



SCV VALVE
Innovative Valve Solutions®

[281] 482-4728 • www.scvvalve.com

Floating & Trunnion Ball Valve Installation, Operations, & 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.

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 available
- 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

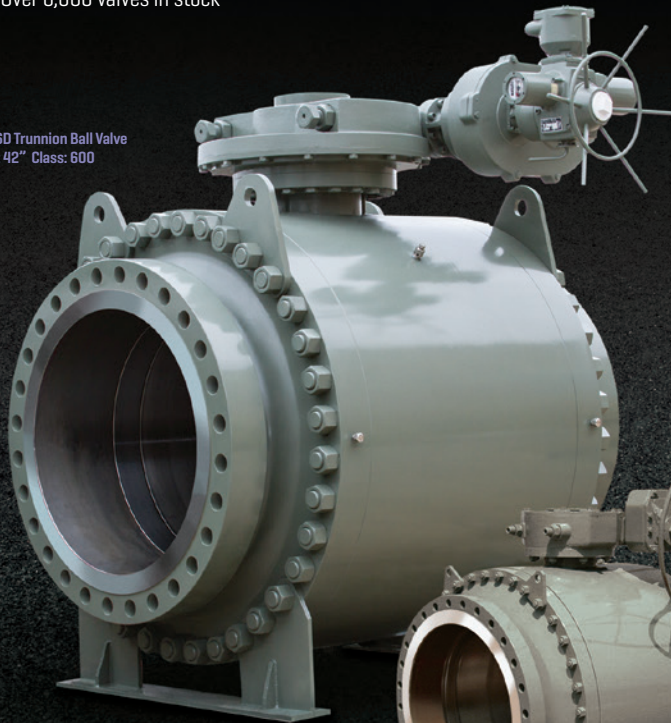
3-Piece Trunnion Ball Valves - API 6D

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_FE_122617.1

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

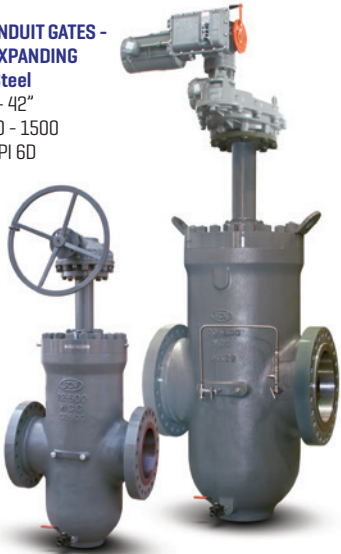
Sizes: 1/2" - 12"
 Class: 150 - 1500
 Design: B16.34



THRU CONDUIT GATES - SLAB & EXPANDING

Carbon Steel

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



COVER PISTON CHECKS

Carbon Steel

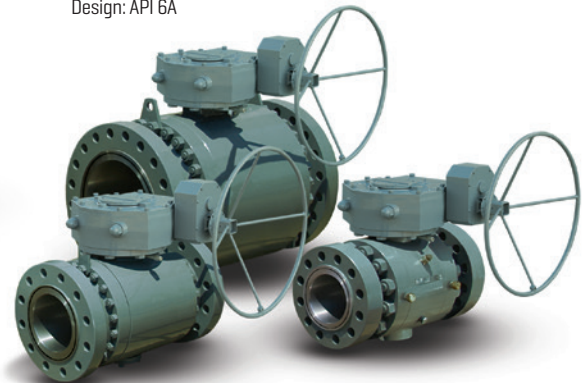
Sizes: 2" - 24"
 Class: 150 - 2500
 Design: API 6D



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

Complete Product Line.....	3
Table of Contents.....	4
Introduction/Scope.....	5
Valve Markings & Valve I.D.....	5
Product Transportation & Reception	6
Product Storage.....	6
Handling.....	6
Do’s and Don’ts.....	8
Installation.....	8
Valve Operation	10
Maintenance	11
Preventive Maintenance	11
Trouble Shooting.....	13
Disassemble & Reassemble.....	14
Fastener Torques.....	14
Cold Temperature Maintenance.....	14
Hydrate Formation Chart.....	15
Water Content Of Natural Gas Chart.....	16 & 17

1-PIECE FLOATING BALLS - REDUCED PORT

Expanded View	18
Bill of Materials.....	19

2-PIECE FLOATING BALLS - FULL PORT

Expanded View	20
Bill of Materials.....	21

3-PIECE TRUNNION BALLS - API 6A

Expanded View	22
Bill of Materials.....	23

3-PIECE TRUNNION BALLS - API 6D

BOLTED & WELDED BODY CONSTRUCTION

Bolted & Welded Body Expanded View	24
Bill of Materials.....	25

Terms & Conditions	27
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1. INTRODUCTION/SCOPE

The purpose of this manual is to ensure that the valves supplied are properly stored, installed, operated and maintained. Proper practices regarding installation and maintenance of the product will aid in standard trouble free performance.

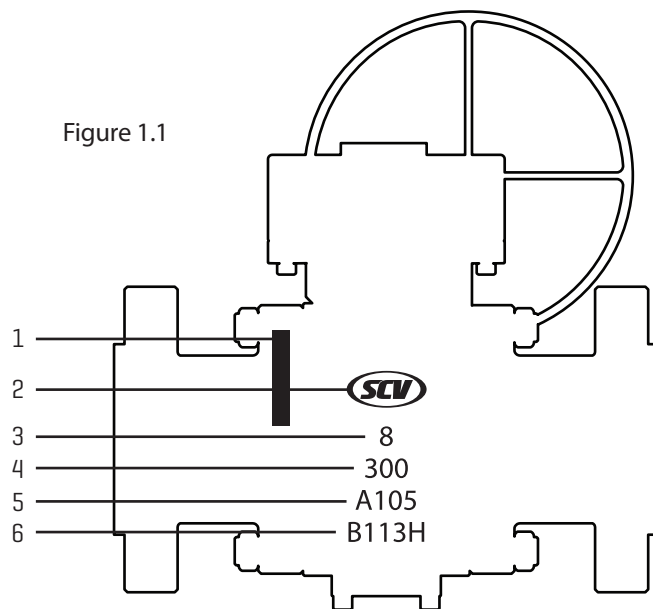
1. Valve specifications are marked on the body and/or identification plate. (Figure 1.1)

Note: To identify all parts of this product and better understand the maintenance requirements, see the expanded view of the valves on page 17, 19, 21, 23 & 24.

Valve Markings

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

Figure 1.1



Valve ID Tag

1	2	3	4	5	6	7	8	9	10	11	12	13	14
ISO 14313	SCV	SIZE	CLASS	BODY	STEM	MFG DATE	API	O RING	NACE MR 01 75				
S/N. NO.		BALL/DISC	SEAT										
FIG. NO.													
MOP/MAX TEMP													

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	API Conformance	Identifies API conformance (600, 6D, 6A, etc.)
11	Manufacturing Date	Identifies the date the valve manufacturing completion date
12	MOP/Min. Temp.	Identifies the maximum operating pressure in PSI and minimum operating temperature in Fahrenheit
13	O Ring	Identifies the O Ring material composition (Viton, Viton GLT, etc.)
14	NACE MR 01 75	Identifies corrosion resistance

2. PRODUCT TRANSPORTATION AND RECEPTION

1. While unpacking the valve, confirm that the valve and any accessories were not damaged during transportation.
2. If the valve or any of its accessories were damaged or lost during transportation, inform SCV immediately.

Caution: Do not place the valve directly on the ground or concrete floor! PLACE THE VALVE ON A WOODEN PALLET FOR INSPECTION.

Note: The valve's open/close position indicator is located on the handle sleeve for lever operated valves and on top of the gearbox for gear-operated valves.

3. Lever and gear-operated valves are delivered with the ball in the full open position. Valves are shipped with flange protectors which are designed to protect the flange face serrations and prevent the entry of foreign debris during transportation.

Note: For safety purposes, pneumatic actuated valves are shipped with ball in closed position with end caps protecting serrations and preventing the entry of foreign debris during transportation. Special care must be taken to avoid damage to the surface of the ball.

4. Do not remove the end caps or protective flange coverings from the valve until it is ready for installation. If the protective coverings are removed for examination, immediately reinstall all protective coverings after the inspection.
5. SCV recommends storing the valves indoors, in a dry, dust free atmosphere.

3. PRODUCT STORAGE

If the valves are to be stored for an extended period of time, the following procedures and steps are to be followed.

1. Spray the inside of the valve with Tectyl 502C Rust Inhibitor or equal.
2. Inject Shell B-B Grease [or equivalent] into the secondary seat ports.
3. Insert Shell VPI #300 tablet into the valve body cavity to aid in keeping moisture out of the valve.
4. Spray a rust inhibitor (WD40, or equal) on the flange facing of each end connection.
5. Install plastic or plywood flange protectors on each flange. Tape the edges of the protector with duct-tape to provide an air tight seal.
6. The product should be operated monthly to ensure lubricated areas have lubricant distributed accordingly. The valve stem should be left in a different position each month. When stroking the valve, use filtered dehydrated and lubricated air to operate the actuator.
7. For valves with actuators, the actuator should have all fluid ports or connections plugged to prevent ingress of water or dust. Coupling parts must be protected with grease or protective oil.
8. Valve should be stored in a dry, weatherproof building [preferably climate controlled].

Caution: When handling the valve or valve package, remember, valves are very heavy!

