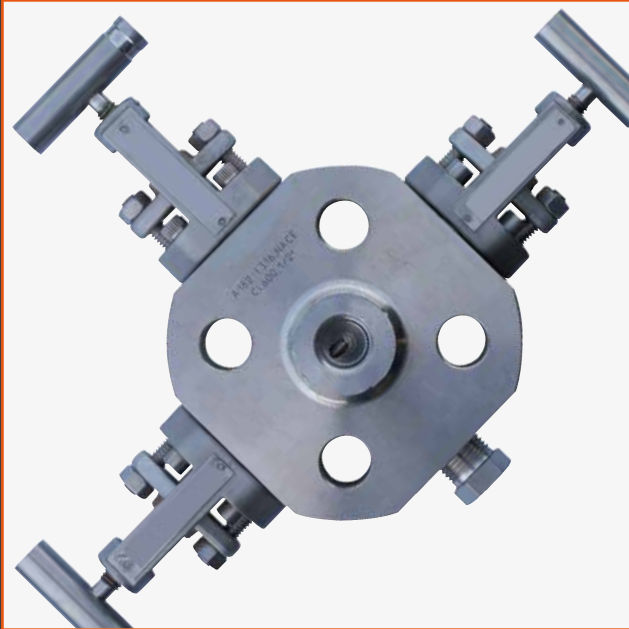
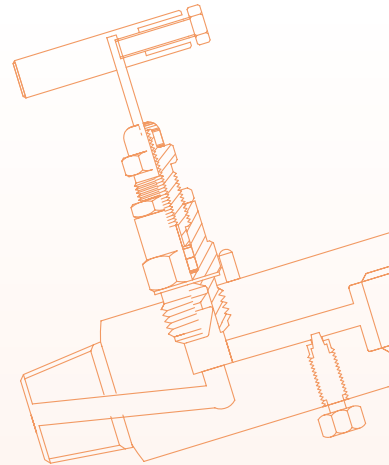


NEEDLE AND INSTRUMENTATION VALVES

SHORT VERSION

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



**AUSTRALIAN
PIPELINE VALVE®**

www.australianpipelinevalve.com.au

QUALITY VALVE MANUFACTURER

QUALITY COMMITMENT

Quality is Our First Priority.

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

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



**AUSTRALIAN
PIPELINE VALVE®**

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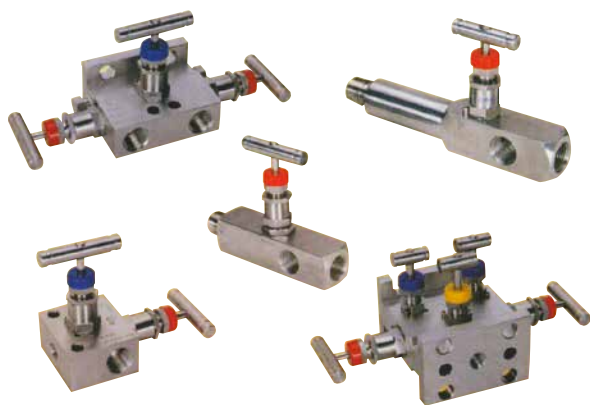
* This version excludes some of these pages, refer to full version at website.



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MANIFOLD VALVES



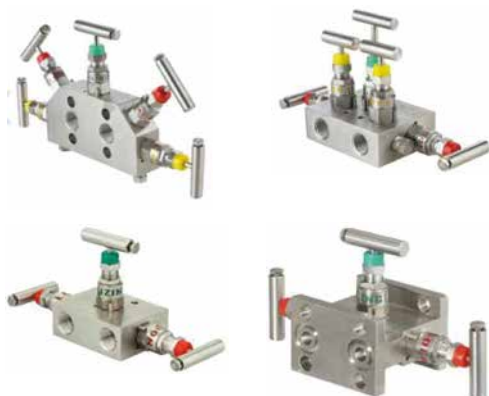
2, 3 AND 5 WAY MANIFOLD VALVES

Flowturn offers a variety of 2, 3 and 5 valve instrument manifolds.

The 2 valves manifolds are designed for static pressure and liquid level application; the 3 and 5 valve manifolds are designed for differential pressure applications.

FEATURES

- Convenient method of blocking, bleeding, and calibrating pressure instruments.
- Designed for connected system impulse line & transmitter.
- Combines the function of a tee, calibration valve, isolation valve, all tubing and fittings in a single valve configuration.
- Bonnet lock pins prevent accidental movement.
- Free swiveling ball end stem (metal seat, standard.) assures bubbles tight valve closure without seat galling.
- Special hardened ball seat is ideal for both gas and liquid service.
- All stem packing is located below the stem threads preventing galling, corrosion and contamination.
- Adjustable packing reduces the possibility of bonnet/body leaks.
- Full back sealed bonnets prevents accidental stem removal and blowout.



The Flowturn range of Manifolds offer a safe and economical method of installation to control and measure pressure of liquids and gaseous media. They are ruggedly manufactured and precision machined to the most exacting dimensional tolerance to ensure perfect installation and application.

Flowturn Manifolds are functionally installed to control, measure, isolate, equalise, calibrate, drain, vent or differentiate the pressure of liquids and gases.

Flowturn Manifold series offer optional 2, 3 and 5 valve configurations which come in remote mounting (pipe to pipe), direct mounting (pipe to flange, flange to flange) onto the instrument on a 2 1/8" (54mm) centre.

Working Pressure up to 6000 PSI.

TECHNICAL

- Working pressure up to 6000 psig (413 bar).
- Temperature up to 450°F (232°C) with PTFE packing up to 1200°F (648°C) with Grafoil® packing.
- Orifice Size: 0.156 inch (4.0 mm).
- For block and bleed (or calibration) of a gauge or absolute pressure transmitter or gauge.
- Consists of equalizing, isolation and vent.
- Direct instrument mount and remote mount.
- End connections pipe or flange.

APPLICATIONS

- General plant service.
- Pressure instrumentation devices.
- Differential pressure instruments devices.
- Pressure equalization.
- Block and bleed applications.

T-TYPE SINGLE

(SINGLE FLANGE, PIPE TO FLANGE)

Manifolds bolt directly to the differential pressure Instruments which eliminate the need for unnecessary piping, valves and fittings. T-Type manifolds come complete with mounting kit for quick and easy installation to a pipe stand.

R-TYPE (PIPE TO PIPE IN-LINE)

Manifolds are designed for differential pressure of flowrecorder to impulse tubing. Connections are 1/2" NPT industry standard and 2 1/8" (54mm) center dimension (Model for 2 3/16" & 2 1/4" dimension) (Model for 2 3/16" & 2 1/4" - center dimension).

H-TYPE (DUAL FLANGE, FLANGE TO FLANGE)

Manifolds bolt directly to the differential pressure instruments which eliminate the need for unnecessary piping, valves and fittings.

NEEDLE & INSTRUMENTATION VALVES

Flowturn supply quality precision valves for each application.

As well as hand valves, Flowturn can produce monoflange double block and bleed integral manifolds.

Flowturn's hand valve and gauge valves include multi-port and block and bleed styles suitable for gauge isolation, calibration and venting with a choice of either globe pattern or through bore designs. A wide choice of end connections and comprehensive range of standard gauge accessories allows complete flexibility for individual installations.

SPECIFICATIONS

Materials: CS, SS, Duplex and other exotic materials.

Seats: Metal (and soft)

Orifice Size: 1/8 inch (3mm) to 5/8 inch (16mm).

