



Compact Valves

Compact solutions for complex projects.

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Compact solutions

When space and weight considerations are vital for your high-pressure topside applications in shallow water, deepwater and ultra-deepwater. TechnipFMC's compact valves have been the standard for more than 40 years.

If your project requires compact valves, you can rest assured that with TechnipFMC, you are getting the highest-quality, most trusted valves in the industry. As a global company, part of our mission is to embrace the Absolutes of Quality (Requirements, Prevention, Zero Defects, Measure, Create Customer Success), and through stringent conformance to customer requirements, and a zero-defect performance standard, we generate success for our customers. We invented and wrote the book on compact valves. But it didn't stop there. We've been improving on it ever since.

Manufactured only from the highest quality materials TechnipFMC's compact valves are manufactured from the highest quality materials to ensure safety, enhancing the value to our customers. All of our compact valve pressure-containing components are made using materials that are fully traceable, as well as both destructive and non-destructive tested, assuring material performance under all specified conditions. All valves are pressure-tested at the factory before shipment, and documentation is provided via the available valve data books. Our commitment to producing products that meet 100% of requirements with zero defects can

be witnessed by our customers at all stages of manufacturing.

Our compact valves set the standard Reliability can mean the difference between profit and loss for all of our customers, therefore, we are committed to providing equipment, solutions, service and quality, health, safety, environment performance that deliver one hundred percent of the time.

TechnipFMC: Quality in everything we do for over 135 years

Since we were first founded back in the late 1800s, TechnipFMC has lived by a set of core values that defines not only who we are, but how it shapes our behavior and sets us apart from others in the industry. Through the years we have refined our core values to reflect a further commitment to quality and customer success.

TechnipFMC's compact valves: The best keeps getting better

With over three decades of experience encompassing a multitude of global projects, TechnipFMC is the preferred supplier of compact valves for high-pressure production, injection, and launcher/receiver applications for exploration and production companies.

While your projects may be complex, our approach is not. Our valves are designed to last. In addition, all of our compact valves are available with API monogramming, PSL1, PSL2, PSL3 certification, as well as country of origin flexibility so you know you are always getting the quality products that meet your projects' technical requirements. Custom quality solutions have been always been the hallmark of TechnipFMC from our inception.

We provide lightweight compact valves in a

variety of sizes, designs and materials aimed to meet all customer and industry requirements. With our ability to offer bare stem valves, valves with automation and manifold systems on a complete turnkey basis, TechnipFMC is helping our customers meet the technical and economic challenges for high-pressure manifold applications. Our manifold systems design team works as an integral part of your front end engineering and design (FEED) phase. Our team works with your piping and instrumentations engineers to ensure our manifold design meets all aspects of the process and instrument diagrams (P&ID). This close alignment reduces unplanned budgetary risk as the project progresses.

From project inception to installation and after-sales service, TechnipFMC provides single source responsibility for your complete project.

New features, legacy performance Our Gen II floating ball valves, Trunnion mounted ball valves and Swing check valves contain a wealth of new design features while still maintaining the robust qualities of the original Compact valve gen I product line. The new features are designed to enhance safety, regulatory compliance and tough performance in-the-field.

To complement the Soft-seated gen II compact valve product line, TechnipFMC also manufactures Poppet diverter valves, Double ball valves and Compact throttle valves, giving you the flexibility to produce the most compact piping systems possible, while satisfying the most rigorous of design requirements.



Fluid Co
Stephen

MOD 12-48213-

BODY 1000 RLY

TRIM 17-4PH 88

ASSY F500002 -

WP 1000 PSI @

TEST 15000

TEMP 200 / 400

CE0575

Compact valves

Fluid Control
Columbus, Texas

BALL VALVE

1-168571	1/2	PORT
316 STL	1/2	SEAT
1/2" NPT		
1/2" NPT		
@ 100 °F	BAR @	°C
PSI		BAR
°F		°C
		SER

P523595

Gen II floating compact ball valve

(ANSI 1500, ANSI 2500, API 10k) (1" through 4")

Safety features

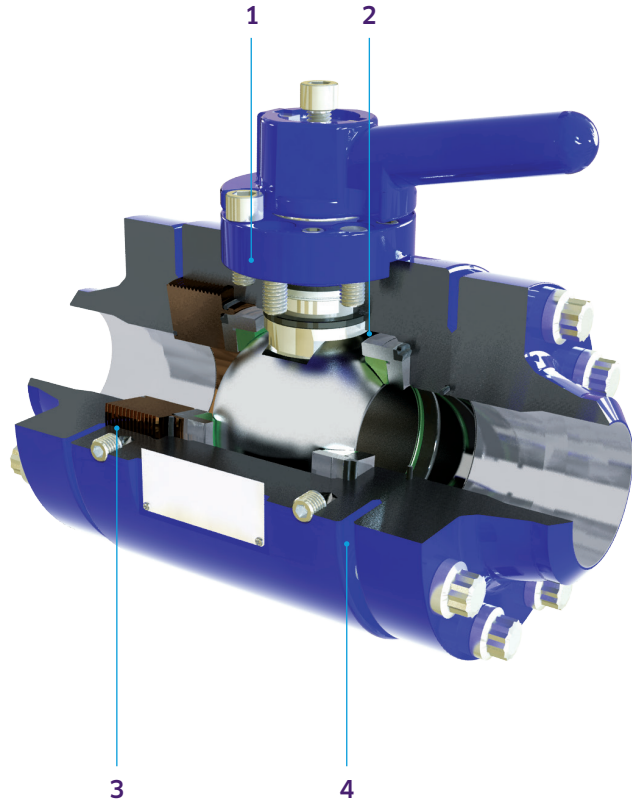
- ▶ The retainer is threaded to the body using a Stub Acme thread for durability and strength. This makes the valve fully pressure-containing without an end connection installed on the retainer end if the retainer is inadvertently removed. Our retainers are coated with Xylan for both corrosion protection and ease of maintenance.
- ▶ The stem is retained by a shoulder in the body, not the bonnet, making the stem fully blow-out proof.
- ▶ Our valves have dedicated, built-in automation mounting locations in either the valve body or bonnet, allowing for field installation of automation without any pressure-containing fasteners being loosened.
- ▶ conventional compact valve designs are eliminated.
- ▶ The handle incorporates wrench flats, allowing the valve to be operated without an extension handle. An integral stop plate is included so an TechnipFMC locking device can be installed.
- ▶ Automation Interface: To simplify adaptation between the actuator and the stem, the stem is manufactured round with keyways. The unique design allows it to shear outside of the pressure boundary in the event of overload torque. In addition, the bonnet is keyed to the body, eliminating rotation when the valve is fitted with an actuator.
- ▶ 316 stainless steel nameplates are permanently installed with stainless steel screws.

Robust performance

- ▶ The stronger weldneck end connections allow for bending loads up to 50% of pipe yield at full working pressure, and up to 100% of pipe yield at no pressure, assuming a pipe yield strength of 36,000 psi.
- ▶ The large ¼ inch gap between the flange face and the body allows for improved corrosion protection, thereby eliminating the need for corrosion gaskets. This allows the use of three-part paint systems between the flange and valve, and helps in removing the valve from the line for any required maintenance.
- ▶ Because TechnipFMC integrates matching bolt patterns and flange sizes on both ends of the valve, assembly issues found in many
- ▶ The body is slightly over-bored allowing for easy removal of valve components for maintenance. The carriers can be removed without removing the stem.
- ▶ The stem seal seals to both the body and the stem, eliminating the need for a bonnet-to-body seal, meaning fewer leak paths than conventional compact valves. For valves larger than 3", easy external access to the stem seal is achieved by removing the bonnet.
- ▶ Valve bore sizes are chosen to closely match the most popular pipe bores, minimizing flow turbulence in the valve bore.

Compliance

- ▶ Gen II compact ball valves are designed in accordance with API 6A and API 6D.
- ▶ Gen II compact ball valves are fully compliant with the latest revisions of NACE MR0175-2003 which severely limits the use of 17-4 stainless steels for valve stems, as well as completely eliminating its use for pressure-containing components such as bodies, bonnets and retainers.
- ▶ Our Gen II compact ball valves incorporate a “zero line spread” end connection that is fully compliant with ASME B 31.3 Chapter 9 and ASME B 31.8.
- ▶ Gen II floating compact ball valves use the same sealing technologies of our Gen I compact valves, which have been fire tested to API 6FA and BS 6755 Part 2.



1. Stem Seal, seals between stem and body to reduce external leak paths by eliminating a bonnet to body seal.
2. Stem retained by body, not a bolted bonnet.
3. Retainer threaded to body using Stub Acme thread
(Makes valve pressure containing without flanges installed.)
4. Large flange gap allows for 3-part paint system to prevent corrosion.

Gen II trunnion mounted compact ball valve

(ANSI 1500, ANSI 2500, API 10k) (4" through 12")

Safety features

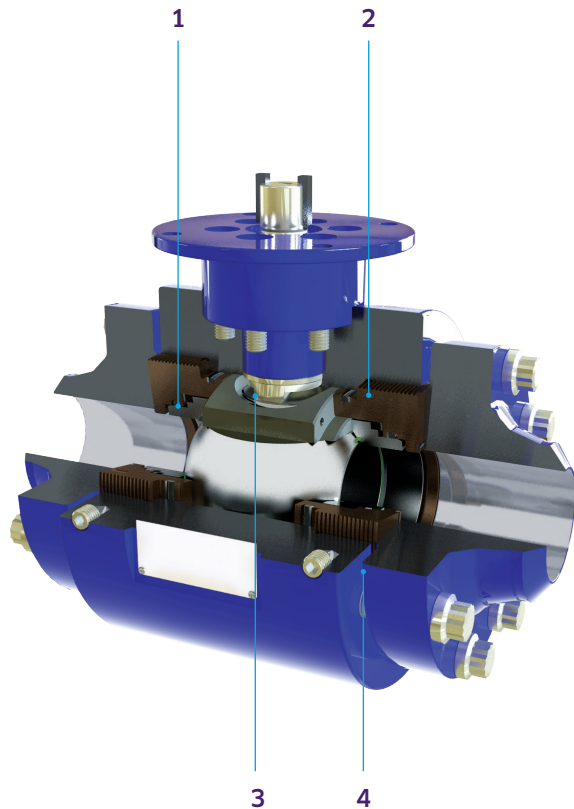
- ▶ The retainer is threaded to the body using a Stub Acme thread for durability and strength. This makes the valve fully pressure-containing without an end connection installed on the retainer end if the retainer is inadvertently removed. Our retainers are coated with Xylan for both corrosion protection and ease of maintenance.
- ▶ Our valves have dedicated, built-in automation mounting locations in either the valve body or bonnet, allowing for field installation of automation without any pressure-containing fasteners being loosened. Many other conventional compact valves require removal and reinstallation of bonnet fasteners in order to install the actuator mounting hardware.
- ▶ Gen II trunnion mounted compact ball valves have a standard double block-and-bleed capability. Every valve body is fitted with a stainless body bleed fitting, which allows easy bleeding of the body cavity.
- ▶ valve, and helps in removing the valve from the line for any required maintenance.
- ▶ Because TechnipFMC integrates matching bolt patterns and flange sizes on both ends of the valve, assembly issues found in many conventional compact valve designs are eliminated.
- ▶ The handle incorporates wrench flats, allowing the valve to be operated without an extension handle. An integral stop plate is included so an TechnipFMC locking device can be installed.
- ▶ Automation Interface: To simplify adaptation between the actuator and the stem, the stem is manufactured round with keyways. The unique design allows it to shear outside of the pressure boundary in the event of overload torque. In addition, the bonnet is keyed to the body, eliminating rotation when the valve is fitted with an actuator.

