

# Polysulfone Variable Area Flow Meters

## F-440 SERIES Compact Size. Big Performance.

### F-440 BENEFITS

- Adjustable Flow Indicating Marker.
- Engineered with large half union connections.
- Oversized o-rings for Superior seal.
- All wetted parts are PVDF or Polypropylene.
- Tough Polysulfone meter body resists high temperatures and pressures.\*
- Compact size for tight installation spaces.
- 2" scale length (approximate).
- Direct reading permanent scale.
- In-line or Panel mount configurations available.
- Optional Integral Flow Adjustment Valve.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Standard models have #316 Stainless Steel, PTFE or PVC float.
- Not recommended for direct sunlight.

### F-440 SPECIFICATIONS

Max. Working Pressure..... 175 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature  
 Standard Models..... 212°F (100°C) @ 0 PSI  
 Full Scale Accuracy..... +/- 4%  
 Meter Body Material..... Polysulfone  
 Adapter Material..... Polysulfone  
 O-Ring Material..... FKM  
 Approx. Shipping Weight... 1/2lb. (.23 kg)

### F-440 ORDERING GUIDELINES

#### STANDARD LIQUID MODELS

MODEL NUMBER	Pipe Size M/NPT	DUAL SCALE RANGE		Float Material
		GPM	LPM	
F-44250(*)-6	3/8"	.025 to .250	0.1 to 1.0	PVDF
F-44250(*)-8	1/2"	.025 to .250	0.1 to 1.0	PVDF
F-44375(*)-6	3/8"	0.1 to 1.0	0.4 to 4.0	316 SS
F-44375(*)-8	1/2"	0.1 to 1.0	0.4 to 4.0	316 SS
F-44376(*)-6	3/8"	0.2 to 2.0	0.8 to 8.0	316 SS
F-44376(*)-8	1/2"	0.2 to 2.0	0.8 to 8.0	316 SS
F-44500(*)-6	3/8"	0.5 to 5.0	1.8 to 18.0	316 SS
F-44500(*)-8	1/2"	0.5 to 5.0	1.8 to 18.0	316 SS
F-44750(*)-8	1/2"	1.0 to 10.0	5.0 to 37.5	316 SS
F-44750(*)-12	3/4"	1.0 to 10.0	5.0 to 37.5	316 SS
F-44330(*)-6	3/8"	3.0 to 30.0	10 to 110	PTFE
F-44330(*)-8	1/2"	3.0 to 30.0	10 to 110	PTFE