9. Place an approved lifting device securely around the valve body or use lifting hooks while handling the valve. Special care should be taken not to damage the lever/gearbox/actuator. [Figure 2.1]

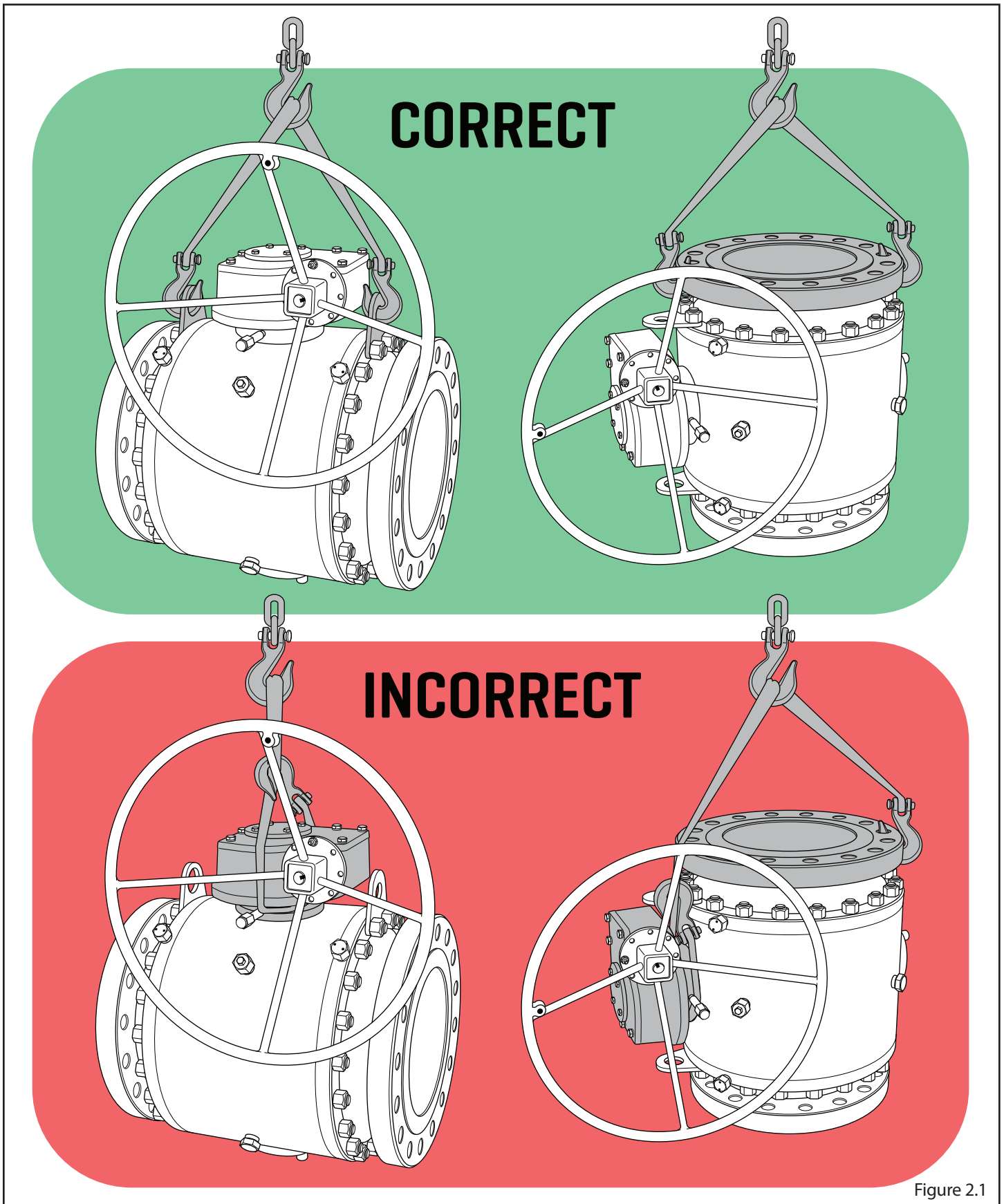


Figure 2.1

4. DO'S AND DON'TS

Note: Read and understand the Do's and Don'ts before valve installation, operation, or maintenance. Contact SCV with any questions or concerns.

Do's

1. Use the valve for the specified application as agreed between SCV and the purchaser/end-user.
2. Read this manual before installing or operating any SCV valve.
3. Train employees on the safe handling and use (maintenance and operation) of the valve.
4. Open or close the valve slowly to avoid a hammering effect on the valve and the pipeline.
5. Always replace the damaged parts with genuine and recommended SCV parts.
6. Be aware of the media type and environment (explosive, highly flammable, toxic, oxidizing, etc.) in which the valve is to be used. Protect people and the environment from any harmful or poisonous substances.
7. To avoid any major product/environmental damage, remove any residual hazard(s) (as applicable, or as informed by the SCV).
8. The valve body may be very hot or cold during use. Take all precautions to protect against burn/freeze injuries.

Don'ts

1. Do not exceed maximum operating conditions (pressures, temperatures, etc.) as specified on the body and/or nameplate.
2. Do not allow the valve to remain open at any intermediate position.
3. Do not try to rectify any valve leakage by reworking the seats. Leaking seats have to be replaced with new genuine SCV seats.
4. The threaded connections in the valve body for the drain and vent lines are sealed with threaded plugs. Do not remove these plugs while the valve is under pressure.
5. Do not modify the valve at any time under any circumstances.
6. Do not use these valves for throttling applications.

5. INSTALLATION

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.
2. When removing the valve from storage, inspect it for damage.
3. Before 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 if necessary.

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

4. During commissioning and pipeline flushing, the valve must remain in the full-open position to prevent damage to internal parts.

Note: 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. Ball valves are designed for bidirectional flow unless the ball is prepared for cavity relief. For a ball with a cavity relief hole, ensure that the installation of the valve is correct with respect to the flow direction arrow marked on valve.

- Valves can be mounted in a horizontal (with stem upwards only) or vertical position depending on pipeline routing. SCV does not recommend installing the valve with the actuator on the underneath side because dirt in the pipeline may enter the body cavity and damage the gland packing. [Figure 3.1]
- It may be necessary to firmly support the pipeline in order to protect the valve from excess stress and to reduce the pipeline vibrations. To facilitate servicing, it is recommended that the valve be supported by the body, using approved support devices. Do not fasten supports to flange bolting or actuator. [Figure 3.2]

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.

Figure 3.1

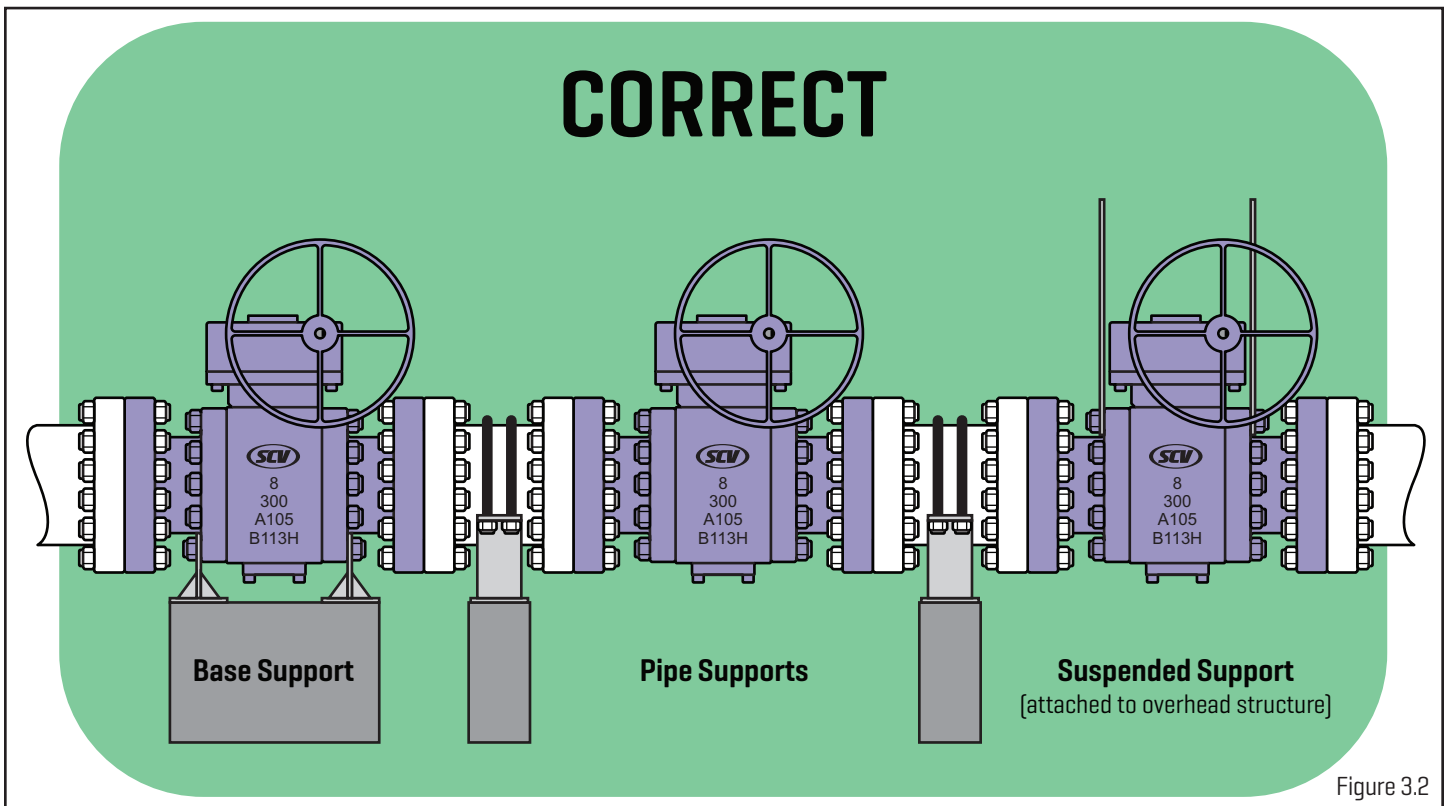
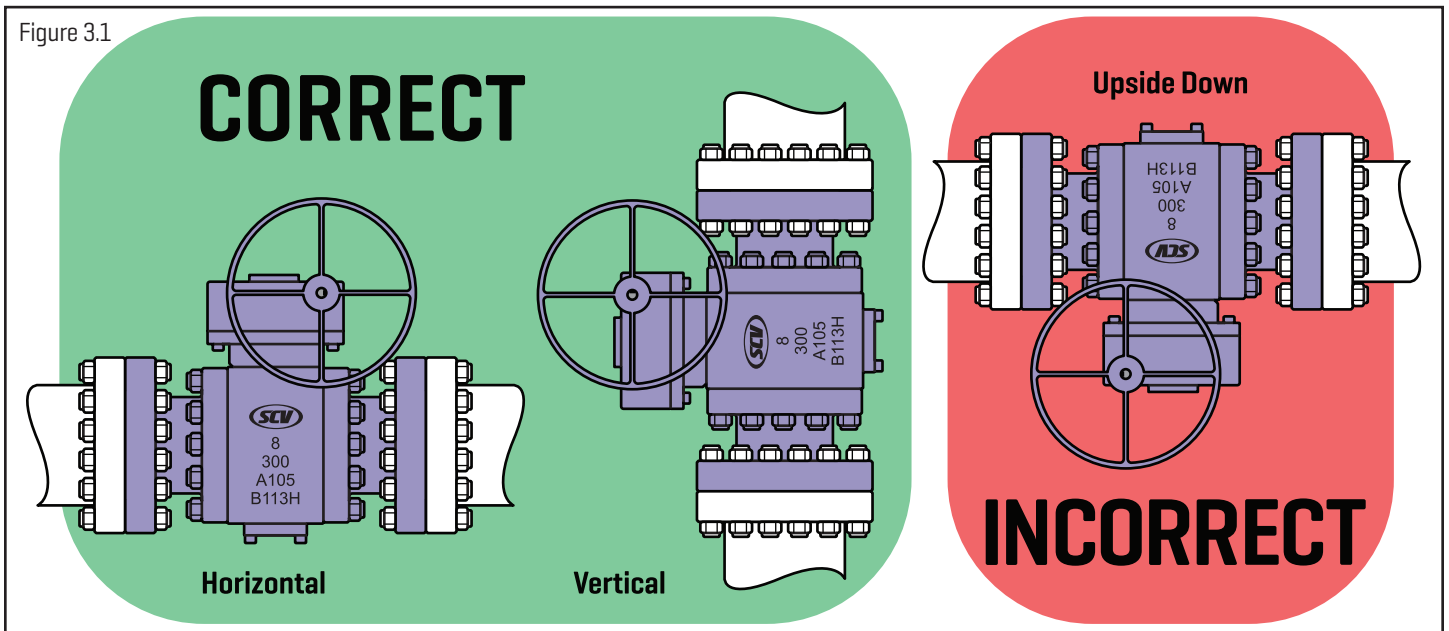


