

# GATE, GLOBE & CHECK VALVES - CAST STEEL

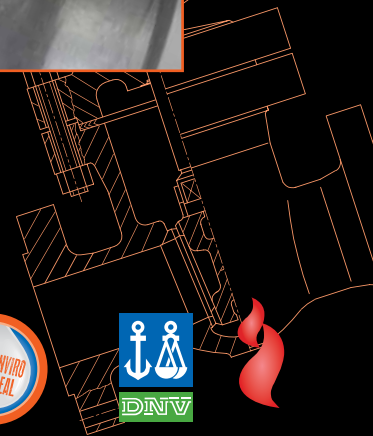
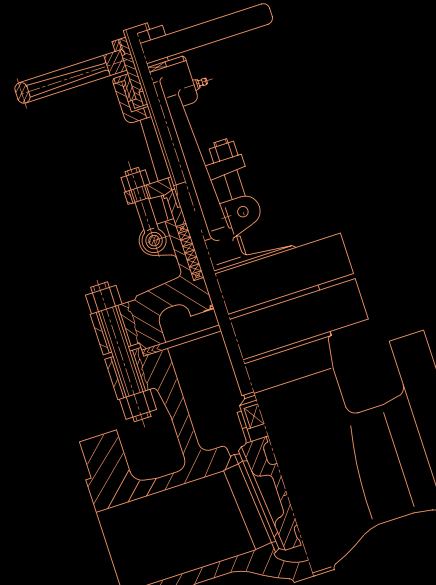
## SHORT VERSION

[Click here](#) for complete version of this catalogue

API 600  
API 624  
API 594  
API 6D  
ASME B16.34



**AUSTRALIAN  
PIPELINE VALVE®**



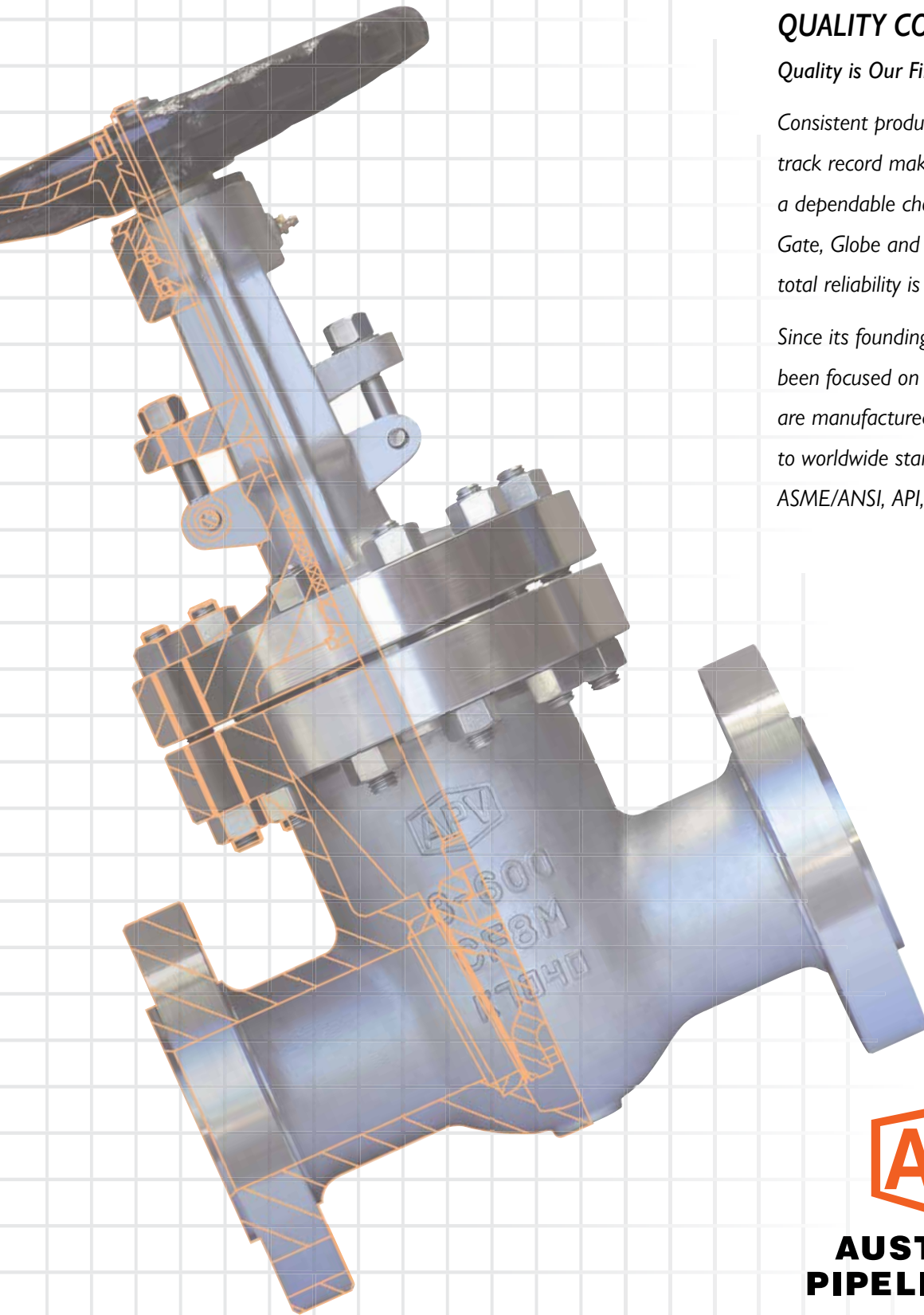
ISO 15848-1 & API 622  
Fugitive Emission Certified



API 607 & ISO 10497  
Firesafe Certified



# 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 for cast Gate, Globe and Check Valves, 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).*



**AUSTRALIAN  
PIPELINE VALVE®**

70-78 Stanbel Road Salisbury Plain South Australia 5109

Telephone +61 (0)8 8285 0033

email: [admin@australianpipelinevalve.com.au](mailto:admin@australianpipelinevalve.com.au)

[www.australianpipelinevalve.com.au](http://www.australianpipelinevalve.com.au)

## CONTENTS - SHORT VERSION\*

Figure Number System	4~5
Firesafe & Fugitive Emission Certificates	6*
Material Combinations / Features & Trim Types	7~11*
Design Specifications & Selection Criteria	12~15*
Bolted Bonnet Gate, Globe, Check Valves Overview	16~18
Pressure Seal Bonnet Valves Overview	19~22
Gate Valve Class 150 - 300 - 600 - 900 - 1500	23~27
Gate Valve (PSB) Class 900 - 1500 - 2500	28~30*
Gate Valve Geothermal Trim Class 150 - 300 - 600	31~33*
Globe Valve Class 150 - 300 - 600 - 900 - 1500	34~38
Globe Valve (PSB) Class 900 - 1500 - 2500	39~41*
Globe Valve Y Pattern Class 150 - 600	42*
Globe Valve Screw Down Non Return Class 300 - 2500	43*
Swing Check Valve Class 150 - 300 - 600 - 900 - 1500	44~48
Swing Check Valve c/w Lever Class 150 -300	49
Swing Check Valve (PSB) Class 900 - 1500 -2500	50~52*
Tilting Disc Check Valve (PSB) Class 600 - 2500	53~54*
Piston Check - Lift Type Class 150 - 600	55~56*
API 6D Full Port Piston Check (PSB & BB) Class 150 - 2500	57*
Stainless Steel Gate, Globe, Check Valve - Class 150 - 300	58~61*
Cryogenic Flexible Wedge Gate Valve	62~64*
Cryogenic Globe Valve	65~66*
Cryogenic Swing Check Valve	67~68*
Non Slam Nozzle Check Valve SW-NC/FL - NCFO Series	69~72*
API 6D Slab Gate Valve	73~78*
API 6D Expanding Gate Valve	79~83*
API 6D Wafer Pattern Gate Valve	84*
Parallel Slide Gate Valve Pressure Seal Bonnet - Class 600 - 2500	85~86*
Parallel Slide Gate Valve BBOSY API 600 - Class 150 - 1500	87~89*
Slurry Valve	90~93*
Technical Data	94~102*
Actuation Torque & Top Works Specifications	103~106*
Technical Considerations	107

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



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# FIGURE NUMBER SYSTEM

EXAMPLE 150FZAP125QTISN-9PBWG-FA

150	FZ	AP125	QTI	S	N	-	9	PL	BW	G	-	F	A
													<p><b>Bonnet gasket:</b>  <b>Blank</b> Standard- SS + GRP (BB), Pressure Seal Ring (PSB).          N/A- (VWB), <b>A</b> SS + PTFE <b>B</b> S31803 Spiral <b>C</b> PTFE  <b>D</b> SS + PTFE + GRP <b>E</b> Ring <b>Z</b> Special</p>
													<p>Stem packing: <b>Blank</b> Standard- Graphite. N/A- (Check Valves)  <b>F</b> Fugitive Emission GRP <b>I</b> Fugitive Emission PTFE  <b>J</b> Special <b>L</b> Live Loaded <b>P</b> Graphite + PTFE <b>T</b> PTFE</p>
													Denotes special suffix - Packing/Gasket
													<p>Operator: <b>Blank</b> Handwheel or N/A <b>A</b> Actuator <b>C</b> Counter-Weight  <b>D</b> Dampner <b>G</b> Gear <b>H</b> Hammer Blow Handwheel <b>L</b> External Lever</p>
													<p>End connection: <b>Blank</b> RF (B16.5) <b>BA</b> RF B16.47A (MSS SP44)  <b>BB</b> RF B16.47B (API 605) <b>RJ</b> RTJ <b>BW</b> Buttweld <b>FF</b> Flat Face  <b>SP</b> is special drilling <b>UD</b> Undrilled <b>UM</b> Unmachined for RF/RJ</p>
													<p>Bonnet: <b>Blank</b> Bolted <b>C</b> Cryogenic <b>H</b> Pillar &amp; Bridge <b>L</b> Low Temperature Ext.  <b>P</b> Pressure Seal <b>S</b> Bellows Sealed <b>T</b> Threaded <b>W</b> Welded</p>
													Body material: - see page 5. (WCB is Blank)
													Denotes special suffix - Body/Bonnet/Ends/Operator
													<b>Blank</b> Non NACE <b>N</b> NACE <b>C</b> Cryogenic
													<p><b>Blank</b> Standard Configuration (Example Solid Wedge) <b>A</b> S Bend Globe <b>D</b> Globe-Stop Check  <b>DG</b> Globe - Stop Check Guided <b>F</b> Flexible Disc Gate <b>J</b> Slab Gate <b>K</b> Expanding Gate <b>L</b> Lever (Swing Check)  <b>P</b> Full Opening Swing Check (API 6D) <b>Q</b> Full Opening Piston Check (API 6D) <b>R</b> Right Angle <b>S</b> Parallel Slide  <b>Y</b> Inclined Bonnet <b>Z</b> c/w Spring</p>
													Denotes trim - Code & Modifier (see below)
													Basic identifier number denoting valve class and valve type (As shown in catalogue)
													Prefix: <b>Blank</b> APV <b>FZV</b> APV-FZV J.V.
													Valve Size

## TRIM CODES

		BODY SEAT SURFACE	DISC SURFACE	STEM	BACK SEAT (STUFFING BOX)
TRIM CODE (1)	B	Bronze	Bronze	Bronze	Bronze
	C	AL-Bronze	AL-Bronze	AL-Bronze	AL-Bronze
	D	Monel(1)	Monel(1)	Monel	Monel
	E	F51(1)	F51(1)	F51	F51
	G	F55(1)	F55(1)	F55	F55
	H	Hastelloy B(1)	Hastelloy B(1)	Hastelloy B	Hastelloy B
	L	F316(1)(6)	F316(1)(6)	F316(6)	F316(6)
	M	F316L(1)	F316L(1)	F316L	F316L
	N	Alloy 20(1)	Alloy 20(1)	Alloy 20	Alloy 20
	P	F304(1)	F304(1)	F304	F304
	Q	F304L(1)	F304L(1)	F304L	F304L
	R	Alloy 625(1)	Alloy 625(1)	Alloy 625	Alloy 625
	V	F53(1)	F53(1)	F53	F53
	W	F347(1)	F347(1)	F347	F347
MODIFIER	Blank	F6a/F6/410	F6a/F6/410	F6a/F6/410	F6a/F6/410
	Z	Special(1)	Special(1)	Special	Special
	EN	ENP	ENP	(2)	(2) (3)
	GE(5)	Stellite #6	Stellite #12	17-4 PH	Stellite #6
	I	-	-	17-4 PH	-
	M	-	-	Monel	-
	T	+PTFE Seat	-	-	-
	U	Stellite	Stellite	(2)	(2) (3)
	X	(4)	(4)	(4)	(4)
	XU	Stellite	(2)	(2)	(2) (3)
Z	-	-	Special	-	

(1) Add modifier below if applicable. (2) As per trim code above or stellite (refer dwg). (3) Or Integral as per body. (4) API trim code #1 only. (5) Geothermal trim. (6) Can be dual certified 316/316L.



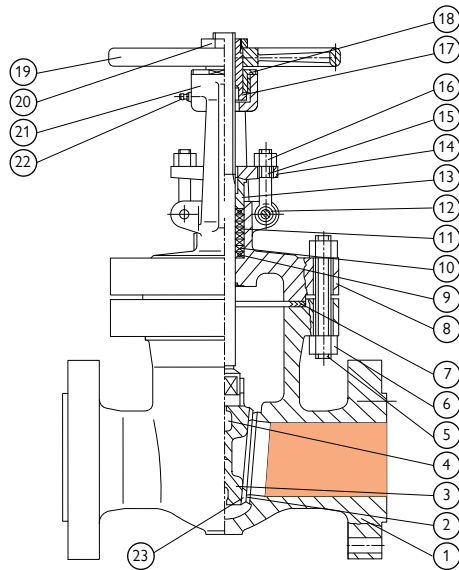
## FIGURE NUMBER CODES

### BODY MATERIAL CODE • BODY/BONNET MATERIALS

Suffix	ASTM Spec.	Material
None	A216 WCB / A105N	Carbon Steel
1	A216 WCC	Carbon Steel
1A	A217 WC1	Carbon Moly 1/2% Mo
2	A352 LCC	Low Carbon Steel
2B	A352 LCB / LF2	Low Carbon Steel
4	A351 CF3M / 316L	Stainless with Molybdenum (low carbon)
5	A217 Gr. C5 /F5	5% Cr, 1/2% Mo
6	A217 Gr. WC6 / F11	1-1/4% Cr, 1/2% Mo
7	A217 Gr. WC9 / F22	2-1/4% CR, 1% Mo
8	A351 CF8 / 304	Stainless 18% Cr, 8% Ni
8A	A351 CF3 / 304L	Stainless 18% Cr, 8% Ni (low carbon)
8D	A351 CF8C	Stainless 18% Cr, 10% Ni & Cb
8M	A351 CF8M / 316	Stainless with Molybdenum
9	A217 Gr. C12	Chrome Moly 9% Cr, 1% Mo
10	A352 LC1	Carbon Moly 1/2% Mo
11	A352 LC3	Low Carbon Steel (-101°C)
13	A351-CN7M	Alloy 20
14	A890/A995-4A/CD3MN	Duplex (F51)
15	A995-6A/CD3MWCuN	Super Duplex (F55)
19	Bronze	Bronze B62/LG2/B148
20	AL-Bronze	Aluminium Bronze
21	A995-5A/CE3MN	Super Duplex (F53)
22	A296 M-35	Monel
23	A296 CW-12M	Hastelloy C
24	A484 CU-5M CUC	Inconel 825
25	A494 CY40	Inconel 600
26	A494 CW6MC	Inconel 625
27	B367 GR.C2	Titanium (F2)
28	B367 GR.C3	Titanium (F3)
29	A358 LC4	Low Temp. 4-1/2% Nickel Steel
30	A358 LC9	9% Nickel Steel
31	A358 CA6NM	18-1/2% Chromium, Nickel-Molybdenum Steel
32	A217 WC4	Nickel Chromium Molybdenum
33	A217 WC5	Nickel Chromium Molybdenum
34	A217 WC11	Chromium Molybdenum
35	A217 C12	Chromium Molybdenum
36	A217 C12A	Chromium Molybdenum Vanadium
37	A217 CA15	Chromium Steel
0	SPECIAL	



# MATERIAL COMBINATIONS / FEATURES



## CAST STEEL GATE VALVES ANSI CLASS 150 ~ 2500

### FEATURES

- Bolted bonnet, OS&Y, Flexible wedge.
- On smaller size valves, the yoke is cast integral with bonnet. Larger size valves have two piece yoke, refer to individual drawing.
- Stem nut is mounted with ball bearings to reduce operating torque for ease of manual operation in larger sizes and higher classes.
- Self aligning two piece gland.