Robust performance

- ▶ The trunnion design allows lower actuation torque in the valve allowing a smaller actuator to operate the valve.
- ▶ The stronger weldneck end connections allow for bending loads up to 50% of pipe yield at full working pressure, and up to 100% of pipe yield at no pressure, assuming a pipe yield strength of 36,000 psi.
- ▶ The large ¼ inch gap between the flange face and the body allows for improved corrosion protection, thereby eliminating the need for corrosion gaskets. This allows the use of three-part paint systems between the flange and
- ▶ 316 stainless steel nameplates are permanently installed with stainless steel screws.
- ▶ The trunnion-mounted ball reduces actuation torque by as much as 50%, compared to conventional compact floating ball valves.
- ▶ To ensure long life and low valve torque, the trunnion bearings are self-lubricating.
- ▶ Our seat assembly incorporates one-piece wave springs for ease of maintenance and reliability.
- ▶ The standard PEEK seat insert offers superior chemical and temperature compatibility over other soft-seat materials.
- ▶ Valve bore sizes are chosen to closely match the most popular pipe bores, minimizing flow turbulence in the valve bore.

Compliance

- ▶ Gen II compact ball valves are designed in accordance with API 6A and API 6D.
- ▶ Gen II compact ball valves are fully compliant with the latest revisions of NACE MR0175-2003 which severely limits the use of 17-4 stainless steels for valve stems, as well as completely eliminating its use for pressure-containing components such as bodies, bonnets and retainers.
- ▶ Our Gen II compact ball valves incorporate a new “zero line spread” end connection that is fully compliant with ASME B 31.3 Chapter 9 and ASME B 31.8.
- ▶ Gen II trunnion mounted ball valves have been fire tested to API 6FA, API 607, and BS 6755 Part 2.



1. Spring loaded seats for superb low pressure sealing.
2. Retainers threaded to body using Stub Acme thread. Makes valve pressure containing without flange installed.
3. Trunnion mounted ball for low torque operation.
4. Large flange gap allows for 3 part paint system installation to prevent corrosion.

Gen II compact check valve

(ANSI1500, ANSI2500, API 10k) (1" through 12")

Safety features

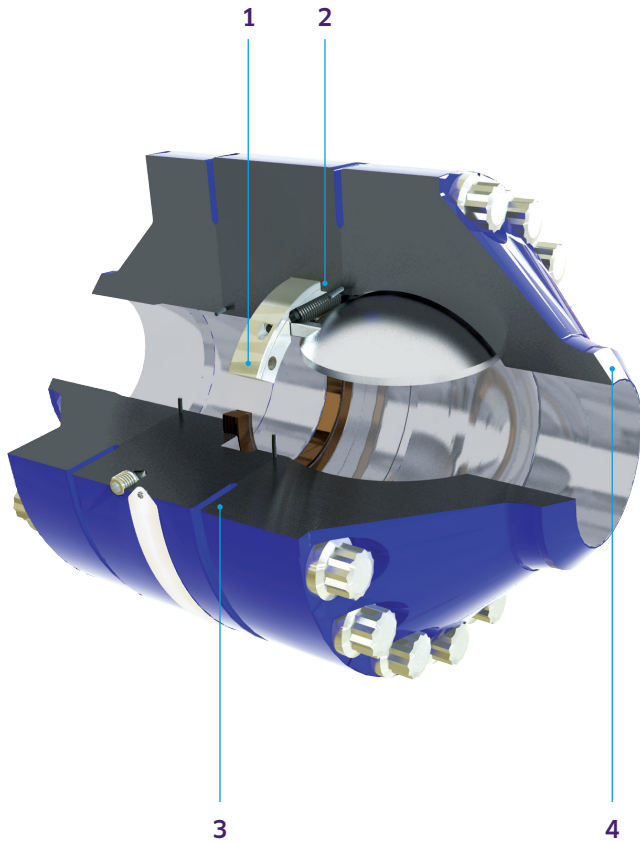
- ▶ TechnipFMC's internally captured pivot pin reduces external leak paths when compared to conventional compact check valves.
- ▶ Our blowout-proof seat design eliminates need to have a downstream end connection installed for pressure containment.

Robust performance

- ▶ Our Gen II check valves incorporate a specially designed tailpiece, allowing the flapper check valve to open fully, while still maintaining the shortest overall valve length.
- ▶ The stronger weldneck end connections allow for bending loads up to 50% of pipe yield at full working pressure, and up to 100% of pipe yield at no pressure, assuming a pipe yield strength of 36,000 psi.
- ▶ The large ¼ inch gap between the flange face and the body allows for improved corrosion protection, thereby eliminating the need for corrosion gaskets. This allows the use of three-part paint systems between the flange and valve, and helps in removing the valve from the line for any required maintenance.
- ▶ 316 stainless steel nameplates are permanently installed with stainless steel screws.
- ▶ Valve bore sizes are chosen to closely match the most popular pipe bores, minimizing flow turbulence in the valve bore.

Compliance

- ▶ Gen II compact check valves are designed in accordance with API 6A and API 6D.
- ▶ Gen II compact check valves are fully compliant with the latest revision of NACE MR0175- 2003 which severely limits the use of 17-4 PH stainless steels for pressure containing components such as valve bodies and pressure containing seats.
- ▶ Gen II compact ball valves incorporate a new "zero line spread" end connection that is fully compliant with ASME B 31.3 Chapter 9 and ASME B 31.8.
- ▶ Gen II check valves 2" through 12" have been fire tested and certified to API 6FD.



- 1.** Stainless steel seat for superior corrosion resistance.
Seat seal ring out of direct flow path for long life.
- 2.** Internally captured pivot pin eliminates external leak path.
Flapper spring loaded for low pressure sealing performance.
- 3.** Large flange gap allows for 3 part paint system installation to prevent corrosion.
- 4.** Tailpiece designed to allow valve to fully open while reducing valve length.

Gen II compact double ball valve

(ANSI 1500, ANSI 2500, API 10k) (1" through 12")

Safety features

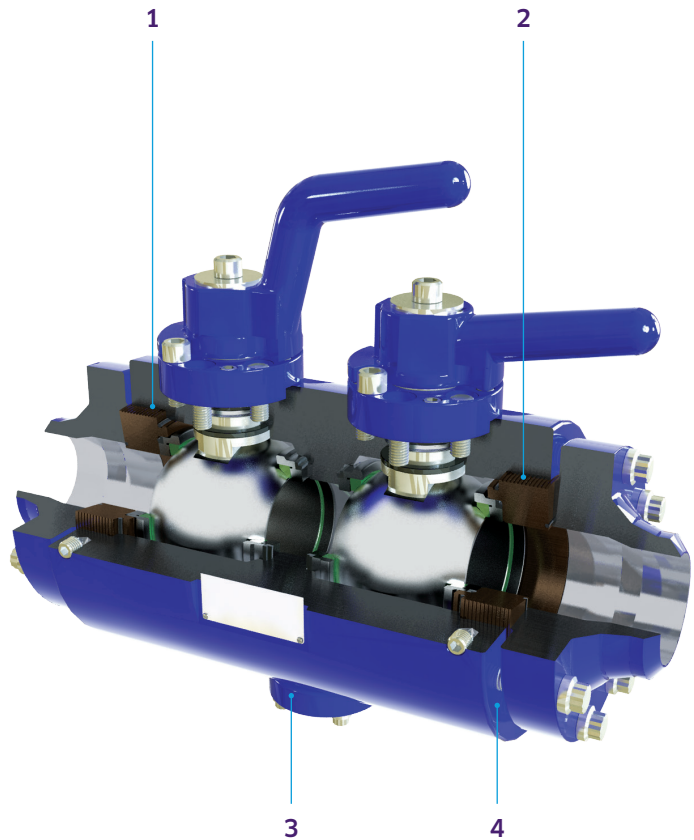
- ▶ TechnipFMC's Compact Double Ball Valve offers true double block-and-bleed safety. Having two valves in one solid body means two physical barriers to pressure when working downstream of the closed valve.
- ▶ The retainer is threaded to the body using a Stub Acme thread for durability and strength. This makes the valve fully pressure-containing without an end connection installed on the retainer end if the retainer is inadvertently removed. Our retainers are coated with Xylan for both corrosion protection and ease of maintenance.
- ▶ The center bleed port between the valves permits testing of either valves performance before conducting any maintenance work downstream of the valve.
- ▶ 316 stainless steel nameplates are permanently installed with stainless steel screws.
- ▶ Valve bore sizes are chosen to closely match the most popular pipe bores, minimizing flow turbulence in the valve bore.
- ▶ Because we are a collaborator and not just a manufacturer/supplier, TechnipFMC will produce custom valve designs to fit your space and actuation needs, anywhere in the world.
- ▶ Please consult the factory for your valve end-to-end dimensions.
- ▶ Gen II compact double ball valves are available in floating valve design in 1" through 4" sizes, and in trunnion valve design in 4" through 12".
- ▶ The trim is the same as floating and trunnion valves.

Robust performance

- ▶ The Gen II compact double ball valves incorporate many of the same design features of the Gen II Ball Valve, with two valves in one solid body.
- ▶ The stronger weldneck end connections allow for bending loads up to 50% of pipe yield at full working pressure, and up to 100% of pipe yield at no pressure, assuming a pipe yield strength of 36,000 psi.
- ▶ The large ¼ inch gap between the flange face and the body allows for improved corrosion protection, thereby eliminating the need for corrosion gaskets. This allows the use of three-part paint systems between the flange and valve, and helps in removing the valve from the line for any required maintenance.

Compliance

- ▶ Double block and bleed valves are designed in accordance with API 6A and API 6D.
- ▶ Double block and bleed compact ball valves are fully compliant with the latest revisions of NACE MR0175-2003 which severely limits the use of 17-4 PH stainless steels for valve stems, as well as completely eliminating its use for pressure-containing components such as bodies and bonnets.
- ▶ Gen II compact double ball valves incorporate a new “zero line spread” end connection that is fully compliant with ASME B 31.3 Chapter 9 and ASME B 31.8
- ▶ Our valves have been fire tested and certified to API 6FA, API 607 and BS 6755 Part 2.



- 1 Custom valve design to fit customers space and actuation needs.
- 2 Consult factory for valve end-to-end dimensions.
- 3 Available in floating valve design in 1" through 4" sizes.
- 4 Available in trunnion valve design in 4" through 12".
- 5 Trim same as floating and Trunnion valves.

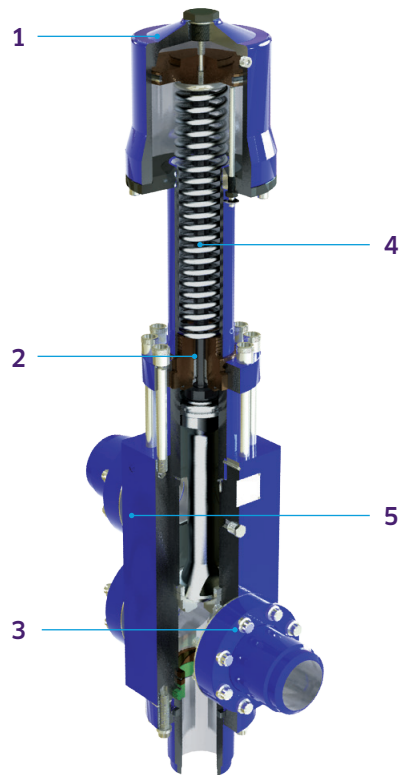
1. Threaded retainers have valve fully pressure containing with or without installed end connections.
2. Threaded retainers have valve fully pressure containing with or without installed end connections.
3. Integral bleed port allowing verification of valve sealing with line pressurized.
4. Single piece body houses two valves. Creates 2 physical barriers between pressure and downstream work.

Compact poppet diverter valve

(ANSI 1500, ANSI 2500) (2" through 6")

Features

- ▶ This valve is primarily used in compact manifolds to safely and successfully transform header valves into safety valves.
- ▶ Our modular design allows the inlet to be placed on either side of the valve.
- ▶ TechnipFMC's built-in fail-safe actuation permits remote operation, and biases flow to the lower port on any loss of actuator pressure.
- ▶ The recessed sealing components minimize the effects of erosion, meaning reduced maintenance and downtime.
- ▶ The unique, patented design equalizes pressure across the seats to balance the poppet and reduce the actuation forces.
- ▶ The Compact Poppet Diverter Valve uses a conventional compact flange.
- ▶ The TechnipFMC valve enables you to divert flow from one line to another with just a single valve.



