



# **Blue-White<sup>®</sup>**

## **Industries, Ltd.**

**METERING PUMPS | FLOWMETERS**

**QUALITY • PERFORMANCE • STYLE**



# **Blue-White<sup>®</sup>**

## **Industries, Ltd.**



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**BLUE-WHITE<sup>®</sup> has been a Leading Manufacturer of Top Quality Flowmeters, Metering Pumps and Water Treatment Accessories for Close to Six Decades.**

**At Blue-White we pride ourselves** on innovative engineering, quality materials of construction and excellent customer service. Our worldwide network of factory authorized representatives, distributors, dealers and warranty centers look forward to serving you. This catalog is designed to familiarize you with Blue-White's extensive product lines. If you don't see the product that meets your system requirements please contact the factory. Blue-White is pleased to provide price quotation for custom calibrations and feed rates; alternate materials of construction, and private labeling to volume purchasers. In addition to the products shown on these pages, Blue-White manufactures an extensive line of products for larger system requirements, including Industrial and Municipal installations.



# CHEM-FEED<sup>®</sup> METERING PUMPS

**When you need a Tough, Accurate,  
Dependable Metering Pump  
insist on CHEM-FEED<sup>®</sup>**



**CHEM-FEED<sup>®</sup>  
C-1500N**



**CHEM-FEED<sup>®</sup>  
C-600P**



**CHEM-FEED<sup>®</sup>  
C-1100E**

**CHEM-FEED<sup>®</sup> injectors combine high quality materials** of construction and smart engineering with flexibility and value.

Because we manufacture most of the components in our own plant, including the all ball bearing gear motor, we can offer CHEM-FEED<sup>®</sup> metering pumps with a wide range of configuration, material, voltage and feed rate options.

All CHEM-FEED<sup>®</sup> metering pumps feature Blue-White's exclusive heavy duty cartridge valve head. The thoughtful design of this pump head begins with bullet cartridge valves constructed of tough PVDF plastic. Each valve has two ceramic ball checks and is double sealed with high grade Aflas o-rings. The double ball valve pump head design ensures enhanced priming capabilities, and it is exceptional for purging air and gas.

Because CHEM-FEED<sup>®</sup> has earned the reputation as the BEST small metering pump in the business, other manufacturers may try to confuse you by using the name CHEM-FEED<sup>®</sup>. Only Blue-White manufactures the genuine CHEM-FEED<sup>®</sup> metering pump.

***Don't Settle for Imitations – Insist on  
CHEM-FEED<sup>®</sup> Metering Pumps!***

## CHEM-FEED<sup>®</sup> BENEFITS

- Superior, efficient pump head design.
- Double Ball inlet and outlet valves which are completely interchangeable.
- PVDF valve body and fittings, ceramic ball checks, FKM and TFE/P o-rings.
- All ball bearing gear motor plus permanent lubrication.
- Quick Adjusting Output Mechanisms.
- Efficient, Dependable Design.
- Each Unit Factory Tested.
- Backed by an excellent limited warranty.

## CHEM-FEED<sup>®</sup> APPLICATIONS

- Water treatment and conditioning.
- Soap, wax and detergent injection.
- Wastewater treatment.
- Biocide feed.
- Rural water systems.
- Cooling tower & boiler treatment.
- Fertilizer and nutrient injection.
- Pool chlorination & PH control.

## CHEM-FEED<sup>®</sup> OPTIONS

There are a wide range of feed/output rate options, voltage options and configuration options. In addition, the factory is pleased to quote on custom material and color options as well as, private labeling and packaging for volume purchasers.







**CHEM-FEED® C-1500N** Quality. Performance. Options.

*Blue-White's CHEM-FEED® C-1500N Metering Pumps are well suited to a variety of water and wastewater treatment applications.*

C-1500N Series injectors feature Blue-White's exclusive Heavy Duty Head with Cartridge Valves constructed of tough PVDF. Each valve has two ceramic checks, and is double sealed. The double ball valve design provides enhanced priming, and is exceptional for purging air and gas. The Heavy Duty Head is nearly maintenance-free, and Bottom and Top Valves are completely interchangeable for quick, easy and economic servicing.

Two distinct C-1500N Models are offered. The STANDARD C-1500N has an easy to adjust dial-type, top mounted mechanical stroke length (output) control. The efficient design allows for minimum stroke length of 5%. DELUXE Models feature stroke length and time interval control. The pump's on time is adjustable from 5-100% of the repeating 5 second time interval. (0.25-5.0). The high frequency of the repeating 5 second time interval, and the extremely accurate mechanical stroke adjustment, result in a higher frequency of small injections per minute.

## C-1500N SPECIFICATIONS

Max. Working Pressure .....	125 psig (8.6 bar)
Max. Fluid Temperature .....	130° F (54° C)
Ambient temp range .....	14° to 110° F (-10° to 43° C)
Max. viscosity .....	1000 Centipoise
Max. suction lift .....	10 ft. Water
Output accuracy .....	+/- 10% of max. (water 0 psi, 5' suction lift)
Turndown ratio .....	20:1 Standard models, 200:1 Deluxe models
Enclosure .....	Acceptable for outdoor use. NEMA 3R (IP23)
Amperage draw .....	115V/60Hz.....starting .74 / running .45 230V/60Hz.....starting .36 / running .21 220V/50Hz.....starting .31 / running .19 24V/60Hz.....starting 3.4 / running 2.0
O-ring seals .....	FKM and FTFE/P (Optional EP)
Dimensions .....	9-1/2" D x 4-1/2" W x 5-3/4" D
Approximate shipping wt. .....	8 lb. (3.6 kg)

## C-1500N ORDERING GUIDELINES

### STANDARD MODEL with Stroke Adjustment

MODEL NUMBER	GPD	MAX OUTPUT @ 0 PSI GPH	LPH OZ/MIN	Max Strokes Per minute	Max PSI
C15N0(*)2X026V00	3.4	0.2	0.5	14	125
C15N1(*)2X026V00	8.3	0.3	1.3	0.7	30
C15N3(*)2X026V00	16.3	0.6	2.5	1.4	60
C15N2(*)2X000V00	26.6	1.1	4.2	2.4	45
C15N4(*)2X026V00	34.2	1.4	5.4	3.0	125
C15N2(*)4X000V00	49.0	2.0	7.7	4.3	45
C15N3(*)4X000V00	57.7	2.4	9.1	5.1	60
C15N4(*)2X000V00	68.4	2.8	10.8	5.9	125
C15N4(*)4X000V00	119.7	4.9	18.9	10.6	125
C15N4(*)1X000V00	155.9	6.4	24.6	13.8	125
C15N4(***)3X000V00	228.1	9.5	36.0	20.2	125

### DELUXE MODEL with Stroke and Time Interval Adjustment

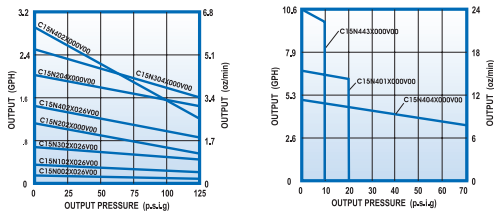
MODEL NUMBER	GPH	MAX OUTPUT @ 0 PSI LPH	OZ/MIN	Max Strokes Per minute	MAX PSI
C15N4(*)21026V00	.007-1.4	.027-5.40	.015-3.00	125	125
C15N4(*)21000V00	.014-2.8	.054-10.8	.030-5.90	125	125
C15N4(*)11000V00	.032-6.4	.123-24.6	.069-13.8	125	20

### VOLTAGE OPTIONS

(\*)Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz, 3=24V/60Hz

(\*\*) Replace: 4=115V/60Hz, 5=220V/50Hz, 6=230V/60Hz

Note: 220V/50Hz units deliver approximately 20% less output





# CHEM-FEED® C-1700N Duplex Head Pump

The CHEM-FEED® C-1700N Duplex Head Metering Pump features two independently controlled pump heads.

Because of the unique duplex head configuration, motor power is used to maximum efficiency. This is of particular importance for overcoming backpressure. Also, alternating strokes mean double the injections per minute. For example, a 125 RPM delivers 250 injections per minute, or four injections per second. This is of significance for applications requiring a pump approaching a constant, even feed rate, without broad spaces of time between injections.

The C-1700N can be used to inject different amounts of like chemical into separate systems, feed two different chemicals into the same system (blend), or when a single head pump doesn't provide quite enough output.

## C-1700N SPECIFICATIONS

Max. Working Pressure ..... 125 psig (8.6 bar)  
 Max. Fluid Temperature ..... 130° F (54° C)  
 Ambient temp range ..... 14° to 110° F (-10° to 43° C)  
 Max. viscosity ..... 1000 Centipoise  
 Max. suction lift ..... 10 ft. Water  
 Output accuracy ..... +/- 10% of max. (water 0 psi, 5' suction lift)  
 Turndown ratio ..... 20:1 Standard models  
 400:1 Deluxe models with optional Time Interval controller  
 Amperage draw ..... 115V/60Hz..... starting .74 / running .45  
 230V/60Hz..... starting .36 / running .21  
 220V/50Hz..... starting .31 / running .19  
 24V/60Hz..... starting 3.4 / running 2.0  
 O-ring seals ..... FKM and TFE/P  
 Dimensions ..... 9-1/2" H x 7-1/2" W x 4" D  
 Approximate shipping wt... 11 lb. (5.0 kg)

## C-1700N ORDERING GUIDELINES

### STANDARD MODEL with Stroke Adjustment

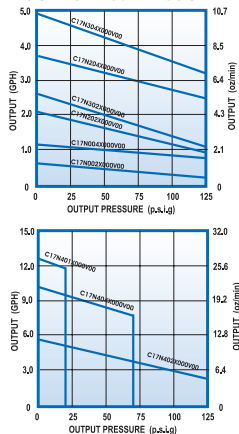
MODEL NUMBER	GPD	MAX OUTPUT @ 0 PSI GPH	LPH	OZ/MIN	Max Strokes Per minute	MAX PSI
C17N0(*)2X000V00	14.2	0.6	2.3	1.3	14	125
C17N0(*)4X000V00	28.9	1.2	4.5	2.6	14	125
C17N2(*)2X000V00	50.2	2.1	7.9	4.4	45	125
C17N3(*)2X000V00	62.3	2.6	9.8	5.5	60	125
C17N2(*)4X000V00	89.7	3.7	14.1	8.0	45	125
C17N3(*)4X000V00	119.0	5.0	18.8	10.6	60	125
C17N4(*)2X000V00	133.8	5.5	21.1	11.9	125	125
C17N4(*)4X000V00	243.3	10.1	38.4	21.6	125	70
C17N4(*)1X000V00	304.2	12.6	48.0	27.0	125	20

### VOLTAGE OPTIONS

(\*)Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz

Note: 220V/50Hz units deliver approximately 20% less output

## C-1700N OUTPUT VS. PRESSURE



C-1700N



## FLOW INDICATOR Diagnostic Tool for Chemical Feed Pumps

### BENEFITS

- Rhythmic rising and falling of the ball indicates positive flow.
- Air bubbles indicate chemical has exhausted.
- Stationary ball indicates no flow. Possible problems could be:
  - lost prime
  - stopped motor
  - plugged injection fitting
  - faulty tube or diaphragm
  - plugged or dirty footvalve filter
  - chemical has been exhausted for a lengthy period of time

### APPLICATIONS

- Glass bobbin for Chlorines and Acids.
- Stainless Steel bobbin for soaps and waxes (high viscose fluids).

### ORDERING GUIDELINES

MODEL NUMBER	Tube Connection	Bobbin Material	Body Material	O-ring
FI-100-4V	1/4" tubing	Glass	Acrylic	FKM
FI-100S-4V	1/4" tubing	Stainless Steel	Acrylic	FKM
FI-100-6V	3/8" tubing	Glass	Acrylic	FKM
FI-100S-6V	3/8" tubing	Stainless Steel	Acrylic	FKM

## FOOT VALVE / STRAINER

### APPLICATIONS

- Foot Valve / Strainer (with check valve) is recommended for CHEM-FEED® models C-340A and C-340E.
- Foot Strainer (no valve) is recommended for FLEXFLO® peristaltic pumps model C-342-6.
- Capacity of strainer is 300 micron.

