

Manual Valves



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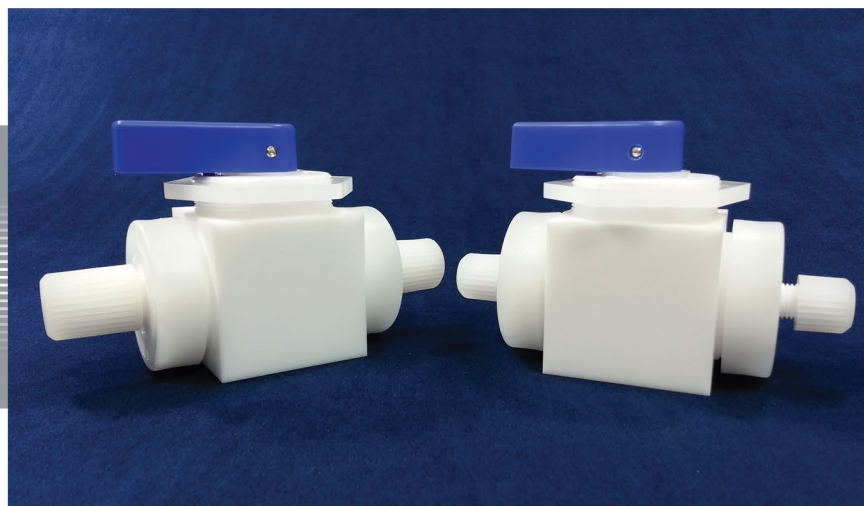
PTFE Ball Valve



Our **IPS Ball Valve** features an all PTFE wetted surface design. The design is ideally suited for harsh chemical and corrosive media and environments.

Polytetrafluoroethylene (PTFE), commonly known by its popular E.I. DuPont trade name TEFLON®, is also well suited to clean room and deionized water applications.

The body, stem, ball and ports are constructed from PTFE. For standard applications, external non wetted components are constructed from Natural PVDF and Polypropylene.



Contact IPS for special applications, including high ambient temperatures and corrosive atmospheres.

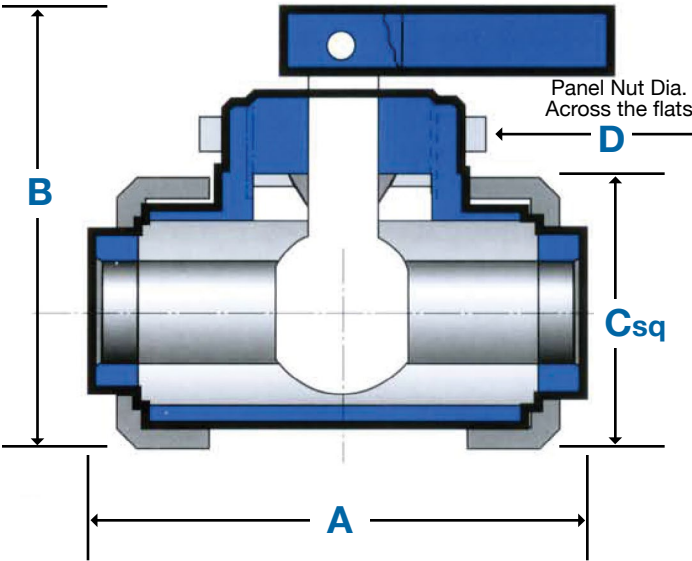
Metric sizes are available upon request.

