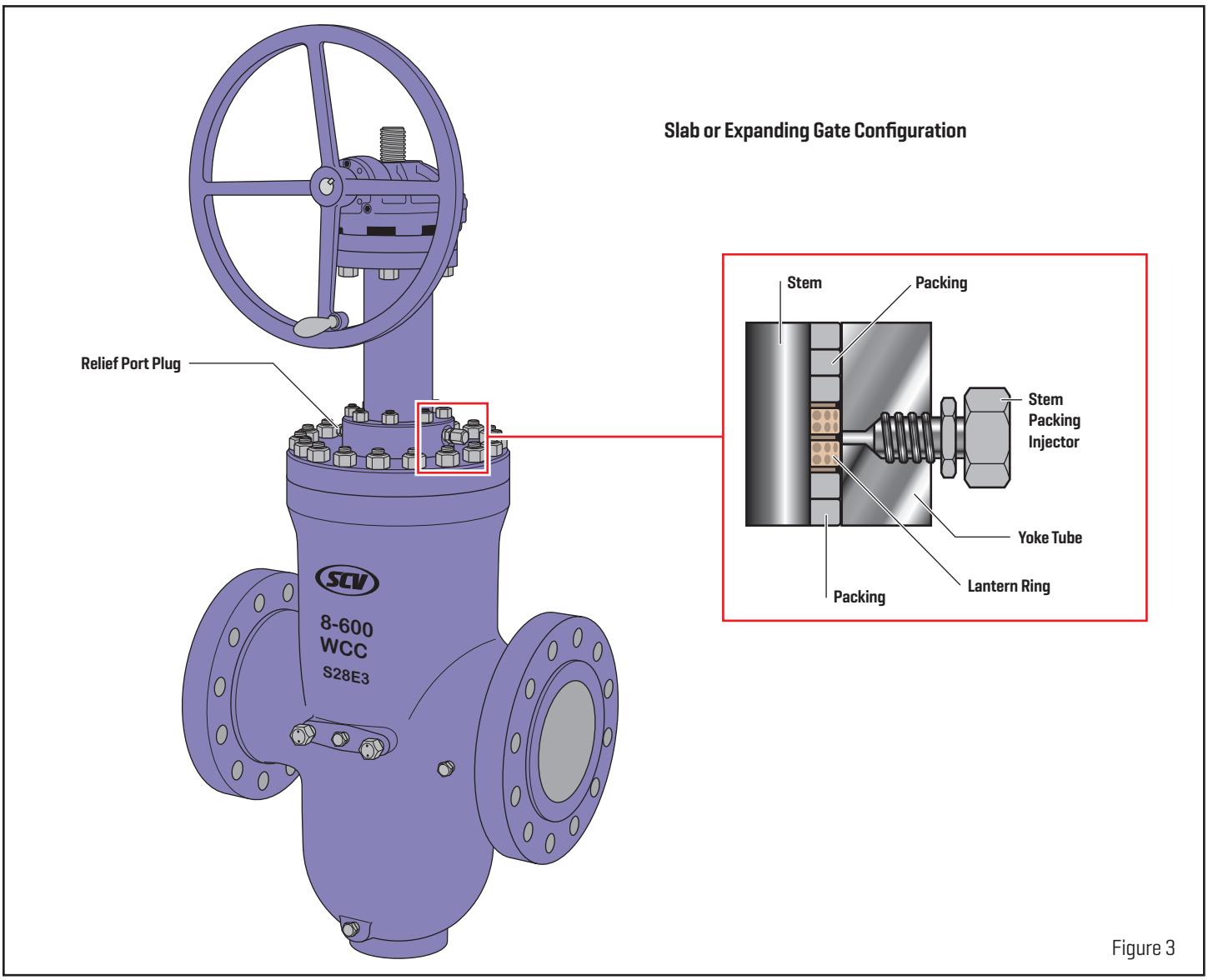


Figure 3

Notice: Please refer to relevant installation operating instructions of the actuator when installing and debugging the electric actuator and pneumatic actuator.

PACKING BOX PRESSURE PSIG

VALVE PRESSURE CLASS	PACKING BOX PRESSURE (PSIG)
150	1925
300	2600
400	2950
600	3675
900	4750
1500	6900

8. COLD TEMPERATURE MAINTENANCE PROGRAM

COLD WEATHER TIME OPERATION REMINDER

8.1 Allowing freezable fluids to be trapped inside the valve will result in damage to the valve when the fluid freezes.

Note: 32° F is the temperature water will freeze. Here are some frozen water hydraulics generated by fluids frozen solid.