### APPLICABLE STANDARDS

- Valves designed to API Std. 600 and BS 1414
- Valves tested to API Std. 598
- Face-to-face to ANSI B16.10
- Flanged ends to ANSI B16.5
- Butt-welding ends to ANSI B16.25
- Trim and seating surface as per API 600 standard.
- Stuffing box smoothness  $\leq Ra\ 3.2\ \mu m$  (superior to API 600)
- Stem smoothness to API 600  $\leq Ra\ 0.80\ \mu m$



### MATERIAL LIST

No.	Part Name	Carbon Steel				Alloy Steel			Stainless Steel			
		WCB	WCC	LCB	LCC	C5	WC6	WC9	CF8	CF8M	CF3	CF3M
	APV Suffix Code	1	2B	2	5	6	7	8	8M	0	4	
1	Body	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	A105	A105	A350 LF2	A350 LF2	A182 F5	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Wedge	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F6	A182 F6	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Bonnet Bolt	A193 B7		A320 L7		A193 B16		A320 B8		A193 B8M		
6	Bonnet Nut	A194 2H		A194 7		A194 8		A194 8M				
7	Gasket	Solid metal serrated gasket		Stainless Steel & Graphite wound			Non-metallic gasket		Stainless Steel or Soft Iron Ring Gasket			
8	Bonnet	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A217 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Back Seat Bushing	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
10	Stem Packing	Braided/Flexible Graphite or PTFE										
11	Lantern*1	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 304L	A182 F316L
12	Pin	Carbon Steel			Stainless Steel		Alloy Steel					
13	Gland	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
14	Gland Flange	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
15	Gland Eyebolt	A307 B		A307 L7		A193 B7		A193 B8		A193 B8M		
16	Gland Nut	A194 2H		A194 4		A194 8		A194 8M				
17	Stem Nut	A439D2 (Austenitic DI)					ZCuA110Fe3 (AL-Bronze)					
18	Retaining Nut	Carbon Steel or Alloy Steel										
19	Hand Wheel	Ductile Iron or Carbon Steel										
20	H.W. Lock Nut	Carbon Steel			Stainless Steel			Alloy Steel				
21	Yoke	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
22	Nipple	Copper Alloy			or Carbon Steel			or Stainless Steel				
23	Seat/Wedge Facing	13Cr		or 16Cr-8Ni		or HF(Co-CrA)		or 316		or 304		

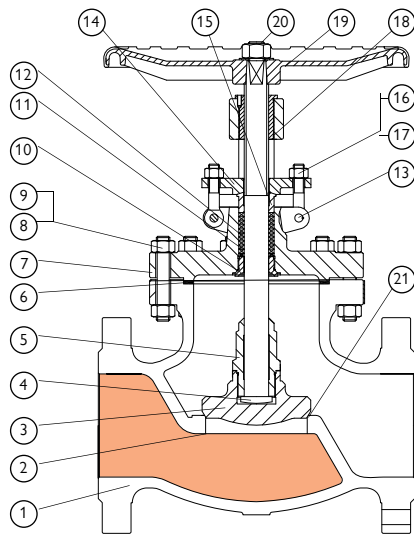
\*1 Lantern Ring where applicable



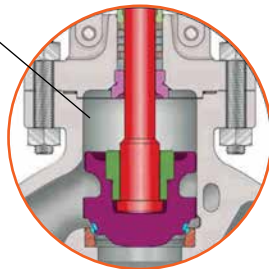
API 622 & ISO 15848-1  
Fugitive Emission Certified

API 607 & ISO 10497  
Firesafe Certified

# MATERIAL COMBINATIONS / FEATURES



**Body Guided Disc** style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.



## CAST STEEL GLOBE VALVES ANSI CLASS 150 ~ 2500

### FEATURES

- Bolted bonnet, OS&Y, Swivel Disc.
- Plug type disc (Ball type also available).
- On smaller sizes, the yoke is cast integral with bonnet. Larger sizes have two piece yoke, refer to individual drawing.
- Stem nut is mounted with ball bearings to reduce operating torque for ease of manual operation in larger sizes and higher classes.



### APPLICABLE STANDARDS

- Valves designed to ASME B16.34 / API 623 wall thickness to API 623
- Valves tested to API Std. 598
- Face-to-face to ANSI B16.10
- Flanged ends to ANSI B16.5
- Butt-welding ends to ANSI B16.25
- Trim and seating surface as per API 600
- Stuffing box smoothness  $\leq Ra\ 3.2\ \mu m$  (superior to API 623 / API 600)
- Stem smoothness to API 623  $\leq Ra\ 0.80\ \mu m$

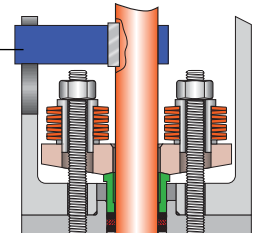


API 622-2 & ISO 15848-1  
Fugitive Emission Certified

API 607-7th & ISO 10497  
Firesafe Certified

### Torque Arm

Used in larger sizes the torque arm prevents stem movement which reduces wear on packing rings and enables better sealing as well as reducing torque. Non rotating stem, only the stem nut rotates. The arm also provides visual stem position indication and can be interfaced with position switches. Optional live loaded packing system is shown.



## MATERIAL LIST

No.	Part Name	Carbon Steel				Alloy Steel			Stainless Steel			
		WCB	WCC	LCB	LCC	C5	WC6	WC9	CF8	CF8M	CF3	CF3M
	APV Suffix Code	1	2B	2	5	6	7	8	8M	0	3M	
1	Body	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	A105	A105	A350 LF2	A350 LF2	A182 F5	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Disc	A105	A216 WCC	A350 LF2	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Stem	A182 F6	A182 F6	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Disc Nut	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
6	Gasket	Solid metal serrated gasket		Stainless Steel & Graphite spiral wound		Non-metallic gasket		Stainless Steel or Soft Iron Ring Gasket				
7	Bonnet	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
8	Bonnet Bolt	A193 B7				A320 L7	A193 B16	A320 B8	A193 B8M			
9	Bonnet Nut	A194 2H				A194 7		A194 8M				
10	Back Seat Bushing	A182 F6	A182 F6	A182 F6	A182 F6	A182 F6a	A182 F6a	A182 F6a	A182 F304	A182 F316	A182 304L	A182 F316L
11	Stem Packing	Braided/Flexible Graphite or PTFE										
12	Lantern*	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
13	Pin	Carbon Steel			Stainless Steel		Alloy Steel					
14	Gland Flange	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
15	Gland	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
16	Gland Eyebolt	A307 B		A307 L7	A193 B7	A193 B8	A193 B8M					
17	Gland Nut	A194 2H		A194 4	A194 8	A194 8M						
18	Stem Nut	A439D2 (Austenitic DI)				ZCuA110Fe3 (AL-Bronze)						
19	Handwheel	Ductile Iron or Steel										
20	H.W. Lock Nut	Carbon Steel			Stainless Steel		Alloy Steel					
21	Seat/Disc Facing	13Cr		or	16Cr-8Ni	or	HF(Co-CrA) ST#6	or	316	or	304	

\* Lantern Ring where applicable.

# MATERIAL COMBINATIONS / FEATURES

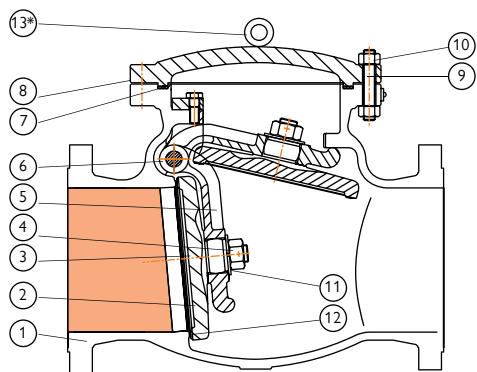
## CAST STEEL CHECK VALVES ANSI CLASS 150 ~ 2500

### FEATURES

- Bolted or pressure seal bonnet
- Swing disc

### APPLICABLE STANDARDS

- Valves designed to ASME B16.34 and API 594/API 6D
- Valves tested to API Std. 598/API 6D/ISO 5208
- Face-to-face to ANSI B16.10
- Flanged ends to ANSI B16.5
- Butt-welding ends to ANSI B16.25
- Trim and seating surface as per API 600 standard.



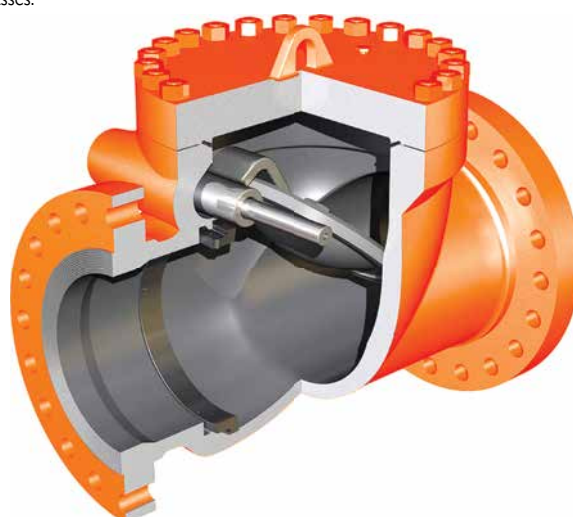
API 6FD & API 6FA-5th  
Firesafe Certified  
(API 6D Version)

## MATERIAL LIST

No.	Part Name	Carbon Steel				Alloy Steel			Stainless Steel			
		WCB	WCC	LCB	LCC	C5	WC6	WC9	CF8	CF8M	CF3	CF3M
APV Suffix Code		1	2B	2	5	6	7	8	8M	0	3M	
1	Body	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
2	Seat Ring	A105	A105	A350 LF2	A352 LCC	A182 F5	A182 F11	A182 F22	A182 F304	A182 F316	A182 F304L	A182 F316L
3	Disc	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
4	Disc Nut	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
5	Hinge	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
6	Hinge Pin	A182 F6	A182 F6	A182 F6	A182 F6	A182 F304	A182 F304	A182 F304	A182 F304	A182 F316	A182 F304L	A182 F316L
7	Gasket	Solid metal serrated gasket		Stainless Steel & Graphite spiral wound		Non-metallic gasket		Stainless Steel or CAD Plated Soft Iron Ring Gasket				
8	Cover	A216 WCB	A216 WCC	A352 LCB	A352 LCC	A217 C5	A217 WC6	A217 WC9	A351 CF8	A351 CF8M	A351 CF3	A351 CF3M
9	Cover Bolt	A193 B7		A320 L7	A193 B16	A193 B8	A193 B8M					
10	Cover Nut	A194 2H		A194 4	A194 7	A194 8						
11	Washer	Carbon Steel or Alloy Steel or Stainless Steel										
12	Seat/Disc Facing	13Cr		or	16Cr-8Ni	or	HF(Co-CrA) ST#6	or	316	or	304	
13	Eye Bolt*	A193 B7		A320 L7								

The material is according to ASTM standard.

\* Eye bolt supplied in larger sizes & higher classes.





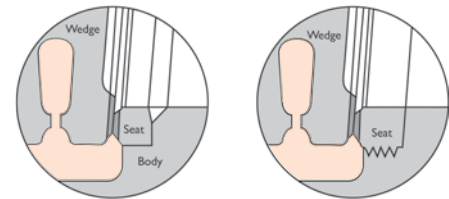
## API 600 CAST STEEL VALVES

**APV** Cast steel valves are designed and manufactured to conform with API, ASTM, ANSI and other applicable internationally recognised standards, to possess all the qualities to meet with stringent requirement criteria of petroleum, petro-chemical and general industrial applications.

**APV** Valves are tested in accordance with applicable API standards. Full traceability is maintained.

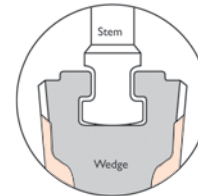
**APV** Valves offer the option of hard facing on the wedge (disc) and seating areas.

**APV** Gate Valves are optionally available with lantern rings. These rings along with double packing provide a leak-off connection. Alongside are illustrations of lantern rings as well as disc connection. Fugitive emission packing sets do normally need a lantern ring.

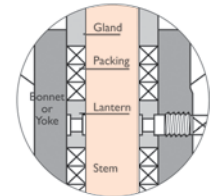


Seat Ring (welded)

Seat Ring (threaded)



Connection of stem to wedge



Lantern ring and packing

### FUGITIVE EMISSION SERVICE

APV offers fugitive emission service valves on special request. The valves comply with environmental protection requirements. APV fugitive emission valves are designed, manufactured and tested to meet less than 100ppm with packing conforming to API 622 and valve design tested to API 624 and ISO 15848-1. Furthermore, optional live-loading of packing bolts is available. Two sets of belleville plate springs maintain a permanent packing stress of 24,000-28,000 kPa. Live-loading extends low emission service life especially in service with high pressure/temperature transients.

The stem on all APV fugitive emission service valves is surface finished to  $\leq Ra\ 0.80\ \mu m$ . Straightness and roundness are precisely controlled. The stuffing box has a maximum  $\leq Ra\ 3.2\ \mu m$  surface finish. Cylindricity and verticality are precisely controlled.

## GENERAL DESIGN SPECIFICATIONS

	STANDARD
Shell wall thickness and general valve design specifications	API 600 (Gate Valves) API 603 (Gate Valves) API 594 (Check Valves) API 623 (Globe Valves)
Pressure-temperature ratings	ANSI B16.34
Face-to-face & End to end dimensions	ANSI B16.10
Flanged end dimensions	ANSI B16.5*
Welding end dimensions	ANSI B16.25

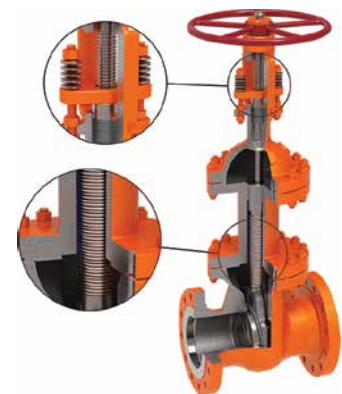
\*Valves 700NB (28") and larger according to MSS SP-44 or API 605 are available.

