

# Blue-White<sup>®</sup>

## Industries, Ltd.

THE CLASSICS | METERING PUMPS & FLOWMETERS

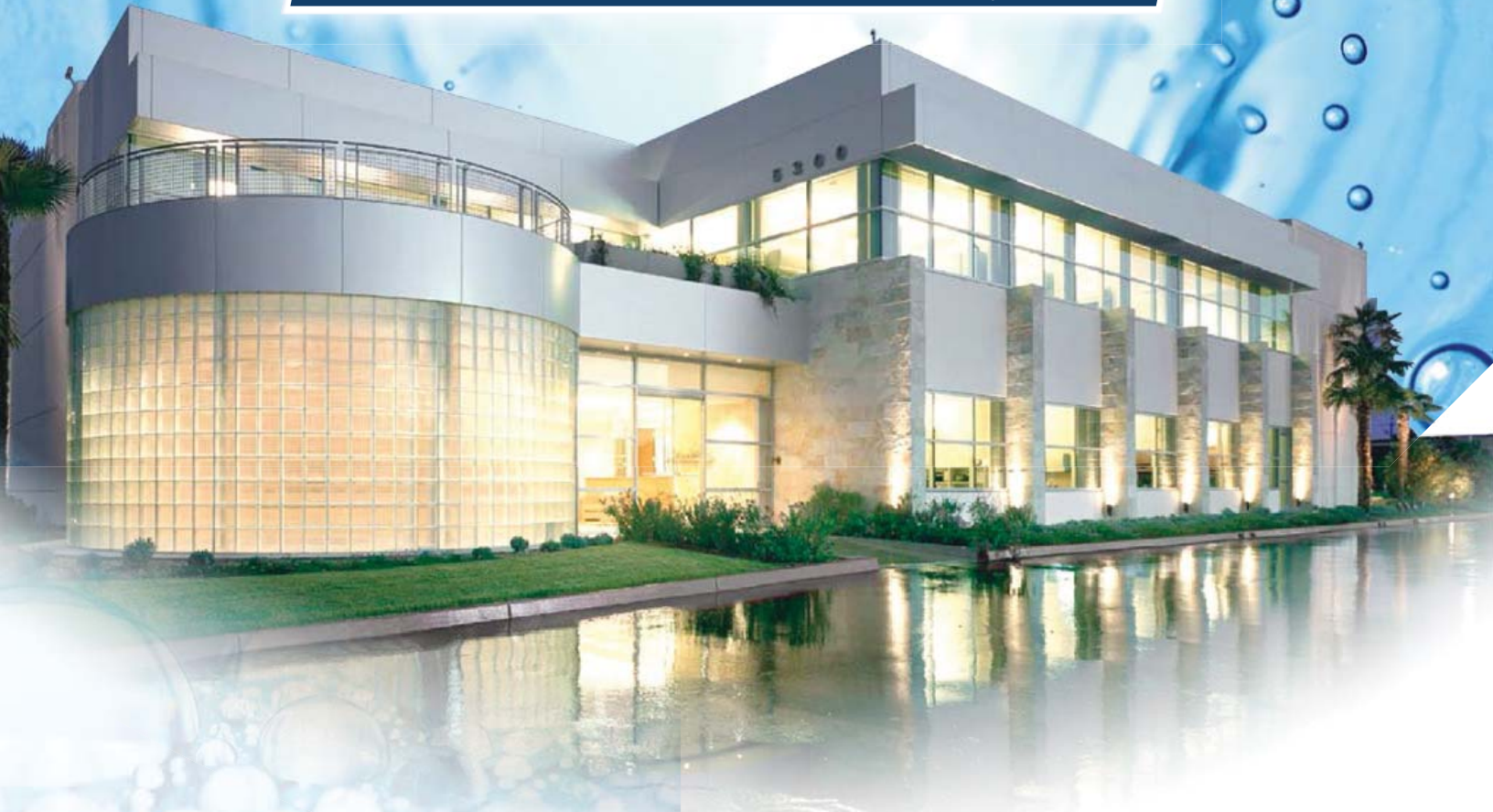


**PRECISION CHEMICAL  
METERING & FLOW  
MONITORING**



# Blue-White®

## Industries, Ltd.



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**BLUE-WHITE® 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® METERING PUMPS

**WHEN YOU NEED A TOUGH,  
ACCURATE, DEPENDABLE  
METERING PUMP INSIST  
ON CHEM-FEED®**

**CHEM-FEED® 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® metering pumps with a wide range of configuration, material, voltage and feed rate options.

All CHEM-FEED® 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® 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®. Only Blue-White® manufactures the genuine CHEM-FEED® metering pump.

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

## CHEM-FEED® 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® 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® 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



CHEM-FEED®  
C-600P



CHEM-FEED®  
C-1100E

# CHEM-FEED® C-600P

SIMPLE. PROVEN. PERFORMANCE.