Pressure (max): 10,000psig [690 bar]

Temperature (max): 10000F [5380C]



**S-M9 Integral Block & Bleed
Gauge Valve**



**S-M5 Multi Port Gauge
Root Valve**



**S-H1 Rising Plug Hand
Needle Valve**



**Mono Flange Wafer Type
Double Block & Bleed Valve**



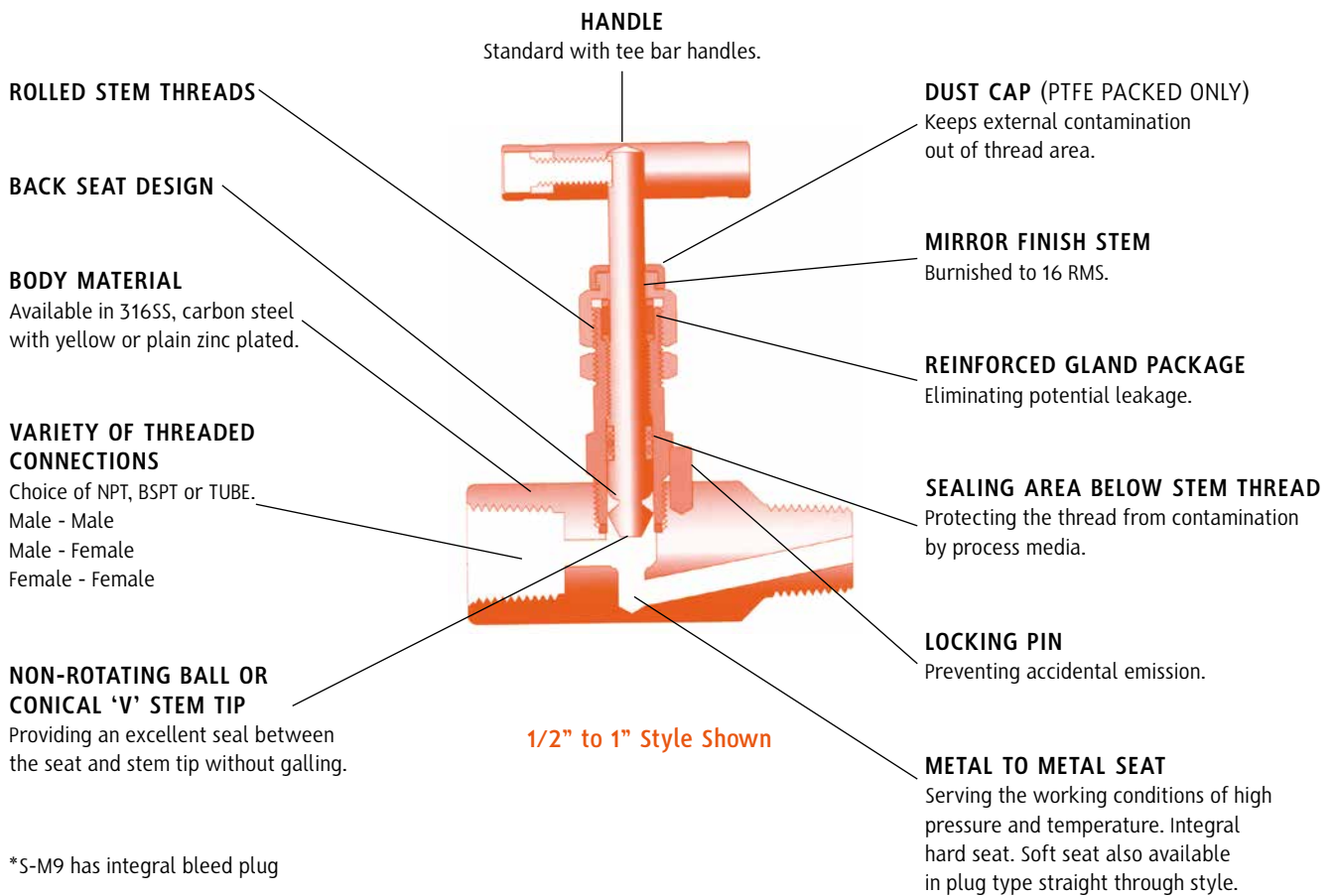
Double Block & Bleed Valve



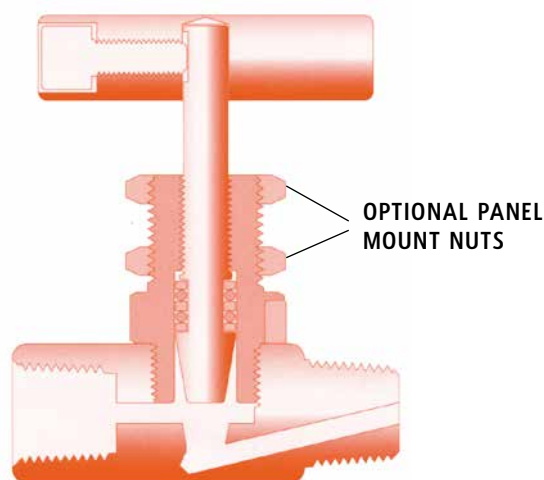
KER-JY Y Globe Type Valve

MODEL S-H7, S-H71, S-M5, S-M9*

FEATURES



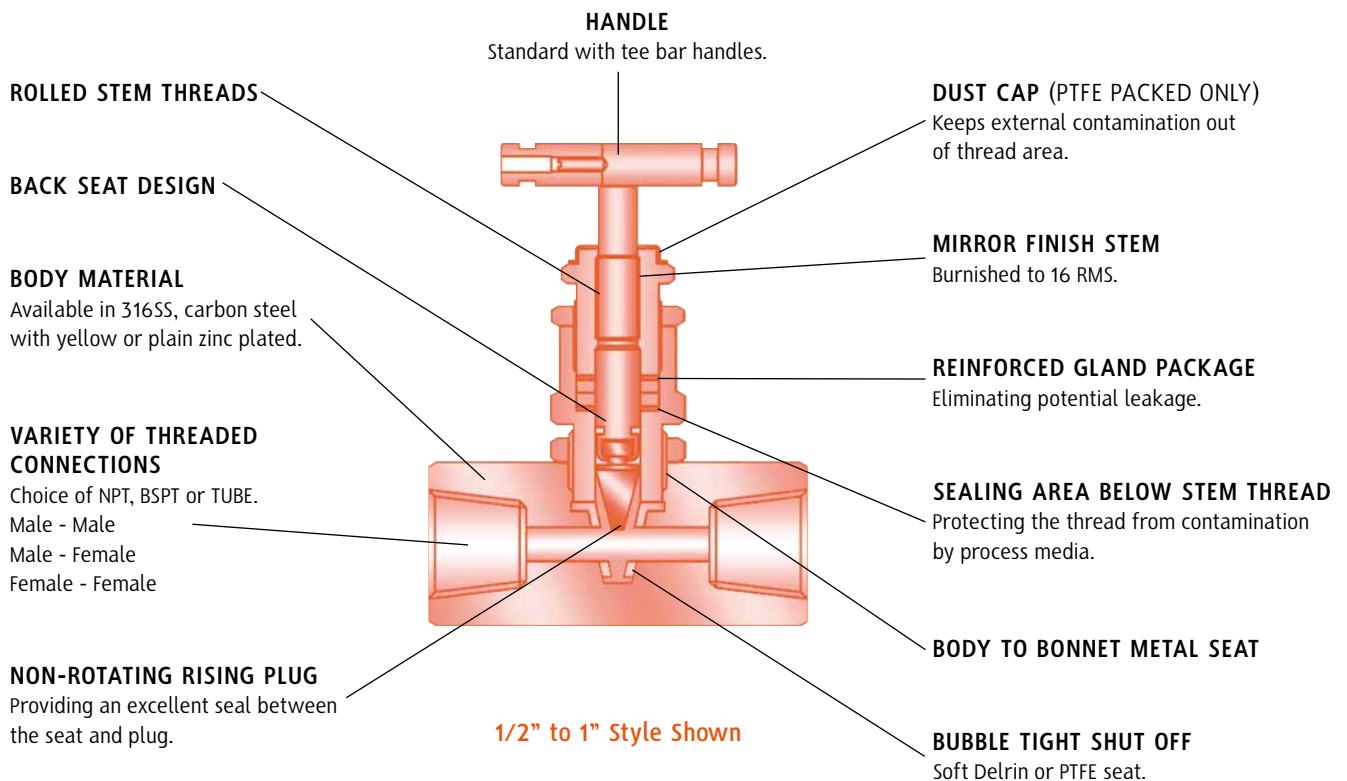
MODEL S-H7/H71-PM



1/8" to 3/8" Style Shown

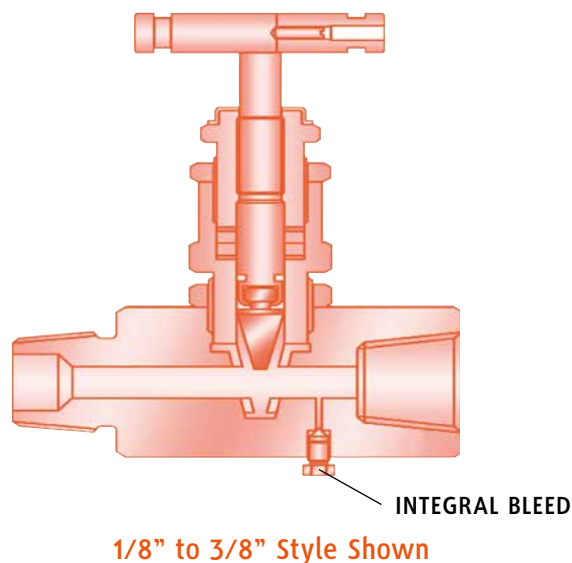
MODEL S-H1, S-M9S*

FEATURES

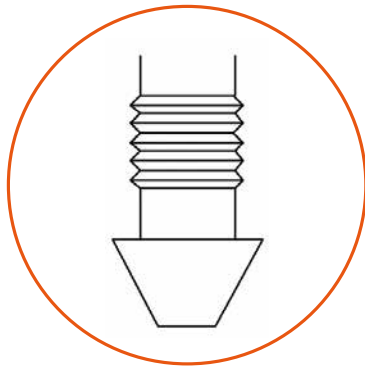


*S-M9S has integral bleed plug
See below.

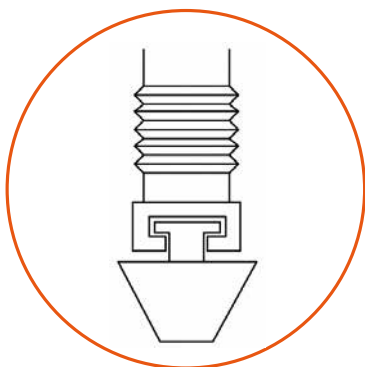
MODEL S-M9S



DESIGN OVERVIEW



ROTATING



NON ROTATING

One piece bar stock construction with full material traceability.

Back seating of stems in a fully open position prevents stem back out.

All types of valves have self centering, non rotating needle on the valve seat, alternative seating to choose for every application requiring bubble tight shut off.

Safety Stop Pin, 316 stainless steel pin prevents detachment of the bonnet from the body due to vibration.

