BALL VALVES - FLOATING & TRUNNION MOUNTED

SHORT VERSION

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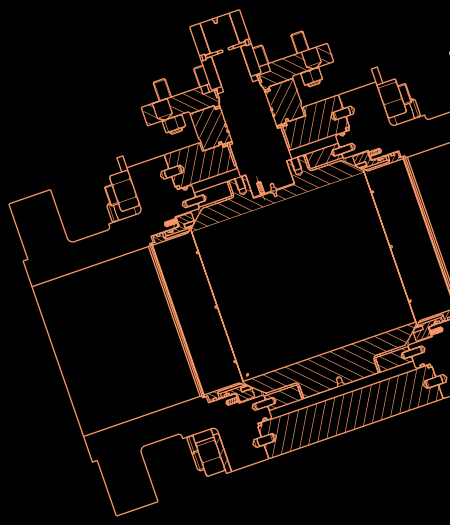
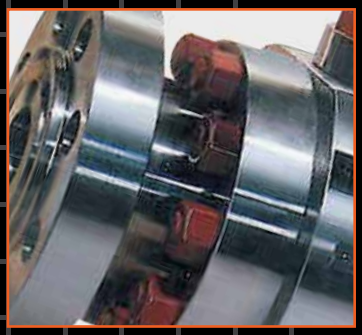
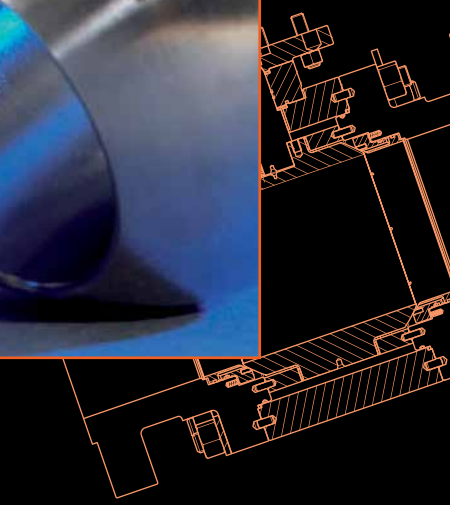
APV
AUSTRALIAN PIPELINE VALVE®







API 622 & ISO 15848-1
Fugitive Emission Certified

API 607 6th & 7th Ed. & ISO 10497
Firesafe Certified

www.australianpipelinevalve.com.au

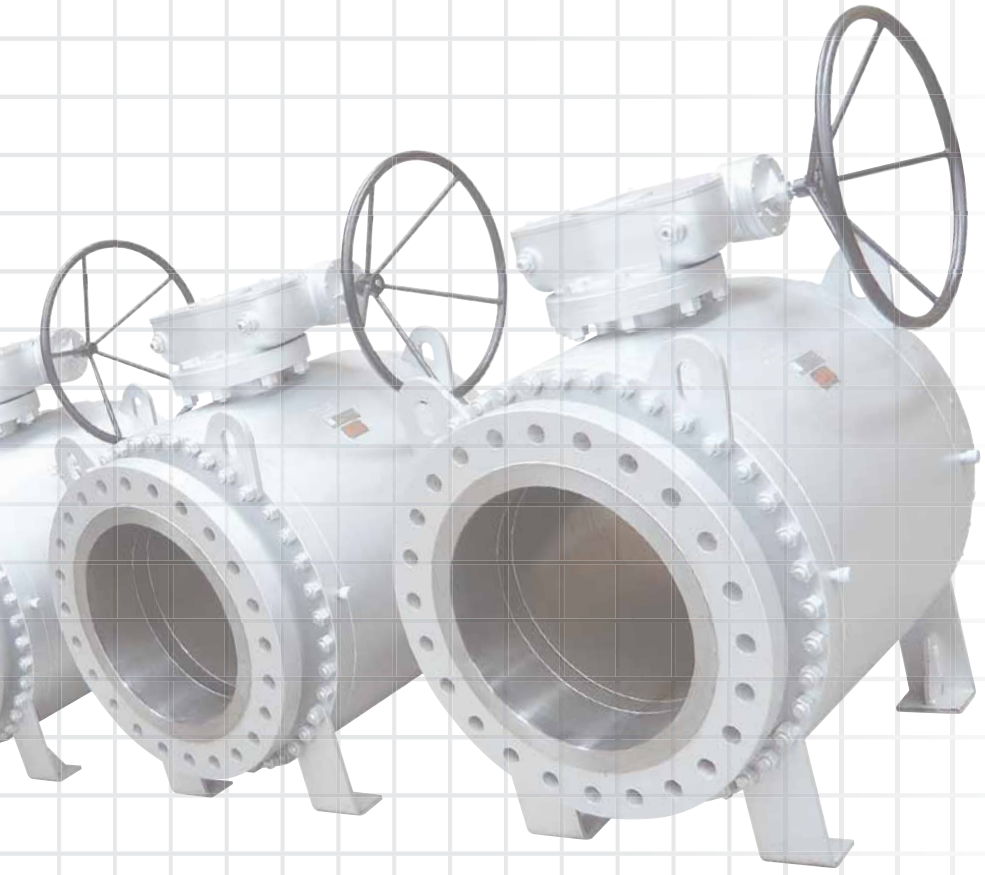
QUALITY VALVE MANUFACTURER

QUALITY COMMITMENT

Quality is Our First Priority.

Consistent product quality and a proven track record makes Australian Pipeline Valve a dependable choice where total reliability is the number one concern.

Since its founding, APV's philosophy has been focused on quality. Our valves are manufactured in full compliance to worldwide standards (such as ASME/ANSI, API, EN, ISO, BS, AS).



APV

AUSTRALIAN PIPELINE VALVE®

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FIRESAFE CERTIFIED API 607 5TH, 6TH & 7TH EDITION, API 6FA & ISO 10497

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** This version excludes some of these pages, refer to full version at website.*

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SLFSBV01 SERIES FLOATING TYPE API 608/6D BALL VALVES

2 PIECE, SPLIT BODY, FULL BORE, ANSI 150 TO 1500LB

ASTM A351 - CF8M & CF8 AND ASTM A216 - WCB
NACE MR0175 (CLASS III BOLTING) FOR SOUR SERVICE
ISO 5211 TOP flange for Actuation

- API 6D & API 608
- 250NB (10") & over trunnion mounted *
- Aga Approved
- Full bore solid ball
- Investment Cast or Forged
- Split Body 2 piece design
- Anti Blow-Out Stem
- Anti-Static Device
- Firesafe Design to API 607 and API 6FA
- Temperature Range -25°C to 230°C
- Also available in metal seats and PEEK seats
- Also available in Monel, Duplex, Alloy 20 etc.

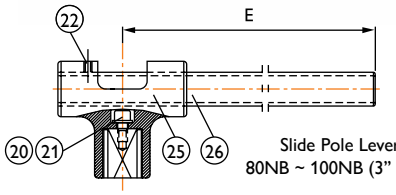
* 250NB (10") & 300NB (12")150LB avaliable in floating and trunnion

Endurance Test Certified

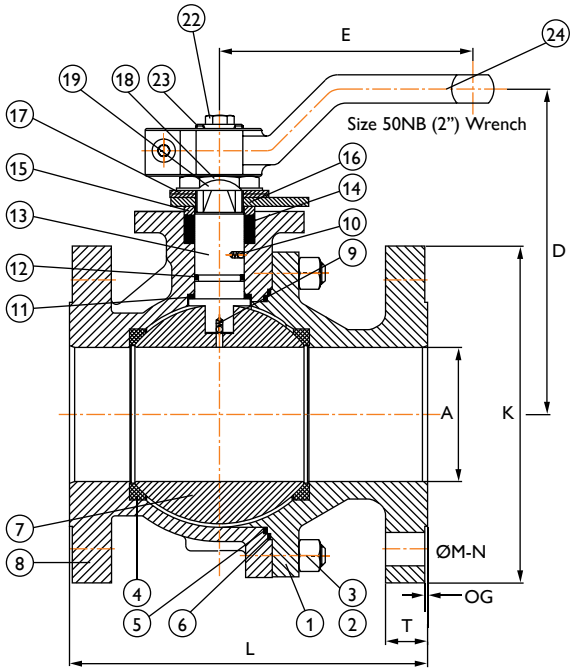
API 607 6th & 7th Ed. & ISO 10497 Firesafe Certified

ISO 15848-1 Class CO2 Fugitive Emission Certified

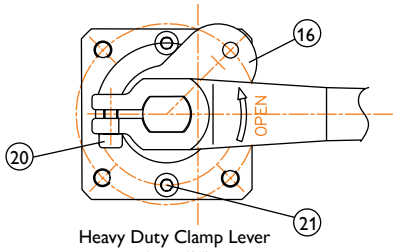
AS 4617, AS 4629



Slide Pole Lever
80NB ~ 100NB (3" ~ 4")



Size 50NB (2") Wrench



Heavy Duty Clamp Lever
50NB (2")

Standards	
Face to Face	ANSI B16.10
Flange Dimensions	ANSI B16.5
Wall Thickness	ANSI B16.34
Basic Design	API 608/API 6D
Testing	API 598
Firesafe Design	API 607

No.	Part Name	Materials
1	Body Cap	ASTM A216 WCB
2	Stud	ASTM A193 B7M
3	Nut	ASTM A194 2HM
4	Seat	RPTFE
5	Gasket	PTFE
6	Gasket	Graphite
7	Ball	ASTM A182 F316
8	Body	ASTM A194 2HM
9	Anti Static Spring	SS316
10	Anti Static Ball	SS316
11	Thrust Washer	25% GFPTFE
12	O-Ring	Viton AED
13	Stem **(1)**	ASTM A276 F316
14	Stem Packing **(2)**	Graphite Chesterton #1622
15	Gland	SS316
16	Stop Plate / Lock Device	A3+ZP
17	Belleville Packing Springs	SS301
18	Gland Nut	ASTM A194 2H
19	Locking Washer	SS316
20	Screw	ASTM A193 B7
21	Stop Bolts - Allen Key	ASTM A193 B7
22	Screw	SS316
23	Washer	SS316
24	Wrench	STEEL+ZP
25	Handle Adaptor	SS316
26	Pipe Handle	CS+ZP

Indicative guide only, refer to as-built drawing.
(1) Stem smoothness Ra 0.2 ~ 0.6 µm (superior to API requirements)
(2) Stuffing box smoothness ≤Ra 1.6 µm (superior to API requirements)

Test Pressure	Shell - kPa (PSIG)	Seat - kPa (PSIG)
Air	652.90 kPA (80 PSIG)	652.90 kPA (80 PSIG)
Hydrostatic 150 Class	3,031.59 kPA (425 PSIG)	2,342.12 kPA (325 PSIG)
Hydrostatic 300 Class	7,857.92 kPA (1125 PSIG)	5,789.49 kPA (825 PSIG)
Hydrostatic 600 Class	15,442.15 kPA (2225 PSIG)	11,477.67 kPA (1650 PSIG)
Hydrostatic 900 Class	23,198.76 kPA (3350 PSIG)	16,993.48 kPA (2450 PSIG)
Hydrostatic 1500 Class	38,539.596 kPA (5575 PSIG)	28,369.829 kPA (4100 PSIG)

SLFSBV01 SERIES

API 607 6th & 7th Ed. & ISO 10497 Firesafe Certified

ISO 15848-1 Class CO2 Endurance Test Certified

AS 4617, AS 4629

BODY GASKET

Gasket is designed so that the outer circumference of the gasket is in metal to metal contact with the valve body flange.

BODY SEAT

The seat is carefully designed for perfect sealing at low and high pressure ranges, as well as for minimised operating torque. If the seat ring is burnt, the ball is pressed against the metal body by fluid pressure, effecting a seal.

DIMENSIONS ANSI-150LB

Size (in)	1/2"	3/4"	1"	1-1/4"	1-1/2"	2"	2-1/2"	3"	4"	5"	6"	8"
Size (mm)	15	20	25	32	40	50	65	80	100	125	150	200
A	15	20	25	32	38	50	64	78	98	123	150	200
L	108	117	127	140	165	178	190	203	230	356	394	457
K	89	98	108	117	127	152	178	190	229	254	279	343
D	90	90	110	110	130	140	155	175	180	230	260	290
E	160	175	175	175	230	230	340	340	340	380	510	720
Weight (kg)	2	3	3	4	7	9	16	19	33	50	65	120
Torque (Nm) breakaway	11	19	34	44	51	67	90	135	259	451	632	1127
CV	10	20	50	130	160	330	450	600	1200	2700	3300	9000

DIMENSIONS ANSI-150LB

Size (in)	10"	12"	14"									
Size (mm)	250	300*	350*	-	-	-	-	-	-	-	-	-
A	250	302	352	-	-	-	-	-	-	-	-	-
L	533	610	686	-	-	-	-	-	-	-	-	-
K	406	433	533	-	-	-	-	-	-	-	-	-
D	-	-	-	-	-	-	-	-	-	-	-	-
E	-	-	-	-	-	-	-	-	-	-	-	-
Weight (kg)	160	430	-	-	-	-	-	-	-	-	-	-
Torque (Nm) breakaway	1242	903	-	-	-	-	-	-	-	-	-	-
CV	12000	-	-	-	-	-	-	-	-	-	-	-

*Trunnion support ball, see FS9000.

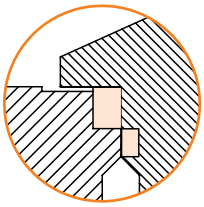
DIMENSIONS ANSI-300LB

Size (in)	1/2"	3/4"	1"	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"
Size (mm)	15	20	25	40	50	65	80	100	180	200	250	300*
A	15	20	25	38	50	64	78	98	150	200	250	300
L	140	152	165	190	216	241	283	305	403	502	568	648
K	95	115	125	156	165	191	210	254	318	381	445	520
D	94	94	94	115	120	155	162	191	290	340	420	470
E	160	160	160	230	230	340	400	750	1000	1500	-	-
Weight (kg)	3	4	5	10	16	22	31	52	105	170	-	-
Torque (Nm) breakaway	106	142	33	66	85	157	203	316	768	1354	2417	3615
CV	23	46	50	160	330	450	600	1200	3300	9000	-	-

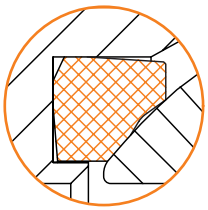
*Trunnion support ball, see FS9000.
Torque is maximum breakaway at maximum differential (running torque is approx 1/3 of breakaway). A 25% factor is included, but torques assume clean wet fluids like water/oil. Torques shown are for RPTFE for PTFE seats torques are 30% lower. TFM1600 energised low torque seats also available.

Optional direct mount pad with adjustable packing gland which is accessable for tightening without disassembly.
API 608 compliant.

Austenitic Direct Mount Version

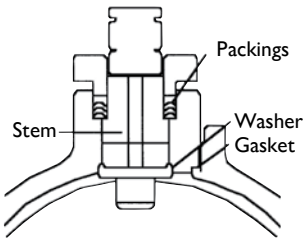


(Encapsulated)
Body Gasket

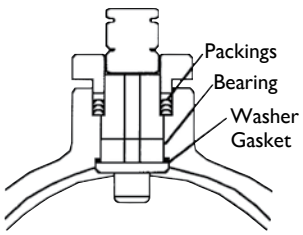


Live Semi Flexible Lip and Heal Design Seat with Large Contact Face

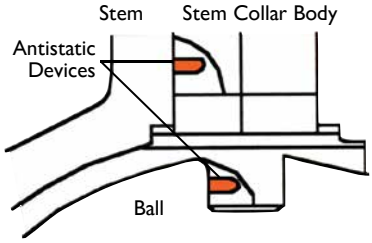
Body Seat



Blowout Proof Stem



Stem Packing



Anti-Static

SLFSBV01 SERIES DESIGN

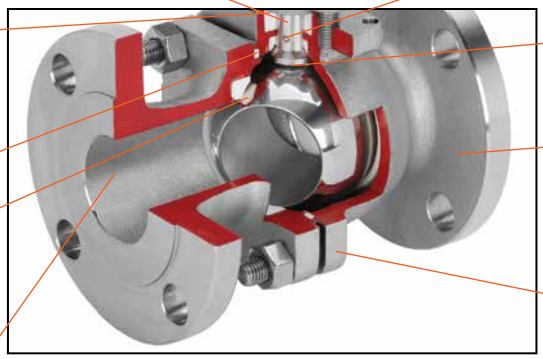
High tensile High Strength Stem
Adapts readily to our wide range of pneumatic and electric actuators. Blow-out proof design.