### ORDERING GUIDELINES

MODEL NUMBER	Tube Connection	(OD) Valve	Body Material	O-ring
C-340A	1/4" and 3/8" tubing	Check Valve	PVDF	FKM
C-340E	1/4" and 3/8" tubing	Check Valve	PVDF	EP
C-342-6	1/4" and 3/8" tubing	No Valve, strainer only	Acrylic	FKM





# CHEM-FEED® STAR SYSTEM Ships Complete



Blue-White's CHEM-FEED® STAR SYSTEM is shipped complete with the CHEM-FEED® C-1500N metering pump of your choice, STANDARD or DELUXE. The pump is mounted on a sturdy Polyethylene tank, which is offered in three convenient sizes: 7, 15 or 30 gallon capacity. The tank is constructed of Polyethylene and features extra heavy wall thickness for added strength, and includes a U.V. inhibitor for sunlight protection. The tank is rectangular in shape for convenient placement, and is raised off the floor for easy wash down. An opening at the top of the tank makes adding chemical simple. The multi-position opening can be left open, or can be completely closed, or vented. For an efficient, well-designed metering system, choose The Star System.

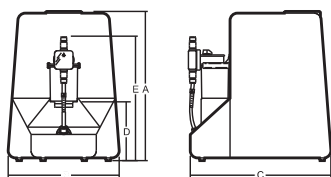
## STAR SYSTEM C-1500N BENEFITS

- The Star System is equipped with the C-1500N model of your choice – Standard or Deluxe.
- All necessary accessories are included.
- Three Tank capacities to choose from: 7 gallon, 15 gallon, or 30 gallon.
- The Polyethylene tank has extra heavy wall thickness for stability with U.V. inhibitor for sunlight protection.
- Lid positions include open, closed, or vent.
- Convenient rectangular shape.
- Flooded suction assists in priming.
- Raised off the floor for easy wash down.

## STAR SYSTEM

DIMENSIONS = INCH (CM)

	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	SHIP WT.
7 GALLON TANK	17.5 (44.5)	12.0 (30.5)	16.0 (41.0)	7.8 (19.7)	17.0 (43.0)	19 LB. (9 Kg)
15 GALLON TANK	22.0 (56.0)	15.5 (39.0)	19.5 (50.0)	7.8 (19.7)	17.0 (43.0)	28 LB. (13 Kg)
30 GALLON TANK	27.0 (69.0)	20.0 (51.0)	24.0 (61.0)	7.8 (19.7)	17.0 (43.0)	36 LB. (16 Kg)



## STAR SYSTEM ORDERING GUIDELINES

STANDARD MODEL with 7, 15, and 30 GALLON Tanks						
MODEL NUMBER	GPD	GPH	LPH	OZ/MIN	Max Strokes Per minute	MAX PSI
T15N0(**)2X026V0(***)	3.4	0.2	0.5	0.3	14	125
T15N1(**)2X026V0(***)	8.3	0.3	1.3	0.7	30	125
T15N3(**)2X026V0(***)	16.3	0.6	2.5	1.4	60	125
T15N2(**)2X000V0(***)	26.6	1.1	4.2	2.4	45	125
T15N4(**)2X026V0(***)	34.2	1.4	5.4	3.0	125	125
T15N2(**)4X000V0(***)	49.0	2.0	7.7	4.3	45	125
T15N3(**)4X000V0(***)	57.7	2.4	9.1	5.1	60	125
T15N4(**)2X000V0(***)	68.4	2.8	10.8	5.9	125	125
T15N4(**)4X000V0(***)	119.7	4.9	18.9	10.6	125	70
T15N4(**)1X000V0(***)	155.9	6.4	24.6	13.8	125	20
T15N4(**)3X000V0(***)	228.1	9.5	36.0	20.2	125	10

DELUXE MODELS with 7, 15, and 30 GALLON Tanks						
MODEL NUMBER	GPD	GPH	LPH	OZ/MIN	Max Strokes Per minute	MAX PSI
T15N4(**)2I026V00	.007-1.4	.027-5.40	.015-3.00		125	125
T15N4(**)2I000V00	.014-2.8	.054-10.8	.030-5.90		125	125
T15N4(**)1I000V00	.032-6.4	.123-24.6	.069-13.8		125	20

## VOLTAGE OPTIONS

(\*) Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz  
 (\*\*) Replace: 4=115V/60Hz, 5=220V/50Hz, 6=230V/60Hz

Note: 220V/50Hz units deliver approximately 20% less output

## GALLON OPTIONS

(\*\*\*) Replace: 1=7 Gallon, 2=15 Gallon, 3=30 Gallon

## STAR TANKS ONLY

MODEL NUMBER	CAPACITY GAL	LITER
STAR 7	7	26.5
STAR 15	15	57
STAR 30	30	113.5

# FLEXFLO® STAR III® Metering System

Blue-White's STAR III® Metering System features the FLEXFLO® A-100N Series Peristaltic Metering Pump of your choice, combined with a sturdy Polyethylene tank.

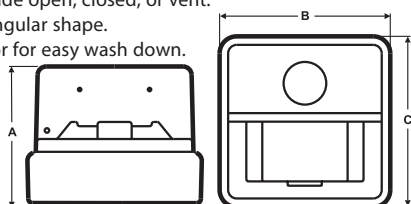
The STAR III® tank is available in 7, 15 or 30 gallon capacity. The Polyethylene Tank has UV inhibitors for sunlight protection; and extra heavy wall thickness for stability. A well located opening at the top of the tank allows for easy addition of chemical. The tank lid position can be open, closed or vented. The STAR III® tank is a handy rectangular shape, and is raised off the floor for easy wash down.

For a convenient Peristaltic Metering System Package, Get the FLEXFLO® STAR III®.

## FLEXFLO® STAR III® BENEFITS

- The Star III® is equipped with the FLEXFLO® A-100N model of your choice - fixed or variable speed models with standard or digital controls.
- All necessary accessories are included.
- Three Tank capacities to choose from: 7 gallon, 15 gallon, or 30 gallon.
- The polyethylene tank has extra heavy wall thickness for stability with U.V. inhibitor for sunlight protection.
- Lid positions include open, closed, or vent.
- Convenient rectangular shape.
- Raised off the floor for easy wash down.

Note: Refer to the 85000-045 data sheet or visit blue-white.com for more information.



DIMENSIONS = INCH (CM)

	DIM 'A'	DIM 'B'	DIM 'C'	SHIP WT.
7 GALLON TANK	12.00 (30)	18.50 (47)	18.50 (47)	24 LB. (11 Kg)
15 GALLON TANK	17.25 (44)	20.00 (51)	20.00 (51)	32 LB. (15 Kg)
30 GALLON TANK	27.50 (69)	20.00 (51)	20.00 (51)	38 LB. (18 Kg)



STAR III®  
with 15 Gallon Tank



# CHEM-FEED® C-1100 SERIES Diaphragm Metering Pumps

**CHEM-FEED® Delivers Precision, Chemical Metering and Smooth, Powerful Operation.**



**DELUXE C MODEL**  
with Stroke Length & Time Interval Control

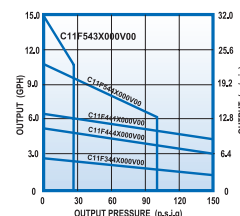
## CHEM-FEED® BENEFITS

- Superior pump head design.
- All ball bearing, permanently lubricated gear motor for smooth, powerful operation.
- Efficient, dependable design – each unit is factory tested.
- Private labeling for volume purchasers.\*
- 3/8" OD x 1/4" ID tubing connections.
- Pump head design and material options

## CHEM-FEED® APPLICATIONS

- Water treatment and conditioning.
- Soap, wax and detergent injection.
- Wastewater treatment.
- Biocide feed.
- Rural water systems.
- Cooling tower & boiler treatment.
- Fertilizer and nutrient injection.
- Pool chlorination & PH control.

## C-1100 OUTPUT VS. PRESSURE



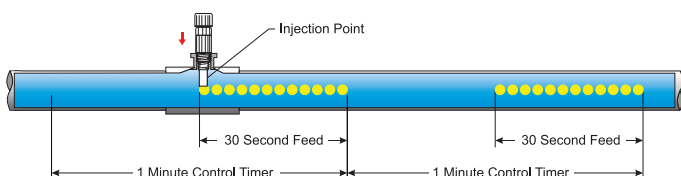
## CHEM-FEED® SPECIFICATIONS

Max. Working Pressure	150 psig (10.3 bar)
Max. Fluid Temperature	130° F (54° C)
Ambient temp range	14° to 110° F (-10° to 43° C)
Max. viscosity	1000 Centipoise
Max. suction lift	10 ft. Water 0 psig
Output accuracy	+/- 1% full scale repeatability
Turndown ratio	20:1 Standard Fixed Models 400:1 Deluxe Fixed Models 4000:1 Digital Fixed Models 400:1 Variable Speed Models
Enclosure	Acceptable for outdoor use. NEMA 3R (IP23)
Amperage draw	115V/60Hz... start 1.37 / run .35 230V/60Hz... start 0.57 / run .18 220V/50Hz... start 0.49 / run .23
O-ring seals	FKM and TFE/P (Optional EP)
Dimensions	6-1/4" H x 10" W x 9-1/4" D
Approximate shipping wt.	12 lb. (5.4 kg)

# CHEM-FEED® FIXED SPEED vs. VARIABLE SPEED

## FIXED SPEED MODELS (intermittent cycle time output)

You control the pumps feed by using timers (built-in or external).  
See image below.

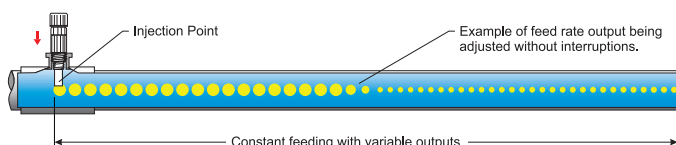


Most fixed speed outputs can be adjusted by simply:

- 1) Selecting the pump head diaphragm size.
- 2) Manual stroke length adjustment (cam style).
- 3) Choosing the desired RPM (revolutions per minute).

## VARIABLE SPEED MODELS (continuous pulse free output)

Continuous pumping, even while adjusting the percentage of output. See image below.



Graphical representation of the Variable Speed and Fixed Speed peristaltic pump injection characteristics.

NOTE: Your chemical or solution is mixed in the fluid. This image is only illustrating the feed characteristics.

\* Provided purchase requirements are met.



# CHEM-FEED® C-1100 SERIES Diaphragm Metering Pumps



**STANDARD X MODEL**  
with Stroke Adjustment



**DELUXE C MODEL**  
with Stroke Length & Time Interval Control

## Standard Model

### CHEM-FEED® STANDARD X MODEL FIXED SPEED

Features a quick-adjusting, high accuracy mechanical stroke length control. The efficient design of the pump allows for a minimum stroke length of 5%. Maximum recommended output is 5% of maximum.

## Deluxe Models

### CHEM-FEED® DELUXE C MODEL FIXED SPEED

Features stroke length and electronic time interval control. The pumps' on-time is adjustable from 5-100% of the repeating 5 second time interval. (0.25-5.0 seconds). The high frequency of the repeating 5 second time interval and the extremely accurate mechanical stroke adjustment, result in a higher frequency of small injections per minute. Minimum recommended output is 5% of maximum.



**DIGITAL V MODEL - VARIABLE SPEED UNIT**  
with Stroke Length & 4-20mA, 0-10dc,  
and Pulse Input Speed Control

### CHEM-FEED® DELUXE F MODEL VARIABLE SPEED

Stroke length and analog speed control. The pumps' speed is adjustable from 5-100% of the maximum using a dial knob style controller. The minimum recommended output is .25% of the maximum. No special input signal connectors to purchase. Model features a 1 amp alarm output.