Figure 3.2

Flanged End Valves

- Do not use flange bolts to correct misalignments.
- During tightening operation, ensure that piping stresses are not transferred to the valve.
- Over-tightening flange studs can cause damage and/or leakage at the flanges or body-to-body end joints.

Butt Weld End Valves

Note: Welding operation must be performed by a qualified welder. The welding procedure should be performed according to ASME Boiler and Pressure Vessel Code Section IX.

Caution: To prevent seat/seal damage during welding installation, do not allow the temperature of the valve body seat area to exceed 200° F [94° C]. Use thermal chinks to monitor temperatures.

Note: Any damage to the seats due to temperatures greater than 200° F [94° C] can cause leakage. SCV recommends keeping spares readily available.

Caution: To prevent damage to sealing surfaces and seals, ensure that weld spatter does not fall on ball and/or body seals.

- Ensure a gap of 0.08" to 0.12" between the valve ends and pipeline as per ASME Welding Standard then tack weld the pipeline and valve ends. After proper alignment of the valve to the pipeline, complete the weld as necessary.

6. VALVE OPERATION

- For lever operated valves, the hand lever is either assembled with the valve or shipped by fastener, depending on the size of the valve or hand lever.
- For gear operated valves, THE GEARBOX OPEN/CLOSE ADJUSTMENT HAS BEEN MADE PRIOR TO DISPATCH AND MUST NOT BE DISTURBED. Rotation of hand wheel in the clockwise direction closes the valve. Counter clockwise rotation opens the valve [looking from the hand wheel end.] The internal details/construction of gearbox may vary as per manufacturer's standard. [Figure 4.1]

Caution: Ensure that the force applied on the hand wheel of the gearbox or lever does not exceed 265 ft. lbs.

Note: Do not apply extra leverage [using pipe/bar], when the end stops or the gearbox reaches it's final setting point.

- SCV ball valves always close in a clockwise direction. The ball should always be rotated through 90° to the fully opened or fully closed position.

Caution: Keeping the valve at any intermediate position should always be avoided, as high velocity through the narrow opening will produce erosion of seats, ball and the body.

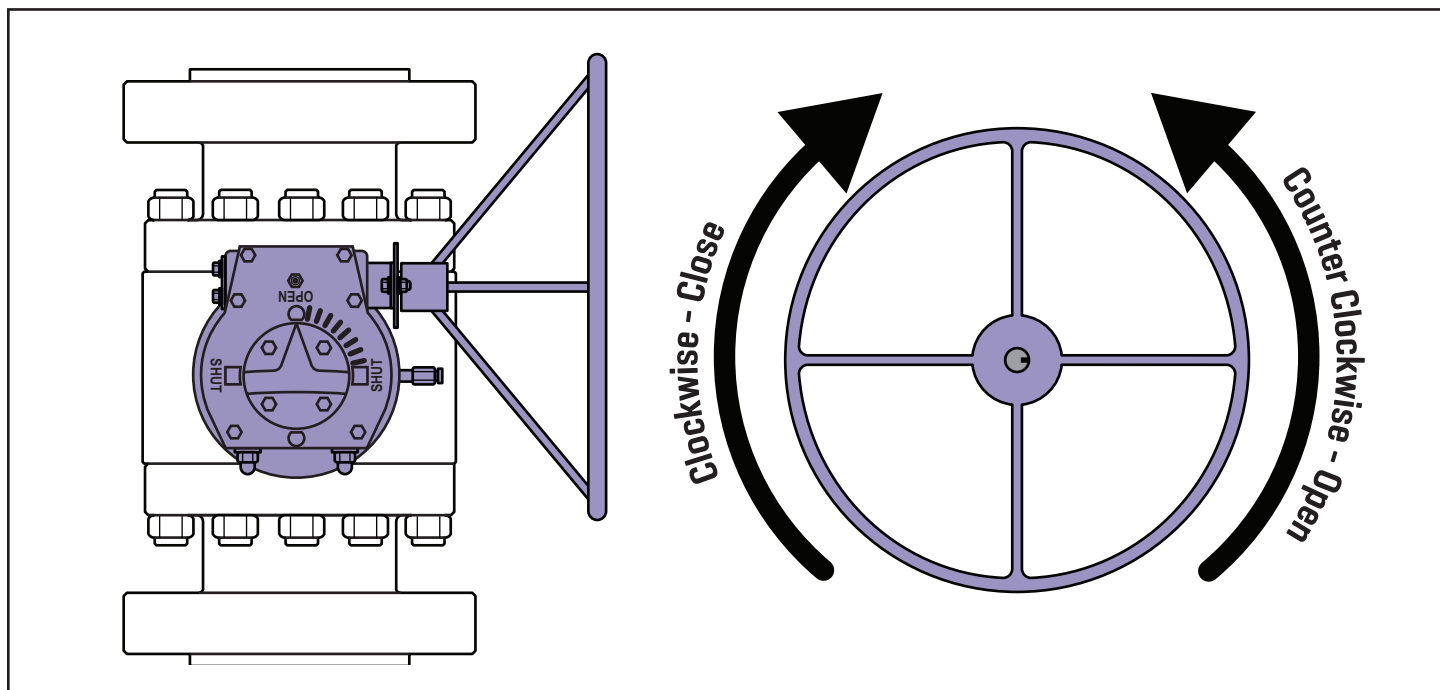


Figure 4.1

7. MAINTENANCE

Caution: Observe the Caution/Safety precautions before carrying out maintenance.

Guidelines for routine user maintenance are as follows.

1. Ensure that the performance of the valve is satisfactory.
2. Ensure that no leakage is being observed from the valve.
3. Frequent observation is recommended under extreme application/condition.
4. To remove debris from the sealant system, periodically flush the sealant ports with an approved valve cleaning solution.
5. Mounting studs/nuts of the worm gearbox may be checked for tightness and retightened if necessary.
6. Before and after pigging, it is recommended that an approved lubricant be injected to all seats to prevent debris build-up.

8. PREVENTIVE MAINTENANCE

1. In order to avoid failure during operation, all valves in a process plant should be periodically inspected thoroughly for wear on the ball, seats, seals, or body. If wear is discovered, SCV recommends replacing seats, seals, gaskets, and packing with genuine SCV parts. Check the electrical continuity of the valve and pipeline.
2. The type of process, fluids involved, working conditions, and location of the valve in the process plant, will determine the frequency of the inspection/maintenance.
3. Preventive maintenance is essential to ensure optimum valve performance.
4. Before removing the valve from the pipe, it is important to mark the relative position of the valve flange with respect to pipeline flange and the flow of direction of the valve.
5. Once a valve is repaired, it should undergo a complete set of tests to make sure that the valve is adequate for the original working conditions. Hydrostatic/pneumatic shell/seat tests should be carried out as per the specifications relevant to the valve.