Packing
Multi-ring adjustable packing offers secure, dynamic sealing with low torque.
Elastomer free design option.

Encapsulated Body Seal
With secondary metal to metal body sealing.

Live loaded seats
Flexible cavity relief capable seats.

High Flow Capacity
Full bore opening offers higher Cv values and ensures lower pressure drops.

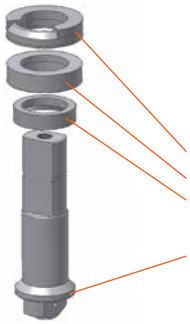


Anti-Static device
Ensures electrical conductivity

Vent Hole
Pressure balanced hole in ball

Flanges
ASME (ANSI) Cl. 150/300/600 flanges are standard. Other end connections are also available.

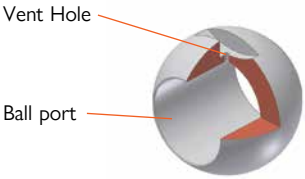
Rugged heavy-Duty Body
We offer a lifetime guarantee on our casting if the valves are used within our design parameters. Heavy wall to ANSI B16 dual conforming API 608.



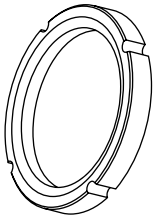
Stem assembly
The stem rotates in a reinforced PTFE bearing which eliminates excessive load on the packing and helps to reduce torques. Design varies according to size/class. (Direct mount pad version, refer to drawing.)

Packing
Gland Bearing
Stem Thrust Bearing/Washer

Anti-static device
Protects against potentially dangerous electrostatic discharges.



Safety (Vent) Hole
Pressure balanced design.
Relieves the pressure differential between the body cavity and the ball port to prevent buildup of trapped pressure and to prolong the life of the stem packing/seals. (80NB & above)



Seat design.
Low and high pressure zero leakage capability.
Large contact face.
Flexible design and radial grooves on sides of seats ensure upstream pressure balances cavity pressure.

SLFSBV01 SERIES

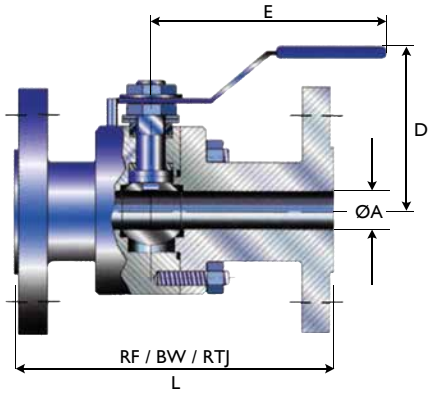
API 607 6th & 7th Ed. & ISO 10497 Firesafe Certified

ISO 15848-1 Class CO2 Endurance Test Certified

AS 4617, AS 4629

DIMENSIONS ANSI-600LB

Size (in)	1/2"	3/4x1/2"	3/4"	1x3/4"	1"	1-1/4x1"	1-1/4"	1-1/2x-1/4"	1-1/2"	2x1-1/2"	2"
Size (mm)	15	20x15	20	25x20	25	32x25	32	40x32	40	50x40	50
A	15	15	19	19	25	25	32	32	38	38	50
D	82	82	87	87	92	92	105	105	108	108	119
E	145	145	170	170	170	170	270	270	270	270	270
L (RF)	165	190.5	190.5	216	229	229	241	241	292	292	292
L (BW)	165	190.5	190.5	216	216	229	229	241	241	292	292
L (RTJ)	163.5	190.5	190.5	216	216	229	229	241	241	295	295
Weight (kg)	5	7	7	9	10	14	15	17	18	20	22
Torque (Nm) breakaway	18	18	21	21	45	45	80	80	91	91	125



DIMENSIONS ANSI-600LB

Size (in)	2-1/2x2"	2-1/2"	3x2"	3"	4x3"	4"	6x4"					
Size (mm)	65x50	65	80x50	80	100x80	100	150x100*					
A	50	65	50	76	76	102	102	-	-	-	-	-
D	119	150	119	163	163	187	187	-	-	-	-	-
E	270	380	270	380	380	470	470	-	-	-	-	-
L (RF)	330	330	356	356	432	432	559	-	-	-	-	-
L (BW)	330	330	356	356	432	432	559	-	-	-	-	-
L (RTJ)	333	333	359	359	435	435	562	-	-	-	-	-
Weight (kg)	27	28	33	38	75	78	150	-	-	-	-	-
Torque (Nm) breakaway	125	140	125	195	195	350	350	-	-	-	-	-

For 600LB to 200NB (8") Floating see BVF100-F26 (Ball Special)
*150 x 111mm standard bore also available. Refer to drawing.

Forged 3 Piece 600~2500LB

DIMENSIONS ANSI-900/1500LB

Size (in)	1/2"	3/4x1/2"	3/4"	1x3/4"	1"	1-1/2x1"	1-1/4"	1-1/2x1/4"	1-1/2"	2x1-1/2"	2"
Size (mm)	15	20x15	20	25x20	25	32x25	32	40x32	40	50x40	50
A	15	15	19	19	25	25	32	32	38	38	50
D	82	82	87	87	92	92	105	105	108	108	119
E	145	145	170	170	170	170	270	270	270	270	270
L (RF)	216	229	229	254	254	279	279	305	305	368	368
L (BW)	216	229	229	254	254	279	279	305	305	368	368
L (RTJ)	216	229	229	254	254	279	279	305	305	371	371
Weight (kg)	10	11	14	15	17	19	23	25	28	30	34
Torque (Nm) 900*	21	21	33	33	68	68	90	90	135	135	139
Torque (Nm) 1500*	35	35	42	42	120	120	250	250	305	305	390

65NB~100NB Refer to drawing. 2500LB (up to 40NB) Refer to drawing. Also see BVF100-F26 (Special Service Ball Valves) for floating to 150NB 900/1500lb. Also see model BV100 3 piece.

Forged 2 Piece 150~1500LB

2 Piece 600 Class Cast

Welding End: PE / BW / SW

SLFSBV02 SERIES FLOATING TYPE API 608/6D BALL VALVES

1 PIECE, UNI BODY, REDUCED BORE, ANSI 150 TO 600LB

ASTM A351 - CF8M & CF8 AND ASTM A216 - WCB
NACE MR0175 FOR SOUR SERVICE
ISO 5211 TOP flange for Actuation (optional)

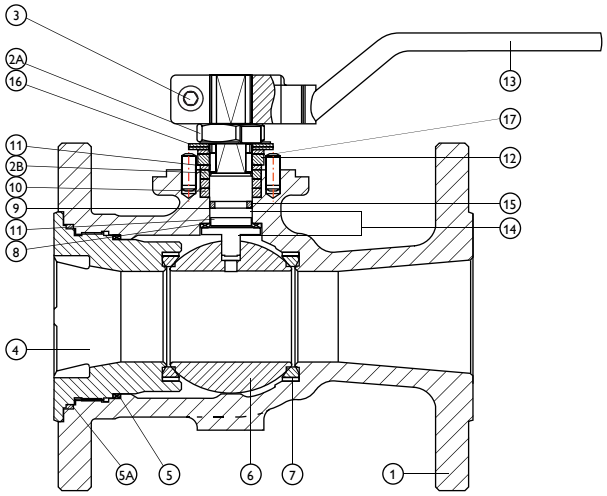
- API 6D & API 608
- AGA approved for AS 4617, AS 4629.1 & AS 4629.2
- Reduced bore*, solid ball
- Investment Cast or Forged
- Uni Body 1 piece design
- Anti Blow-Out Stem
- Anti-Static Device
- Firesafe Design to API 607 and ISO 10497
- Temperature Range -25°C to 230°C
- Also available in metal seats and PEEK seats
- Also available in Monel, Duplex, Alloy 20 etc.

*Full bore available up to 25NB (1")

ISO 15848-1 Class CO2
Fugitive Emission Certified

API 607 6th & 7th Ed. & ISO 10497
Firesafe Certified

No.	Part Name	Stainless Steel CF8M	Carbon Steel	Stainless Steel CF8
1	Body **(4)**	ASTM A351 Gr. CF8M	ASTM A216 Gr. WCB	ASTM A351 Gr. CF8
2	Gland Yoke **(7)**	ASTM A351 Gr. CF8M	A216 Gr. WCB	ASTM A351 Gr. CF8
2A	Gland Nut/Bolt **(7)**	ASTM A194 Gr. 8	ASTM A194 2H	ASTM A194 Gr. 8
2B	Gland Retainer **(7)**	AISI 316	AISI 304	AISI 304
2C	Gland Bolt **(7)**	ASTM A193 Gr. B8	ASTM A193 B7	ASTM Gr. B8
3	Screw	AISI 316	AISI 304	A2 Stainless
3A	Snap Ring **(3)**	ASTM A276 Gr. 304	ASTM A276 Gr. 304	ASTM A276 Gr. 304
4	Cap **(4)**	ASTM A351 Gr. CF8M	ASTM A216 Gr. WCB	ASTM A351 Gr. CF8
5	Body Gasket	PTFE	Graphoil / Spiral	PTFE
5A	Body Seal **(6)**	Graphite	Graphite	Graphite
6	Ball	ASTM A351 Gr. CF8M	ASTM A216 Gr. CF8	ASTM A351 Gr. CF8
7	Seat **(1)**	Reinforced TFE	Reinforced TFE	Reinforced TFE
	(Carbon or Glass)	(Carbon or Glass)	(Carbon or Glass)	
8	Thrust Washer	PTFE	PTFE	PTFE
9	Stem **(8)**	ASTM A276 Gr. 316	ASTM A276 Gr. 304	ASTM A276 Gr. 304
10	Packing **(9) (10)**	PTFE or Graphoil **(10)**	Graphoil **(10)**	PTFE or Graphoil **(10)**
11	Bearing	PTFE	PTFE	PTFE
12	Stopper **(5)**	ASTM A276 Gr. 304	ASTM A276 Gr. 304	ASTM A276 Gr. 304
13	Handle **(2)**	ASTM A536 Gr. FCD45	ASTM A536 Gr. FCD45	ASTM A536 Gr. FCD45
14	Anti Static Device	Stainless Steel	Stainless Steel	Stainless Steel
15	O-Ring **(3)**	Viton/PTFE	Viton	Viton/PTFE
16	Belleville Washer	AISI 304	AISI 311	AISI 304
17	Stop Device	AISI 304	Carbon Steel ZP	AISI 304

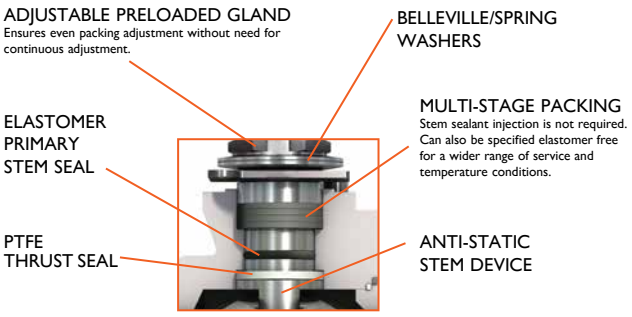


Uni-Nut Yoke Version
(50NB ~ 150NB)

(1) Also available in "PEEK" or CPTFE for high temperature
(2) Gear operator: ≥200NB 300# and ≥250NB 150#
(3) Design depends on size & class
(4) Also available in Forged
(5) Locking device optional
(6) Or PTFE if non firesafe
(7) Gland (2) can be uni-nut (2A) as shown or yoke type depending on size and class
(8) Stem smoothness Ra 0.2 ~ 0.6 µm (superior to API requirements)
(9) Stuffing box smoothness ≤Ra 1.6 µm (superior to API requirements)
(10) Chesterton 1622 FE packing

Standards	
Face to Face	ANSI B16.10
Flange Dimensions	ANSI B16.5
Wall Thickness	ANSI B16.34
Basic Design	API 608/API 6D
Testing	API 598
Firesafe Design	API 607

Test Pressure	Shell	Seat
Air	80 PSIG	80 PSIG
Hydrostatic 150#	425 PSIG	325 PSIG
Hydrostatic 300#	1125 PSIG	825 PSIG
Hydrostatic 600#	2225 PSIG	1650 PSIG
Hydrostatic 900#	3350 PSIG	2450 PSIG
Hydrostatic 1500#	5575 PSIG	4100 PSIG



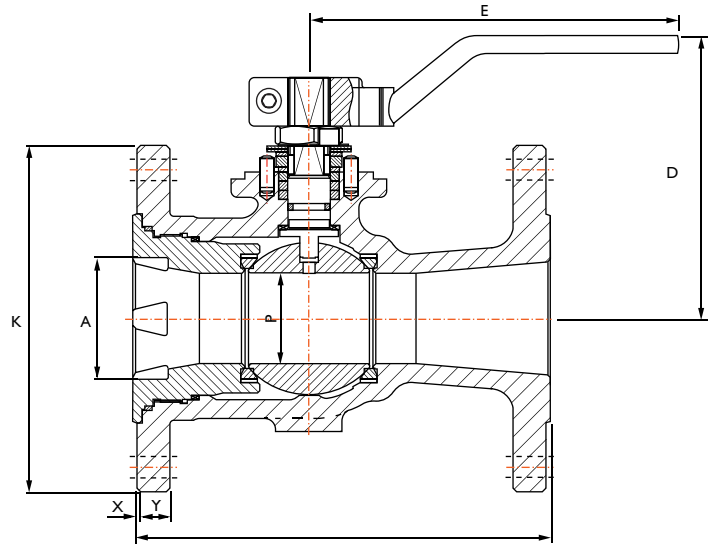
SLFSBV02 SERIES

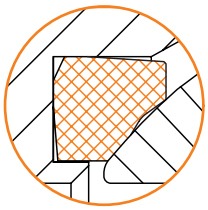
BODY GASKET

Gasket is behind a threaded metal to metal end closure. The SLFSBV02 can be supplied elastomer free for chemical or higher temperature applications.

BODY SEAT

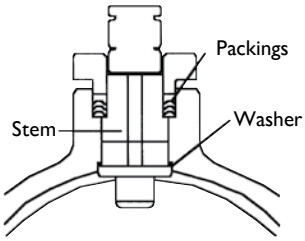
The seat is carefully designed for perfect sealing at low and high pressure ranges, as well as for minimised operating torque. If the seat ring is burnt, the ball is pressed against the metal body by fluid pressure, effecting a seal.



