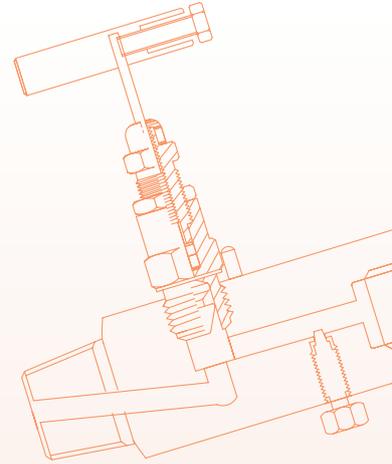
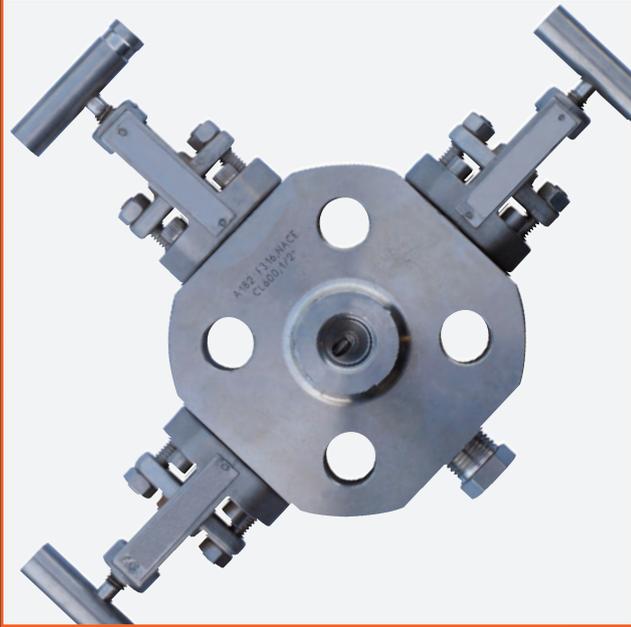
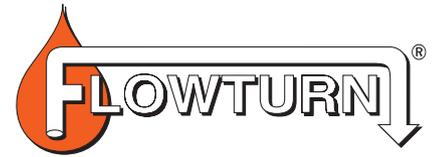


NEEDLE AND INSTRUMENTATION VALVES

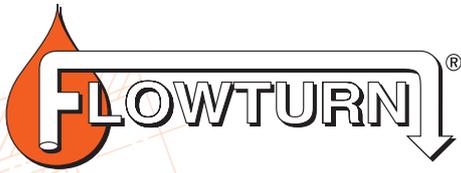


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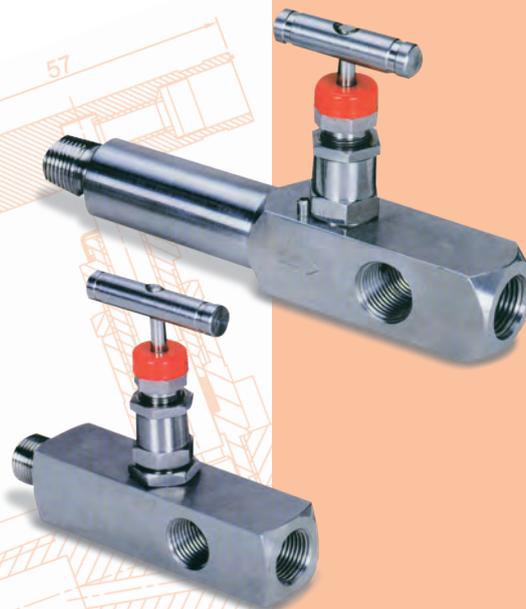
QUALITY VALVE MANUFACTURER





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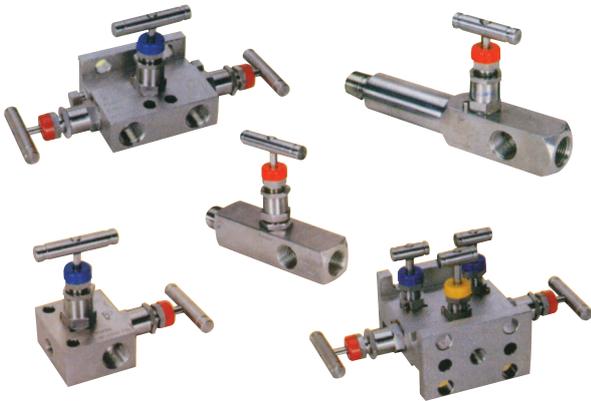
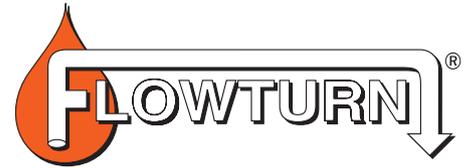


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The Flowturn range of Manifolds offer a safe and economical method of installation to control and measure pressure of liquids and gaseous media. They are ruggedly manufactured and precision machined to the most exacting dimensional tolerance to ensure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

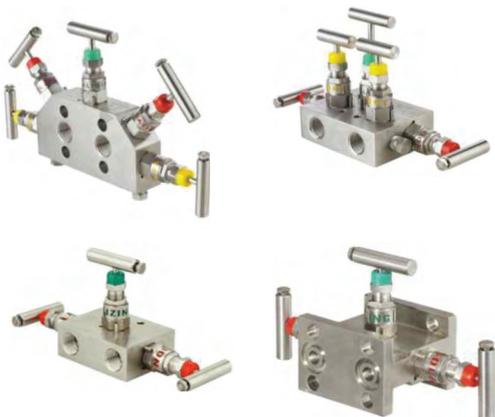
2, 3 and 5 Way manifold Valves

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.



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 1/2 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.

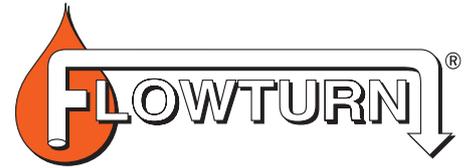
R-Type (pipe to pipe in-line)

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 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

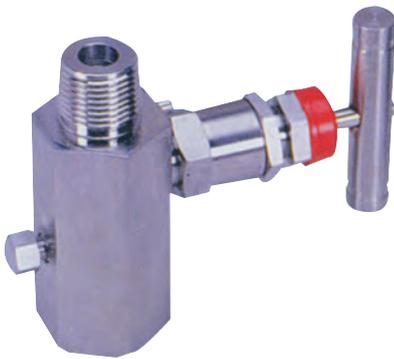
Materials: CS, SS, Duplex and other exotic materials.

Seats: Metal (and soft)

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

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

Temperature (max): 1000°F [538°C]