#### MODEL Variations

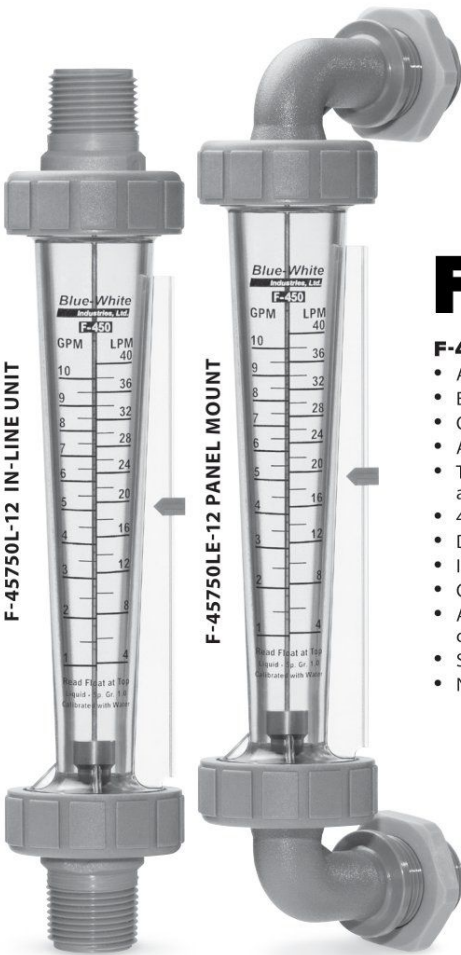
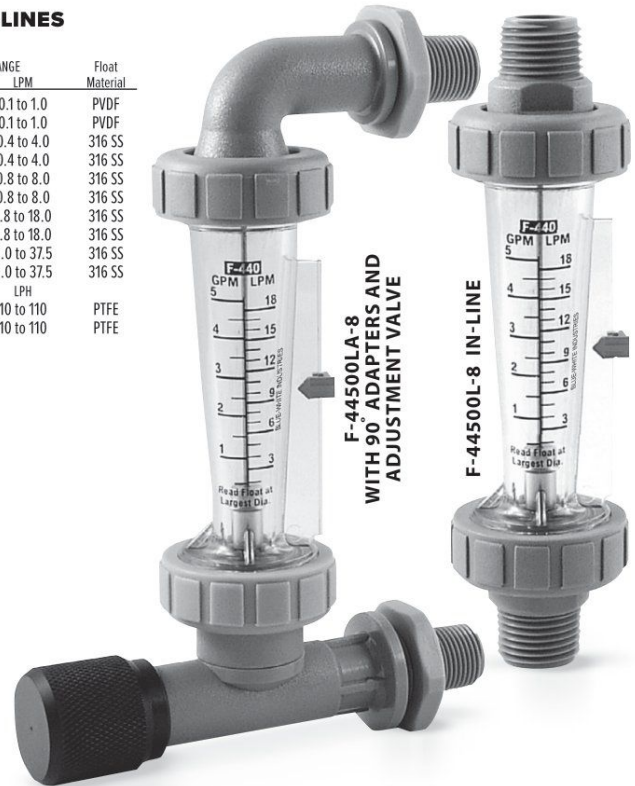
\*L = In-Line Model is listed  
 \*LE = Panel Mount Model  
 \*LA = Adjustable Model

#### PIPE SIZES

Standard Models: 3/8" F/NPT; 1/2", 3/4" M/NPT

#### FLOW RATES

0.025 to 10 U.S. GPM  
 0.1 to 37.5 LPM  
 3 to 60 GPH  
 10 to 220 LPH



## F-450N SERIES Performance and Versatility

### F-450N BENEFITS

- Adjustable Flow Indicating Marker.
- Engineered with large half union connections.
- Oversized o-rings for Superior seal.
- All wetted parts are PVDF or Polypropylene.
- Tough Polysulfone meter body resists high temperatures and pressures.\*
- 4" approximate scale length for easy reading.
- Direct reading permanent scale.
- In-line or Panel mount configurations available.
- Optional integral flow adjustment valve.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Standard models have #316 Stainless Steel or PTFE float.
- Not recommended for direct sunlight.

### F-450N ORDERING GUIDELINES

#### STANDARD LIQUID MODELS

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE		Float Material
		GPM	LPM	
F-45375(*)-6	3/8" F/NPT	.1 to 1	.4 to 4	PTFE
F-45375(*)-8	1/2" M/NPT	.1 to 1	.4 to 4	PTFE
F-45376(*)-6	3/8" F/NPT	.2 to 2	1 to 7.5	316 SS
F-45376(*)-8	1/2" M/NPT	.2 to 2	1 to 7.5	316 SS
F-45500(*)-6	3/8" F/NPT	.5 to 5	2 to 20	316 SS
F-45500(*)-8	1/2" M/NPT	.5 to 5	2 to 20	316 SS
F-45500(*)-12	3/4" M/NPT	.5 to 5	2 to 20	316 SS
F-45750(*)-12	3/4" M/NPT	1 to 10	4 to 40	316 SS

#### MODEL Variations

\*L = In-Line Model is listed  
 \*LE = Panel Mount Model  
 \*LA = Adjustable Model

### F-450N SPECIFICATIONS

Max. Working Pressure..... 175 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature  
 Standard Models..... 212°F (100°C) @ 0 PSI  
 Full Scale Accuracy..... +/- 4%  
 Meter Body Material..... Polysulfone  
 Adapter Material..... Polysulfone  
 O-Ring Material..... FKM  
 Max. Pressure Drop..... 2 psi  
 Approx. Shipping Weight... 1/2lb. (.23 kg)

### PIPE SIZES

Standard Models: 3/8" F/NPT; 1/2", 3/4" M/NPT

### FLOW RATES

0.1 to 10 GPM  
 4 to 40 LPM

\* The factory does not guarantee their flowmeters for use with liquids other than water. Customers are required to do their own compatibility testing.