### LIVE LOADING

Live Loading is an addition of spring washers to the gland studs to maintain the packing load of the valve over time.

### BELLOW SEAL

The bellow seal replaces the dynamic sealing system of a stem packing by a static sealing system between the valve bonnet and the valve stem bottom. It prevents the valve from the risk of leakage from the valve packing for VOC or toxic services.



Bellows Seal Option

## BOLTED BONNET GATE VALVES

### FEATURES

Full body wedge guides allow correct wedge alignment. Yoke sleeve with bearings reduce torque for easy operation. Seat rings allow easy access for maintenance and packing replacement is simple. Seat face 13Cr hardfaced, ground and lapped to a Ra 0.4~0.8 µm finish. Wedge is ground and lapped to a Ra 0.4~0.8 µm finish and tightly guided to prevent dragging and seat damage. Non-rotating stem with precision Acme threads and burnished finish. Rotating stem nut is austenitic ductile iron Gr. D-2C renewable.

### STANDARDS

API 600 and ANSI B16.34. Dimensions to ANSI B16.10 and ISO 5727.

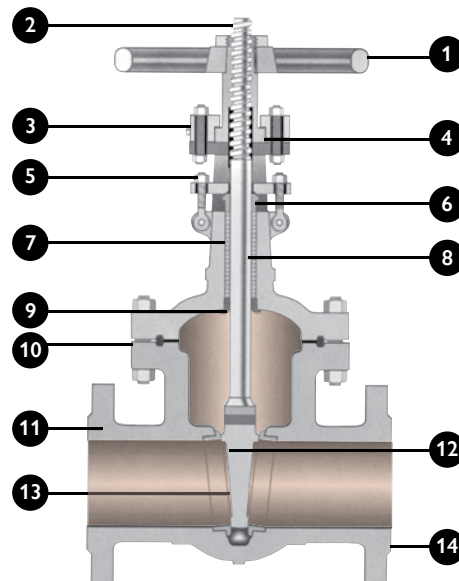
Stuffing box smoothness ≤Ra 3.2 µm superior to API 600.

Stem smoothness ≤Ra 0.80 µm as per API 600.

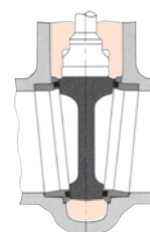
### SOFT SEATED TRIM OPTION

All gate valves are available with optional PTFE seat rings. The moulded PTFE ring is bonded into a seat ring groove in the face for maximum service life. This design is excellent for lower temperature service where tight shutoff is required.

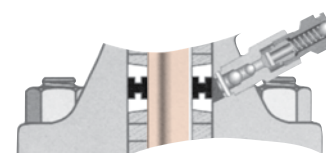
Parallel slide style  
also available,  
see page 20, 84 - 88  
and also see  
APV Steamco Catalogue



1. Handwheel
2. Rising Stem - provides open-close indication
3. Grease Fitting - to minimise wear and operating torque
4. Yoke Sleeve - furnished in ductile Ni-resist or aluminium-bronze for low torque operation
5. Swing Bolt - easier maintenance and packing replacement
6. Gland - flange is self-aligning to eliminate stem damage
7. Stuffing Box
8. Stem - upset forge T-head stems to eliminate possibility of a bent stem jamming the valve
9. Backseat - provides back-up stem seal
10. Bonnet Joint
11. Body - full ported, heavy wall body API 600 wall thickness
12. Wedge - heavy pattern. Available in solid & flex wedge
13. Seat Ring - full ported rings for easy maintenance
14. End Connections - flanged or butt weld ends



Soft seated "ST" trim option



Sealant injector and lantern ring option



API 622 & ISO 15848-1  
Fugitive Emission Certified



ISO 10497-1 & API 607-7th  
Firesafe Certified



# BOLTED BONNET GLOBE VALVES

## OPERATION

Seat rings are easily accessible for repair or replacement. Australian Pipeline Valve globe valves are for services requiring frequent operation for on-off isolation service as well as throttling. Never attempt throttling at under 20% of stem travel. Closer throttling, can result in higher pressure drops which may cause excessive velocities or cavitation and could cause vibration or high noise levels resulting in damage to the valve or adjacent components/structure.

## LIFE

Heavy construction provides years of reliable service.

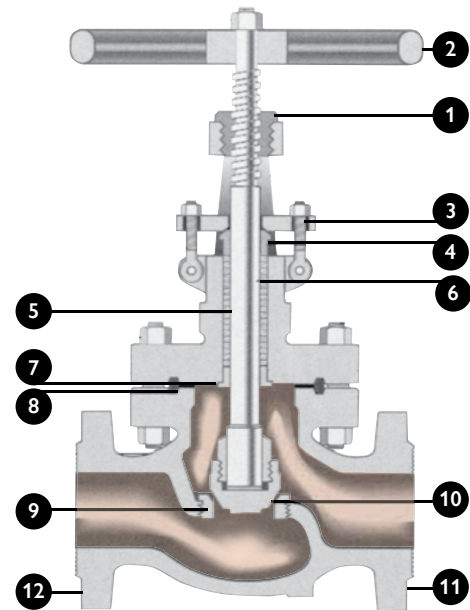
## DESIGN

Available in bolted and pressure seal bonnet, outside screw and yoke, rising stem with ball or plug type disc, and have flanged or butt weld ends. Screw down non-return (Stop check) also available. Stem with precision Acme threads and burnished finish. Valve suitable for horizontal installation. Conical seating surfaces 13Cr hardfaced/stellite, ground and lapped to a Ra 0.4~0.8 µm finish. Tapered plug type disc as standard. Body guided disc on larger sizes, and higher classes on smaller sizes, accurately mates the hardfaced surface of the disc with the surface of the seat. Body and bonnet joint accurately machined. Fully enclosed gasket. Rotating stem nut, austenitic ductile iron Gr. D-2C, renewable in-line.

## STANDARDS

To ASME B16.34 / API 623. Dimensions to ASME B16.10 and ISO 5752.

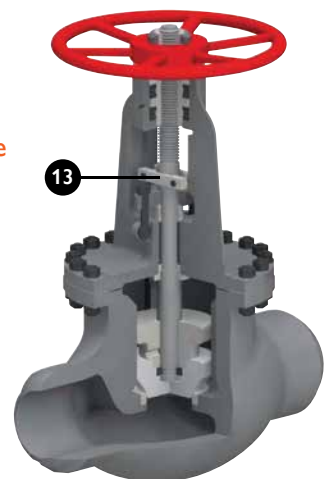
Wall thickness, stem smoothness and stuffing box finish complies with API 623. APV stuffing box smoothness  $\leq Ra\ 3.2\ \mu m$  superior to API 623 / API 600. Stem smoothness  $\leq Ra\ 0.80\ \mu m$  as per API 623.



1. Yoke Sleeve - furnished in aluminium-bronze to reduce torque. Larger sizes furnished with bearings
2. Handwheel
3. Swing Bolts - easier maintenance
4. Gland - self-aligning to eliminate stem damage
5. Stuffing Box
6. Stem - heavy duty
7. Backseat - provides back-up stem seal
8. Bonnet Joint - ring joint or spiral according to ANSI class
9. Seat Rings - separate heavy duty, full ported rings for easy maintenance
10. Disc - heavy duty disc plug design
11. End Connections - flanged or butt weld ends
12. Body - full ported, with API 600 / API 623 heavy wall thickness
13. Stem guide - (Optional) for reduced packing wear



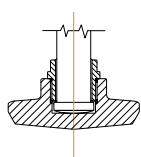
API 623  
Guided  
disc style  
(Non  
Rotating  
Stem  
Version)



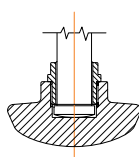
API 622 & ISO 15848-1  
Fugitive Emission Certified



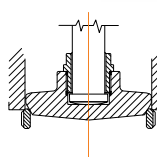
API 607-7th & ISO 10497  
Firesafe Certified



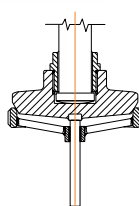
Plug Disc



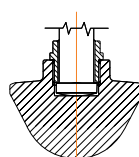
Ball Disc



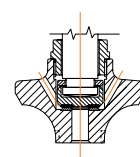
Body Guided Disc



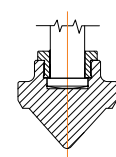
Pin Guided Disc



Parabolic Disc



Equilibrated Disc



Vee Point Disc

## BOLTED BONNET CHECK VALVES

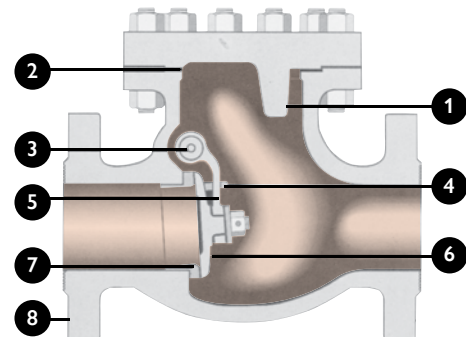
Australian Pipeline Valve valves are designed to provide fast valve action and maximum life. All valves are full ported, have full API 594/API 600 wall thickness, and meet the requirements of ANSI B16.34. Full opening API 6D (piggable) type also available on request.

### DESIGN

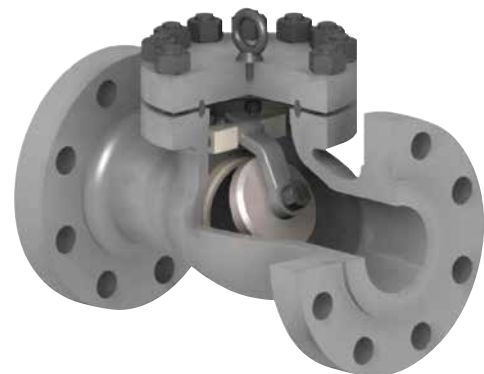
ASME B16.34 / API 594 /API 6D as applicable.

### FEATURES

Check valves are designed to close quickly in either horizontal or vertical (flow up) pipe runs. The body seat ring is installed on a 3° angle. This allows our check valve to close even when installed in horizontal pipe run with no pressure.



1. Disc Stop - provides positive stop in open position
2. Bonnet Joint - (ring or spiral according to class)
3. Hinge Pin - solid pin for maximum strength
4. Securing Lugs - allow disc to seat freely and prevent disc spinning
5. Hinge - designed to withstand shock and load of quick closing
6. Disc - disc is bolted and pinned to hinge; ground seating surface is mated to seat ring for positive shut off
7. Seat Ring - Full port seal welded or screwed
8. End Connections - flanged or butt weld



API 6FD & API 6FA-5th  
Firesafe Certified  
(API 6D Version)

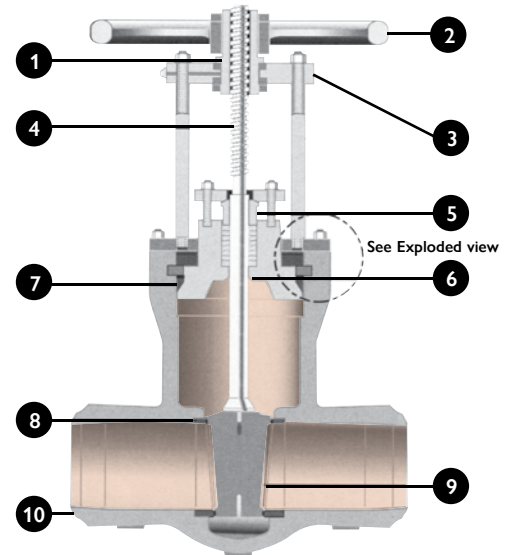


# PRESSURE SEAL BONNET VALVES

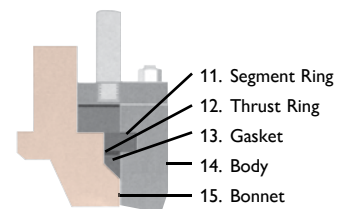
## FLEXIBLE WEDGE GATE VALVE

The wedge is a one piece, fully guided wedge. Available in flex wedge and solid wedge. (Flexible wedge allows the seating faces to move to compensate for thermal expansion). Wedging actions allows a tight seal even in low differential pressure services. Flexible wedge construction resists wedge sticking in service where the valve may be closed when hot and opened when cold. Seating surfaces are hardfaced for long life.

Parallel slide also available, see page 20, 84 - 85 and also see APV Steamco Catalogue.



1. Yoke Sleeve - aluminium-bronze yoke sleeve has thrust bearings to minimise torque
2. Hand Wheel - (or gear in larger sizes)
3. Yoke - offering ease of maintenance
4. Stem - The design allows the wedge to self-align, eliminating the possibility of jamming the wedge
5. Gland - two piece, self-aligning gland eliminates cocking. Swing out bolting facilitates maintenance
6. Back Seat - Integral, hardfaced
7. Pressure Seal - retaining ring and mild steel silver plated/SS/SS+GRP gasket to aid disassembly and provide maximum seal
8. Seat Ring - hardfaced seat rings are welded to body. Tapered design provides clear flow path
9. Wedge - one-piece, fully guided. Parallel seat also available
10. Body - streamlined flow path minimises pressure drop. API 600 wall thickness



Exploded View



Flexible Wedge



API 622 & ISO 15848-1  
Fugitive Emission Certified

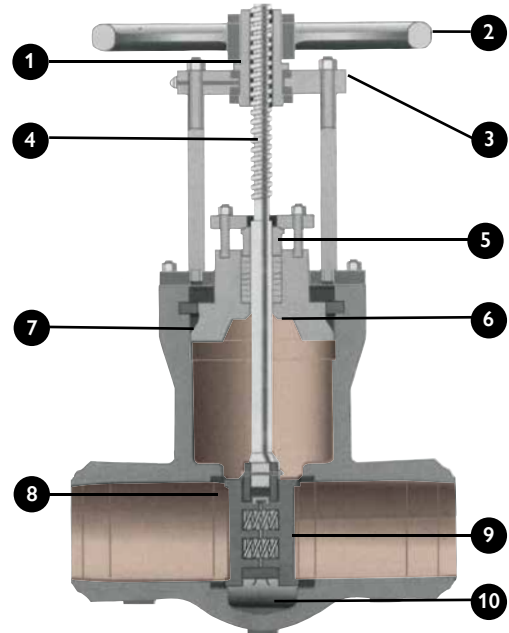


API 607-7th & ISO 10497  
Firesafe Certified

# PRESSURE SEAL BONNET VALVES

## PARALLEL SLIDE GATE VALVES

Normally utilised for shut off service but are not recommended for throttling. Gate valves are normally installed in horizontal pipe runs with the valve stem vertically up. They can be installed in horizontal or vertical pipe runs. After closing with sufficient force, the stem should be backed off slightly (1/8 turn) to relieve stem load. Parallel Slide Valves have self aligning discs with no wedging force and react freely to thermal changes. The design also ensures uniform seat wear and ease of maintenance. Parallel Slide Gate Valves are ideal where high differential pressure or thermal expansion may cause sticking of wedge to gate in traditional gate valves.