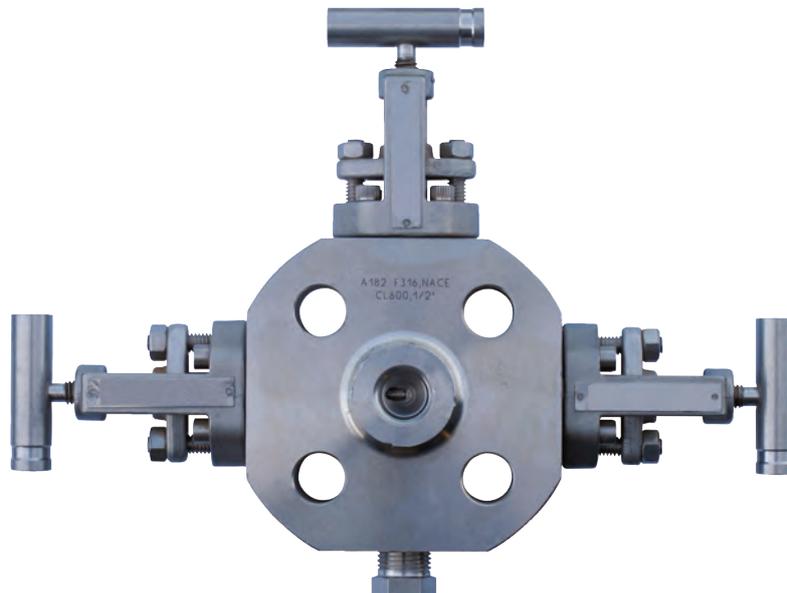
S-M9 Integral Block & Bleed Gauge Valve



S-M5 Multi Port Gauge Root Valve

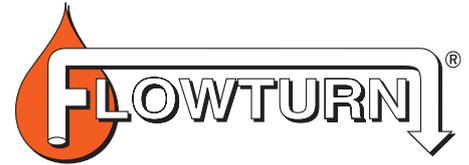


S-H1 Rising Plug Hand Needle Valve



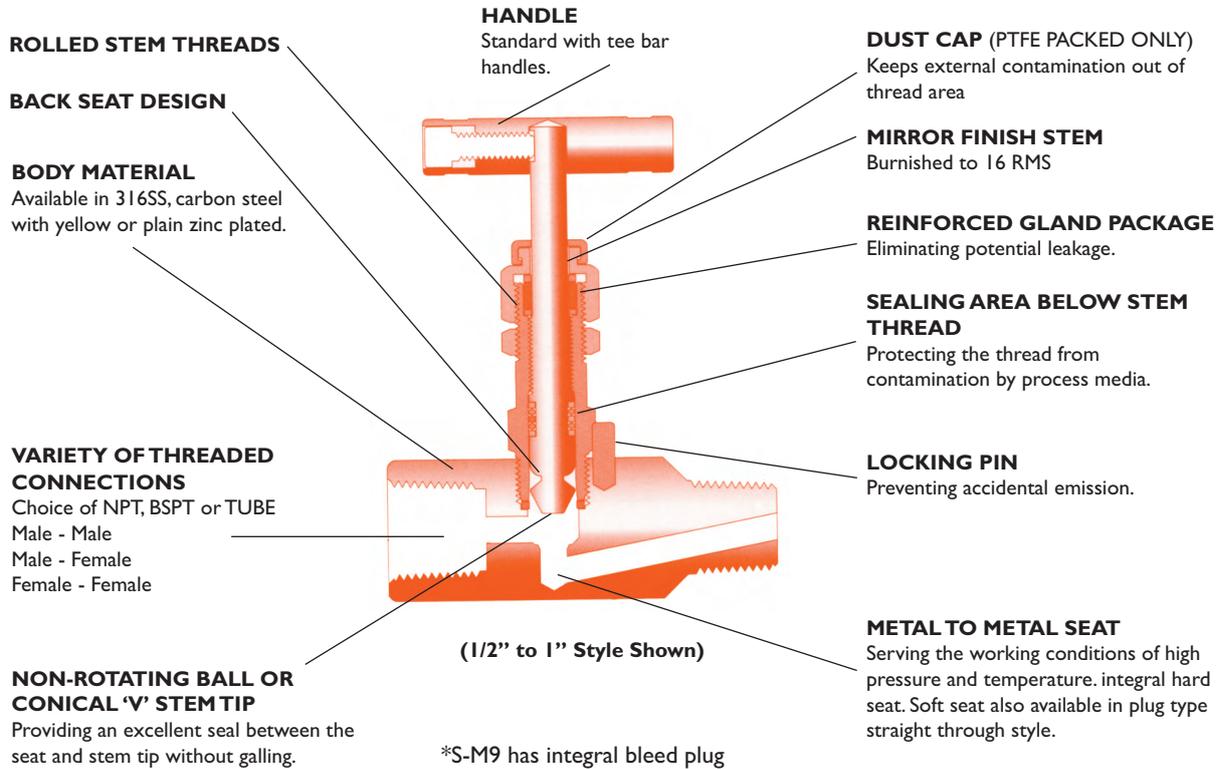
Mono Flange Wafer Type
Double Block & Bleed Valve

Needle Valves Technical Information

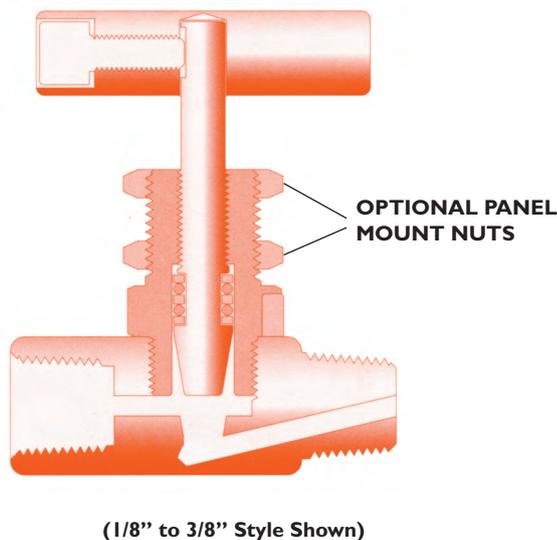


FEATURES

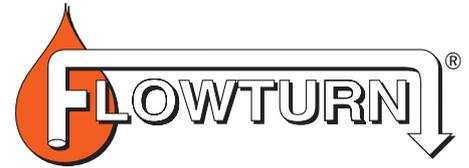
Model S-H7, S-H7I, S-M5, S-M9*



Model S-H7/H7I-PM

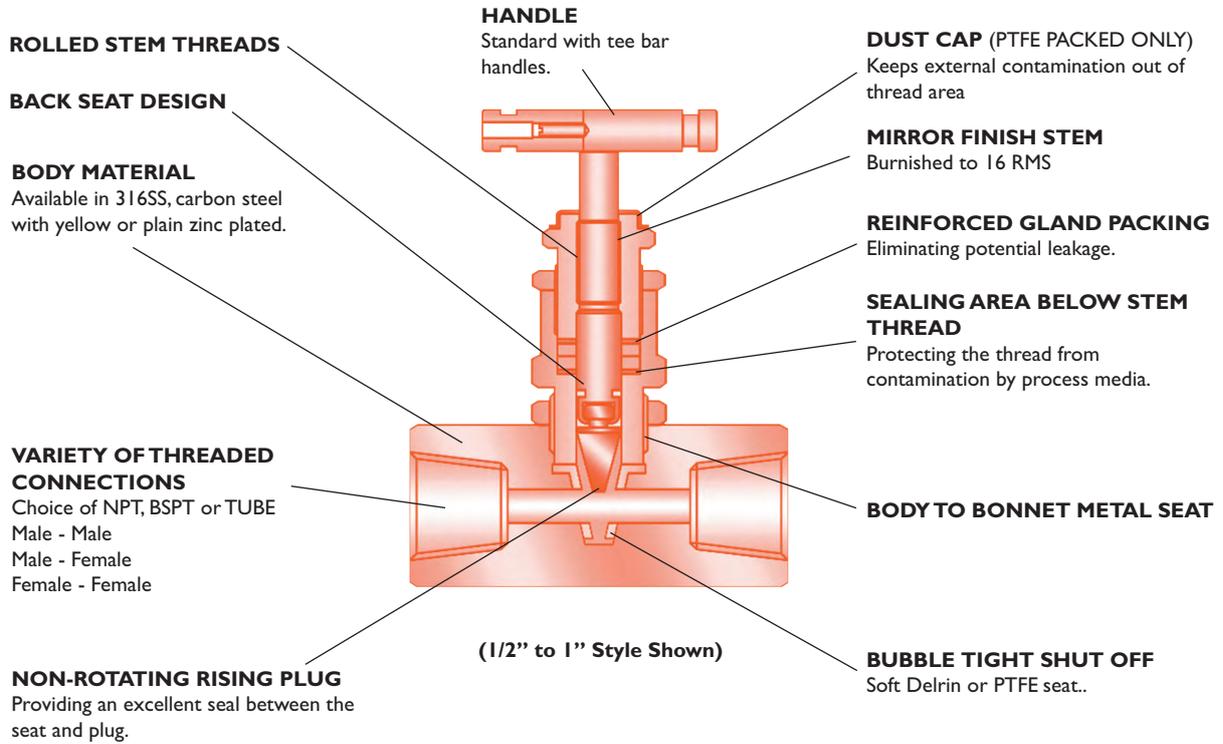


Needle Valves Technical Information



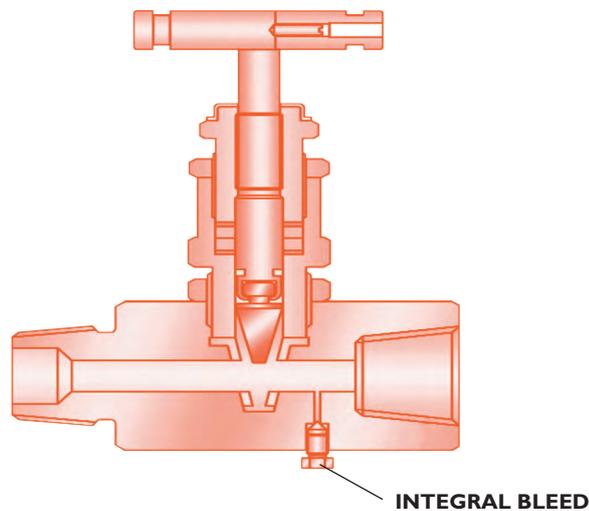
FEATURES

Model S-HI, S-M9S*



*S-M9S has integral bleed plug
See below.