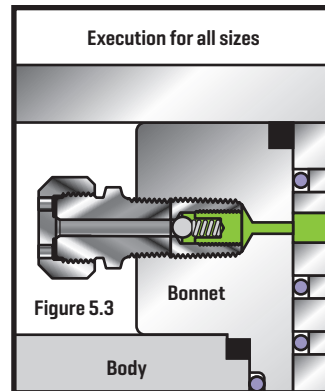
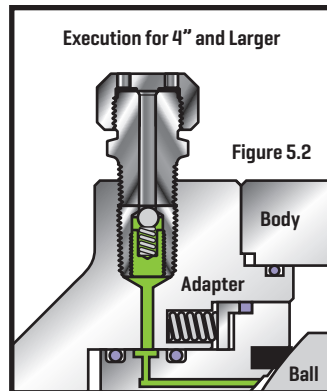
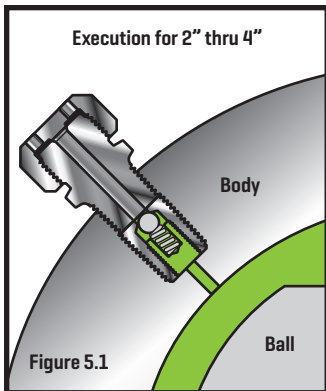
Note: Clean the valve carefully of all media. Inform SCV of any dangerous media involved when sending the product to SCV for servicing.

6. Sealant/lubrication injection feature in Trunnion mounted ball valves
 - 6.1. Secondary sealant/lubrication injection systems are used to provide seat lubrication for regular maintenance programs and if necessary, when a temporary tight shut off is required due to seat ring or stem seal damage caused by foreign debris in the process media. Flush the sealant/lubrication port with suitable valve cleaner. Use only standard grade valve sealants/lubricants suitable for the media in the valve. Using a hand pump, inject sealant/lubrication into the seat surface through the injection port located on the valve body and stem housing. This will purge old sealant debris from the valve seats and maintain low torques.
7. Procedure for sealant/lubrication injection
 - 7.1. Trunnion mounted pipeline valves of sizes 6" NB and above are provided with two sealant/lubrication injection ports on the body/body adapter for individual seats and one sealant/lubrication injection port on the stem housing. Each port provided on the body provides sealant entry to the stem sealing area. The ports are fitted with an inline check fitting.
 - 7.2. Injecting handgun: Sealant is injected by connecting the outlet fitting of the handgun to the sealant injection port.

Note: Sealant injection is to be carried out only if the valve seats or stem packing are leaking.

8. Sealant should be injected only when the valve is in the closed position to ensure effective sealing of the damaged seat.

9. Refer to the sealant injection fitting arrangement. Slide the giant button head coupler which is integral with the hose of the sealant injection gun, over a double-check one-piece fitting. Now the arrangement is ready for injection of the sealant.
(Figure 5.1, 5.2, & 5.3)



Lubrication of Worm Gear Box

10. Worm gear boxes are supplied with grease. Normally the grease is suitable for -20°C [-4°F] to 80°C [176°F.] For other applications, consult the Factory/Branch office.
11. Grease as necessary.
- 11.1. Grease should be changed if operated frequently, after approximately three years.
 - 11.2. If operated rarely, after approximately five years.
 - 11.3. The primary reducing spur gear unit attached to main worm gearbox should be re-greased at least annually.

Caution: Disassembly of the gear box should be done only by experienced, trained operators and as directed by SCV.

9. TROUBLE SHOOTING

1. The following table lists the possible malfunctions that might occur after prolonged use.

Symptom	Possible fault	Actions
Leakage through a closed Valve	Damaged ball surface	Replace the ball
	Damaged seats	Replace seats
	Ball might not be closed fully	Check ball Open/Close settings
Irregular ball movement	Impurities between the ball and seats or ball - body cavity and ball seats	Flush the ball from inside
		Clean the sealing surfaces and seats
Valve too hard to operate / valve torque too high	Damaged seats	Replace the seats
	High application pressure/temperature	Confirm the application pressure/temperature rating
	Foreign particles in valve	Clean the internals
Water hammer or noisy operation	Error in valve sizing or flow of fluid with high velocity	Confirm valve sizing with respect to flow
Leakage through stem	Gland nut loose	Tighten gland nut
	Damaged stem, stem sealing surface	Replace the stem
	Damaged stem seal	Replace the stem seal

2. Ordering the spares.

Information	Location
Size of Valve	Available on name plate or body of the valve
Valve Rating	
Serial Number/Batch Number	
Manufacturing Date	
Part Number	Available on general arrangement drawing
Name of Part	
Number of Pieces Required	
Purchase Order Number	

Note: Selection and use of the valve for a specific application requires close consideration to detailed aspects. Due to the nature of the product, this manual cannot cover all of the individual situations that may occur when installing, using or servicing the valve.

Caution: Follow safety rules and regulations to avoid personal injury or equipment damage.

10. DISASSEMBLE AND REASSEMBLE

Important: Please contact SCV regarding disassembly/assembly matters.

FASTENER TORQUES

BM7 & LM7 Torque Guide						
ASTM A193 Gr. B7M ASTM A320 Gr. L7M			Minimum Torque (Ft/Lbs) (50% Yield)		Maximum Torque (Ft/Lbs) (70% Yield)	
Bolt Size Dia x TPI	Stress Area (IN)	Min. Yield Strength (PSI)	w/Thread Compound	Teflon/Xylan Coated	w/Thread Compound	Teflon/Xylan Coated
3/8 x 16	0.0775	80,000	19	10	24	13
1/2 x 13	0.1419	80,000	37	20	47	25
5/8 x 11	0.2261	80,000	88	52	123	73
3/4 x 10	0.3345	80,000	153	90	214	126
7/8 x 9	0.4618	80,000	243	143	340	200
1 x 8	0.6059	80,000	361	213	505	298
1 1/8 x 8	0.7906	80,000	523	305	732	427
1 1/4 x 8	0.9999	80,000	726	421	1,016	590
1 3/8 x 8	1.2337	80,000	976	563	1,366	788
1 1/2 x 8	1.4920	80,000	1,278	733	1,789	1,026
1 3/4 x 8	2.0824	80,000	2,054	1,169	2,876	1,637
2 x 8	2.7709	80,000	3,094	1,750	4,332	2,450
2 1/8 x 8	3.1520	80,000	3,725	2,101	5,215	2,942
2 1/4 x 8	3.5576	80,000	4,436	2,496	6,211	3,495
2 3/8 x 8	3.9877	80,000	5,232	2,938	7,325	4,113
2 1/2 x 8	4.4424	80,000	6,118	3,429	8,565	4,800
2 3/4 x 8	5.4254	80,000	8,179	4,568	11,450	6,395
3 x 8	6.5066	80,000	10,656	5,935	14,918	8,308
3 1/4 x 8	7.6860	80,000	13,588	7,549	19,024	10,569
3 1/2 x 8	8.9635	80,000	17,015	9,433	23,820	13,206
3 3/4 x 8	10.3393	80,000	20,973	11,606	29,362	16,248

B7 & B16 Torque Guide						
ASTM A193 Gr. B7 ASTM A193 Gr. B16			Minimum Torque (Ft/Lbs) (50% Yield)		Maximum Torque (Ft/Lbs) (70% Yield)	
Bolt Size Dia x TPI	Stress Area (in)	Min. Yield Strength (PSI)	W/ Thread Compound	Teflon/Xylan Coated	W/ Thread Compound	Teflon/Xylan Coated
3/8 x 16	0.0775	105,000	25	14	31	17
1/2 x 13	0.1419	105,000	49	26	59	32
5/8 x 11	0.2261	105,000	115	68	161	96
3/4 x 10	0.3345	105,000	200	118	280	166
7/8 x 9	0.4618	105,000	319	188	446	263
1 x 8	0.6059	105,000	474	279	663	391
1 1/8 x 8	0.7906	105,000	686	401	960	561
1 1/4 x 8	0.9999	105,000	953	553	1,334	774
1 3/8 x 8	1.2337	105,000	1,281	739	1,794	1,034
1 1/2 x 8	1.4920	105,000	1,677	962	2,348	1,347
1 3/4 x 8	2.0824	105,000	2,696	1,534	3,775	2,148
2 x 8	2.7709	105,000	4,061	2,297	5,686	3,216
2 1/8 x 8	3.1520	105,000	4,889	2,758	6,845	3,861
2 1/4 x 8	3.5576	105,000	5,822	3,276	8,151	4,587
2 3/8 x 8	3.9877	105,000	6,867	3,856	9,614	5,398
2 1/2 x 8	4.4424	105,000	8,030	4,500	11,242	6,300
2 3/4 x 8	5.4254	95,000	9,712	5,424	13,597	7,594
3 - 8	6.5066	95,000	12,654	7,047	17,715	9,866
3 1/4 - 8	7.6860	95,000	16,136	8,965	22,591	12,551
3 1/2 - 8	8.9635	95,000	20,205	11,201	28,287	15,682
3 3/4 - 8	10.3393	95,000	24,905	13,782	34,867	19,294

8M & B8M Torque Guide						
ASTM A193 Gr. 8M ASTM A193 Gr. B8M			Minimum Torque (Ft/Lbs) (50% Yield)		Maximum Torque (Ft/Lbs) (70% Yield)	
Bolt Size Dia x TPI	Stress Area (In)	Min. Yield Strength (PSI)	w/Thread Compound	Teflon/Xylan Coated	w/Thread Compound	Teflon/Xylan Coated
3/8 x 16	0.0775	30,000	7	4	9	5
1/2 x 13	0.1419	30,000	14	7	18	9
5/8 x 11	0.2261	30,000	33	20	46	27
3/4-10	0.3345	30,000	57	34	80	47
7/8 x 9	0.4618	30,000	91	54	127	75
1 x 8	0.6059	30,000	135	80	190	112
1 1/8 x 8	0.7906	30,000	196	114	274	160
1 1/4 x 8	0.9999	30,000	272	158	381	221
1 3/8 x 8	1.2337	30,000	366	211	512	296
1 1/2 x 8	1.4920	30,000	479	275	671	385
1 3/4 x 8	2.0824	30,000	770	438	1,078	614
2 x 8	2.7709	30,000	1,160	656	1,625	919
2 1/8 x 8	3.1520	30,000	1,397	788	1,956	1,103
2 1/4 x 8	3.5576	30,000	1,664	936	2,329	1,311
2 3/8 x 8	3.9877	30,000	1,962	1,102	2,747	1,542
2 1/2 x 8	4.4424	30,000	2,294	1,286	3,212	1,800
2 3/4 x 8	5.4254	30,000	3,067	1,713	4,294	2,398
3 x 8	6.5066	30,000	3,996	2,225	5,594	3,116
3 1/4 x 8	7.6860	30,000	5,096	2,831	7,134	3,963
3 1/2 x 8	8.9635	30,000	6,380	3,537	8,933	4,952
3 3/4 x 8	10.3393	30,000	7,865	4,352	11,011	6,093

Note: Ensure that all nuts and bolts are tightened to the torque values as specified in this table. In case of service/repair, contact SCV.