Features:

- PTFE construction for media wetted surfaces.
- Reliable low torque manual operation.
- Quarter Turn with Positive Stops.
- Design accommodates partial open position for metered flow.
- All models can be specified panel mounted (-PM).
- All models can be specified high ambient temperature (-HT)

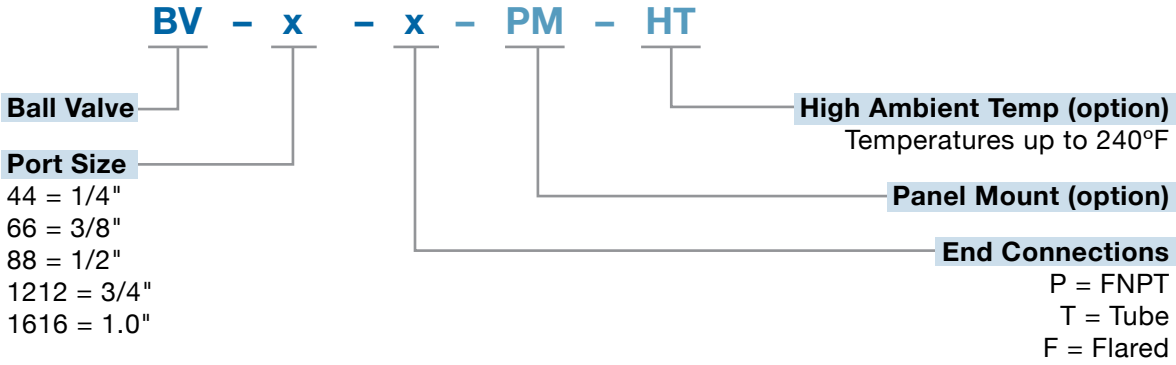
Specification:

Standard Port Configurations	1/4 • 3/8" • 1/2" • 3/4" • 1"
Connection Types	Female NPT • Tube • Flared
Media Operating Pressure	120 psi max • 25 in Hg vacuum
Media Operating Temperature	320°F (160°C) max • 32°F (0°C) min
Ambient Temperature	150°F (65°C) max • 32°F (0°C) min



Product Configuration	A	B	C	D
1/4" FNPT	3.24	3.18	2.00	2.00
1/4" Tube	4.00	3.18	2.00	2.00
1/4" Flare	5.24	3.18	2.00	2.00
3/8" FNPT	3.24	3.18	2.00	2.00
3/8" Tube	4.00	3.18	2.00	2.00
3/8" Flare	5.24	3.18	2.00	2.00
1/2" FNPT	3.24	3.18	2.00	2.00
1/2" Tube	4.24	3.18	2.00	2.00
1/2" Flare	5.44	3.18	2.00	2.00
3/4" FNPT	4.14	4.06	2.75	2.75
3/4" Tube	5.38	4.06	2.75	2.75
3/4" Flare	6.64	4.06	2.75	2.75
1" FNPT	4.14	4.06	2.75	2.75
1" Flare	7.12	4.06	2.75	2.75

PTFE Ball Valves: ORDERING FORMAT



IPS Product Notes:

- 1. Please email Customer Service at info@ipolymer.com
- 2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
- 3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
- 4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.



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PTFE Stopcocks

Stopcock Valves are precision machined devices that function in much the same way as a ball valve. When the handle points in the direction of flow, the valve is fully open; when the handle points perpendicular to the direction of flow, the valve is fully closed; and at the 45° position the valve is halfway open and thereby has a metering effect on the media flow.

The IPS Stopcock features an all PTFE wetted surface design. The design is ideally suited for harsh chemical and corrosive media and environments. Poly-tetrafluoroethylene (PTFE), commonly known by its popular E.I. DuPont trade name TEFLON®, is also well suited to clean room and deionized water applications.

The body, stem and ports are constructed from PTFE. For standard applications, external non wetted components are constructed from Polypropylene. All configurations are optionally available as Panel Mounted and/or High Ambient Temperature models.