## Digital Models

### CHEM-FEED® DIGITAL E MODEL FIXED SPEED

Features stroke length, electronic user programmable time interval. Interval lengths are user programmable from 0.1 to 99 seconds, in 0.1 increments, with external interval control. The unit accepts pulse inputs (programmable from 1-9900) which can trigger programmable timed chemical injection batches from 0.1-99 seconds in duration. Analog signals can be used to remotely vary the interval timer's on-time adjustment.

### CHEM-FEED® DIGITAL V MODEL VARIABLE SPEED

Features stroke length, manual digital percentage and external input signal speed control. The unit accepts pulse inputs from 1-999Hz and 4-20mA or 0-10VDC analog input signals. The minimum and maximum speed at the minimum and maximum input values can be programmed using the digital LCD display. Flow verification sensor option is available. No special input signal connectors to purchase. Model features a 1 amp alarm output.

# CHEM-FEED® ORDERING GUIDELINES All Models

MODEL NUMBER	MAX OUTPUT AT 0 PSI				Max Strokes	MAX PSI
	GPD	GPH	LPH	OZ/MIN	Per minute	
C11(*)3(**)4X000V00	57.7	2.4	9.1	5.1	60	150
C11(*)4(**)4X000V00	119.7	4.9	18.9	10.6	125	150
C11(*)4(**)1X000V00	155.9	6.4	24.6	13.8	125	150
C11(*)5(**)4X000V00	260.8	10.8	41.1	23.1	250	100
C11(*)5(**)3X000V00	360.0	15.0	56.8	32.0	250	25

#### MODEL OPTIONS

(\*)Replace:

X= STANDARD X MODELS with Stroke Adjustment

C=DELUXE C MODELS with Stroke and Time Adjustment

E=DIGITAL E MODELS with Stroke, Pulse, and 4-20mA Adjustment

F=DELUXE F MODELS with Stroke and Dial Knob Speed Adjustment (Variable Speed)

V=DIGITAL V MODELS with Stroke, Pulse, and 4-20mA Analog Speed Adjustment (Variable Speed)

#### VOLTAGE OPTIONS

(\*)Replace: 4=115V/60Hz, 5=220V/50Hz, 6=230V/60Hz, 7=240V/50Hz

Note: 220V/50Hz units deliver approximately 20% less output.



# FLEXFLO® PERISTALTIC METERING PUMPS

When your installation calls for a compact Peristaltic Metering Pump  
Don't Settle for Less Than  
the BEST—FLEXFLO®!

Peristaltic Injectors are well suited to metering chemicals that could foul heads with conventional check valves. Peristaltic pumps have rollers that compress the tube in a progressive squeezing action.

Blue-White's superior FLEXFLO® peristaltic injectors have an impressive edge over the others. Only FLEXFLO® pumps feature Blue-White's Superior Pump Head and Tube Design.

All FLEXFLO® Peristaltic Pumps are equipped with Blue-White's exclusive patented TUBE FAILURE DETECTION SYSTEM. No other manufacturer can offer this feature.

*When you want the Best Compact Peristaltic Metering Injector – Get FLEXFLO®!*

## NEW & IMPROVED: PUMP HEAD & TUBE DESIGN

**Increased Performance:** The precision circumference of the New Pump Head ensures even greater accuracy. Larger internal adapter ports will handle higher viscosity fluids.

**Increased Strength:** A strong pump head adapter plate ensures adapters are secured in place. Tougher, more durable tube adapters are manufactured of natural PVDF.

**Easy Reorder:** Tube assemblies are now stamped with simple reorder number.



FLEXFLO A-100NF - VARIABLE SPEED UNIT  
with Percentage Speed Control



**FLEXFLO® OPTIONS** There are a wide range of feed/output rate options, voltage options, motor options, feature and configuration options. In addition, the factory is pleased to quote on custom material and output options, as well as private labeling and packaging for volume purchasers meeting purchase requirements.

### FLEXFLO® BENEFITS

- Precise chemical feed up to 124 GPH / 8.45 LPH.
- Max working pressure of 100 PSI / 6.9 bar.
- Exclusive, Built-in Tube Failure Detection System (TFD). FLEXFLO® A-100N pumps are compatible with Blue-White's Micro-Flo Verification Sensor.
- De-gassing design eliminates gas or air accumulation in the head.
- Output amount is not affected by changes in back pressure.
- Durable housing of rugged Valox.

### FLEXFLO® APPLICATIONS

- Water treatment and conditioning.
- Proportional Chemical injection.
- Wastewater treatment.
- Biocide feed.
- Rural water systems.
- Cooling tower & boiler treatment.
- Fertilizer and nutrient injection.
- Pool chlorination & PH control.

### FLEXFLO® SPECIFICATIONS

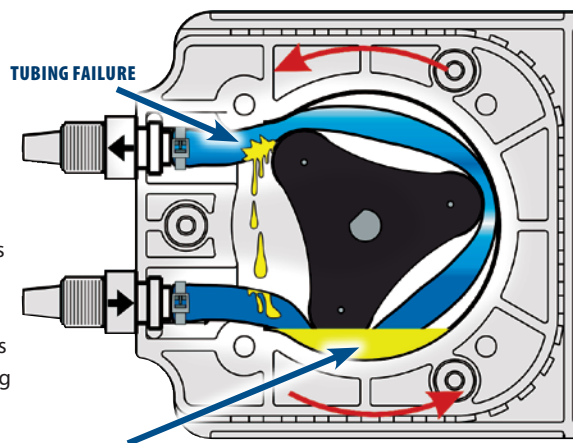
Max. Working Pressure .....	100 psig (6.9 bar)
Max. Fluid Temperature .....	130°F (54°C)
Ambient Temp Range .....	14° to 110°F (-10° to 43°C)
Max. Viscosity .....	5,000 Centipoise
Max. Suction Lift .....	30 ft. Water 0 psig
Duty Cycle .....	Continuous
Max. Solids .....	50% by volume
Amperage Draw .....	115V/60Hz, 230V/60Hz, 220V/50Hz
Injection Fitting O-ring Seals .....	FKM and TFE/P (Optional EP)
Dimensions .....	6-1/4" H x 10" W x 9-1/4" D
Approx. Shipping Weight .....	10 lb. (4.5 kg)

## The Exclusive Patented TUBE FAILURE DETECTION SYSTEM



Blue-White's exclusive patented Tube Failure Detection system, no one comes close to this breakthrough technology (U.S. patent: 7,001,153 and 7,284,964). In fact, the TFD may be the most important patent ever awarded for peristaltic metering pumps. The TFD System will detect a wide range of conductive chemicals with no false triggering. If the TFD senses tube failure, the pump will automatically shut off and energize a relay or switch, permitting communication with external equipment, such as a back-up pump or alarm.

*Simple, efficient and BUILT-IN to every FLEXFLO® Pump*



CHEMICAL IS IMMEDIATELY DETECTED IN THE PUMP HEAD. THE PUMP SHUTS DOWN.

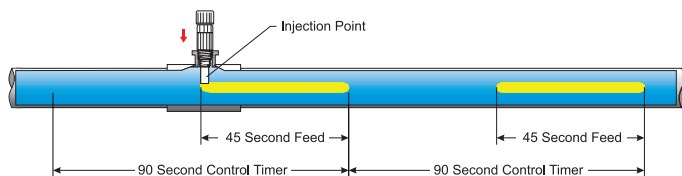


# FLEXFLO® FIXED SPEED vs. VARIABLE SPEED Units

## FIXED SPEED MODELS (intermittent cycle time output)

You control the pumps feed by using timers (built-in or external).

See image below.

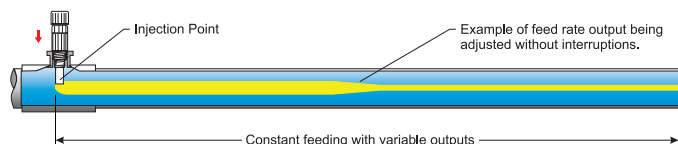


Most fixed speed outputs can be adjusted by simply:

- 1) Selecting the pump head tube size
- 2) Choosing the desired RPM (revolutions per minute).

## VARIABLE SPEED MODELS (continuous pulse free output)

Continuous pumping, even while adjusting the percentage of output. See image below.



Graphical representation of the Variable Speed and Fixed Speed peristaltic pump injection characteristics.

NOTE: Your chemical or solution is mixed in the fluid. This image is only illustrating the feed characteristics.

# FLEXFLO® PUMP TUBING Material Selection Guide

## NORPRENE®

Alcohol general	Hydrogen peroxide
Alum, 5% in water	Hypochlorous acid
Ammonium chloride	Iodine
Ammonium hydroxide	Lactic acid
Benzyl alcohol	Magnesium chloride
Bleach	Magnesium sulfate
Brine solutions	Phosphoric acid
Calcium hypochlorite 20%	Plating solutions
Ethylene glycol	Potassium hydroxide
Ferric chloride	Potassium permanganate
Ferric nitrate	Propylene glycol
Ferric sulfate	Sodium hydroxide 40%
Ferrous chloride - 43% in water	Sodium Bisulfite
Ferrous sulfate	Sodium Hypochlorite 12.5%
Formic acid	Sodium sulfide
Glucose	Sulfuric acid 50%
Hydrochloric acid 33%	Tannic acid
Hydrocyanic acid	

## TYGOTHANE®

Cyclohexane
Diesel Fuel
Fatty acids
Gasoline
Heptane
Hexane
Kerosene
Lard
Mineral spirits
Oils:
ASTM reference No.1,2,3
Castor
Coconut
Fuel
Linseed
Lubricating
Mineral
Soap solutions
Turpentine

## FKM

Allyl Alcohol
Ethylene bromide
Hydrofluoric acid
Hydrobromic acid
Isopropyl Alcohol
Toluene

## NORPRENE® CHEMICAL

Phosphoric acid (up to 85%)
Potassium hypochlorite (up to 70%)
Sodium phosphate (up to 30%)
Sulfuric acid (up to 98%)
Ferrous chloride (up to 40%)
Fluoboric acid (up to 48%)
Fluosilicic acid (up to 25%)
Hydrofluoric acid (up to 48%)
Nitric acid (up to 71%)

# FLEXFLO® ORDERING GUIDELINES Fixed & Variable Speed

## NORPRENE® TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	LPH	ML/MIN	
A1N0(*)(**)-4T	2.3	0.10	0.20	6	100
A1N1(*)(**)-4T	4.9	0.21	0.44	13	100
A1N2(*)(**)-4T	8.0	0.33	0.71	21	100
A1N1(*)(**)-6T	16.0	0.67	1.42	42	100
A1N2(*)(**)-6T	24.0	1.00	2.13	63	100
A1N3(*)(**)-6T	30.1	1.25	2.67	79	75
A1N1(*)(**)-7T	52.5	2.19	4.66	138	50
A1N3(*)(**)-7T	95.1	3.96	8.45	250	50

## TYGOTHANE® TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	LPH	ML/MIN	
A1N0(*)(**)-1T	5.7	0.24	0.51	15	65
A1N3(*)(**)-1T	25.5	1.06	2.26	67	65
A1N3(*)(**)-2T	53.2	2.22	4.73	140	65
A1N2(*)(**)-3T	99.2	4.14	8.82	261	50
A1N3(*)(**)-3T	124.0	5.17	11.01	326	50

## FKM TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	LPH	ML/MIN	
A1N0(*)(**)-5T	4.2	0.17	0.37	11	25
A1N1(*)(**)-5T	9.9	0.41	0.88	26	25
A1N3(*)(**)-5T	18.3	0.76	1.62	48	25

## NORPRENE® CHEMICAL TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	LPH	ML/MIN	
A1N0(*)(**)-8T	24.0	1.00	2.13	63	50
A1N1(*)(**)-8T	30.1	1.25	2.67	79	50
A1N3(*)(**)-8T	30.1	1.25	2.67	79	50

### VOLTAGE OPTIONS

(\*)Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz

Note: 220V/50Hz units deliver approximately 20% less output.