Stainless steel models of needle, gauge and instrument manifold valves, equipped with needle stems, meet NACE MR-01-75.

Bonnet-to-body-seat, metal-to-metal seal eliminates the need for O-ring seals.

Shroud with colour identification:

△ Blue for isolation

△ Red for drain/vent

△ Green for equalizing

Handle: T-bar metal (standard) or circular plastic optional.

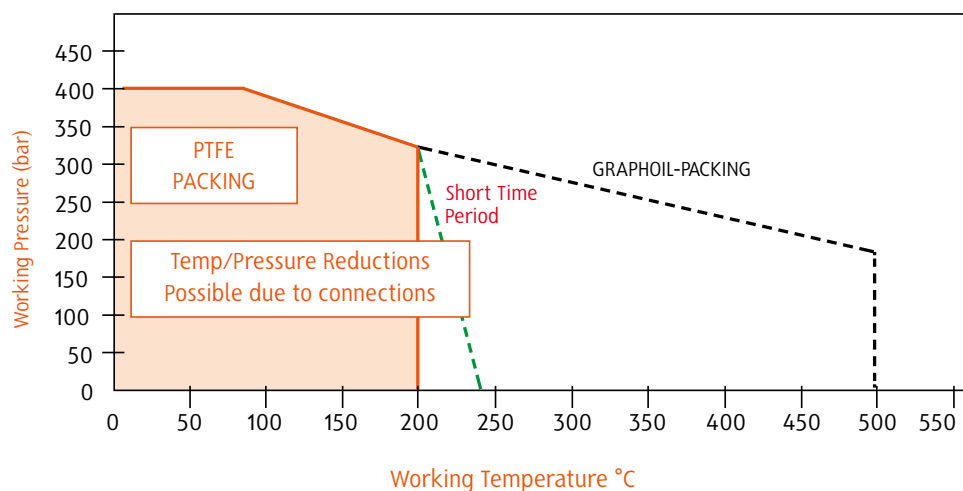
Double bonnet or single bonnet (optional).

Optional high temperature packing for compatibility to 1000°F on certain models.

All valves are designed in accordance with ASME/ANSI B16.34-1988 and ASME Section VIII, Div 1.

Low torque operation.

Spindle treated for durable operation.



*Assuming not Viton stem seal design.

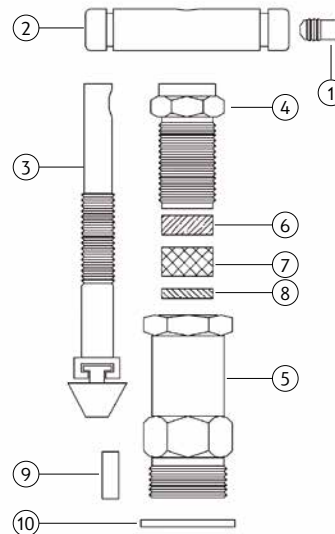
WARNING FOR YOUR SAFETY

The system designer and user have the sole responsibility to select products suitable for their special application requirements to ensure the proper installation. Operation and maintenance of the product. Application details, material compatibility and product ratings should all be considered in the individual selection. Improper selection or use of products can cause property damage or personal injury. Flowturn accept no liability for any improper selection, installation, operation or maintenance.