Pressure Exerted By Frozen Fluids	
Temperature (F)	**Internal Pressure**
32°	14.7psi
30°	2,100 psi
25°	7,000 psi
18.5°	12,660 psi
9.5°	20,056 psi
5°	23,115 psi
.5°	26,103 psi
Note: Eliminate trapped water in your system to avoid system damage.	

9. ACTUATION

Notice: SCV Thru Conduit Gate Expanding and Slab Gate Valves are manufactured with ISO standard mounting plates for manual or automation installations.

Caution: Correct actuator calibration is critical for proper valve performance and longevity. Incorrect TRAVEL LIMIT and TORQUE LIMIT settings can result in catastrophic valve failure!

Important: SCV recommends that all actuation is installed and calibrated in a controlled testing environment. Utilize a hydro-test to simulate the targeted operating conditions while setting TRAVEL LIMITS and TORQUE LIMITS.

9.1 The SCV Expanding Gate Valve is a "torque seated" design. For proper actuator torque requirements, please consult with SCV.

9.2 The SCV Slab Gate Valve is a "travel position seated" design. The travel stops are set at the factory.

Important: If actuation is to be installed after shipment from SCV, IT IS CRITICAL THAT THE SLAB DOES NOT DROP TO THE BOTTOM OF THE VALVE DURING ACTUATION INSTALLATION! THIS MAY RESULT IN SEAT DAMAGE.

9.2.1 To protect the seats, ensure the slab is above the closed position prior to actuation installation.

10. THE REMEDIES FOR TROUBLES

Nos.	Trouble	Possible Reason	Trouble Shooting
1	Stem packing leakage	Damage packing	Inject stem packing
2	Sealing incompletely to upstream and downstream (the pressure in middle cavity cannot relieve to low pressure)	The gate is not CLOSED completely	CLOSE the valve
		Damage to sealing surface	Replace the damaged sealing element
		Damaged to O-ring	Replace O-ring
3	Leakage in bonnet flange	Bonnet bolts loose	Tighten bonnet bolts as necessary
		Damage to gasket	Replace the gasket
4	Leakage in grease injection and waste valve	Damage to ball, spring and sealing ring	Replace the damaged components
		Screw cap is not tight	Tighten screw cap as necessary
5	The gate will not CLOSE	Debris obstruction in bottom of valve	Remove debris thru bottom drain plug
		Medium frozen in the bottom	Heating
6	Difficult to OPEN or CLOSE	Dry stem	Inject lubricant as necessary
		Valve has not been opened or closed for a long time, the seats and gate tied tightly	OPEN and CLOSE the valve rapidly several times till the gate is loosened, then OPEN or CLOSE the valve to the required position.
		Medium frozen in the cavity	Heating
		Pipeline distorted	Eliminate the distorting restriction of Pipeline
7	Imbalance of operation	Dry bearing	Inject lubricant as necessary
		Possible damage to drive nut or bearing	Replace the damaged parts

For trouble shootings of motor, pneumatic actuator, refer to the installation and maintenance instruction of selected motor, see actuator manufacturer information or website.

11. THRU CONDUIT EXPANDING GATE VALVE BODY BLEED PROCEDURE

Notice: To relieve pressure from the internal cavity (body) of the valve while under pressure, please follow this procedure carefully. Operate the valve into the full torqued CLOSED position.

11.1 Operate the valve to the CLOSED position.

11.2 CLOSE valve "A", shown in the photo below, tightly.

11.3 Make sure valve "B" is in the OPEN position.

11.4 Double check the valves again to insure they are in the proper position.

11.5 Lightly loosen the body bleed fitting plunger "C" to allow slow release of pressure from the cavity.

Safety Precaution: Please make sure all persons are clear of the fitting opening during venting. Pressure will begin to decrease and flow will lessen as valve body pressure is released.

Important: If pressure does not bleed down, CLOSE fitting "C" and operate valve again to the CLOSE position to insure proper closure. Reopen fitting "C" and allow pressure to finish venting.

11.6 Once venting is complete, CLOSE fitting "C" tightly, then operate the valve to the OPEN position and OPEN valve "A" to allow the thermal relief system to operate as designed.