### MODEL OPTIONS

(\*\*)Replace: C=A100NC, E=A100NE, F=A100NF, V=A100NV

# FLEXFLO® A-100N PERISTALTIC Metering Pumps

## Analog Units

## FLEXFLO® A-100NC ANALOG FIXED SPEED

- Precise output control to 20:1 turndown by means of a dial knob.
- Adjustable 5 second repeating interval timer (0.25 - 5.0 sec) results in high frequency of small injections per minute.

## FLEXFLO® A-100NF ANALOG VARIABLE SPEED

- Manual output control.
- Easy Dial knob style – output percentage speed adjustment.
- Nothing to program.
- 15 – 100% output adjustment.
- On-Off power switch.
- Variable speed results in near continuous injection.



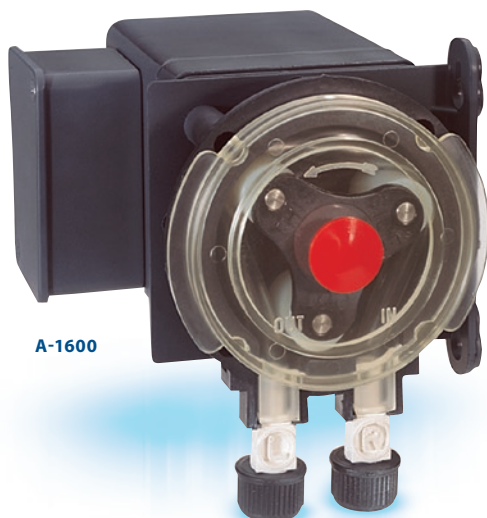
## Digital Units

## FLEXFLO® A-100NE DIGITAL FIXED SPEED

- Manual output control digital interval timer for 200:1 turndown ratio.
- Accepts pulse inputs for time on per one pulse or multiple pulses.
- Accepts 4-20mA & 0-10VDC signal for external interval percentage control.
- No special input wiring connectors to buy.
- Digital interval timer results in a high frequency of small injections per minute.

## FLEXFLO® A-100NV DIGITAL VARIABLE SPEED

- Manual or Automatic control.
- Accepts 4-20mA, 0-10VDC, and pulse input signals.
- 1 amp alarm output relay.
- Precise output control with digital touch-pad and LCD display.
- Easy-to-read Service and Alarm indicator icons on LCD display.
- Display motor speed or input signal values on the LCD display.
- Flow Verification Sensor (FVS) compatible.
- Variable speed results in near continuous injection.



# FLEXFLO® A-1600 Simple and Efficient

## FLEXFLO® A-1600 BENEFITS

- Basic design that is efficient and economical.
- No valves to clog in the pump head.
- Self priming against maximum line pressure.
- De-gassing design eliminates gas or air accumulation in the head.
- Output amount is not effected by changes in back pressure.
- Clear pump head cover allows viewing of pump operation.
- OEM design modifications.

## FLEXFLO® A-1600 APPLICATIONS

- Pool and Spa chlorine and acid injection.
- Automatic PH control systems.

## A-1600 SPECIFICATIONS

Max. Working Pressure .....	25 PSI (1.7 bar)
Max. Fluid Temperature .....	130° F (54° C)
Ambient temp range .....	14° to 110° F (-10° to 43° C)
Max. viscosity .....	500 Centipoise
Max. suction lift .....	10 ft. Water
Duty cycle .....	Continuous
Turndown ratio .....	Not adjustable
Amperage draw .....	115V/60Hz.....starting .74 / running .45 230V/60Hz.....starting .36 / running .21 220V/50Hz.....starting .31 / running .19 24V/60Hz.....starting 3.4 / running 2.0
Dimensions .....	4-3/4" H x 10" W x 6-1/4" D
Approx. Shipping Weight.....	8 lb. (3.6 kg)



# MICRO-FLO FLOW VERIFICATION SYSTEM

## Easy Access to Critical Flow Data

### Are you certain the pump is actually pumping?

An empty chemical tank, clogged injection fitting, lost prime, and other problems can prevent a metering pump from actually injecting chemical – even though the pump is in good working order.

**This innovative product** is designed to be used with your metering pump to provide accurate Flow Measurement and Accumulated Flow Data. **KNOW** how much chemical your metering pump is dispensing. The MICRO-FLO may be

installed directly into the pumps discharge tubing, inline in the system after the pump, or conveniently mounted to a panel.

**The Micro-Flo Model FV Flow Verification Sensor** can be connected directly to Blue-White model **A-100NV** and **C-1100V** metering pumps and verify that chemical injection has actually occurred. The pump's sophisticated electronics constantly monitor the sensor. If chemical should fail to inject, the pump will stop and an alarm relay will close, allowing for remote alarm indication or initiation of a back-up injector pump.

*For Innovation, Accuracy and Dependable Service,  
count on Blue-White's  
MICRO-FLO VERIFICATION METER.*

### MICRO-FLO BENEFITS

- Model Variations include: Sensor Only; and Panel Mount Display, which includes 6' of Cable.
- Six Digit LCD, up to Four decimal positions.
- Displays both Rate of Flow and Accumulated Flow.
- Non-volatile programming and accumulated flow memory.
- User Selectable scale factors include:  
Flow units: Gallons; Liters; Ounces; Milliliters  
Time units: Minutes; Hours; Days
- Clear PVC viewing lens or opaque PVDF chemical resistant lens.
- Weather resistant Valox PBT enclosure.
- LCD is not recommended for direct sunlight installation.

### MICRO-FLO SPECIFICATIONS

Max. Working Pressure .....PVC lens: 130 psig (9 bar) @ 70°F (21°C)  
PVDF lens: 150 psig (10 bar) @ 70°F (21°C)  
Max. Fluid Temperature.....PVC lens, and connectors: 130°F (54°C) @ 0 PSI  
PVDF lens, and connectors: 200°F (93°C) @ 0 PSI  
Body, Paddle, Axle Material .....PVDF  
Connector Material .....3/8" Tubing connectors: PVDF  
O-ring Seals .....FKM  
Compression Seal to Pump.....PVC  
Approx. Shipping Weight.....1 lb. (.45 kg)

### MICRO-FLO ORDERING GUIDELINES

MODEL NUMBER	OPERATING FLOW RANGE C-1100		OPERATING FLOW RANGE A-100N	
	GPD	ML/MIN	GPD	ML/MIN
FV-10*-6V	11.4 to 114	30 to 300	1 to 7	30 to 200
FV-20*-6V	38.0 to 380	100 to 1000	1.8 to 31.8	50 to 900
FV-30*-6V	76.0 to 760	200 to 2000	3.5 to 63.5	100 to 1800
FV-40*-6V	114 to 1440	300 to 3000	10 to 100	300 to 3000
FV-50*-6V	190 to 1900	500 to 5000	17 to 170	500 to 5000
FV-60*-6V	266 to 2660	700 to 7000	24 to 240	700 to 7000

(\*) Replace: 0 = PVC LENS CAP, 1 = PVDF LENS CAP



MICRO-FLO SENSOR  
FV-200-6V

MICRO-FLO  
SENSOR  
FS-100-3V

## Installation Examples



MICRO-FLO  
SENSOR - FV-200-6V  
mounted on C-1100V



MICRO-FLO  
SENSOR - FV-100-6V  
mounted on  
A-100NV

# MODEL PC Proportional Feed System

## MODEL PC SYSTEM BENEFITS

- The F-2000 digital paddlewheel flowmeter includes circuitry that automatically turns on your metering pump for a preset injection time, from 1 through 999 seconds, per volume of fluid flow measured.
- The simple relay switch (8A 115/230Vac) can be used to control any electrically operated device such as a metering pump, centrifugal pump, solenoid valve, etc.
- It maintains a constant chemical injection to water flow ratio regardless of changes in the system flow rate or pressure.
- Setpoint status icon indicates when chemical is being injected.
- Total number of injections (batches) is recorded and displayed.
- When purchased as a Flowmeter & Pump System Kit, the system is factory wired and tested for easy installation.
- Hundreds of Flowmeter and pump combinations from which to choose.

## MODEL PC SYSTEM APPLICATIONS

- Water treatment and conditioning.
- Rural water well systems.
- Wastewater treatment.
- Cooling tower & boiler treatment.
- Biocide feed.
- Fertilizer and nutrient injection.

## How to Build Your System

### 1 SELECT YOUR F-2000-PC FLOWMETER:

Each F-2000 flowmeter is designed specifically for use on the intended pipe size and operating flow range. Contact the factory for assistance in specifying the correct model for your application.

#### THE MODEL F-2000-PC FEATURES THE FOLLOWING OPTIONS:

- Models with flow ranges from .4 to 8000 gallons per minute.
- Pipe sizes from 3/8" through 12".
- Pipe fitting styles include:
  - Injection molded inline units with MPT end connectors. 3/8" - 2" pipe.
  - Machined inline units with FPT end connectors and union adapters. 3/8" - 2" pipe.
  - Saddle mount units from 1-1/2" - 12" pipe.
  - PVC solvent weld tee fittings from 1" - 3"
- Display mounting options include:
  - On-sensor mounting.
  - Remote panel mounting (1/4 DIN opening)
  - Remote pipe or wall mounting.
- Power options include 115Vac, 220Vac, 230Vac, 16-24V DC.
- Calibration unit options:
  - Gallons, liters, cubic meters, acre feet, imperial gallons, or custom units.

### 2 SELECT YOUR METERING PUMP:

Virtually any metering pump can be used for your Proportional Feed System. For diaphragm pump applications, we recommend the CHEM-FEED® C-1500N Series. For peristaltic pump applications, we recommend the FLEXFLO A-100N Series. Contact the factory for assistance in specifying the best model for your application.

#### OPTION 1: CHEM-FEED® C-1500N DIAPHRAM PUMP

- Standard Models feature a quick adjusting, high accuracy mechanical stroke length feed control allowing you to easily fine tune your system.
- Superior pump head design.
- All ball bearing gear motor for smooth, powerful operation.
- Voltage options 115Vac, 220Vac, 230Vac, 24Vac.
- Pump head configuration and material options.
- Field serviceable.
- Efficient, dependable design - each unit is factory tested.
- Can be purchased as the Star System® Tank System.

#### OPTION 2: FLEXFLO® A-100N PERISTALTIC PUMP

- Self priming, even against line pressure.
- No valves in the pump head to clog or clean.
- Great for slurries.
- Patented Tube Failure Detection System (TFD).
- De-gassing design eliminates gas or air accumulation in the pump head.
- Output amount is not effected by changes in back pressure.
- Voltage options: 115Vac, 220Vac, 230Vac.
- Can be purchased as the Star III® Tank System.

### 3 CONTACT THE FACTORY:

Our sales staff can assist you in selecting the exact flowmeter and pump models to meet your application requirements. The flowmeter and pump will be pre-wired and factory tested to ensure a high quality, hassle free installation.



**OPTION 1 - C-1500N DIAPHRAM PUMP SYSTEM**

F-2000 FLOWMETER MODEL NUMBER: PCS11MP2GM2-Z  
C-1500N PUMP MODEL NUMBER: C15N402Z000V00  
(Model Shown: Star-7. Tank sold separately)



**OPTION 2 - A-100N PERISTALTIC PUMP SYSTEM**

F-2000 FLOWMETER MODEL NUMBER: PCP120K8GM1-ZW  
A-100N PUMP MODEL NUMBER: A1N10A-6T  
(Model Shown: Star3-30. Tank sold separately)



Annealed for  
Added Strength!

# ACRYLIC VARIABLE AREA FLOWMETERS

## The F-400 SERIES of In-Line Units



F-400N

### F-400N

#### F-400N BENEFITS

- Tough machined acrylic meter body, highly polished to a clear finish. Annealed for added strength.
- Direct reading permanent scale.
- White back reflector for easy reading.
- Sturdy adapters with high grade FKM o-ring seals.
- Standard models #316 stainless steel float guide rods. (Optional K-series hastelloy C-276).
- Standard models #316 stainless steel, PVDF, PTFE float. (Optional K-series hastelloy C-276, PVDF, PTFE).
- Acceptable in direct sunlight applications.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Models available for use with liquid or air.