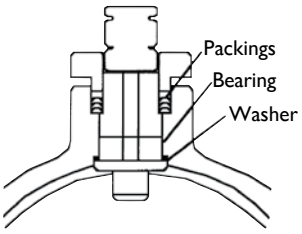


Live Semi Flexible Lip and Heal Design Seat with Large Contact Face

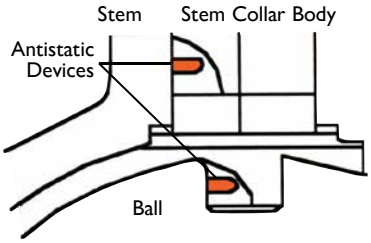
Body Seat



Blowout Proof Stem



Stem Packing



Anti-Static

DIMENSIONS ANSI-150LB

Size (in)	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	14"	16"
Size (mm)	**15**	**20**	**25**	**40**	**50**	**80**	**100**	**150**	**200**	**250**	**300**	**350**	**400**
A	15	20	25	38	50	78	98	148	200	250	300	350	400
P	9.5*	15*	20*	32	40	58	80	111	144	187	241	267	305
L	108	117	127	165	178	203	230	267	292	330	356	381	406
K	89	98	108	127	152	190	229	279	343	405	433	535	597
D	90	80	100	117	134	149	189	227	264	307	-	-	-
E	160	160	160	210	210	340	380	490	690	690	-	-	-
Weight (kg)	1.6	2	2.7	5.1	7.9	14	25	43	77	114	230	270	390
Torque (Nm) breakaway	6	9	10	21	25	40	90	180	250	600	-	-	-
Kv m3/h	7	10	26	107	140	300	600	1000	2000	4100	-	-	-

* Also available in full bore up to 25NB (1"). 250NB ~ 400NB Refer to Drawing.
Torque is maximum breakaway at maximum differential (running torque is approx 1/3 of breakaway).
A 20% factor is included, but torques assume clean wet fluids like water/oil.

DIMENSIONS ANSI-300LB

Size (in)	1/2"	3/4"	1"	1-1/2"	2"	3"	4"	6"	8"	10"	12"	14"	16"
Size (mm)	**15**	**20**	**25**	**40**	**50**	**80**	**100**	**180**	**200**	**250**	**300**	**350**	**400**
A	12	19	25	38	50	78	98	150	200	250	300	350	400
P	9.5*	15*	20*	32	40	58	80	111	144	187	241	267	305
L	140	152	165	190	216	283	305	403	419	457	502	762	838
K	95	115	125	156	165	210	254	318	381	445	520	585	650
D	81	94	98	115	130	149	180	227	260	-	-	-	-
E	160	160	160	210	213	348	445	497	698	-	-	-	-
Weight (kg)	1.6	2.1	4	8	10	21	28	70	110	295	402	420	490
Torque (Nm) breakaway	10	12	16	30	35	60	150	280	420	-	-	-	-
Kv m3/h	7	10	26	107	140	300	600	1000	2000	-	-	-	-

* Also available in full bore up to 25NB (1")
Torque is maximum breakaway at maximum differential (running torque is approx 1/3 of breakaway).
A 20% factor is included, but torques assume clean wet fluids like water/oil.
15NB ~ 150NB 600LB Refer to Drawing. 250NB ~ 400NB 300LB Refer to Drawing.

BVF100 SERIES API 6D FORGED 3 PIECE BODY TRUNNION BALL VALVES

1/2" - 36" ANSI CLASS - 150/300/600/900/1500/2500

Endurance Test Certified

API 607 6th & 7th Ed. & ISO 10497 Firesafe Certified

ISO 15848-1 Class CO2 Fugitive Emission Certified

Design and construction conforms to API 6D specifications, tested to API 607 & 6D standards.

Independent loaded upstream and downstream seats provide a tight shut-off and allow the valves to be used for bi-directional flow. Spring loaded seat design provides low and high pressure sealing and body cavity pressure relief due to self relieving seat design.

Suitable for single or double block and bleed applications.

BVF100 Series 3 Piece Ball Valves have an emergency seal facility, blow-out proof stem, full through-conduit bore, electroless nickel plated or stainless trim and are anti-static. Stem and gland seals can be replaced in-line for ease of maintenance.

Available with locking devices, stem extensions, pipe pups, and actuation.

The full range of APV valves can meet NACE standard MR-10-75, latest edition if necessary.

APV was one of the first brands in the world to have firesafe certification to API 607 6th and 7th Edition, as well as being Firesafe Certified (DNV witnessed) to API 6FA 3rd Edition & ISO 10497-2010.

FEATURES

- Forged Construction
- Rugged Anti-Corrosive Gear Design
- Seat Lubrication Facility
- Body Bleed and Drain Ports
- Enclosed, Encapsulated Triple Barrier Stem Seals
- Blowout Proof Stem Design
- Emergency Stem Lubrication Fitting
- Self Lubricating PTFE coated Trunnion Bearings

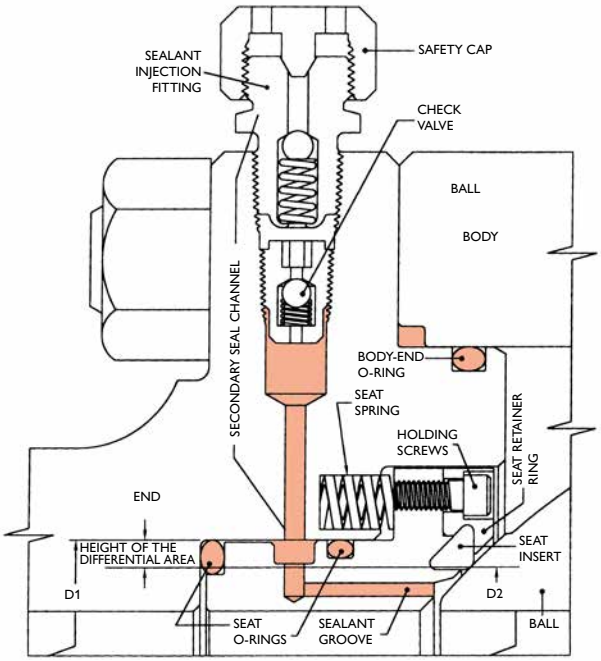
This catalogue is general in it's nature and the design and materials can change at any time. This catalogue is to be used as a guide only.

BVF100 SERIES BALL VALVE DESIGN FEATURES - SEAT & STEM SEALING

SEAT DESIGN

APV piston-action seats are floating type & allow the automatic relief of excess pressure from the body to the pipeline. The helical seat springs that provide a uniform initial low pressure seat sealing load against the ball are fully enclosed in individual housings. Independent floating spring loaded seats are always in contact with ball to provide an effective tight seal even at low differential pressures. Independent upstream & downstream seats permit draining of fluid from the body cavity, allowing double block & bleed operation. With the single sealing feature, when the valve is closed there is an automatic body cavity release of over pressure to the line through the downstream seat. The pre-tightened seat springs are preset to automatically relieve excess cavity pressure caused by thermal expansion down stream once pressure exceeds the API 6D (6.8) maximum (1.33 times the valve pressure rating at 38°C at the time of publishing this catalogue)

A combination of double sealing features on the downstream side and single sealing on the upstream seat is available on request. This configuration maintains the sealing capacity of the valve in case of failure of the up stream seat and release of the body cavity over pressure through the up stream seat.



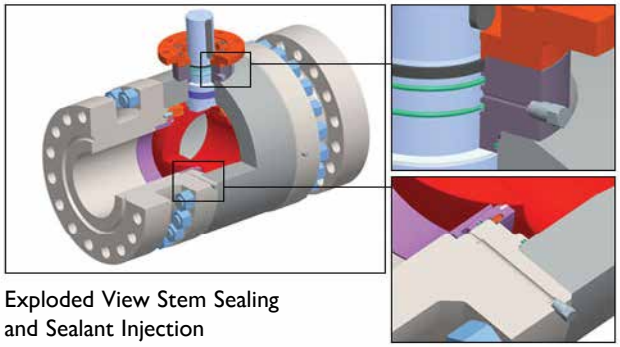
Cross-Section Seat Sealant Injection System
(design varies according to size and class)

PISTON-ACTION SEATS

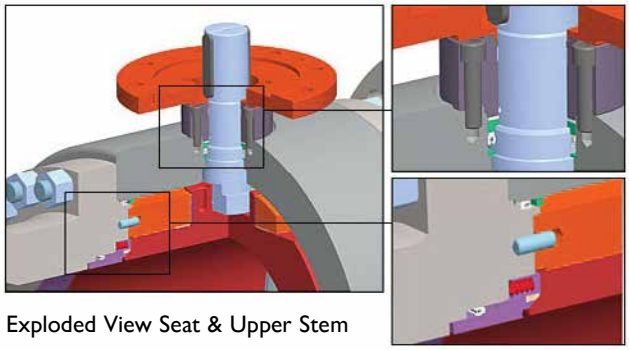
As line pressure increases the seat reacts to the force of the pressure to form an effective seal. In the absence of line pressure, coil springs around the seat unit provide a tight seal by keeping the seat in contact with the ball.

SEALANT INJECTION

APV ball valves ordinarily require no lubrication. Configuration shows a secondary temporary sealing mechanism to inject sealant directly to the seats in case the seats are ever damaged by foreign matters or in event of an accident.



Exploded View Stem Sealing
and Sealant Injection

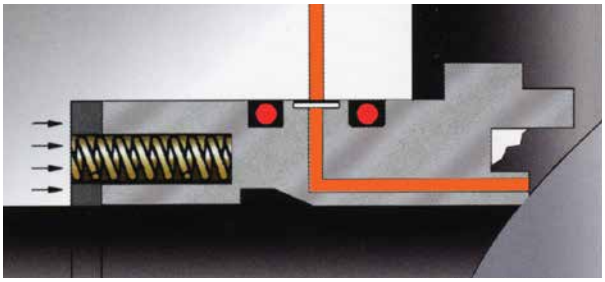


Exploded View Seat & Upper Stem

BVF100 SERIES BALL VALVE DESIGN FEATURES SEAT & STEM SEALING

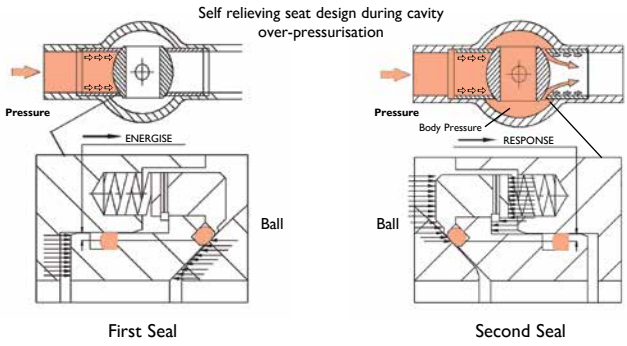
PISTON-ACTION SEATS

As line pressure increases the seat reacts to the force of the pressure to form an effective seal. In the absence of line pressure, coil springs behind the seat provide a tight seal by keeping the seat in contact with the ball surface. Independent floating spring loaded seats are always in contact with the ball to provide an effective tight seal even at low differential pressure. Independent upstream and downstream seats permit draining of fluid from the body cavity, so allowing double block & bleed operation (closed position only). With the optional single sealing feature, there is automatic body cavity release of over pressure to the line through the down stream seat.



SELF RELIEVING SEATS (STANDARD)

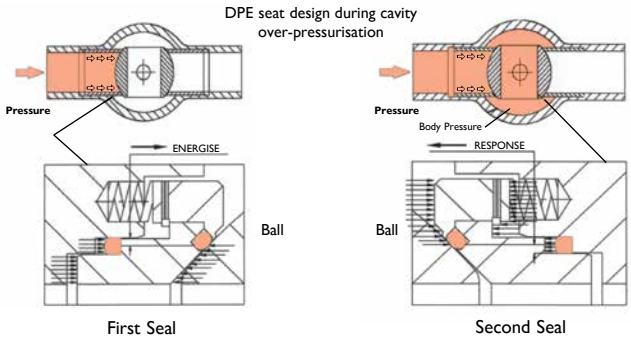
In self relieving condition, excessive internal body pressure is automatically relieved both upstream & downstream into the line by excessive pressure forcing the seats away from the ball.



DOUBLE PISTON EFFECT (DPE) SEATS

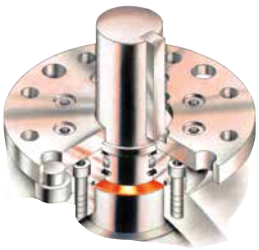
With the 'DPE' seat option, if a leakage occurs in the upstream seat, the pressure entering the body cavity pushes the downstream seat against the ball & valve seals. Line pressure forces a seal against the floating seat.

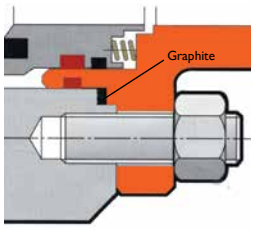
An external body relief valve is installed to protect the body cavity from excess pressure which can be vented to atmosphere or recycled back to the upstream side of the valve or to flare.

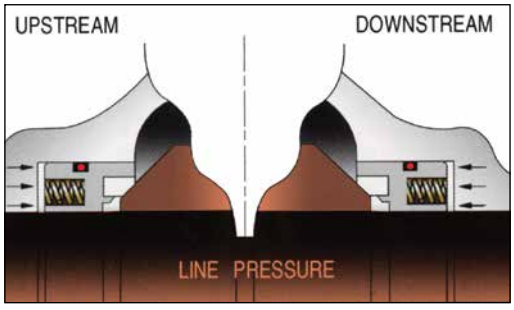


TRIPLE BARRIER STEM SEAL DESIGN

Leakage from the stem area is prevented by double barrier sealing with O-Rings as well as graphite fireseals. Leakage through the valve body joint is also protected by double sealing with an O-Ring and a flexible graphite gasket. After a fire has deteriorated the O-Rings, graphite packing and secondary seal ensure prevention of external fluid leakage.



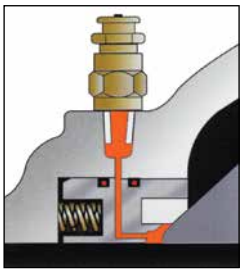




Piston action seats are standard and provide bi-directional sealing.

DOUBLE BLOCK AND BLEED

Whether in the open or closed position, pressure on each side of the ball is blocked from the body cavity by the seat ring. The cavity can be blown down or drained (only in closed position) through the body port to indicate line isolation is effective.



EMERGENCY SEALING FUNCTION

In case of fluid leaks from the seat or stem sealing area, a sealant can be supplied through the injection fitting to temporarily prevent leakage.