## CHEM-FEED® C-600P BENEFITS

- Easy access, side mounted mechanical output rate adjustment.
- Double-ball inlet and outlet cartridge type ceramic check valves.
- PVDF valve body and fitting, ceramic balls, FKM and TFE/P o-rings.
- Superior pump head design of precision molded polypropylene.
- PTFE coated EP diaphragm.
- All ball bearing, permanently lubricated gear motor for smooth, powerful operation.
- Polypropylene injection check valve with FKM and TFE/P o-rings and spring loaded ceramic ball seal.
- PVDF suction (foot) valve with FKM and TFE/P o-rings, ceramic check ball and removable polypropylene filter screen.
- Includes 3/8" OD, 1/4" ID suction and discharge tubing, and all mounting hardware.
- Efficient, dependable design – each unit is factory tested.
- Private labeling for volume purchasers.

## C-600P ORDERING GUIDELINES

### STANDARD MODEL with Stroke Adjustment

MODEL NUMBER	GPD	GPH	LPH	OZ/MIN	MAX PSI
C-614P-(-)JVC	24	1.0	3.8	2.7	125
C-630P-(-)JVC	58	2.4	9.3	5.2	125
C-645P-(-)JVC	91	3.8	14.9	8.1	80
C-660P-(-)JVC	110	4.6	17.4	9.8	60
C-6125P-(-)JVC	237	9.9	37.0	21.1	30
C-6250P-(-)JVC	389	16.2	61.4	34.6	10

### VOLTAGE OPTIONS

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

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

## C-600P 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..... 27:1 Standard models  
 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  
 12VDC ..... 3.0 amp max  
 Dimensions..... 6-1/2" H x 6-5/8" W x 5-3/8" D  
 Approximate shipping wt.. 8 lb. (3.6 kg)



C-600P



# CHEM-FEED® C-600HV

## CHEM-FEED® C-600HV BENEFITS

- Acrylic pump head.
- Ethylene-propylene diaphragm.
- Ethylene-propylene O-ring seals.
- 1/2" ID barbed tubing connections.

## CHEM-FEED® C-600HV APPLICATIONS

- Low pressure and open atmosphere metering.
- Plating chemicals.
- Water and wastewater treatment.

## C-600HV ORDERING GUIDELINES

### STANDARD MODEL with Stroke Adjustment

MODEL NUMBER	GPD	GPH	LPH	OZ/MIN	MAX PSI
C-660HV-(-)JVC	189	7.8	29.5	16.8	20
C-6125HV-(-)JVC	398	16.5	62.4	35.3	10
C-6250HV-(-)JVC	791	32.9	124.5	70.3	5

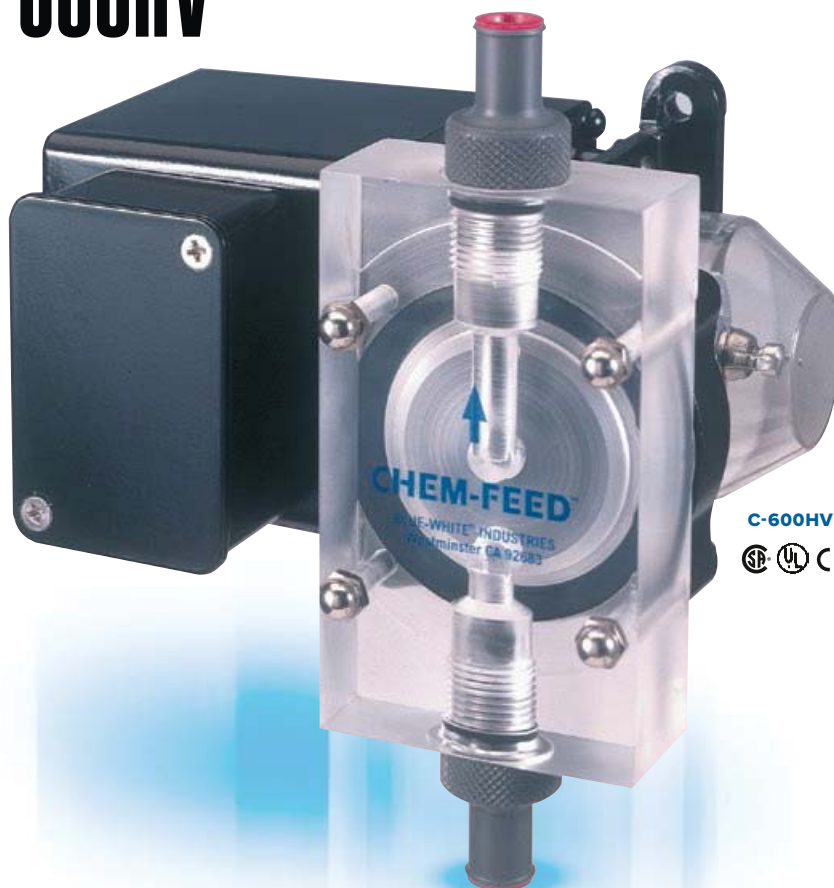
### VOLTAGE OPTIONS

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

Note: 220V/50Hz units deliver approx. 20% less output. 12V DC and 24V DC models also available.

