



SCV VALVE
Innovative Valve Solutions®

Gate, Globe & Check Installation Manual

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

An API 6D & API 6A Monogrammed Company

Complete Product Line

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

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



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

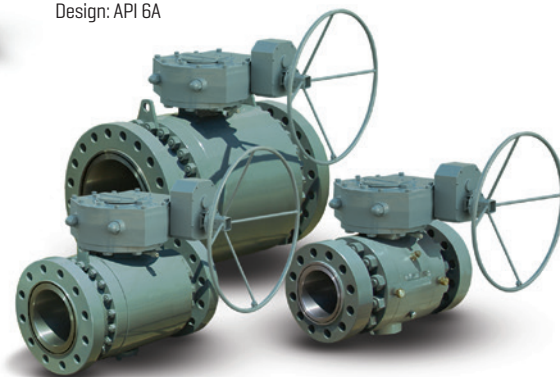
Sizes: 2" - 42"
Class: 150 - 1500
Design: API 6D



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

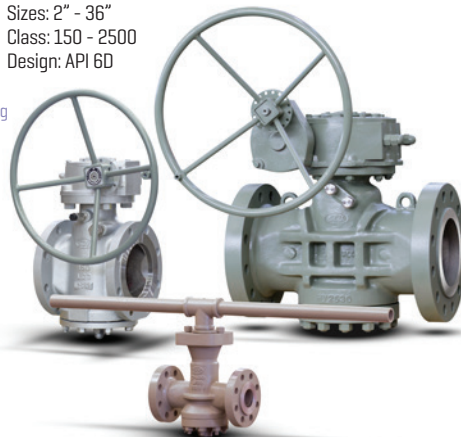


PRESSURE BALANCED LUBRICATED PLUGS

Carbon Steel

Sizes: 2" - 36"
Class: 150 - 2500
Design: API 6D

Epoxy Coating



3-PIECE TRUNNION BALLS

Carbon & Stainless

Sizes: 2" - 42"
Class: 150 - 2500
Design: API 6D

Bore Coating: Scotchkote™ 134



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The trouble - free performance of a valve largely depends on the selection of a right valve for the job followed by proper storage, Neat Installation gentle operation and timely maintenance. Please follow the guidelines given for the valve to function well to your satisfaction.

1. GENERAL

- 1.1 Upon delivery, inspect the valve for any shipping damage.
- 1.2 As per the packing-slip placed inside the box, verify the goods received, items packed loose within the box are separately identified in the packing - slip check for short supply, if any.

2. STORAGE

- 2.1 Do not take - off the end protectors until installation.

Caution: Avoid possible entry of any foreign matter such as water, dirt, mud, sand, etc, into the valve in order to protect the lapped sealing faces of the valve seats.

3. INSTALLATION

- 3.1 Valve conforming to the customer's specification in all respects is duly tested prior to dispatch, however ensure once again that specifications mentioned over the name plate are in line with your requirements with regard to size, Material of construction, working pressure etc.

- 3.2 Alignment and proper supports for the pipings are essential to prevent unwanted stresses in the valves.

Caution: Blow-out or flush the pipe lines thoroughly before valve installation, of not, the hard particles left within the pipe line can easily ruin the seating faces-A common cause for most of the valve failures.

- 3.3 Ensure that valves is freely accessible to the operator.
- 3.4 Mating flange faces should be clean for proper sealing at the joint.
- 3.5 GATE/GLOBE VALVES: The actuating stem will project out while opening and hence provide enough head room.
- 3.6 Take off end-protectors just prior to the installation.
- 3.7 CHECK VALVES: Remove additional packing stuff placed inside the valve bore.

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.

4. DIRECTION OF MOUNTING

4.1 GATE VALVE

- 4.1.1 Can be mounted for flow in either direction it can be installed both in horizontal and vertical pipe - lines however preferred mounting is in horizontal pipe-line with the stem in upright position.

4.2 GLOBE VALVE

- 4.2.1 Is generally mounted in such a way that fluid pressure should act beneath the disc however, when operating conditions are very severe, like high temperature steam, the other way may be desired it can be installed both in horizontal and vertical pipelines, however, preferred mounting is in horizontal pipe-line with the stem in upright position.

4.3 CHECK VALVE

- 4.3.1 Should be mounted with flow tending to open the disc. Body exterior has an arrowhead to indicate the direction of flow. It can be installed both in horizontal and vertical pipe-lines if vertical, flow has to be in upward direction only-however preferred mounting is in horizontal pipelines.