- 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 Ex-works, 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.

11. COLD TEMPERATURE MAINTENANCE PROGRAM

COLD WEATHER TIME OPERATION REMINDER

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

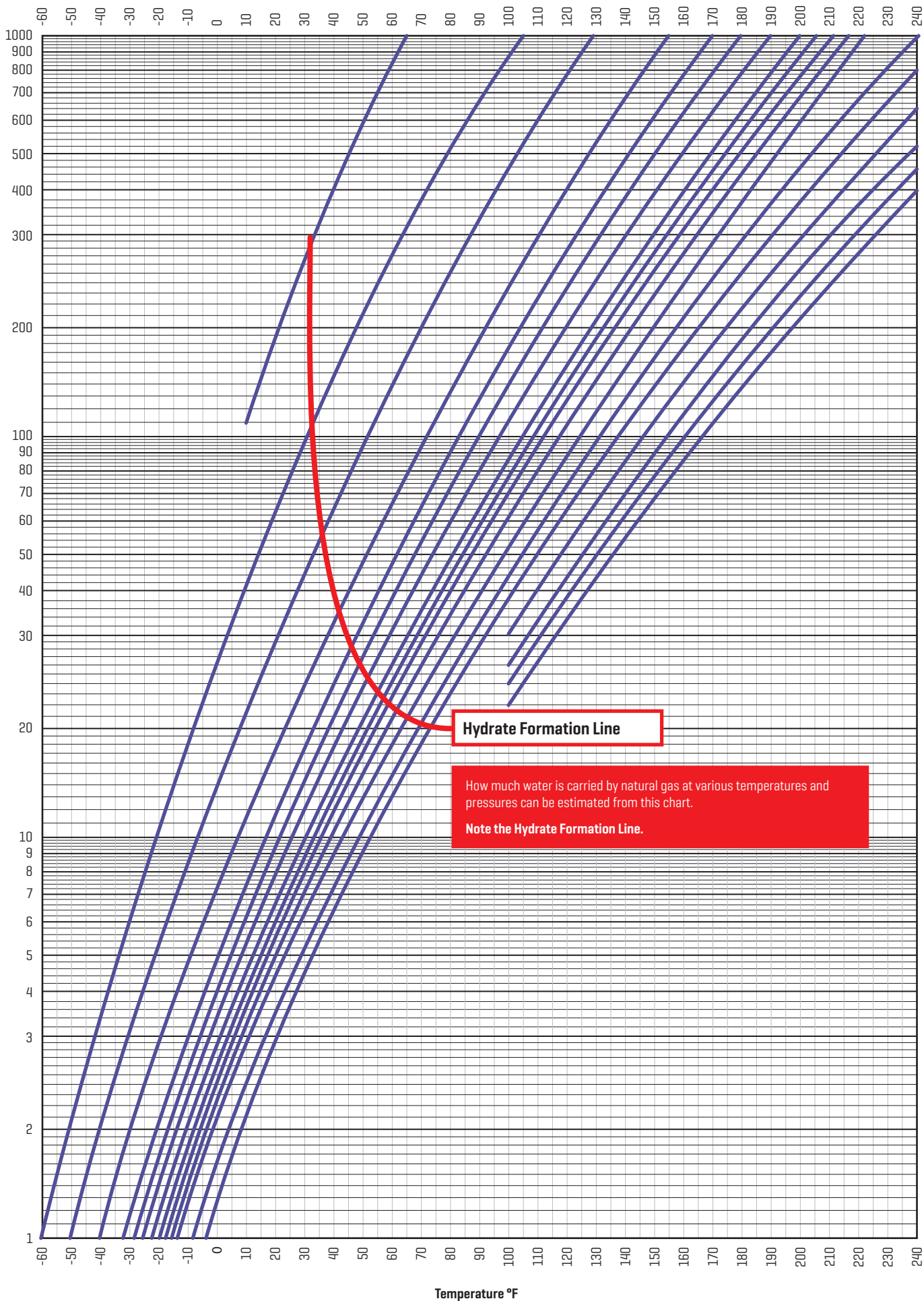
Warning: If media freezes, do not operate. This will add extreme torque to valve and damage internal components.

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.

WATER CONTENT, LBS. PER MM CUBIC FEET AT 14.7 PSIA AND 60 °F.



Water Content of Natural Gas (IGT Res. Bull #8 1955) LB. Water/MMSCF at Dew Point Temperature (F)