## C-600HV SPECIFICATIONS

Max. Working Pressure..... 20 psig (1.4 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..... 27:1 Standard models  
 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  
 12VDC ..... 3.0 amp max  
 24VDC ..... 1.50 amp max  
 Dimensions..... 7" H x 6-3/4" W x 6-1/8" D  
 Approximate shipping wt.. 8 lb. (3.6 kg)



C-600HV





# 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 TFE/P (Optional EP)
Dimensions .....	9-1/2" H 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	0.3	14	125
C15N1(*)2X026V00	8.3	0.3	1.3	0.7	30	125
C15N3(*)2X026V00	16.3	0.6	2.5	1.4	60	125
C15N2(*)2X000V00	26.6	1.1	4.2	2.4	45	125
C15N4(*)2X026V00	34.2	1.4	5.4	3.0	125	125
C15N2(*)4X000V00	49.0	2.0	7.7	4.3	45	125
C15N3(*)4X000V00	57.7	2.4	9.1	5.1	60	125
C15N4(*)2X000V00	68.4	2.8	10.8	5.9	125	125
C15N4(*)4X000V00	119.7	4.9	18.9	10.6	125	70
C15N4(*)1X000V00	155.9	6.4	24.6	13.8	125	20
C15N4(*)3X000V00	228.1	9.5	36.0	20.2	125	10

### 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(*)2I026V00	.007-1.4	.027-5.40	.015-3.00	125	125
C15N4(*)2I000V00	.014-2.8	.054-10.8	.030-5.90	125	125
C15N4(*)1I000V00	.032-6.4	.123-24.6	.069-13.8	125	20

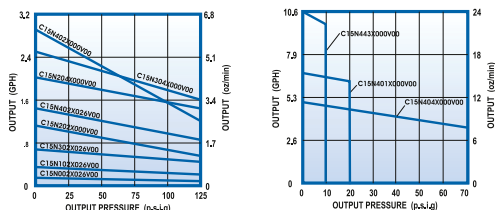
### VOLTAGE OPTIONS

(\*)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

## C-1500N OUTPUT VS. PRESSURE



C-1500N

C-1500N DELUXE

# 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	MAX OUTPUT @ 0 PSI LPH	MAX OUTPUT @ 0 PSI 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

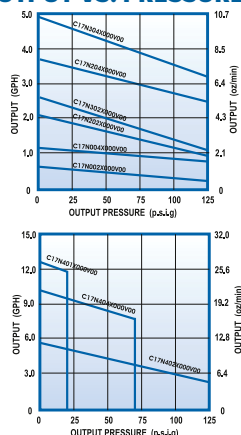
(\*)Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz

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

Please Note: Outputs given are a combined total of both pump heads using pure water at zero gauge pressure.

All C-1700N are shipped complete with accessory package. Ordering matrix available on request, Order #85000-057.

## 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 viscous 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	
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	Polypropylene	



# 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.

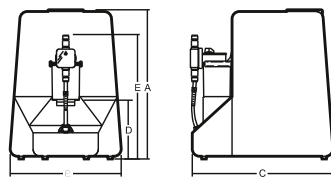
The Star System includes the CHEM-FEED C-1500N metering pump of your choice mounted on a sturdy polyethylene tank. Flooded suction assists in priming.

For a thoughtfully designed top quality Metering System, choose the Star System.

## STAR SYSTEM C-1500N BENEFITS

- Three tank capacities to choose from: 7 gallon, 15 gallon, or 30 gallon.
- All necessary accessories are included.
- 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 rectangle shape.
- 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	MAX OUTPUT @ 0 PSI 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	MAX OUTPUT @ 0 PSI 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.

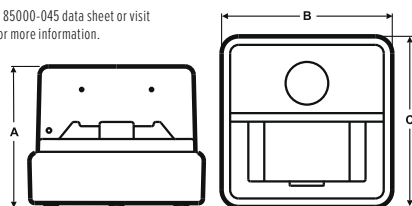
Choose between FLEXFLO'S fixed or variable speed A-100N models, equipped with standard or digital controls.

For an efficient and dependable Peristaltic Metering System Package, get FLEXFLO® STAR III®.