5. OPERATION (GATE & GLOBE VALVE)

- 5.1 After installation, Operate the valve slowly up and down and ensure free movement of the stem.
- 5.2 All external lootings of the valve may be checked to ensure that they have not got loosened during transit, storage or handling.
- 5.3 Never use a wrench and try to achieve tight shut-off the torque through the handwheel is sufficient to seal the pressure
- 5.4 When valve is fully opened, screw it down about a quarter turn to prevent sticking.

Caution: Do not use the gate valve for throttling left partly open or cracked open, the wedge would erode rapidly and may cause a severe damage to the seat faces.

- 5.5 Some more greasing may be done at the stem threads if required.
- 5.6 Direction of handwheel rotation facing the handwheel, clockwise rotation to close the valve and counter-clockwise rotation to open the valve.

6. MAINTENANCE

- 6.1 The valve hardly needs any maintenance regular greasing at the stem threads an periodic cleaning of the seat faces would keep the valve smooth and efficient in its function.
- 6.2 The moment any trouble is noticed with the valve examine and take corrective action if attended.
- 6.3 Do not attempt any modifications/repairs arbitrarily. Utilize our services when required.

Important: It is easy to identify the valve by the serial number punched on the valve body. Try to quote the same whenever referring to us.

7. RECOMMENDED SPARES

- 7.1 GATE VALVE
 - 7.1.1 Pressure seal ring {Applicable for class 900,1500 & 2500 Only}
 - 7.1.2 Packing
 - 7.1.3 Gasket
 - 7.1.4 Soft seal ring {Applicable for soft seated valves only}
- 7.2 GLOBE VALVE
 - 7.2.1 Pressure seal ring {Applicable for class 900,1500 & 2500 Only}
 - 7.2.2 Packing
 - 7.2.3 Gasket
 - 7.2.4 Soft seal ring {Applicable for soft seated valves only}
- 7.3 SWING CHECK VALVE
 - 7.3.1 Pressure seal ring {Applicable for class 900,1500 & 2500 Only}
 - 7.3.2 Gasket
 - 7.3.3 Soft seal ring {Applicable for soft seated valves only}

TROUBLESHOOTING

TROUBLE	POSSIBLE CAUSE & REMEDY (KEY NO.)*
Seat leakage ^{a)}	1, 2, 3, 4, 5, 6
Back seat leakage ^{b)}	7, 8, 9
Stem OD gets deep scoring along the length ^{b)}	10, 11
Leakage through packing ^{b)}	12, 13, 14
Leakage through body-to-bonnet/cover joint ^{c)}	15, 16, 17
Leakage across pressure seal ring ^{c)}	18, 19, 20
Seat faces get damaged in short duration ^{c)}	21
Gear actuator handwheel is stuck and cannot be rotated ^{b)}	22
Gear actuator rotates but stem does not move up or down ^{b)}	23
Gear actuator's operation is noisy and not smooth ^{b)}	24
Pneumatically operated (piston type) valve does not take either full seating or full back seating ^{b)}	25

No.	Possible Reason	Remedy
1	Pipelines were not properly flushed prior to installation	Flush pipelines thoroughly
2	Sealing faces of seats and wedges are damaged	Remove the damaged areas by machining (if necessary) and lapping
3	Soft seat ring (if required) is damaged	Replace the soft seat ring
4	Body-to-seat threaded joint is leaking because of damage on body face or seat's back face	Remove the damaged areas by machining (if necessary) and lapping
5	Body-to-seat seal-weld joint leaking	Weld the leaking spot
6	Operating torque is insufficient, in case of motor-operated or piston actuated gate/globe valves	In case of motor operated torque, setting can be regulated from 40% to 100% and in case of piston actuator
7	Back seat sealing faces of stem, collar and bonnet are damaged	Remove the damaged areas by machining (if necessary) and lapping
8	Bonnet-to-bonnet bushing	Weld the leaking spot
9	Bonnet-to-bonnet bushing press fitted joint is leaking	Remove the damage if any and lap the bonnet face and 5° back-face of bonnet bushing
10	Back seat bore is not concentric to stem c/l	Maintain concentricity
11	Packing contains foreign matter and hard particles	Replace with clean packing
12	Compression load on packing is insufficient	Tighten the gland flange nut further
13	Packing have worn out	Operate the valve to full-open to take the backseating and install additional packing or replace all the packing
14	Scoring on the stem OD along sealing length	Avoid scoring (refer to 9 and 10)
15	Gasket sealing faces of body and bonnet/cover are damaged	Remove the damage marks
16	Gasket is damaged	Replace
17	Body bolting is not properly tightened	Bolting should be tightened in a uniform criss-cross pattern to the specified torque
18	Insufficient pre-load	Tighten bolt-to-yoke nut
19	Pressure seal ring is damaged	Replace
20	Sealing faces in contact are damaged	Remove damage
21	Hardness is low for the service conditions	Provide increased hardness for the seat faces (eg: Stellite 6)
22	Gear teeth broken	Replace
23	Mating gear teeth have insufficient engagement	Replace
24	Grease inside the gear case is insufficient or is contaminated	Fill extra grease or replace
25	Gap between stem ends at the coupling is set less or more respectively	Reset the gap appropriately