#### F-400N SPECIFICATIONS

Max. Working Pressure ..... 150 psig (10.3 bar) @ 70° F (21° C)  
 Max. Fluid Temperature..... Polypropylene adapters: 150° F (65° C) @ 0 PSI  
 Full scale accuracy ..... +/- 5%  
 Meter body material ..... Machined acrylic  
 O-ring seals ..... FKM (optional EP)  
 Approximate shipping wt... 1/2 lb. (.23 kg)  
 NIST certificates optional

#### PIPE SIZES

1/4", 3/8" and 1/2" F/NPT

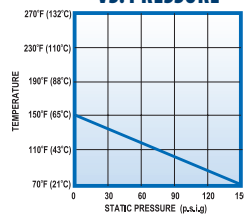
#### FLOW RATES

0.025 to 5 GPM  
 0.1 to 20 LPM  
 0.2 to 20 SCFM  
 0.4 to 34 M<sup>3</sup>/HR

#### DIMENSIONS

Height: 8-3/16"  
 Width: 1-1/4"

#### F-400N TEMPERATURE VS. PRESSURE



F-420N

### F-420N

#### F-420N BENEFITS

- Tough machined acrylic meter body, highly polished to a clear finish. Annealed for added strength.
- Direct reading permanent scale.
- White back reflector for easy reading.
- Sturdy adapters with high grade FKM o-ring seals.
- Standard models #316 stainless steel float guide rods. (Optional K-series hastelloy C-276).
- Acceptable in direct sunlight applications.
- Available OEM options: Private labeling, custom calibrations, custom materials.

#### F-420N SPECIFICATIONS

Max. Working Pressure ..... 130 psig (8.9 bar) @ 70° F (21° C)  
 Max. Fluid Temperature..... 130° F (54° C) @ 0 PSI  
 Full scale accuracy ..... +/- 5%  
 Meter body material ..... Machined acrylic  
 O-ring seals ..... FKM (optional EP)  
 Approximate shipping wt... 2 lb. (.91 kg)  
 NIST certificates optional

#### PIPE SIZES

1" F/NPT and 1-1/2" M/NPT

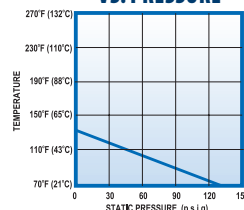
#### FLOW RATES

5 to 50 GPM  
 20 to 200 LPM

#### DIMENSIONS

Height: 12"  
 Width: 2"

#### F-420N TEMPERATURE VS. PRESSURE



### F-410N

#### F-410N BENEFITS

- Tough machined acrylic meter body, highly polished to a clear finish. Annealed for added strength.
- Direct reading permanent scale.
- White back reflector for easy reading.
- Sturdy adapters with high grade FKM o-ring seals.
- Standard models #316 stainless steel float guide rods. (Optional K-series hastelloy C-276).
- Standard models #316 stainless steel or PVC float. (Optional K-series hastelloy C-276 or PVC).
- Acceptable in direct sunlight applications.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Models available for use with liquid or air.

#### F-410N SPECIFICATIONS

Max. Working Pressure ..... 150 psig (10.3 bar) @ 70° F (21° C)  
 Max. Fluid Temperature..... 316 SS and Hastelloy Floats: 150° F (65° C) @ 0 PSI  
 PVC floats: 120° F (49° C) @ 0 PSI  
 Full scale accuracy ..... +/- 5%  
 Meter body material ..... Machined acrylic  
 O-ring seals ..... FKM (optional EP)  
 Approximate shipping wt... 2 lb. (.91 kg)  
 NIST certificates optional

#### PIPE SIZES

3/4" and 1" F/NPT

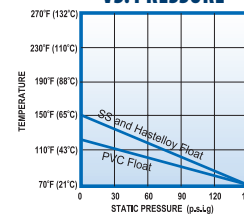
#### FLOW RATES

1 to 20 GPM  
 4 to 80 LPM  
 4 to 80 SCFM  
 8 to 140 M<sup>3</sup>/HR

#### DIMENSIONS

Height: 11"  
 Width: 1-3/4"

#### F-410N TEMPERATURE VS. PRESSURE



F-410N

F-430N

### F-430N

#### F-430N BENEFITS

- Tough machined acrylic meter body, highly polished to a clear finish. Annealed for added strength.
- Direct reading permanent scale.
- White back reflector for easy reading.
- Sturdy adapters with high grade FKM o-ring seals.
- Standard models #316 stainless steel float guide rods. (Optional K-series hastelloy C-276).
- Acceptable in direct sunlight applications.
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Optional Polypropylene and CPVC Adapters available.

#### F-430N SPECIFICATIONS

Max. Working Pressure ..... 130 psig (8.9 bar) @ 70° F (21° C)  
 Max. Fluid Temperature..... 130° F (54° C) @ 0 PSI  
 Full scale accuracy ..... +/- 5%  
 Meter body material ..... Machined acrylic  
 O-ring seals ..... FKM (optional EP)  
 Approximate shipping wt... 6 lb. (2.7 kg)  
 NIST certificates optional

#### PIPE SIZES

1-1/2" and 2" F/NPT

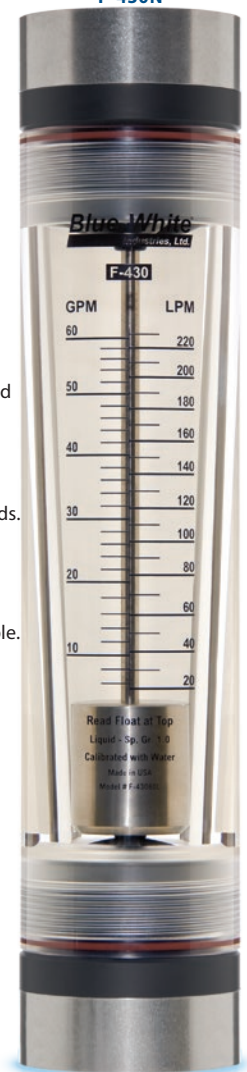
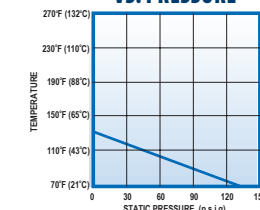
#### FLOW RATES

4 to 100 GPM  
 15 to 375 LPM

#### DIMENSIONS

Height: 14"  
 Width: 3"

#### F-430N TEMPERATURE VS. PRESSURE



# F-550 SERIES Machined Panel Mount Meter

Annealed for  
Added Strength!



F-550A with  
Integral Flow  
Adjustment Valve

F-550

## F-550 BENEFITS

- Durable, highly polished, one piece machined meter body. Annealed for added strength.
- #316 Stainless Steel floats and float guides.
- Sturdy adapters with FKM O-ring seals. EP O-rings optional.
- Bulkhead nuts attach directly to inside panel.
- Separate mounting screws are not required.
- Optional Adjustable Flow Control Valve (F-550A only) easy to disassemble. No special tool required, ALL FIELD REPLACEABLE.
- Acceptable in direct sunlight applications.
- Models available for use with liquid or air.

## F-550 SPECIFICATIONS

Pressure..... 250 psig (17.2 Bar) @70°F (21°C)  
 Temperature..... 200°F (93°C) @ 0 pressure  
 Full Scale Accuracy..... ± 5%  
 Meter Body Material..... Machined acrylic  
 Adapter Material..... Polypropylene  
 O-rings..... FKM (Optional EP)  
 Float Material..... #316 SS  
 Approximate Shipping Wt.. 2 lbs. (.907 kg.)

## F-550 ORDERING GUIDELINES

### with NON-ADJUSTABLE & ADJUSTABLE Valves

MODEL NUMBER	CALIBRATION GPM	LPM	ADAPTER SIZE	FLOAT MATERIAL
F-55250L(*)	0.025 to 0.250	0.1 to 1	1/4" M/NPT	#316 SS
F-55375L(*)	0.1 to 1	0.4 to 4	3/8" M/NPT	#316 SS
F-55375L(*)-BRB	0.1 to 1	0.4 to 4	1/2" BARB	#316 SS
F-55376L(*)	0.2 to 2	0.75 to 7.5	3/8" M/NPT	#316 SS
SSF-55376L(*)-BRB	0.2 to 2	0.75 to 7.5	1/2" BARB	#316 SS
F-55500L(*)	0.5 to 5	2 to 20	1/2" M/NPT	#316 SS
F-55500L(*)-BRB	0.5 to 5	2 to 20	1/2" BARB	#316 SS
F-55750L(*)	1 to 10	4 to 40	3/4" M/NPT	#316 SS
F-55005L	1 to 5	3 to 18	1" M/NPT	PTFE
F-55010L(*)	1 to 10	4 to 40	1" M/NPT	#316 SS
F-55015L(*)	1 to 15	5 to 60	1" M/NPT	#316 SS
F-55200L(*)	2 to 20	7.5 to 75	1" M/NPT	#316 SS

### MODEL OPTIONS

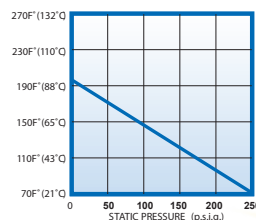
(\*) To order with Flow Adjustment Valve add the letter "A" after the "L" in the model number.  
 Model #F-55005L is not available with Adjustment Valve.  
 For optional hastelloy internals, add letter "K" to model number.



1/2" BARB FITTINGS  
for the  
F-550 Series

1/2" Barb Hose  
Bulkhead Nut (Attached directly to inside panel)

## F-550 OUTPUT VS. PRESSURE



## F-550 NON-ADJUSTABLE DIMENSIONS

Model Number	A	B	C	D	E	Mount Hole
F-55250L (1/4")	7-1/4"	2-1/2"	1-1/16"	5-5/8"	1-1/4"	9/16"
F-55375L (3/8")	8-3/8"	2-3/4"	1-11/32"	6-1/2"	1-1/2"	1-1/16"
F-55376L (3/8")	8-3/8"	2-3/4"	1-11/32"	6-1/2"	1-1/2"	1-1/16"
F-55500L (1/2")	8-3/8"	2-3/4"	1-11/32"	6-1/2"	1-1/2"	7/8"
F-55750L (3/4")	9"	3-3/4"	1-1/2"	6-1/2"	1-3/4"	1-1/16"
F-55200L (1")	10-5/8"	4"	1-3/4"	8"	2"	12-1/64"

## F-550 ADJUSTABLE DIMENSIONS

Model Number	A	B	C	D	E	F
F-55250LA (1/4")	7-1/4"	3-7/16"	1"	5-5/8"	2-7/16"	1-11/32"
F-55375LA (3/8")	8-3/8"	4-1/2"	1-11/32"	6-1/2"	3-1/4"	1-3/4"
F-55376LA (3/8")	8-3/8"	4-1/2"	1-11/32"	6-1/2"	3-1/4"	1-3/4"
F-55500LA (1/2")	8-3/8"	4-1/2"	1-11/32"	6-1/2"	3-1/4"	1-3/4"
F-55750LA (3/4")	9"	5-1/2"	1-1/2"	6-1/2"	3-1/4"	1-5/16"
F-55200LA (1")	10-5/8"	5-1/4"	1-3/4"	8"	3-1/2"	1-7/16"

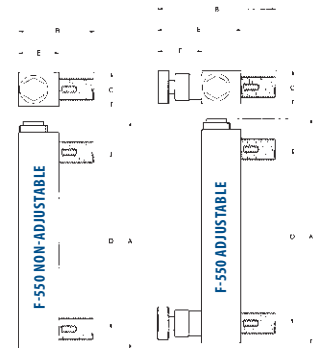
Note: Mount Hole Dimensions are the same as the Model Non-Adjustable

## PIPE SIZES

1/4", 3/8", 1/2", 3/4"  
 and 1" M/NPT.  
 1/2" Barb

## FLOW RATES

0.025 to 20 GPM  
 0.1 to 75 LPM  
 0.1 to 45 SCFM



# F-300 SERIES Machined Acrylic Flowmeters

NEW!  
The Best Just Got  
Even Better!