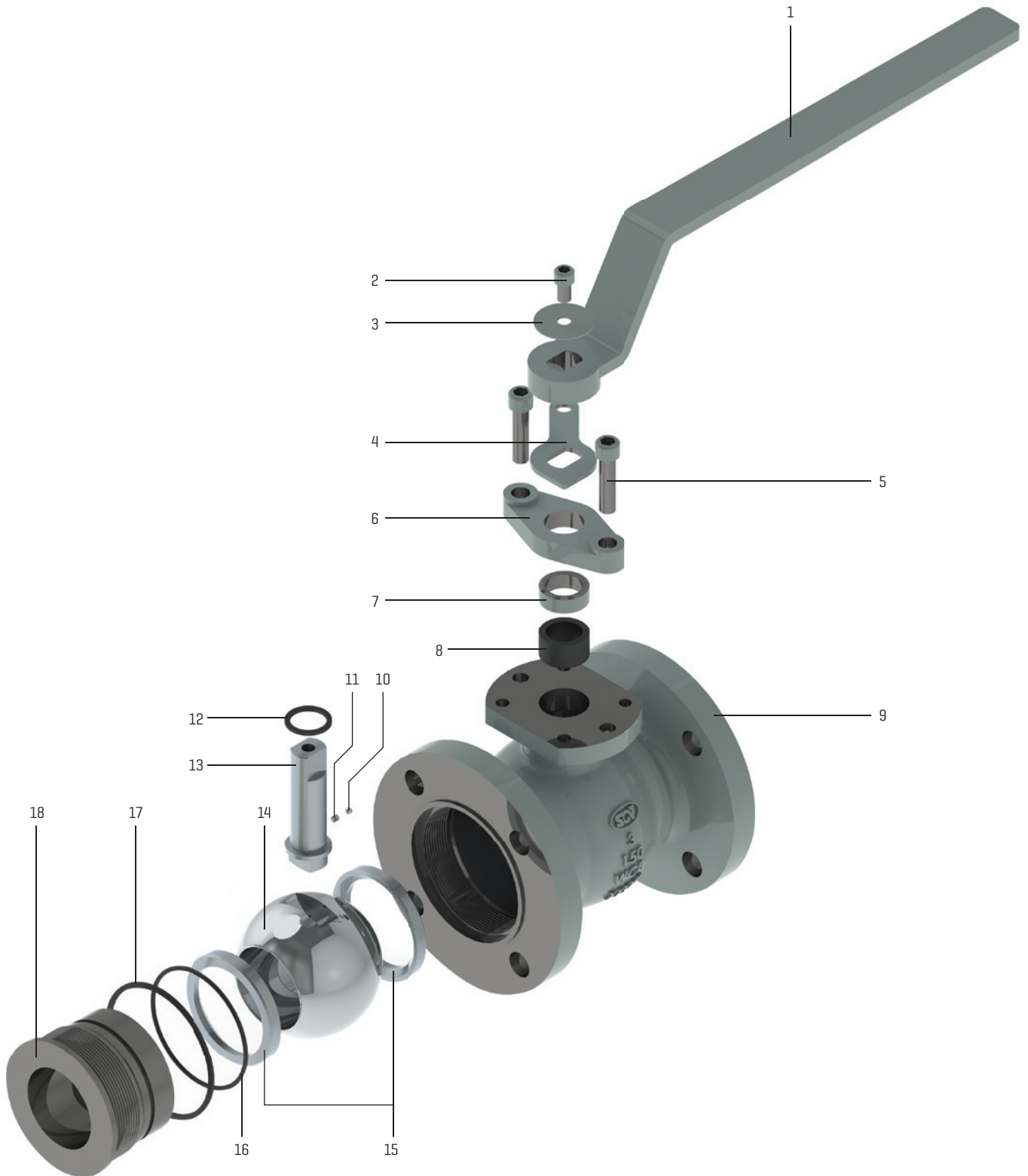
Pressure (PSIG)	120	115	110	105	100	95	90	85	80	75	70	65	64.4	60.8	57.2	53.6	50	46.4	42.8	39.2	35.6	32	28.4	24.8
0	5517	4793	4153	3588	3091	2655	2273	1940	1651	1400	1183	996	975	859	755	663	580	507	442	385	334	289	245	207
10	3292	2881	2479	2142	1845	1585	1353	1159	986	836	707	595	583	513	451	396	347	303	254	230	208	173	146	124
20	2350	2042	1770	1530	1318	1132	970	828	705	598	505	425	416	367	323	283	248	217	189	164	143	124	105	88.9
30	1830	1590	1378	1191	1027	882	756	645	540	466	394	332	325	286	252	221	193	169	147	128	111	96.9	82.2	69.5
40	1500	1303	1130	977	842	723	620	529	450	382	323	272	266	235	206	181	159	139	121	105	91.9	79.7	67.5	57.2
50	1271	1165	958	828	714	614	528	449	382	324	274	231	225	199	175	154	135	118	103	80.9	78.2	67.8	47.5	48.6
75	924	803	696	602	519	446	383	327	278	236	200	169	155	145	128	112	98.8	86.5	75.5	65.8	57.2	49.6	42.1	35.6
100	727	633	540	475	409	352	302	258	220	187	156	133	138	115	101	89.2	78.2	68.5	59.8	52.1	45.3	39.4	33.4	28.3
125	602	523	454	393	339	291	250	214	182	155	131	111	108	95.6	84.3	74.1	65.0	56.9	49.7	43.4	37.8	32.8	27.8	23.6
150	514	447	388	336	290	249	214	183	156	133	112	94.8	92.8	82.0	72.3	63.6	55.3	48.9	42.7	37.3	32.5	28.2	24.0	20.2
175	449	391	339	294	254	218	187	160	137	116	98.5	83.2	81.5	72.0	63.4	55.8	49.0	43.0	37.6	32.1	28.6	24.8	21.1	17.9
200	400	348	302	252	226	194	167	143	122	104	87.9	74.3	72.7	64.3	56.7	49.9	43.8	38.4	33.6	29.4	25.8	22.2	18.0	15.1
225	360	314	273	236	204	176	151	129	110	93.7	79.5	67.2	65.8	58.2	51.3	43.8	39.7	34.3	30.5	26.6	23.2	20.2	17.2	14.6
250	320	286	249	215	186	169	138	113	101	85.7	72.7	61.5	59.2	53.2	47.0	39.7	36.4	31.9	27.9	24.4	21.3	18.5	15.8	13.4
275	302	263	229	198	171	148	127	109	92.8	79.0	67.1	56.7	55.6	49.1	43.4	36.4	33.6	29.5	25.8	22.6	19.7	17.2	14.6	12.4
300	280	244	212	184	159	137	118	101	85.2	73.4	62.3	52.7	51.7	45.7	40.4	33.6	31.3	27.5	24.1	21.0	18.4	15.0	13.6	11.6
350	245	214	186	151	139	120	103	88.5	75.7	64.5	54.8	46.4	45.5	40.2	35.5	31.3	27.6	24.2	21.3	18.6	16.2	14.2	12.1	10.3
400	218	190	166	144	124	107	92.3	79.2	67.7	57.7	49.1	41.6	40.8	35.1	31.9	28.1	24.8	21.8	19.1	16.7	14.5	12.5	10.9	9.3
450	197	172	150	130	113	97.2	83.6	71.8	61.5	52.4	44.6	37.8	37.1	32.8	29.0	25.6	22.6	19.9	17.4	15.3	13.4	11.7	10.0	8.5
500	180	158	137	119	103	89.0	76.7	65.9	56.4	45.2	41.0	34.8	34.1	30.2	26.7	23.6	20.8	18.3	16.1	14.1	12.4	10.8	9.2	7.9
600	155	135	118	102	88.8	76.8	66.2	56.9	48.8	41.7	35.5	30.2	33.3	26.2	23.7	20.6	18.1	16.0	14.1	12.3	10.8	9.5	8.1	6.9
700	137	119	104	90.5	78.5	67.9	58.6	50.5	43.3	37.1	31.8	26.9	26.3	23.4	20.7	19.4	16.2	14.3	12.6	11.1	9.7	8.5	7.3	6.2
800	123	107	93.7	81.5	70.8	61.3	52.9	45.6	39.2	33.5	28.7	24.4	23.9	21.2	18.8	16.7	14.8	13.0	11.5	10.1	8.9	7.8	6.7	5.7
900	112	97.9	85.5	74.5	64.7	56.1	48.5	41.8	35.9	30.8	26.3	22.5	22.0	19.6	17.4	15.4	13.6	12.0	10.6	9.3	8.2	7.2	6.2	5.3
1000	103	90.4	79.0	68.8	59.8	51.9	44.9	38.7	33.3	28.6	24.5	20.9	20.4	18.2	16.2	14.3	12.7	11.2	9.9	8.7	7.7	6.8	5.8	5.0
1200	90.1	79.0	69.1	60.3	52.5	45.6	39.5	34.1	29.4	25.3	21.7	18.5	18.1	16.2	14.4	12.8	11.3	10.0	8.9	7.8	6.9	6.1	5.2	4.5
1400	80.7	70.8	62.0	54.2	47.2	41.1	35.6	30.8	26.6	22.9	19.7	16.8	16.5	14.7	13.1	11.7	10.3	9.21	8.1	7.2	6.3	5.6	4.8	4.1
1600	73.7	64.7	56.7	49.6	43.3	37.7	32.7	28.3	24.5	21.1	18.1	15.6	15.2	13.6	12.1	10.8	9.5	8.5	7.6	6.7	5.9	5.2	4.5	3.9
1800	68.1	59.9	52.6	46.0	40.2	35.0	30.4	26.4	22.8	19.7	17.0	14.6	14.3	12.7	11.4	10.1	9.0	8.0	7.1	6.3	5.6	4.9	4.3	3.7
2000	63.7	56.1	49.2	43.1	37.7	32.9	28.6	24.9	21.5	18.6	16.0	13.8	13.5	12.1	10.8	9.6	8.8	7.6	6.8	6.0	5.3	4.7	4.1	3.5
2200	60.1	52.9	46.5	40.8	35.7	31.2	27.1	23.6	20.4	17.7	15.3	13.1	12.8	11.5	10.3	9.2	8.2	7.3	6.5	5.7	5.1	4.5	3.9	3.4
2400	57.1	50.3	44.2	38.8	34.0	29.7	25.9	22.5	19.5	16.9	14.6	12.4	12.3	11.0	9.9	8.8	7.9	7.0	6.2	5.5	4.9	4.3	3.8	3.3
2600	54.5	48.1	42.3	37.2	32.6	28.5	24.8	21.6	18.8	16.3	14.1	12.1	11.9	10.5	9.5	8.5	7.5	6.8	6.0	5.4	4.8	4.2	3.7	3.2
2800	52.3	46.2	40.7	35.7	31.3	27.4	23.9	20.9	18.1	15.7	13.6	11.7	11.5	10.3	9.2	8.3	7.4	6.5	5.9	5.2	4.6	4.1	3.6	3.1
3000	50.4	44.5	39.2	34.5	30.43	26.5	23.2	20.2	17.6	15.2	13.2	11.4	12.4	10.0	9.0	8.0	7.2	6.4	5.7	5.1	4.5	4.0	3.5	3.0

1-Piece Floating Ball Valves

Reduced Port

Bolted Body Construction

[Expanded View]



1-Piece Floating Ball Valves

Reduced Port

Bolted Body Construction

[Bill of Materials & Features]

No	Name of Part	Material
1	Handle	Carbon Steel
2	SHCS	ASTM A193 - BB
3	Name Plate	304 SS
4	Handle Stop	304 SS
5	SHCS	ASTM A193 - BB
6	Gland Flange	ASTM A351 - CF8
7	Gland	ASTM A351 - CF8
8	Gland Packing	Graphite
9	Body	ASTM A216 - WCB
10	Ball	ASTM A276 - 316
11	Anti- Static Spring	ASTM A580 - 316
12	Thrust Washer	RTFE
13	Stem	ASTM A276 - 316
14	Ball	ASTM A351 - CF8
15	Seat	PTFE
16	O-Ring	VITON
17	Gasket	316 SS + Graphite
18	Cap	ASTM A216 - WCB

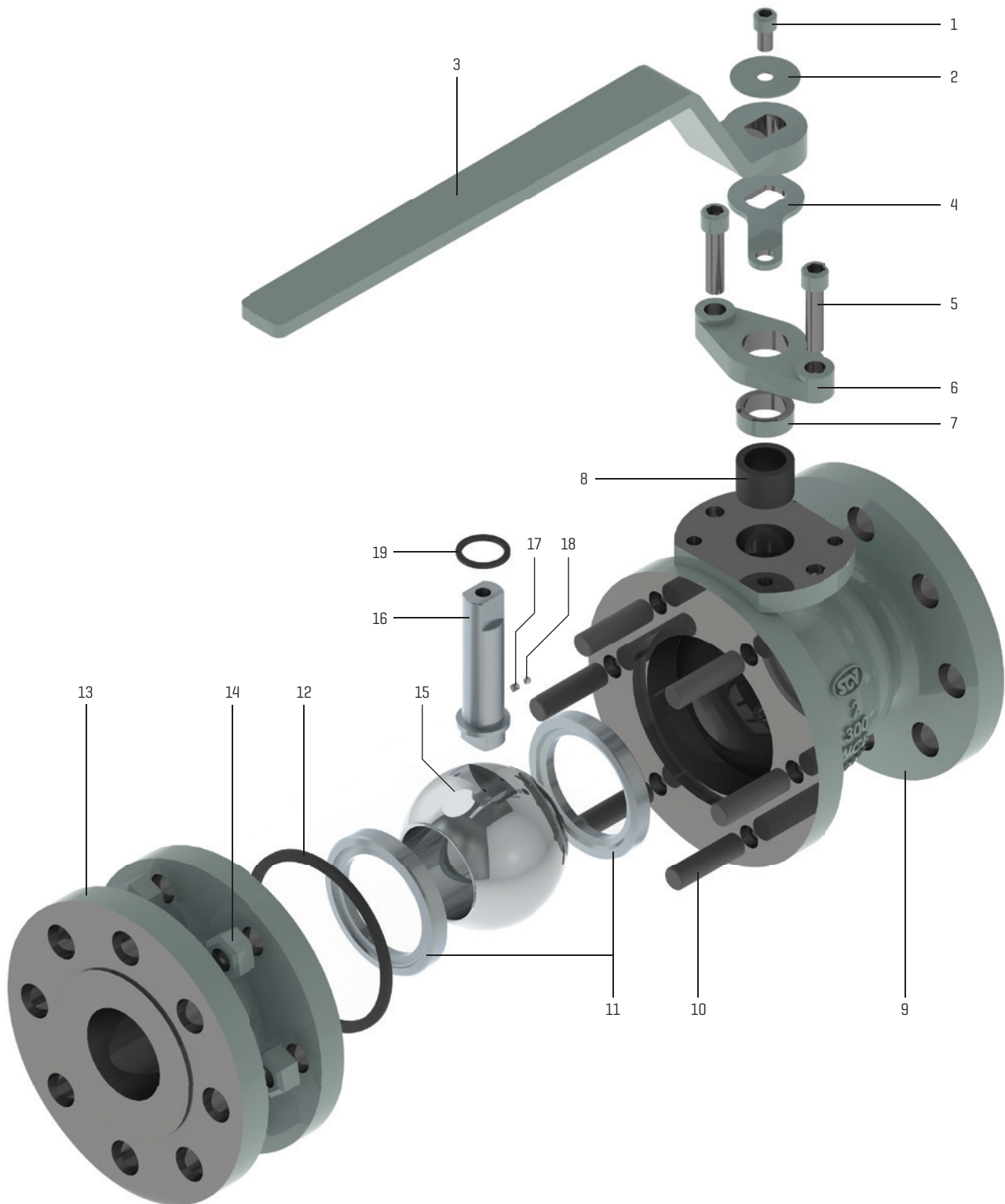
Note: Additional materials available upon request