DOUBLE BONNET ASSEMBLY (MODEL S-H1/M5/M5A/M5F/H7/M9)

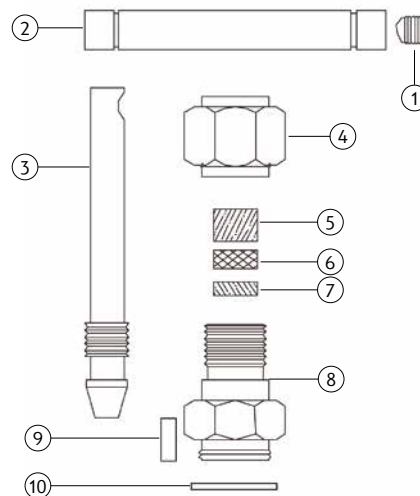
No.	Description	Qty	Material
1	Set Screw	1	MS
2	Handle	1	SS
3	Spindle	1	316SS
4	Packing Bolt	1	MS/316SS
5	Bonnet	1	MS/316SS
6	Bush	1	MS/316SS
7	Packing	1	PTFE/Graphite
8	Bush	1	MS/316SS
9	Stop Pin	1	MS/316SS
10	Washer	1	COPPER
11	Dust Cap*		PLASTIC

*PTFE Packed Version



SINGLE BONNET ASSEMBLY (MODEL S-H5)

No.	Description	Qty	Material
1	Set Screw	1	MS
2	Handle	1	SS
3	Spindle	1	316SS
4	Gland Nut	1	MS/316SS
5	Bush	1	MS/316SS
6	Packing	1	PTFE/Graphite
7	Bush	1	MS/316SS
8	Bonnet	1	MS/316SS
9	Stop Pin	1	MS/316SS
10	Washer	1	COPPER



Bellows sealed version
(VAF) bonnet



PART NUMBER SYSTEM NEEDLE VALVES

			SH7 1	V	D	C	-	44Q	-	L	A	I	BL
MODEL													
SH1	- Rising Plug Straight Through Type 6000 PSI												
SM5	- Multiport Gauge Valve Globe Type MxF 6000 PSI												
SM5A	- Multiport Gauge Valve Straight Through MxF 6000 PSI												
SM5F	- Multiport Gauge Valve Straight Through FxF 6000 PSI												
SH7	- Globe Type 6000 PSI												
S15K	- Globe Type 15,000 PSI												
SM9	- Integral Block & Bleed Gauge-Globe Type 6000 PSI												
SM9S	- Integral Block & Bleed Gauge-Straight Thru Type 6000PSI												
SH5	- Miniature Globe Type 6000 PSI (Soft) 3000 PSI (Metal)												
SMO	- Monoflange Instrument Valve												
SBB	- Block & Bleed Valves												
ALTERNATE PRESSURE SUFFIX													
BLANK	- 6000 PSI	3	- 3000 PSI										
1	- 10,000 PSI	5	- 15,000 PSI										
PACKING													
V	- Teflon®												
R	- Viton® O-Ring with Teflon® or 316 backup ring												
H	- Graphoil® (260°C Max)												
E	- Fugitive / Low emission Graphoil.												
L	- Low Temp. Viton - 46°C or HNBR												
SEAT													
D	- Delrin®	I	- Integral Metal	N	- Nylon								
K	- PCTFE / KElf	V	- Teflon®	Z	- Special								
E	- PEEK	M	- 316 Overlay										
MATERIAL													
C	- CS (CAD or Zinc Plated)	J	- Hastelloy®										
S	- 316 SS	W	- 316L										
M	- Monel® 400	Z	- Special										
CONNECTIONS INLET x Outlet †													
2	- 1/4 -inch NPTF x 1/4 -inch NPTF		44	- 1/2 -inch NPTM x 1/2 -inch NPTF									
3	- 3/8 -inch NPTF x 3/8 -inch NPTF		46	- 3/4 -inch NPTM x 1/2 -inch NPTF									
22	- 1/4 -inch NPTM x 1/4 -inch NPTF		48	- 1/2 -inch NPTM x 1 -inch NPTF									
24	- 1/2 -inch NPTM x 1/4 -inch NPTF		6	- 3/4 -inch NPTF x 3/4 -inch NPTF									
33	- 3/8 -inch NPTM x 3/8 -inch NPTF		66	- 3/4 -inch NPTM x 3/4 -inch NPTF									
4	- 1/2 -inch NPTF x 1/2 -inch NPTF		8	- 1-inch NPTF x 1-inch NPTF									
4M	- 1/2 -inch NPTM x 1/2 -inch NPTM		88	- 1-inch NPTM x 1-inch NPTF									
AT*	- Tube Compression Fitting End(s)		**	- 11/4-inch to 2-inch									
*Concatenate with size, example 4AT4 is 1/2 inch Tube x 1/2 inch NPTF, 4AT is 1/2 inch Tube x 1/2 inch Tube													
† SH1 is Bi-Directional **32/40/50													
SPECIAL SUFFIX FOR SH1/S-H7/S-H71 ONLY													
Q	- 1/2 inch End connections (S-H1/S-H7/S-H71 ONLY)												
BLANK	- Over and under 1/2 inch End connections. (Except 1/4 inch S-H1 see below.)												
QR	- 1/4-inch End connections (S-H1 ONLY)												
CONNECTION VARIATION SUFFIX													
BLANK	- No Variation												
BSP	- BSP												
MSW	- Male plain end (Male Socket Weld)(CS is black oxide coated)												
SWF	- Female Socket Weld												
L	- Integral Long body extension												
ANGLE VARIATION SUFFIX													
BLANK	- Inline	A	- Angle										
BONNET VARIATION SUFFIX													
BLANK	- Threaded Bonnet (Standard)	I	- Integral Bonnet					W	- Welded Bonnet				
B	- Bolted Bonnet OS&Y	O	- OS&Y Bonnet					Z	- Special				
OPTIONS													
BL	- Bonnet Lock Pin			SG1	- (Sour Gas) meets NACE MR0175/ISO 15156-3 -2 (for Chloride conditions > 50 mg/l [ppm])								
BS	- Bellow Sealed			SV6	- Side Bleeder Fitted Type SV6								
LT	- Low Temp Lubricant (low temperature service -46°C)			SVA	- Side Bleeder Fitted Type SVA								
MO	- Monel® Stem			BP	- Bleed Plug								
OX	- Oxygen Cleaning			DB	- Bleed Valve Bonnet								
PM	- Panel Mount			DBB	- Two Bleed Valve Bonnets								
RH	- Black Round Handle			Z	- Special								
SG	- (Sour Gas) meets NACE MR0175/ISO 15156-3 -2 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103-2005 (316 SS only)												

MODEL S-H71, 10,000 PSI GLOBE TYPE

Flowturn 'HP' Series Globe Pattern Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environments. 'HP' Series valves are used in process control, instrumentation and flow control applications. 'HP' Series valves are precision machined, and designed for durability and maximum efficiency to provide a high quality valve for use in fluid and gaseous control systems of different applications, to meet the exacting standards of our growing and demanding customers.

Flowturn 'HP' Series Valves are available in high grade stainless steel, carbon steel, monel and other materials in a variety of end connections including male / female threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered pipe ends. Valves can be supplied to meet current revision of NACE MR-01-75 (Sour Gas Service).

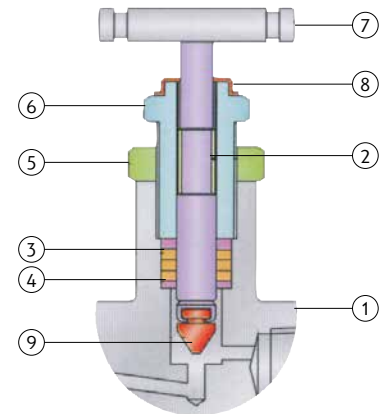
FEATURES - BENEFITS

- **One piece body construction no welding** - for high strength and safety.
- **Vee tip design** - controls accurate flow.
- **Stem thread rolled and hard plated** - provides additional strength and maximum service life.
- **Mirror finish stem, burnished to 16 RMS** - extends packing life and smooth stem operation.
- **Stainless steel handle** - for proper actuation.
- **Dust cap** - prevents contaminants and lubricant washout of bonnet assembly.
- **Reparable Metal Seat** - can be resurfaced without removing valve from line.



MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316
2	Stem	1	A479-316
3	Packing Washer	1	A479-316
4	Gland Packing	1	Glass Filled PTFE
5	Lock Nut	1	A479-316
6	Gland Retainer	1	A479-316
7	Handle	1	Stainless Steel
8	Dust Cap	1	Plastic
9	Vee Tip	1	17.4 PH/316/HF



DIMENSIONS (MM)

Size	A(MF)	A(FF)	S-SQ	H	L
1/4"	60	55	25	86	60
3/8"	60	55	28	86	60
1/2"*	82	75	34	98	70
3/4"*	87	80	38	98	70

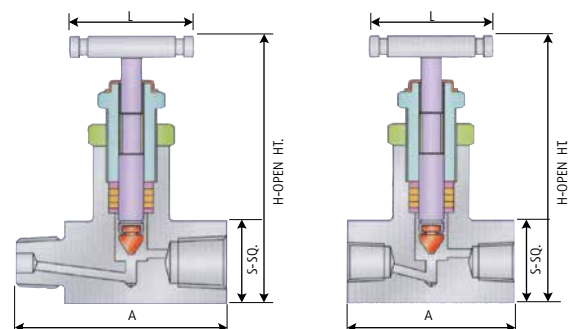
PRESSURE/TEMPERATURE RATINGS

Orifice	Cv	Pressure Rating	Temperature Rating
5mm*	0.22	10,000 PSI (700 bar)	-65° to 200°F (-50° to 93°C)

*Larger orifice available to 16mm.

TESTING

Every Flowturn 'HP' Series Needle Valve is 100% tested with nitrogen gas at 1200psig (80Bar) for leakage at seal and seat. Hydrostatic test performed with pure water at 1½ times the working pressure. Other optional tests like helium and low temperature are available upon request.



MODEL S-H7 & S-M9, 6000 PSI GLOBE TYPE

Flowturn 'HB' Series Globe Pattern Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environment. 'HB' Series valves are used in process control, instrumentation and flow control applications. 'HB' Series are precision machined, and designed for durability and maximum efficiency to provide a high quality valve for use in fluid and gaseous control systems of different applications, to meet the exacting standards of our growing and demanding customers. The model S-M9 is complete with an integral bleed plug.

Flowturn 'HB' Series Valves are available in high grade stainless steel, carbon steel, monel and other materials in variety of end connections including male / female threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered pipe ends. Valves can be supplied to meet current revision of NACE MR01-75 (Sour Gas Service). All valves are 100% factory tested and complete traceability is available upon request.

FEATURES - BENEFITS

- **Non rotating vee / ball tip design** - which forms a bearing joint with the stem eliminates rotation between plug and seat at closure. This prevents scoring and galling up the valve seat and ensure long life in repetitive shut off service.
- **Safety bonnet lock** - prevents accidental disassembly.
- **Stem thread rolled and hard plated** - provides additional strength and maximum service life
- **Mirror finish stem, burnished to 16 RMS** - extends packing life and smooth stem operation
- **Adjustable packing below stem threads** - prevents stem lubrication washout and isolate threads from process contamination.
- **Safety back seating** - provides secondary stem seal in full open position, prevents stem blow out.
- **Stainless steel handle** - for proper actuation.
- **Body to bonnet seal** - metal to metal constant compression isolates bonnet threads from system fluids.
- **Dust cap** - prevents contaminants and lubricant washout of bonnet assembly.
- **Repairable Metal Seat** - can be resurfaced without removing valve from line.

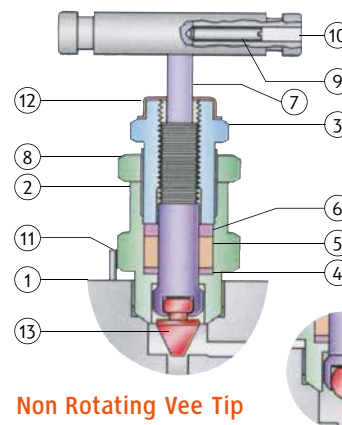


S-M9 & S-H7

MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316 / A-105*
2	Gland Body	1	A479-316 / A-105*
3	Gland Retainer	1	A479-316 / A-105*
4	Washer	1	A479-316
5	Packing	1	PTFE / Graphoil
6	Packing Washer	1	A276-316
7	Spindle	1	A276-316
8	Lock Nut	1	A479-316 / A-105*
9	Grub Screw	1	A479-316
10	Handle	1	A276-304 / A-105*
11	Lock Pin	1	A479-316
12	Dust Cap	1	Plastic LD
13	Vee Tip / Ball Tip	1	17.4 PH/316

*CAD or zinc plated



Non Rotating Vee Tip

Non Rotating Ball Tip

PRESSURE/TEMPERATURE RATINGS

Valve	Orifice	Cv	Max. Working Pressure	Temp	Pressure@Max. Pressure
					PTFE
1/4"	3.5mm	0.31	41300 kpa (6000 psi)	-29° to 121°C	27579 kpa @ 230°C (4000 psi @ 446°F)
3/8"	3.5mm	0.31		-20° to 250°F	
1/2"	4.8mm	0.52			GRAPHITE
3/4"	6.4mm	1.40		29° to 315°C	24821 kpa @ 230°C (3600 psi @ 446°F)
1"	9.5mm	2.40		-29° to 600°F	
1 1/4"	11.9mm		20670 kpa (3000 psi)		
1 1/2"	11.9mm				
2"	14.0mm				

TESTING

Every Flowturn 'HB' Series Needle Valve is 100% tested with nitrogen gas at 1200 psig (80Bar) for leakage at seal and seat. Hydrostatic test performed with pure water at 1½ times the working pressure. Other optional tests like helium and low temperature are available upon request. *See Page 14 for dimensions (same as S-H7-PM).*

NEEDLE VALVES MODEL S-H7-PM PANEL MOUNT

Flowturn 'IB' Series **Panel Mount** Globe Type Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environments. 'IB' Series valves are used in Process control, instrumentation and flow control applications. 'IB' Series Valves are precision machined, and designed for durability and maximum efficiency to provide a high quality valve for use in fluid and gaseous control systems of different applications, to meet the exacting standards of our growing and demanding customers.

Flowturn 'IB' Series Valves are available in high grade stainless steel, carbon steel, monel and other materials in a variety of end connections including male / female threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered pipe ends. Valves can be supplied to meet current revision of NACE MR01-75 (Sour Gas Service). All valves are 100% factory tested and complete traceability is available upon request. **Model S-H71-PM 10,000 psi is also available.**

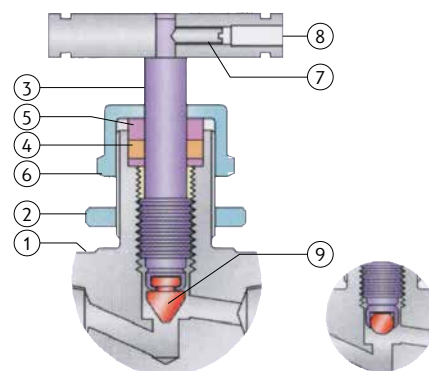
FEATURES - BENEFITS

- **One piece body construction no welding used** - for high strength and safety.
- **Non rotating vee / ball tip design** - which forms a bearing joint with the stem eliminates rotation between plug and seat at closure. This prevents scoring and galling up the valve seat and ensure long life in repetitive shut off service.
- **Stem thread rolled and hard plated** - provides additional strength and maximum service life.
- **Mirror finish stem, burnished to 16 RMS** - extends packing life and smooth stem operation.
- **Stainless steel handle** - for proper actuation.
- **Repairable Metal Seat** - can be resurfaced without removing valve from line.



MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316
2	Panel Nut	1	A479-316
3	Stem	1	A479-316
4	Packing	1	Teflon / Graphoil
5	Washer	1	A479-316
6	Gland Nut	1	A479-316
7	Grub Screw	1	Steel Plated / 316
8	Handle	1	Stainless Steel
9	Vee Tip / Ball Tip	1	17.4 PH/316/HF



Non Rotating
Vee Tip

Non Rotating
Ball Tip

PRESSURE/TEMPERATURE RATINGS

Valve	Orifice	Cv	Max. Working Pressure	Temp	Pressure@Max. Pressure
					PTFE
1/4"	3.5mm	0.31	41300 kpa (6000 psi)	-29° to 121°C	27,579 kpa @ 230°C
3/8"	3.5mm	0.31		-20° to 250°F	(4000 psi @ 446°F)
1/2"	4.8mm	0.52			GRAPHOIL
3/4"	6.4mm	1.40		-29° to 315°C	24,821 kpa @ 230°C
1"	9.5mm	2.40		-29° to 600°F	(3600 psi @ 446°F)

The S-H71 10,000 psi is also available.

TESTING

Every Flowturn 'IB' Series Needle Valve is 100% tested with nitrogen gas at 1200psig (80Bar) for leakage at seal and seat. Hydrostatic test performed with pure water at 1½ times the working pressure. Other optional tests like helium and low temperature are available upon request.

MODEL S-H1 & S-M9S RISING PLUG TYPE 6000 PSI

Flowturn SH1 and S-M9S Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environment. S-H1 & S-M9S valves are used in process control, instrumentation and flow control applications. 'HB' Series are precision machined, and designed for durability and maximum efficiency to provide a high quality valve for use in fluid and gaseous control systems of different applications, to meet the exacting standards of our growing and demanding customers. The model S-M9S is complete with an integral bleed plug.

Flowturn Needle Valves are available in high grade stainless steel, carbon steel, monel and other materials in variety of end connections including male/female threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered pipe ends. Valves can be supplied to meet current revision of NACE MR01-75 (Sour Gas Service). All valves are 100% factory tested and complete traceability is available upon request.



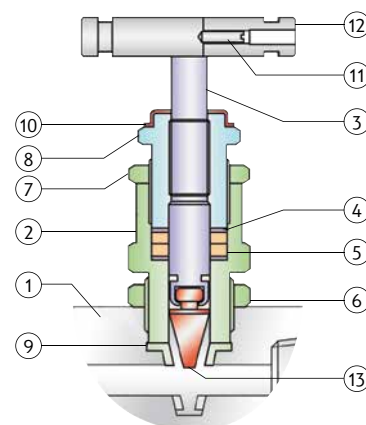
FEATURES - BENEFITS

- **Straight through flow path** - provides high flow capacity bi-directional 'roddable' capability.
- **Safety bonnet lock** - prevents accidental disassembly.
- **Stem thread rolled and hard plated** - provides additional strength and maximum service life.
- **Mirror finish stem, burnished to 16 RMS** - extends packing life and smooth stem operation.
- **Adjustable packing below stem threads** - prevents stem lubrication washout and isolate threads from process contamination.
- **Safety back seating** - provides secondary stem seal in full open position, prevents stem blow out.
- **Stainless steel handle** - for proper actuation.
- **Body to bonnet seal** - metal to metal constant compression isolates bonnet threads from system fluids.
- **Dust cap** - prevents contaminants and lubricant washout of bonnet assembly.

MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316 / A-105*
2	Bonnet	1	A479-316 / A-105*
3	Stem	1	A276-316
4	Spacer	1	PTFE / Graphoil
5	Packing	1	PTFE / Graphoil
6	Lock Nut	1	A479-316 / A-105*
7	Gland Lock Nut	1	A479-316 / A-105*
8	Gland Retainer	1	A479-316
9	Rising Plug Seat	1	Delrin
10	Dust Cap	1	Plastic LD
11	Grub Screw	1	A479-316
12	Handle	1	A276-304 / A-105*
13	Rising Plug	1	A479-316
14	Lock Pin (Optional)	1	A479-316

*CAD or zinc plated



Non Rotating Vee Tip (Soft Seat)

PRESSURE/TEMPERATURE RATINGS

Valve	Orifice	Cv	Max. Working Pressure	Temp	Pressure@Max. Pressure
					PTFE
1/4"	3.5mm	0.31	41300 kpa (6000 psi)	-29° to 121°C	27,579 kpa @ 230°C
3/8"	3.5mm	0.31		-20° to 250°F	(4000 psi @ 446°F)
1/2"	4.8mm	0.52			GRAPHOIL
3/4"	6.4mm	1.40		-29° to 315°C	24,821 kpa @ 230°C
1"	9.5mm	2.40		-29° to 600°F	(3600 psi @ 446°F)

DIMENSIONS (MM)

Size	(MF)*	(FF)*	HQ	A (open)
1/4"	60	55	27	93.5
3/8"	60	55	27	93.5
1/2"	80	75	32	96.5
3/4"	95	80	42	117
1"	100	95	45	119

*S-M9S Refer to drawing

TESTING

Every Flowturn Needle Valve is 100% tested with nitrogen gas at 1200 psig (80Bar) for leakage at seal and seat. Hydrostatic test performed with pure water at 1½ times the working pressure. Other optional tests like helium and low temperature are available upon request.

MODEL S-M5 & S-M5A/F GAUGE ROOT 6000 PSI

Flowturn Gauge Root Globe and Plug Type Needle Valves are used for safe installation in pressure switches, gauges and differential pressure transmitters, suitable for block and bleed assemblies to test pressure source required in sampling line or purge valve.



FEATURES

316 S.S. construction for corrosion resistance. Non rotating vee or ball tip. Extended body for insulation clearance. Scheduled 160 or heavier pipe valve inlet for strength. Optional graphoil packing available for high temperatures. Ball*/vee tip design forms a bearing joint with the stem which eliminates rotation between ball/vee tip and seat at closure. This prevents scoring and galling up the valve seat and ensures long life in repetitive shut off service.

- **Non rotating vee / ball* tip design** - which forms a bearing joint with the stem eliminates rotation between plug and seat at closure. This prevents scoring and galling up the valve seat and ensure long life in repetitive shut off service.
- **Safety bonnet lock** - prevents accidental disassembly.
- **Stem thread rolled and hard plated** - provides additional strength and maximum service life.
- **Mirror finish stem, burnished to 16 RMS** - extends packing life and smooth stem operation.
- **Adjustable packing below stem threads** - prevents stem lubrication washout and isolate threads from process contamination.
- **Safety back seating** - provides secondary stem seal in full open position, prevents stem blow out.
- **Stainless steel handle** - for proper actuation.
- **Body to bonnet seal** - metal to metal constant compression isolates bonnet threads from system fluids.
- **Dust cap** - prevents contaminants and lubricant washout of bonnet assembly.
- **Repairable Metal Seat** - can be resurfaced without removing valve from line.

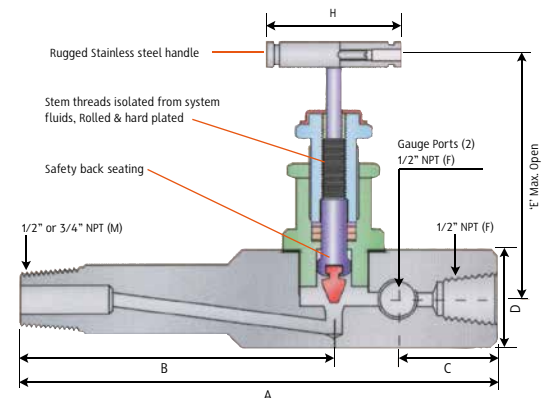
*Ball tip available as option only on S-M5 globe style.