5 LIQUID MONITORING



# Polysulfone Variable Area Flow Meters

## F-460 & F-461 SERIES For Ultra Pure & Corrosive Environments



**NO METALS  
IN THE  
FLUID PATH**

F-461

F-460

### F-460 & F-461 BENEFITS

- Polysulfone meter body with precisely engineered float guide ribs.
- No metal in the fluid path.
- Direct reading permanent scale.
- Ideal for corrosive environments\* such as Deionized Water or other applications where an all plastic meter is desirable.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Not recommended for direct sunlight.

### F-460 & F-461 SPECIFICATIONS

Max. Working Pressure..... 150 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature .... PVDF adapters: 210°F (98°C) @ 0 PSI, PVC adapters: 130°F (54°C) @ 0 PSI  
 Full Scale Accuracy ..... +/- 2-1/2%  
 Meter Body Material ..... Polysulfone  
 Float Material ..... PTFE  
 O-ring Seals ..... FKM  
 Max. Pressure Drop ..... 2 psi  
 Approx. Shipping Weight... F-460 = 1 lb. (.45 kg), F-461 = 3 lb. (1.4 kg)

### F-460 PIPE SIZES

1/2" and 3/4" F/NPT

### F-460 FLOW RATES

0.1 to 5.0 U.S. GPM  
 0.4 to 20 LPM

### F-460 DIMENSIONS

Height: 10" (25.4cm)  
 Width: 1-3/4" (4.4cm)

### F-461 PIPE SIZES

1" F/NPT

### F-461 FLOW RATES

1 to 35 GPM  
 4 to 130 LPM

### F-461 DIMENSIONS

Height: 15"  
 Width: 2-3/4"

### F-460 & F-461 ORDERING GUIDELINES

#### STANDARD F-460 LIQUID MODELS with F/NPT Adapters

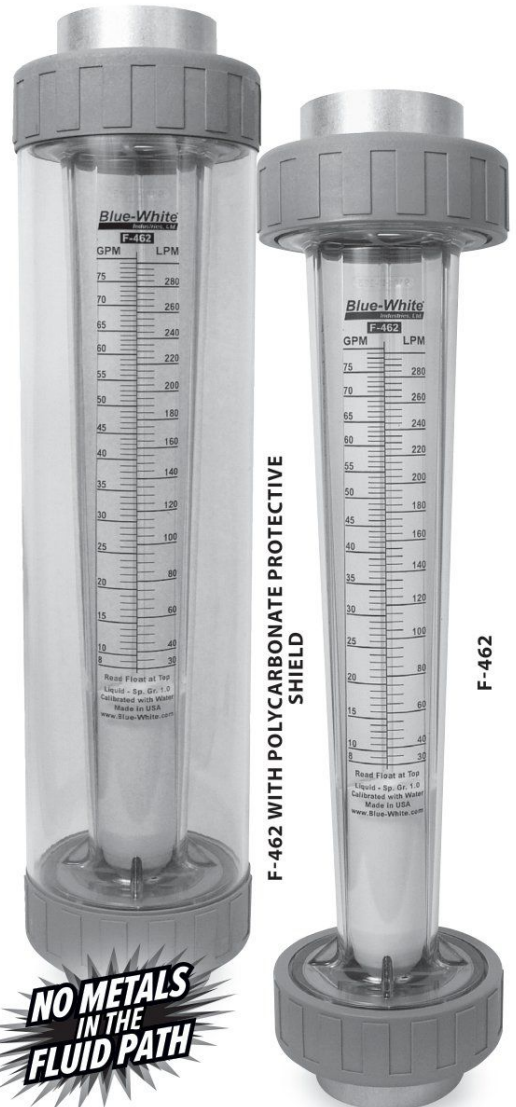
MODEL NUMBER	Pipe Size	DUAL SCALE RANGE	
		GPM	LPM
F-46010LX-08(*)	1/2"	0.1 to 1.2	0.4 to 4.4
F-46010LX-12(*)	3/4"	0.1 to 1.2	0.4 to 4.4
F-46020LX-08(*)	1/2"	0.2 to 2.0	0.8 to 8.0
F-46020LX-12(*)	3/4"	0.2 to 2.0	0.8 to 8.0
F-46030LX-08(*)	1/2"	0.3 to 3.0	1.0 to 11
F-46030LX-12(*)	3/4"	0.3 to 3.0	1.0 to 11
F-46050LX-08(*)	1/2"	0.5 to 5.0	2.0 to 20
F-46050LX-12(*)	3/4"	0.5 to 5.0	2.0 to 20

