

Industries, Ltd.



FLOWMETERS • METERING PUMPS • ACCESSORIES



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.

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, Viton[®] 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-600P

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, Viton and TFE/P o-rings.
- Superior pump head design of precision molded polypropylene.
- Teflon coated EP diaphragm.
- All ball bearing, permanently lubricated gear motor for smooth, powerful operation.
- Polypropylene injection check valve with Viton and TFE/P o-rings and spring loaded ceramic ball seal.
- PVDF suction (foot) valve with Viton and TFE/P o-rings, ceramic check ball and removable polypropylene filter screen.
- Includes 3/8" OD 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-(*)VAC	24	1.0	3.8	2.7	125
C-630P-(*)VAC	58	2.4	9.3	5.2	125
C-645P-(*)VAC	91	3.8	14.9	8.1	80
C-660P-(*)VAC	110	4.6	17.4	9.8	60
C-6125P-(*)VAC	237	9.9	37.0	21.1	30
C-6250P-(*)VAC	389	16.2	61.4	34.6	10

VOLTAGE OPTIONS

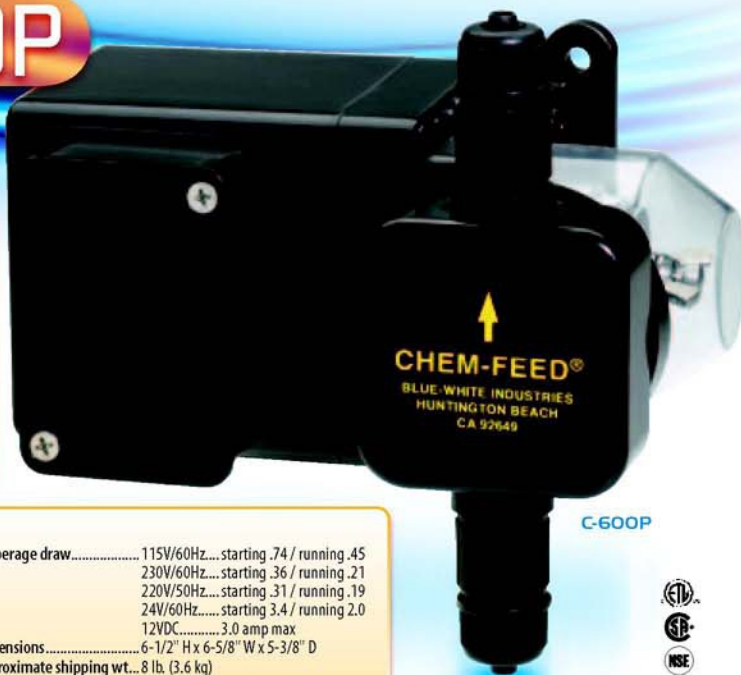
(*)Replace: 115=115V/60Hz, 220=220V/50Hz,
230=230V/60Hz, 24=24V/60Hz

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



* Viton[®] is a registered trademark of DuPont.

CHEM-FEED[®] C-1500N

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	 Viton [®] and TFE/P
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

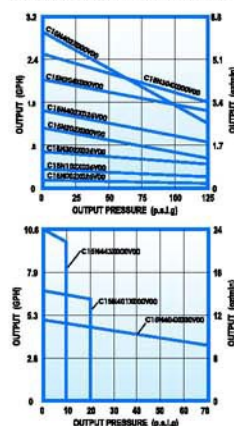
VOLTAGE OPTIONS

(*)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



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	MAX OUTPUT @ 0 PSI GPH	LPH	OZ/MIN	MAX PSI
C-660HV-(*)VAC	189	7.8	29.5	16.8	20
C-6125HV-(*)VAC	398	16.5	62.4	35.3	10
C-6250HV-(*)VAC	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

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
Dimensions	 7" H x 6-3/4" W x 6-1/8" D
Approximate shipping wt.	 8 lb. (3.6 kg)