## F-300 BENEFITS

- Well suited for closed pipe installation.
- Easy to read dual scale (GPM/LPM), screen printed on both sides of the meter body.
- Horizontal or Vertical pipe installation.
- One piece machined acrylic meter body.
- Corrosion resistant internal parts.
- Calibrated pitot tube.
- Ships with gasket seal and mounting clamps.
- Calibrated for use on PVC or Copper Pipe.
- Low Flow units offered.

## F-300 SPECIFICATIONS

Max. Working Pressure..... 150 psig (10.3 bar) @ 70°F (21°C)  
 Max. Fluid Temperature..... 190°F (88°C) @ 0 pressure  
 Full Scale Accuracy..... ± 5% for 1-1/2" and 2" horizontal models  
 ± 10% all other models

Meter Body Material..... Acrylic  
 Connection Type..... Saddle  
 Float Material..... #316 SS or PTFE (low flow units)  
 Gasket Material..... Neoprene  
 Max. Pressure Drop..... 0 psi  
 Approx. Shipping Weight... 1" to 4" Pipe: 1 lbs. (.454 kg.); 6" to 8" Pipe: 2 lbs. (.907 kg.)

## F-300 IMPROVEMENTS

**Re-engineered:** Now with even better accuracy, and we've kept the Classic Look including the Signature Red Cap.

**New Pitot Tube Design:** For smooth fluid flow.

**Better Float Stability:** With four capture points, the float no longer bounces.

**Improved Accuracy:** To ±5%.

**Reduced Space Needed:** You only need half the previous requirement of straight pipe length.

**New Red Float:** It's standard and is equipped with a rare earth magnet for use with the optional alarm accessory.

**Easy Reading:** Permanently printed scale in bold black, contrasting the new bright red float, makes flow verification fast and easy, even from a distance.

**Dual Scale:** Dual Scale now reads in SCH 40 and SCH 80.

**New Sizes:** Current improved models include 1-1/2" and 2" horizontal models.

## I.P.S. PIPE SIZES

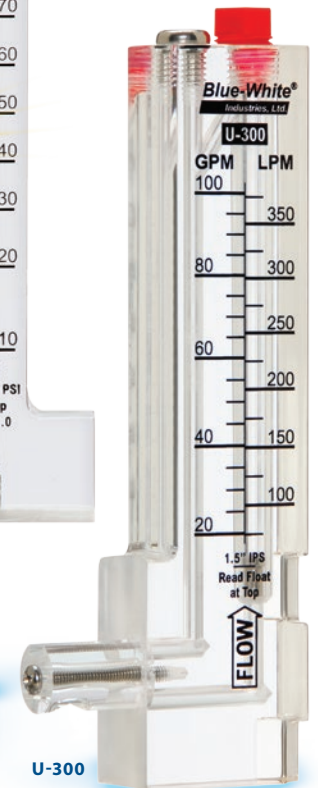
1", 1-1/4", 1-1/2", 2", 2-1/2", 3", 4", 6", 8"

## FLOW RATES

5 to 1900 U.S. GPM  
 20 to 7200 LPM



F-300



U-300



# POLYSULFONE VARIABLE AREA FLOWMETERS

## 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. (Optional K-series Hastelloy C-276 or PVC).
- Not recommended for direct sunlight.
- Solarmeter® units available with in-line Brass adapters. Contact factory for more information.

### 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  
 Solarmeter® Models ..... 240°F (115°C) @ 0 PSI  
 Full Scale Accuracy ..... +/- 4%  
 Meter Body Material ..... Polysulfone  
 Adapter Material ..... Polysulfone (optional Brass)  
 O-Ring Material ..... FKM (optional EP)  
 Approx. Shipping Weight ..... 1/2lb. (.23 kg)

### F-440 ORDERING GUIDELINES

#### STANDARD LIQUID MODELS

MODEL NUMBER	Pipe Size M/NPT	DUAL SCALE RANGE GPM	LPM	Float Material
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
		GPH	LPH	
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
F-44560(*)-6	3/8"	5.0 to 60.0	20 to 220	316 SS
F-44560(*)-8	1/2"	5.0 to 60.0	20 to 220	316 SS

#### MODEL Variations

\*L = In-Line Model is listed

\*LE = Panel Mount Model

\*LA = Adjustable Model

\*LK = In-Line K-Series - specially equipped units for liquid (highly corrosive)

\*LKE = Panel Mount K-Series

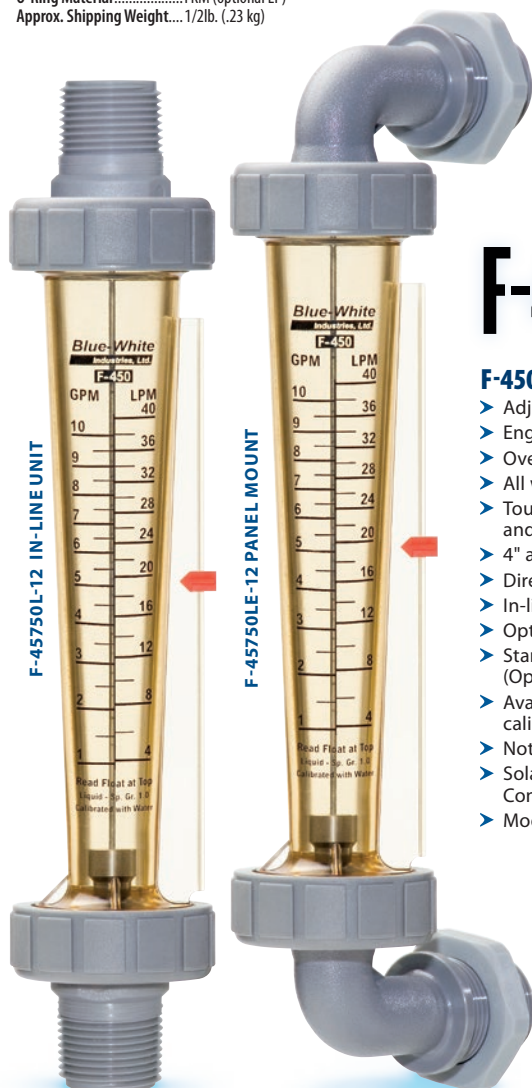
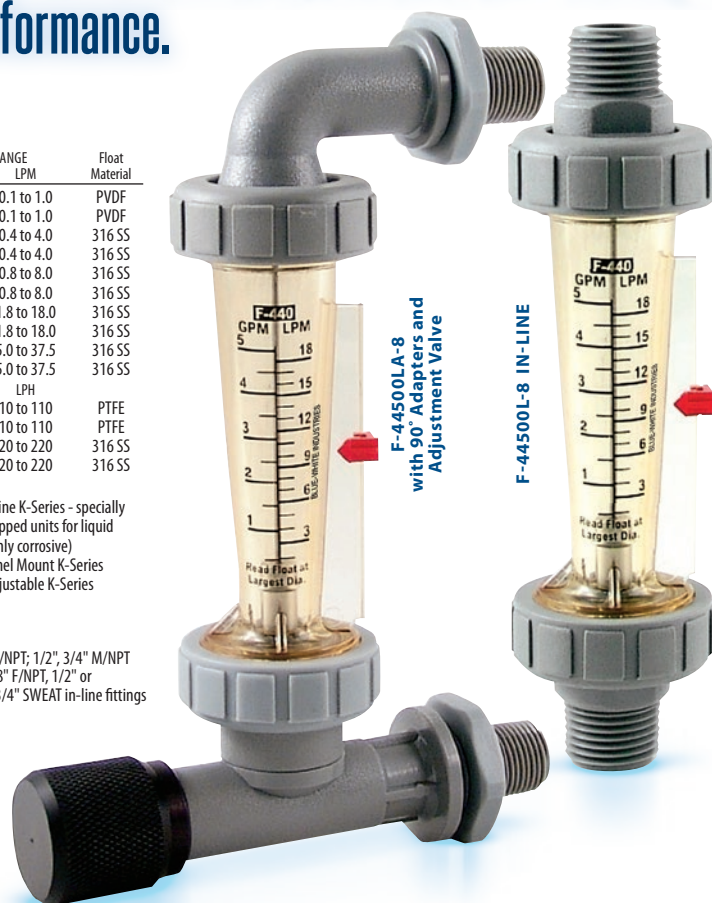
\*LKA = Adjustable K-Series

### PIPE SIZES

Standard Models: 3/8" F/NPT; 1/2", 3/4" M/NPT  
 Solarmeter® Models: 3/8" F/NPT, 1/2" or 3/4" M/NPT, and 1/2" or 3/4" SWEAT in-line fittings

### 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.
- Standard models have #316 Stainless Steel or PTFE float. (Optional K-series Hastelloy C-276 or PTFE).
- Available OEM options: Private labeling, custom calibrations, custom materials.
- Not recommended for direct sunlight.
- Solarmeter® units available with in-line Brass adapters. Contact factory for additional information.
- Models available for use with liquid or air.

### 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  
 Solarmeter® Models ..... 240°F (115°C) @ 0 PSI  
 Full Scale Accuracy ..... +/- 4%  
 Meter Body Material ..... Polysulfone  
 Adapter Material ..... Polysulfone (optional Brass)  
 O-Ring Material ..... FKM (Optional EP)  
 Max. Pressure Drop ..... 2 psi  
 Approx. Shipping Weight ..... 1/2lb. (.23 kg)

### F-450N ORDERING GUIDELINES

#### STANDARD LIQUID MODELS

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	LPM	Float Material
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

#### STANDARD AIR MODELS

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	LPM	Float Material
F-45376G-6	3/8" F/NPT	1 to 12	2 to 20	316 SS
F-45376G-8	1/2" M/NPT	1 to 12	2 to 20	316 SS
F-45750G-12	3/4" M/NPT	4 to 48	8 to 80	316 SS

#### MODEL Variations

\*L = In-Line Model is listed

\*LE = Panel Mount Model

\*LA = Adjustable Model

\*LK = In-Line K-Series - specially equipped units for liquid (highly corrosive)

\*LKE = Panel Mount K-Series

\*LKA = Adjustable K-Series

### PIPE SIZES

Standard Models: 3/8" F/NPT; 1/2", 3/4" M/NPT  
 Solarmeter® Models: 1/2", 3/4" M/NPT; 1/2", 3/4" SWEAT in-line only.

### FLOW RATES

0.1 to 10 GPM  
 4 to 40 LPM  
 1 to 48 SCFM  
 2 to 80 M³/hr

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

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



## 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, special calibrations and alternate 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  
 1/2" and 3/4" Socket Fusion

## F-460 FLOW RATES

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

## F-460 DIMENSIONS

Height: 10"  
 Width: 1-3/4"

## F-461 PIPE SIZES

1" F/NPT and 1" Socket Fusion

## F-461 FLOW RATES

1 to 35 GPM  
 4 to 130 LPM

## F-461 DIMENSIONS

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



**Available for F-460, F-461, and F-462**  
 Polypropylene or PVDF Butt Fusion & Socket Fusion Fittings for  
 ULTRA PURE APPLICATIONS

## F-460 & F-461 ORDERING GUIDELINES

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

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	DUAL SCALE RANGE 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