Stopcock Specifications

Media Pressure	60 psi
Media temperature	110° C / 230° F
Ambient temperature	65° C / 150° F
Sealing	Bubble Tight
All Wetted Surfaces	Virgin PTFE

Call IPS for:

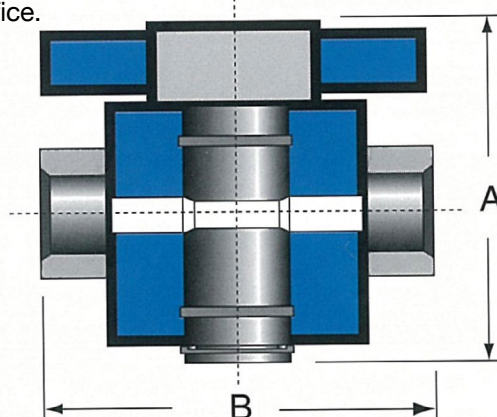
- Metric Tube End options
- Male Pipe End options
- Sanitary Connection options



Stopcock Valve: ORDERING FORMAT

- Stem Type must be specified for all 3-Way Stopcock Valves (-3T or -3L).
- 4-Way Stopcock Valves are available. Please call IPS to properly configure your selection.
- The valve flow orifice is governed by your port end connections (FNPT, Tube or Flared) unless requested otherwise. Please call IPS to configure a restrictive Valve Stem Orifice.

Part No.	Body Style	Connection
SC-200	2-way	1/16" Tube
SC-201	3-way	1/16" Tube
SC-400	2-way	1/8" FNPT
SC-401	3-way	1/8" FNPT
SC-403	2-way	1/8" Tube
SC-404	3-way	1/8" Tube
SC-409	2-way	1/4" FNPT
SC-410	3-way	1/4" FNPT
SC-412	2-way	1/4" Tube
SC-413	3-way	1/4" Tube
SC-500	2-way	1/4" FNPT
SC-501	3-way	1/4" FNPT
SC-503	2-way	1/4" Tube
SC-504	3-way	1/4" Tube
SC-506	2-way	1/4" Flared
SC-507	3-way	1/4" Flared
SC-600	2-way	3/8" FNPT
SC-601	3-way	3/8" FNPT
SC-609	2-way	3/8" Tube
SC-610	3-way	3/8" Tube
SC-612	2-way	3/8" Flared
SC-613	3-way	3/8" Flared
SC-700	2-way	1/2" FNPT
SC-701	3-way	1/2" FNPT
SC-709	2-way	1/2" Tube
SC-710	3-way	1/2" Tube
SC-712	2-way	1/2" Flared
SC-713	3-way	1/2" Flared
SC-800	2-way	3/4" FNPT
SC-801	3-way	3/4" FNPT
SC-809	2-way	3/4" Tube
SC-810	3-way	3/4" Tube
SC-812	2-way	3/4" Flared
SC-813	3-way	3/4" Flared

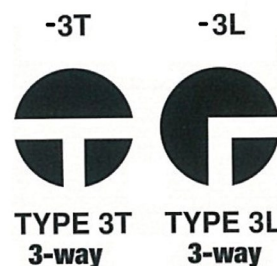


Basic Dimensions

Series	Dim A	Dim B	Dim C	Dim D
200	1.4	1.5	1.0	1.2
400	1.7	1.9	1.0	1.6
500	1.9	2.3	1.2	2.0
600	2.0	2.4	1.2	2.1
700	3.5	3.8	1.5	3.5
800	3.5	3.8	2.3	3.5

- For Panel Mount add 1" to the above Dim A values.
- Dim C is the width of the 2-Way valve body.
- Dim D is the width of the 3-Way valve body & 3rd port.
- For Flared Connections add ~3/8" per port.

Valve Stem Configuration



Example Part No.:

SC-501-3T
SC-501-3L-P
SC-501-3T-P-HT

Options:

- Add "-P" to the end of the Part Number to specify a Panel Mount configuration.
- Add "-HT" to the end of the Part Number for high ambient temperature conditions. This is only required for room temperatures above 140°F. The external non wetted components are changed to PVDF.

IPS Product Notes:

1. Please email Customer Service at info@ipolymer.com
2. Call us for special applications. We can manufacture our Valves with special mounting and interface dimensions.
3. Upon request, alternate material selection from those listed will allow for expanding temperature ratings or other performance characteristics.
4. Unauthorized disassembly of this product will void the original factory one-year product warranty. For further details please contact your local Distributor or our factory directly.

