

Analog Pathfinder variable area flowmeters provide stable and repeatable flow indication for low and medium flow rates in aggressive and ultra pure applications. Non-intrusive sensing provides an analog signal to electronic read-outs and controls.

Flow ranges from 30 - 370 ml/min. through 3220 - 6000 ml/min. in H₂O



Analog Pathfinder[®]

Accurate, Reliable and Repeatable Performance

- 100% functional testing including calibration for accuracy and pressure leak testing—superior performance
- PFA sight tube—media compatibility and improves float visibility
- Guide rod centers float—improved sensing accuracy
- Serialization—quality control tracking and custom configurations
- Patented valve provides stable and repeatable flow of process fluids—high resolution and improved linear flow adjustment
- Provides analog signal for remote readouts and controls—yet allows visual indication of flow
- Serialized graph for each flowmeter—quick and accurate setup

Ultra Pure Construction

- Premium grade fluoropolymers and other high performance plastics—resist corrosion and prevent process contamination
- No exposed metal—eliminates metallic corrosion
- Cleanroom manufacturing and packaging—minimizes potential contamination

flowmeters

Operation

Analog Pathfinder Series variable area flowmeters consist of a magnet encapsulated in a TFM float inside a vertical tube that tapers upward. Fluid enters at the base of the tube causing the float to rise. As the float inside the tube rises, the area between the float and the tapered tube wall increases. The upward or downward movement of the float corresponds to the rate of fluid flow in the tube. An external housing mounted sensor located at the top of the site tube senses and relays the float position as an analog signal.

Specifications

MATERIALS

- Wetted parts:
PFA, PTFE, TFM and CTFE
- Non-wetted parts:
PVDF, polyethylene and polypropylene

OPERATING

- Accuracy: $\pm 5\%$ set point
- Maximum temperature: 120°C (248°F)
- Maximum pressure: 100 psi
- Minimum gap of 12" required between flowmeters

ELECTRICAL

- Input: user supplied 12-24 VDC
- Output: 4-20 mA non-isolated sinking output and 1-5 VDC
- Current draw: 90 mA maximum (includes 4-20 mA signal)
- CE compliant version available. Consult factory.

Configuration Options

STYLE

- Panel Mount
- Inline
- Inline / Panel Mount

METERING VALVE

- With or without integral high resolution metering valve

CONNECTION SIZES

- 1/4" and 3/8" FNPT
- 1/4", 3/8" and 1/2" fine thread flare
- 1/4", 3/8" and 1/2" coarse thread flare
- 1/8", 1/4", 3/8" and 1/2" Pillar Super 300®

Ordering Information

To order, select a configuration and a flow range from the following tables.
Contact Futurestar for information on additional flow ranges and custom configurations.

Complete Part Number = Configuration + Flow Range (Example: **1A4-0037-4P**)