MATERIAL OF CONSTRUCTION (S-M5)

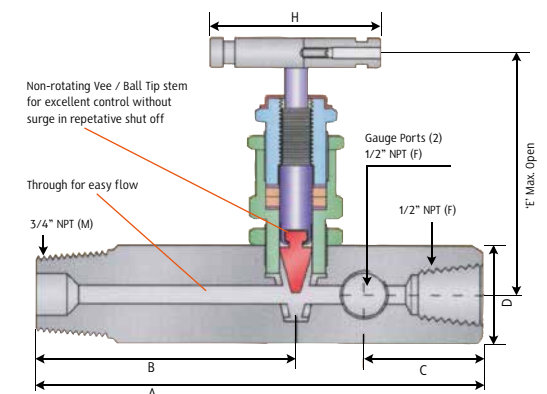
Sr No.	Part	Qty.	Material
1	Body	1	A479-316 / A-105**
2	Stem	1	A479-316
3	Spacer	2	A479-316
4	Gland Body	1	A479-316 / A-105**
5	Gland Packing	2	Teflon / Graphoil
6	Lock Nut	1	A479-316 / A-105**
7	Retainer	1	A479-316 / A-105**
8	Cap	1	Plastic / LD
9	Grub Screw	1	A479-316
10	Washer	1	A479-316
11	Handle	1	Stainless Steel
12	Vee / Ball Tip	1	Titanium / 17-4PH/316/HF

*CAD or zinc plated

MAT.	SEAT	TEMP. RATING	PR. RATING @ 1000°F (380°C)
S. S. 316	V-Stem Rising Plug	-650°F to 4500°F (-540°F to 232°C)	6000 PSI (41,300 Kpa)



Globe Style S-M5



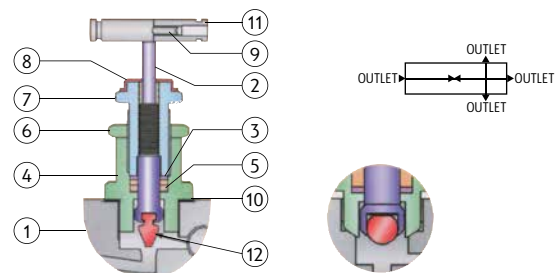
Straight Through Style S-M5A/F
(Drawing on request)

DIMENSIONS

Body	Orifice mm	Connecting Size		Dimensions						
		Inlet	Outlet	A	B	C	D	E	H	
Short	5	1/2"NPT	1/2"NPT	137	76	38	32 SQ	90	64	
Lagging Extension	5	1/2"NPT	1/2"NPT	184	123	38	32 SQ	90	64	

TESTING

Each valve is tested with nitrogen gas at 1000 psi for seat and packing leakage with a maximum allowable leak rate of 0.1 sec/min. Hydro test performed with pure water at 1 1/2 times the working pressure. Other tests like vibration and temperature etc. are available upon requests.



Non Rotating Vee Tip Non Rotating Ball Tip
Globe Style S-M5

MONO FLANGE BLOCK & BLEED VALVES MODEL SMO 150-2500 CLASS

MONO FLANGE

Flowturn Design Mono Flange, Single block and bleed and Double block and bleed valves incorporate primary process valves together with standard isolation and vent needle valves in one single compact unit to offer a space, weight and cost saving compared to traditional block & bleed valve. The compact size allows the use of more expensive materials like 316 & F51 to provide a longer life.



FEATURES

- Single piece body with Bonnet assembly.
- Flange connection 15NB to 50NB (1/2" to 2").
- TFE or Graphite Packing for Bubble tight sealing.
- Non-Rotating Tip to provide positive, bubble - tight seal.
- Metal to Metal Body/Bonnet Seal.
- Tbar Handle.
- Designed to comply with requirements of ANSI/ASME B16.5. Optional valve Bonnet assembly OS & Y bolted, Anti Tamper and globe Style assembly with non rotating needle trim.

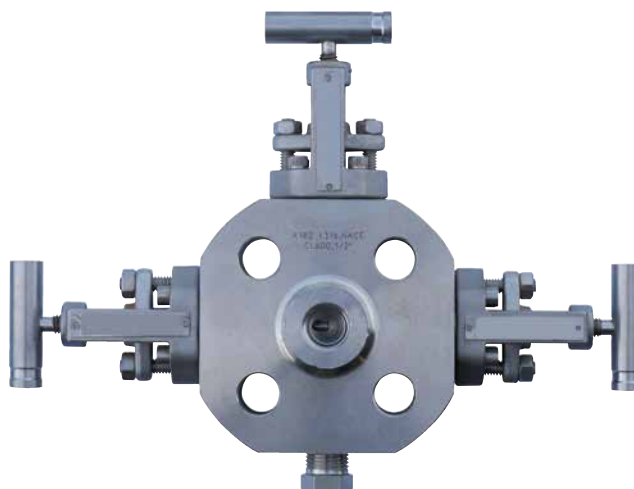
ADVANTAGES

1500-lb, One -piece integrally forged valve:-

- Reduced weight
- Reduced height
- Reduced leakage points
- Reduced effect of system vibration
- Supporting brackets are not required
- Reduced bending moment acting on the vessel branch fitting weld.
- Reduced installation cost
- Reduced gaskets and bolting

TECHNICAL

- NACE MR-01-75.
- ASTM (Gr) Stainless steel, F316/F316L Carbon steel, A150/ LF2 and duplex or Super duplex and Alloy (400, 625, 825 and C276).
- Heat Code for material traceable to EN 10204.3.1.B.
- End connection accordance with ASME B16.5 RF and RTJ NPT connection accordance with ASME B1.20.1
- Working pressure in accordance to ASME B16.5 class 150 to 2500 class working temperature 58 to 400°F (-50 to 204°C) for stainless steel and duplex -50 to 400°F (-46 to 204°C) carbon steel valve
- All valves are 100% factory testing hydrostatically and pneumatic leakage accordance with BS 12266.1



**Mono Flange Wafer Type
Double Block & Bleed Valve**

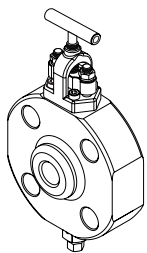
BALL/NEEDLE DOUBLE BLOCK & BLEED VALVES MODEL SBB 150-2500 CLASS

BALL/NEEDLE BALL ASSEMBLY

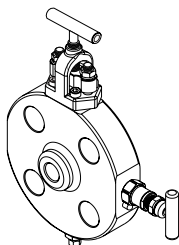
Flowturn provides needle/ball valve assembly in Single block and bleed and Double block and bleed in one single compact unit. This combination of primary and secondary valve provides shut off assurance & verification as well as space, weight and cost savings. This style is configured with one ball and one needle isolation valve in-line with an additional needle valve side bleed for block & bleed use. Flowturn can supply this style of valve in very short delivery in A105N, LF2, 316, F51, etc., in 150 to 2500 class

FEATURES

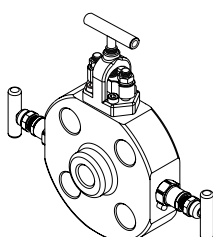
- Process interface in one compact ball/needle ball valve assembly.
- Three piece bolted body and integral single piece forged body styles.
- Flanged or Flanged & Screwed connection 15NB to 100NB (1/2" to 4").
- Graphite packing for bubble tight sealing.
- Ball seats in PTFE, Delrin or PEEK.
- Bore size available 10mm to 100mm.
- Anti-blowout valve stems and non rotating needles.
- Fire safe designed to meet API 607.
- Optional vent valve bonnet assembly, OS&Y bolted, Anti-Tamper and globe style assembly with non-rotating needle trim.