Features

1-piece body design with flanged ends for fast installation
Solid ball construction provides structural integrity and minimizes flow turbulence
Mounting pad complies with ISO 5211 for ease and interchangeability of actuation
Anti-static devices
Basic design complies with ASME/ANSI B16.34
Flanged ends comply with ASME/ANSI B16.5
Face-to-face dimensions comply with ASME/ANSI B16.10
Fire Safe Design: API 607/BS 6755
NACE MR 01-75
Hydrostatic and pneumatic test are conducted per standard, API 6D
The finishes of contact face of end flanges are machined 125 - 250 AARH with serrated spiral finish

2-Piece Floating Ball Valves Full Port Bolted Body Construction

[Expanded View]



2-Piece Floating Ball Valves

Full Port

Bolted Body Construction

[Bill of Materials & Features]

No	Name of Part	Material
1	SHCS	304 SS
2	Name Plate	304 SS
3	Handle	Carbon Steel
4	Handle Stop	304 SS
5	SHCS	304 SS
6	Gland Flange	ASTM A351 - CF8
7	Gland	ASTM A351 - CF8
8	Stem Packing	Graphite
9	Body	ASTM A216 - WCB
10	Stud	GR. B7
11	Seat	PTFE
12	Body Gasket	316 + Graphite
13	Body End Cap	ASTM A216 - WCB
14	Heavy Hex Nut	GR. 2H
15	Ball	ASTM A351 - CF8M/316
16	Stem	ASTM A276-316
17	Anti- Static Spring	316 SS
18	Ball	316 SS
19	Thrust Washer	PTFE

Note: Additional materials available upon request

Features

Split body design with flanged ends for fast installation, in-line maintenance and rebuilding
Solid ball construction provides structural integrity and minimizes flow turbulence
Mounting pad complies with ISO 5211 for ease and interchangeability of actuation
Bottom-loaded blow-out proof stem
Investment cast body & end cap on sizes 1/2" to 4". Sand cast body & end cap on sizes 5" to 10"
Body joint is designed to prevent excessive compression of valve internals, resulting in a consistent and low operating torque
Basic design complies with ASME/ANSI B16.34
Flanged ends comply with ASME/ANSI B16.5
Face-to-face dimensions comply with ASME/ANSI B16.10
Tested according to ANSI/ASME B16.34 & API 598
Fire Tested to API 607/BS 6577