Figure 4: Thermal Relief System & Bonnet Vent Fitting

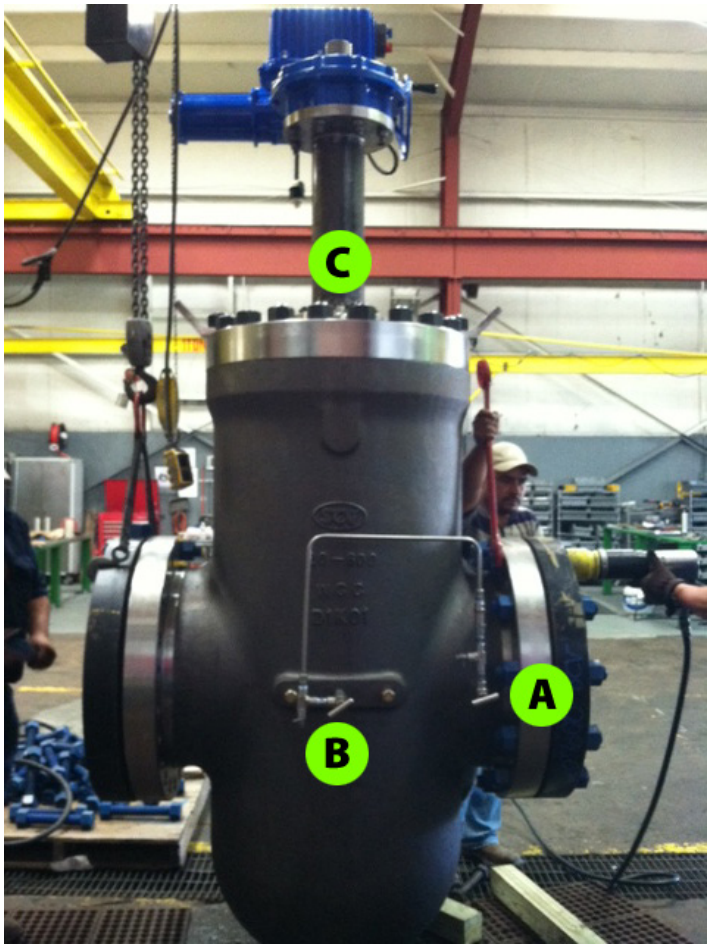


Figure 4

Industry Standards for Valve Manufacturing

This information is for reference only.

American Society of Mechanical Engineers (ASME)

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

American Society Non-destructive Test (ASNT)

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

American Society for Testing and Materials (ASTM)

American Petroleum Institute (API)

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

National Association of Corrosion Engineers (NACE)

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

British Standards Institute (BS)

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

Canadian Standards Association

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

International Organization for Standardization

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

Manufacturers Standardization Society

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

Terms & Conditions

Quotation Validity

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

Shipments

All items quoted are EXW our Dock - (Ex Works - SCV Valve at 3521 FM 646 Rd. North, Santa Fe, TX 77510) - unless otherwise noted and agreed to in writing. Shipment may be billed either third party billing to the buyer or freight collect. Shipment dates offered above are forecasted delivery lead times and are estimated from the date payment terms (acceptable to seller) are established, clarification is received on all technical information, and resolution of customer's written approval of drawings is received (when required). The equipment quoted shall be packed in accordance with seller's standard packing procedure unless otherwise noted and agreed to in writing by the seller.

Force Majeure

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

Payment terms

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

Purchase Orders

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

Prices

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

Intellectual Property

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

Governing Law; Arbitration; Jurisdiction

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

Warranty

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

Limitation of Liability

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

Cancellation

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

Cancellation Charge

The following indicates the rates of cancellation charge of contract value for project manufactured items and/or special engineered

- **Time of cancellation: Order Acknowledgement and prior to Engineering engagement.** — **Cancellation Charge: 10%**
- **Time of cancellation: After start of engineering but prior to release to production.** — **Cancellation Charge: 30%**
- **Time of cancellation: After release to production but prior to completion of fabrication.** — **Cancellation Charge: 80%**
- **Time of cancellation: After completion of fabrication.** — **Cancellation Charge: 100%**

Return of Goods

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

Documentation

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

Inspection

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

Witness Hydro-testing

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

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

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

SCV Valve products include thru conduit gates, wedge gates, globes, full port swing checks, piston checks, trunnion mounted balls, floating balls, and lubricated plugs. Valves utilized throughout the industry must meet rigorous quality and production standards. SCV Valve has earned its API 6A, API 6D, ISO: 9001, CE-PED, and CRN certifications while operating under the
API Q1 Quality Management System.

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

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

Sincerely,

Sid McCarra
President
SCV Valve, LLC

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

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

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

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SCV VALVE