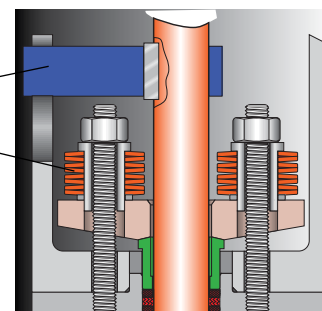


- 1. Yoke Sleeve - aluminium-bronze yoke sleeve with thrust bearings for ease of opening
- 2. Actuation - Low torque seating design reduces actuation costs
- 3. Yoke - designed to offer ease of maintenance
- 4. Stem - Threaded into disc housing and also pinned
- 5. Gland - two piece, self-aligning gland eliminates cocking. Swing out bolting facilitates maintenance
- 6. Back Seat - Integral, hardfaced
- 7. Pressure Seal - retaining ring and mild steel silver plated/SS/SS+GRP gasket to aid disassembly and provide maximum seal
- 8. Seat Ring - hardfaced seat rings are welded to body and are designed for ease of maintenance
- 9. Discs - Spring loaded discs are self-aligning and reduce actuator torque requirements
- 10. Integral Stop - Integral stop positions for reliable seating



### Pressure Seal Bonnet Non Rotating Stem & Live Loaded Packing

The torque arm design guides and centralises the stem and prevents stem movement which reduces wear on packing rings & enables better sealing as well as reducing torque. Only the stem nut rotates. The arm also provides visual stem position indication & can be interfaced with position switches. Optional live loaded packing system is shown.



# PRESSURE SEAL BONNET VALVES

## GLOBE & SDNR CHECK VALVES

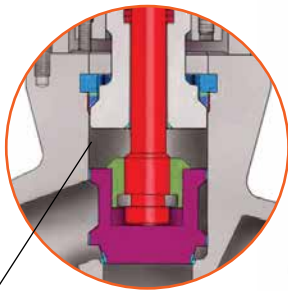
Australian Pipeline Valve Globe valves are installed with pressure and flow under the disc. Globe valves are suitable for most throttling applications; they should not be used for throttling at less than 10% open. Stop Check Valves have a guided loose disc allowing the valve to act as a combination globe valve and check valve.



API 622 & ISO 15848-1  
Fugitive Emission Certified

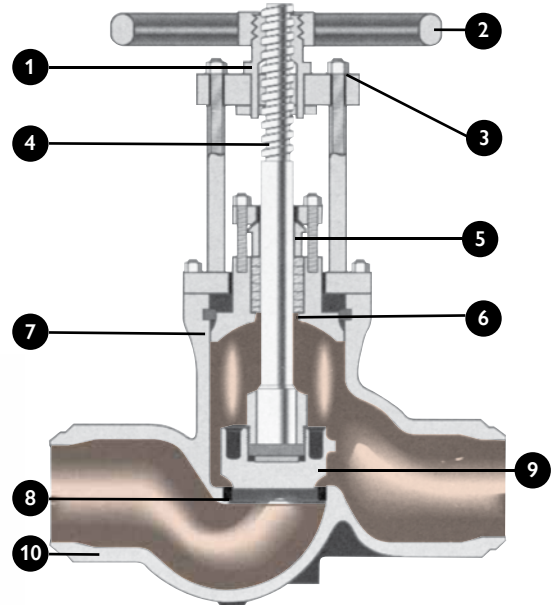


API 607-7th & ISO 10497  
Firesafe Certified



### Body Guided Disc

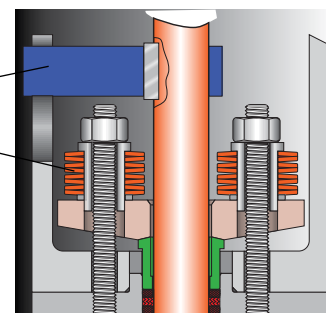
Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.



1. Yoke Sleeve - aluminium-bronze yoke sleeve minimizes operating torque. Larger sizes have needle bearing type thrust bearings
2. Actuation - Manual handwheel gear operator or actuated
3. Yoke - designed to offer ease of maintenance
4. Stem - precision-ground stem has upset tee-head for reliable stem/wedge connection
5. Gland - two piece, self-aligning gland eliminates cocking. Swing out bolting facilitates maintenance
6. Back Seat - Integral, hardfaced
7. Pressure Seal - uncomplicated design has segmented retaining ring and mild steel silver plated/SS/SS+GRP gasket to aid disassembly and provide maximum bonnet seal
8. Hardened Seating Surfaces - both disc and body seating surfaces are hard faced for maximum service life
9. Disc - fully body guided for positive seating
10. Body - Full port 's' pattern design available to minimise pressure drop

### Pressure Seal Bonnet Non Rotating Stem & Live Loaded Packing

The torque arm design guides and centralises the stem and prevents stem movement which reduces wear on packing rings & enables better sealing as well as reducing torque. Only the stem nut rotates. The arm also provides visual stem position indication & can be interfaced with position switches. Optional live loaded packing system is shown.



# PRESSURE SEAL BONNET VALVES

## CHECK VALVES

Australian Pipeline Valve Check valves are installed with pressure and flow under the disc.

### TILTING DISC CHECK VALVES

Reduced maintenance is assured because the disc is the only moving part and is designed to minimise flutter in the closed position, thus reducing wear on the pivot pin, disc, and seat.

Loss of head is minimised by the balanced disc and its 'aerofoil' design. Short distance of travel, combined with a balanced disc allows rapid closure while minimising slamming.

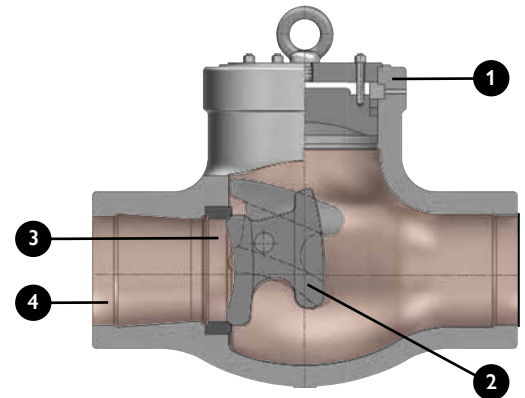
Drip tight seating is accomplished over the full pressure range because a slight clearance at the pivot pin assures complete seating between the disc ring and body ring.

The hinge pin located near the center of gravity allows the conical seating face of the disc to move out and into the seat rapidly without sliding or wear. The disc pivots through a small arc preventing backflow and 'water hammer'. Superior tightness - conical, lapped-in hardfaced seating is self aligning. Valve can be used in horizontal but also even in vertical piping with flow up.

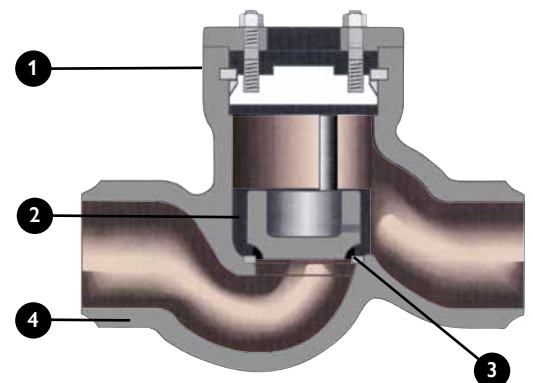
### PISTON LIFT CHECK VALVES

Piston Lift Check valves are generally used in applications where pressure drop through the valve is not critical, although APV piston check valves have a relatively low pressure drop. available in horizontal, right angle, Y patterned (inclined) and vertical designs. Excellent for low or pulsating flows with good to moderate sealing capability. APV offers fully guided disc through the total travel.

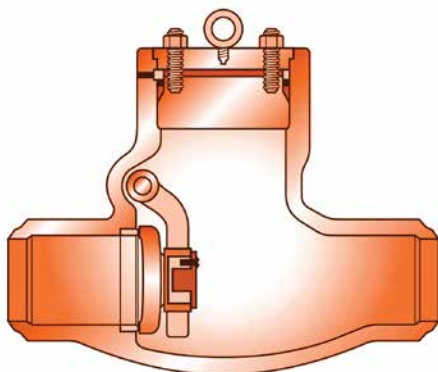
Piston Lift Check Valves may be equipped with equaliser lines to vent the bonnet area above the disk and eliminate any dash-pot effect during rapid operation. An aspirator is also available with an adjustable valve to control disc opening and closing speed.



- 1. Pressure seal design - with retaining ring
- 2. Tilting disc - internal pin
- 3. Welded in - hardfaced seat ring
- 4. Full port



- 1. Pressure seal design - with retaining ring
- 2. Guided disc - for positive seating
- 3. Welded in - hardfaced seat ring
- 4. Full port - S pattern flow path available to minimise pressure drop





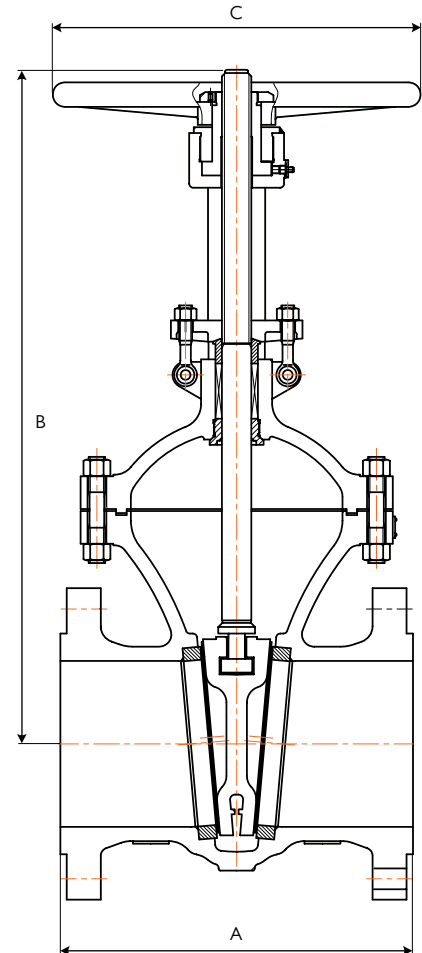
# GATE VALVE

## CAT 40~1200AP47XXXXXXXXXX-XX CLASS 150

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13 or Stellite/HF
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat / Facing	Stainless Steel/HF	A105/F6a+410SS/CR13/Stellite
Back Seat Ring	Stainless Steel	A276 Gr. 410 or A182 Gr. F6a
Yoke Sleeve	Ductile Iron or Bronze	A439 Gr. D2C or B62
Sleeve Gland	Carbon Steel	A216 Gr. WCB
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Wheel Nut	Carbon Steel	A105
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Bearing	-	Thrust Ball
Grease Nipple	Carbon Steel	A307 Gr. B
Set Screw	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	316/Graphite	Reinforced Graphite 316 Tanged

Standards	
Face to Face/End to End	ANSI B16.10
Flange Dimensions	ANSI B16.5/26" & larger MSS SP-44
Basic Design	API 600
Testing	API 598



### DIMENSIONS

(MM)

Size (in)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
<b>A. Face to Face RF</b>	165	178	190	203	229	268	292	330	356	381	406
<b>A. End to End BW</b>	165	216	241	283	305	403	419	457	502	571	610
<b>B. Valve Open</b>	365	390	435	511	610	765	978	1146	1372	1587	1759
<b>C. Hand Wheel Dia</b>	229	229	229	254	305	356	406	457	508	559	559
<b>Weight (Kg) RF *</b>	20	24	28	30	50	85	127	195	283	450	560

For 1/2" to 1" dimensions see page 57 and overview brochure.

### DIMENSIONS

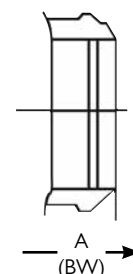
(MM)

Size (in)	18"	20"	22"	24"	26"	28"	30"	32"	36"	42"	48"
<b>A. Face to Face RF</b>	432	457	508	508	559	610	610	660	711	787	914
<b>A. End to End BW</b>	660	711	762	813	864	914	914	965	1016	1092	-
<b>B. Valve Open</b>	1930	2156	2346	2515	2721	2896	3130	3264	3588	4610	4842
<b>C. Hand Wheel Dia</b>	559	610	660	660	813	813	813	815	813	813	-
<b>Weight (Kg) RF *</b>	700	900	1050	1350	2000	2400	2800	3400	3820	5900	7300

For 1/2" to 1" dimensions see page 57 and overview brochure.

For CF8/CF8M 150lb gate see page 57.

\* For Butt weld weights see overview brochure.



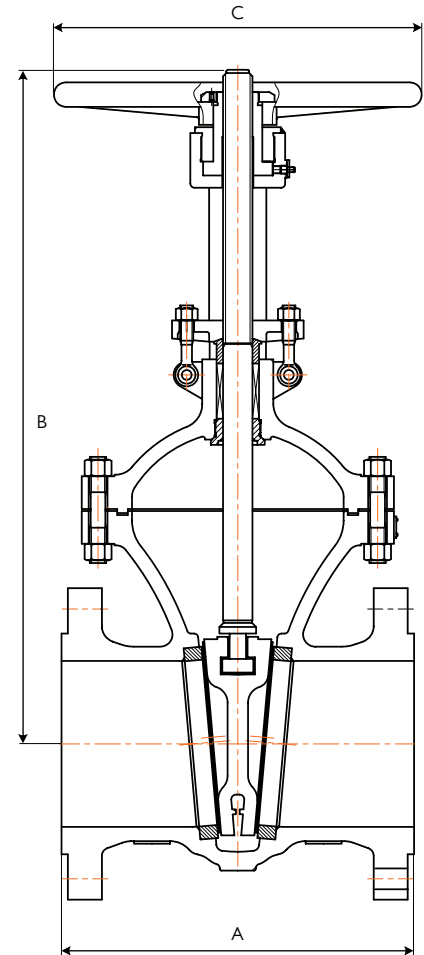
# GATE VALVE

## CAT 40~600AP33XXXXXXXXXX-XX CLASS 300

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13 or Stellite/HF
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat / Facing	Stainless Steel/HF	A105/F6a+410SS/CR13/Stellite
Back Seat Ring	Stainless Steel	A276 Gr. 410 or A182 Gr. F6a
Yoke Sleeve	Ductile Iron or Bronze	A439 Gr. D2C or B62
Sleeve Gland	Carbon Steel	A216 Gr. WCB
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Wheel Nut	Carbon Steel	A105
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Bearing	-	Thrust Ball
Grease Nipple	Carbon Steel	A307 Gr. B
Set Screw	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Spiral Wound	304/316 Graphite filled

Standards	
Face to Face/End to End	ANSI B16.10
Flange Dimensions	ANSI B16.5
Basic Design	API 600
Testing	API 598



### DIMENSIONS

(MM)

Size (in)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
<b>A. Face to Face RF</b>	190	216	241	283	305	403	419	457	502	762	838
<b>A. End to End BW</b>	190	216	241	283	305	403	419	457	502	762	838
<b>B. Valve Open</b>	365	429	457	527	619	829	1025	1213	1473	1589	1784
<b>C. Hand Wheel Dia</b>	229	229	229	254	305	406	457	508	559	559	559
<b>Weight (Kg) RF *</b>	20	24	44	50	74	137	217	337	580	715	1050

For 1/2" to 1" dimensions see page 58 and overview brochure.  
 For RTJ & 5" dimensions see overview brochure.