## FLEXFLO® STAR III® BENEFITS

- Three tank capacities to choose from: 7 gallon, 15 gallon, or 30 gallon.
- All necessary accessories are included.
- 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 rectangle 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



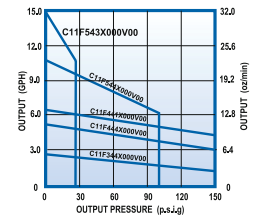


# CHEM-FEED® C-1100 SERIES DIAPHRAGM METERING PUMPS



**CHEM-FEED® DELIVERS PRECISION, CHEMICAL METERING AND SMOOTH, POWERFUL OPERATION.**

**C-1100 OUTPUT VS. PRESSURE**



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

## CHEM-FEED® BENEFITS

- Superior pump head design.
- Max feed rate of 15 GPH (56.8 LPH).
- 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.

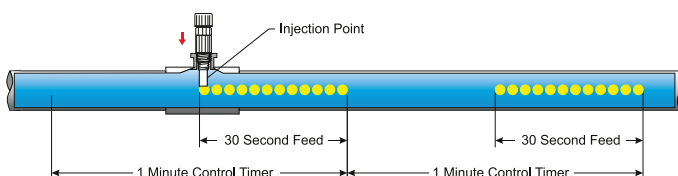
## CHEM-FEED® SPECIFICATIONS

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.

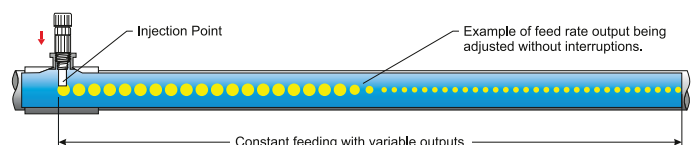


Most fixed speed outputs can be adjusted by simply:

- 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.





**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 maximum 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 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	GPD	MAX OUTPUT AT 0 PSI	Max Strokes Per minute	MAX PSI
C11(*)3(**)4X000V00	57.7	2.4	60	150
C11(*)4(**)4X000V00	119.7	4.9	125	150
C11(*)4(**)1X000V00	155.9	6.4	125	150
C11(*)5(**)4X000V00	260.8	10.8	250	100
C11(*)5(**)3X000V00	360.0	15.0	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 NEEDS 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® 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 GPD / 11.01oz/min.
- 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)



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

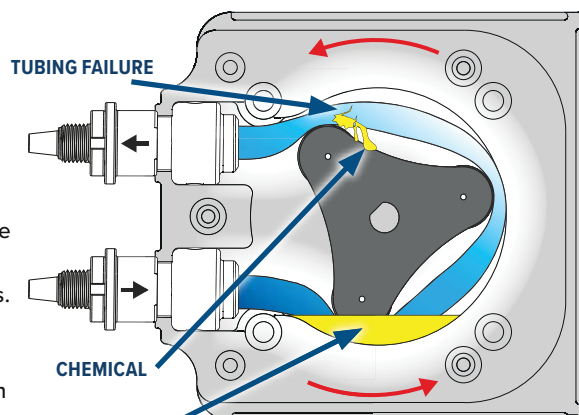


## THE EXCLUSIVE PATENTED TUBE FAILURE DETECTION SYSTEM



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**



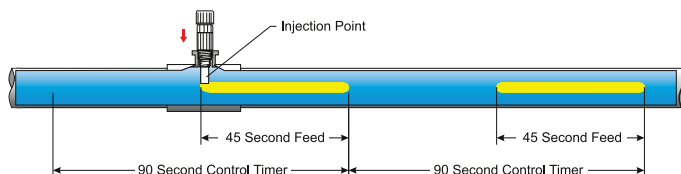
**CHEMICAL IS IMMEDIATELY DETECTED IN THE PUMP HEAD. THE PUMP SHUTS DOWN.**



# 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.

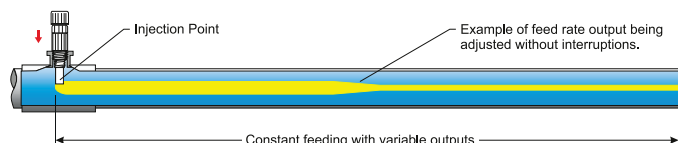


Most fixed speed outputs can be adjusted by simply:

- 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

## FLEX-A-PRENE® TUBING

Alcohol general	Hydrocyanic acid
Aluminum Sulfate (Alum)	Hydrogen peroxide
Ammonium chloride	Hypochlorous acid
Ammonium hydroxide	Iodine
Benzyl alcohol	Magnesium chloride
Bleach	Magnesium sulfate
Brine solutions	Phosphoric acid
Calcium hydroxide	Plating solutions
Calcium hypochlorite 20%	Polyaluminum Chloride (PAC)
Citric Acid	Potassium hydroxide
Ethylene glycol	Propylene glycol
Ferric chloride	Sodium hydroxide 50%
Ferric nitrate	Sodium bisulfite
Ferric sulfate	Sodium chlorite 12%
Ferrous chloride - 43% in water	Sodium hypochlorite 12.5%
Ferrous sulfate	Sodium sulfide
Fluosilic Acid (up to 25%)	Sulfuric acid (up to 50%)
Formic acid	Tannic acid
Glucose	
Hydrochloric acid 33%	