BVF100 SERIES MATERIAL SPECIFICATION FORGED TRUNNION BALL VALVE

FLANGED / BW ENDS API 6D

- API 6D
- Flanged & Butt weld ends
- 3P split body, side entry
- Trunnion mounted ball, low operating torque
- Fire safe API 607, ISO 10497
- Anti-static device, BS 5351
- Double block & bleed
- Pressure self relieving seats
- Self Lubricating PTFE coated Trunnion Bearings

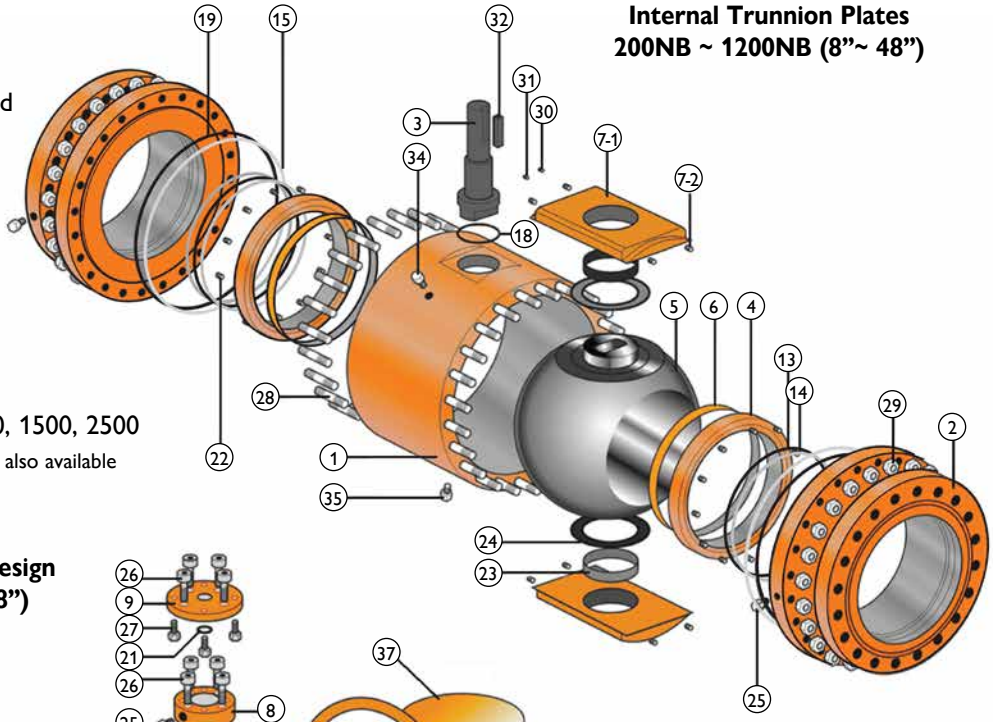
OPERATING CONDITION

Operating Temperature
-29°C~+185°C*

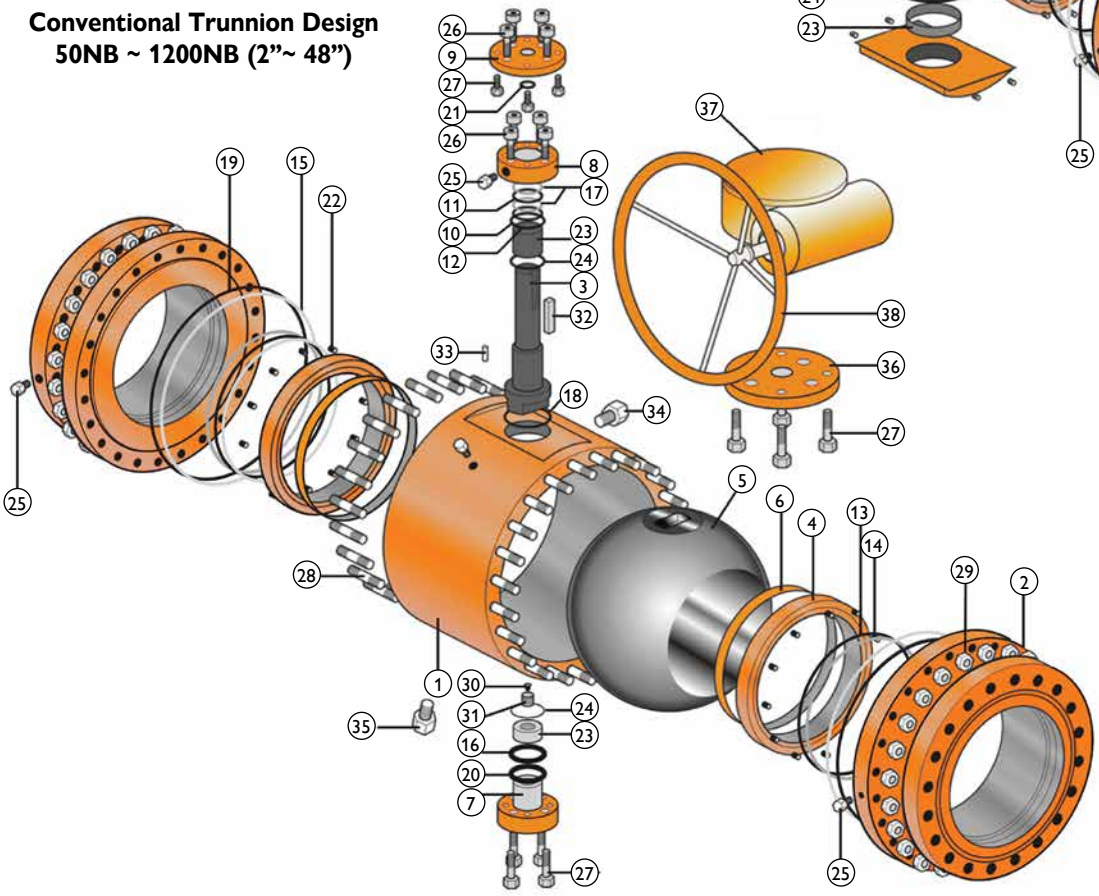
Pressure Rating
PN 20, 50, 64, 100, 150
Class 150, 300, 400, 600, 900, 1500, 2500

* Low and high temperature service also available

Internal Trunnion Plates
200NB ~ 1200NB (8"~ 48")

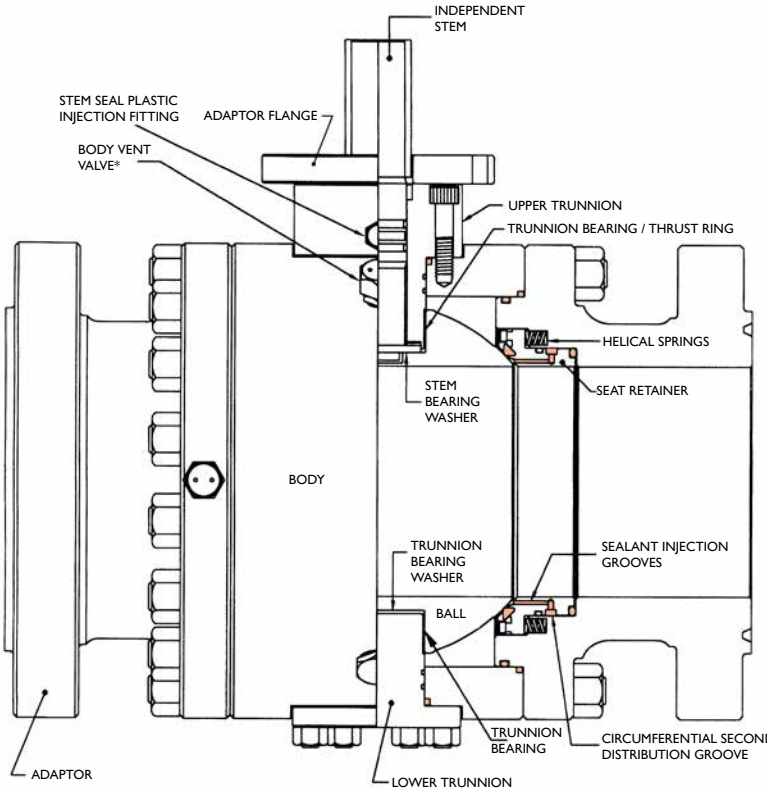


Conventional Trunnion Design
50NB ~ 1200NB (2"~ 48")



The above is a general overview and design varies depending on size and class. (Refer to actual as built drawing.)

BVF100 SERIES MATERIAL SPECIFICATIONS



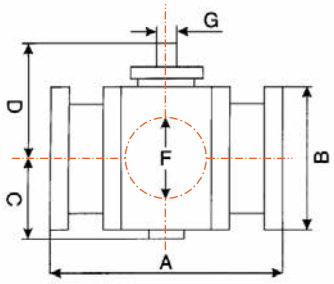
This drawing is general and for indicative purposes only and may vary according to size and class. (Refer to actual as built drawing if more accurate detail is required.)

BILL OF MATERIALS

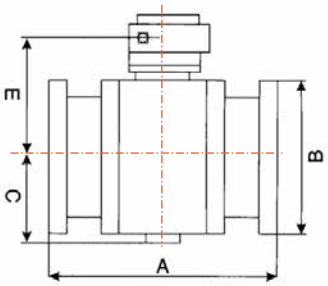
No.	Part Name	Material			
		Low Temp	Carbon Steel	Stainless Steel	Duplex Steel
1 & 2	Body & Closure	ASTM A350 LF2	ASTM A105N	ASTM A182 F316	ASTM A182 F51/F53/F55
3 & 4	Stem & Seat Ring	ASTM A350 LF2 + ENP / A182 F6a / F304 / F316 / F51	ASTM A105N + ENP / 4140 + ENP / A182 F6a / F304 / F316 / 17-4PH	ASTM A182 F316/F51	ASTM A182 F51/F53/F55
5	Ball	ASTM A350 LF2 + ENP / A182 F6a / F304 / F316 / F51	ASTM A105N + ENP / A694 F60 + ENP /A182 F6a / F316 / F51	ASTM A182 F316/F51	ASTM A182 F51/F53/F55
6	Seat Insert	PTFE / RPTFE / Nylon / Devlon / PEEK			
7	Trunnion Mounting	LF2 + ENP / F51	ASTM A105 + ENP / 4140 + ENP	ASTM A182 F316/F51	ASTM A182 F51/F53/F55
7-1	Trunnion Block	LF2 + ENP / F51	ASTM A105 + ENP / 4140 + ENP	ASTM A182 F316/F51	ASTM A182 F51/F53/F55
7-2	Trunnion Block Pin	SS410 / SS304 / SS316		SS316	SS316 / S31803 / S32205
8	Stuffing Box	LF2 + ENP	ASTM A105 + ENP	ASTM A182 F316	ASTM A182 F51/F53/F55
9	Connection Plate	LF2 + ENP	ASTM A105 + ENP	ASTM A182 F316	ASTM A182 F51/F53/F55
10 & 11	Stem O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
12	Gland O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
13	Seat O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
14	Seat Subseal	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985® / Graphite			
15	Closure O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
16	Trunnion O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
17	Backup Ring	PTFE / Nylon / PEEK			
18	Gland Gasket	SS + Graphite / SS + PTFE			
19	Closure Gasket	SS + Graphite / SS + PTFE			
20	Trunnion O-Ring	Viton-B / Viton AED / Viton GLT / Aflas / Elast-o-lion 985®			
21	Stem Packing	PTFE / Graphite			
22	Seat Spring	17-4 / Inconel X 750			
23	Bearing	SS + PTFE / SS + Nitriding			
24	Thrust Washer	PTFE / RPTFE / Devlon / PEEK			
25	Sealant Fitting	Stainless Steel			
26 & 27	Screw	ASTM A320 L7 / L7M + ZP	ASTM A193 B7(M) + ZP	ASTM A193 B8(M) CL 1/2	
28	Stud	ASTM A320 L7 / L7M + ZP	ASTM A193 B7(M) + ZP	ASTM A193 B8(M) CL 1/2	
29	Nut	ASTM A194 7L / 7ML + ZP	ASTM A194 2H(M) + ZP	ASTM A194 8(M) CL 1/2	
30	Grounding Ball	Stainless Steel			Duplex Steel
31	Grounding Spring	Stainless Steel			Duplex Steel
32	Stem Key	AISI 1045			S31803 / S32205
33	Positioning Pin	316 Stainless Steel			Duplex Steel
34 & 35	Vent Plug & Drain Plug	316 Stainless Steel			Duplex Steel
36	Connection Plate	LF2 / ASTM A105N	ASTM A105N	ASTM A182 F316	ASTM A182 F51
37 & 38	Gear & Handwheel	Ductile Iron, Carbon Steel Assembly			

1500LB and 2500LB refer to drawing. O-ring and backing rings specified in larger sizes. The above specifications are general in nature and subject to change without notice.