CONFIGURATIONS

FLOW RANGES

Rate Re All	STYLE	CONNECTION SIZE		FNPT	FINE THREAD FLARE	COARSE THREAD FLARE	PILLAR SUPER 300	
PANEL MOUNT	1/8	w/ valve					1A0-XXX-2S	
		w/o valve					1A1-XXX-2S	
	1/4	w/ valve	1A0-XXX-4P	1A0-XXX-4F	1A0-XXX-4G	1A0-XXX-4S		
		w/o valve	1A1-XXX-4P	1A1-XXX-4F	1A1-XXX-4G	1A1-XXX-4S		
	3/8	w/ valve	1A0-XXX-6P	1A0-XXX-6F	1A0-XXX-6G	1A0-XXX-6S		
		w/o valve	1A1-XXX-6P	1A1-XXX-6F	1A1-XXX-6G	1A1-XXX-6S		
	1/2	w/ valve			1A0-XXX-8F	1A0-XXX-8G	1A0-XXX-8S	
		w/o valve			1A1-XXX-8F	1A1-XXX-8G	1A1-XXX-8S	
	INLINE	1/8	w/ valve					1A2-XXX-2S
			w/o valve					1A3-XXX-2S
1/4		w/ valve	1A2-XXX-4P	1A2-XXX-4F	1A2-XXX-4G	1A2-XXX-4S		
		w/o valve	1A3-XXX-4P	1A3-XXX-4F	1A3-XXX-4G	1A3-XXX-4S		
3/8		w/ valve	1A2-XXX-6P	1A2-XXX-6F	1A2-XXX-6G	1A2-XXX-6S		
		w/o valve	1A3-XXX-6P	1A3-XXX-6F	1A3-XXX-6G	1A3-XXX-6S		
1/2		w/ valve			1A2-XXX-8F	1A2-XXX-8G	1A2-XXX-8S	
		w/o valve			1A3-XXX-8F	1A3-XXX-8G	1A3-XXX-8S	
INLINE/ PANEL MOUNT	1/8	w/ valve					1A4-XXX-2S	
		w/o valve					1A5-XXX-2S	
	1/4	w/ valve	1A4-XXX-4P	1A4-XXX-4F	1A4-XXX-4G	1A4-XXX-4S		
		w/o valve	1A5-XXX-4P	1A5-XXX-4F	1A5-XXX-4G	1A5-XXX-4S		
	3/8	w/ valve	1A4-XXX-6P	1A4-XXX-6F	1A4-XXX-6G	1A4-XXX-6S		
		w/o valve	1A5-XXX-6P	1A5-XXX-6F	1A5-XXX-6G	1A5-XXX-6S		
	1/2	w/ valve			1A4-XXX-8F	1A4-XXX-8G	1A4-XXX-8S	
		w/o valve			1A5-XXX-8F	1A4-XXX-8G	1A5-XXX-8S	

OPTIONAL DISPLAYS AND ACCESSORIES

Optional displays and accessories are ordered separately.
Contact Futurestar for more information.

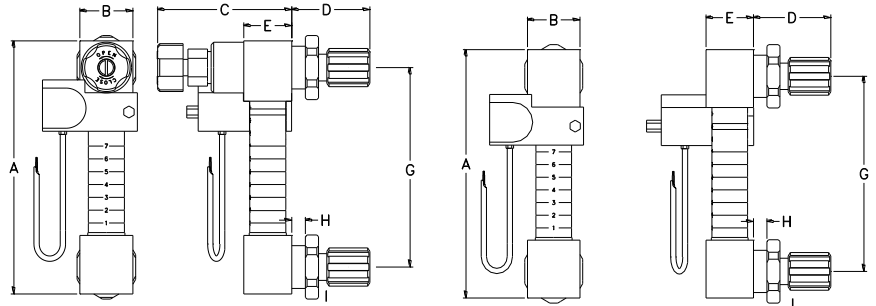
FLOW (ml/min.)	PART NUMBER
30—370	00370
150—1000	010
110—2000	020
750—3000	030
1660—4000	040
2420—5000	050
3220—6000	060

	DESCRIPTION	PART NUMBER
DISPLAYS CE Compliant	Display Option A <ul style="list-style-type: none"> 6 digit LED display with 4 ½ digit resolution, linearization and totalization Power: 115 VAC 	410-001
	Display Option B <ul style="list-style-type: none"> 6 digit LED display with 4 ½ digit resolution, linearization and totalization Controller 1: Two 5 amp relays Power: 115 VAC 	420-001
	Display Option C <ul style="list-style-type: none"> 6 digit LED display with 4 ½ digit resolution, linearization and totalization Controller 1: Two 5 amp relays Controller 2: 4-20 mA output Power: 115 VAC 	420-002
ACCESSORIES	Power Supply <ul style="list-style-type: none"> 12 volt 	430-001
	Serial Communications	Contact Futurestar