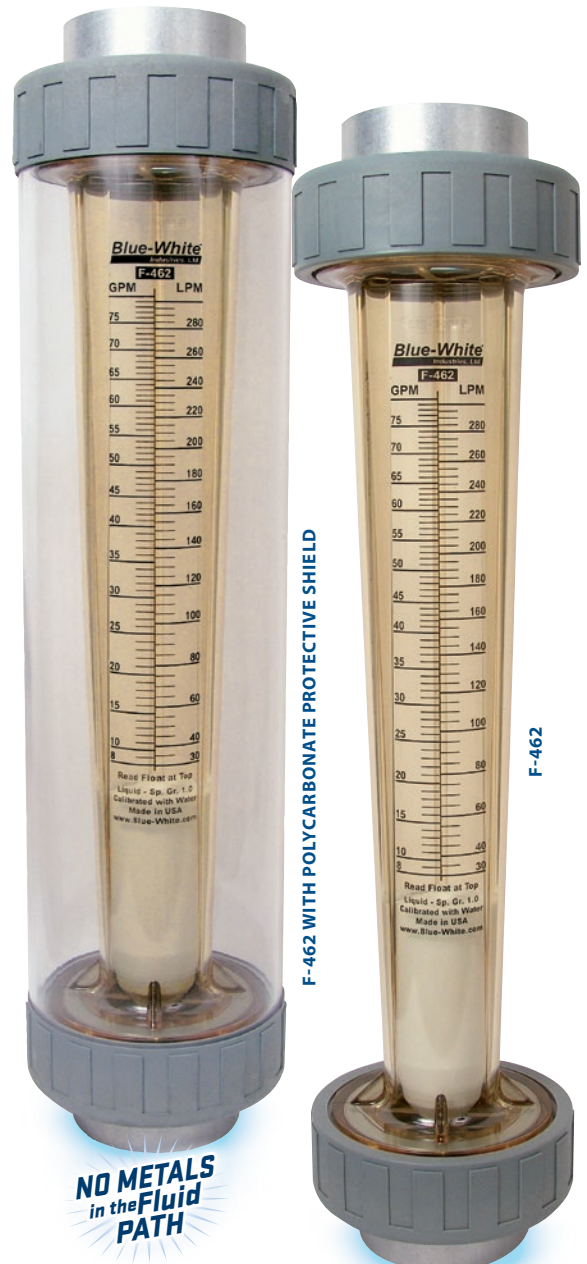
MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	DUAL SCALE RANGE LPM
F-461100LX-16(*)	1"	1 to 10	to 40
F-461200LX-16(*)	1"	2 to 20	5 to 75
F-461300LX-16(*)	1"	3 to 35	12 to 130

### MODEL Variations

\*P = PVC Adapter

\*K = PVDF Adapter

PVC Union Nuts = replace "X" with "P"  
 Contact factory for Socket Fusion Models.



## 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, special calibrations and alternate 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)

## PIPE SIZES

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

## DIMENSIONS

Height: 18-7/8"  
 Width: 4-5/8"

## FLOW RATES

2 to 80 GPM  
 8 to 300 LPM

## F-462 ORDERING GUIDELINES

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

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	DUAL SCALE RANGE LPM	Adapter Material	Float Material
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

### STANDARD F-462 LIQUID MODELS with 2" Socket Fusion Adapters

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	DUAL SCALE RANGE LPM	Adapter Material	Float Material
F-462200LX-33G	2" S.F.	2 to 20	8 to 80	Polypropylene	PTFE
F-462500LX-33G	2" S.F.	5 to 50	20 to 200	Polypropylene	PTFE
F-462800LX-33G	2" S.F.	8 to 80	30 to 300	Polypropylene	PTFE
F-462200LX-33K	2" S.F.	2 to 20	8 to 80	PVDF	PTFE
F-462500LX-33K	2" S.F.	5 to 50	20 to 200	PVDF	PTFE
F-462800LX-33K	2" S.F.	8 to 80	30 to 300	PVDF	PTFE

### STANDARD F-462 LIQUID MODELS with 63mm Butt Fusion Adapters

MODEL NUMBER	Pipe Size	DUAL SCALE RANGE GPM	DUAL SCALE RANGE LPM	Adapter Material	Float Material
F-462200LX-34G	63mm B.F.	2 to 20	8 to 80	Polypropylene	PTFE
F-462500LX-34G	63mm B.F.	5 to 50	20 to 200	Polypropylene	PTFE
F-462800LX-34G	63mm B.F.	8 to 80	30 to 300	Polypropylene	PTFE
F-462200LX-34K	63mm B.F.	2 to 20	8 to 80	PVDF	PTFE
F-462500LX-34K	63mm B.F.	5 to 50	20 to 200	PVDF	PTFE
F-462800LX-34K	63mm B.F.	8 to 80	30 to 300	PVDF	PTFE

### MODEL Variations

Polycarbonate shield = add the letter "C" to the end of the model number.  
 PVC Union Nuts = replace "X" with "P"

\* 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.



# 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.
- Many calibrations are offered in GPM, LPM, SCFM and M<sup>3</sup>/hr.
- 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, Optional EP.
- Accuracy ± 3%.
- May be ordered with 90° elbow adapters.
- Available with 1" brass sweat or brass F/NPT adapters.
- Available with Polycarbonate Protective Shield.
- Not recommended for direct sunlight applications.
- Models available for use with liquid or air.
- Optional K Series for corrosive applications.

## F-451 ORDERING GUIDELINES

MODEL NUMBER	CALIBRATION GPM	LPM	ADAPTER SIZE
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 GPM	LPM	ADAPTER SIZE
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

### Models calibrated for Air

MODEL NUMBER	CALIBRATION GPM	LPM	ADAPTER SIZE
F-451001GHN	4 to 40	7 to 70	1" F/NPT
F-451001GHN-24	4 to 40	7 to 70	1-1/2" F/NPT
F-451002GHN	8 to 80	14 to 140	1" F/NPT
F-451002GHN-24	8 to 80	14 to 140	1-1/2" F/NPT

## PIPE SIZES

1", 1-1/2" F/NPT  
Brass: 1" F/NPT or Sweat

## FLOW RATES

0.5 to 40 GPM  
2 to 155 LPM  
4 to 80 SCFM  
7 to 140 M<sup>3</sup>/hr

## DIMENSIONS

Height: 14-1/2"  
Width: 3-5/16"

## 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..... ± 3%  
Meter Body Material..... Polysulfone  
Adapter Material..... 1" Polysulfone & 1 1/2" PVC  
O-Rings..... FKM (Optional EP)  
Float Material..... #316 SS, Hastelloy C or PTFE, depending on calibration.  
Max. Pressure Drop..... 2 psi  
Approx. Shipping Weight.... 3 lbs. (1.36 kg.)

F-451 with Protective Shield



# F-452N SERIES High Capacity.

## F-452N BENEFITS

- One piece Polysulfone meter body resists high temperatures and pressures.\*
- 316 Stainless Steel or Hastelloy rod guided float.
- Direct reading permanent scale.
- Adapters and unions engineered for maximum protection from misalignment and vibration.
- Optional Polycarbonate Protective Shield.
- Available OEM options: Private labeling, custom calibrations and custom materials.
- Not recommended for direct sunlight.
- Models available for use with liquid or air.
- Optional K Series for corrosive applications.

## F-452N 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%  
Meter Body Material..... Polysulfone  
Union Nuts..... Glass fiber reinforced Nylon  
Guide Rod Material..... 316 Stainless Steel  
Options: Hastelloy C-276  
O-Ring Material..... FKM (Optional EP)  
Max. Pressure Drop..... 2 psi  
Approx. Shipping Weight.... 5 lb. (2.27 kg)

## PIPE SIZES

2" F/NPT

## DIMENSIONS

Height: 18-7/8"  
Width: 4-5/8"

## FLOW RATES

2 to 175 GPM  
8 to 675 LPM  
4 to 240 SCFM  
7 to 400 M<sup>3</sup>/hr

## F-452 ORDERING GUIDELINES

MODEL NUMBER	DUAL SCALE RANGE GPM	LPM	ADAPTER SIZE
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

### Models calibrated for Air

MODEL NUMBER	DUAL SCALE RANGE SCFM	M <sup>3</sup> /hr	ADAPTER SIZE
F-452040GHN	4 to 40	7 to 67	2" F/NPT
F-452250GHN	40 to 240	70 to 400	2" F/NPT

F-452N



\* 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.

# BW DIGI-METER®

## PADDLEWHEEL FLOWMETERS

The BW DIGI-METER® is the meter of choice when your application requires an Innovative, Accurate and Versatile Digital Flowmeter.

### BW DIGI-METER® F-1000 Paddlewheel Flowmeter

Blue-White's carefully engineered BW DIGI-METER® F-1000 Series include premier features and provide outstanding performance.

Three versions of the BW DIGI-METER® F-1000 are offered. The F-1000RB Unit is a rate meter only; the F-1000TB Unit is a flow totalizer; and the F-1000RT Unit is both a Rate Meter and Flow Totalizer. BW DIGI-METERS are available with a number of configuration and mounting style options. If you don't see the unit that meets your requirements here, please contact our courteous and knowledgeable staff for assistance.

#### F-1000 BENEFITS

- Easy to read six digit LCD, up to four decimal positions.
- Tamper proof.
- Battery operated (2 AAA batteries included).
- Three model variations:
  - RB = RATE ONLY
  - TB = TOTAL ONLY
  - RT = RATE & TOTALIZER
- Total reset function can be disabled.
- Display update time: Rate 1.5 sec., Total 0.5 sec.
- Factory calibrated - nothing to program.
- Custom calibration units available. Contact the factory.
- Weather resistant ABS enclosure. NEMA 4X
- Calibration Units: GPM, LPM, m3/min, oz/min, GPH, LPH.
- LCD is not recommended for direct sunlight applications.

#### F-1000 SPECIFICATIONS with Saddle Mount Body

Max. Working Pressure .....300 psig (20 bar) @ 70° F (21° C)  
 Max. Fluid Temperature.....200° F (93° C) @ 0 PSI (all PVDF saddle fittings)  
 140° F (60° C) @ 0 PSI (all PVC saddle fittings)  
 Note: Temperature rating of F-1000 only. Actual pipe rating may vary.  
 Full scale accuracy.....+/- 2%  
 Saddle material.....PVDF (1-1/2", 2", 3", 50mm, 63mm, 90mm sizes)  
 .....PVC (all other sizes)  
 Sensor/Paddle/Axle material...PVDF  
 O-ring seals.....FKM (Optional EP)  
 Max. pressure drop .....0 psi (no significant drop)  
 Approximate shipping wt.....2 lb. (.91 kg)

#### with Solvent Weld or Stainless Steel TEE Body

Max. Working Pressure  
 316 SS Tee fittings.....300 psig (20 bar) @ 70° F (21° C)  
 PVC Tee fittings .....200 psig (13.8 bar) @ 70° F (21° C)  
 Max. Fluid Temperature  
 316 SS Tee fittings.....200° F (93° C) @ 0 PSI  
 PVC Tee fittings .....140° F (60° C) @ 0 PSI  
 Full scale accuracy.....+/- 2%  
 Tee material options.....316 Stainless Steel, PVC  
 Body, Paddle, Axle material...PVDF  
 O-ring seals.....FKM (Optional EP)  
 Max. pressure drop .....0 psi (no significant drop)  
 Approximate shipping wt.....2 lb. (.91 kg)

#### with Molded In-Line Body

Max. Working Pressure .....300 psig (20 bar) @ 70° F (21° C)  
 Max. Fluid Temperature.....200° F (93° C) @ 0 PSI  
 Full scale accuracy.....+/- 2%  
 Meter body material .....Polysulfone  
 Sensor/Paddle/Axle material...PVDF  
 O-ring seals.....FKM (Optional EP)  
 Max. pressure drop .....8 psi (varies per model)  
 Approximate shipping wt.....2 lb. (.91 kg)



**BW DIGI-METER® F-1000 WITH SOLVENT TEE BODY**  
**PIPE SIZES**  
 1", 1-1/2", 2", 3"



**BW DIGI-METER® F-1000 WITH SADDLE MOUNT**  
**PIPE SIZES**  
 1-1/2", 2", 2-1/2", 3", 4", 6", 8", 10", 12"



**BW DIGI-METER® F-1000 WITH MOLDED IN-LINE BODY**  
**PIPE SIZES**  
 1/4", 3/8", 1/2", 3/4", 1", 2" M/NPT



# BW DIGI-METER® F-2000 Paddlewheel Flowmeter

The thoughtfully engineered BW DIGI-METER® F-2000 combine innovative features and benefits, and the finest materials of construction to provide an accurate and versatile Digital Flowmeter.

If you don't see the unit that matches your requirements listed here, please contact our courteous and knowledgeable staff for assistance

## FOUR MODEL VARIATIONS

- RT** = Rate and Totalizer. Transformer or battery operated.  
**AO** = 4-20mA, 0-10 VDC analog output, flow rate & totalizer. Transformer operated.  
**PC** = Batch processing, flow rate alarm, proportional chemical metering, flow rate and totalizer. Transformer operated.  
**AP** = Analog output, batch processing, flow rate alarm, proportional chemical metering, flow rate and totalizer. Transformer operated.