BVF100 SERIES DIMENSIONS 150LB



Lever Operated

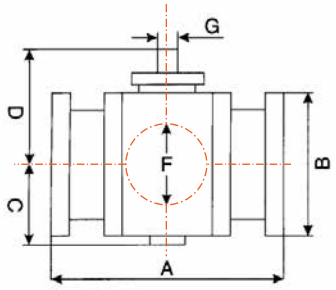


Gear Operated

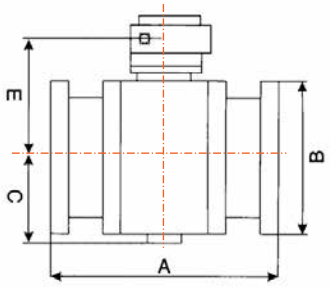
Nominal Diameter Inches		Size mm (inches)		End to End Dimensions mm (inches)				Body Dimensions mm (inches)			Weight Kg (Lbs.)	
		Ball Bore F	Stem G	RF A	RTJ A	Flange O.D. B	Weld End A	Centre Top D	Centre Bottom C	Centre Gear E	Flanged	Weld End
2x2*	mm	50.80	22.86	177.8	190.5	152.4	216.00	165.1	112.776	226.06	18	14
	inch	(2.00)	(0.90)	(7.00)	(7.50)	(6.00)	(8.50)	(6.50)	(4.44)	(8.90)	(40)	(30)
3x2*	mm	50.80	26.92	203.20	215.90	190.50	283.00	184.91	132.59	245.87	23	16
	inch	(2.00)	(1.06)	(8.00)	(8.50)	(7.50)	(11.12)	(7.28)	(5.22)	(9.68)	(50)	(35)
3x3*	mm	76.20	38.10	203.20	215.90	190.50	283.00	220.73	141.22	281.69	32	25
	inch	(3.00)	(1.50)	(8.00)	(8.50)	(7.50)	(11.12)	(8.69)	(5.56)	(11.09)	(70)	(55)
4x3*	mm	76.20	38.10	228.60	241.30	228.60	305.00	240.54	161.04	301.50	41	34
	inch	(3.00)	(1.50)	(9.00)	(9.50)	(9.00)	(12.00)	(9.47)	(6.34)	(11.87)	(90)	(75)
4x4*	mm	101.60	42.93	228.60	241.30	228.60	305.00	242.82	165.10	303.78	55	43
	inch	(4.00)	(1.69)	(9.00)	(9.50)	(9.00)	(12.00)	(9.56)	(6.50)	(11.96)	(120)	(95)
6x4*	mm	101.60	42.93	393.70	406.40	279.40	457.00	262.64	184.91	323.60	68	55
	inch	(4.00)	(1.69)	(15.50)	(16.00)	(11.00)	(18.00)	(10.34)	(7.28)	(12.74)	(150)	(120)
6x6*	mm	152.40	50.80	393.70	419.10	279.40	457.00	309.63	220.73	370.59	227	182
	inch	(6.00)	(2.00)	(15.50)	(16.50)	(11.00)	(18.00)	(12.19)	(8.69)	(14.59)	(500)	(400)
8x6*	mm	152.40	50.80	457.20	469.90	342.90	521.00	337.57	240.54	398.53	273	227
	inch	(6.00)	(2.00)	(18.00)	(18.50)	(13.50)	(20.50)	(13.29)	(9.47)	(15.69)	(600)	(500)
8x8	mm	203.20	50.80	457.20	469.90	342.90	521.00	375.92	263.65	436.88	341	295
	inch	(8.00)	(2.00)	(18.00)	(18.50)	(13.50)	(20.50)	(14.80)	(10.38)	(17.20)	(750)	(650)
10x8	mm	203.20	50.80	533.40	546.10	406.40	559.00	403.86	283.46	464.82	386	341
	inch	(8.00)	(2.00)	(21.00)	(21.50)	(16.00)	(22.00)	(15.90)	(11.16)	(18.30)	(850)	(750)
10x10	mm	254.00	57.15	533.40	546.10	406.40	559.00	422.40	308.10	502.41	470	440
	inch	(10.00)	(2.25)	(21.00)	(21.50)	(16.00)	(22.00)	(16.63)	(12.13)	(19.78)	(1034)	(968)
12x10	mm	254.00	57.15	609.60	622.30	482.60	635.00	453.14	336.04	532.89	650	600
	inch	(10.00)	(2.25)	(24.00)	(24.50)	(19.00)	(25.00)	(17.84)	(13.23)	(20.98)	(1430)	(1320)
12x12	mm	304.80	57.15	609.60	622.30	482.60	635.00	474.73	352.55	554.74	773	705
	inch	(12.00)	(2.25)	(24.00)	(24.50)	(19.00)	(25.00)	(18.69)	(13.88)	(21.84)	(1700)	(1550)
14x12	mm	304.80	57.15	685.80	698.50	533.40	762.00	508.00	380.49	585.22	841	750
	inch	(12.00)	(2.25)	(27.00)	(27.50)	(21.00)	(30.00)	(20.00)	(14.98)	(23.04)	(1850)	(1650)
14x14	mm	336.55	57.15	685.80	698.50	533.40	762.00	508.00	393.70	613.41	1068	977
	inch	(13.25)	(2.25)	(27.00)	(27.50)	(21.00)	(30.00)	(20.00)	(15.50)	(24.15)	(2350)	(2150)
16x14	mm	336.55	57.15	762.00	774.70	596.90	838.00	566.42	421.64	646.43	1182	1068
	inch	(13.25)	(2.25)	(30)	(30.50)	(23.50)	(33.00)	(22.30)	(16.60)	(25.45)	(2600)	(2350)
16x16	mm	387.35	57.15	762.00	774.70	596.90	838.00	577.85	436.63	679.45	1386	1250
	inch	(15.25)	(2.25)	(30.00)	(30.50)	(23.50)	(33.00)	(22.75)	(17.19)	(26.75)	(3050)	(2750)
18x16	mm	387.35	57.15	863.60	876.30	635.00	914.00	610.87	467.11	712.47	1568	1409
	inch	(15.25)	(2.25)	(34.00)	(34.50)	(25.00)	(36.00)	(24.05)	(18.39)	(28.05)	(3450)	(3100)
18x18	mm	438.15	95.25	863.60	876.30	635.00	914.00	654.05	476.25	756.92	2000	1795
	inch	(17.25)	(3.75)	(34.00)	(34.50)	(25.00)	(36.00)	(25.75)	(18.75)	(29.80)	(4400)	(3950)
20x18	mm	438.15	95.25	914.40	927.10	698.50	991.00	687.07	509.27	789.94	2250	2023
	inch	(17.25)	(375)	(36.00)	(36.50)	(27.50)	(39.00)	(27.05)	(20.05)	(31.10)	(4950)	(4450)
20x20	mm	488.95	95.25	914.40	927.10	698.50	991.00	687.07	520.70	825.50	2409	2182
	inch	(19.25)	(3.75)	(36.00)	(36.50)	(27.50)	(39.00)	(27.05)	(20.50)	(32.50)	(5300)	(4800)
24x20	mm	488.95	95.25	1066.80	1079.50	812.80	1143.00	731.52	556.26	861.06	2545	2341
	inch	(19.25)	(3.75)	(42.00)	(42.50)	(32.00)	(45.00)	(28.80)	(21.90)	(33.90)	(5600)	(5150)
24x24	mm	590.55	95.25	1066.80	1079.50	812.80	1143.00	822.45	619.25	931.42	3955	3614
	inch	(23.25)	(3.75)	(42.00)	(42.50)	(32.00)	(45.00)	(32.38)	(24.38)	(36.67)	(8700)	(7950)
26x26	mm	635.00	100.33	1143.00	1155.70	1263.65	1245.00	1270.00	884.68	1420.11	4773	4295
	inch	(25.00)	(3.95)	(45.00)	(45.50)	(49.75)	(49.00)	(50.00)	(34.83)	(55.91)	(10500)	(9450)
28x28	mm	685.80	100.33	1244.60	1257.30	1320.80	1346.00	1332.23	924.56	1482.34	5455	4909
	inch	(27.00)	(3.95)	(49.00)	(49.50)	(52.00)	(53.00)	(52.45)	(36.40)	(58.36)	(12000)	(10800)
30x30**	mm	736.60	107.95	1295.40	1308.10	1406.65	1397.00	1416.05	984.76	1573.53	6818	6136
	inch	(29.00)	(4.25)	(51.00)	(51.50)	(55.38)	(55.00)	(55.75)	(38.77)	(61.95)	(15000)	(13500)
36x36**	mm	876.30	114.30	1524.00	1536.70	1616.20	1727.00	1623.06	1131.32	1780.54	11364	10227
	inch	(34.50)	(4.50)	(60.00)	(60.50)	(63.63)	(68.00)	(63.90)	(44.54)	(70.10)	(25000)	(22500)

* Lever Operator **30x24 & 36x30 refer to drawing. **Notes:-** Sizes 1/2" to 1-1/2", 2-1/2" & 5" also available, drawing on request. Short pattern design also available in larger sizes.

BVF100 SERIES DIMENSIONS 300LB



Lever Operated

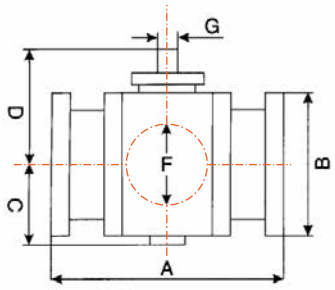


Gear Operated

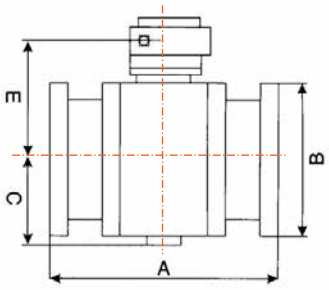
Nominal Diameter Inches		Size mm (inches)		End to End Dimensions mm (inches)				Body Dimensions mm (inches)			Weight Kg (Lbs.)	
		Ball Bore F	Stem G	RF A	RTJ A	Flange O.D. B	Weld End A	Centre Top D	Centre Bottom C	Centre Gear E	Flanged	Weld End
2x2*	mm	50.80	22.86	215.90	231.78	165.10	215.90	165.10	112.78	226.06	27	20
	inch	(2.00)	(0.90)	(8.50)	(9.13)	(6.50)	(8.50)	(6.50)	(4.44)	(8.90)	(60)	(45)
3x2*	mm	50.80	26.92	282.58	298.45	209.55	282.58	184.91	132.59	245.87	32	25
	inch	(2.00)	(1.06)	(11.13)	(11.75)	(8.25)	(11.13)	(7.28)	(5.22)	(9.68)	(70)	(55)
3x3*	mm	76.20	38.10	282.58	298.45	209.55	282.58	220.73	141.22	281.69	45	36
	inch	(3.00)	(1.50)	(11.13)	(11.75)	(8.25)	(11.13)	(8.69)	(5.56)	(11.09)	(100)	(80)
4x3*	mm	76.20	38.10	304.80	320.68	254.00	304.80	240.54	161.04	301.50	55	41
	inch	(3.00)	(1.50)	(12.00)	(12.63)	(10.00)	(12.00)	(9.47)	(6.34)	(11.87)	(120)	(90)
4x4*	mm	101.60	42.93	403.23	419.10	317.50	457.20	262.64	184.91	323.60	100	82
	inch	(4.00)	(1.69)	(15.88)	(16.50)	(12.50)	(18.00)	(10.34)	(7.28)	(12.74)	(220)	(180)
6x4*	mm	101.60	42.93	403.23	419.10	317.50	457.20	309.63	220.73	370.59	250	214
	inch	(4.00)	(1.69)	(15.88)	(16.50)	(12.50)	(18.00)	(12.19))	(8.69)	(14.59)	(550)	(470)
6x6*	mm	152.40	50.80	403.23	419.10	317.50	457.20	309.63	220.73	370.59	250	214
	inch	(6.00)	(2.00)	(15.88)	(16.50)	(12.50)	(18.00)	(12.19)	(8.69)	(14.59)	(550)	(470)
8x6*	mm	152.40	50.80	501.65	517.53	381.00	520.70	337.57	240.54	398.53	295	255
	inch	(6.00)	(2.00)	(19.75)	(20.38)	(15.00)	(20.50)	(13.29)	(9.47)	(15.69)	(650)	(560)
8x8	mm	203.20	50.80	501.65	517.53	381.00	520.70	375.92	263.65	436.88	386	336
	inch	(8.00)	(2.00)	(19.75)	(20.38)	(15.00)	(20.50)	(14.80)	(10.38)	(17.20)	(850)	(740)
10x8	mm	203.20	50.80	568.33	584.20	444.50	558.80	403.86	283.46	464.82	409	355
	inch	(8.00)	(2.00)	(22.38)	(23.00)	(17.50)	(22.00)	(15.90)	(11.16)	(18.30)	(900)	(780)
10x10	mm	254.00	57.15	568.33	584.20	444.50	558.80	422.40	308.10	502.41	568	491
	inch	(10.00)	(2.25)	(22.38)	(23.00)	(17.50)	(22.00)	(16.63)	(12.13)	(19.78)	(1250)	(1080)
12x10	mm	254.00	57.15	647.70	663.58	520.70	635.00	453.14	336.04	532.89	750	659
	inch	(10.00)	(2.25)	(25.50)	(26.13)	(20.50)	(25.00)	(17.84)	(13.23)	(20.98)	(1650)	(1450)
12x12	mm	304.80	57.15	647.70	663.58	520.70	635.00	474.73	352.55	554.74	864	777
	inch	(12.00)	(2.25)	(25.50)	(26.13)	(20.50)	(25.00)	(18.69)	(13.88)	(21.84)	(1900)	(1710)
14x12	mm	304.80	57.15	762.00	777.88	584.20	762.00	508.00	380.49	585.22	909	818
	inch	(12.00)	(2.25)	(30.00)	(30.63)	(23.00)	(30.00)	(20.00)	(14.98)	(23.04)	(2000)	(1800)
14x14	mm	336.55	57.15	762.00	777.88	584.20	762.00	533.40	393.70	613.41	1182	1045
	inch	(13.25)	(2.25)	(30.00)	(30.63)	(23.00)	(30.00)	(21.00)	(15.50)	(24.15)	(2600)	(2300)
16x14	mm	336.55	57.15	838.20	777.88	647.70	838.20	566.42	421.64	646.43	1318	1205
	inch	(13.25)	(2.25)	(33.00)	(30.63)	(25.50)	(33.00)	(22.30)	(16.60)	(25.45)	(2900)	(2650)
16x16	mm	387.35	57.15	838.20	854.08	647.70	838.20	577.85	436.63	679.45	1568	1409
	inch	(15.25)	(2.25)	(33.00)	(33.63)	(25.50)	(33.00)	(22.75)	(17.19)	(26.75)	(3450)	(3100)
18x16	mm	387.35	57.15	914.40	930.28	711.20	914.40	610.87	467.11	712.47	1795	1614
	inch	(15.25)	(2.25)	(36.00)	(36.63)	(28.00)	(36.00)	(24.05)	(18.39)	(28.05)	(3950)	(3550)
18x18	mm	438.15	95.25	914.40	930.28	711.20	914.40	654.05	476.25	756.92	2273	2045
	inch	(17.25)	(3.75)	(36.00)	(36.63)	(28.00)	(36.00)	(25.75)	(18.75)	(29.80)	(5000)	(4500)
20x18	mm	438.15	95.25	990.60	1009.65	774.70	990.60	687.07	509.27	789.94	2409	2182
	inch	(17.25)	(3.75)	(39.00)	(39.754)	(30.50)	(39.00)	(27.05)	(20.05)	(31.10)	(5300)	(4800)
20x20	mm	488.95	95.25	990.60	1009.65	774.70	990.60	687.07	520.70	825.50	2500	2273
	inch	(19.25)	(3.75)	(39.00)	(39.75)	(30.50)	(39.00)	(27.05)	(20.50)	(32.50)	(5500)	(5000)
24x20	mm	488.95	95.25	1143.00	1165.23	914.40	1143.00	731.52	556.26	861.06	2705	2432
	inch	(19.25)	(3.75)	(45.00)	(45.88)	(36.00)	(45.00)	(28.80)	(21.90)	(33.90)	(5950)	(5350)
24x24	mm	590.55	95.25	1143.00	1165.23	914.40	1143.00	822.45	619.25	931.42	4205	3841
	inch	(23.25)	(3.75)	(45.00)	(45.88)	(36.00)	(45.00)	(32.38)	(24.38)	(36.67)	(9250)	(8450)
26x26	mm	635.00	100.33	1244.60	1270.00	1263.65	1244.60	1270.00	884.68	1420.11	5318	4773
	inch	(25.00)	(3.95)	(49.00)	(50.00)	(49.75)	(49.00)	(50.00)	(34.83)	(55.91)	(11700)	(10500)
28x28	mm	685.80	100.33	1346.20	1371.60	1320.80	1346.20	1332.23	924.56	1482.34	6364	5727
	inch	(27.00)	(3.95)	(53.00)	(54.00)	(52.00)	(53.00)	(52.45)	36.40)	(58.36)	(14000)	(12600)
30x30**	mm	736.60	107.95	1397.00	1422.40	1406.65	1397.00	1416.05	984.76	1573.53	7727	6955
	inch	(29.00)	(4.25)	(55.00)	(56.00)	(55.38)	(55.00)	(55.75)	(38.77)	(61.95)	(17000)	(15300)
36x36**	mm	876.30	114.30	1727.20	1755.90	1616.20	1727.20	1623.06	1131.32	1780.54	11818	10636
	inch	(34.50)	(4.50)	(68.00)	(69.13)	(63.63)	(68.00)	(63.90)	(44.54)	(70.10)	(26000)	(23400)

* Lever Operator **30x24 & 36x30 refer to drawing. **Notes:-** Sizes 1/2" to 1-1/2", 2-1/2" & 5" also available, drawing on request. Short pattern design also available in larger sizes.