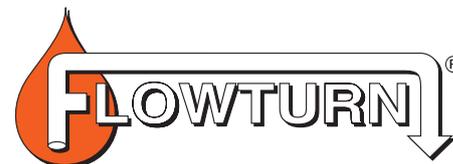
Model S-M9S



(1/8" to 3/8" Style Shown)

Needle Valves

Technical Information



MATERIAL SPECIFICATION

VALVE	BODY	BONNET	STEM	PACKING	PRESSURE & TEMPERATURE RATING	
Carbon Steel	A108	A108	A508	PTFE	6000 psi @ 200°F	414 bar 93°C
					4000 psi @ 500°F	276 bar 260°C
				Graphoil	6000 psi @ 200°F	276 bar 94°C
					4000 psi @ 600°F	276 bar 315°C
Stainless Steel	A479	A479	A479	PTFE	6000 psi @ 200°F	414 bar 260°C
					4000 psi @ 500°F	276 bar 260°C
				Graphoil	6000 psi @ 200°F	414 bar 93°C
					3000 psi @ 500°F	207 bar 260°C
6MO	A182	A182	A182	PTFE	6000 psi @ 200°F	414 bar 93°C
					4000 psi @ 500°F	276 bar 260°C
				Graphoil	6000 psi @ 200°F	414 bar 93°C
					3000 psi @ 500°F	207 bar 260°C
Monel	Monel 400	Monel 400	Monel 400	PTFE	6000 psi @ 200°F	414 bar 93°C
					4000 psi @ 500°F	276 bar 260°C
				Graphoil	6000 psi @ 200°F	414 bar 93°C
					3000 psi @ 500°F	207 bar 260°C
Hastelloy	Hastelloy	Hastelloy	Hastelloy	PTFE	6000 psi @ 200°F	414 bar 93°C
					4000 psi @ 500°F	276 bar 260°C
				Graphoil	6000 psi @ 200°F	414 bar 93°C
					3000 psi @ 500°F	207 bar 260°C

MATERIAL STANDARDS

SR No.	MATERIAL	BAR STOCK	FORGING	TUBING
1	STAINLESS	ASTM A479	ASTM A182	ASTM A269
	STEEL	ASTM A276	F316	ASTM A213
2	BRASS	JIS G4303	JOS G3214	ASTM A249
		ASTM B16 Alloy 360	ASTM B124 Alloy 377	ASTM B68
		ASTM B453 Alloy 345	JIS H3250 Alloy C3771	ASTM B75
		JIS H3250 Alloy C3604	ASTM B88	DIN 1786
3	CARBON STEEL	JIS G4051	JIS G4051	ASTM A161
		S20C - S48C	S20C - S48C	ASTM A179
				DIN 2391
4	ALLOY 400	ASTM B164	ASTM B164	ASTM B165
5	COPPER	---	---	ASTM B75
6	MONEL	BS 3076 NA 13	BS 3076 NA 13	---
7	HASTELLOY	ASTM B164	ASTM B164	---
	C276	ASTM B575	ASTM B574	
8	INCOLOY 825	BS3076 NA16	BS3076 NA16	---
		ASTM B425	ASTM B425	
9	INCONEl 600	ASTM B166	ASTM B564	

MANUFACTURING & TESTING STANDARDS

SR. No.	DESCRIPTION	STANDARD
1	Pressure & Temperature Rating	ANSI B16-34
2	Valves	ANSI B16 Class 2500
3	Sour Gas Service Valves	ANSI B31.1
4	Fittings	JIS B2351, BS4368

THREAD STANDARDS

SR. No.	DESCRIPTION	STANDARD
1	British Parallel Pipe	ISO/BS2779 - DIN - 3852
2	British Taper Pipe	BS21 - IS 07, DIN - 3852
3	Metric Parallel Threads	ISO 6149, DIN - 3852
4	Metric Taper Threads	DIN -3852
5	National Pipe Taper Thread	ANSI/ASME B20.1 - 1983

Needle Valves

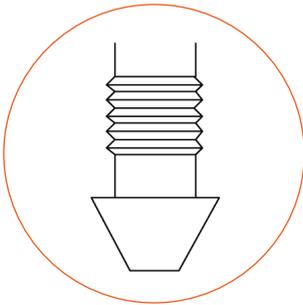
Technical Information



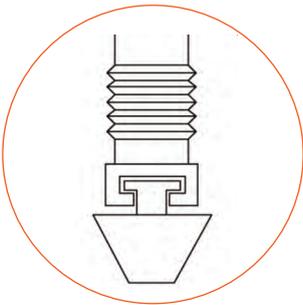
One piece bar stock construction with full material traceability.

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.



ROTATING



NON ROTATING

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.

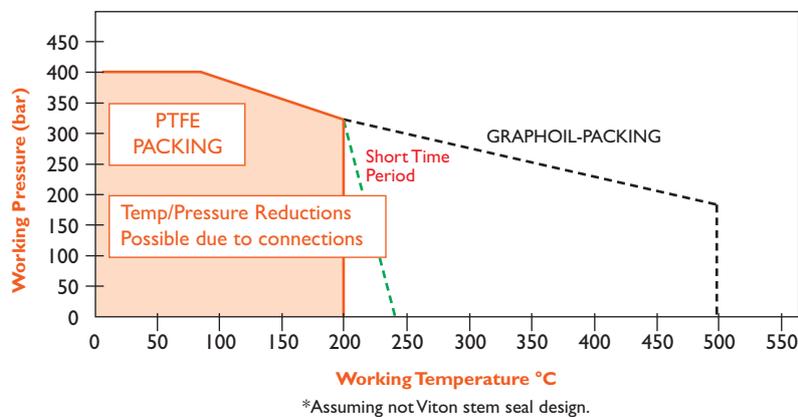
Double bonnet or single bonnet (optional).

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 I.

Low torque operation.

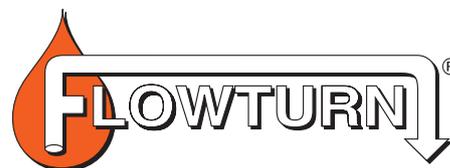
Spindle treated for durable operation.



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.

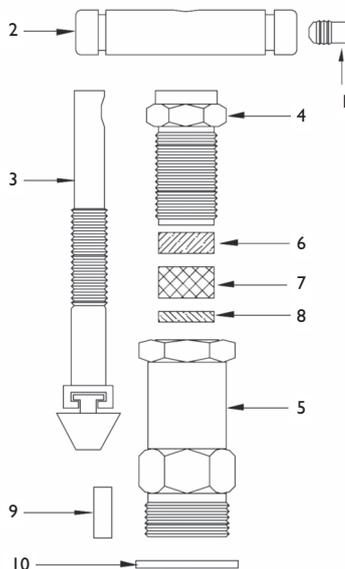
Needle Valves Technical Information



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

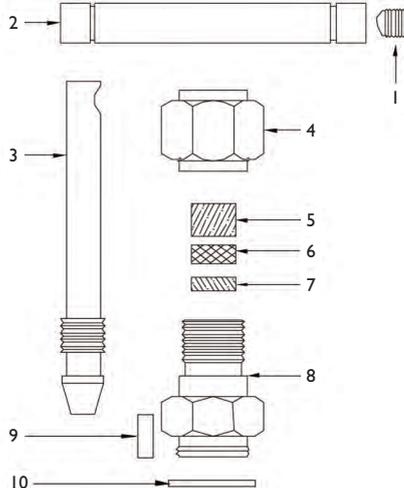
No.	Description	Qty	Material
1	Set Screw	1	MS
2	Handle	1	SS
3	Spindle	1	316SS
4	Packing Bolt	1	MS/316SS
5	Bonnet	1	MS/316SS
6	Bush	1	MS/316SS
7	Packing	1	PTFE/Graphite
8	Bush	1	MS/316SS
9	Stop Pin	1	MS/316SS
10	Washer	1	COPPER
11	Dust Cap*		PLASTIC

* 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 - 44 Q - 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)

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	- ¼ -inch NPTF x ¼ -inch NPTF	44	- ½ -inch NPTM x ½ -inch NPTF
3	- ⅜ -inch NPTF x ⅜ -inch NPTF	46	- ¾ -inch NPTM x ½ -inch NPTF
22	- ¼ -inch NPTM x ¼ -inch NPTF	48	- ½ -inch NPTM x 1 -inch NPTF
24	- ½ -inch NPTM x ¼ -inch NPTF	6	- ¾ -inch NPTF x ¾ -inch NPTF
33	- ⅜ -inch NPTM x ⅜ -inch NPTF	66	- ¾ -inch NPTM x ¾ -inch NPTF
4	- ½ -inch NPTF x ½ -inch NPTF	8	- 1 -inch NPTF x 1 -inch NPTF
4M	- ½ -inch NPTM x ½ -inch NPTM	88	- 1 -inch NPTM x 1 -inch NPTF
AT*	- Tube Compression Fitting End(s)	**	- 1¼ -inch to 2 -inch

* Concatenate with size, example 4AT4 is ½ inch Tube x ½ inch NPTF, 4AT is ½ inch Tube x ½ inch Tube † SH1 is Bi-Directional ** 20/24/32

Special Suffix for SH1/S-H7/S-H71 only (½ inch to 1 inch ends only)

BLANK - Over ½ inch Orifice. (Also ¼ and ⅜ inch ends do not have suffix.)
 Q - Up to ½ inch Orifice (S-H1/S-H7/S-H71 ONLY)*
 QR - ¼ -inch Orifice (S-H1 ONLY)
 * S-H1 over ½ inch orifice does not have a 'Q' suffix.
 Also ¼ inch and ⅜ inch ends S-H1/S-H7/S-H71 do not have a 'Q' suffix.

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 - In-line
 A - Angle

Bonnet Variation Suffix

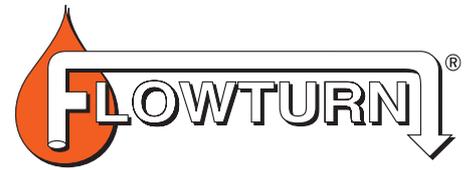
BLANK - Threaded Bonnet (Standard) I - Integral Bonnet W - Welded Bonnet
 B - Bolted Bonnet OS&Y O - OS&Y Bonnet Z - Special

Options

BS	- Bellow Sealed	SG	- (Sour Gas) meets NACE MR0175/ISO 15156-3 -2 (for Chloride conditions ≤ 50 mg/l [ppm]) and NACE MR0103-2005 (316 SS only)
LT	- Low Temp Lubricant (low temperature service -46°C)	SG1	- (Sour Gas) meets NACE MR0175/ISO 15156-3 -2 (for Chloride conditions > 50 mg/l [ppm])
MO	- Monel® Stem	SV6	- Side Bleeder Fitted Type SV6
OX	- Oxygen Cleaning	Z	- Special
PM	- Panel Mount		
RH	- Black Round Handle		

Needle Valves 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.