Block Only



Block & Bleed



Double Block & Bleed



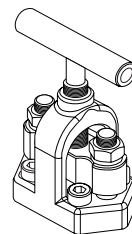
Combination Needle & Ball



Double Ball

TECHNICAL

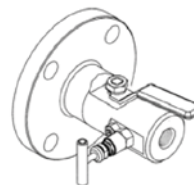
- NACE MR-01-75.
- ASTM (Gr) Stainless steel, F316/F316L carbon steel, A105/LF2 and duplex F51/F53 and Alloy 400, 625, 825 and C276.
- Heat Code for material traceable to EN 10204.3.1.B.
- Flange connection accordance with ASME B16.5 RF, RTJ or NPT connections in accordance with ASME B1.20.1.
- Working pressure in accordance to ASME B16.5 class 150 to 2500 class working temperature 58 to 400°F (-50 to 204°C) for stainless steel and duplex 50 to 400°F (-46 to 204°C) for carbon steel valve.
- All valve 100% factory testing hydrostatically and pneumatic leakage accordance with BS 12266.1.



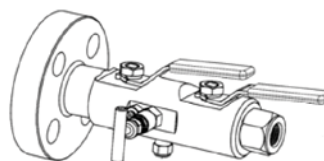
OS & Y Bonnet Option



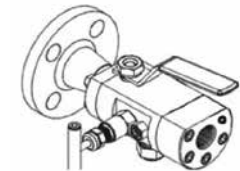
Block & Bleed -
Ball/Needle Style



Single Ball Block & Bleed



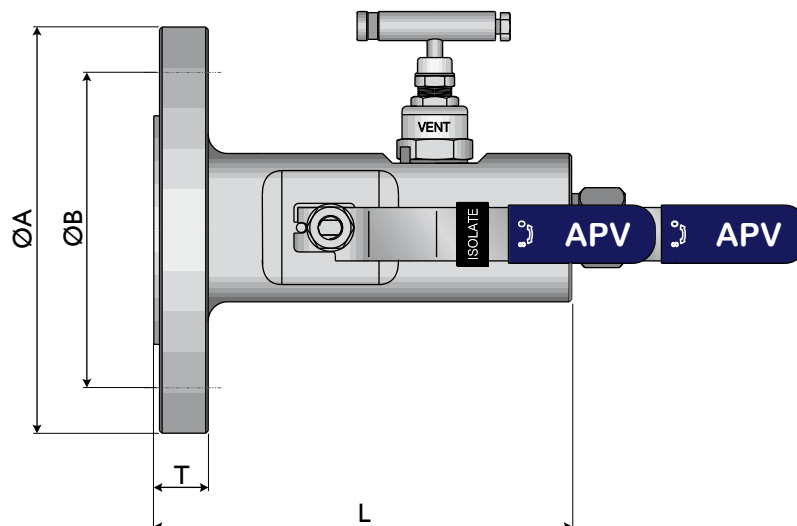
Double Ball
Block & Bleed



Double Block & Bleed -
Ball/Needle/Ball Style

MODEL SBB-SW FLANGED NPT OR SW DOUBLE BLOCK & BLEED & NEEDLE VALVE

Size (NPS)	Rating (Class)	Dimension (mm)						Weight (kg)
		A	B	L		T		
				RF	RTJ	RF	RTJ	
1/2	150	89	60.3	188	-	11.2	-	3.6
	300	96	66.7		193	14.3	18.3	3.9
	600				196	20.6	19.8	4.0
	900/1500	121	82.5	206	213	28.8	28.8	5.4
	2500	134	88.9			36.6	36.6	6.9
3/4	150	99	69.8	188	-	12.7	-	3.9
	300	118	82.5		196	15.7	20.6	4.6
	600					22.1	22.3	4.7
	900/1500	130	88.9	206	213	31.8	21.8	6.3
	2500	140	95.2			38.2	38.2	7.5
1	150	108	79.4	178	183	14.3	19.0	4.0
	300	124	88.9	180	185	17.5	22.3	4.6
	600				188	23.9	23.9	4.7
	900/1500	150	101.6	191	198	34.8	34.8	7.0
	2500	159	108.0	206	206	41.5	41.5	8.6
1 1/2	150	127	98.4	180	185	17.5	22.3	4.6
	300	156	114.3	183	188	20.6	25.4	6.0
	600			193	193	28.8	28.8	6.5
	900/1500	178	123.8	203	203	38.2	38.2	9.4
	2500	203	146.1	216	216	50.9	52.4	15.9
2	150	153	120.6	183	188	19.1	23.9	6.6
	300	165	127.0	185	192	22.4	28.7	8.0
	600			196	197	31.8	33.3	8.3
	900/1500	216	165.1	226	210	44.5	46.0	15.0
	2500	235	171.5	221	223	57.2	58.7	22.0





**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,
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and process industries.
APV valves and pipeline
products form the most
competitive portfolio
in the market.”***



STEAMCO®

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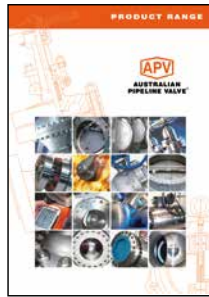
TORQTURN®

TWIN-LOK®

UNIFLO®



AUSTRALIAN PIPELINE VALVE BRAND RANGE - CATALOGUES



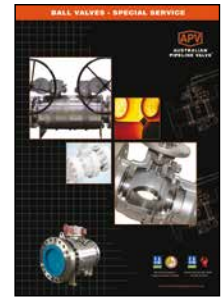
Product Brochure



Ball Valves Floating
& Trunnion Mounted



Ball Valves
Floating Small Bore



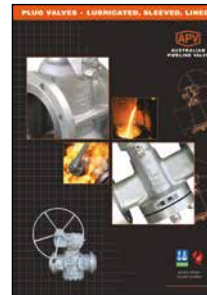
Ball Valves
Special Service



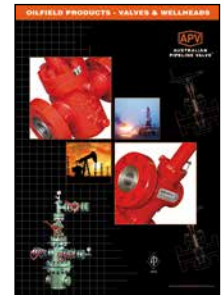
Gate, Globe & Check Valves -
Cast Steel



Gate, Globe & Check Valves -
Forged Steel



Plug Valves Lubricated, Sleeved
& Lined



Oilfield Products
Valves & Wellheads

APV FAMILY OF BRANDS RANGE - CATALOGUES



Diamond Gear
Gearboxes



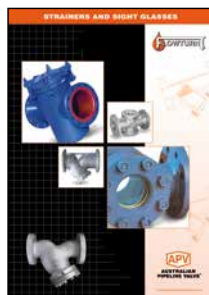
Flowturn Ball Valves Multiway
& Deadman



Flowturn Gate, Globe & Check
Valves



Flowturn
Instrument Valves



Flowturn Strainers
& Sight Glasses



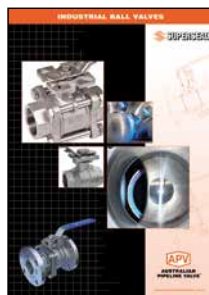
Steamco
Steam Valves



Supercheck
Wafer Check Valves



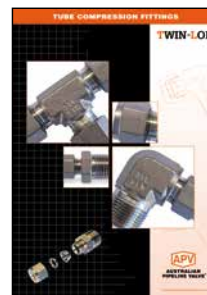
Superseal
Butterfly Valves



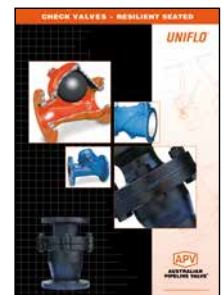
Superseal
Industrial Ball Valves



Torqturn Actuators



TwinLok Tube Fittings



Uniflo Check Valves

Contact us for your local stockist/distributor



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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 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.