BVF100 SERIES DIMENSIONS 600LB



Lever Operated



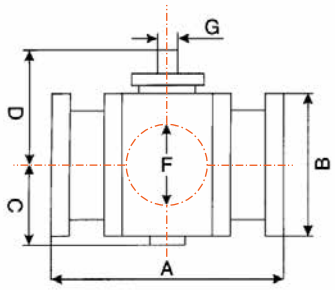
Gear Operated

Nominal Diameter Inches		Size mm (inches)		End to End Dimensions mm (inches)				Body Dimensions mm (inches)			Weight Kg (Lbs.)	
		Ball Bore F	Stem G	RF A	RTJ A	Flange O.D. B	Weld End A	Centre Top D	Centre Bottom C	Centre Gear E	Flanged	Weld End
2x2*	mm	50.80	22.86	292.10	295.28	165.10	292.10	165.10	112.78	226.06	32	25
	inch	(2.00)	(0.90)	(11.50)	(11.63)	(6.50)	(11.50)	(6.50)	(4.44)	(8.90)	(70)	(55)
3x2*	mm	50.80	26.92	355.60	358.78	209.55	355.60	184.91	132.59	245.87	36	30
	inch	(2.00)	(1.06)	(14.00)	(14.13)	(8.25)	(14.00)	(7.28)	(5.22)	(9.68)	(80)	(65)
3x3*	mm	76.20	38.10	355.60	358.78	209.55	355.60	220.73	141.22	281.69	55	43
	inch	(3.00)	(1.50)	(14.00)	(14.13)	(8.25)	(14.00)	(8.69)	(5.56)	(11.09)	(120)	(95)
4x3*	mm	76.20	38.10	431.80	434.98	254.00	431.80	240.54	161.04	301.50	64	52
	inch	(3.00)	(1.50)	(17.00)	(17.13)	(10.00)	(17.00)	(9.47)	(6.34)	(11.87)	(140)	(115)
4x4*	mm	101.60	42.93	431.80	434.98	317.50	431.80	242.82	165.10	303.78	100	82
	inch	(4.00)	(1.69)	(17.00)	(17.13)	(12.50)	(17.00)	(9.56)	(6.50)	(11.96)	(220)	(180)
6x4*	mm	101.60	50.80	558.80	561.98	317.50	558.80	262.64	184.91	323.60	136	114
	inch	(4.00)	(2.00)	(22.00)	(22.13)	(12.50)	(22.00)	(10.34)	(7.28)	(12.74)	(300)	(250)
6x6*	mm	152.40	50.80	558.80	561.98	317.50	558.80	309.63	220.73	370.59	273	227
	inch	(6.00)	(2.00)	(22.00)	(22.13)	(12.50)	(22.00)	(12.19)	(8.69)	(14.59)	(600)	(500)
8x6	mm	152.40	50.80	660.40	663.58	381.00	660.40	337.57	240.54	398.53	318	264
	inch	(6.00)	(2.00)	(26.00)	(26.13)	(15.00)	(26.00)	(13.29)	(9.47)	(15.69)	(700)	(580)
8x8	mm	203.20	50.80	660.40	663.58	381.00	660.40	375.92	263.65	436.88	545	445
	inch	(8.00)	(2.00)	(26.00)	(26.13)	(15.00)	(26.00)	(14.80)	(10.38)	(17.20)	(1200)	(980)
10x8	mm	203.20	50.80	787.40	790.58	444.50	787.40	403.86	283.46	464.82	614	491
	inch	(8.00)	(2.00)	(31.00)	(31.13)	(17.50)	(31.00)	(15.90)	(11.16)	(18.30)	(1350)	(1080)
10x10	mm	254.00	57.15	787.40	790.58	444.50	787.40	422.40	308.10	502.41	773	627
	inch	(10.00)	(2.25)	(31.00)	(31.13)	(17.50)	(31.00)	(16.63)	(12.13)	(19.78)	(1700)	(1380)
12x10	mm	254.00	57.15	838.20	841.38	520.70	838.20	453.14	336.04	532.89	864	700
	inch	(10.00)	(2.25)	(33.00)	(33.13)	(20.50)	(33.00)	(17.84)	(13.23)	(20.98)	(1900)	(1540)
12x12	mm	304.80	57.15	838.20	841.38	520.70	838.20	474.73	352.55	554.74	1000	809
	inch	(12.00)	(2.25)	(33.00)	(33.13)	(20.50)	(33.00)	(18.69)	(13.88)	(21.84)	(2200)	(1780)
14x12	mm	304.80	57.15	889.00	892.18	584.20	889.00	508.00	380.49	585.22	1182	977
	inch	(12.00)	(2.25)	(35.00)	(35.13)	(23.00)	(35.00)	(20.00)	(14.98)	(23.04)	(2600)	(2150)
14x14	mm	336.55	57.15	889.00	892.18	584.20	889.00	533.40	393.70	613.41	1341	1091
	inch	(13.25)	(2.25)	(35.00)	(35.13)	(23.00)	(35.00)	(21.00)	(15.50)	(24.15)	(2950)	(2400)
16x14	mm	336.55	57.15	990.60	993.78	647.70	990.60	566.42	421.64	646.43	1500	1250
	inch	(13.25)	(2.25)	(39.00)	(39.13)	(25.50)	(39.00)	(22.30)	(16.60)	(25.45)	(3300)	(2750)
16x16	mm	387.35	57.15	990.60	993.78	647.70	990.60	577.85	436.63	679.45	2068	1705
	inch	(15.25)	(2.25)	(39.00)	(39.13)	(25.50)	(39.00)	(22.75)	(17.19)	(26.75)	(4550)	(3750)
18x16	mm	387.35	57.15	1092.20	1095.38	711.20	1092.20	610.87	467.11	712.47	2318	1905
	inch	(15.25)	(2.25)	(43.00)	(43.13)	(28.00)	(43.00)	(24.05)	(18.39)	(28.05)	(5100)	(4190)
18x18	mm	438.15	95.25	1092.20	1095.38	711.20	1092.20	654.05	476.25	756.92	2677	2191
	inch	(17.25)	(3.75)	(43.00)	(43.13)	(28.00)	(43.00)	(25.75)	(18.75)	(29.80)	(5890)	(4820)
20x18	mm	438.15	95.25	1193.80	1200.15	774.70	1193.80	687.07	509.27	789.94	2977	2432
	inch	(17.25)	(3.75)	(47.00)	(47.25)	(30.50)	(47.00)	(27.05)	(20.05)	(31.10)	(6550)	(5350)
20x20	mm	488.95	95.25	1193.80	1200.15	774.70	1193.80	687.07	520.70	825.50	3023	2477
	inch	(19.25)	(3.75)	(47.00)	(47.25)	(30.50)	(47.00)	(27.05)	(20.50)	(32.50)	(6650)	(5450)
24x20	mm	488.95	95.25	1397.00	1405.26	914.40	1397.00	731.52	556.26	861.06	3364	2750
	inch	(19.25)	(3.75)	(55.00)	(55.33)	(36.00)	(55.00)	(28.80)	(21.90)	(33.90)	(7400)	(6050)
24x24	mm	590.55	95.25	1397.00	1405.26	914.40	1397.00	822.45	619.25	931.42	5250	4659
	inch	(23.25)	(3.75)	(55.00)	(55.33)	(36.00)	(55.00)	(32.38)	(24.38)	(36.67)	(11550)	(10250)
26x26	mm	635.00	100.33	1447.80	1460.50	1263.65	1447.80	1034.80	806.20	1159.26	6227	5227
	inch	(25.00)	(3.95)	(57.00)	(57.50)	(49.75)	(57.00)	(40.74)	(31.74)	(45.64)	(13700)	(11500)
28x28	mm	685.80	100.33	1549.40	1562.10	1320.80	1549.40	1136.90	986.79	1287.02	10227	9205
	inch	(27.00)	(3.95)	(61.00)	(61.50)	(52.00)	(61.00)	(44.76)	(38.85)	(50.67)	(22500)	(20250)
30x30	mm	736.60	107.95	1651.00	1663.70	1406.65	1651.00	1224.28	1066.80	1381.76	10909	9818
	inch	(29.00)	(4.25)	(65.00)	(65.50)	(55.38)	(65.00)	(48.20)	(42.00)	(54.40)	(24000)	(21600)
36x36	mm	876.30	114.30	2082.80	2098.80	1616.20	2082.80	1359.92	1202.44	1517.40	17136	15409
	inch	(34.50)	(4.50)	(82.00)	(82.63)	(63.63)	(82.00)	(53.54)	(47.34)	(59.74)	(37700)	(33900)

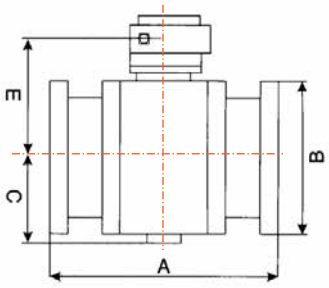
* Lever Operator

Notes:- Sizes 1/2" to 1-1/2" also available, drawing on request.

BVF100 SERIES DIMENSIONS 900LB



Lever Operated

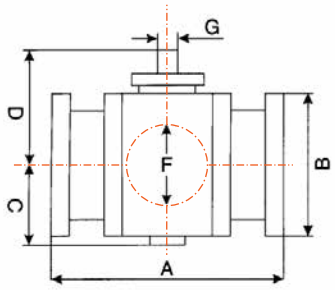


Gear Operated

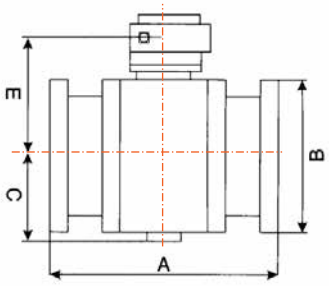
Nominal Diameter Inches		Size mm (inches)		End to End Dimensions mm (inches)				Body Dimensions mm (inches)			Weight Kg (Lbs.)	
		Ball Bore F	Stem G	RF A	RTJ A	Flange O.D. B	Weld End A	Centre Top D	Centre Bottom C	Centre Gear E	Flanged	Weld End
2x2*	mm	50.80	26.92	368.30	371.48	215.90	368.30	184.91	112.78	276.86	55	43
	inch	(2.00)	(1.06)	(14.50)	(14.63)	(8.50)	(14.50)	(7.28)	(4.44)	(10.90)	(120)	(95)
3x2*	mm	50.80	38.10	381.00	307.98	241.30	381.00	204.72	132.59	295.66	64	50
	inch	(2.00)	(1.50)	(15.00)	(12.13)	(9.50)	(15.00)	(8.06)	(5.22)	(11.64)	(140)	(110)
3x3*	mm	76.20	38.10	381.00	384.18	241.30	381.00	240.54	141.22	331.47	82	66
	inch	(3.00)	(1.50)	(15.00)	(15.13)	(9.50)	(15.00)	(9.47)	(5.56)	(13.05)	(180)	(145)
4x3*	mm	76.20	42.93	457.20	460.38	292.10	457.20	260.35	161.04	351.54	100	80
	inch	(3.00)	(1.69)	(18.00)	(18.13)	(11.50)	(18.00)	(10.25)	(6.34)	(13.84)	(220)	(175)
4x4*	mm	101.60	42.93	457.20	460.38	292.10	457.20	262.64	165.10	353.57	145	102
	inch	(4.00)	(1.69)	(18.00)	(18.13)	(11.50)	(18.00)	(10.34)	(6.50)	(13.92)	(320)	(225)
6x4*	mm	101.60	50.80	609.60	612.78	381.00	609.60	282.45	184.91	373.38	200	159
	inch	(4.00)	(2.00)	(24.00)	(24.13)	(15.00)	(24.00)	(11.12)	(7.28)	(14.70)	(440)	(350)
6x6	mm	152.40	50.80	609.60	612.78	381.00	609.60	329.44	220.73	420.37	318	255
	inch	(6.00)	(2.00)	(24.00)	(24.13)	(15.00)	(24.00)	(12.97)	(8.69)	(16.55)	(700)	(560)
8x6	mm	152.40	50.80	736.60	739.78	469.90	736.60	357.38	240.54	448.31	409	327
	inch	(6.00)	(2.00)	(29.00)	(29.13)	(18.50)	(29.00)	(14.07)	(9.47)	(17.65)	(900)	(720)
8x8	mm	203.20	50.80	736.60	739.78	469.90	736.60	395.73	263.65	485.14	705	564
	inch	(8.00)	(2.00)	(29.00)	(29.13)	(18.50)	(29.00)	(15.58)	(10.38)	(19.10)	(1550)	(1240)
10x8	mm	203.20	57.15	838.20	841.38	546.10	838.20	423.67	283.46	514.60	727	582
	inch	(8.00)	(2.25)	(33.00)	(33.13)	(21.50)	(33.00)	(16.68)	(11.16)	(20.26)	(1600)	(1280)
10x10	mm	254.00	57.15	838.20	841.38	546.10	838.20	442.21	308.10	552.20	841	673
	inch	(10.00)	(2.25)	(33.00)	(33.13)	(21.50)	(33.00)	(17.41)	(12.13)	(21.74)	(1850)	(1480)
12x10	mm	254.00	57.15	965.20	968.38	609.60	965.20	472.95	336.04	582.68	1045	841
	inch	(10.00)	(2.25)	(38.00)	(38.13)	(24.00)	(38.00)	(18.62)	(13.23)	(22.94)	(2300)	(1850)
12x12	mm	304.80	57.15	965.20	968.38	609.60	965.20	494.54	352.55	604.52	1318	1068
	inch	(12.00)	(2.25)	(38.00)	(38.13)	(24.00)	(38.00)	(19.47)	(13.88)	(23.80)	(2900)	(2350)
14x12	mm	304.80	57.15	1028.70	1038.23	641.35	1028.70	527.56	380.49	635.00	1545	1250
	inch	(12.00)	(2.25)	(40.50)	(40.88)	(25.25)	(40.50)	(20.77)	(14.98)	(25.00)	(3400)	(2750)
14x14	mm	336.55	57.15	1028.70	1038.23	641.35	1028.70	553.21	393.70	663.19	1750	1409
	inch	(13.25)	(2.25)	(40.50)	(40.88)	(25.25)	(40.50)	(21.78)	(15.50)	(26.11)	(3850)	(3100)
16x14	mm	336.55	57.15	1130.30	1139.83	704.85	1130.30	586.74	421.64	696.21	1818	1455
	inch	(13.25)	(2.25)	(44.50)	(44.88)	(27.75)	(44.50)	(23.10)	(16.60)	(27.41)	(4000)	(3200)
16x16	mm	387.35	95.25	1130.30	1139.83	704.85	1130.30	597.66	436.63	729.23	2159	1727
	inch	(15.25)	(3.75)	(44.50)	(44.88)	(27.75)	(44.50)	(23.53)	(17.19)	(28.71)	(4750)	(3800)
18x16	mm	387.35	95.25	1219.20	1231.90	787.40	1219.20	630.68	467.11	762.25	2477	1932
	inch	(15.25)	(3.75)	(48.00)	(48.50)	(31.00)	(48.00)	(24.83)	(18.39)	(30.01)	(5450)	(4250)
18x18	mm	438.15	95.25	1219.20	1231.90	787.40	1219.20	673.86	476.25	806.45	3205	2568
	inch	(17.25)	(3.75)	(48.00)	(48.50)	(31.00)	(48.00)	(26.53)	(18.75)	(31.75)	(7050)	(5650)
20x18	mm	438.15	95.25	1320.80	1333.50	857.25	1320.80	706.88	509.27	839.47	3886	3114
	inch	(17.25)	(3.75)	(52.00)	(52.50)	(33.75)	(52.00)	(27.83)	(20.05)	(33.05)	(8550)	(6850)
20x20	mm	488.95	100.08	1320.80	1333.50	857.25	1320.80	718.82	520.70	875.28	4568	3659
	inch	(19.25)	(3.94)	(52.00)	(52.50)	(33.75)	(52.00)	(28.30)	(20.50)	(34.46)	(10050)	(8050)
24x20	mm	488.95	100.08	1549.40	1568.45	1041.40	1549.40	751.33	556.26	910.84	5205	4159
	inch	(19.25)	(3.94)	(61.00)	(61.75)	(41.00)	(61.00)	(29.58)	(21.90)	(35.86)	(11450)	(9150)
24x24	mm	590.55	100.08	1549.40	1568.45	1041.40	1549.40	843.28	619.25	981.20	6091	4886
	inch	(23.25)	(3.94)	(61.00)	(61.75)	(41.00)	(61.00)	(33.20)	(24.38)	(38.63)	(13400)	(10750)

* Lever Operator **Note:-** Sizes 1/2" to 1-1/2" also available, drawing on request