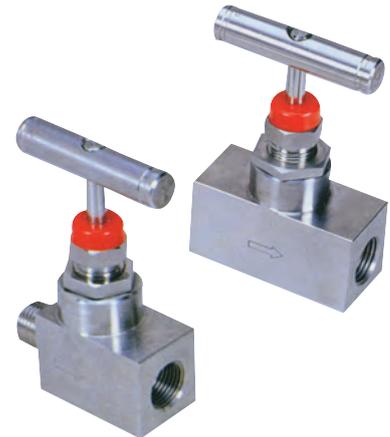
Stem thread rolled and hard plated - provides additional strength and maximum service life.

Mirror finish stem, burnished to 16 RMS - extends packing life and smooth stem operation

Stainless steel handle - for proper actuation.

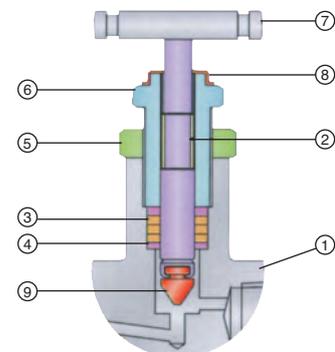
Dust cap - prevents contaminants and lubricant washout of bonnet assembly.

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	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

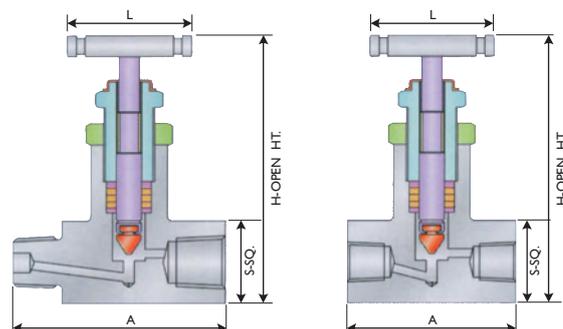
PRESSURE/TEMPERATURE RATINGS

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

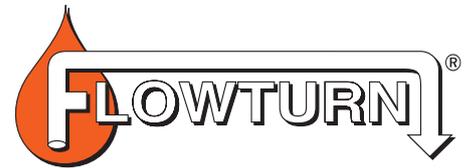
*Larger orifice available to 16mm.

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 1 1/2 times the working pressure. Other optional tests like helium and low temperature are available upon request.



Needle Valves 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.

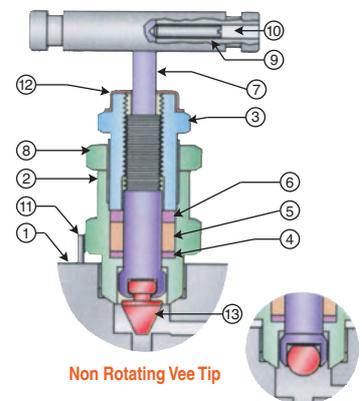


S-M9 & S-H7

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/HF

* CAD or zinc plated



Non Rotating Vee Tip

Non Rotating Ball Tip

PRESSURE/TEMPERATURE RATINGS

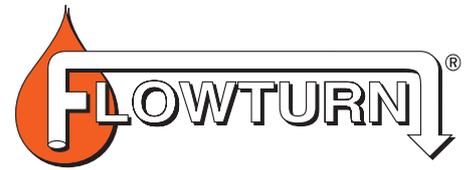
Valve	Orifice	Cv	Max. Working Pressure	Temp	Pressure @ Max. Pressure
1/4"	3.5 mm	0.31	41300 kpa (6000 psi)	PTFE	
				-29° to 121 °C	27579 kpa @ 230°C (4000 psi @ 446°F)
-20° to 250°F					
GRAPHITE					
-29° to 315°C	24821 kpa @ 230°C (3600 psi @ 446°F)				
-29° to 600°F					
1/2"	4.8 mm	0.52			
3/4"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

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 1 1/2 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.

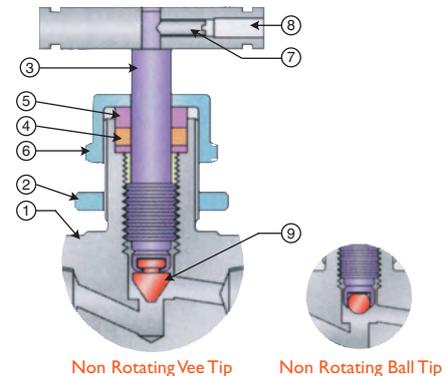
Mirror finish stem, burnished to 16 RMS - extends packing life and smooth stem operation

Stainless steel handle - for proper actuation.

Repairable Metal Seat - can be resurfaced in 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



PRESSURE/TEMPERATURE RATINGS

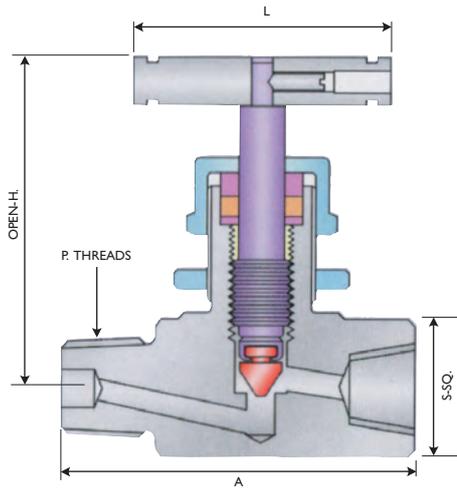
Valve	Orifice	Cv	Max. Working Pressure	Temp	Pressure @ Max. Pressure
¼"	3.5mm	0.31	41300 kpa (6000 psi)	PTFE	
				-29° to 121°C	27,579 kpa @ 230°C (4000 psi @ 446°F)
-20° to 250°F	GRAPHOIL				
½"	4.8mm	0.52		-29 to 315°C	24,821 kpa @ 230°C (3600 psi @ 446°F)
¾"	6.4mm	1.40		-29° to 600°F	
1"	9.5mm	2.40			

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.

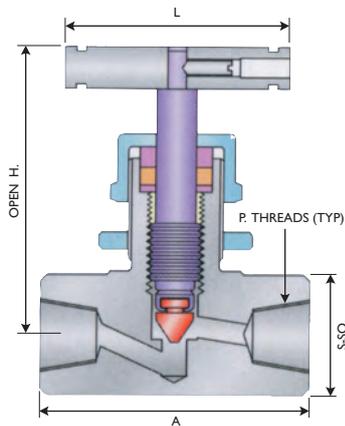
NEEDLE VALVE MODEL S-H7-PM



DIMENSIONS (MM)

P-NPTF	A	S-SQ.	H	L
1/4"	55	22	69	60
3/8"	55	25	69	60
1/2"	73	30	83	60
3/4"	80	36	89	70
1"	88	45	102	70

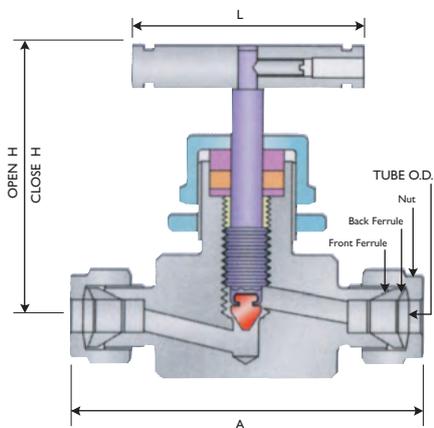
NEEDLE VALVE I.B. FF (MODEL S-H7-PM)



DIMENSIONS (MM)

P-NPTF	A	S-SQ.	H	L
1/4"	50	22	69	60
3/8"	50	25	69	60
1/2"	68	30	83	60
3/4"	70	36	89	70
1"	88	45	102	70

NEEDLE VALVE I.B. OD (MODEL S-H7-PM)



DIMENSIONS (MM)

P-NPTF	A	S-SQ.	H	L
1/4"	50	22	69	50
3/8"	50	25	69	60
1/2"	68	30	83	60
3/4"	70	36	89	70
1"	88	45	102	70

* Dimensions shown are for S-H7 and S-H7 panel mount (PM)

WARNING: Inadequate care and improper utilisation of valves can cause intense and excessive damage to life and property. Flowturn's products are not for your liable use and at the behest of the user's responsibility to check and analyse the service in which it is going to be inserted into, so that the valve functions properly and the relevant product type and materials have been selected. Also all other precautions should be taken before the user puts the product into service.

Needle Valves 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.

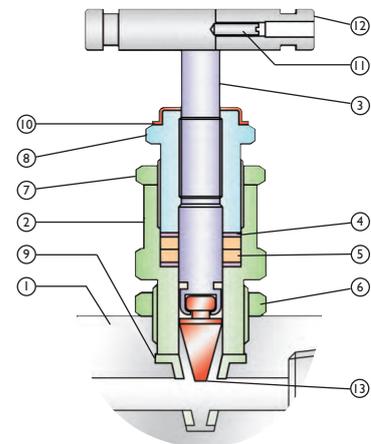
Dust cap - prevents contaminants and lubricant washout of bonnet assembly.