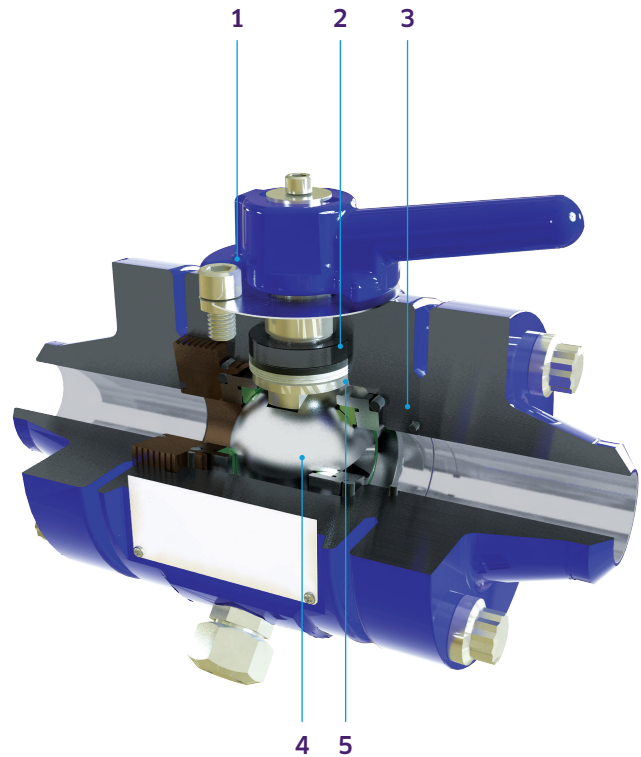
1. Integral actuator operates pneumatically, hydraulically or with field gas.
2. Small bleed ports balance pressure across seats to minimize throttling and vibrations.
3. Sealing components are positioned out of flow stream to minimize erosion.
4. Positive spring return diverts flow to lower outlet on loss of cylinder pressure.
5. Modular design allows inlet to be located on either side of valve.

Throttle valve

(ANSI 1500, ANSI2500, API 10k) (1" through 4")

Features

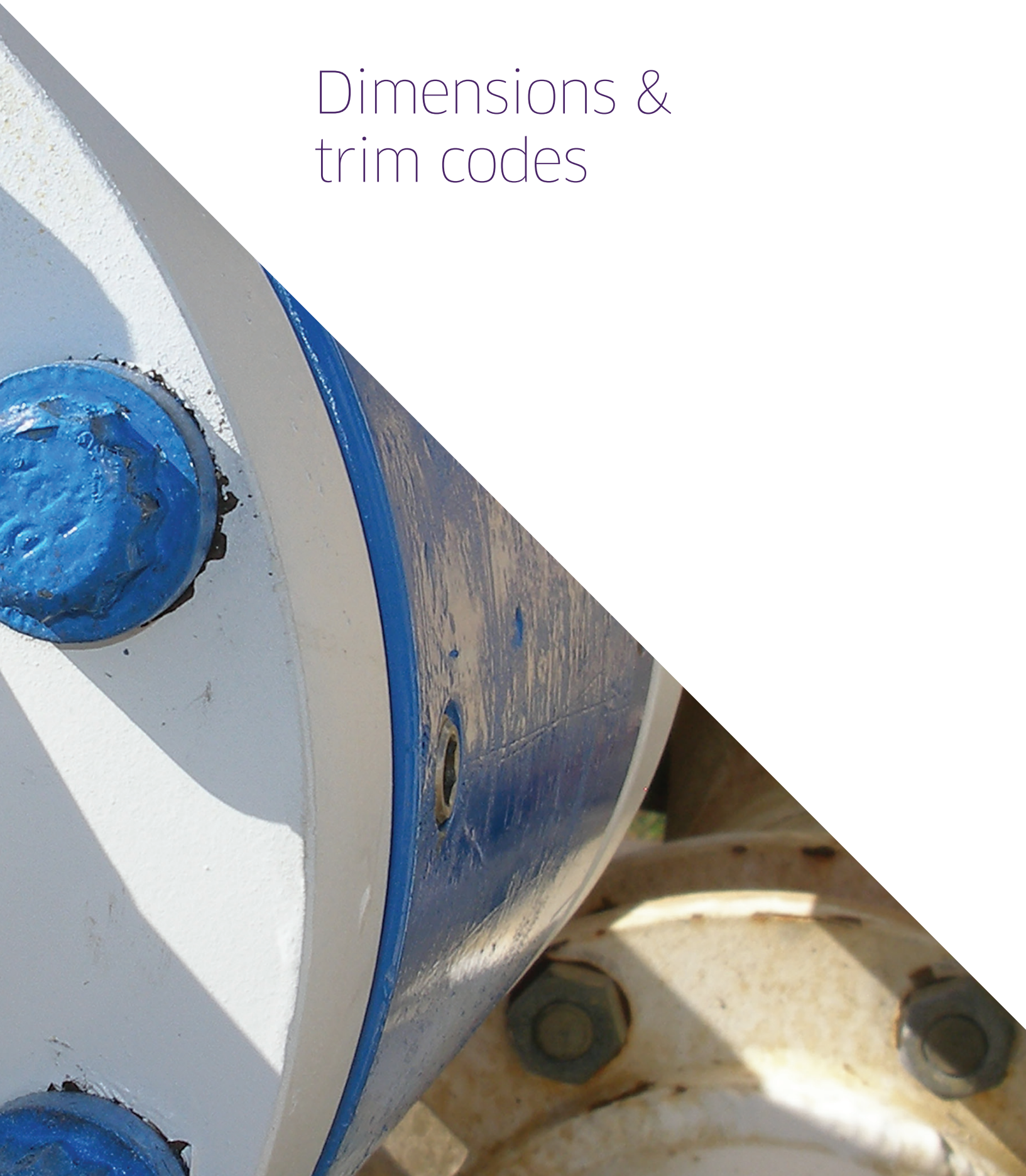
- ▶ TechnipFMC's throttle ball valves are based on the 1B valves, and include modified ball ports to permit flow control. As a result, the features of 1B valves apply.
- ▶ The valve was custom-designed to meet the demands of virtually all throttling applications.
- ▶ Flow passage is engineered specifically for high pressure drop throttling service with precise control throughout the operating range.
- ▶ It delivers higher linear flow rates than any equivalent positive choke.
- ▶ The valve features a flow indicator for precise flow control.
- ▶ The unique ball design enables precise throttling with minimum erosion resistance.
- ▶ The retainer is threaded to the body using a Stub Acme thread for durability and strength. This makes the valve fully pressure-containing without flanges installed.
- ▶ The stem seal seals between the stem and the body to reduce external leak paths.
- ▶ The stem is retained by a shoulder in the body, not the bonnet.
- ▶ Flow passage is designed specifically for high pressure - drop throttling service with precise control throughout the operating range.



1. Indicator at top of valve for precise control.
2. Stem retained by body not a bolted bonnet.
3. Retainer threaded to body using stub Acme thread - makes valve pressure containing without flanges installed.
4. Flow passage designed specifically for high pressure - drop throttling service with precise control throughout the operating range.
5. Stem seal seals between stem and body to reduce external leak paths.



Dimensions & trim codes



Soft-seated floating ball valve - (1" - 4")

Models

1" through 4" dimensions - English

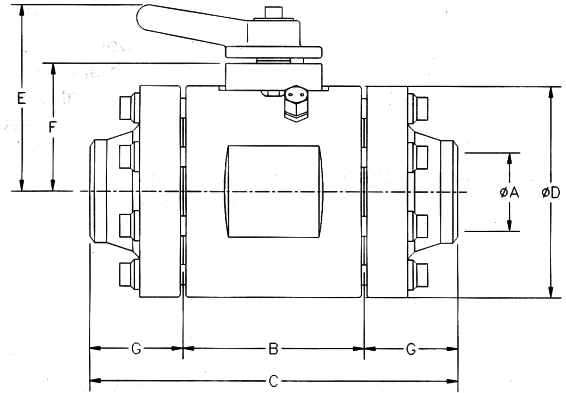
Model #	Nom Pipe Size	Working Pressure (psi)	Weight (lbs)	Bore (inch)	Valve Group Length (inch)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (inch)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
1B-K0081	1	10000	26	0.81	4.00	8.25	N/A	4.50	4.28	2.25	2.13	N/A
1B-G0150	2	6250	70	1.50	4.88	12.25	12.69	6.50	5.16	3.13	3.69	4.13
1B-K0150	2	10000	99	1.50	6.00	15.25	15.88	7.00	5.38	3.28	4.63	5.25
1B-F0209	3	3750	95	2.09	5.38	14.13	14.25	7.13	5.45	3.44	4.38	4.50
1B-F0263 *	3	3750	129	2.63	6.63	13.38	13.75	7.88	7.46	4.91	3.38	3.75
1B-G0230 *	3	6250	151	2.30	6.88	15.63	16.13	7.88	7.33	4.91	4.38	4.88
1B-G0259 *	3	6250	167	2.59	7.13	15.63	16.50	8.38	7.54	5.11	4.25	5.13
1B-K0213 *	3	10000	175	2.13	7.75	15.25	15.63	8.50	8.18	5.16	3.75	4.13
1B-F0344 *	4	3750	196	3.44	7.75	15.25	15.50	9.25	7.98	5.54	3.75	4.00
1B-F0383 *	4	3750	235	3.83	8.25	16.25	16.88	10.25	9.09	6.03	4.00	4.63
1B-G0315 *	4	6250	230	3.15	8.38	16.63	17.13	9.50	8.72	5.66	4.13	4.63
1B-G0363 **	4	6250	327	3.63	9.25	17.63	18.25	11.00	10.07	6.52	4.13	4.75
1B-K0306 **	4	10000	434	3.06	10.25	19.50	20.00	12.25	10.70	7.15	4.63	5.13

1" through 4" dimensions - Metric

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (kg)	Bore (mm)	Valve Group Length (mm)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (mm)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
1B-K0081	1	10000	11.79	21	102	210	N/A	111	109	57	54	N/A
1B-G0150	2	6250	31.75	38	124	311	322	165	131	80	94	105
1B-K0150	2	10000	44.91	38	152	387	403	178	137	83	117	133
1B-F0209	3	3750	43.09	53	137	359	362	181	138	87	111	114
1B-F0263 *	3	3750	58.51	67	168	340	349	200	189	125	86	95
1B-G0230 *	3	6250	68.49	58	175	397	410	200	186	125	111	124
1B-G0259 *	3	6250	75.75	66	181	397	419	213	192	130	108	130
1B-K0213 *	3	10000	79.38	54	197	387	397	216	208	131	95	105
1B-F0344 *	4	3750	88.91	87	197	387	394	235	203	141	95	102
1B-F0383 *	4	3750	106.60	97	210	413	429	260	231	153	102	118
1B-G0315 *	4	6250	104.33	80	213	422	435	241	221	144	105	118
1B-G0363 **	4	6250	148.33	92	235	448	464	279	256	166	105	121
1B-K0306 **	4	10000	196.86	78	260	495	508	311	272	182	117	130

Ball valve key

A.	Bore
B.	Valve Group Length
C.	Overall Length (WNF x WNF)
C.	Overall Length (SWF x WNF)
D.	Body Outer Diameter
E.	Handle Height
F.	Bonnet Height
G.	Weldneck Length
G.	Nipple Length



- Note:**
1. Dimension "F" reflects the standard bonnet provided. Bonnets for close coupling of actuation are available on request. When the close coupling bonnet is provided, dimension "F" increases 0.250 inches.
 2. 1B-G0363 & 1B-K0306 are not available with handles for lever operation. Close coupling bonnet is provided as standard dimension "F" shown is for close coupling bonnet.

Trim codes

Trim coding for the new valve is very different from the legacy system. Ball valve trim is a nine-digit, alphanumeric code that identifies the materials of construction and the type of service, actuation, grease, and other features. The trim code positions are defined below.