Installation Drawings

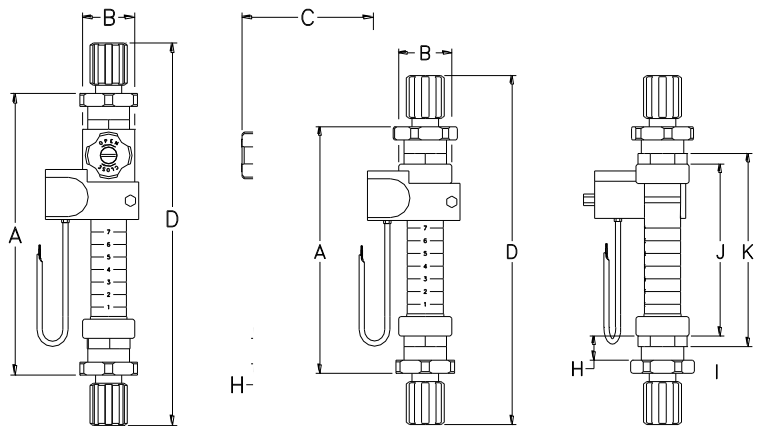
		inches	mm
A	Height	5.91	150.1
B	Width	1.25	31.8
C	Valve open	3.64	92.5
	Valve closed	3.16	80.3
D	1/4" flarenut	1.79	45.5
	3/8" flarenut	1.84	46.7
	1/2" flarenut	1.94	49.3
E	Depth	1.13	28.7
F	1/4" flarenut	NA	NA
	3/8" flarenut	NA	NA
	1/2" flarenut	NA <td NA	
G	Flare center to center	4.63	117.6
H	Panel thickness	0.31	7.9
I	Panel hole diameter	1.06	26.9
K	Dimension	NA	NA

PANEL MOUNT



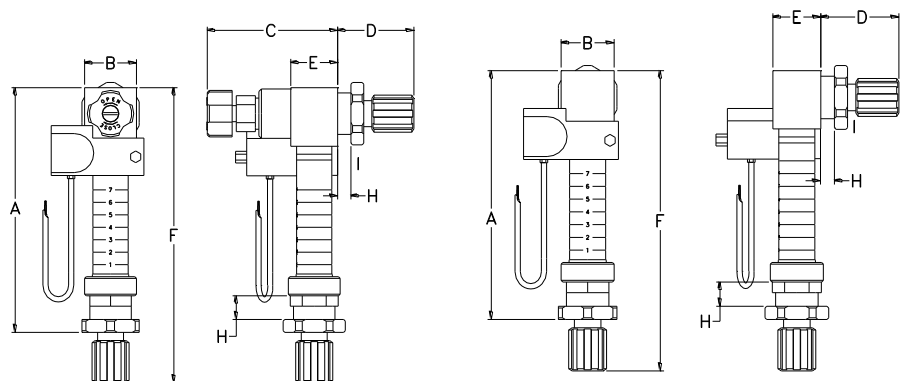
		inches	mm
A	Height	6.68	169.7
B	Width	1.25	31.8
C	Valve open	3.64	92.5
	Valve closed	3.16	80.3
D	1/4" flarenut	9.00	228.6
	3/8" flarenut	9.10	231.1
	1/2" flarenut	9.30	236.2
E	Depth	NA	NA
F	1/4" flarenut	NA	NA
	3/8" flarenut	NA	NA
	1/2" flarenut	NA	NA
G	Flr. cent. to cent.	NA	NA
H	Panel thickness	0.31	7.9
I	Panel hole diameter	1.06	26.9
J	Dimension	4.94	125.5
K	Dimension	5.42	137.7

INLINE



		inches	mm
A	Height	5.83	148.1
B	Width	1.25	31.8
C	Valve open	3.64	92.5
	Valve closed	3.16	80.3
D	1/4" flarenut	1.79	45.5
	3/8" flarenut	1.84	46.7
	1/2" flarenut	1.94	49.3
E	Depth	1.13	28.7
F	1/4" flarenut	6.99	177.6
	3/8" flarenut	7.04	178.8
	1/2" flarenut	7.14	181.4
G	Flr. cent. to cent.	NA	NA
H	Panel thickness	0.31	7.9
I	Panel hole diameter	1.06	26.9
J	Dimension	NA	NA
K	Dimension	NA	NA

INLINE / PANEL MOUNT



*Pillar Super 300 dimensions available upon request.

U.S. Patents: 5565631, 5549277, 5381826, 5078004 • Others pending
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 Super 300 Type Pillar Fitting® is a trademark of NIPPON PILLAR PACKING CO., LTD.

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