## FLEX-A-THANE™ TUBING

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

## FLEX-A-CHEM™ TUBING

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%)
Phosphoric acid (up to 85%)
Potassium hypochlorite (up to 70%)
Sodium phosphate (up to 30%)
Sulfuric acid (up to 98%)
Bases
Salts
Ketones
Alcohols:
Isobutyl Alcohol
Applications
Ink and solvent production
Battery acid filling
Specialty chemical production / processing
Sensitive fluid transfer

# FLEXFLO® ORDERING GUIDELINES FIXED & VARIABLE SPEED

## FLEX-A-PRENE® TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	OZ/MIN	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

## FLEX-A-THANE™ TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	OZ/MIN	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

## FLEX-A-CHEM™ TUBING

MODEL NUMBER	MAX OUTPUT @ ANY PRESSURE				MAX PSI
	GPD	GPH	OZ/MIN	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)



# FLEXFLO® **NEW PRODUCT!** POLYMER PUMP PERISTALTIC METERING PUMPS

The all New FLEXFLO® Polymer Pump has been designed to handle polymer liquids used in Wastewater Treatment.

The FLEXFLO® peristaltic metering pump has our exclusive built in TFD+ (Tube Failure Detection Plus) system which detects oil and water based polymers, and in turn helps to eliminate costly polymer spills and clean up. Condensation and wash down procedures will not cause false triggering.

Because of the peristaltic design, the FLEXFLO® Polymer Pump has no valves that can clog and thus require maintenance. The FLEXFLO® Peristaltic Polymer Pump is also self-priming even against maximum line pressure, and won't lose prime.

## ALL FLEXFLO® POLYMER PUMPS FEATURE

- New TFD+ works with oil and water based polymers.
- Gentle pumping action for long chain polymers.
- Ideal for low and high viscosity fluids.
- Equipped with polymer compatible tubing.
- Self priming – even against maximum line pressure. By-pass valves are not required. Cannot vapor lock or lose prime.
- Outputs to 5.17 GPH (19.56 LPH).
- Output pressures to 65 PSI (4.5 bar).
- Output volume is not effected by changes in back pressure.
- Two pump tubes supplied with each pump. No extra tubing required.
- Durable housing of chemical resistant Valox (PBT) thermoplastic.

## FLEXFLO® A-100NFP ANALOG VARIABLE SPEED

- Built-in Tube Failure Detection Plus system (TFD+). Senses chemical in the pump head, shuts off the pump and activates an NPN open collector output. This feature helps eliminate costly polymer spills and clean-up time.
- Easy to use dial knob speed adjustment.

## FLEXFLO® A-100NVP DIGITAL VARIABLE SPEED

- Built-in Tube Failure Detection Plus system (TFD+). Senses chemical in the pump head, shuts off the pump and activates a 1 amp alarm relay (dry contact closure). This feature helps eliminate costly polymer spills and clean-up time.
- Accepts 4-20mA, 0-10Vdc, and Pulse inputs for manual or external speed control.
- Operator friendly digital touch pad.
  - Easy to read LCD display
  - Service and Alarm indicator icons.
  - Display motor speed or input signal values.
  - Prime mode for easy priming without changing programming.



**FLEXFLO® A-100NFP - VARIABLE SPEED UNIT**  
with Percentage Speed Control



**FLEXFLO® A-100NVP - VARIABLE SPEED UNIT**  
with 4-20mA, 0-10dc, and Pulse Input Speed Control



## A-100NFP & A-100NVP SPECIFICATIONS

Max. Flow Rate.....	5.17 GPH (19.56LPH)	Power cord plug type.....	115V/60Hz = NEMA 5/15 (USA)
Max. Working Pressure.....	65 psig (4.5 bar)		230V/60Hz = NEMA 5/15 (USA)
Max. Fluid Temperature.....	130°F (54°C)		220V/50Hz = CEE 7/VI (EUROPE)
Ambient Temp Range.....	14° to 110°F (-10° to 43°C)		240V/50Hz = AS 3112 (Australia/New Zealand)
A-100NFP Output Adjustment Range	10-100% in 1% increments	Injection Fitting O-ring Seals.....	FKM and TFE/P (Optional EP)
A-100NVP Output Adjustment Range	14 & 30 RPM with -1T, -2T tubes: 5-100% (20:1 turndown)	Enclosure.....	NEMA 3R, (IP23)
All other models.....	10-100% (10:1 turndown)	Dimensions.....	A-100NFP=6"H x 9-3/8"W x 9-1/8"D
Max. Viscosity.....	5,000 Centipoise		A-100NVP=6"H x 9-1/2"W x 9-1/8"D
Max. Suction Lift.....	30 ft. Water 0 psig	Approx. Shipping Weight.....	12 lb. (5.4 kg)
Duty Cycle.....	Continuous		
Max. Solids.....	50% by volume		
Amperage Draw.....	115V/60Hz, 1ph (A-100NFP=.513; A-100NVP=.350 amp max)		
	230V/60Hz, 1ph (A-100NFP=.563; A-100NVP=.173 amp max)		
	220V/50Hz, 1ph (A-100NFP=.660; A-100NVP=.175 amp max)		
	240V/50Hz, 1ph (A-100NFP=.585; A-100NVP=.193 amp max)		