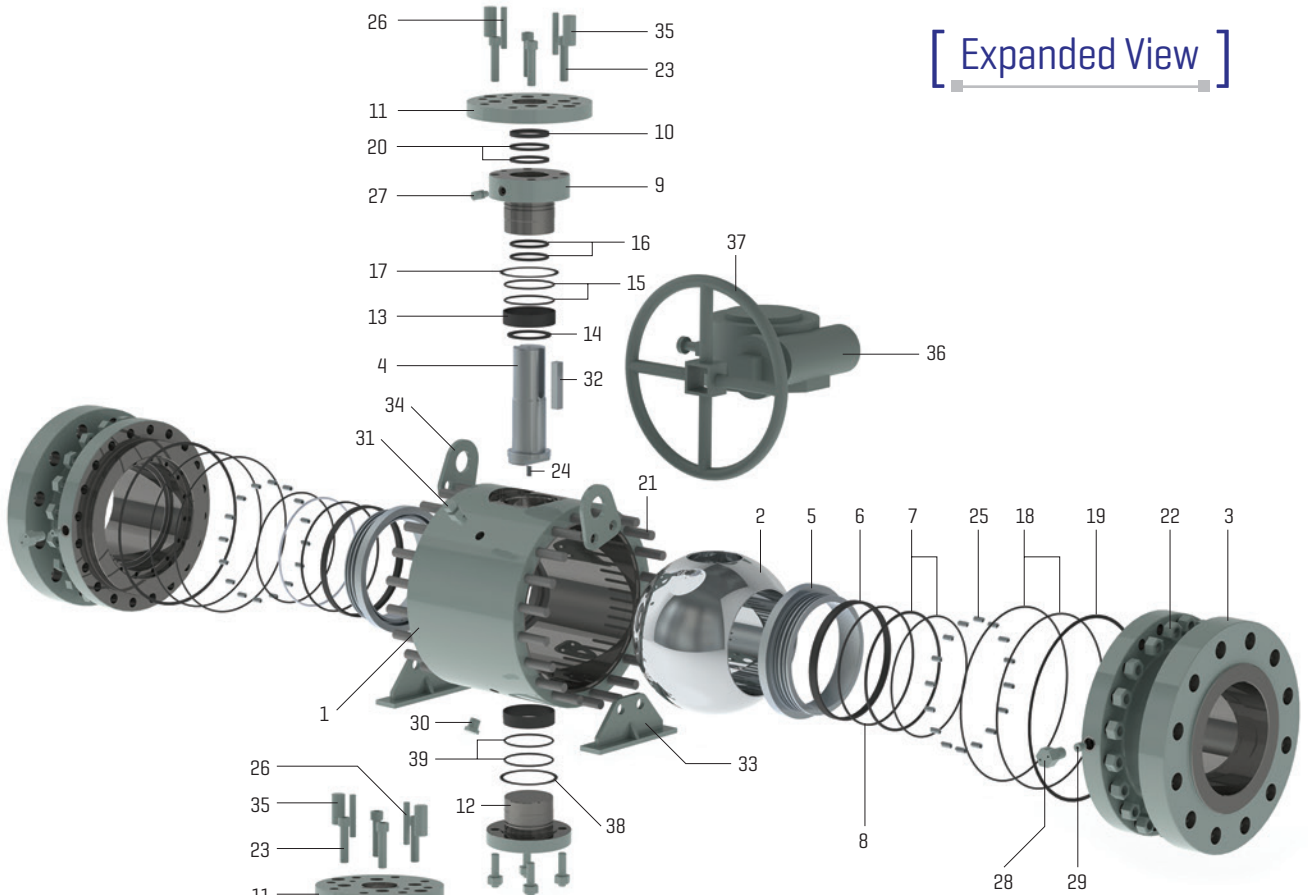
3-Piece Trunnion Ball Valves - API 6D

Model E: Full & Reduced Port

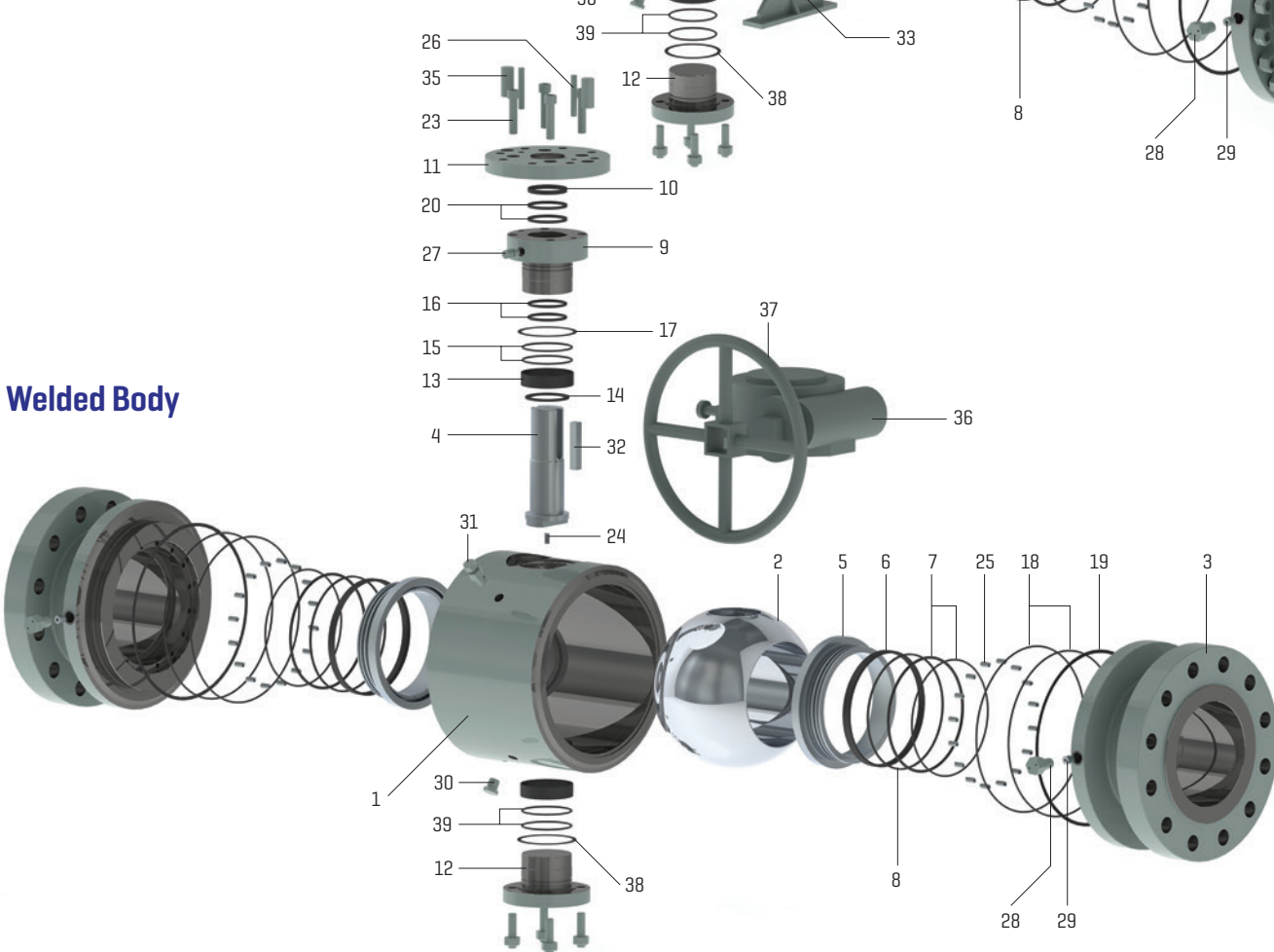
Bolted & Welded Body Construction

[Expanded View]

Bolted Body



Welded Body



3-Piece Trunnion Ball Valves - API 6D

Model E: Full & Reduced Port

Bolted & Welded Body Construction

[Bill of Materials]

No	Name Of Part	Materials		
1	Body	A105, A350 LF2	A350 LF2	A182, F316
2	Closure	A105, A350 LF2	A350 LF2	A182 F316, A351, CF8M
3	Stem	A105 ENP	A350 LF2	316 SS, 17-4 PHSS, 410
4	Seat Ring	A105 ENP, A106 ENP	A350 LF2 ENP	316 SS, 410
5	Ball	A105 ENP	A350 LF2 ENP	A182F316, A351, CF8M, 410
6	Seat Insert	Nylon, PTFE, PEEK	Nylon, PTFE, PEEK	Nylon, PTFE, PEEK
7	Trunnion	AISI 1045, AISI 4140		316 SS, 410
7-1	Trunnion Block	AISI 1045, AISI 4140		316 SS, 410
7-2	Trunnion Block Pin	AISI 410		316 SS, 410
8	Gland	AISI 1045		316 SS, 410
9	Adapter Plate	AISI 1045		316 SS, 410
10	Stem O-ring/ Lipseal	Viton	Viton GLT	Viton
11	Stem O-ring	Viton	Viton GLT	Viton
12	Gland O-ring	Viton	Viton GLT	Viton
13	Seat O-ring/Lipseal	Viton	Viton GLT	Viton
14	Seat Subseal	Viton, Graphite	Viton GLT, Graphite	Viton, Graphite
15	Closure O-ring	Viton	Viton GLT	Viton
16	Trunnion O-ring	Viton	Viton GLT	Viton
17	Backup Ring	PTFE, Nylon	PTFE, Nylon	PTFE, Nylon
18	Gland Seal	Spiral Wound Gasket 316SS + Graphite		
19	Body Seal	Spiral Wound Gasket 316SS + Graphite		
20	Trunnion Seal	Spiral Wound Gasket 316SS + Graphite		
21	Stem Packing	Graphite		
22	Seat Spring	Inconel X-750, 17-4 PHSS		
23	Bearing	PTFE, Carbon Steel		PTFE, 316SS
24	Thrust Washer	PTFE, Carbon Steel		PTFE, 316SS
25	Sealant Fitting	Carbon Steel, SS Ball Check		316SS, SS Ball Check
26	Socket Bolt	A574		316 SS
27	Hex/Socket Bolt	A574		316 SS
28	Stud Bolt*	A193 B7M	A320 L7M	A193 B8
29	Hex Nut*	A1942HM	A194 7M	A194 8
30	Grounding Pin	Stainless Steel		
31	Grounding Spring	Stainless Steel		
32	Key	Carbon Steel		Stainless Steel
33	Dowel Pin	Carbon Steel		Stainless Steel
34	Relief Plug	Carbon Steel		Stainless Steel
35	Drain Plug	Carbon Steel		Stainless Steel
36	Mounting Plate	Carbon Steel		Stainless Steel
37	Gear Operator	Ductile Iron Case, Carbon Steel Worm Gear		
38	Hand Wheel	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.

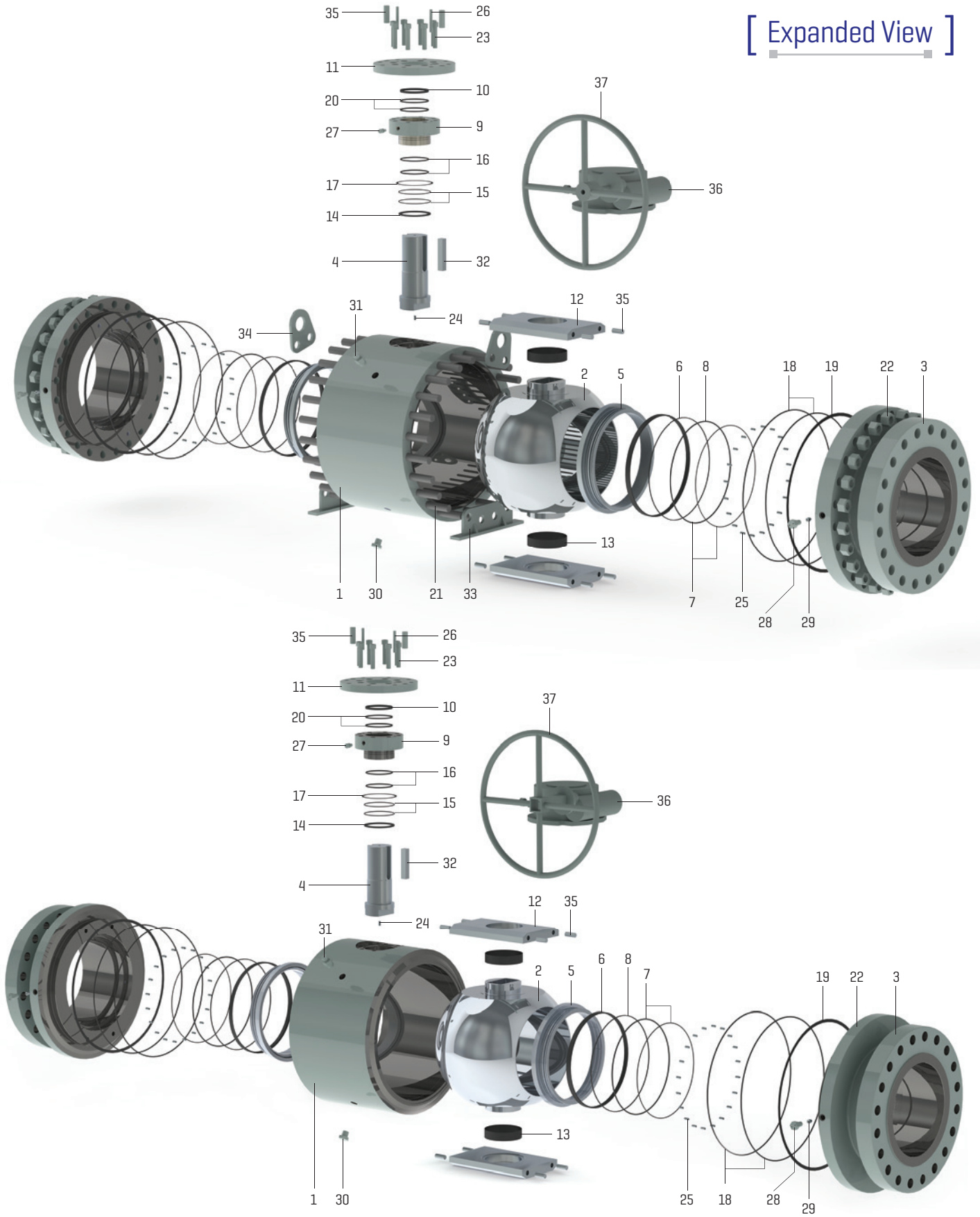
*= Used only in bolted body construction.

3-Piece Trunnion Ball Valves - API 6D

Model I: Full & Reduced Port

Bolted & Welded Body Construction

[Expanded View]



3-Piece Trunnion Ball Valves - API 6D

Model I: Full & Reduced Port

Bolted & Welded Body Construction

[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		
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.

*= Used only in bolted body construction.

Meet the Family

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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 - 2500



SCV VALVE
Innovative Valve Solutions®

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 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

• 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.

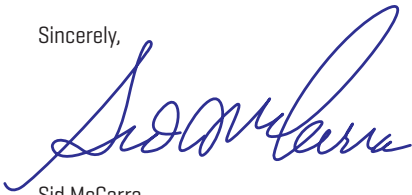
SCV Valve takes sincere pride in our ability to manufacture both commodity and specialty valves that meet and exceed the needs of our customers. All sizes, pressure classes, and metallurgical compositions are managed in house utilizing the strictest quality control measures to ensure the customer's total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

**SALES, PROJECTS, ENGINEERING,
MANUFACTURING, & WAREHOUSING**

3521 FM 646 Rd. North
Santa Fe, TX 77510

Phone: [281] 482-4728

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