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Metering Valve



IPS Metering Valve (MV) use a tapered plug-stem to give a fine adjustment to the flow in addition to a full, open, or positive shutoff position.

Our Metering Valves come in two configurations: Straight Flow Pattern (standard) and Angled Flow Pattern (special). IPS Metering Valves are considered low pressure valves.

The PTFE all-wetted surface design works equally well with ultra clean DI water and harsh chemical media. As with all Metering Valves, we recommend filtering the media prior to entering the valve.

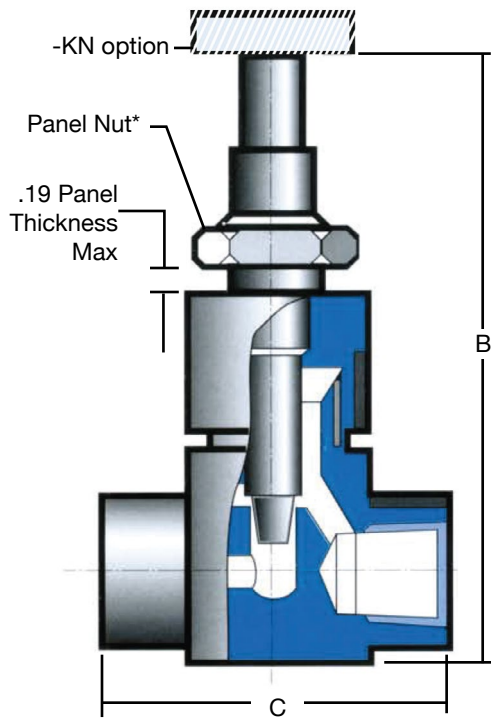
Specifications:

Media Pressure	25 in HG to 60 psi maximum
Media Temperature	-30°C (-22°F) to 110°C (230°F)
Ambient Temperature	-18°C (0°F) to 80°C (176°F)

Metering Valve Flow Characteristics:

Metering Valve Orifice	Maximum Flow H2O (gpm)	Maximum Flow Air (scfm)	Turns Full Open Valve
0.094" Orifice	0.67	3.90	5 ±1
0.125" Orifice	1.37	8.10	5 ±1
0.188" Orifice	2.73	14.03	10 ±1
0.250" Orifice	2.90	15.19	10 ±1
0.313" Orifice	9.77	52.04	10 ±1
0.375" Orifice	11.33	61.52	10 ±1
0.438" Orifice	20.33	106.88	10 ±1
0.500" Orifice	22.19	112.76	10 ±1

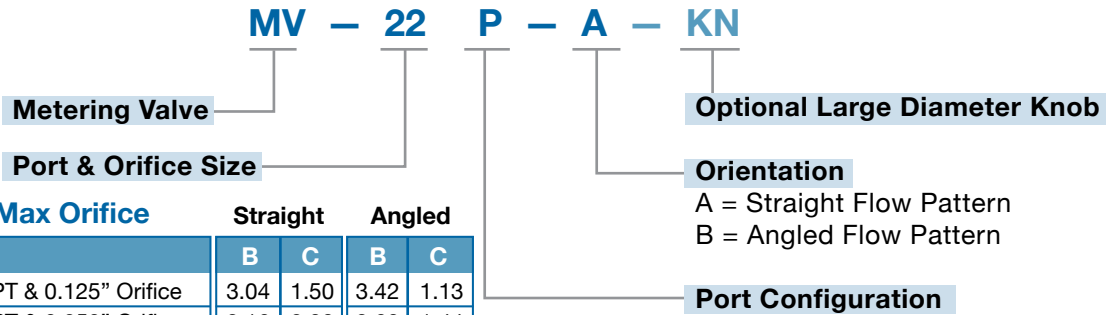
H2O & Air Flow based on nominal 70°F DI Water & Shop Air at 50 psi



*Stem Style Adjustment Knob supplied with the panel mount version. This is the standard Metering Valve configuration.