#### STANDARD F-461 LIQUID MODELS with F/NPT Adapters

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE	
		GPM	LPM
F-461100LX-16(*)	1"	1 to 10	4 to 40
F-461200LX-16(*)	1"	2 to 20	5 to 75
F-461300LX-16(*)	1"	3 to 35	12 to 130

#### MODEL Variations

\*P= PVC Adapter  
 \*K = PVDF Adapter  
 PVC Union Nuts = replace "X" with "P"



**F-462 WITH POLYCARBONATE PROTECTIVE SHIELD**

F-462

**NO METALS  
IN THE  
FLUID PATH**

## F-462 WITH RIB GUIDED FLOAT High Capacity. Top Performance.

### F-462 BENEFITS

- Polysulfone meter body with precisely engineered float guide ribs.
- No metal in the fluid path.
- Direct reading permanent scale.
- Ideal for corrosive environments\* such as Deionized Water or other applications where an all plastic meter is desirable.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Not recommended for direct sunlight.

### F-462 SPECIFICATIONS

Max. Working Pressure..... 150 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature .... 200°F (93°C) @ 0 PSI  
 Full Scale Accuracy ..... +/- 2-1/2%  
 Meter Body Material ..... Polysulfone  
 Float Material ..... PTFE  
 O-ring Seals ..... FKM (Optional EP)  
 Max. Pressure Drop ..... 2 psi  
 Approx. Shipping Weight... 5 lb. (2.27 kg)

### F-462 ORDERING GUIDELINES

#### STANDARD F-462 LIQUID MODELS with 2" F/NPT Adapters

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE		Adapter Material	Float Material
		GPM	LPM		
F-462200LX-32H	2" F/NPT	2 to 20	8 to 80	Polysulfone	PTFE
F-462500LX-32H	2" F/NPT	5 to 50	20 to 200	Polysulfone	PTFE
F-462800LX-32H	2" F/NPT	8 to 80	30 to 300	Polysulfone	PTFE

#### MODEL Variations

Polycarbonate Shield may be ordered as an accessory.  
 PVC Union Nuts = replace "X" with "P"

### PIPE SIZES

2" F/NPT, 2" Socket Fusion, 63mm Butt Fusion

### FLOW RATES

2 to 80 GPM  
 8 to 300 LPM

### DIMENSIONS

Height: 18-7/8" (47.9cm)  
 Width: 4-5/8" (11.7cm)

\* The factory does not guarantee their flowmeters for use with liquids other than water. Customers are required to do their own compatibility testing.



# Polysulfone Variable Area Flow Meters

## F-451 SERIES Quality. Versatility.



### F-451 BENEFITS

- A Heat and Chemical resistant meter body of injection molded Polysulfone.\*
- Floats are #316 S.S. or PTFE, depending on calibration.
- Permanent, easy to read screen printed scales.
- 1" F/NPT Polysulfone adapters, or 1-1/2" PVC adapters (depending on model ordered).
- FKM O-ring Seals.
- Accuracy  $\pm 3\%$ .
- May be ordered with 90° elbow adapters.
- Polycarbonate Protective Shield may be ordered as an accessory.
- Not recommended for direct sunlight applications.
- Models available for use with liquids.