## A-100NFP & A-100NVP ORDERING GUIDELINES

FEED RATE	RPM	MAX PSI (BAR)	PUMP TUBE PART NUMBER	PUMP TUBE MATERIAL	PUMP OUTPUT CONTROL OPTIONS	
					A-100NFP MODEL #	A-100NVP MODEL #
0.8–15 ML/min	14	65 (4.5)	A1-1T	Flex-A-Thane™	A1N0°F-1T-P	A1N0°V-1T-P
1.8–35 ML/min	30	65 (4.5)	A1-1T	Flex-A-Thane™	A1N1°F-1T-P	A1N1°V-1T-P
6.7–67 ML/min	60	65 (4.5)	A1-1T	Flex-A-Thane™	A1N3°F-1T-P	A1N3°V-1T-P
14.0–140 ML/min	60	65 (4.5)	A1-2T	Flex-A-Thane™	A1N3°F-2T-P	A1N3°V-2T-P
26.1–261 ML/min	45	50 (3.5)	A1-3T	Flex-A-Thane™	A1N2°F-3T-P	A1N2°V-3T-P
32.6–326 ML/min	60	50 (3.5)	A1-3T	Flex-A-Thane™	A1N3°F-3T-P	A1N3°V-3T-P

### VOLTAGE OPTIONS

(\*) Replace: 0=115V/60Hz, 1=220V/50Hz, 2=230V/60Hz, 8=240V/50Hz



# 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 condition.

**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 .....1lb. (.45 kg)

### MICRO-FLO ORDERING GUIDELINES

MODEL NUMBER	OPERATING FLOW RANGE C-1100 GPD	ML/MIN	OPERATING FLOW RANGE A-100NV 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  
FS-100-3V

MICRO-FLO SENSOR  
FV-200-6V

## Installation Examples



MICRO-FLO  
SENSOR - FV-200-6V  
MOUNTED ON C-1100V

MICRO-FLO  
SENSOR - FV-100-6V  
MOUNTED ON  
A-100NV





**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.

#### 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

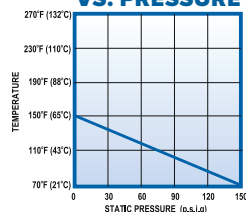
#### FLOW RATES

0.025 to 5 GPM  
 0.1 to 20 LPM

#### 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

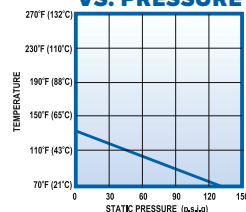
#### FLOW RATES

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.

#### 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

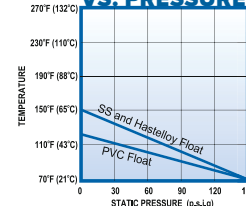
#### FLOW RATES

1 to 20 GPM  
 4 to 80 LPM

#### 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

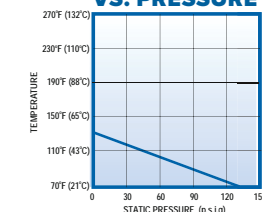
#### FLOW RATES

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-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.

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

## F-550 NON-ADJUSTABLE DIMENSIONS

Model Number	A	B	C	D	E	Mount Hole
F-55250L (1/4")	7-1/4"	2-1/2"	11/16"	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"

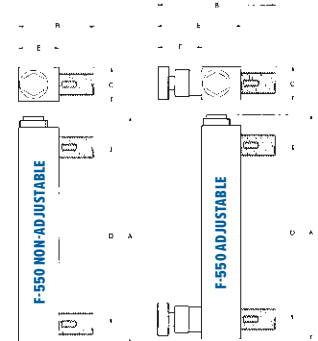
Note: Mount Hole Dimensions are the same as the Model Non-Adjustable

## PIPE SIZES

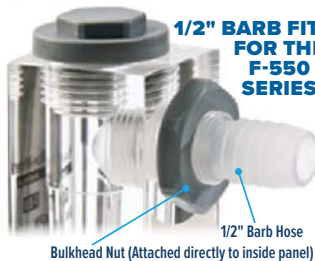
1/4", 3/8, 1/2", 3/4" and  
 1" M/NPT.  
 1/2" Barb