-KN Option is a large Diameter Knob. The unit is not panel mountable. See photo for difference.

Metering Valve: ORDERING FORMAT



Porting w/ Max Orifice

PIPE		Straight		Angled	
		B	C	B	C
22	1/8" FNPT & 0.125" Orifice	3.04	1.50	3.42	1.13
44	1/4" FNPT & 0.250" Orifice	3.16	2.00	3.60	1.44
66	3/8" FNPT & 0.375" Orifice	4.79	2.75	5.35	2.19
88	1/2" FNPT & 0.500" Orifice	5.04	3.13	5.79	2.38
TUBE		B	C	B	C
21	1/8" TUBE & 0.094" Orifice	3.04	1.50	3.42	1.13
43	1/4" TUBE & 0.188" Orifice	3.16	2.00	3.60	1.44
65	3/8" TUBE & 0.313" Orifice	4.79	2.75	5.35	2.19
87	1/2" TUBE & 0.436" Orifice	5.04	2.75	5.79	2.19
FLARE		B	C	B	C
42	1/4" FLARE & 0.125" Orifice	3.16	2.88	4.04	1.88
64	3/8" FLARE & 0.250" Orifice	5.22	3.62	5.79	2.62
86	1/2" FLARE & 0.375" Orifice	5.22	3.82	6.14	2.72

Orientation
A = Straight Flow Pattern
B = Angled Flow Pattern

Port Configuration
P = Pipe Female NPT
T = Tube
FF = Fractional Flared
M = Pipe Male NPT

If you do not find your configuration available please call the IPS factory

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Precision Plug Valve



The **IPS Precision Plug Valve (PPV)** is a precision machined manual valve manufactured from 100% virgin PTFE (all wetted surfaces) and PVDF Stem Nut. The PTFE body and stem perform equally well with harsh chemicals and ultra clean DI water.

The basic construction is a single through orifice with a tapered body that matches the tapered plug for positive shut-off.

Various orifice and port sizes are available as standard items. Other sizes and configurations are available on request.



Our Precision Plug Valve are supplied in two configurations:

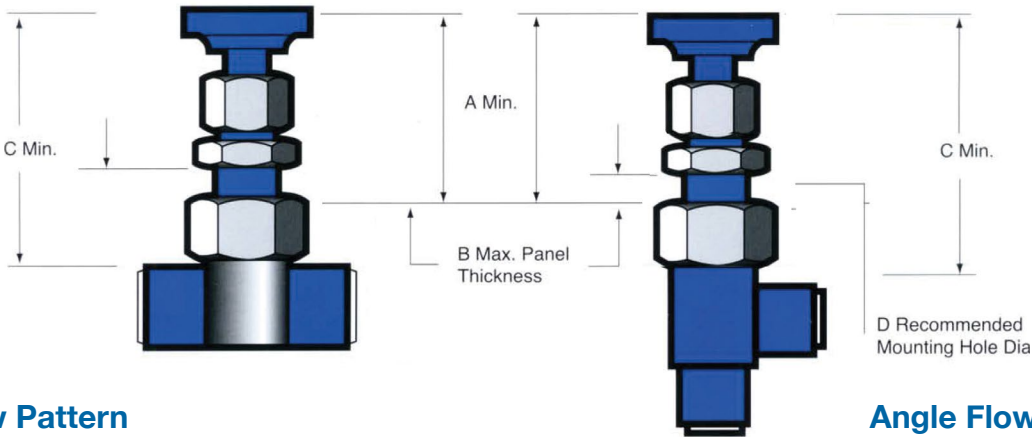
- Straight Flow Pattern ("A" = standard)
- Angled Flow Pattern ("B" = special)

Specification:

Operating Pressure	0 – 60 psi	
Temperature Range	Line Media:	-55°C to + 100°C (-67°F to + 212°F)
	Ambient:	-55°C to + 71°C (-67°F to + 160°F)
Leak Rating	Bubble Tight	