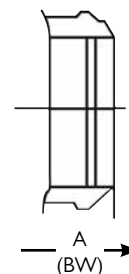
### DIMENSIONS

(MM)

Size (in)	18"	20"	24"				
<b>A. Face to Face RF</b>	914	991	1143				
<b>A. End to End BW</b>	914	991	1143				
<b>B. Valve Open</b>	1965	2194	2578				
<b>C. Hand Wheel Dia</b>	610	660	660				
<b>Weight (Kg) RF *</b>	1235	1655	2320				

For CF8/CF8M 300Lb gate see page 58.

\*For Butt weld weights see overview brochure.



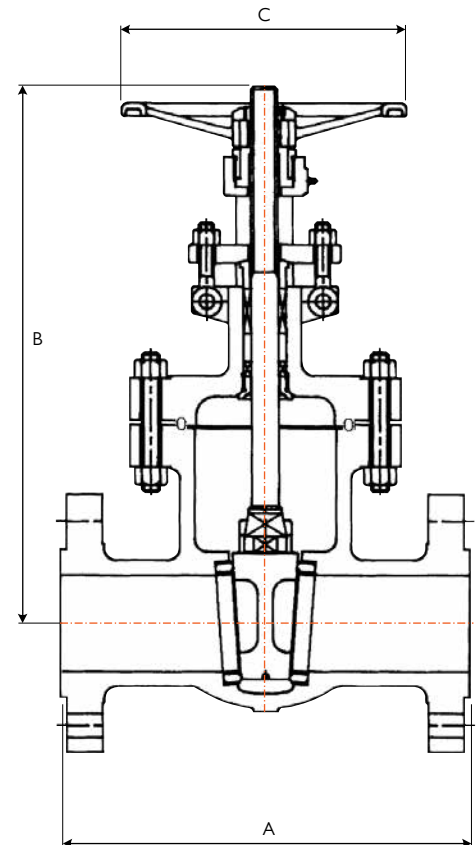
# GATE VALVE

## CAT 40~1200AP76XXXXXXXXXX-XX CLASS 600

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13 or Stellite/HF
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat / Facing	Stainless Steel/HF	A105/F6a+410SS/CR13/Stellite
Back Seat Ring	Stainless Steel	A276 Gr. 410 or A182 Gr. F6a
Yoke Sleeve	Ductile Iron or Bronze	A439 Gr. D2C or B62
Sleeve Gland	Carbon Steel	A216 Gr. WCB
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Wheel Nut	Carbon Steel	A105
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Bearing	-	Thrust Ball
Grease Nipple	Carbon Steel	A307 Gr. B
Set Screw	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	

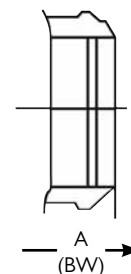
Standards	
Face to Face/End to End	ANSI B16.10
Flange Dimensions	ANSI B16.5
Basic Design	API 600
Testing	API 598



### DIMENSIONS

(MM)

Size (in)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
A. Face to Face RF	241	292	330	356	432	559	660	787	838	889	991
A. Face to Face RTJ	241	390	333	359	435	562	664	790	841	892	994
A. End to End BW	241	292	330	356	432	559	660	787	838	889	991
B. Valve Open	362	387	457	514	638	838	1029	1270	1486	1667	1832
C. Hand Wheel Dia	229	229	254	305	406	508	559	559	610	660	660
Weight (Kg) RF	35	48	60	85	135	325	515	840	1100	1360	1910
Weight (Kg) BW	22	38	45	70	105	265	380	700	925	1240	1580



### DIMENSIONS

(MM)

Size (in)	18"	20"	24"						
A. Face to Face RF	1092	1194	1397						
A. Face to Face RTJ	1095	1197	1400						
A. End to End BW	1092	1194	1397						
B. Valve Open	2013	2331	2610						
C. Hand Wheel Dia	813	813	813						
Weight (Kg) RF	2335	2750	4450						
Weight (Kg) BW	1900	2150	3660						

For 5" and 26" to 36" dimensions see overview brochure.

# GATE VALVE

## CAT 50~500AP83XXXXXXXXXX-XX CLASS 900

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13 or Stellite/HF
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat / Ring	Carbon Steel/HF	A105/F6a+410SS/CR13/Stellite
Back Seat Ring	Stainless Steel	A182 Gr. F6a
Yoke Sleeve	Ductile Iron or Bronze	A439 Gr. D2C or B62
Sleeve Gland	Carbon Steel	A216 Gr. WCB
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Wheel Nut	Carbon Steel	A105
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7/B7M
Gland Nut	Alloy Steel	A194 Gr. 2H.2HM
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Bearing	-	Thrust Ball
Grease Nipple	Carbon Steel	A307 Gr. B
Set Screw	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Ring Joint or Spiral Wound SS, Graphite filled	

Standards	
Face to Face/End to End	ANSI B16.10
Flange Dimensions	ANSI B16.5
Basic Design*	API 600, ANSI B16.34
Testing	API 598

\*10" and over sizes are according to ANSI B16.34

### DIMENSIONS (MM)

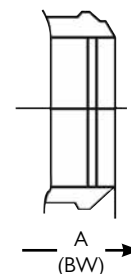
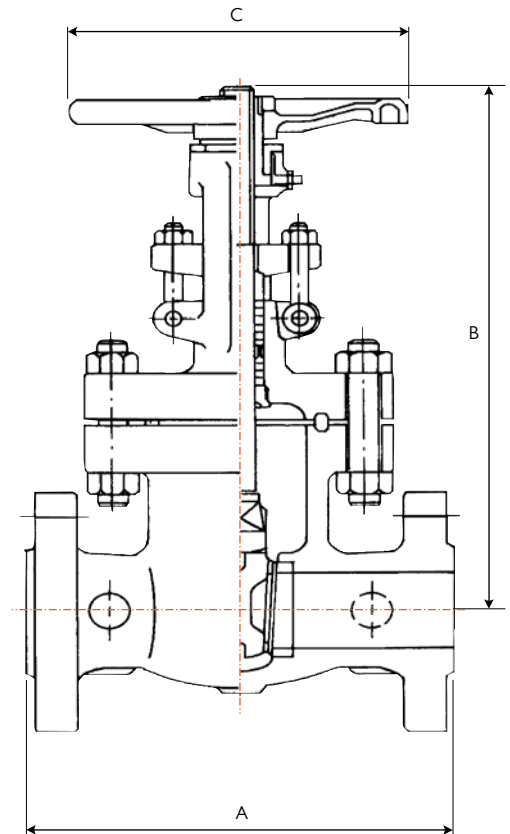
Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
A. Face to Face RF/BW	368	419	381	457	610	737	838	965	1029	1130	1219
A. Face to Face RTJ	371	422	384	460	613	740	841	968	1038	1140	1232
B. Valve Open	660	702	800	902	1121	1470	1571	1715	1880	2067	2267
C. Hand Wheel Dia	356	406	356	559	610	813	610	610	610	760	-
Weight (Kg) RF	100	140	120	190	460	860	1050	1600	2220	3000	3870
Weight (Kg) BW	80	120	110	180	400	710	830	1350	1890	2565	3300

Note: 900<sup>LB</sup> 2" & 2-1/2" are the same as 1500<sup>LB</sup> 2" & 2-1/2"

### DIMENSIONS (MM)

Size (in)	20"										
A. Face to Face RF	1321										
A. Face to Face RTJ	1333										
B. Valve Open	2440										
C. Hand Wheel Dia	760										
Weight (Kg) RF	4860										
Weight (Kg) BW	4050										

For 5" and 24" dimensions & weights see overview brochure.





# GATE VALVE

## CAT 50~500AP87XXXXXXXXXX-XX CLASS 1500

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13 or Stellite/HF
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat / Ring	Carbon Steel/HF	A105/F6a+410SS/CR13/Stellite
Back Seat Ring	Stainless Steel	A182 Gr. F6a
Yoke Sleeve	Ductile Iron or Bronze	A439 Gr. D2C or B62
Sleeve Gland	Carbon Steel	A216 Gr. WCB
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Wheel Nut	Carbon Steel	A105 Zn. Plating
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7/B7M
Gland Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Bearing	-	Thrust Ball
Grease Nipple	Carbon Steel	A307 Gr. B
Set Screw	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	

Standards	
Face to Face/End to End	ANSI B16.10
Flange Dimensions	ANSI B16.5
Basic Design*	API 600, ANSI B16.34
Testing	API 598

\*10" and over sizes are according to ANSI B16.34

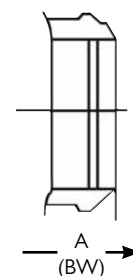
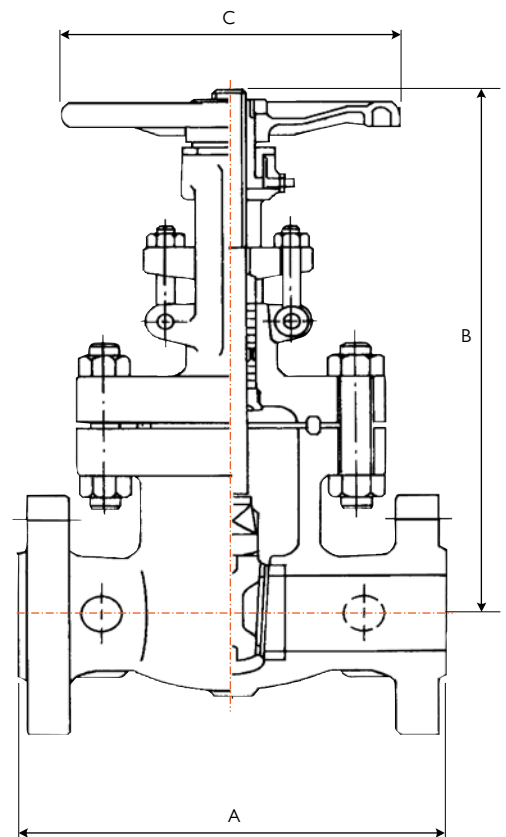
### DIMENSIONS (MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
A. Face to Face RF/BW	368	419	470	546	705	832	991	1130	1257	1384	1537
A. Face to Face RTJ	371	422	473	549	711	841	1000	1146	1276	1407	1559
B. Valve Open	590	702	781	879	1181	1343	1511	1711	1880	2067	2267
C. Hand Wheel Dia	356	406	406	559	610	813	915	915	915	-	-
Weight (Kg) RF	100	140	180	340	700	1211	2092	2951	4382	6950	9000
Weight (Kg) BW	90	130	160	240	590	986	1765	2586	3659	6000	7740

### DIMENSIONS (MM)

Size (in)	20"										
A. Face to Face RF	1664										
A. Face to Face RTJ	1686										
A. Short Pattern End to End BW	1473										
B. Valve Open	2440										
C. Hand Wheel Dia	-										
Weight (Kg) RF	11130										
Weight (Kg) Short Pattern BW	-										
Long Pattern BW	9560										

For 5" and 24" dimensions & weights see overview brochure.

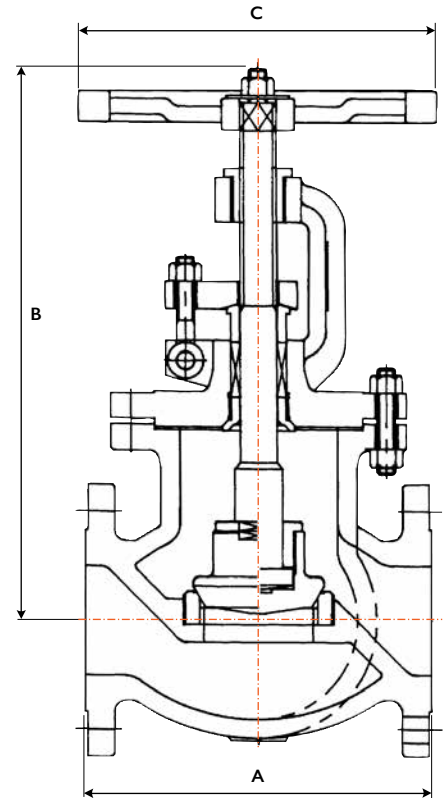


# GLOBE VALVE

## CAT 50~400AP143XXXXXXXXXX-XX CLASS 150

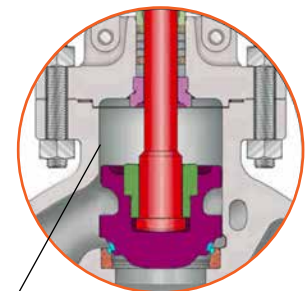
### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13/Stellite
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat	Stainless Steel	A182 Gr. F6a/CR13-Stellite/HF
Back Seat Ring	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a/A276 Gr.410
Disc Gland	Stainless Steel	A217 Gr. CA-15/A276 Gr.410
Yoke Bush	Stainless Steel or Bronze	A439 Gr. D2C or B62
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr.B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Wheel Nut	Stainless Steel	A192 Gr. 8/A105
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Spiral Wound	304/316 Graphite filled



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 / API 623*
Testing	API 598

\*Stuffing box chamber & stem smoothness to API 623 and API 600



**Body Guided Disc**

Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.

### DIMENSIONS

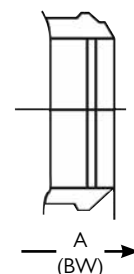
(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
<b>A. Face to Face RF</b>	203	216	241	292	406	495	622	698.5	787	914
<b>A. End to End BW</b>	203	216	241	292	406	495	622	698.5	787	914
<b>B. Valve Open</b>	330	365	413	463	536	616	746	832	1375	1569
<b>C. Hand Wheel Dia</b>	203	229	254	305	356	406	559	559	600	600
<b>Weight (Kg) RF</b>	20	26	35	65	113	190	238	410	560	890
<b>Weight (Kg) BW</b>	18	22	28	55	93	170	215	370	500	795

For RTJ dimensions and 5" dimensions, see overview brochure.

For 1/2" to 1 1/2" see page 59 and overview brochure.

For CF8/CF8M Globe 150Lb see page 59.