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

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

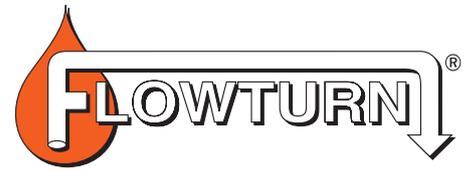
*S-M9S Refer to drawing

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 1/2 times the working pressure. Other optional tests like helium and low temperature are available upon request.

Needle Valves 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.

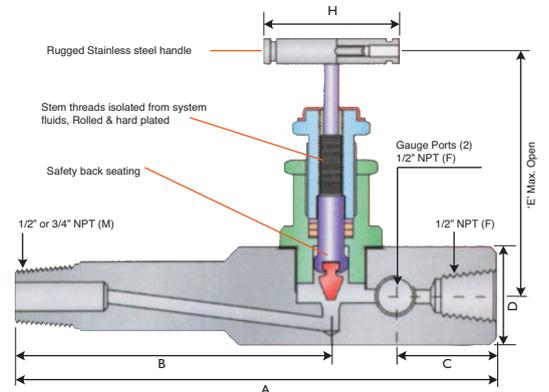
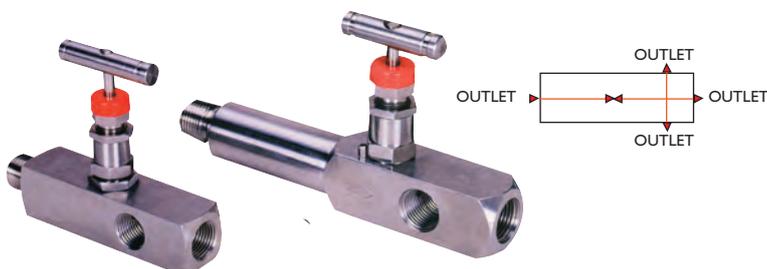
*Ball tip available as option only on S-M5 globe style.

MATERIAL OF CONSTRUCTION (S-M5)

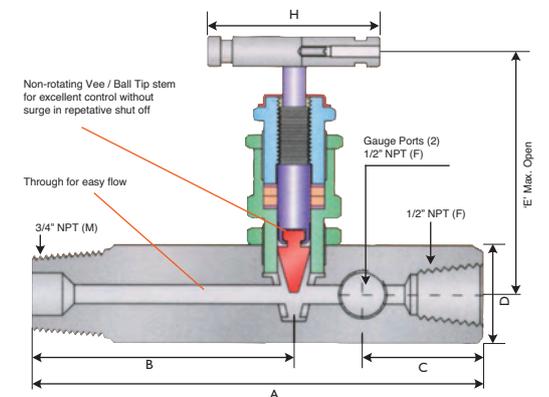
Sr No.	Part	Qty.	Material
1	Body	1	A479-316 / A-105**
2	Stem	1	A479-316
3	Spacer	2	A479-316
4	Gland Body	1	A479-316 / A-105**
5	Gland Packing	2	Teflon / Graphoil
6	Gland Lock Nut	1	A479-316 / A-105**
7	Gland Retainer	1	A479-316 / A-105**
8	Dust Cap	1	Plastic / LD
9	Grub Screw	1	A479-316
10	Washer	1	A479-316
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



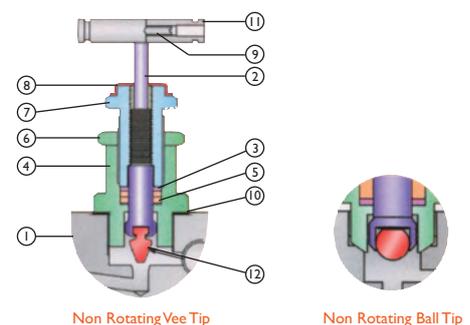
Straight Through Style S-M5A/F (Drawing on request)

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		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 1½ times the working pressure. Other tests like vibration, and temperature, helium etc. are available upon requests.



Non Rotating Vee Tip

Non Rotating Ball Tip

Globe Style S-M5

Mini Needle Valve Model S-H5

3000 PSI Globe Type



Flowturn Mini Series Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environment. Mini valves are used in process control, instrumentation and flow control application. Mini 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 Mini 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 MR-01-75 (Sour Gas Service).

FEATURES - BENEFITS

One piece body construction no welding - for high strength and full safety.

Vee tip design - controls accurate flow.

Dust cap - prevents contaminants and lubricant washout of bonnet assembly.

Stem thread rolled and hard plated - provides additional strength and maximum service life.

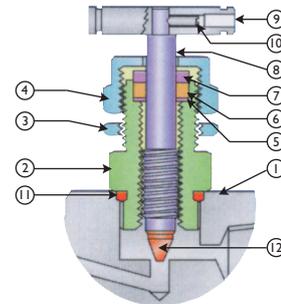
Mirror finish stem, burnished to 16RMS - extends packing life and smooth stem operation

Stainless steel handle - for proper actuation.

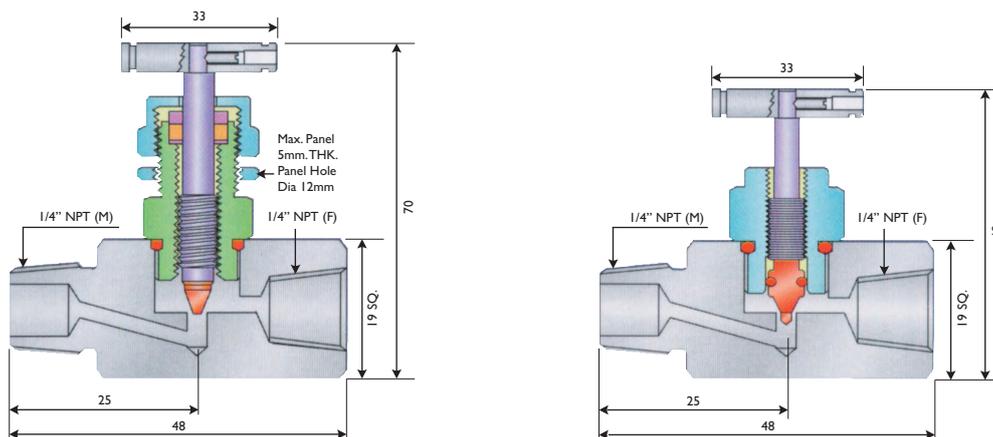


MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316 / A-105**
2	Bonnet	1	A479-316
3	Lock Nut	1	A479-316
4	Dust Cap	1	A479-316 / A-105**
5	Packing Washer	1	Teflon / Graphoil
6	Gland Packing	1	A479-316 / A-105**
7	Gland Retainer	1	A479-316 / A-105**
8	Stem	1	Plastic / LD
9	Handle	1	A479-316
10	Grub Screw	1	A479-316
11	Gasket	1	Stainless Steel
12	Vee Tip	1	17.4 PH/316/HF



DIMENSIONS (MM)



Available in 1/4", 3/8", 1/2"

PRESSURE/TEMPERATURE RATINGS:-

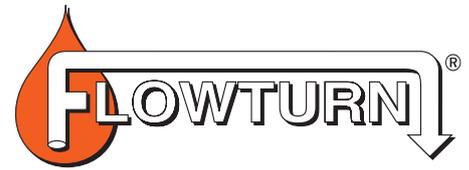
Orifice	Cv	Pressure Rating	Temperature Rating
3.5mm*	0.31	20700kpa (3000 PSI*)	-29° to 121°C (-20° to 250°F)

* Also available in 6000PSI and in larger orifice for 3/8" and 1/2" ends

TESTING

Every Flowturn 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.

High Pressure Needle Valve Model S-15K 15000 PSI Globe Type



Flowturn ARY - S15K Needle Valves are specially designed and ruggedly manufactured for use in corrosive and hazardous environment. S15K valves are used in process control, instrumentation and flow control application. S15K 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. Valves can be supplied to meet current revision of NACE MR-01-75 (Sour Gas Service).

BENEFITS

- One piece heavy duty body construction no welding** - for high strength and full safety.
- Vee tip design** - ensures accurate flow control.
- Stem thread rolled and hard plated** - provides additional strength and maximum service life.
- Mirror finish stem, burnished to 16RMS** - extends packing life and smooth stem operation
- Stainless steel handle** - for proper actuation.