8. GENERAL ARRANGEMENT OF CONSTRUCTION

8.1 Refer general assembly drawing.

9. ASSEMBLY/DISASSEMBLY

9.1 Refer assembly - specifications of the standard valves supplied on request.

10. APPLICABILITY

10.1 ALL VALVES

10.2 GATE & GLOBE VALVES

10.3 GATE, GLOBE & SWING CHECK VALVES

LOW F.E. PROVEN

www.scvvalve.com

Performance Exceeds Requirements for ISO 15848-1:2015 Fugitive Emission Testing

SCV Valve's newly designed API 6D 3-Piece Trunnion Mounted Ball Valve was built to exceed the performance requirements for specification ISO 15848-1:2015 (Fugitive Emission Testing*).

Standard Features

- Low fugitive emissions rated
- Triple barrier stem seal system
- Spring energized self-relieving seats standard stocking configuration
- Double piston effect sealing
- Double block and bleed capability standard with SPE design
- Secondary sealant injections
- Large ready-to-ship inventory in classes 150 thru 2500
- Short lead times
- Over 6,000 valves in stock

3-Piece Trunnion Ball Valves - API 6D

Full & Reduced Port - Bolted & Welded Body Construction

- 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/API 6FA
- Fugitive Emission Design: ISO 15848-1:2015

* = SCV Valve API 6D Trunnion Mounted Ball Valves in sizes 3" thru 20" in classes 150, 300, & 600 have been certified to ISO 15848-1:2015 by 3rd party inspection. However, all other SCV Valve API 6D products are built to this standard and can be 3rd party tested and certified upon request.

API 6D Trunnion Ball Valve
Size: 42" Class: 600



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



 **SCV VALVE**
Innovative Valve Solutions®

SCV_FE_122617.1

Meet the Family

www.scvvalve.com

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

SCV Valve's product family has you covered for all of your upstream, midstream and downstream applications. Take advantage of our large 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 6A Trunnion Balls

- Size: 2-1/16" - 13-5/8"
- Pressure: 2K, 3K, & 5K

API 6D Lubricated Plugs

- Size: 2" - 36"
- Class: 150 - 2500

API 6D Full Port Swing Checks

- Size: 2" - 36"
- Class: 150 - 2500

API 6D Trunnion Balls

- Size: 2" - 42"
- Class: 150 - 2500

API 623 Globes

- Size: 2" - 24"
- Class: 150 - 2500

API 594 Dual Plate Checks

- Size: 1.5" - 36"
- Class: 150 - 2500

API 6D Thru Conduit Gates

- Size: 2" - 42"
- Class: 150 - 2500

API 600 Gates

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

B16.34 Floating Balls

- Size: 1/2" - 12"
- Class: 150 - 1500



Industry Standards for Valve Manufacturing

This information is for reference only.

American Society of Mechanical Engineers (ASME)

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

American Society Non-destructive Test (ASNT)

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

American Society for Testing and Materials (ASTM)

American Petroleum Institute (API)

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

National Association of Corrosion Engineers (NACE)

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

Canadian Standards Association

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

British Standards Institute (BS)

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

International Organization for Standardization

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

Manufacturers Standardization Society

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

Terms & Conditions

Quotation Validity

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

Shipments

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

Force Majeure

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

Payment terms

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

Purchase Orders

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

Prices

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

Intellectual Property

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

Governing Law; Arbitration; Jurisdiction

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

Warranty

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

Limitation of Liability

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

Cancellation

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

Cancellation Charge

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

- | | |
|---|---------------------------|
| • 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 Valve Facility identified in writing, unless otherwise notified, and are subject to seller's standard re-stocking fees.

Documentation

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

Inspection

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

Witness Hydro-testing

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

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

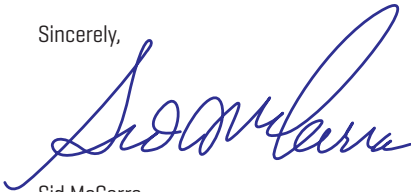
SCV Valve takes sincere pride in our ability to manufacture both commodity and specialty valves that meet and exceed the needs of our customers. All sizes, pressure classes, and metallurgical compositions are managed in house utilizing the strictest quality control measures to ensure the customer's total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

SCV Valve products include thru conduit gates, wedge gates, globes, full port swing checks, piston checks, trunnion mounted balls, floating balls, lubricated plugs, and pressure seal gates, globes and checks. 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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