# GLOBE VALVE

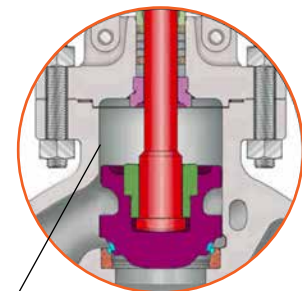
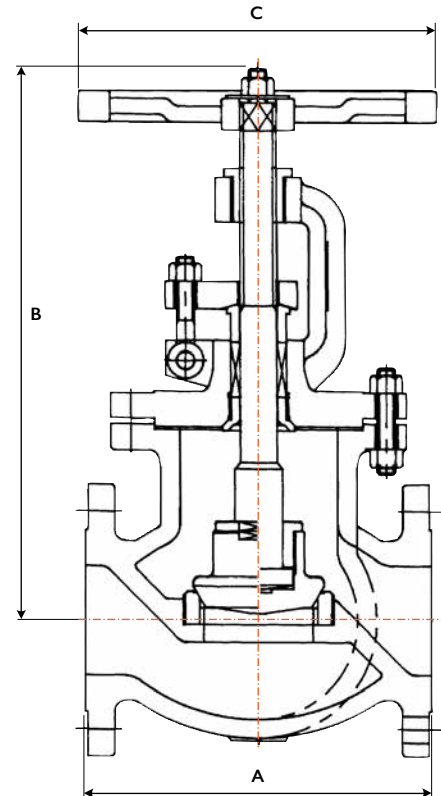
## CAT 50~400AP151XXXXXXXXXX-XX CLASS 300

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13/Stellite
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat	Stainless Steel	A182 Gr. F6a/CR13, Stellite/HF
Back Seat Ring	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a/A276 Gr.410
Disc Gland	Stainless Steel	A217 Gr. CA-15/A276 Gr.410
Yoke Bush	Stainless Steel or Bronze	A439 Gr. D2C or B62
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr.B7/2HM
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Wheel Nut	Stainless Steel	A194 Gr. 8/A105
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Spiral Wound	304/316 Graphite filled

Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 / API 623*
Testing	API 598

\*Stuffing box chamber & stem smoothness to API 623 and API 600



**Body Guided Disc**

Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.

### DIMENSIONS

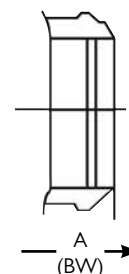
(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
<b>A. Face to Face RF</b>	267	292	317	356	444	559	622	711	838	863
<b>A. End to End BW</b>	267	292	317	356	444	559	622	711	838	863
<b>B. Valve Open</b>	356	400	448	537	625	800	990	1170	1380	1480
<b>C. Hand Wheel Dia</b>	205	229	254	305	406	559	559	559	700	-
<b>Weight (Kg) RF</b>	30	37	60	90	176	333	340	550	765	1100
<b>Weight (Kg) BW</b>	25	30	52	75	150	295	310	510	-	-

For RTJ dimensions 2" - 16" and 5" RF/RTJ dimensions, see overview brochure.

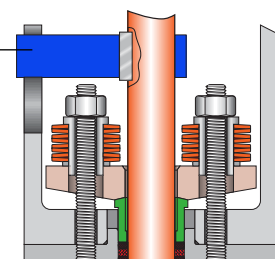
For 1/2" to 1-1/2" see page 59 and overview brochure.

For CF8/CF8M Globe 300# see page 59.



### Torque Arm

Used in larger sizes the torque arm prevents stem movement which reduces wear on packing rings and enables better sealing as well as reducing torque. Non rotating stem, only the stem nut rotates. The arm also provides visual stem position indication and can be interfaced with position switches. Optional live loaded packing system is shown.

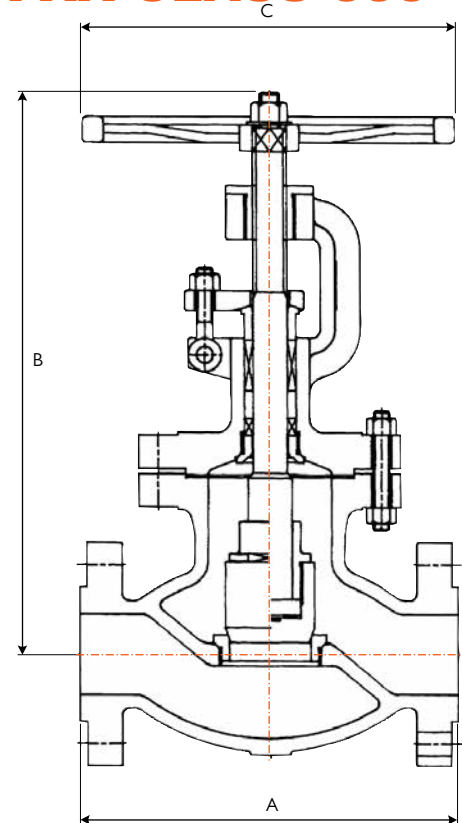


# GLOBE VALVE

## CAT 50~400AP171XXXXXXXXXX-XX CLASS 600

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13/Stellite
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat	Stainless Steel	A182 Gr. F6a/CR13, Stellite/HF
Back Seat Ring	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Disc Gland	Stainless Steel	A217 Gr. CA-15
Yoke Bush	Ductile Iron or Bronze	A439 Gr. D2C or B62
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Wheel Nut	Stainless Steel	A194 Gr. 8/A105
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 / API 623*
Testing	API 598

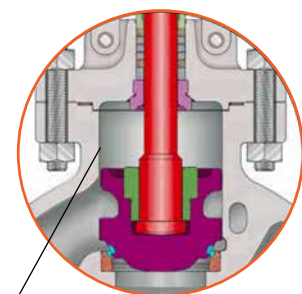
\*Stuffing box chamber & stem smoothness to API 623 and API 600

### DIMENSIONS

(MM)

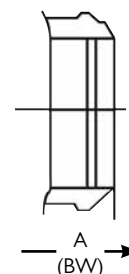
Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
A. Face to Face RF	292	330	356	432	559	660	787	838	889	991
A. Face to Face RTJ	295	333	359	435	562	663	790	841	892	994
A. End to End BW	292	330	356	432	559	660	787	838	892	994
B. Valve Open	425	438	546	663	889	997	865	1101	1426	1431
C. Hand Wheel Dia	254	305	356	457	559	660	610	660	-	-
Weight (Kg) RF	39	56	68	121	280	450	720	950	1750	2260
Weight (Kg) BW	35	44	59	97	230	380	580	830	-	-

For 1/2" to 1-1/2" see overview brochure.



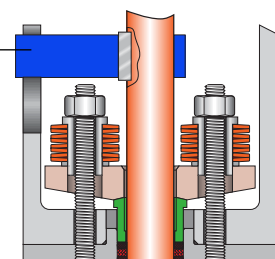
Body Guided Disc

Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.



### Torque Arm

Used in larger sizes the torque arm prevents stem movement which reduces wear on packing rings and enables better sealing as well as reducing torque. Non rotating stem, only the stem nut rotates. The arm also provides visual stem position indication and can be interfaced with position switches. Optional live loaded packing system is shown.

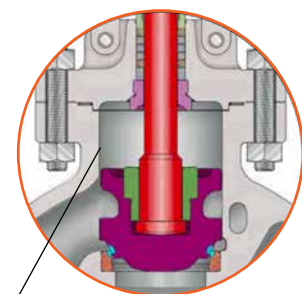
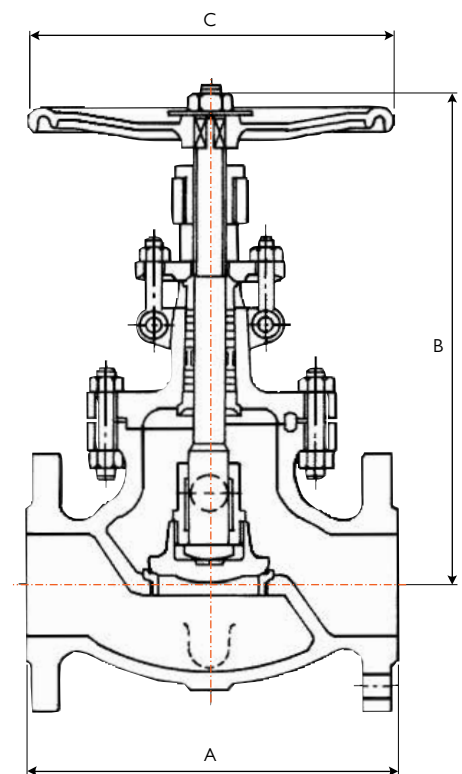


# GLOBE VALVE

## CAT 50~400AP183XXXXXXXXXX-XX CLASS 900

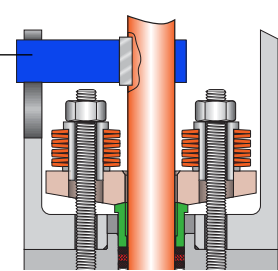
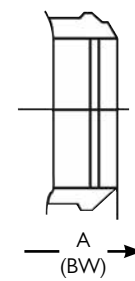
### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13/Stellite
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat	Stainless Steel	A182 Gr. F6a/CR13, Stellite/HF
Back Seat Ring	Stainless Steel	A276 Gr.410 or A182 Gr. F6a
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Disc Gland	Stainless Steel	A217 Gr. CA-15
Yoke Bush	Ductile Iron or Bronze	A439 Gr. D2C or B62
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Wheel Nut	Stainless Steel	A194 Gr. 8/A105
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	



**Body Guided Disc**

Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 / API 623*
Testing	API 598

\*Stuffing box chamber & stem smoothness to API 623 and API 600

### DIMENSIONS

(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
A. Face to Face RF/BW	368	419	381	457	610	737	838	965	1029	1130
A. Face to Face RTJ	371	422	384	460	613	740	841	968	1038	1140
A. Short Pattern End to End BW	216	254	305	256	508	660	-	-	-	-
B. Valve Open	597	648	724	832	1019	1181	1540	1840	2135	2380
C. Hand Wheel Dia	406	457	457	559	750	750	750	-	-	-
Weight (Kg) Short Pattern BW	60	85	80	130	229	1110	-	-	-	-
Weight (Kg) Long Pattern BW	73	110	95	150	310	1225	1345	1900	2130	2860
Weight (Kg) Long Pattern RF	98	130	110	180	440	1346	1400	2220	2650	3300

Note:- 900<sup>lb</sup> 2" & 2-1/2" are the same as 1500<sup>lb</sup> 2" & 2-1/2"

Parabolic disc for low torque

For 1/2" to 1-1/2" dimensions see overview brochure.

### Torque Arm

Used in larger sizes the torque arm prevents stem movement which reduces wear on packing rings and enables better sealing as well as reducing torque. Non rotating stem, only the stem nut rotates. The arm also provides visual stem position indication and can be interfaced with position switches. Optional live loaded packing system is shown.

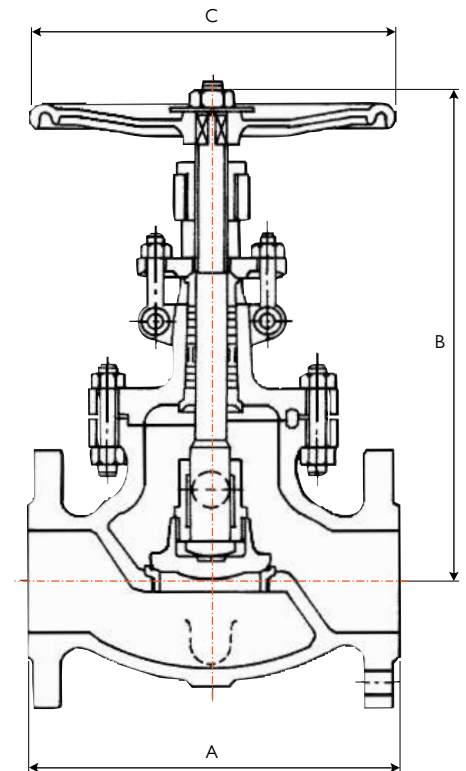


# GLOBE VALVE

## CAT 50~300AP189XXXXXXXXXX-XX CLASS 1500

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Bonnet	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+410SS/CR13/Stellite
Stem	Stainless Steel	A276 Gr.410 or A182 Gr. F6a/CR13
Hand Wheel	Ductile Iron	A536 Gr. 65-45-12
Seat	Stainless Steel	A182 Gr. F6a/CR13, Stellite/HF
Back Seat Ring	Carbon Steel	A276 Gr.410 or A182 Gr. F6a
Gland Flange	Carbon Steel	A105
Gland Ring	Stainless Steel	A182 Gr. F6a
Disc Gland	Stainless Steel	A217 Gr. CA-15
Yoke Bush	Ductile Iron or Bronze	A439 Gr. D2C or B62
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Gland Bolt	Alloy Steel	A193 Gr. B7
Gland Nut	Alloy Steel	A194 Gr. 2H
Gland Bolt Pin	Alloy Steel	A108 Gr. 1020
Wheel Nut	Stainless Steel	A194 Gr. 8/A105
Name Plate	Stainless Steel	304/AL
Packing	Asbestos Free	Reinforced Graphite
Gasket	Metal Joint or Spiral Wound SS Graphite filled	



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34 / API 623*
Testing	API 598

\*Stuffing box chamber & stem smoothness to API 623 and API 600

### DIMENSIONS

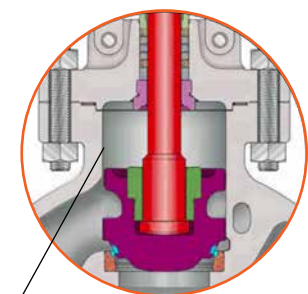
(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"				
A. Face to Face RF/BW	368	419	470	546	705	832	991	1130				
A. Face to Face RTJ	371	422	473	549	708	835	1000	1146				
A. Short Pattern End to End BW	216	254	305	406	559	711						
B. Valve Open	597	648	724	816	1019	1181	1610	1950				
C. Hand Wheel Dia	406	457	559	610	813	-	-	-				
Weight (Kg) Short Pattern BW	60	85	120	220	490	1150						
Weight (Kg) Long Pattern BW	98	130	170	255	590	1290	1700	2600				
Weight (Kg) Long Pattern RF	73	110	140	230	540	1190	1480	2300				

Parabolic disc for low torque  
For 1/2" to 1-1/2" dimensions see overview brochure.

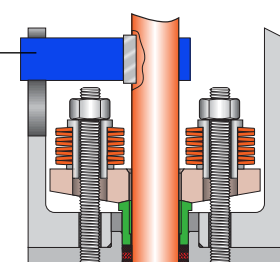
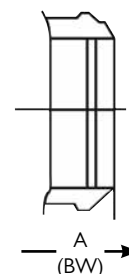
### Torque Arm

Used in larger sizes the torque arm prevents stem movement which reduces wear on packing rings and enables better sealing as well as reducing torque. Non rotating stem, only the stem nut rotates. The arm also provides visual stem position indication and can be interfaced with position switches. Optional live loaded packing system is shown.



Body Guided Disc

Body guided disc style eliminates side thrust and provides longer disc, seat and body life as well as ensuring positive shut-off and low closing torque.



# SWING CHECK VALVE

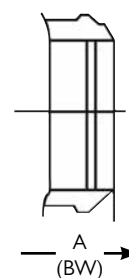
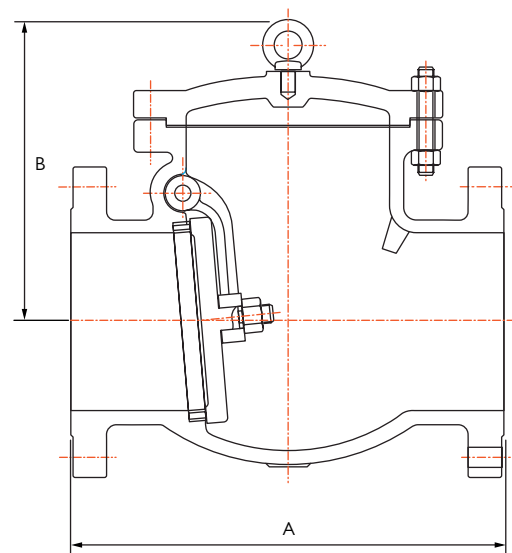
## CAT XXXAP147XXXX-XX CLASS 150

### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Cover	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+CR13/410SS/Stellite
Hinge	Carbon Steel	A276 Gr. 410 or A182 Gr. F6a/CR13
Hinge Pin	Stainless Steel	A182 Gr. F6a/CR13
Seat / Facing	Stainless Steel	A105 + CR13/410SS/Stellite
Plug	Carbon Steel	A108 Gr. 1045
Cover Bolt	Alloy Steel	A193 Gr. B7/B7M
Cover Nut	Alloy Steel	A194 Gr. 2H/2HM
Disc Nut	Stainless Steel	A563 Gr. B
Washer	Stainless Steel	A276 Gr. 410
Eye Bolt	Carbon Steel	A105
Name Plate	Stainless Steel	304 AL
Gasket	Spiral Wound	304/316 Graphite filled

Standards		
Face to Face/End to End		ASME B16.10
Flange Dimensions		ASME B16.5
Basic Design		ASME B16.34/API 594*/API 6D**
Testing		API 598

\*Full API 594 compliance where stated.  
 \*\*API 6D also available, refer to drawing.