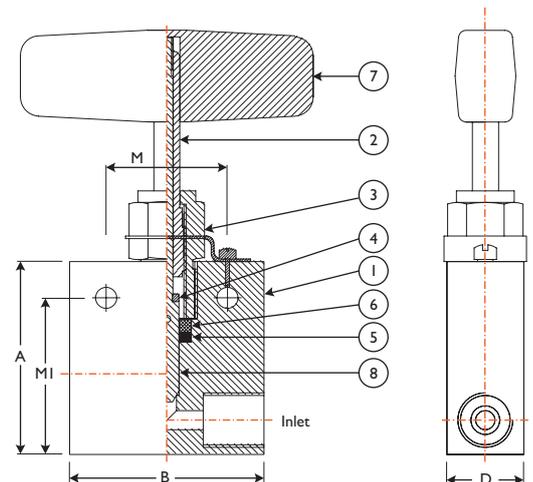
FEATURES

- NPT threads to assure 15,000 psi
- Valve design provides in-line pipe connections for 1/4" to 1/2" pipe sizes.
- Rising stem & bar stock body design.
- Non-rotating stem prevents stem/seat galling. These stems are standard for on-off service and insure long life on valve seats.
- Metal-to-metal seating achieves bubble-tight shut-off, longer stem/seat life in abrasive flow, greater durability for repeated on/off cycles and excellent corrosion resistance.
- PTFE (Teflon) encapsulated packing provides dependable stem and body sealing. Teflon 232°C (450°F) standard with optional Viton 177°C (350°F), BUNA-N 93°C (200°F) and Grafoil 343°C (650°F) available.
- Materials include high tensile Type 316 stainless steel for valve bodies and hardened 17-4PH stainless steel for lower section stems. Stem sleeve and packing gland materials have been carefully chosen to achieve extended thread cycle life and reduced handle torque.
- Operating temperature range from -17°C (0°F) TO 204°C (400°F).



MATERIAL OF CONSTRUCTION

Sr No.	Part	Qty.	Material
1	Body	1	A479-316
2	Stem Holder	1	A479-316
3	Bonnet	1	Aluminium/Bronze
4	Washer	1	Aluminium
5	Packing	1	PTFE
6	Packing	1	Brass
7	Handle	1	Aluminium
8	Stem	1	17-4 PH



DIMENSIONS:-

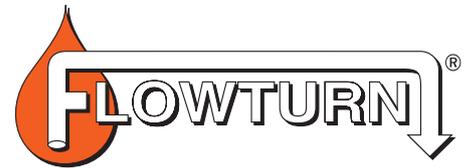
Inlet-F	Outlet-F	A	B	D	M	MI
1/4" NPT	1/4" NPT	50	50	19	31.5	41.0
3/8" NPT	3/8" NPT	63.5	50	25.4	31.5	54.5
1/2" NPT	1/2" NPT	76	73	35	35.0	64.0

TESTING

Every Flowturn Needle Valve is 100% tested with nitrogen gas for leakage at seal and seat. Hydrostatic test performed with pure water. Other optional tests like helium and low temperature are available upon request.

Needle Valve Model KER-JY

Y Type & Angle Type Globe Style



Flowturn KER-JY Series Needle Valves, with their rugged compact design, offer positive shut off or directional control of fluids in process, oilfield wellhead and instrumentation applications. The unique proven design ensures excellent sealing characteristics while accommodating a superior temperature range and cycle life. A high integrity metal to metal bonnet anti ingress seal ensures leak tightness at high pressures.

These valves are available in Y-type and right angle configurations in steel, stainless steel, Monel, Duplex and Inconel construction, with a wide variety of port connections.

- Globe Style, Metal Seat
- Compact and lightweight
- Pressure responsive PTFE packing seal arrangement.
- Bi-directional flow, with preferred flow indicated.
- Ingress seals fitted as standard.
- Full material traceability of main components.
- 100% Hydrotestic testing.
- Materials of construction can be supplied to NACE MR 01-75.

Flowturn "KER-JY" 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.

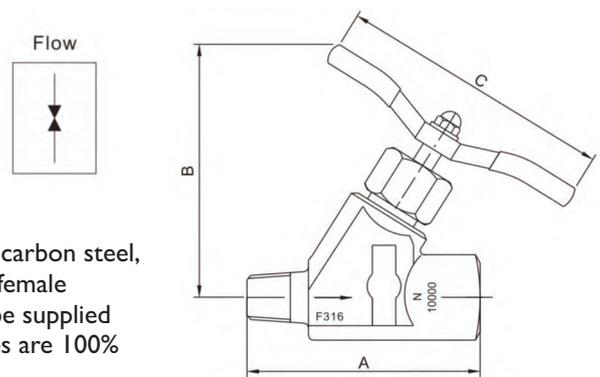
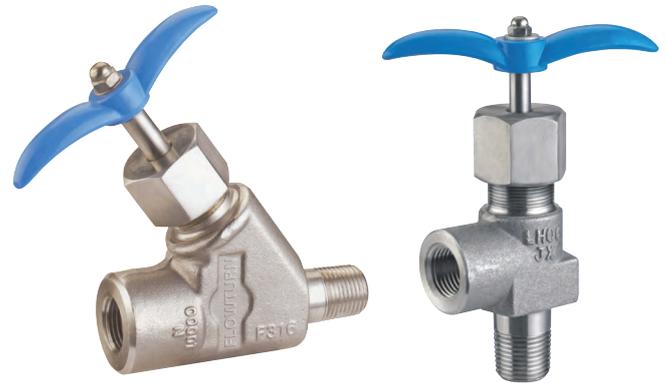
Body to bonnet seal - metal to metal constant compression isolates bonnet threads from system fluids.

Repairable Metal Seat - can be resurfaced without removing valve from line.

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	Handle	1	Painted or 316
9	Vee Tip / Ball Tip	1	17.4 PH/316/HF

* CAD or zinc plated



SPECIFICATIONS

Pressure Rating	Up to 10,000PSI (700 Bar)
Size Range	1/4" to 1"
Temperature Rating	PTFE Packing :- -54°C to 200°C (-65°F to 392°F) Graphite Packing :- -50°C to 550°C (-58°F to -958°F)
Port Connections	Tube compression - Twin Ferrule NPT (Male / Female) BSP

DIMENSIONS

Connections Size	A	B	C	Cv	Weight (Kgs)
1/2" M*FNPT	102	138	120	0.7	1.09
1/2" M*FNPT	102	138	120	0.7	1.09

1/4", 3/8", 3/4", 1" Refer to Drawing

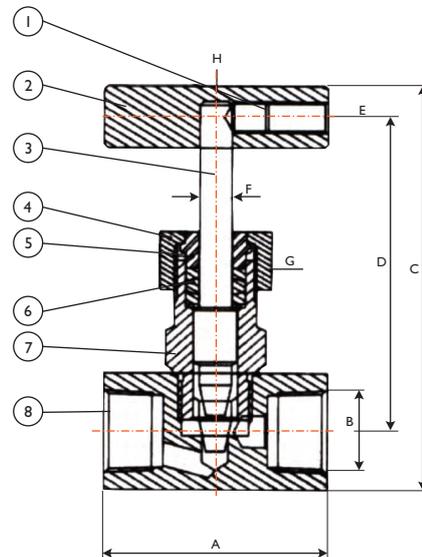
TESTING

Every Flowturn "KER-JY" 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 1 1/2 times the working pressure. Other optional tests like helium and low temperature are available upon request.

Needle Valve Model SLNT6000 6000 PSI Globe Type

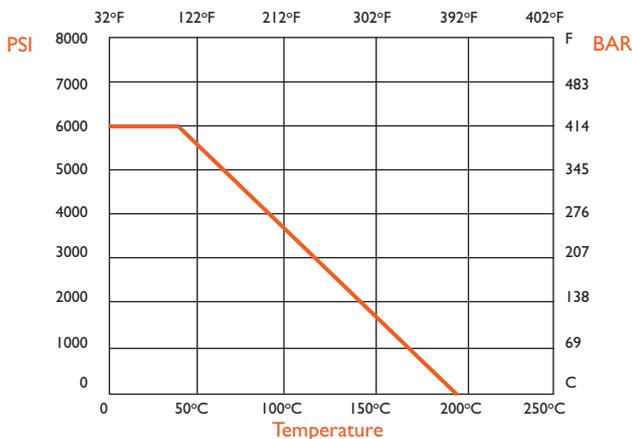


The SLNT6000 is an economical Globe Style Needle Valve with needle point tip. This valve has a smaller orifice than the S-H7 Globe Type Needle Valve. This valve is available in Female X Female and Male X Female end connections.

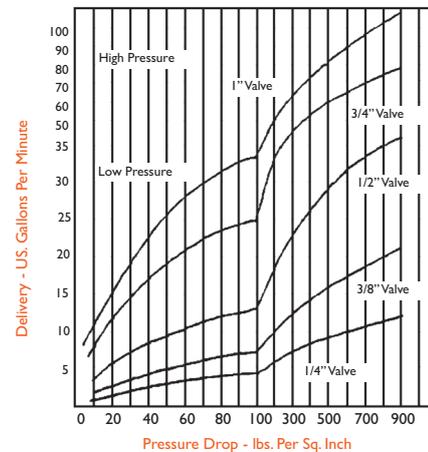


**METAL SEATED T-6000-M
TEFLON SEATED NT-6000-T**

PRESSURE/TEMPERATURE CHART (TEFLON SEATED VALVE)



(with graphite packing, metal seated version will do 315°C Max)



MATERIAL OF CONSTRUCTION

No.	Parts Name	Materials
1	Set Screw	316
2	Handle	316
3	Stem	316
4	Gland Nut	316
5	Gland	316
6	Packing	PTFE or graphite
7	Bonnet	316 or A105*
8	Body	316 or A105*
	Seat	PTFE or metal

*Zinc or CAD plated

TESTING

TYPE OF TEST	MEDIUM	PRESSURE
Seat Test	Air	100 PSI (7 bar)
Body Test	Water	9000 (620 bar)

DIMENSIONS (MM)