BALL VALVE CODE	-	1B-K0081-XXXXXXXXXX								
MODEL NUMBER	-	TRIM CODES								
XX-XXXXX 1	-	1	2	3	4	5	6	7	8	9
1B-K0081	-	X	X	X	X	X	X	X	X	X

1. Body, bonnet, and retainer material

Standard = 1

1	4130 Body, Bonnet & Retainer
A	Duplex Body, Bonnet & Retainer
B	Super Duplex Body, Bonnet & Retainer
F	410 SS Body, Bonnet & Retainer
N	Inconel 625 Body, Bonnet & Retainer
P	4130 / Inconel 625 Fully Clad Body, Bonnet & Retainer
Q	4130 / Inconel 625 Partial Clad Body, Bonnet & Retainer

2. Ball material and coating

Standard = 1 or 6

1	A350-LF2 - .003" ENP Standard
3	4130 - .003" ENP Standard
6	17-4PH - .0004" Chrome
7	410 - .0004" Chrome
D	Duplex - .0004" Chrome
H	Super Duplex - .0004" Chrome
N	Inconel 718 - .0004" Chrome

3. Stem material and coating

Standard = 1

1	4130 - QPQ
D	Duplex
H	Super Duplex
M	Inconel 625
N	Inconel 718

4. Carrier material and coating

Standard = 1 or 6

1	4130 Alloy
6	17-4PH
D	Duplex
H	Super Duplex
N	Inconel 625
R	410 Stainless

5. Carrier and body seal material

Standard = 1 or 5

1	Nitrile
5	Viton A
A	James Walker Elast-o-Lion 101
B	James Walker Elast-o-Lion 985
H	Greene Tweed 938

6. Stem seal and backup material

Standard = 1 or 2

1	Nitrile Jacket / Nitrile O-spring / PEEK Backup
2	Viton Jacket / Viton O-spring / PEEK Backup
R	Virgin Teflon Jacket / Elgiloy Spring / PEEK Backup

7. Seat material

Standard = C or P

C	Celcon
P	PEEK

8. Actuation style

Standard = 1

1	Handle or Lever
2	Handle or Lever with Locking Device
6	Bare Stem
F	Gear Operator with Hand wheel
G	Gear Operator with Hand wheel and Locking Device

9. Service, grease, and bonnet bolting material

Standard = 1

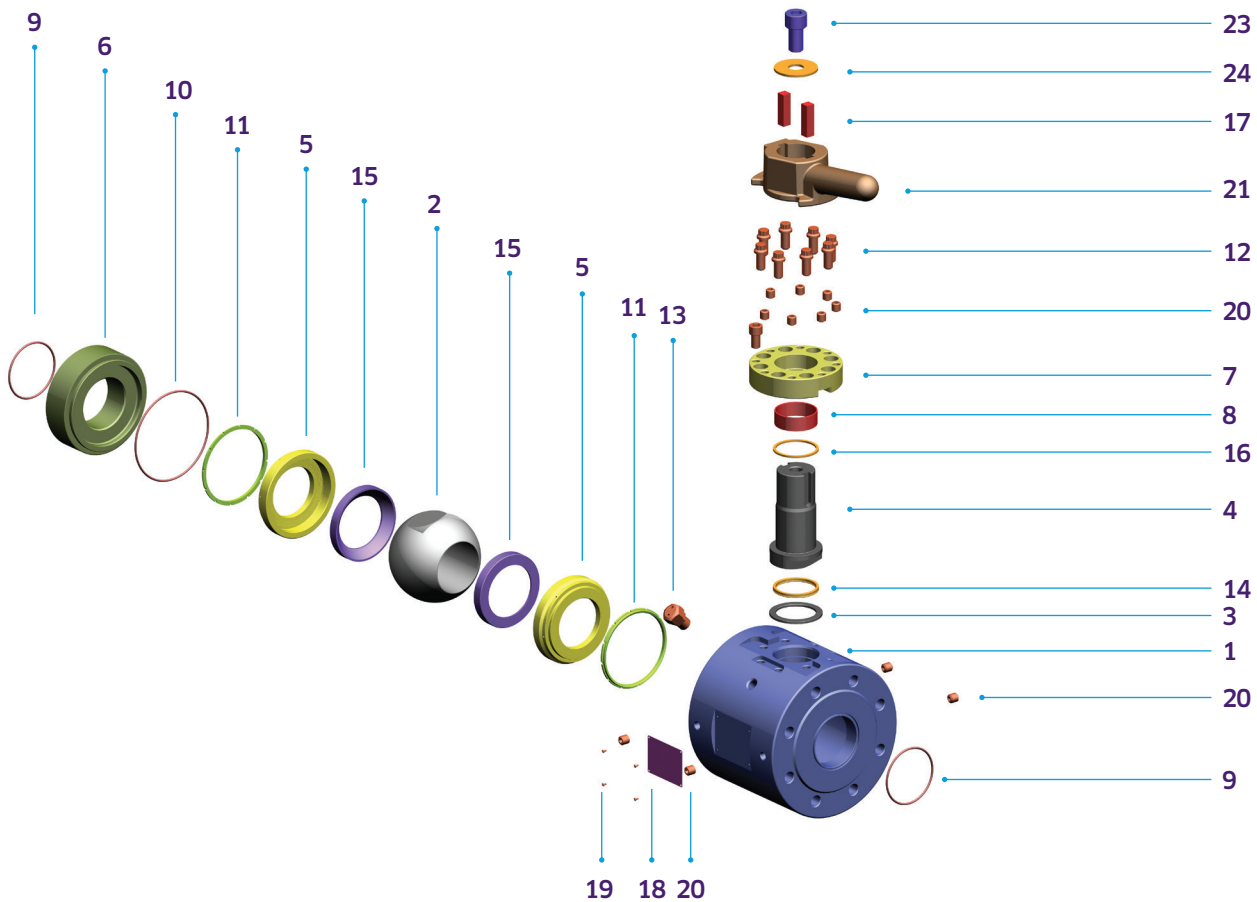
1	Standard Grease, B7M / L7M Bonnet Bolting
3	Standard Grease, Grade 660 Bonnet Bolting
A	Low Temperature Grease, B7M / L7M Bonnet Bolting
C	Low Temperature Grease, Grade 660 Bonnet Bolting
Y	Oxygen / Air Service Grease, B7M / L7M Bonnet Bolting
Z	Oxygen / Air Grease, Grade 660 Bonnet Bolting

- Note:**
1. Nipple and weldneck lengths are not necessarily the same. Valves are typically provided with weldneck flanges at both ends. Nipples / swivel flanges may be used at either end of the valve as an option (except as noted above)
 2. Weights listed are approximate and include the standard weldneck flanges at each end. Pipe schedule, swivel flanges, actuation mounting hardware, etc., may affect the final assembly weight.

Parts

Item	Description	Qty
1	Body	1
2	Ball	1
3	Thrust ring	1
4	Stem	1
5	Carrier	2
6	Retainer	1
7	Bonnet	1
8	Bushing: bonnet	1
9	O-Ring	2
10	O-ring	1
11	"I" seal	2
12	Capscrew	8

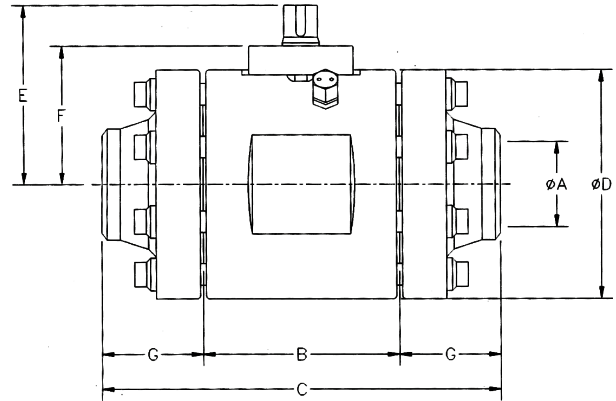
Item	Description	Qty
13	Grease fitting	1
14	Stem seal: optiseal type s lip	1
15	Seat	2
16	Backup ring	1
17	Key	2
18	Nameplate	1
19	Self tapping screw	3
20	Set screw: 5/8 x .63 lg	11
21	Handle	1
22	Capscrew: soc hd 5/8 1.00 lg	1
23	Capscrew: soc hd 1 x 1.75 lg	1
24	Flat washer: type b, 1 w	1



Trunnion soft-seated ball valve - (4" - 12")

Ball valve key

A.	Bore
B.	Valve Group Length
C.	Overall Length (WNF x WNF)
C.	Overall Length (SWF x WNF)
D.	Body Outer Diameter
E.	Handle Height
F.	Bonnet Height
G.	Weldneck Length
G.	Nipple Length



Models

4" through 12" dimensions - English

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (lbs)	Bore (inch)	Valve Group Length (inch)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (inch)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
2B-F0344	4	3750	192	3.44	8.25	15.75	16.00	9.25	7.27	5.59	3.75	4.00
2B-F0383	4	3750	257	3.83	9.25	17.25	18.00	10.25	7.64	6.09	4.00	4.75
2B-G0315	4	6250	230	3.15	8.88	17.13	17.63	9.50	7.35	5.72	4.13	4.63
2B-G0363	4	6250	308	3.63	9.75	18.50	18.75	10.63	7.79	6.28	4.38	4.63
2B-K0306	4	10000	346	3.06	10.50	19.75	20.25	10.88	7.96	6.36	4.63	5.13
2B-F0406	5	3750	291	4.06	9.00	17.50	18.25	10.63	7.78	6.26	4.25	5.00
2B-G0406	5	6250	420	4.06	11.00	20.50	21.25	11.88	8.46	6.86	4.75	5.00
2B-F0519	6	3750	487	5.19	11.00	20.50	21.50	12.88	8.96	7.36	4.75	5.75
2B-G0490	6	6250	766	4.90	13.00	24.50	24.75	14.63	10.86	8.73	5.75	6.00
2B-K0406	6	10000	716	4.06	13.50	25.00	25.00	13.88	10.47	8.34	5.75	5.75
2B-K0513	6	10000	1227	5.13	16.00	28.50	29.00	16.88	12.44	9.81	6.25	6.75
2B-F0709	8	3750	937	7.09	14.25	25.75	25.75	16.13	11.61	9.48	5.75	5.75
2B-G0709	8	6250	1271	7.09	16.75	29.75	30.25	17.88	12.95	10.32	6.50	7.00
2B-K0609	8	10000	1848	6.09	19.00	33.50	34.00	20.13	14.70	11.44	7.25	7.75
2B-K0709	8	10000	2630	7.09	22.25	39.75	39.75	22.75	16.02	12.76	8.75	8.75
2B-F0909	10	3750	1673	9.09	17.00	30.50	31.50	19.88	13.98	11.34	6.75	7.75
2B-G0850	10	6250	2193	8.50	20.75	36.25	37.25	21.38	15.35	12.09	7.75	8.75
2B-G0909	10	6250	2485	9.09	21.25	37.75	38.50	22.63	15.86	12.72	8.25	9.00
2B-K0763	10	10000	3338	7.63	24.25	42.75	42.75	2.63	17.18	13.72	9.25	9.25
2B-F1075	12	3750	2536	10.75	20.00	36.50	37.50	23.25	16.35	13.03	8.25	9.25
2B-G1013	12	6250	3233	10.13	23.00	41.00	42.00	25.13	17.43	13.97	9.00	10.00
2B-G1075	12	6250	3828	10.75	24.00	43.50	44.25	26.25	17.92	14.53	9.75	10.50
2B-F1140	12	3750	3201	11.40	21.25	40.25	40.25	24.75	16.92	13.78	9.50	9.50