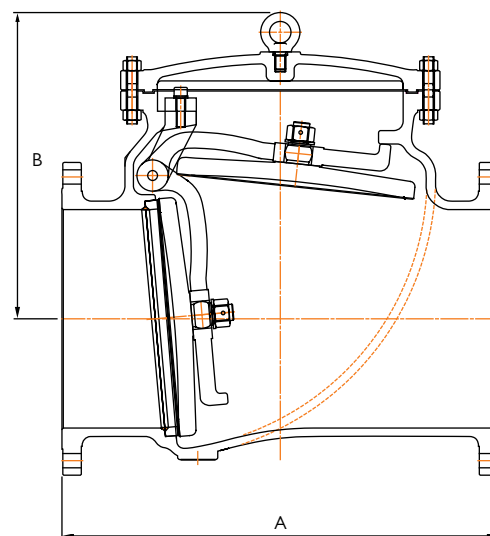
### DIMENSIONS (MM)

Size (in)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
A. Face to Face RF	165	203	216	237	292	356	495	622	698	787	864
A. End to End BW	165	203	216	237	292	356	495	622	698	787	864
B. Height	114	140	140	156	184	292	353	371	416	489	521
Weight (Kg) RF	11	15	23	33	44	78	137	207	279	428	555
Weight (Kg) BW	8.5	12	16	24	34	63	122	175	229	368	483

### DIMENSIONS (MM)

Size (in)	18"	20"	24"	28"	30"					
A. Face to Face RF	978	978	1295	1448	1524					
A. End to End BW	978	978	1295	1448	1524					
B. Height	559	590	702	710	870					
Weight (Kg) RF	775	835	1300	1450	1620					
Weight (Kg) BW	685	720	1150	1300	1450					

For RTJ dimensions see overview brochure.  
 For 5" dimensions see page 60 and overview brochure.  
 For 1/2" to 1" dimensions see page 60 and overview brochure..  
 For CF8/CF8M 150Lb see page 60.



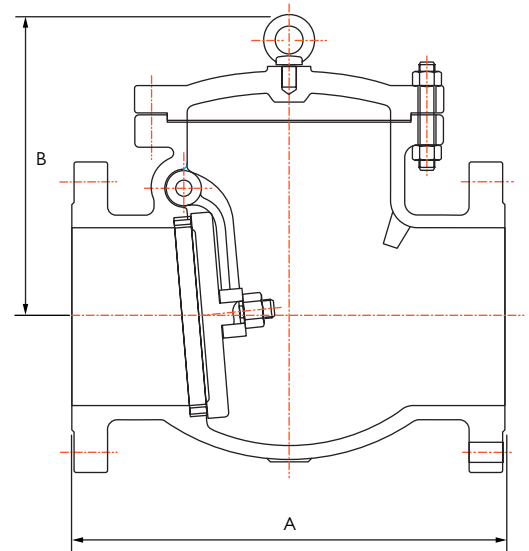
API 6D Version

# SWING CHECK VALVE

## CAT XXXAP159XXXX-XX CLASS 300

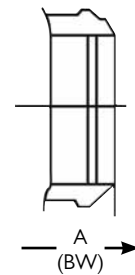
### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Cover	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+CR13/410SS/Stellite
Hinge	Carbon Steel	A216 Gr WCB
Hinge Pin	Stainless Steel	A182 Gr. F6a/CR13
Seat / Facing	Stainless Steel	A105 + CR13/410SS/Stellite
Plug	Carbon Steel	A108 Gr.1045
Cover Bolt	Alloy Steel	A193 Gr. B7/B7M
Cover Nut	Alloy Steel	A194 Gr. 2H/2HM
Disc Nut	Carbon Steel	A563 Gr. B
Washer	Stainless Steel	A276 Type 410
Eye Bolt	Carbon Steel B	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Gasket	Spiral Wound	304/316 Graphite filled



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34/API 594*/API 6D**
Testing	API 598

\*Full API 594 compliance where stated.  
 \*\*API 6D also available, refer to drawing.

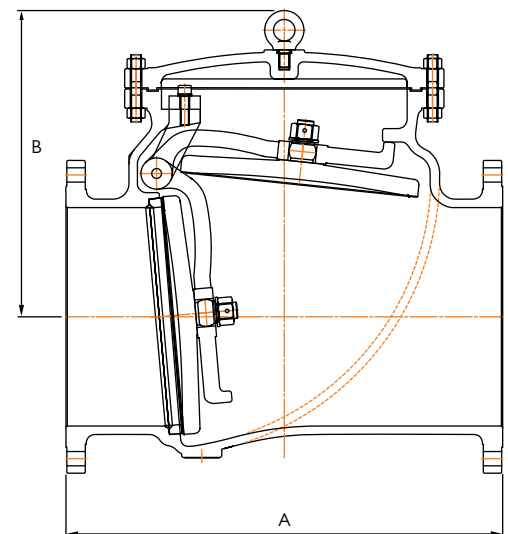


### DIMENSIONS (MM)

Size (in)	1-1/2"	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"
A. Face to Face RF	241	267	292	317	356	444	533	622	711	838	864
A. End to End BW	241	267	292	317	356	444	533	622	711	838	864
B. Height	140	149	165	184	209	305	350	353	422	479	521
Weight (Kg) RF	12	21	24	39	60	120	219	345	460	700	774
Weight (Kg) BW	10	15	17	30	50	92	180	255	360	490	640

### DIMENSIONS (MM)

Size (in)	18"	20"	24"	28"	30"					
A. Face to Face RF	978	1016	1346	1499	1595					
A. End to End BW	978	1016	1346	1499	1595					
B. Height	714	746	780	790	820					
Weight (Kg) RF	1000	1273	1650	1725	1819					
Weight (Kg) BW	850	1100	1400	1570	1700					



API 6D Version

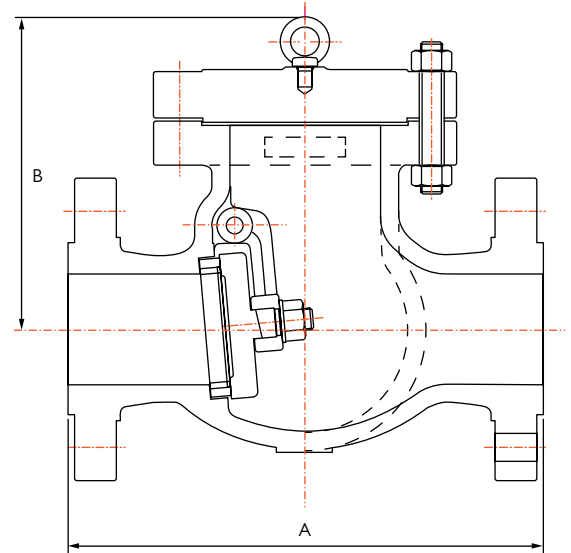
For RTJ dimensions see overview brochure.  
 For 5" dimensions see page 60 and overview brochure.  
 For 1/2" to 1" dimensions see page 60 and overview brochure.  
 For CF8/CF8M 300Lb see page 60.

# SWING CHECK VALVE

## CAT XXXAP175XXXX-XX CLASS 600

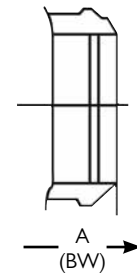
### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Cover	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+CR13/410SS/Stellite
Hinge	Carbon Steel	A216 Gr WCB
Hinge Pin	Stainless Steel	A182 Gr. F6a/CR13
Seat / Facing	Stainless Steel	A105 + CR13/410SS/Stellite
Plug	Carbon Steel	A108 Gr.1045
Cover Bolt	Alloy Steel	A193 Gr. B7/B7M
Cover Nut	Alloy Steel	A194 Gr. 2H/2HM
Disc Nut	Carbon Steel	A563 Gr. B
Washer	Stainless Steel	A276 Type 410
Eye Bolt	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34/API 594*/API 6D**
Testing	API 598

\*Full API 594 compliance where stated.  
 \*\*API 6D also available, refer to drawing.

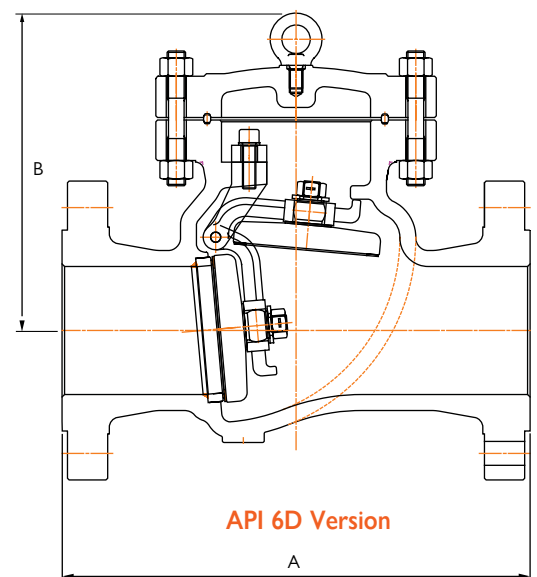


### DIMENSIONS (MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
A. Face to Face RF	292	330	356	432	559	660	787	838	889	991	1092
A. Face to Face RTJ	295	333	359	435	562	664	791	841	891	994	1095
A. End to End BW	292	330	356	432	559	660	787	838	889	991	1092
B. Height	159	184	197	292	352	397	492	556	737	650	771
Weight (Kg) RF	28	38	55	87	207	354	580	790	892	1200	1600
Weight (Kg) BW	20	30	42	65	155	280	490	670	750	1020	1350

### DIMENSIONS (MM)

Size (in)	20"	24"							
A. Face to Face RF	1194	1397							
A. Face to Face RTJ	1200	1407							
A. End to End BW	1194	1397							
B. Height	800	900							
Weight (Kg) RF	2420	3150							
Weight (Kg) BW	2050	2720							

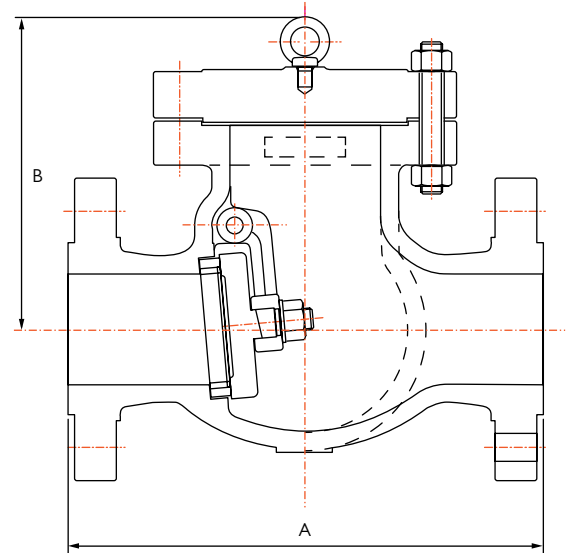


# SWING CHECK VALVE

## CAT XXXAP187XXXX-XX CLASS 900

### FULL PORT DESIGN

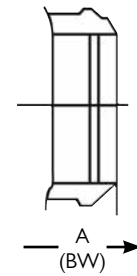
Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Cover	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+CR13/410SS/Stellite
Hinge	Carbon Steel	A216 Gr WCB
Hinge Pin	Stainless Steel	A182 Gr. F6a/CR13
Seat / Facing	Stainless Steel	A105 + CR13/410SS/Stellite
Plug	Carbon Steel	A108 Gr.1045
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Disc Nut	Carbon Steel	A563 Gr. B
Washer	Stainless Steel	A276 Type 410
Eye Bolt	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34/API 594*/API 6D**
Testing	API 598

\*Full API 594 compliance where stated.

\*\*API 6D also available, refer to drawing.



### DIMENSIONS

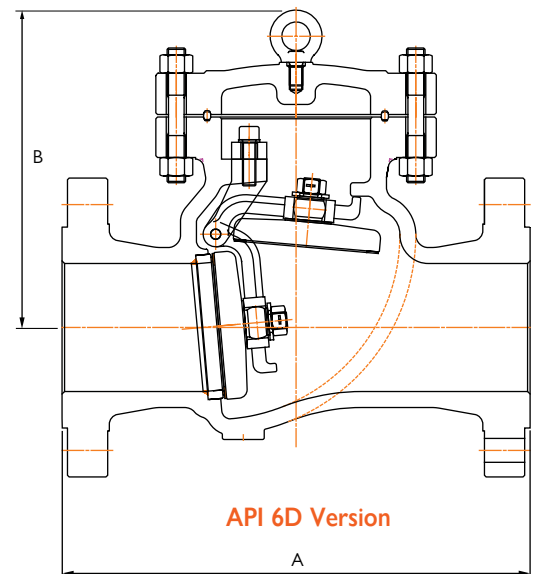
(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
A. Face to Face RF/BW-LP	368	419	381	457	610	737	838	965	1029	1130	1219
A. Face to Face RTJ	371	422	384	460	613	740	841	968	1038	1140	1232
A. Face to Face Short Pattern BW	216	254	305	356	508	660	757	914	991	1092	-
B. Height	340	371	302	333	413	495	571	535	686	757	819
Weight (Kg) Short Pattern BW	50	56	50	100	240	380	600	840	1040	1410	-
Weight (Kg) Long Pattern BW	54	60	70	110	265	498	810	1228	2009	2563	3300
Weight (Kg) Long Pattern RF	74	80	100	194	372	637	1065	1550	1582	2400	2800

### DIMENSIONS

(MM)

Size (in)	20"									
A. Face to Face RF/BW	1321									
A. Face to Face RTJ	1334									
B. Height	867									
Weight (Kg) Long Pattern BW	3100									
Weight (Kg) Long Pattern RF	3500									



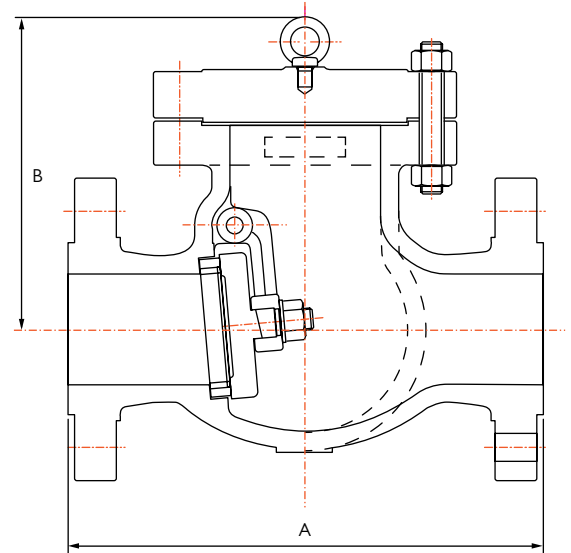


# SWING CHECK VALVE

## CAT XXXAP199XXXX-XX CLASS 1500

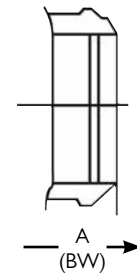
### FULL PORT DESIGN

Description	Material	Specs.
Body	Carbon Steel	A216 Gr. WCB
Cover	Carbon Steel	A216 Gr. WCB
Disc / Facing	Stainless Steel	A216 Gr. WCB+CR13/410SS/Stellite
Hinge	Carbon Steel	A216 Gr WCB
Hinge Pin	Stainless Steel	A182 Gr. F6a/CR13
Seat / Facing	Stainless Steel	A105 + CR13/410SS/Stellite
Plug	Carbon Steel	A108 Gr.1045
Bonnet Bolt	Alloy Steel	A193 Gr. B7/B7M
Bonnet Nut	Alloy Steel	A194 Gr. 2H/2HM
Disc Nut	Carbon Steel	A563 Gr. B
Washer	Stainless Steel	A276 Type 304
Eye Bolt	Carbon Steel	A307 Gr. B
Name Plate	Stainless Steel	304/AL
Gasket	Metal Ring Joint or Spiral Wound SS Graphite filled	



Standards	
Face to Face/End to End	ASME B16.10
Flange Dimensions	ASME B16.5
Basic Design	ASME B16.34/API 594*/API 6D**
Testing	API 598

\*Full API 594 compliance where stated.  
 \*\*API 6D also available, refer to drawing.