Size	A	B	C	D	E	F	G	H	Minimum* Orifice Size	Weight Kg
1/4"	45	22	80	70	13	7	21	60	1/8"	.27
3/8"	50	25	85	73	13	7	21	60	1/8"	.33
1/2"	60	30	110	95	16	8	24	65	3/16"	.54
3/4"	65	35	115	100	16	8	24	65	3/16"	.68
1"	83	46	129	102	19	10	30	80	1/4"	1.4

*Also available large orifice needle valves

Monoflange Block & Bleed Valves



Monoflange

Flowturn Design Monoflange, 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

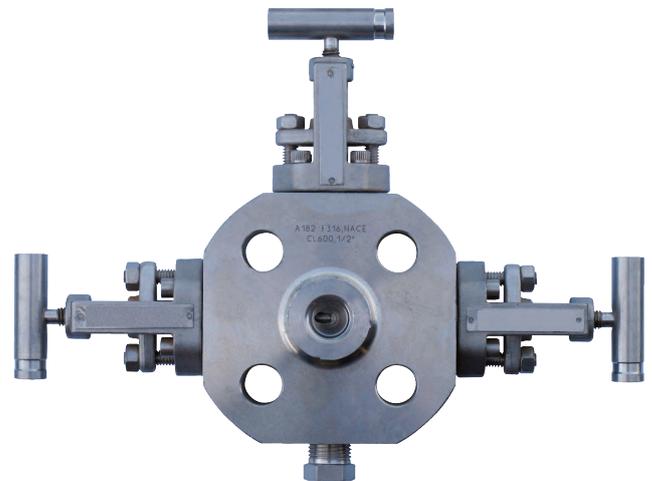
Advantages

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

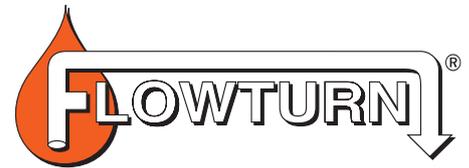
Technical

- 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 EN10204.3.1.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 valve 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



Ball/Needle Ball assembly

Flowturn provides ball/needle ball valve assembly 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.

Features:-

- Process interface in one compact ball/needle ball valve assembly.
- Three piece bolted body and integral single piece forged body
- Flange connection 15NB to 50NB (1/2" to 2")
- Graphite packing for bubble tight sealing
- Ball seats in PTFE, DERLIN or PEEK.
- Bore size available 10mm to 50mm
- Antiblowout 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 nonrotating needle trim

Cartridge Type Standard Length Dual Valve Trunnion & Floating DB&B Valves

Compact cartridge type standard length DB&B valves consist of two valves and a bleed valve in one (side entry) compact cartridge type unit with ANSI B16.5 flanged & tapped connections. The design configuration allows the same face to face dimensions as a single block ball as specified in API 6D and ANSI B16.10

(Australian Pipeline Valve and its sub contract manufacturers can produce this type of DB&B ball valve in floating and trunnion configurations). In addition, integral one piece body design is also available in top entry and end entry design (see drawings on last page) further eliminating potential leak joints.



Combination Needle & Ball

Double Ball

Technical

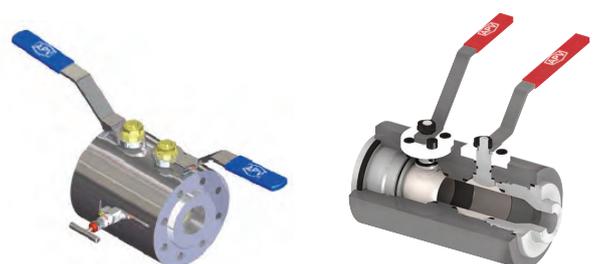
- NACEMR-01-75
- ATM (Gr) Stainless steel, F316/F316L carbon steel, A150/LF2 and duplex F15/F53 Alloy (400, 625, 825 and C276)
- Heat Code for material traceable to EN10204.3.1.B
- Flange connection accordance with ASME B16.5 RF and RTJ NPT connection accordance with ASME B1.20.1
- Working pressure in 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 for carbon steel valve
- All valve 100% factory testing hydrostatically and pneumatic leakage accordance with BS 12266.1

Dual Ball Floating Design DB&B Valves

In smaller sizes typically from 8NB (1/4") to 150NB (6") Floating Ball design firesafe certified Twin Ball Double Block & Bleed valves are also available. Australian Pipeline Valve and its manufacturing partners can supply this style of valve in very short delivery in A105N, LF2, 316, F51, etc., in 150 to 2500 class.

Lower cost firesafe certified modular DB&B Dual Floating Ball valves are also manufactured by Australian Pipeline Valve in flanged & screwed ends.

This style can also be configured with one ball plus one needle valve in-line with an additional needle valve side bleed in cartridge style configuration with tapped ends to suit flanged connections both ends. For instrumentation use, mono flange wafer style, needle valve DB&B valves are also manufactured in short lead times.

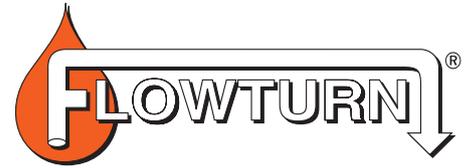


DB&B Dual Cartridge Style (end entry - one side)

DB&B Dual Cartridge Style (end entry - both sides)

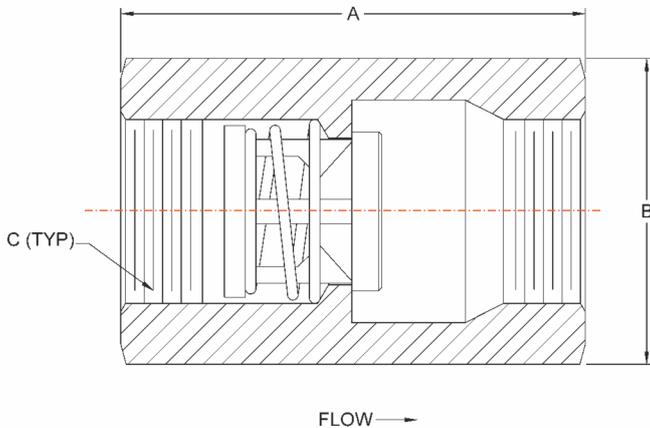
Piston Check Model CAV-3

Inline 3000 PSI



The CAV-3 check valve is a one piece body machined from bar stock and is designed for minimum pressure drop. The valve has a light weight compact design that provides maintenance-free dependable service. 10,000PSI Model also available to 2"

DIMENSIONS (INCHES)

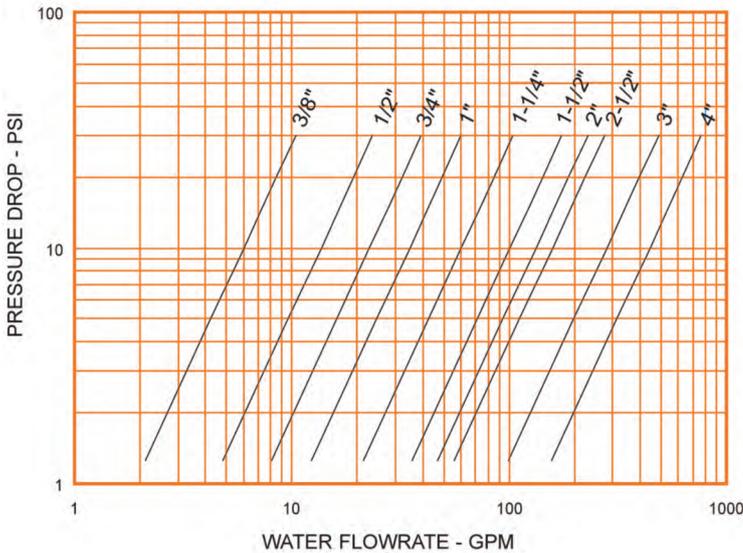


NOM. PIPE SIZE	SIZE CODE	A	HEX * SIZE B	C	Orifice Diameter
3/8	C	2.16	13/16	3/8 NPT	0.348
1/2	D	2.71	1-1/8	1/2 NPT	0.464
3/4	F	2.95	1-1/4	3/4 NPT	0.593
1	H	3.64	1-5/8	1 NPT	0.890
1-1/4	I	3.91	2-1/4	1-1/4 NPT	1.135
1-1/2	J	4.36	2-1/2	1-1/2 NPT	1.385
2	K	5.85	3	2 NPT	1.555
2-1/2	L	5.50	3-3/4	2-1/2 NPT	1.555
3	M	6.25	4-1/2	3 NPT	2.025
4	N	7.13	5-1/2	4 NPT	2.560

Body Material	Availability	Non-Shock Pressure-Temperature Rating	
316 Stainless Steel (SS)	Standard	3/8 - 3"	4"
Carbon Steel (CS)			
Brass (BR)			
Alloy 20 (A2)	Semi-standard	3000 PSIG @ 100°F (1500 PSIG for o-ring seats)	1500 PSIG @ 100°F
Hastelloy® C (HC)			
Monel®	Special		
Hastelloy® B (HB)			
Titanium (TI)			

PRESSURE / FLOW

For Water at 72°F



Style CAV-3 Cv Values & Valve Weights

Cv	SIZE	SS & CS ALLOYS	BRASS
1.9	3/8	3.0 oz.	3.3 oz.
4.3	1/2	8.5 oz.	9.1 oz.
7.2	3/4	9.6 oz.	10.1 oz.
11.0	1	1.2 lb.	1.3 lb.
19.0	1-1/4	2.9 lb.	3.2 lb.
31.9	1-1/2	3.6 lb.	3.9 lb.
42.0	2	6.5 lb.	7.2 lb.
50.0	2-1/2	9.2 lb.	10.0 lb.
89.0	3	14.3 lb.	15.5 lb.
140	4	21.5 lb.	23.3 lb.