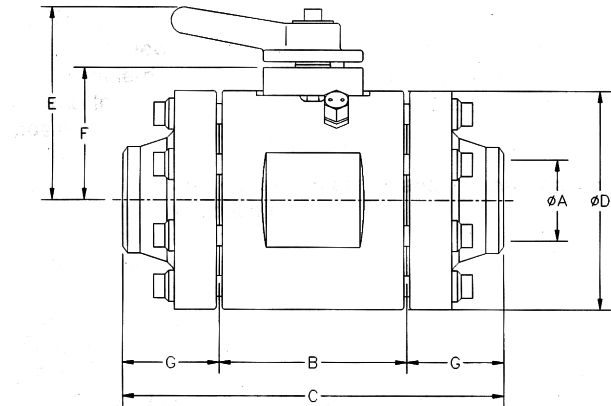
4" through 12" dimensions - Metric

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (kg)	Bore (mm)	Valve Group Length (mm)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (mm)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
2B-F0344	4	3750	87.09	87	203	400	406	235	185	142	95	102
2B-F0383	4	3750	116.57	97	235	438	457	260	194	155	102	121
2B-G0315	4	6250	104.33	80	225	435	448	241	187	125	105	118
2B-G0363	4	6250	139.71	92	248	470	476	270	198	160	111	118
2B-K0306	4	10000	156.94	78	267	502	514	276	202	162	117	130
2B-F0406	5	3750	132.00	103	229	445	464	270	198	159	108	127
2B-G0406	5	6250	190.51	103	279	521	540	302	215	174	121	127
2B-F0519	6	3750	220.90	132	279	521	546	327	228	187	121	146
2B-G0490	6	6250	347.46	124	330	622	629	371	276	222	146	152
2B-K0406	6	10000	324.78	103	343	635	635	352	266	212	146	146
2B-K0513	6	10000	556.56	130	406	724	737	429	316	249	159	171
2B-F0709	8	3750	425.02	180	362	654	654	410	295	241	146	146
2B-G0709	8	6250	576.52	180	425	756	768	454	329	262	165	165
2B-K0609	8	10000	838.25	155	483	851	864	511	373	291	184	197
2B-K0709	8	10000	1192.96	180	565	1010	1010	578	407	324	222	222
2B-F0909	10	3750	758.87	231	432	775	800	505	355	288	171	197
2B-G0850	10	6250	994.74	216	527	921	946	543	390	307	197	222
2B-G0909	10	6250	1127.19	231	540	959	978	575	403	323	210	229
2B-K0763	10	10000	1514.11	194	616	1086	1086	625	436	348	235	235
2B-F1075	12	3750	1150.32	273	508	927	953	591	415	331	210	235
2B-G1013	12	6250	1466.48	257	584	1041	1067	638	443	355	216	254
2B-G1075	12	6250	1736.37	23	610	1105	1124	667	455	369	248	267
2B-F1140	12	3750	1451.96	290	540	1022	1022	629	430	350	229	241

Trunnion soft-seated ball valve - (4" - 5")

Ball valve key

A.	Bore
B.	Valve Group Length
C.	Overall Length (WNF x WNF)
C.	Overall Length (SWF x WNF)
D.	Body Outer Diameter
E.	Handle Height
F.	Bonnet Height
G.	Weldneck Length
G.	Nipple Length



Models

4" through 5" dimensions - English

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (lbs)	Bore (inch)	Valve Group Length (inch)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (inch)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
2B-F0344	4	3750	192	3.44	8.25	15.75	16.00	9.25	8.15	5.59	3.75	3.75
2B-F0383	4	3750	257	3.83	9.25	17.25	18.00	10.25	8.56	6.09	4.00	4.50
2B-G0315	4	6250	230	3.15	8.88	17.13	17.63	9.50	8.27	5.72	4.13	4.38
2B-G0363	4	6250	308	3.63	9.75	18.50	18.75	10.63	8.71	6.28	4.38	4.38
2B-K0306	4	10000	346	3.06	10.50	19.75	20.25	10.88	8.79	6.36	4.63	4.63
2B-F0406	5	3750	291	4.06	9.00	17.50	18.25	10.63	8.69	6.26	4.25	5.00
2B-G0406	5	6250	420	4.06	11.00	20.50	21.25	11.88	9.29	6.86	4.75	5.00
2B-F0519	6	3750	487	5.19	11.00	20.50	21.50	12.88	9.79	7.36	4.75	5.75

4" through 5" dimensions - Metric

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (kg)	Bore (mm)	Valve Group Length (mm)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (mm)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
2B-F0344	4	3750	87.09	87.33	210	400	406	235	207	142	95	95
2B-F0383	4	3750	116.57	97.18	235	438	457	260	217	155	102	114
2B-G0315	4	6250	104.33	80.01	225	435	448	241	210	145	105	111
2B-G0363	4	6250	139.71	92.08	248	470	476	270	221	160	111	111
2B-K0306	4	10000	156.94	77.80	267	502	514	276	223	162	117	117
2B-F0406	5	3750	132.00	103.20	229	445	464	270	221	159	108	127
2B-G0406	5	6250	190.51	103.20	279	521	540	302	236	174	121	127
2B-F0519	6	3750	220.90	131.78	279	521	546	327	249	187	121	146

Trim codes

Trim coding for the new valve is very different from the legacy system. Ball valve trim is a nine-digit, alphanumeric code that identifies the materials of construction and the type of service, actuation, grease, and other features. The trim code positions are defined below.

BALL VALVE CODE - 2B-F0344-XXXXXXXXXX										
MODEL NUMBER - TRIM CODES										
XX-XXXXX 1	-	1	2	3	4	5	6	7	8	9
2B-F0344	-	X	X	X	X	X	X	X	X	X

1. Body, bonnet, and retainer material

Standard = 1

1	4130 Body, Bonnet & Retainer
A	Duplex Body, Bonnet & Retainer
B	Super Duplex Body, Bonnet & Retainer
F	410 SS Body, Bonnet & Retainer
N	Inconel 625 Body, Bonnet & Retainer
P	Full Clad 625
Q	4130 / Inconel 625 Partial Clad Body, Bonnet & Retainer

3. Stem material and coating

Standard = 1

D	Duplex
1	4130 - QPQ
H	Super Duplex
M	Inconel 625
N	Inconel 718

2. Ball material and coating

Standard = 3 or 6

3	4130 - .003" ENP Standard
6	17-4PH - .0004" Chrome
7	410 - .0004" Chrome
D	Duplex - .0004" Chrome
H	Super Duplex - .0004" Chrome
N	Inconel 718 - .0004" Chrome

4. Carrier material and coating

Standard = 1 or 6

1	4130 Alloy
6	17-4PH
D	Duplex
H	Super Duplex
N	Inconel 625
R	410 Stainless

Note: 1. Nipple and weldneck lengths are not necessarily the same. Valves are typically provided with weldneck flanges at both ends. Nipples / swivel flanges may be used at either end of the valve as an option (except as noted above)

2. Weights listed are approximate and include the standard weldneck flanges at each end. Pipe schedule, swivel flanges, actuation mounting hardware, etc., may affect the final assembly weight.

3. For other materials not listed, please consult the factory.

Trim codes (continued)

BALL VALVE CODE - 2B-F0344-XXXXXXXXXX										
MODEL NUMBER - TRIM CODES										
XX-XXXXX 1	-	1	2	3	4	5	6	7	8	9
2B-F0344	-	X	X	X	X	X	X	X	X	X

5. Carrier and body seal material

Standard = 1 or 5

1	Nitrile
5	Viton A
A	James Walker Elast-o-Lion 101
B	James Walker Elast-o-Lion 985
D	James Walker FR 25/90
H	Greene Tweed 938

8. Actuation style

Standard = 1

1	Handle or Lever
2	Handle or Lever with Locking Device
6	Bare Stem
F	Gear Operator with Hand wheel
G	Gear Operator with Hand wheel and Locking Device

6. Stem seal and backup material

Standard = 1 or 2

1	Nitrile Jacket / Nitrile O-spring / PEEK Backup
2	Viton Jacket / Viton O-spring / PEEK Backup
R	Virgin Teflon Jacket / Elgiloy Spring / PEEK Backup

9. Service, grease, and bonnet bolting material

Standard = 1

1	Standard Grease, B7M / L7M Bonnet Bolting
3	Standard Grease, Grade 660 Bonnet Bolting
A	Low Temperature Grease, B7M / L7M Bonnet Bolting
C	Low Temperature Grease, Grade 660 Bonnet Bolting
Y	Oxygen / Air Service Grease, B7M / L7M Bonnet Bolting
Z	Oxygen / Air Grease, Grade 660 Bonnet Bolting

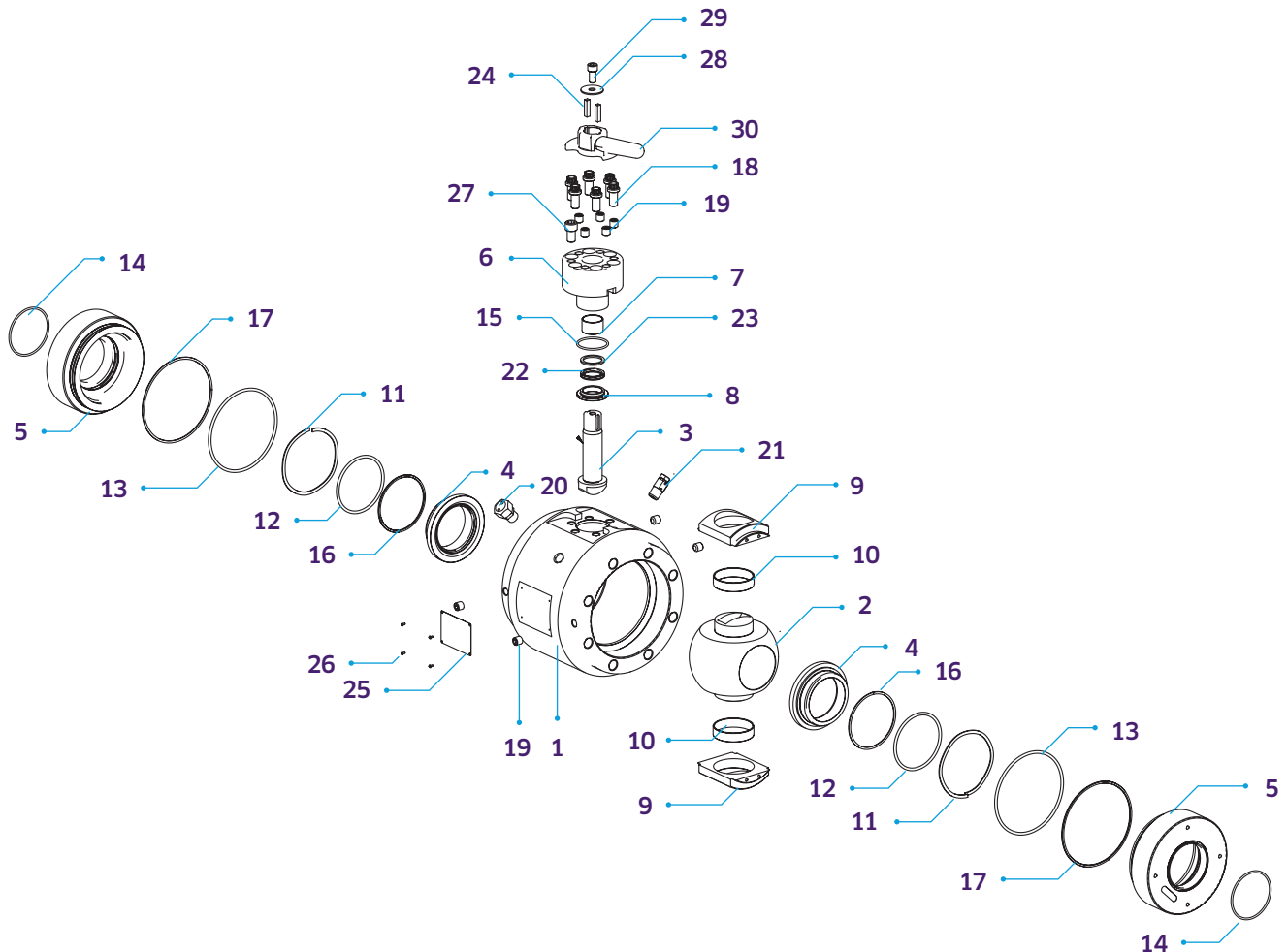
7. Seat material

Standard = P

P	PEEK
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Parts

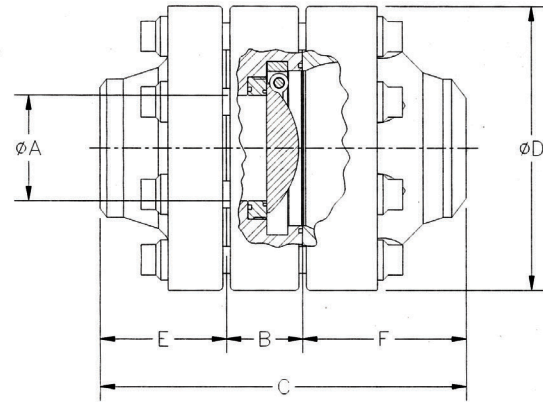
Item	Description	Qty	Item	Description	Qty
1	Body	1	16	Backup-Ring: For O-Ring Uniform #348	2
2	Ball	1	17	Backup-Ring: For O-Ring Uniform #363	2
3	Stem	1	18	Cap Screw: 12 PT, 5/8 X 1.25 LG	6
4	Seat Assembly	2	19	Set Screw: 5/8 X .63 LG	9
5	Retainer	2	20	Grease Fitting	1
6	Bonnet	1	21	Bleed Fitting	1
7	Bushing: Bonnet	1	22	Stem Seal	1
8	Thrust Ring	1	23	Backup Ring	1
9	Trunnion Support	2	24	Key: 5/16" SQ X 1.37 LG	2
10	Bushing: Trunnion	2	25	Nameplate	1
11	Wave Spring	2	26	Self Tapping Screw	4
12	O-Ring: Uniform #348	2	27	Cap Screw: Hex SOC Head, 5/8 X 1.00 LG	1
13	O-Ring: Uniform #363	2	28	Flat Washer: Type B, 1/2 W	1
14	O-Ring: Uniform #240	2	29	Cap Screw: Hex SOC Head, 1/2 X 1.00 LG	1
15	O-Ring: Uniform #228	1	30	Handle	1