BVF100 SERIES DIMENSIONS 1500LB



Lever Operated



Gear Operated

Nominal Diameter Inches		Size mm (inches)		End to End Dimensions mm (inches)				Body Dimensions mm (inches)			Weight Kg (Lbs.)	
		Ball Bore F	Stem G	RF A	RTJ A	Flange O.D. B	Weld End A	Centre Top D	Centre Bottom C	Centre Gear E	Flanged	Weld End
2x2*	mm	50.80	26.92	368.30	371.48	215.90	38.10	1200.15	128.02	292.10	55	43
	inch	(2.00)	(1.06)	(14.50)	(14.63)	(8.50)	(1.50)	(7.88)	(5.04)	(11.50)	(120)	(95)
3x2*	mm	50.80	38.10	469.90	473.08	266.70	469.90	29.96	1147.83	310.90	77	61
	inch	(2.00)	(1.50)	(18.50)	(18.63)	(10.50)	(18.50)	(8.66)	(5.82)	(12.24)	(170)	(135)
3x3*	mm	76.20	38.10	469.90	473.08	266.70	469.90	255.78	156.46	346.71	109	91
	inch	(3.00)	(1.50)	(18.50)	(18.63)	(10.50)	(18.50)	(10.07)	(6.16)	(13.65)	(240)	(200)
4x3*	mm	76.20	42.93	546.10	549.28	311.15	546.10	275.59	276.28	366.52	132	107
	inch	(3.00)	(1.69)	(21.50)	(21.63)	(12.25)	(21.50)	(10.85)	(6.94)	(14.43)	(290)	(235)
4x4	mm	101.60	42.93	546.10	549.28	311.15	546.10	277.88	180.34	368.81	250	200
	inch	(4.00)	(1.69)	(21.50)	(21.3)	(12.25)	(21.50)	(10.94)	(7.10)	(114.52)	(550)	(440)
6x4	mm	101.60	50.80	704.85	711.20	393.70	704.85	282.45	200.15	388.62	318	273
	inch	(4.00)	(2.00)	(27.75)	(28.00)	(15.50)	(27.75)	(11.12)	(7.88)	(15.30)	(700)	(600)
6x6	mm	146.05	50.80	704.85	711.20	393.70	704.85	344.68	235.97	436.88	545	432
	inch	(5.75)	(2.00)	(27.75)	(28.00)	(15.50)	(27.75)	(13.57)	(9.29)	(17.20)	(1200)	(950)
8x6	mm	146.05	50.80	831.85	841.38	482.60	831.85	372.62	255.78	463.55	636	523
	inch	(5.75)	(2.00)	(32.75)	(33.13)	(19.00)	(32.75)	(14.67)	(10.07)	(18.25)	(1400)	(1150)
8x8	mm	193.68	50.80	831.85	841.38	482.60	831.85	410.97	278.89	497.84	73	614
	inch	(7.63)	(2.00)	(32.75)	(33.13)	(19.00)	(32.75)	(16.18)	(10.98)	(19.60)	(1700)	(1350)
10x8	mm	193.68	57.15	990.60	1000.13	584.20	990.60	438.91	298.70	529.59	977	795
	inch	(7.63)	(2.25)	(39.00)	(39.38)	(23.00)	(39.00)	(17.28)	(11.76)	(20.85)	(250)	(1750)
10x10	mm	241.30	57.15	990.60	1000.13	584.20	990.60	457.20	323.34	566.42	1432	1136
	inch	(9.50)	(2.25)	(39.00)	(39.38)	(23.00)	(39.00)	(18.00)	(12.73)	(22.30)	(3150)	(2500)
12x10	mm	241.30	57.15	1130.30	1146.18	673.10	1130.30	488.19	351.28	596.90	1705	1364
	inch	(9.50)	(2.25)	(44.50)	(45.13)	(26.50)	(44.50)	(19.22)	(13.83)	(23.50)	(3750)	(3000)
12x12	mm	288.93	57.15	1130.30	1146.18	673.10	1130.30	509.78	367.79	619.76	1977	1591
	inch	(11.38)	(2.25)	(44.50)	(45.13)	(26.50)	(44.50)	(20.07)	(14.48)	(24.40)	(4350)	(3500)
14x12	mm	288.93	57.15	1257.30	1276.35	749.30	1257.30	542.80	395.73	647.70	2114	1705
	inch	(11.38)	(2.25)	(49.50)	(50.25)	(29.50)	(49.50)	(21.37)	(15.58)	(25.50)	(4650)	(3750)
14x14	mm	317.50	57.15	1257.30	1276.35	749.30	1257.30	568.45	408.94	678.18	2386	1909
	inch	(12.50)	(2.25)	(49.50)	(50.25)	(29.50)	(49.50)	(22.38)	(16.10)	(26.70)	(5250)	(4200)
16x14	mm	317.50	57.15	1384.30	1406.53	850.90	1384.30	601.98	436.88	711.20	2795	2250
	inch	(12.50)	(2.25)	(54.50)	(55.38)	(33.50)	(54.50)	(23.70)	(117.20)	(28.00)	(6150)	(4950)
16x16	mm	361.95	95.25	1384.30	1406.53	850.90	1384.30	612.90	451.87	744.22	3455	2750
	inch	(14.25)	(3.75)	(54.50)	(55.38)	(33.50)	(54.50)	(24.13)	(17.79)	(29.30)	(7600)	(6050)
18x16	mm	361.95	95.25	1536.70	1558.93	914.40	1536.70	645.92	482.35	777.24	4795	3841
	inch	(14.25)	(3.75)	(60.50)	(61.38)	(36.00)	(60.50)	(25.43)	(18.99)	(30.60)	(10550)	(8450)
18x18	mm	438.15	95.25	1536.70	1558.93	914.40	1536.70	645.92	482.35	777.24	4795	3841
	inch	(17.25)	(3.75)	(60.50)	(61.38)	(36.00)	(60.50)	25.43	(18.99)	(30.60)	(10550)	(8450)
20x18	mm	438.15	95.25	1663.70	1685.93	984.25	1663.70	722.12	524.51	854.71	5773	4636
	inch	(17.25)	(3.75)	(65.50)	(66.38)	(38.75)	(65.50)	(28.43)	(20.65)	(33.65)	(12700)	(10200)
20x20	mm	457.20	100.08	1663.70	1685.93	984.25	1663.70	734.06	535.94	891.54	7227	5795
	inch	(18.00)	(3.94)	(65.50)	(66.38)	(38.75)	(65.50)	(28.90)	(21.10)	(35.10)	(15900)	(12750)
24x20	mm	457.20	100.08	1943.10	1972.95	1168.40	1943.10	766.57	571.50	925.83	8682	6955
	inch	(18.00)	(3.94)	(76.50)	(77.68)	(46.00)	(76.50)	(30.18)	(22.50)	(36.45)	(19100)	(15300)
24x24	mm	571.50	100.08	1943.10	1972..95	1168.40	1943.10	858.52	634.49	996.95	12318	9864
	inch	(22.50)	(3.94)	(76.50)	(77.68)	(46.00)	(76.50)	(33.80)	(24.98)	(39.25)	(27100)	(21700)

* Lever Operator **Note:-** Sizes 1/2" to 1-1/2" also available, drawing on request

00.00	Manufacturers Standard - No Standards

FS9000 SERIES CAST 2 PIECE BODY API 6D TRUNNION MOUNTED BALL VALVE

1/2”-36” ANSI CLASS - 150/300/600/900/1500

Endurance Test Certified

API 607 6th Ed. & ISO 10497
Firesafe Certified

ISO 15848-1 Class CO2
Fugitive Emission Certified

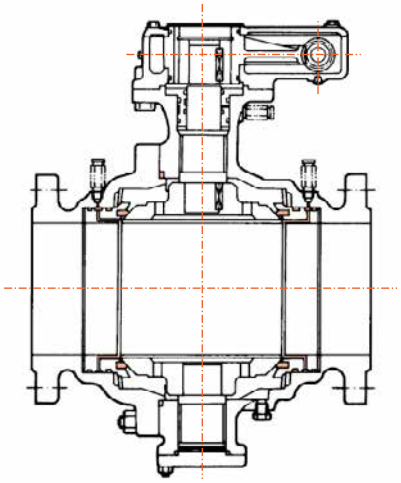
- Double Block & Bleed
- Self-relieving Seats
- Bubble Tight Shut-off
- Fire-safe API 6FA/607
- Full Through-conduit
- Quick Seal Recovery
- Sealing of Gland Assembly
- Drain Plug
- Stem Extensions
- Pneumatic or Gear Operation
- Operational Reliability
- Resistance to Bending Stress

This catalogue is general in it’s nature and the design and materials can change at any time. This catalogue is to be used as a guide only.

FS9000 SERIES BALL VALVE DESIGN FEATURES - OVERVIEW

API TRUNNION MOUNTED BALL VALVE MANUFACTURING SPECIFICATIONS

Specification	Standards
General design standard	API 6D
Pressure-temperature rating	ASME B16.34
Face to face dimensions	ASME B16.10
Flange type and dimensions	ASTM B16.5
Butt-weld ends	ASME B16.25
Inspection and test	API 6D/API 598

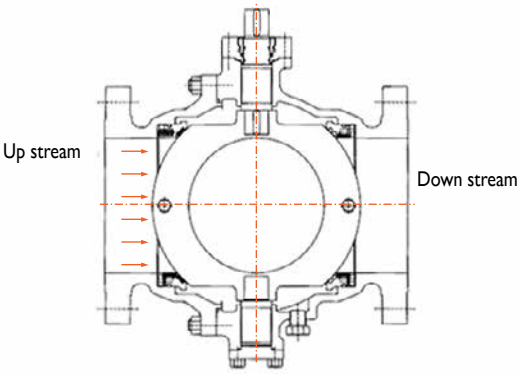


TRUNNION MOUNTED BALL VALVE DESIGN FEATURES

UP STREAM SEALING TWO-WAY VALVE

The up-stream seal of the valve is effected by the advanced spring pre-tightening seats which automatically adjust. The two-way valve has two seats that can be sealed in both directions, so there's no limitation of flow direction during installation.

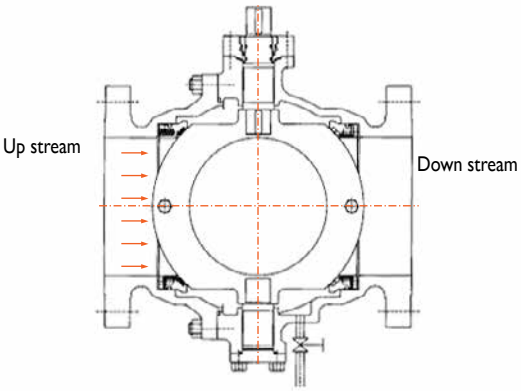
As line pressure increase the seat reacts to the force of the pressure to form an effective seal. In the absence of line pressure, coil springs around the seat unit provide a tight seal by keeping the seat in contact with the ball.



DOUBLE BLOCK & BLEED VALVE

Being "up-stream side sealing", the valve can bleed out the trapped fluid in the body cavity when the valves is in fully open or fully close position. The fluid is intercepted by seats on up stream and down stream side.

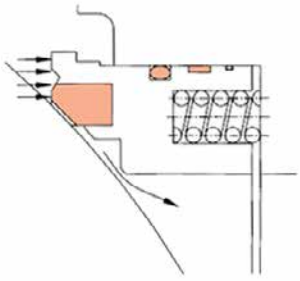
The stem packing or O-ring may be replaced under working pressure. Bleeding the dirty fluid periodically can reduce damage of the sealing surface and prolong the service life of the valve.



AUTOMATIC RELIEF OF THE CAVITY

If the pressure of the body cavity unusually increases due to thermal expansion, APV ball valves automatically relieve the pressure by compressing the spring in the spring pre-tightening seat package. The excess pressure will then be relieved back downstream.

Optional seat designs can be specified to relieve pressure only back upstream or in the case of Double Piston effect seals (DPE). Pressure can be relieved to atmosphere via an external body relief valve.



FS9000 SERIES BALL VALVE DESIGN FEATURES - OVERVIEW

FULL BORE OR REDUCED BORE

Full bore and reduced bore are available in all sizes. Full bore is full through conduit bore size to API 6D to facilitate pigging operations.

SEALANT INJECTION SYSTEM

When the seat and / or stem sealing system is damaged, the grease injection valve can inject sealant into the valve for temporary sealing.

Under normal circumstances Australian Pipeline Valve valves require no lubrication.

STEM SEALING SYSTEM

Two O-rings are utilised in the stem area for reliable performance, as well as a graphite fireseal.

FLEXIBLE OPERATION

The seat and stem bearing has a Teflon coating which is low friction and self-lubricates to reduce the valve operation torque.

OPERATORS

The valve may be operated by hand, pneumatic operator, motor, hydro-pneumatic operator and hydraulic operator, etc.

Stem extensions for underground service applications can also be fitted.

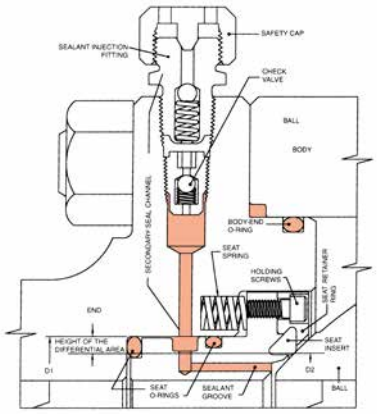
TRUNNION BEARINGS

Self lubricating PTFE coated trunnion bearings top and bottom.

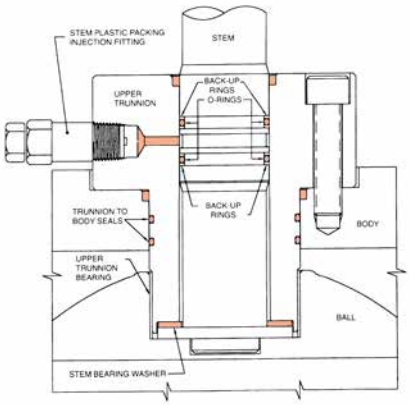
NACE

The full range of APV valves can meet NACE standard MR-10-75, latest edition if necessary.

Cross-Section Seat Area

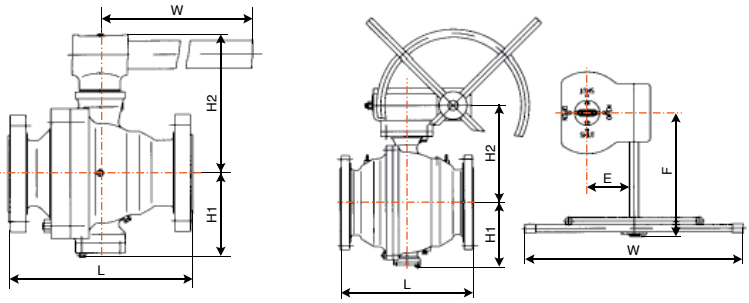


Cross-Section Stem Area*



*Design will vary depending on size & class

FS9000 SERIES DIMENSIONS



CLASS 150 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 150)

DN		2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”	14”	16”	18”	20”	24”	28”
d1		51	64	76	102	127	152	203	254	305	337	387	438	489	591	686
L	RF	178	191	203	229	356	394	457	533	610	686	762	864	914	1067	1245
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1143	1346
H1		102	114	127	152	184	219	273	360	395	430	470	550	580	700	800
H2		107	125	152	178	300	330	398	495	580	625	670	698	840	1050	1100
E		-	-	-	-	-	-	116	116	171	171	257	257	257	150	83
F		-	-	-	-	-	-	350	350	420	420	400	400	400	410	650
W		230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800
Wt (Kg) RF		12	16	22	35	58	74	230	360	460	576	864	1280	1600	3540	4500

Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged). Short pattern design also available.

CLASS 300 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 300)

DN		2”	2-1/2”	3”	4”	5”	6”	8”	10”	12”	14”	16”	18”	20”	22”	24”	28”
d1		51	64	76	102	127	152	203	254	305	337	387	438	489	540	591	686
L	RF	216	241	283	305	381	403	502	568	648	762	838	914	991	1092	1143	1346
	BW	216	241	283	305	381	457	521	559	635	762	838	914	991	1092	1143	1346
H1		102	114	127	152	184	219	273	360	395	430	470	550	580	640	700	800
H2		107	125	152	178	300	330	398	495	580	625	670	698	840	945	1050	1100
E		-	-	-	-	-	-	116	116	171	171	257	257	257	257	150	83
F		-	-	-	-	-	-	350	350	420	420	400	400	400	400	410	650
W		230	400	400	650	1050	1050	600	600	800	800	800	800	800	800	800	800
Wt (Kg) RF		15	24	30	55	87	118	280	420	560	640	1030	1542	2100	1920	4200	5300

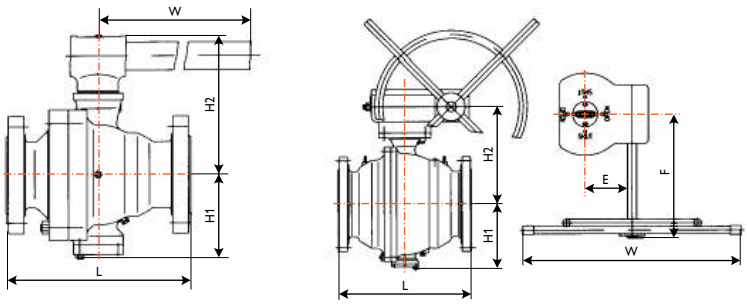
Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged). Short pattern design also available.