Note: All flow curves and Cv values presume the valves are fully open with 1/2 PSI cracking pressure springs. Consult the factory for more information.

ORDERING CODE

BODY MATERIAL

ALLOY 20 = A2
BRASS = BR
CARBON STEEL = CS
HASTELLOY®B = HB
HASTELLOY®C = HC
MONEL® = MO
316 SS = SS
TITANIUM = TI

SPRING CRACKING PRESSURES

Replace "X" with actual desired setting.

Must use decimal as a character.

(PSI) FORMAT

0.000 TO 0.999 = .XXX
1.00 TO 9.99 = X.XX
10.0 TO 99.9 = XX.X
NO SPRING = NOSPRG

STANDARD CRACKING PRESSURES ①

.125 500 1.50 3.50
(Sizes C-I Only)

Note: Many other cracking pressures are available. Consult factory.

SPECIAL OPTIONS

T = FEP ENCAPSULATED SPRING
Contact the factory for more options

C A V 3 D C S N E . X X X S S T

VALVE STYLE

SIZE

3/8 = C
1/2 = D
3/4 = F
1 = H
1-1/4 = I
1-1/2 = J
2 = K
2-1/2 = L
3 = M
4 = N

SEAT MATERIAL ②

AFLAS® = AS
BUNA-N = BN
EPDM = EP
KALREZ® = KZ
METAL-TO-METAL = MT
NEOPRENE = NE
PTFE = TF
VITON® = VT

SPRING MATERIAL

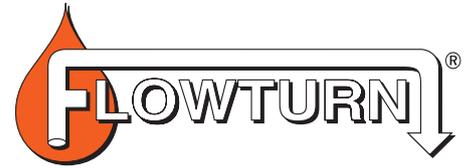
316 SS = SS
HASTELLOY®C = HC
HASTELLOY®B = HB
INCONEL® X-750 = IX
MONEL® = MO
17-7PH SS = PH
TITANIUM = TI

Listed above are the most common material selections. Please contact the factory for additional options.

① .500 PSI is the only standard cracking pressure for spring materials other than Stainless Steel. Cracking pressure tolerance is +/- 15%. .125 PSI springs are not recommended for installations with flow vertical down.

② Seat materials other than metal-to-metal have a maximum pressure rating of 1500 PSI. PTFE seats are not resilient.

Instrument Ball Valves PB Series



Flowturn PB Series Ball Valves, with their rugged compact design, offer positive shut off or directional control of fluids in process, power and instrumentation applications. The unique one piece seat/packing design ensures excellent sealing characteristics while accommodating a superior temperature range and cycle life. A high integrity metal to metal bonnet anti ingress seal ensures leak tightness at high pressures.

These valves are available in two-way and multi-way configurations in brass, 316 stainless steel, Monel and Inconel construction, with a wide variety of port connections.

FEATURES

- One piece seat/packing design
- Broad temperature range
- Blow out proof stem
- Available in one piece stem/ball, floating ball
- Panel mountable option
- Bi-Directional flow
- Handle indicates preferred direction of flow
- Positive handle stops
- 100% factory Nitrogen tested
- Low operating torque
- Vent option
- Manual, electric or pneumatic actuation
- Screwed or double ferrule hardened tube ends.

MATERIALS OF CONSTRUCTION

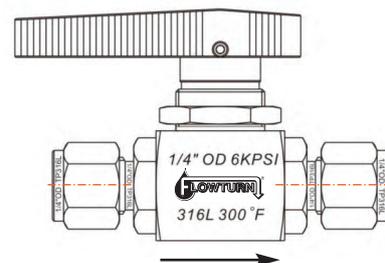
Item#	Part Description	Stainless Steel	Brass
1	Body	ASTMA 276 Type 316	ASTM B16 Alloy C36000
2	Stem	ASTMA276 Type 316	
3	Hollow Insert	316 Stainless Steel	
4	Packing Washer	316 Stainless Steel	
5	Packing Nut	ASTMA 479 Type 316	ASTM B16 Alloy C36000
6	Solid Insert	316 Stainless Steel	
7	Handle	Phenolic	
8	Set Screw	Stainless Steel	
9	Panel Nut	316 Stainless Steel	
10	Seat	Perfluoroalkoxy (PFA)/KEL-F/RPTFE	
11	Packing Ring	ASTMA 479 Type 316	
12	Packing	PFA-Perfluoroalkoxy/PTFE	



SPECIFICATIONS

Pressure Rating	3,000 PSI (206 Bar) to 10,000 PSI (700 Bar)
Temperature Rating	-54°C to 200°C (-65°F to 392°F)
Cv	.05 to 6.96
Body Configurations	2 way 3-way, 4 way and 5 way
Port Connections	Tube compression - Twin Ferrule NPT (Male / Female) BSP
Seat/Packing	PFA-Perfluoroalkoxy/PTFE

* or 150°C if Viton seal fitted.



- Ingress seals fitted as standard
- Flexible packing for replacement can extend field life further.
- Full material traceability of main components.
- Materials of construction can be supplied to meet the requirements of NACE MR-01-75 latest revision.



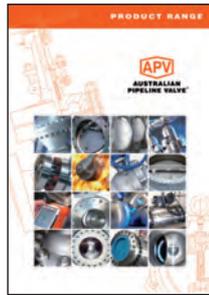
AUSTRALIAN PIPELINE VALVE®

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.”



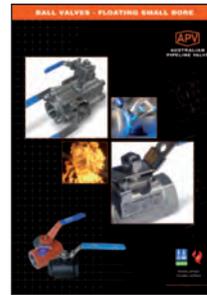
AUSTRALIAN PIPELINE VALVE BRAND RANGE - CATALOGUES



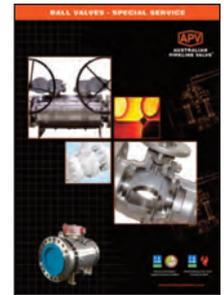
Product Brochure



Ball Valves Floating & Trunnion Mounted



Ball Valves Floating Small Bore



Ball Valves Special Service



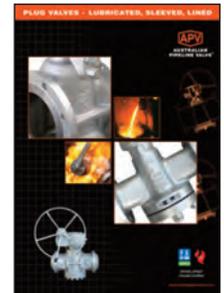
Oilfield Products Valves & Wellheads



Gate, Globe & Check Valves - Cast



Gate, Globe & Check Valves - Forged Steel



Plug Valves Lubricated, Sleeved & Lined

APV FAMILY OF BRANDS RANGE - CATALOGUES



Diamond Gear Gearboxes



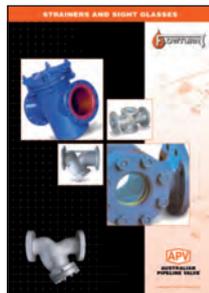
Flowturn Ball Valves Multiway & Deadman



Flowturn Gate, Globe & Check Valves



Flowturn Instrument Valves



Flowturn Strainers & Sight Glasses



Steamco Steam Valves



Supercheck Wafer Check Valves



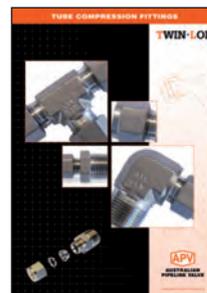
Superseal Butterfly Valves



Superseal Industrial Ball Valves



Torqturn Actuators



TwinLok Tube Fittings



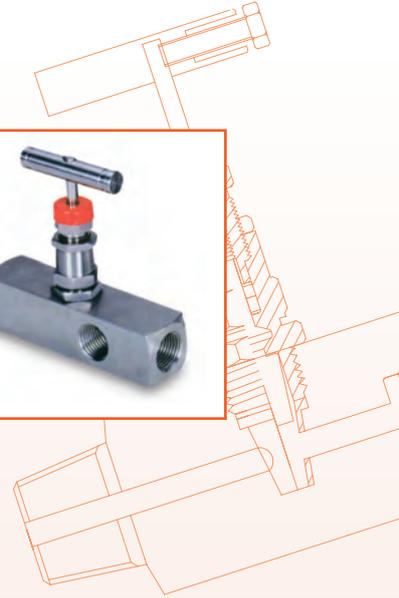
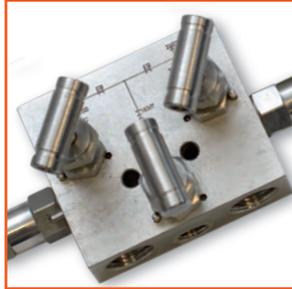
Uniflo Check Valves

Contact us for your local stockist/distributor



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ADELAIDE • BRISBANE • PERTH



www.australianpipelinevalve.com.au

LOCAL DISTRIBUTOR



QUALITY ASSURANCE AND CERTIFICATION

We are continually improving all facets of quality assurance. Full metallurgical and test certificates are always supplied for all pressure retaining parts.

We 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.