Compact check valves - (1" - 12")

Check valve key

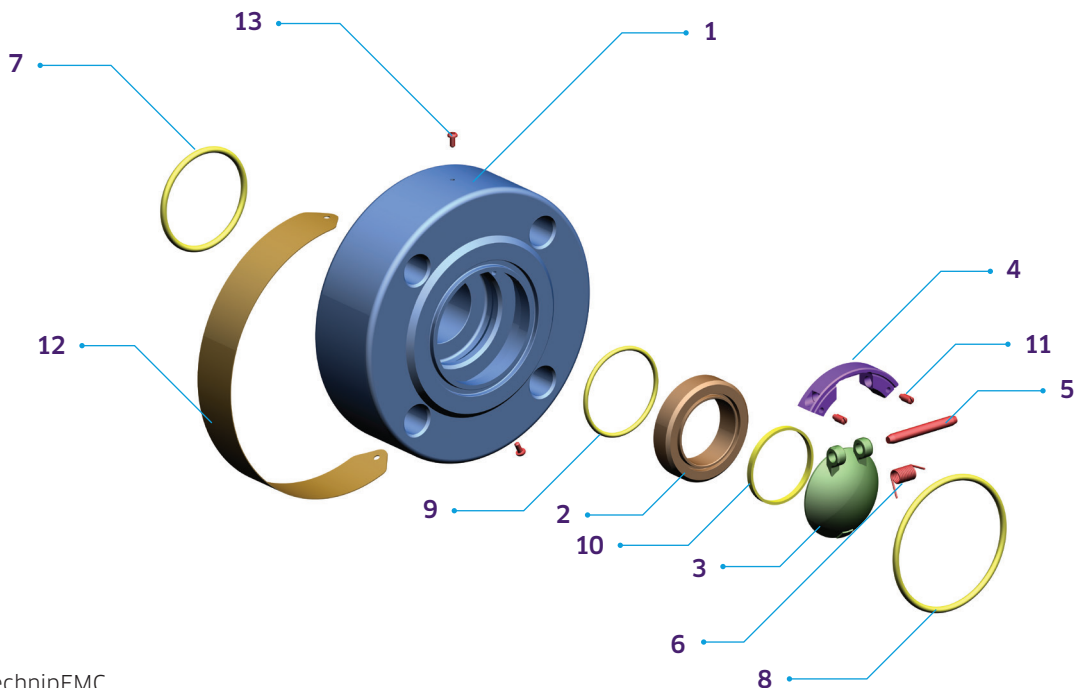
A.	Bore
B.	Valve Group Length
C.	Overall Length (WNF x TP)
C.	Overall Length (SWF x TP)
D.	Body Outer Diameter
E.	Weldneck Length
E.	Nipple Length
F.	Tailpiece Length



Parts

Item	Description	Qty
1	Body	1
2	seat	1
3	flapper	1
4	flapper shoe	1
5	pivot pin	1
6	spring	1
7	o-ring	1

Item	Description	Qty
8	o-ring	1
9	o-ring	1
10	seat seal ring	1
11	set screw: *8 x .375 lg	2
12	nameplate	1
13	self tapping screw	2



Models

1" through 12" dimensions - English

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (lbs)	Bore (inch)	Valve Group Length (inch)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (inch)	Weldneck Length	Nipple Length	Tailpiece Length
				A	B	C	C	D	E	E	G
C-K0081	1	10000	21.38	0.81	2.13	7.13	N/A	5.25	2.13	N/A	2.88
C-G0150	2	6250	44.79	1.50	2.13	9.38	9.81	6.25	3.69	4.13	3.56
C-K0150	2	10000	57.79	1.50	2.13	10.38	11.00	6.56	4.63	5.25	3.63
C-F0209	3	3750	61.43	2.09	2.38	10.50	10.63	6.88	4.38	4.50	3.75
C-F0263	3	3750	69.34	2.63	2.25	10.13	10.50	7.88	3.38	3.75	4.50
C-G0230	3	6250	86.90	2.30	2.50	11.13	11.63	7.88	4.38	4.88	4.25
C-G0259	3	6250	96.00	2.59	2.50	11.50	12.38	8.38	4.25	5.13	4.75
C-K0213	3	10000	96.86	2.13	2.88	11.13	11.88	8.63	3.75	4.13	4.88
C-F0344	4	3750	113.48	3.44	2.50	11.63	11.88	9.25	3.75	4.00	5.38
C-F0383	4	3750	173.70	3.83	3.13	14.00	14.63	11.00	4.00	4.63	6.88
C-G0315	4	6250	156.71	3.15	3.25	13.00	13.50	10.13	4.13	4.63	5.63
C-G0363	4	6250	236.72	3.63	3.25	14.88	15.50	12.25	4.13	4.75	7.50
C-K0306	4	10000	189.22	3.06	3.50	13.63	14.38	10.38	4.63	5.13	5.75
C-F0406	5	3750	181.54	4.06	3.25	13.50	14.50	11.00	4.00	5.00	6.25
C-G0406	5	6250	265.68	4.06	3.75	15.00	15.75	12.25	4.25	5.00	7.00
C-F0519	6	3750	338.80	5.19	3.75	16.25	17.25	13.50	4.75	5.75	7.75
C-G0490	6	6250	457.48	4.90	3.75	18.00	18.00	14.75	5.75	5.75	8.50
C-K0406	6	10000	527.93	4.06	5.00	19.25	19.25	15.38	5.75	5.75	8.50
C-K0513	6	10000	624.53	5.13	5.00	20.50	20.50	15.88	6.50	6.50	9.00
C-F0709	8	3750	583.52	7.09	4.25	18.75	18.75	17.00	5.75	5.75	8.75
C-G0709	8	6250	832.20	7.09	4.75	22.00	N/A	18.63	7.25	N/A	10.00
C-K0609	8	10000	913.54	6.09	5.75	24.00	N/A	17.75	8.75	N/A	9.50
C-K0709	8	10000	1434.36	7.09	7.25	28.50	N/A	20.00	8.50	N/A	12.75
C-F0909	10	3750	1252.15	9.09	5.75	25.00	N/A	21.50	6.75	N/A	12.50
C-G0850	10	6250	1538.77	8.50	5.75	28.25	N/A	22.00	8.25	N/A	14.25
C-G0909	10	6250	1589.36	9.09	5.75	28.25	N/A	22.00	8.25	N/A	14.25
C-K0763	10	10000	1509.84	7.63	7.25	29.50	N/A	20.00	10.25	N/A	12.00
C-F1075	12	3750	1657.89	10.75	5.75	29.00	N/A	22.88	9.00	N/A	14.25
C-G1013	12	6250	2245.85	10.13	7.50	33.00	N/A	23.88	9.50	N/A	16.25
C-G1075	12	6250	2423.48	10.75	7.75	35.50	N/A	24.50	10.50	N/A	17.25
C-F1140	12	3750	1816.51	11.40	6.25	33.25	N/A	23.88	11.00	N/A	16.00

1" through 12" dimensions - Metric

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (kg)	Bore (mm)	Valve Group Length (mm)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (mm)	Weldneck Length	Nipple Length	Tailpiece Length
				A	B	C	C	D	E	E	G
C-K0081	1	10000	9.70	21	54	181	N/A	133	54	N/A	73
C-G0150	2	6250	20.32	38	54	238	249	159	94	105	90
C-K0150	2	10000	26.21	38	54	264	279	167	117	133	92
C-F0209	3	3750	27.86	53	60	267	270	175	222	114	95
C-F0263	3	3750	31.45	67	57	257	267	200	86	95	114
C-G0230	3	6250	39.42	58	64	283	295	200	111	124	108
C-G0259	3	6250	43.55	66	64	292	314	213	108	130	121
C-K0213	3	10000	43.94	54	73	283	302	219	95	105	124
C-F0344	4	3750	51.47	87	64	295	302	235	95	102	137
C-F0383	4	3750	78.79	97	79	356	372	279	102	118	175
C-G0315	4	6250	71.08	80	83	330	343	257	105	118	143
C-G0363	4	6250	107.38	92	83	378	394	311	105	121	191
C-K0306	4	10000	85.83	78	89	346	365	264	117	130	146
C-F0406	5	3750	82.35	103	83	343	368	279	102	127	159
C-G0406	5	6250	120.51	103	95	381	400	311	108	127	178
C-F0519	6	3750	153.68	132	95	413	438	343	121	146	197
C-G0490	6	6250	207.51	124	95	457	457	375	146	146	216
C-K0406	6	10000	239.47	103	127	489	489	391	146	146	216
C-K0513	6	10000	283.28	130	127	521	521	403	165	165	229
C-F0709	8	3750	264.68	180	108	476	476	432	146	146	222
C-G0709	8	6250	377.48	180	121	559	N/A	473	184	N/A	254
C-K0609	8	10000	414.38	155	146	610	N/A	451	222	N/A	241
C-K0709	8	10000	650.62	180	184	724	N/A	508	216	N/A	324
C-F0909	10	3750	567.97	231	146	635	N/A	546	171	N/A	318
C-G0850	10	6250	697.98	116	146	718	N/A	559	210	N/A	362
C-G0909	10	6250	720.93	231	146	718	N/A	559	210	N/A	362
C-K0763	10	10000	684.86	194	184	749	N/A	508	260	N/A	305
C-F1075	12	3750	752.01	273	146	737	N/A	581	229	N/A	362
C-G1013	12	6250	1018.71	257	191	838	N/A	606	241	N/A	413
C-G1075	12	6250	1099.28	273	197	902	N/A	622	267	N/A	438
C-F1140	12	3750	823.96	290	159	845	N/A	606	279	N/A	406

Note: 1. Nipple and weldneck lengths are not necessarily the same. Valves are typically provided with weldneck flanges at the upstream end. Nipples / swivel flanges may be used at the upstream end of the valve as an option (except as noted above). Tailpieces are always required at the downstream end.

Trim codes

Trim coding for the new valve is very different from the legacy system. Ball valve trim is a nine-digit, alphanumeric code that identifies the materials of construction and the type of service, actuation, grease, and other features. The trim code positions are defined below.