## F-2000 BENEFITS

- Easy to read 8 digit LCD, up to 4 decimal positions.
- Flow rate and Total flow display.
- AC/DC transformer or battery operated (RT models only). 4 AA batteries.
- Factory programmed with calibration certificate.
- Field programmable via front panel touch pad.
- Front panel security lockout.
- Total reset function can be disabled.
- Weather resistant ABS enclosure. NEMA 4X.  
Note: LCD is not recommended for direct sunlight applications.
- Panel mounting option available.
- Custom calibration units available.  
Contact the factory.

## F-2000 SPECIFICATIONS

### with Saddle Mount Body

Max. Working Pressure	300 psig (20 bar) @ 70° F (21° C)
Max. Fluid Temperature	200° F (93° C) @ 0 PSI (all PVDF saddle fittings)
	140° F (60° C) @ 0 PSI (all PVC saddle fittings)
Note: Temperatures rating of F-2000 only. Actual pipe rating may vary.	
Full Scale Accuracy	+/- 1%
Sensor/Paddle/Axle Material	PVDF
O-ring Seals	FKM
Max. Pressure Drop	0 psi (no significant pressure drop)
Approx. Shipping Weight	4lb. (1.8 kg)

### with Solvent Weld or Stainless Steel TEE Body

Max. Working Pressure	316 SS Tee fittings: 300 psig (20 bar) @ 70° F (21° C)
	PVC Tee fittings: 200 psig (13.8 bar) @ 70° F (21° C)
Max. Fluid Temperature	316 SS Tee fittings: 200° F (93° C) @ 0 PSI
	PVC Tee fittings: 140° F (60° C) @ 0 PSI
Full scale accuracy	+/- 1%
Tee material options	316 Stainless Steel, PVC
Body, Paddle, Axle material	PVDF
O-ring seals	FKM (Optional EP)
Max. pressure drop	0 psi (no significant drop)
Approximate shipping wt.	4 lb. (.91 kg)

### with Molded In-Line Body

Max. Working Pressure	300 psig (20 bar) @ 70° F (21° C)
Max. Fluid Temperature	200° F (93° C) @ 0 PSI
Full Scale Accuracy	+/- 1%
Sensor/Paddle/Axle Material	PVDF
O-ring Seals	FKM
Max. Pressure Drop	8 psi (varies per model)
Approx. Shipping Weight	4lb. (1.8 kg)



**BW DIGI-METER® F-2000  
WITH MOLDED IN-LINE BODY**  
PIPE SIZES  
3/8", 1/2", 3/4", 1", 1-1/2", 2"



**BW DIGI-METER® F-2000  
WITH SADDLE MOUNT**  
PIPE SIZES  
1-1/2", 2", 2-1/2", 3",  
4", 6", 8", 10", 12"



**BW  
DIGI-METER®  
F-2000  
WITH SOLVENT  
TEE BODY**  
PIPE SIZES  
1", 1-1/2", 2", 3"



**BW DIGI-METER® F-2000 PANEL MOUNT**

# BW DIGI-METER® F-2000 Flow Monitoring System

BW DIGI-METER® F-2000 Series electronic insertion style flowmeters, are well suited for monitoring flow in municipal water and wastewater applications.

The clamp on saddle fitting and insertion sensor is quickly installed on IPS (ASTM-D-1785) pipe sizes from 1-1/2" through 12" and metric (DIN 8062) pipe sizes from 50mm through 315mm. The electronic display and communication enclosure can be mounted directly to the sensor, or remotely mounted to a pipe or panel.

Standard F-2000 models display flow rate and accumulated total flow, and include an NPN open collector output for communication with data loggers, SCADA systems, and other external devices. For additional information and assistance, please contact the factory.



BW DIGIMETER®  
F-2000 FLOW MONITORING SYSTEM

## BW DIGI-METER® F-2000 with Digital Hall Effect Output Signal

### F-2000 BENEFITS

- TTL/CMOS compatible, current sinking output signal.
- Optional AC sine wave output sensor available.
- One mile signal range without boosters.
- NEMA 4X rated.

### F-2000 SPECIFICATIONS

Max. Working Pressure ..... 300 psig (20 bar) @ 70°F (21°C)

Max. Fluid Temperature ..... 200°F (93°C) @ 0 PSI

(Polypro and PVDF saddles)

140°F (60°C) @ 0 PSI

(PVC saddles and TEE fittings)

Note: Temperatures rating of F-2000 only. Actual pipe rating may vary.

Power Requirements ..... FH: 6-24 VDC, AC/DC transformer sold separately.

FC: None

Full Scale Accuracy ..... +/- 1%

Sensor/Paddle/Axle Material PVDF

O-ring Seals ..... FKM (Optional EP)

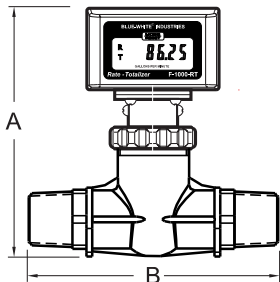
Approx. Shipping Weight..... 2 lb. (0.9 kg)



SADDLE FITTING

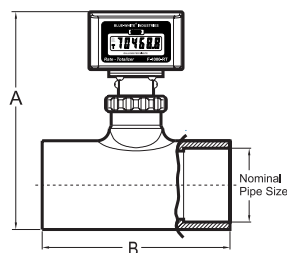
MOLDED FITTING

## BW DIGI-METER® F-1000 & F-2000 Dimensions



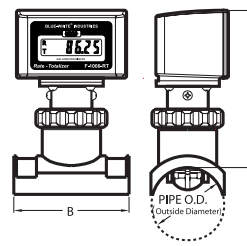
**F-1000 with MOLDED In-Line Body**

PIPE SIZE	A	B
3/8" MPT	5-3/8"	4-3/4"
1/2" MPT	5-3/8"	5-1/8"
3/4" MPT	5-3/8"	5-1/4"
1" MPT	5-3/8"	5-5/8"
1-1/2" MPT	6-1/8"	6-1/2"
2" MPT	6-3/8"	6-3/4"



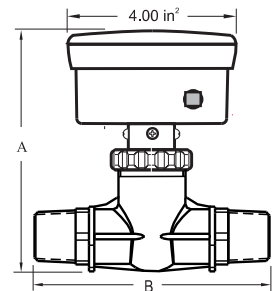
**F-1000 with SOLVENT TEE Body**

PIPE SIZE	A	B
1"	6"	4"
1-1/2"	6-5/8"	4-1/2"
2"	7-1/8"	4-3/4"
3"	8"	5-1/2"



**F-1000 with SADDLE MOUNT Body**

PIPE SIZE (mm)	A	B
150(050)	4-5/16"	3-3/16"
200(063)	4-5/16"	3-3/16"
300(090)	4-5/16"	3-3/16"
400(110)	4-5/16"	3-3/16"
600(160)	4-1/4"	3-3/16"
800(200)	4-1/4"	3-3/16"
1000(250)	4-1/4"	4-1/2"
1200(315)	4-1/4"	4-1/2"



**F-2000 with MOLDED In-Line Body**

PIPE SIZE	A	B
3/8" MPT	5-7/8"	4-3/4"
1/2" MPT	5-7/8"	5-1/8"
3/4" MPT	6"	5-1/4"
1" MPT	6"	5-5/8"
1-1/2" MPT	6-1/2"	7"
2" MPT	6-3/4"	7"



# BW DIGI-METER® F-1000 & F-2000 Installation Options

Blue-White F-1000 and F-2000 Flowmeter model numbers include a pipe fitting as part of the complete model number. Although it is possible to purchase the pipe fittings separately, it is not necessary.

## MOLDED IN-LINE

- One piece injection molded construction.
- Male pipe thread In-line installation.
- Polypropylene fittings for standard applications.
- PVDF material for highly corrosive applications.

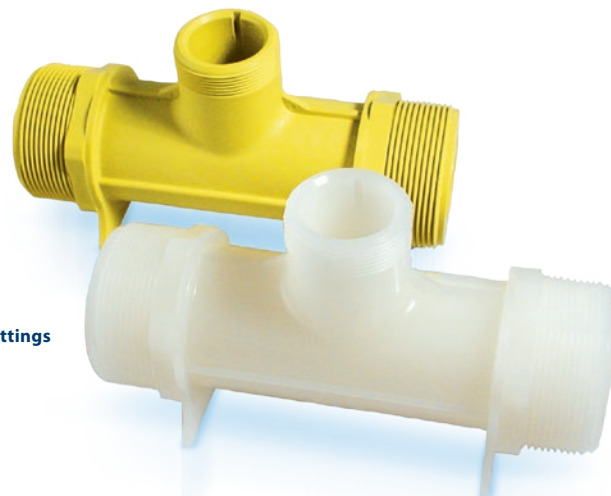
## MOLDED IN-LINE SPECIFICATIONS

Max. PSI .....300 psig (20 bar) @ 70° F (21° C)

Max. Temp .....200° F (93° C) @ 0 PSI

Note: Temperature rating of pipe fitting only.  
Actual pipe rating may vary.

**PIPE SIZES:** 3/8", 1/2", 3/4", 1", 1-1/2", 2" M/NPT



Molded Fittings



Saddle Fittings

## SADDLE FEATURES

- 1-1/2" thru 3" (50mm thru 90mm) injection molded PVDF.
- 4" thru 12" (110mm thru 315mm) machined from solid PVC sheet stock.
- Installs on existing pipe – no other fittings are required.
- No added pressure drop to system.
- Ships with metal clamps to secure fitting to pipe.

## SADDLE SPECIFICATIONS

Max. PSI .....300 psig (20 bar) @ 70° F (21° C)

Max. Temp .....200° F (93° C) @ 0 PSI (PVDF)

140° F (60° C) @ 0 PSI (PVC)

Note: Temperature rating of pipe fitting only. Actual pipe rating may vary.

**I.P.S. PIPE SIZES:** 1-1/2", 2", 2-1/2", 3", 4", 6", 8", 10", 12"

**METRIC PIPE SIZES:** 50, 63, 90, 110, 160, 200, 250, 315MM

## TEE FEATURES

- Easy to install.
- No added pressure drop to system.

## TEE SPECIFICATIONS

Max. PSI

316 SS TEE .....300 psig (20 bar) @ 70° F (21° C)

PVC TEE .....200 psig (13.8 bar) @ 70° F (21° C)

Max. Temp

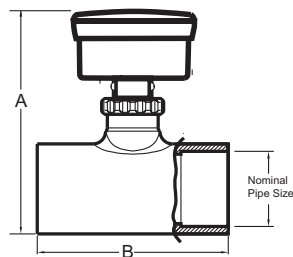
316 SS TEE .....200° F (93° C) @ 0 PSI

PVC TEE .....140° F (60° C) @ 0 PSI

**PIPE SIZES:** 1", 1-1/2", 2", 3"

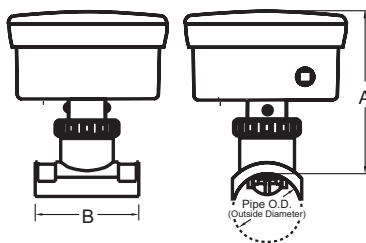


TEE Fittings



### F-2000 with SOLVENT TEE Body

PIPE SIZE	A	B
1"	6"	4"
1-1/2"	6-5/8"	4-1/2"
2"	7-1/8"	4-3/4"



### F-2000 with SADDLE MOUNT Body

PIPE SIZE (mm)	A	B
150(050)	4-1/2"	3-3/16"
200(063)	4-1/2"	3-3/16"
300(090)	4-1/2"	3-3/16"
400(110)	4-1/2"	3-3/16"
600(160)	4-3/8"	3-3/16"
800(200)	4-3/8"	3-3/16"
1000(250)	4-3/8"	4-1/2"
1200(315)	4-1/2"	4-1/2"



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