### DIMENSIONS

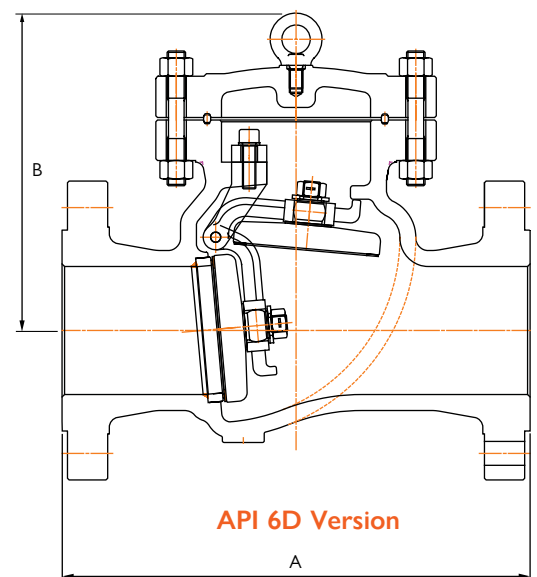
(MM)

Size (in)	2"	2-1/2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
A. Face to Face RF/BW	368	419	470	546	705	832	991	1130	1257	1384	1537
A. Face to Face RTJ	371	422	473	549	711	841	1000	1146	1276	1407	1559
A. Short Pattern End to End BW	216	254	305	406	559	711	867	991	1067	1194	-
B. Height	260	271	302	333	413	495	571	635	686	756	819
Weight (Kg) Short Pattern BW	58	78	89	180	400	610	990	1900	2000	3000	4200
Weight (Kg) Long Pattern RF	73	111	127	286	617	953	1460	2390			
Weight (Kg) Long Pattern BW	69	87	95	185	490	815	1273	2070			

### DIMENSIONS

(MM)

Size (in)	20"									
A. Face to Face RF/BW	1664									
A. Face to Face RTJ	1686									
A. Short Pattern End to End BW	-									
B. Height	2600									
Weight (Kg) Short Pattern BW	4809									



## CRYOGENIC VALVES



### General Design & Wall Thickness

Cast Gate Valves - ASME B16.34

Cast Globe Valves - ASME B16.34

### Inspection & Test BS 6364

### Long Life Seating Surface

Stellite 6 faced both seat and wedge/disc to prevent seizing and galling.

### End Flange Dimensions

ASME B16.5

### Butt Weld End Dimensions

ASME B16.25

### End to End Dimensions

Flanged - ASME B16.10

Butt Weld - ASME B16.10



**Extended Bonnet** Bolted or integral vapour space extended bonnet of sufficient length to keep stem packing out of the cold zone and free of ice formation.

### Austenitic Stainless Steel Forgings or Castings

Tough at cryogenic temperatures and can be classed as a 'cryogenic steel' with good impact strength and corrosion resistance.

**Shell and Trim Parts** are all austenitic stainless steel and sub-zero treated in LN.

**Insulation Collar / Drip Plate** A 'welded' insulation collar/drip plate or a 'clamped on' insulation collar/drip plate can be provided on request.

## API 6D THROUGH CONDUIT GATE VALVES INTRODUCTION - SLAB & GATE EXPANDING STYLE



Slab Gate



Expanding Gate

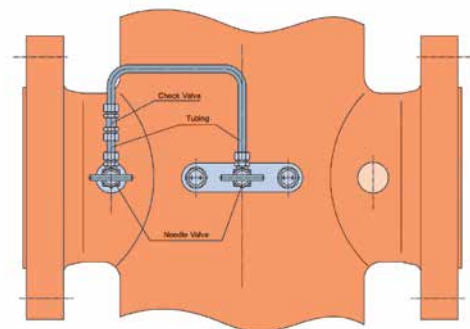
### OVERVIEW API 6D THROUGH CONDUIT GATE VALVES

#### Through conduit Full bore

The through conduit opening design provides full flow passage and allows for the smooth passing of pipeline pigs. Pressure drop through the valve is no greater than that through an equal length of equal diameter pipe.

#### External pressure relief system for cavity over pressure protection

Due to the double tight sealing isolation design for expanding gate valve, cavity pressure can increase significantly through thermal expansion of fluid in the cavity. A body cavity thermal relief system can be provided to relieve this excess body cavity pressure.

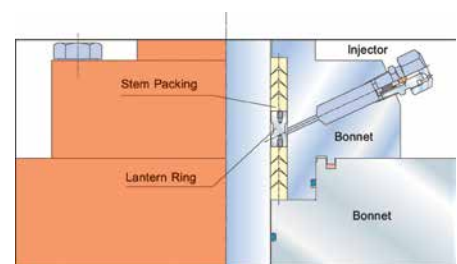


#### In Line repairable

The top entry design allows for access to all internal parts if maintenance is required with the valve still in the pipeline.

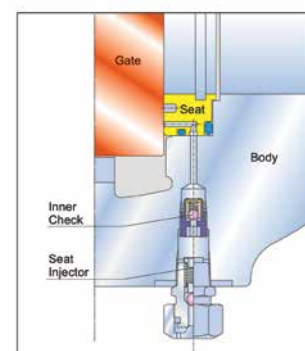
#### Ease of on-line stem packing maintenance

Top and bottom Chevron PTFE packing + lantern ring is the standard stem seal equipped with a stem injector with integrated check valve. Injectable packing material can be injected directly into the packing box through the injector to enhance stem sealing while the valve is under pressure.



#### Emergency sealant injection on seats

Provision of seat injectors with integrated check valve provides emergency backup sealing. Additionally, an inner check valve is installed in front of the seat injector to prevent blow out in case of wrong operation. If a seal surface is damaged by foreign matter, valve leakage can be eliminated by using a sealant injected into a specially designed groove in the seat ring assembly. This secondary seat sealant injection backup provides a peace of mind to users who demand reliable block valve service until the valve can be properly serviced. Seats may be lubricated by injecting lubricant to enhance service life and reduce operating torque.



## CONSIDERATIONS OF TECHNICAL RISK / LIMIT OF LIABILITY FOR APV GATE, GLOBE, CHECK VALVES

Australian Pipeline Valve don't consider in our design the following factors of risk

1. Australian Pipeline Valve 'Standard' valves can be used in a temperature range between -29 to +490°C. (Note, pressure limitations apply above 38°C refer to Pressure/Temperature charts.) For service temperatures below -29°C valves construction materials shall be submitted to an impact test at the minimum service temperature. For temperatures above and below the standard range, special seals need to be specified by the client.
2. The onus is on the customer to specify all materials of construction and service conditions. Australian Pipeline Valve shall assume standard materials and conditions if not otherwise specified.
3. Australian Pipeline Valve 'Standard' valves are not equipped with devices suitable to avoid internal over-pressures caused by incorrect operations of process or by-fluids & liquids subjected to an increase of volume and/or pressure (these devices, such as the over-pressure hole in the gate or safety seats are available upon request).
4. Australian Pipeline Valve 'Standard' valves are not designed with special devices to withstand a sudden thermal jump (thermal shock).
5. In general Australian Pipeline Valve 'Standard' valves are not mechanically designed to bear overloads due to exceptional atmospheric or natural phenomenon's (such as earthquakes).
6. In general Australian Pipeline Valve 'Standard' valves are not designed to bear loads on flanges, on pipe connections or pipe-line.
7. In general Australian Pipeline Valve 'Standard' valves can't withstand ice inside their bodies (in this case the user has to consider the optional stem extension for insulating, avoiding the presence of residual product inside the valve).
8. Australian Pipeline Valve 'Standard' valves are not suitable for low temperature service below -29°C (-20°F) unless supplied (in a suitable body material) with cryogenic stem extension and other modifications, (available on request).
9. Australian Pipeline Valve 'Standard' valves are suitable for 'industrial' oxygen (not medical) service when supplied degreased and packed in polyethylene bags only.
10. The compatibility between the valves construction materials and medium is selected by the user. The user is ultimately responsible for verifying the compatibility between medium and materials.
11. Abrasive or dirty service applications need to be considered and stated at time of order.

### VALVE START-UP

Before installing the valve onto the pipe-line it is mandatory, for the user, to verify the compatibility of the valve with service conditions (medium, temperature and pressure). With reference to standard valves held in stock, the reseller and end user will have to assure themselves of the compatibility between the valve and the conditions required by the customer. Australian Pipeline Valve gate valves must be only used for on-off (fully open/fully closed) service.

Before using the valve in a potential explosive atmosphere it's necessary for the customer to -

- To verify the correct type of valve and operator is specified.
- To verify the compatibility between the valve and the zone in which the valve should be installed
- To foresee the pipe-line ground condition on which the valve should be installed
- To check that the temperature if the valve surface is not higher than the flammable point of the atmosphere in which the valve is installed (in this case specify an insulating cover device for the valve and an extension for the operator)
- To avoid mechanical knocks during the installation that may cause sparks.

Australian Pipeline Valve cannot be held responsible for damage caused by use of the product for any reason, especially if it is improper use or modified.





**AUSTRALIAN PIPELINE VALVE®**

**COMPLETE PRODUCT LINE**

**“Australian Pipeline Valve produces isolation, control and flow reversal protection products for severe and critical service media in utility, steam, pipelines, oil & gas and process industries. APV valves and pipeline products form the most competitive portfolio in the market.”**



**SUPER-CHECK®**



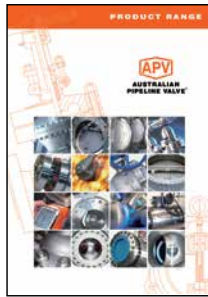
**TORQTURN®**

**TWIN-LOK®**

**UNIFLO®**



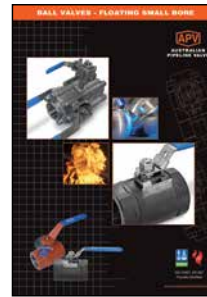
**AUSTRALIAN PIPELINE VALVE BRAND RANGE - CATALOGUES**



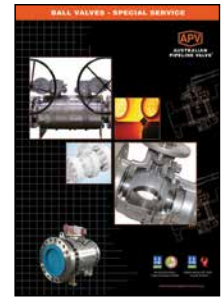
Product Brochure



Ball Valves Floating & Trunnion Mounted



Ball Valves Floating Small Bore



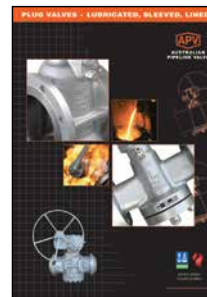
Ball Valves Special Service



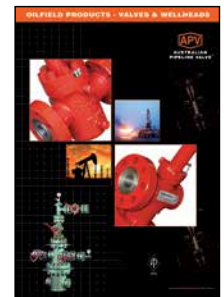
Gate, Globe & Check Valves - Cast Steel



Gate, Globe & Check Valves - Forged Steel



Plug Valves Lubricated, Sleeved & Lined



Oilfield Products Valves & Wellheads

**APV FAMILY OF BRANDS RANGE - CATALOGUES**



Diamond Gear Gearboxes



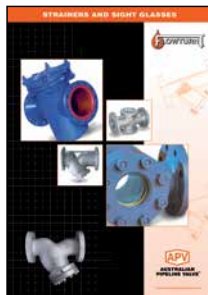
Flowturn Ball Valves Multiway & Deadman



Flowturn Gate, Globe & Check Valves



Flowturn Instrument Valves



Flowturn Strainers & Sight Glasses



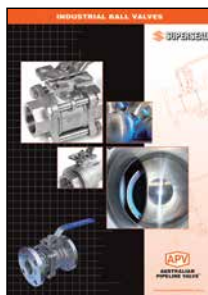
Steamco Steam Valves



Supercheck Wafer Check Valves



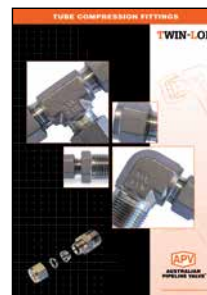
Superseal Butterfly Valves



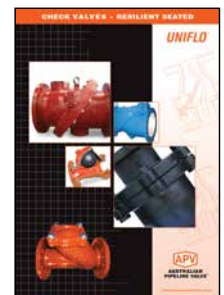
Superseal Industrial Ball Valves



Torqturn Actuators



TwinLok Tube Fittings



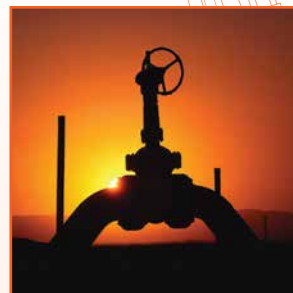
Uniflo Check Valves

Contact us for your local stockist/distributor





# AUSTRALIAN PIPELINE VALVE®



[www.australianpipelinevalve.com.au](http://www.australianpipelinevalve.com.au)

## LOCAL DISTRIBUTOR

Australian Stockist & Agent  
Global Supply Line

Supplier of Gate Valves, Globe Valves, Piston Check Valves, Swing Check Valves  
(Equivalent Style to Crane, Kitz, Neway)

email: [admin@australianpipelinevalve.com.au](mailto:admin@australianpipelinevalve.com.au)

website: [www.australianpipelinevalve.com.au](http://www.australianpipelinevalve.com.au)

Offices in SA (Adelaide), WA (Perth), Queensland (Brisbane), Victoria (Melbourne), also Servicing NSW (Sydney)



## 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.*