PPV DIMENSIONS

PPV Port Size	A	B	C	D
1/8 & 1/4	2.13"	0.19"	2.75"	0.75"
3/8 & 1/2	2.19"	0.31"	2.88"	0.81"



Straight Flow Pattern
("A" = standard)

Angle Flow Pattern
("B" = special)

Precision Plug Valve: ORDERING FORMAT

PPV - X X X - X

Porting w/ Max Orifice

PIPE	
22	1/8" FNPT & 0.125" Orifice
44	1/4" FNPT & 0.250" Orifice
66	3/8" FNPT & 0.375" Orifice
88	1/2" FNPT & 0.500" Orifice
TUBE	
21	1/8" TUBE & 0.063" Orifice
43	1/4" TUBE & 0.188" Orifice
65	3/8" TUBE & 0.313" Orifice
87	1/2" TUBE & 0.436" Orifice
FLARE	
42	1/4" FLARE & 0.125" Orifice
64	3/8" FLARE & 0.250" Orifice
86	1/2" FLARE & 0.375" Orifice

Model Designation
A - Straight Pattern Valve
B - Angle Body Valve

End Connections
P = FNPT
T = Tube
FF = Fractional Flared

Orifice (in)	GPM H2O at 22°C	Air CFM at 20 psi
0.063	1.0	4.2
0.125	1.6	7.1
0.188	2.1	9.2
0.250	2.6	9.3
0.313	3.0	11.1
0.375	3.4	12.8

PPV valves have a 6 (+/-1) Manual Turn Range

IPS Product Notes:

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Sampling Metered Valve

Our **IPS PTFE Sampling Metered Valve (SMV)** is designed for use in high purity water and aggressive chemical applications.

Designed with a 100% virgin PTFE wetted flow path, the unit is ideal for DI Water Systems and corrosive media found in solar, semiconductor, pharmaceutical and chemical process applications.

This Panel Mount unit functions with a manual push level to actuate a metered flow.

The metered flow ensures a controlled dispensing of fluid for manual sampling.

Commonly used for dispensing controlled amounts of media for element verification tests; for manual dispensing of DI Water into carboy and other transport containers; and for dispensing metered amounts of chemicals to blend and balance process chemistries.



Other sizes and configurations are available on request.

Specifications:

Materials of Construction:

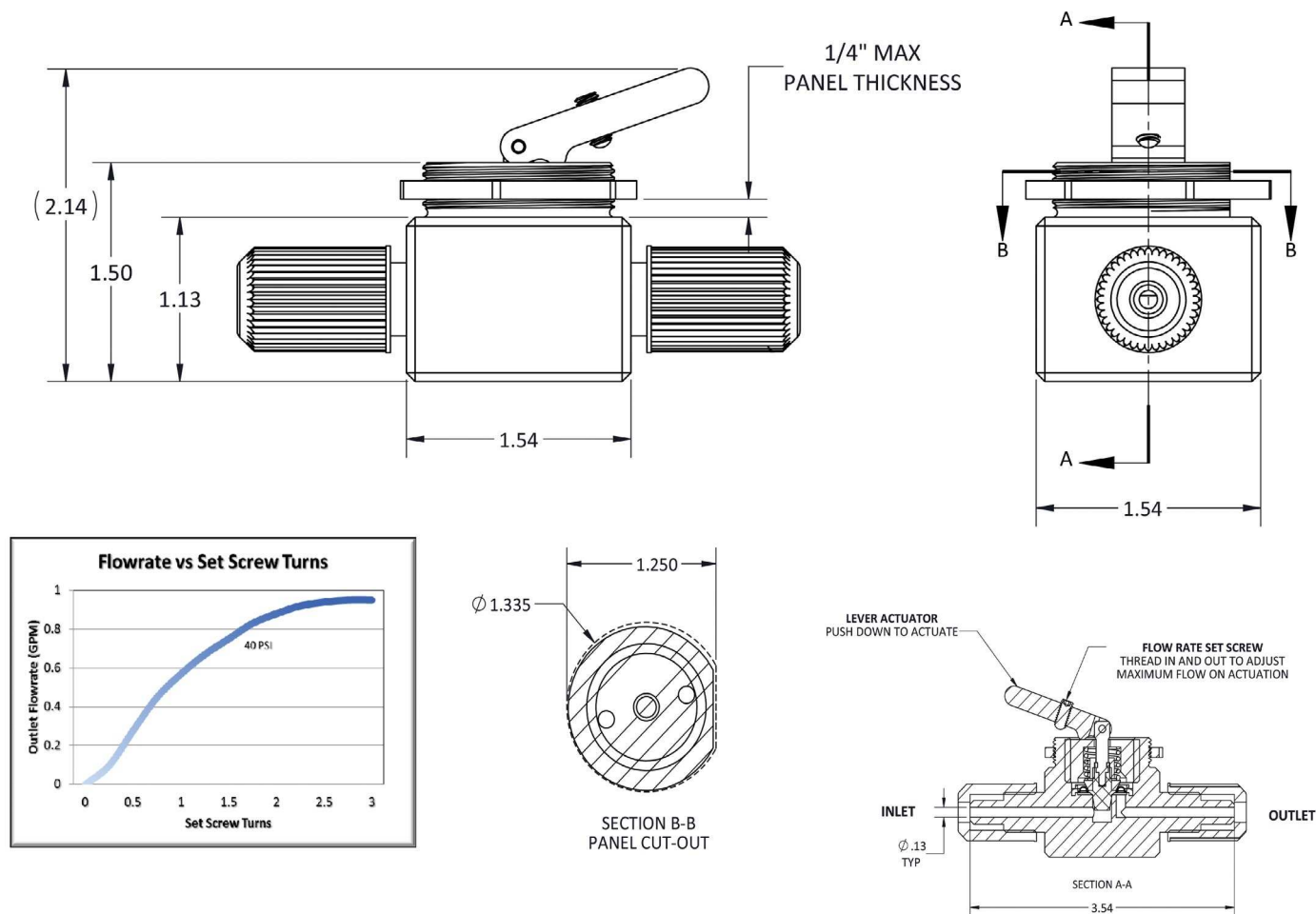
- Wetted Surfaces: Machined 100% Virgin PTFE & TFM
- Non Wetted Materials: Polypro, PVDF, SS

Temperature Ranges:

- 32°F - 140°F (0°C - 60°C) Ambient
- 32°F - 200°F (0°C - 93°C) Media

Pressure Ranges:

- Maximum Inlet Pressure: 60 psi (414 kPa | 4.14 bar)
- The unit is metered to reduce the Inlet Pressure. Depending on the media conditions (pressure, temperature, viscosity and specific gravity) the valve will produce a 25% to 50% pressure drop.



Sampling Metered Valve: ORDERING FORMAT

SMV — 42F — P

Porting w/ Max Orifice

22P = 1/8" FNPT & 0.125" Orifice

21T = 1/8" TUBE & 0.063" Orifice

44P = 1/4" FNPT & 0.250" Orifice

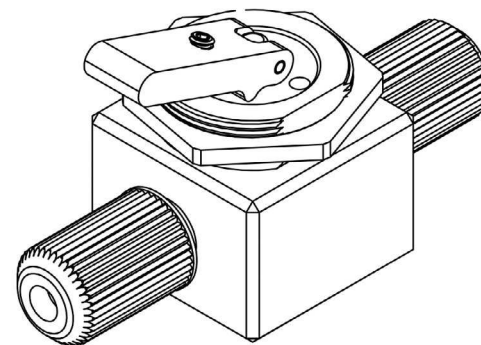
43T = 1/4" TUBE & 0.188" Orifice

42F = 1/4" FLARE & 0.125" Orifice

Mounting

P = Panel Mount

• These valves are configured with their maximum available port orifice for the given port style and size. Call IPS for special constrained orifice & other custom solutions.



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