BALL VALVE CODE - C-K0081-XXXX					
MODEL NUMBER		TRIM CODES			
XX-XXXXX 1	-	1	2	3	4
C-K0081	-	X	X	X	X

1. Body, material & coating

Standard = 1

1	4130 Alloy
2	4130 Alloy - Xylan Internal
A	Duplex
B	Super Duplex
F	410 Stainless
N	Inconel 625
P	4130 Alloy - Inconel 625 Fully Clad
Q	4130 Alloy - Inconel 625 Partially Clad

2. Seat material and coating

Standard = 2

2	17-4 PH
A	4130 Alloy
D	Duplex
E	Super Duplex
G	Inconel 625

3. Flapper material and coating

Standard = 2

2	17-4 PH
A	Inconel 718
D	Duplex
E	Super Duplex

4. Body seal materials

Standard = 2

3	Low Temperature Nitrile
5	Viton A
A	James Walker Elast-o-Lion 101
B	James Walker Elast-o-Lion 985
H	Greene Twed 938

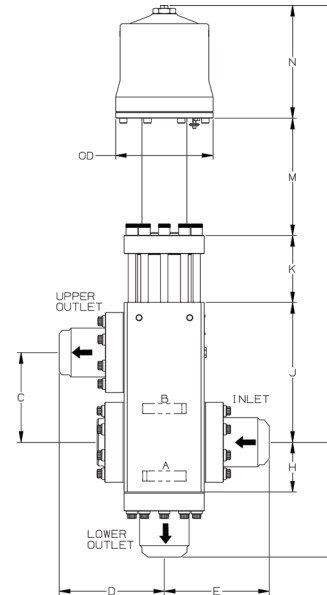
Note: 1. The following valve models are available with thru-hole bodies for close coupling of the check valve to connectors or other valves. [C-G0150, C-K0150, C-F0209, C-F0263, C-G0230, C-G0259]

2. Weights listed are approximate and include the standard weldneck flanges at the upstream end and a tailpiece at the downstream end. Pipe schedule, swivel flanges, etc., may affect the final assembly weight.

Poppet diverter valve

Ball valve key

A	Seat Dia. Production
B	Equiv. Seat Dia. Test
C	Offset Test Outlet
D	Weld End Test
E	Weld End Inlet
F	Weld End Production
G	Body Width
H	Body Below Inlet
J	Body Above Inlet
K	Bonnet flg. Height
L	Cylinder Above Inlet
M	Spring Hsg. Height
N	Cylinder Height
P	Nipple O.D. (max)
OD	Cylinder O.D.



Note: 1. Consult factory for trim codes.

Models

Poppet diverter valve dimensions

Nominal Working Pressure psi (bar)	Nominal Size inches (mm)	Valve Model	Port Diameter inches (mm)	Weight With End Fittings lbs (kg)
3705 (250)	2 (50)	D1860	1 $\frac{1}{8}$ (47)	125 (56)
	3 (75)	D2536	2 $\frac{1}{2}$ (63)	172 (78)
	4 (100)	D3536	3 $\frac{1}{2}$ (88)	380 (172)
	8 (200)	D7136		
6170 (420)	2 (50)	D1860	1 $\frac{1}{8}$ (47)	125 (56)
	3 (75)	D2560	2 $\frac{1}{2}$ (63)	260 (117)
	4 (100)	D3560	3 $\frac{1}{2}$ (88)	535 (242)
	6 (150)	D5060	5 (127)	1155 (523)
	8 (200)	D6860		

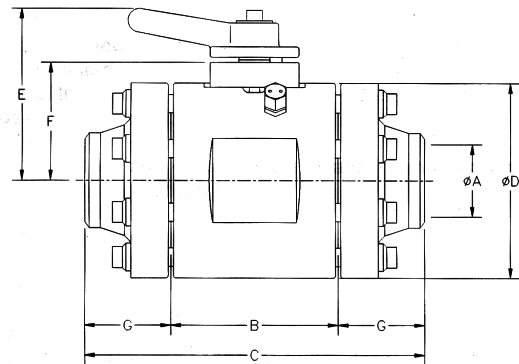
Poppet diverter valve specifications

TYPE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	OD
D1860	1 $\frac{1}{8}$ (47)	1 $\frac{1}{2}$ (38)	5 $\frac{1}{2}$ (139)	8 $\frac{3}{4}$ (209)	7 $\frac{1}{4}$ (184)	8 $\frac{1}{4}$ (222)	4 (101)	3 $\frac{1}{2}$ (88)	7 $\frac{1}{2}$ (190)	6 $\frac{1}{2}$ (165)	29 (736)	6 $\frac{3}{4}$ (171)	8 $\frac{1}{4}$ (209)	2 $\frac{7}{8}$ (73)	7 $\frac{1}{4}$ (184)
D2536	2 $\frac{1}{2}$ (63)	2 $\frac{1}{16}$ (52)	6 $\frac{1}{2}$ (165)	8 (203)	8 (203)	10 (254)	4 $\frac{1}{2}$ (114)	4 $\frac{1}{2}$ (107)	10 $\frac{3}{4}$ (273)	6 $\frac{1}{4}$ (171)	36 (914)	8 $\frac{1}{2}$ (215)	10 (254)	31 $\frac{1}{2}$ (88)	8 $\frac{1}{2}$ (215)
D3536	3 $\frac{1}{2}$ (88)	3 $\frac{3}{8}$ (79)	5 $\frac{1}{2}$ (139)	10 $\frac{3}{4}$ (260)	10 $\frac{2}{3}$ (260)	11 $\frac{1}{2}$ (292)	7 $\frac{1}{2}$ (190)	5 (127)	10 $\frac{1}{2}$ (266)	5 (127)	34 (863)	8 $\frac{1}{2}$ (215)	10 (254)	5 (127)	8 $\frac{1}{2}$ (215)
D1860	1 $\frac{1}{8}$ (47)	1 $\frac{1}{2}$ (38)	5 $\frac{1}{2}$ (139)	8 $\frac{1}{4}$ (209)	7 $\frac{1}{4}$ (184)	8 $\frac{3}{4}$ (222)	4 (101)	3 $\frac{1}{2}$ (88)	7 $\frac{1}{2}$ (190)	6 $\frac{1}{2}$ (165)	29 (736)	6 $\frac{3}{4}$ (171)	8 $\frac{1}{4}$ (209)	2 $\frac{7}{8}$ (73)	7 $\frac{1}{4}$ (184)
D2560	2 $\frac{1}{2}$ (63)	2 $\frac{1}{16}$ (165)	6 $\frac{1}{2}$ (165)	8 $\frac{3}{4}$ (222)	8 $\frac{1}{4}$ (222)	10 (266)	6 (152)	4 $\frac{1}{4}$ (107)	10 $\frac{3}{4}$ (273)	6 $\frac{3}{4}$ (171)	36 (914)	8 $\frac{1}{2}$ (215)	10 (254)	3 $\frac{1}{4}$ (951)	8 $\frac{1}{2}$ (2150)
D3560	3 $\frac{1}{2}$ (88)	3 (76)	9 (288)	10 $\frac{1}{2}$ (266)	10 $\frac{1}{2}$ (266)	11 $\frac{1}{2}$ (292)	8 (203)	5 (127)	14 (355)	6 $\frac{3}{4}$ (171)	43 $\frac{1}{4}$ (1111)	11 $\frac{3}{4}$ (298)	11 $\frac{1}{4}$ (285)	5 (127)	9 $\frac{1}{4}$ (247)
D5060	5 (127)	4 (101)	12 (304)	12 (304)	12 (304)	13 $\frac{1}{4}$ (349)	11 (279)	7 $\frac{1}{4}$ (184)	19 $\frac{1}{4}$ (488)	9 $\frac{1}{4}$ (234)	53 $\frac{1}{2}$ (1358)	11 $\frac{1}{2}$ (292)	13 $\frac{1}{2}$ (342)	7 $\frac{1}{2}$ (190)	11 $\frac{3}{4}$ (298)

Throttle valve

Ball valve key

A.	Max Orifice
B.	Valve Group Length
C.	Overall Length (WNF x WNF)
C.	Overall Length (SWF x WNF)
D.	Body Outer Diameter
E.	Handle Height
F.	Bonnet Height
G.	Weldneck Length
G.	Nipple Length



Models

1" through 12" dimensions - English / (Metric)

Model Number	Nom Size (mm)	Pressure PSI (bar)	Flowrate B/D (M3/D) at percent open dial readings				
			20%	40%	60%	80%	100%
3705 (250)	1 (25)	250 (17)	390 (62)	760 (121)	1,170 (186)	1,450 (231)	1,600 (254)
		500 (34)	550 (87)	1,100 (175)	1,680 (267)	2,060 (328)	2,250 (358)
		1,000 (69)	790 (126)	1,560 (248)	2,400 (382)	2,950 (469)	3,200 (509)
		1,500 (103)	960 (153)	1,930 (307)	2,950 (469)	3,640 (579)	3,950 (628)
		2,000 (138)	1,120 (178)	2,200 (350)	3,400 (541)	4,200 (668)	4,600 (731)
		2,500 (172)	1,250 (199)	2,500 (397)	3,800 (604)	4,700 (747)	5,200 (827)
6170 (420)	2 (50)	250 (17)	980 (156)	2,170 (345)	3,520 (560)	4,510 (717)	5,000 (795)
		500 (34)	1,400 (223)	3,100 (493)	5,000 (795)	6,400 (1,018)	7,100 (1,129)
		1,000 (69)	2,000 (318)	4,400 (700)	7,200 (1,145)	9,100 (1,447)	10,200 (1,622)
		1,500 (103)	2,450 (390)	5,400 (859)	8,800 (1,399)	11,200 (1,781)	12,500 (1,987)
		2,000 (138)	2,850 (453)	6,220 (989)	10,200 (1,622)	13,000 (2,067)	14,400 (2,289)
		2,500 (172)	3,200 (509)	6,950 (1,105)	11,400 (1,812)	14,600 (2,321)	16,100 (2,560)
3705 (250)	3 (75)	250 (17)	3,650 (580)	7,300 (1,161)	11,200 (1,781)	14,900 (2,369)	16,700 (2,655)
		500 (34)	5,200 (827)	10,400 (1,653)	15,700 (2,496)	21,000 (3,339)	23,700 (3,768)
		1,000 (69)	7,400 (1,177)	14,800 (2,353)	22,500 (3,577)	30,000 (4,770)	33,700 (5,358)
		1,500 (103)	9,100 (1,447)	18,200 (2,894)	27,500 (4,372)	36,500 (5,803)	41,500 (6,598)
		2,000 (138)	10,500 (1,669)	21,000 (3,339)	31,800 (5,056)	42,000 (6,677)	47,000 (7,472)
		2,500 (172)	11,800 (1,876)	23,500 (3,736)	35,600 (5,660)	47,000 (7,472)	52,500 (8,347)
6170 (420)	4 (100)	250 (17)	8,500 (1,351)	17,000 (2,703)	26,100 (4,150)	34,700 (5,517)	38,900 (6,185)
		500 (34)	12,100 (1,924)	24,200 (3,848)	36,600 (5,819)	48,900 (7,775)	55,200 (8,776)
		1,000 (69)	17,200 (2,735)	34,500 (5,485)	52,400 (8,331)	69,900 (11,130)	78,500 (12,481)
		1,500 (103)	21,200 (3,371)	42,400 (6,741)	64,100 (10,191)	85,000 (13,514)	95,500 (15,184)
		2,000 (138)	24,500 (3,895)	48,900 (7,775)	74,100 (11,781)	97,900 (15,565)	109,500 (17,409)
		2,500 (172)	27,500 (4,372)	54,800 (8,713)	82,900 (13,180)	109,500 (17,409)	122,300 (19,445)

1" through 4" dimensions - English / (Metric)

Model #	Nom Pipe Size	Working Pressure (psi)	Weight (kg)	Max Orifice (mm)	Valve Group Length (mm)	Overall Length (WNF x WNF)	Overall Length (SWF x WNF)	Body Outer Diameter (mm)	Handle Height	Bonnet Height	Weldneck Length	Nipple Length
				A	B	C	C	D	E	F	G	G
1B-K0081	1	10000	26 (11.79)	5/16 (8)	4.00 (102)	8.25 (210)	N/A	4.50 (111)	4.28 (109)	2.25 (57)	2.13 (54)	N/A
1B-G0150	2	6250	70 (31.75)	5/8 (16)	4.88 (124)	12.25 (311)	12.69 (322)	6.50 (165)	5.16 (131)	3.13 (80)	3.69 (94)	4.13 (105)
1B-K0150	2	10000	99 (44.91)		6.00 (152)	15.25 (387)	15.88 (403)	7.00 (178)	5.38 (137)	3.28 (83)	4.63 (117)	5.25 (133)
1B-F0209	3	3750	95 (43.09)	1/4 (32)	5.38 (137)	14.13 (359)	14.25 (362)	7.13 (181)	5.45 (138)	3.44 (87)	4.38 (111)	4.50 (114)
1B-G0230*	3	6250	151 (68.49)		6.88 (175)	15.63 (397)	16.13 (410)	7.88 (200)	7.33 (186)	4.91 (125)	4.38 (111)	4.88 (124)
1B-F0344*	4	3750	196 (88.91)	1/8 (48)	7.75 (197)	15.25 (387)	15.50 (394)	9.25 (235)	7.98 (203)	5.54 (141)	3.75 (95)	4.00 (102)
1B-G0315*	4	6250	230 (104.33)		8.38 (213)	16.63 (422)	17.13 (435)	9.50 (241)	8.72 (221)	5.66 (144)	4.13 (105)	4.63 (118)