### F-451 ORDERING GUIDELINES

MODEL NUMBER	CALIBRATION		ADAPTER SIZE
	GPM	LPM	
F-451006LHN	0.5 to 6	to 22	1" F/NPT
F-451001LHN	1.0 to 10	4 to 40	1" F/NPT
F-451002LHN	2.0 to 20	7.5 to 75	1" F/NPT
F-451003LHN	3.0 to 30	12 to 115	1" F/NPT
F-451004LHN	4.0 to 40	15 to 155	1" F/NPT

### 1-1/2" F/NPT PVC Adapters

MODEL NUMBER	CALIBRATION		ADAPTER SIZE
	GPM	LPM	
F-451006LHN-24	0.5 to 6	to 22	1-1/2" F/NPT
F-451001LHN-24	1.0 to 10	4 to 40	1-1/2" F/NPT
F-451002LHN-24	2.0 to 20	7.5 to 75	1-1/2" F/NPT
F-451003LHN-24	3.0 to 30	12 to 115	1-1/2" F/NPT
F-451004LHN-24	4.0 to 40	15 to 155	1-1/2" F/NPT

### PIPE SIZES

1", 1-1/2" F/NPT

### FLOW RATES

0.5 to 40 GPM  
2 to 155 LPM

### DIMENSIONS

Height: 14-1/2" (36.8cm)  
Width: 3-5/16" (8.4cm)

### F-451 SPECIFICATIONS

Max. Working Pressure ..... 150 psi (10 Bar) @ 70°F (21°C)  
 Max. Fluid Temperature ..... Polysulfone adapters: 212°F (100°C) @ 0 PSI.  
 PVC adapters: 130°F (54°C) @ 0 PSI  
 Full Scale Accuracy .....  $\pm 3\%$   
 Meter Body Material ..... Polysulfone  
 Adapter Material ..... 1" Polysulfone & 1 1/2" PVC  
 O-Rings ..... FKM  
 Float Material ..... #316 SS, or PTFE, depending on calibration.  
 Max. Pressure Drop ..... 2 psi  
 Approx. Shipping Weight... 3 lbs. (1.36 kg.)

## F-452N SERIES High Capacity.

### F-452N BENEFITS

- One piece Polysulfone meter body resists high temperatures and pressures.\*
- 316 Stainless Steel rod guided float.
- Direct reading permanent scale.
- Adapters and unions engineered for maximum protection from misalignment and vibration.
- Polycarbonate Protective Shield may be ordered as an accessory.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Not recommended for direct sunlight.
- Models available for use with liquids.

### F-452N SPECIFICATIONS

Max. Working Pressure ..... 150 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature ..... 212°F (100°C) @ 0 PSI  
 Full Scale Accuracy .....  $\pm 2\%$   
 Meter Body Material ..... Polysulfone  
 Union Nuts ..... Glass fiber reinforced Nylon  
 Guide Rod Material ..... 316 Stainless Steel  
 O-Ring Material ..... FKM  
 Max. Pressure Drop ..... 2 psi  
 Approx. Shipping Weight... 5 lb. (2.27 kg)

### PIPE SIZES

2" F/NPT

### FLOW RATES

2 to 175 GPM  
8 to 675 LPM

### DIMENSIONS

Height: 18-7/8" (47.9cm)  
Width: 4-5/8" (11.7cm)

### F-452 ORDERING GUIDELINES

MODEL NUMBER	DUAL SCALE RANGE		ADAPTER SIZE
	GPM	LPM	
F-452020LHN	2 to 20	8 to 78	2" F/NPT
F-452060LHN	6 to 60	30 to 230	2" F/NPT
F-452080LHN	8 to 80	40 to 300	2" F/NPT
F-452100LHN	6 to 100	20 to 380	2" F/NPT
F-452130LHN	20 to 130	80 to 500	2" F/NPT
F-452175LHN	25 to 175	100 to 675	2" F/NPT



5 LIQUID MONITORING

\* The factory does not guarantee their flowmeters for use with liquids other than water. Customers are required to do their own compatibility testing. Request Kit #70000-718, at no charge.