CLASS 400 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 400)

DN		2”	2-1/2”	3”	4”	6”	8”	10”	12”	14”	16”	20”	24”	28”
d1		51	64	76	102	152	203	254	305	337	387	489	591	686
L	RF	292	330	356	406	495	597	673	762	826	902	1054	1232	1397
	BW	295	333	359	410	498	600	676	765	829	905	1060	1241	1410
H1		114	124	133	159	250	294	395	445	500	530	660	800	900
H2		168	155	197	235	300	374	445	512	550	615	810	10010	1180
E		-	-	-	-	116	171	171	257	257	257	150	83	123
F		-	-	-	-	350	420	420	400	400	400	410	650	735
W		400	650	650	1050	600	800	800	800	800	800	800	800	800
Wt (Kg) RF		23	35	49	91	192	355	640	880	1100	1540	2800	5300	5700

Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged)

FS9000 SERIES DIMENSIONS



CLASS 600 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 600)

DN		2”	2-1/2”	3”	4”	6”	8”	10”	12”	14”	16”	20”	24”	28”
d1		51	64	76	102	152	203	254	305	337	387	489	591	686
L	RF & BW	292	330	356	432	559	660	787	838	889	991	1194	1397	1549
	RTJ	295	333	359	435	562	664	791	841	892	994	1200	1407	1562
H1		114	124	133	159	250	294	395	445	500	530	660	800	900
H2		108	155	197	235	300	374	445	512	550	615	810	1010	1180
E		-	-	-	-	116	171	171	257	257	257	150	83	123
F		-	-	-	-	350	420	420	400	400	400	410	650	735
W		400	650	650	1050	600	800	800	800	800	800	800	800	800
Wt (Kg) RF		35	38	55	102	232	390	710	960	1700	1970	3250	5800	6700

Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged)

CLASS 900 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 900)

DN		2”	2-1/2”	3”	4”	6”	8”	10”
d1		51	64	76	102	152	203	254
L	RF & BW	368	419	381	457	610	737	838
	RTJ	371	422	384	460	613	740	841
H1		217	241	259	297	360	322	420
H2		126	158	191	216	270	394	502
E		-	116	116	116	171	171	257
F		-	350	350	350	420	420	400
W		650	600	600	600	800	800	800
Wt (Kg) RF		50	60	80	125	270	540	930

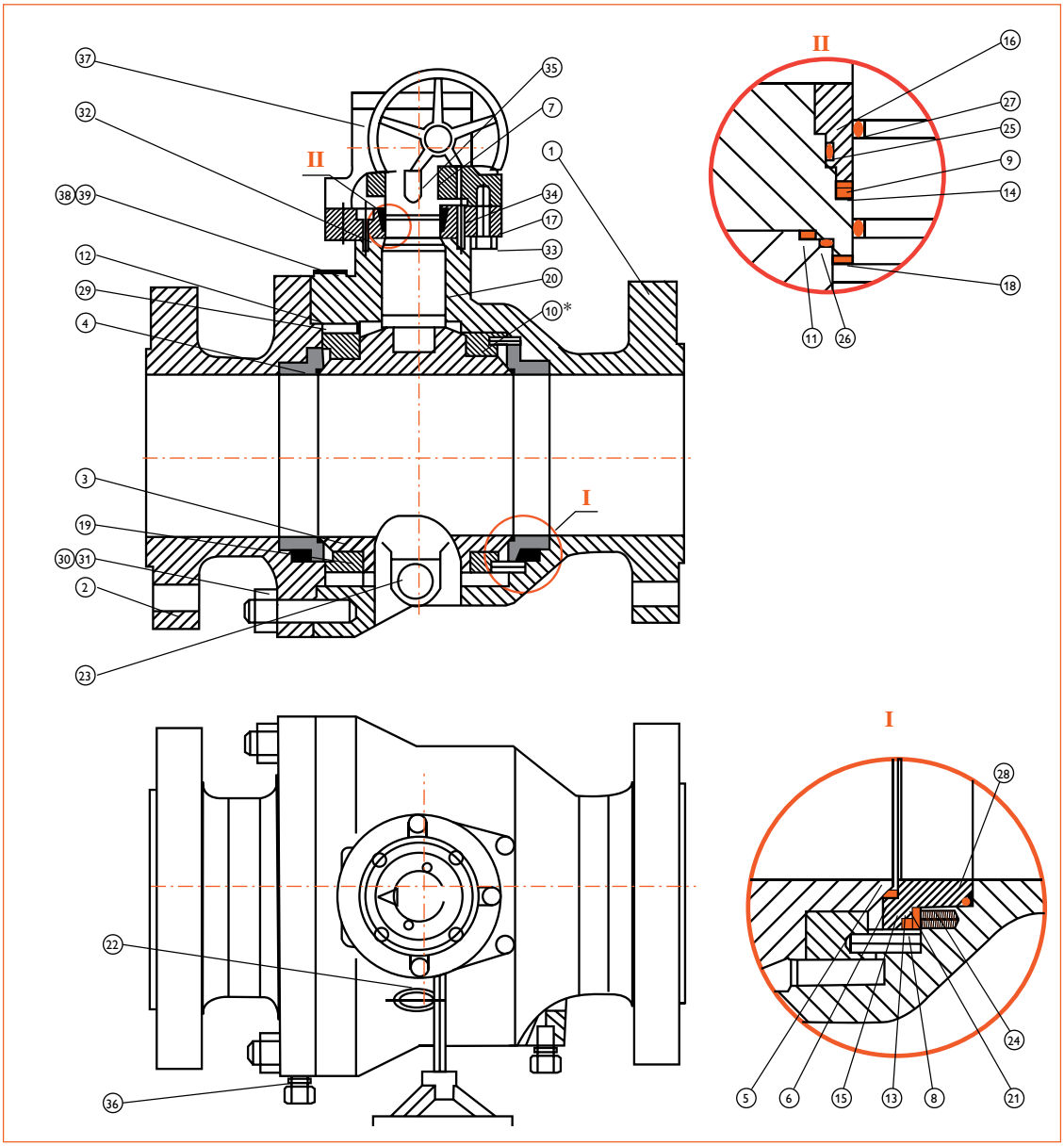
Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged)

CLASS 1500 DIMENSIONS mm (Flange dimensions refer to ASME B16.5 CLASS 1500)

DN		2”	2-1/2”	3”	4”	6”	8”
d1		51	64	76	102	152	203
L	RF & BW	368	419	470	546	705	832
	RTJ	371	422	473	549	711	841
H1		126	158	191	216	296	378
H2		217	241	259	297	365	475
E		-	116	116	116	171	257
F		-	350	350	350	420	400
W		650	600	600	600	800	800
Wt (Kg) RF		50	75	117	216	380	680

Note:- Sizes 1/2” to 1-1/2” also available. (2 Piece Forged)

FS9000 SERIES STANDARD MATERIALS OF CONSTRUCTION



* Internal Trunnion design shown available 150NB (6") and over.

FS9000 SERIES STANDARD MATERIALS

No.	Parts	Carbon Steel	Stainless Steel	Low Temp. Service (-46°C)
1	Body	ASTM 216-WCB	ASTM A351-CF8M	ASTM A352-LCB/LCC
2	Adaptor	ASTM A216-WCB	ASTM A351-CF8M	ASTM A352-LCB/LCC
3	Ball	ASTM A216-WCB/A105+ENP ASTM A351-CF8M	ASTM A351-CF8M ASTM A182-F316	ASTM A352-LCB/LF2+ ENP ASTM A182-F316
4	Seat Assembly	See 5,6	See 5,6	See 5,6
5	Seat Insert	RPTFE / Nylon / Devlon / POM	RPTFE / Nylon / Devlon / POM	RPTFE / Nylon / Devlon / POM
6	Seat Ring	ASTM A105 ENP/F6A/316	ASTM A182-F316/17-4PH	ASTM A182-F304/316
7	Stem	ASTM A276-410 ENP/F6A/316	ASTM A276-316/S31803/17-4PH	ASTM A276-304/316/S31803/17-4PH
8	Pin	ASTM A276-410 ENP/F6A/316	ASTM A276-316	ASTM A276-304/316
9	Washer	ASTM A276-304/316	ASTM A182-F316	ASTM A182-F304/316
10	Trunnion*	ASTM A105 ENP/F6A/316	ASTM A182-F316/17-4PH	ASTM A350-LF2 ENP/316/17-4PH
11	Gasket	Spiral Wound Graphite	Spiral Wound Graphite	Spiral Wound Graphite
12	Gasket	Spiral Wound Graphite	Spiral Wound Graphite	Spiral Wound Graphite
13	Gasket	PTFE	PTFE	PTFE
14	Gasket	Flexible Graphite	Flexible Graphite	Flexible Graphite
15	Gasket	Flexible Graphite	Flexible Graphite	Flexible Graphite
16	Retaining Nut	ASTM A276-410 ENP/316	ASTM A276-316	ASTM A276-304/316
17	Top Flange	ASTM A105/ASTM A182-F316	ASTM A182-F316	ASTM A350-LF2/F316
18	Thrust Plate	RPTFE/316+PTFE/Phenolic Gr.L	RPTFE/316+PTFE/Phenolic Gr.L	RPTFE/316+PTFE/Phenolic GR.L
19	Trunnion Bearing	A182 F316+PTFE	A182 316+PTFE	A182-F316+PTFE
20	Trunnion Bearing	A182 F316+PTFE	A182 316+PTFE	A182-F316+PTFE
21	Seat Follower	ASTM A105 ENP/316	ASTM A182+F316	ASTM A350-LF2 ENP/3162
22	Plug/Vent	ASTM A276-316	ASTM A276-316	ASTM A276-316
23	Plug	ASTM A576-1025 + ZP	ASTM A276-316	ASTM A276-316
24	Springs	Inconel X750	Inconel X750	Inconel X750
25	O-Ring	Viton B/Viton AED/HNBR	Viton B/Viton AED/HNBR/Aflas	HNBR/Elast-O-Lion 985/Viton GLT
26	O-Ring	Viton B/Viton AED/HNBR	Viton B/Viton AED/HNBR/Aflas	HNBR/Elast-O-Lion 985/Viton GLT
27	O-Ring	Viton B/Viton AED/HNBR	Viton B/Viton AED/HNBR/Aflas	HNBR/Elast-O-Lion 985/Viton GLT
28	O-Ring	Viton B/Viton AED/HNBR	Viton B/Viton AED/HNBR/Aflas	HNBR/Elast-O-Lion 985/Viton GLT
29	O-Ring	Viton B/Viton AED/HNBR	Viton B/Viton AED/HNBR/Aflas	HNBR/Elast-O-Lion 985/Viton GLT
30	Stud	ASTM A193-B7 + ZP ASTM A193-B7M + ZP	ASTM A193-B8/B8M	ASTM A350-L7 + ZP ASTM A320-L7M + ZP
31	Nut	ASTM A194-2H + ZP ASTM A194-2HM + ZP	ASTM A194-8/8M	ASTM A194-4 + ZP ASTM A194-7M + ZP
32	Screw	ASTM A194-2H + ZP ASTM A194-2HM + ZP	ASTM A193-B8/B8M	ASTM A320-L7 + ZP ASTM A320-L7M + ZP
33	Bolt	ASTM A194-2H + ZP ASTM A194-2HM + ZP	ASTM A193-B8/B8M	ASTM A320-L7 + ZP ASTN A320-L7M + ZP
34	Pin	ASTM A576-1045	ASTM A276-304/316	ASTM A276-304
35	Key	ASTM A576-1045	ASTM A276-304/316	ASTM A276-304
36	Injection Fitting Assembly	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
37	Gear Operator	Iron Case	Iron Case	Iron Case
38	Name Plate	Stainless Steel	Stainless Steel	Stainless Steel
39	Rivet	Stainless Steel	Stainless Steel	Stainless Steel

Note: Other trim materials are optionally available. This bill of material is indicative only, parts do vary according to trim, size and class.

* Internal Trunnion shown available 150NB (6") and over.

APV

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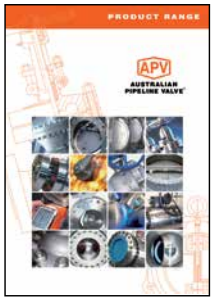
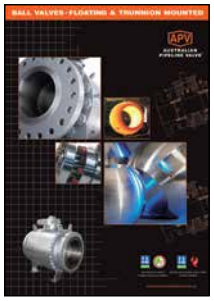
AUSTRALIAN PIPELINE VALVE BRAND RANGE - CATALOGUES

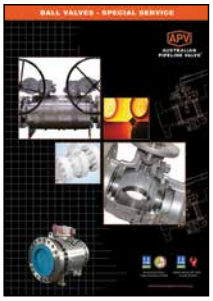


Product Brochure



Ball Valves Floating & Trunnion Mounted

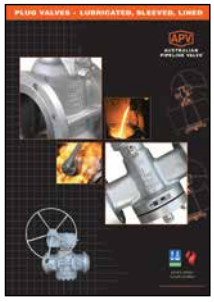
Ball Valves Floating Small Bore



Ball Valves Special Service

Gate, Globe & Check Valves - Cast Steel

Gate, Globe & Check Valves - Forged Steel



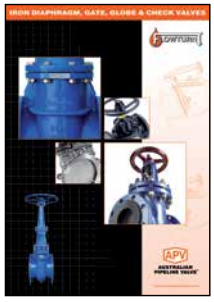
Plug Valves Lubricated, Sleeved & Lined

Oilfield Products Valves & Wellheads

APV FAMILY OF BRANDS RANGE - CATALOGUES

Diamond Gear Gearboxes

Flowturn Ball Valves Multiway & Deadman



Flowturn Gate, Globe & Check Valves

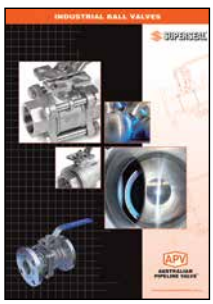
Flowturn Instrument Valves

Flowturn Strainers & Sight Glasses

Steamco Steam Valves

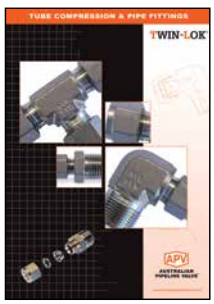
Supercheck Wafer Check Valves

Superseal Butterfly Valves

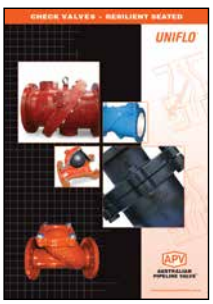


Superseal Industrial Ball Valves

Torqturn Actuators



TwinLok Tube & Pipe Fittings



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APV AgentsWanted

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LOCAL DISTRIBUTOR

QUALITY ASSURANCE AND CERTIFICATION

We are continually improving all facets of quality assurance. Full metallurgical and test certificates are always supplied for all pressure retaining parts, we also provide it on all major trim components.

We have endeavoured to provide a broad outline of our range and capabilities. Because we are continually developing new products for our customers this catalogue will, to some extent be incomplete. This catalogue is a general overview only, individual drawings and data sheets can be furnished on request.

If you have any requirement in the field of valves, please contact us for a prompt response. Continuous development of Australian Pipeline Valve products may necessitate changes in the design or manufacturing processes. Australian Pipeline Valve reserves the right to effect any such changes without prior notice.

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