## FLOW RATES

0.025 to 20 GPM  
 0.1 to 75 LPM



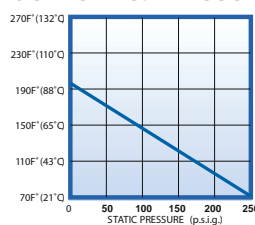
**F-550A WITH  
INTEGRAL FLOW  
ADJUSTMENT  
VALVE**



**1/2" BARB FITTINGS  
FOR THE  
F-550  
SERIES**

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

## F-550 OUTPUT VS. PRESSURE



# F-300 SERIES MACHINED ACRYLIC FLOWMETERS

## F-300 BENEFITS

- NSF listed\*.
- No metal in the fluid.
- Horizontal or Vertical pipe installation.
- One piece machined acrylic meter body.
- Corrosion resistant internal parts.
- Ships with gasket seal and mounting clamps.
- Calibrated for use on PVC or Copper Pipe.

\* Most models.

## F-300 SPECIFICATIONS

Max. Working Pressure ..... 75 psig (5.1 bar) @ 70°F (21°C)  
 Max. Fluid Temperature ..... 190°F (88°C) @ 0 pressure  
 Accuracy ..... ± 5% for 1", 1-1/2", 1-1/4" and 2"  
 ± 10% for 2-1/2", 3", 4", 6"

Meter Body Material ..... Acrylic  
 Connection Type ..... Saddle  
 Float Material ..... PVDF  
 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:** No bounce.

**IMPROVED ACCURACY:** 1" through 2" = ±5% of rate, 2-1/2" through 6" = ±10% of rate.

**REDUCED SPACE NEEDED:** You only need half the previous requirement of straight pipe length.

**NEW RED FLOAT:** Plastic will never corrode.

**EASY READING:** Bold, black, permanent printing. Large distance between lines

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

**ADDITIONAL ACCESSORY:** Optional flow switch can be ordered separately for alarm feedback.

**NEW  
THE BEST JUST GOT  
EVEN BETTER!**



**F-300**

**U-300**

## 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



# 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		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
		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

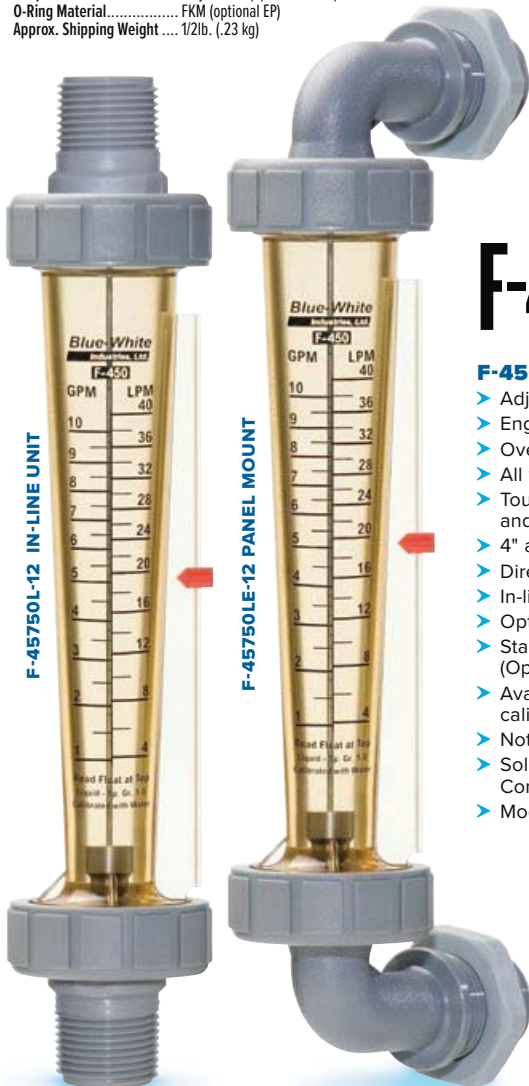
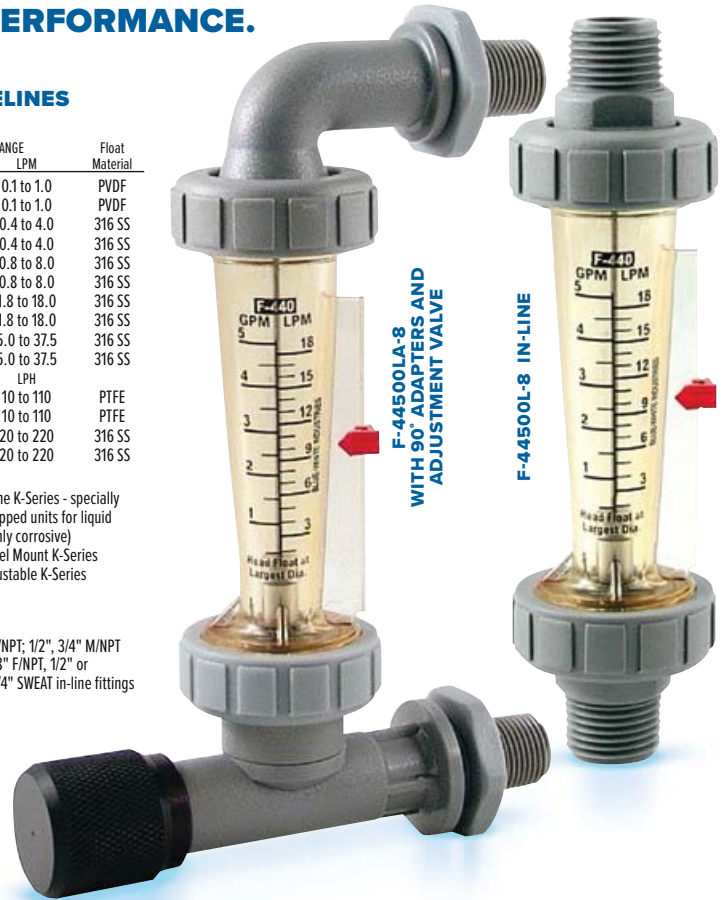
\*LKA = Adjustable K-Series