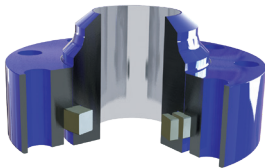
Note:

- This table is useful in determining which throttle ball valve is appropriate for your application.
- Maximum pressure differential is 2,500 psi.
- Size flowrate for minimum 20% opening.
- Reduced orifices are available for special applications.
- Dimensions are the same as soft seated floating ball valve. (1B-Series)

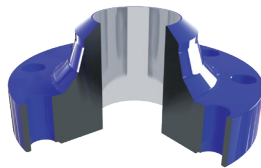


Common end connections

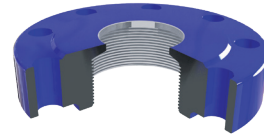
Weldneck flange and swivel flange set



Swivel flange set



Weldneck flange



Threaded flange

Soft-seated floating ball valve flange data

Ball Valve Model Number	Working Pressure (PSI)	Nominal Pipe Size	Weldneck Flange Name	Blind Flange Name	Swivel Flange Name	Nipple Name	Half Ring Name
1BK0081	10000	1	01A	01A	01A	N/A	N/A
1B-G0150	6250	2	02A	02A	02A	R02A0150	R02A
1B-K0150	10000	2	02B	02B	02B	R02B0150	R02B
1B-F0209	3750	3	03A	03A	03A	R03A0209	R03A
1B-F0263	3750	3	03D	03D	03D	R03D0263	R03D
1B-G0230	6250	3	03B	03B	03B	R03B0230	R03B
1B-G0259	6250	3	03C	03C	03C	R03C0259	R03C
1B-K0213	10000	3	03E	03E	03E	R03E0213	R03E
1B-F0344	3750	4	04A	04A	04A	R04A0344	R04A
1B-F0383	3750	4	04C	04C	04C	R04C0383	R04C
1B-G0315	6250	4	04B	04B	04B	R04B0315	R04B
1B-G0363	6250	4	04D	04D	04D	R04D0363	R04D
1B-K0306	10000	4	04E	04E	04E	R04E0306	R04E

Poppet diverter flange data

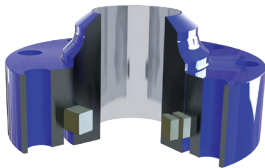
Check Valve Model Number	Working Pressure (PSI)	Nominal Pipe Size	Swivel Flange Ends		Blind Flange Ends	
			Inlet Connection	Outlet Connection	Inlet Connection	Outlet Connection
D1860	6170	2	16D	16D	16	16
D2536	3705	3	24J	24J	24	24
D2560	6170	3	30K	30K	30	30
D3536	3705	4	42N	42N	42	42
D3560	6170	4	42N	42N	42	42
D5060	6170	6	62R	62R	62	62

Check valve flange data

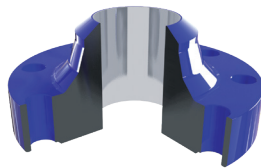
Ball Valve Model Number	Working Pressure (PSI)	Nominal Pipe Size	Upstream Weldneck Flange Name	Upstream Blind Flange Name	Upstream Swivel Flange Name	Upstream Nipple Name	Upstream Half Ring Name	Tailpiece Number
C-K0081	10000	1	01A	01A	01A	N/A	N/A	C-K0081
C-G0150	6250	2	02A	02A	02A	R02A0150	R02A	C-G0150
C-K0150	10000	2	02B	02B	02B	R02B0150	R02B	C-K0150
C-F0209	3750	3	03A	03A	03A	R03A0209	R03A	C-F0209
C-F0263	3750	3	03D	03D	03D	R03D0263	R03D	C-F0263
C-G0230	6250	3	03B	03B	03B	R03B0230	R03B	C-G0230
C-G0259	6250	3	03C	03C	03C	R03C0259	R03C	C-G0259
C-K0213	10000	3	03E	03E	03E	R03E0213	R03E	C-K0213
C-F0344	3750	4	04A	04A	04A	R04A0344	R04A	C-F0344
C-F0383	3750	4	04C	04C	04C	R04C0383	R04C	C-F0383
C-G0315	6250	4	04B	04B	04B	R04B0315	R04B	C-G0315
C-G0363	6250	4	04D	04D	04D	R04D0363	R04D	C-G0363
C-K0306	10000	4	04E	04E	04E	R04E0306	R04E	C-K0306
C-F0406	3750	5	05A	05A	05A	R05A0406	R05A	C-F0406
C-G0406	6250	5	05B	05B	05B	R05B0406	R05B	C-G0406
C-F0519	3750	6	06B	06B	06B	R06B0519	R06B	C-F0519
C-G0490	6250	6	06D	06D	06D	R06D0490	R06D	C-G0490
C-K0406	10000	6	06E	06E	06E	R06E0406	R06E	C-K0406
C-K0513	10000	6	06F	06F	06F	R06F0513	R06F	C-K0513
C-F0709	3750	8	08A	08A	08A	R08A0709	R08A	C-F0709
C-G0709	6250	8	08B	08B	08B	N/A	N/A	C-G0709
C-K0609	10000	8	08C	08C	08C	N/A	N/A	C-K0609
C-K0709	10000	8	08D	08D	08D	N/A	N/A	C-K0709
C-F0909	3750	10	10C	10C	10C	N/A	N/A	C-F0909
C-G0850	6250	10	10B	10B	10B	N/A	N/A	C-G0850
C-G0909	6250	10	10A	10A	10A	N/A	N/A	C-G0909
C-K0763	10000	10	10D	10D	10D	N/A	N/A	C-K0763
C-F1075	3750	12	12A	12A	12A	N/A	N/A	C-F1075
C-G1013	6250	12	12C	12C	12C	N/A	N/A	C-G1013
C-G1075	6250	12	12B	12B	12B	N/A	N/A	C-G1075
C-F1140	3750	12	12G	12G	12G	N/A	N/A	C-F1140

Common end connections

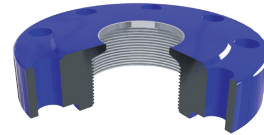
Weldneck flange and swivel flange set



Swivel flange set



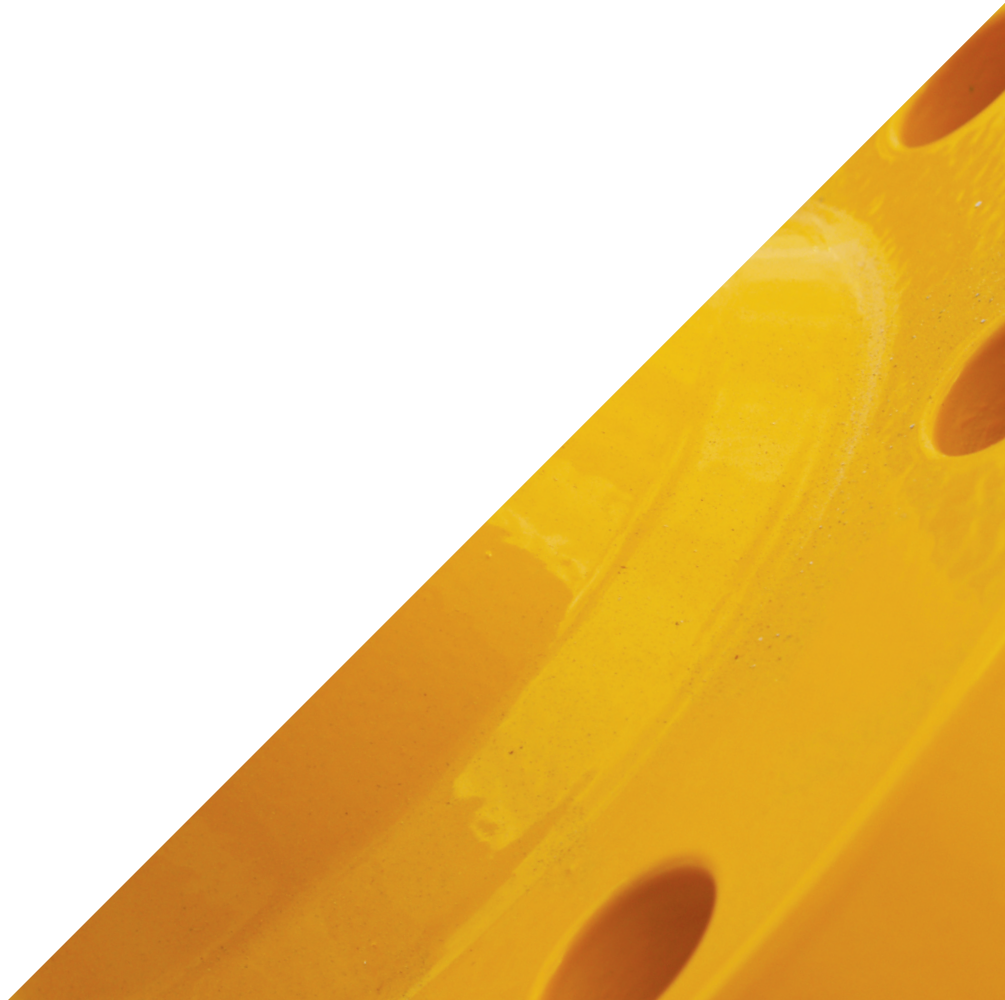
Weldneck flange



Threaded flange

Trunnion soft-seated ball valve flange data

Ball Valve Model Number	Working Pressure (PSI)	Nominal Pipe Size	Weldneck Flange Name	Blind Flange Name	Swivel Flange Name	Nipple Name	Half Ring Name
2B-F0344	3750	4	04A	04A	04A	R04A0344	R04A
2B-F0383	3750	4	04G	04G	04G	R04G0383	R04G
2B-G0315	6250	4	04H	04H	04H	R04H0315	R04H
2B-G0363	6250	4	04J	04J	04J	R04J0363	R04J
2B-K0306	10000	4	04E	04E	04E	R04E0306	R04E
2B-F0406	3750	5	05B	05B	05B	R05B0406	R05B
2B-G0406	6250	5	05C	05C	05C	R05C0406	R05C
2B-F0519	3750	6	06B	06B	06B	R06B0519	R06B
2B-G0490	6250	6	06D	06D	06D	R06D0490	R06D
2B-K0406	10000	6	06E	06E	06E	R06E0406	R06E
2B-K0513	10000	6	06F	06F	06F	R06F0513	R06F
2B-F0709	3750	8	08A	08A	08A	R08A0709	R08A
2B-G0709	6250	8	08E	08E	08E	R08E0709	R08E
2B-K0609	10000	8	08F	08F	08F	R08F0609	R08F
2B-K0709	10000	8	08G	08G	08G	R08G0709	R08G
2B-F0909	3750	10	10E	10E	10E	R10E0909	R10E
2B-G0850	6250	10	10F	10F	10F	R10F0850	R10F
2B-G0909	6250	10	10G	10G	10G	R10G0909	R10G
2B-K0763	10000	10	10H	10H	10H	R10H0763	R10H
2B-F1075	3750	12	12D	12D	12D	R12D1075	R12D
2B-G1013	6250	12	12E	12E	12E	R12E1013	R12E
2B-G1075	6250	12	12F	12F	12F	R12F1075	R12F
2B-F1140	3750	12	12H	12H	12H	R12H1140	R12H



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