### 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.

### 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 .... 2 psi

### 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

\*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

\* 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"



**Butt Fusion & Socket Fusion Fittings**  
**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	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	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 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, 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

## FLOW RATES

2 to 80 GPM  
 8 to 300 LPM

## DIMENSIONS

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

## 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

STANDARD F-462 LIQUID MODELS with 2" Socket Fusion Adapters					
MODEL NUMBER	Pipe Size	DUAL SCALE RANGE		Adapter Material	Float Material
		GPM	LPM		
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		Adapter Material	Float Material
		GPM	LPM		
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.
- Optional K Series for corrosive applications.

## 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  
Brass: 1" F/NPT or Sweat

## FLOW RATES

0.5 to 40 GPM  
2 to 155 LPM

## 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.
- Optional K Series for corrosive applications.

## 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 ..... ± 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

## 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

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.

## 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 ..... 300 psig (20 bar) @ 70° F (21° C)  
 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 ..... 200° F (93° C) @ 0 PSI  
 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 SOLVENT TEE BODY

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

### 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 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 DIGI-METER®  
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)

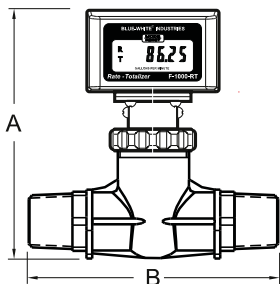
Approx. Shipping Weight .... 2 lb. (0.9 kg)



SADDLE FITTING

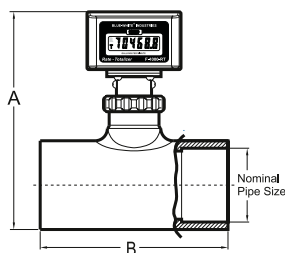
MOLDED FITTING

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



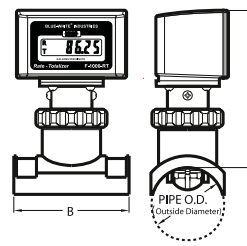
F-1000 with  
MOLDED In-Line Body

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"



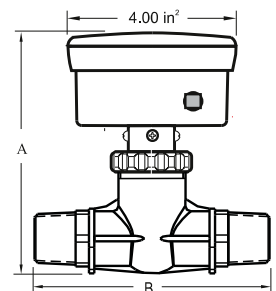
F-1000 with  
SOLVENT TEE Body

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 FITTINGS



## 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)

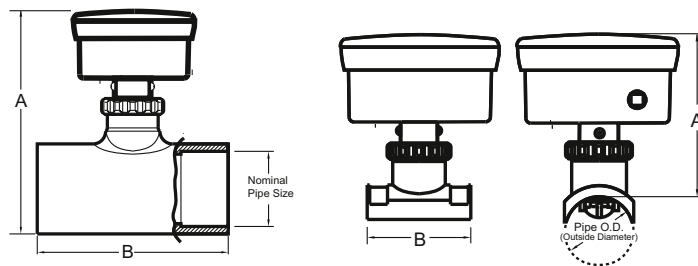
Max. Temp

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"



### 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"



**Blue-White<sup>®</sup>**  
**Industries, Ltd.**

**PRECISION CHEMICAL  
METERING & FLOW  
MONITORING**

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