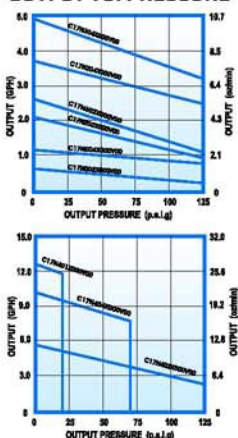
CHEM-FEED C-1700N DUPLEX HEAD PUMP

The CHEM-FEED C1700N Duplex Head Metering Pump features 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 C1700N 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 OUTPUT VS. PRESSURE



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)
Tumdown 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	Viton® 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

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 #80000-301.



CHEM-FEED STAR SYSTEM

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-600P 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 ORDERING GUIDELINES

STANDARD MODEL with 7, 15, and 30 GALLON Tanks

MODEL NUMBER	GPD	MAX OUTPUT @ 0 PSI GPH	LPH	OZ/MIN	Max Strokes Per minute	MAX PSI
T15N0(*)2X026V00	3.4	0.2	0.5	0.3	14	125
T15N1(*)2X026V00	8.3	0.3	1.3	0.7	30	125
T15N3(*)2X026V00	16.3	0.6	2.5	1.4	60	125
T15N2(*)2X000V00	26.6	1.1	4.2	2.4	45	125
T15N4(*)2X026V00	34.2	1.4	5.4	3.0	125	125
T15N2(*)4X000V00	49.0	2.0	7.7	4.3	45	125
T15N3(*)4X000V00	57.7	2.4	9.1	5.1	60	125
T15N4(*)2X000V00	68.4	2.8	10.8	5.9	125	125
T15N4(*)4X000V00	119.7	4.9	18.9	10.6	125	70
T15N4(*)1X000V00	155.9	6.4	24.6	13.8	125	20
T15N4(*)3X000V00	228.1	9.5	36.0	20.2	125	10

DELUXE MODELS with 7, 15, and 30 GALLON Tanks

MODEL NUMBER	GPD	MAX OUTPUT @ 0 PSI 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

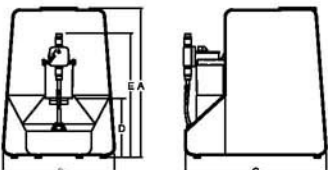
(***) Replace: 1=7 Gallon, 2=15 Gallon, 3=30 Gallon

STAR TANKS ONLY

MODEL NUMBER	CAPACITY GAL	HEIGHT INCH	WIDTH CM	DEPTH INCH	SHIP WEIGHT LBS.
STAR 7	7	26.5	17-1/2"	44.5	12
STAR 15	15	57	22"	56	15-1/2"
STAR 30	30	113.5	27"	69	20"

DIMENSIONS - INCH (CM)

	DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'	DIM 'E'	SHIP WT.
7 GALLON TANK	17.5 (44.6)	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



CHEM-FEED[®] C-1100 SERIES FIXED SPEED UNITS

The Superior CHEM-FEED C-1100

Fixed Speed pumps are offered with three output control options.

STANDARD X MODELS feature a quick-adjusting, high accuracy mechanical stroke length control. The efficient design of the pump allows for a minimum stroke length of 5%. Minimum recommended output is 5% of maximum.

DELUXE C MODELS feature stroke length and electronic time interval control. The pump's 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 E MODELS feature stroke length, electronic user programmable time interval (interval lengths from 1 through 99 seconds are user programmable), and external input signal control. The unit accepts pulse inputs (programmable from 1-9900) which can trigger programmable timed chemical injection batches from 1-99 seconds in duration. Analog signals can be used to remotely vary the interval timer's on-time adjustment.

CHEM-FEED[®] C-1100 BENEFITS

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

CHEM-FEED[®] C-1100 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 FIXED SPEED 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
Output accuracy.....	+/- 1% full scale repeatability
Turndown ratio.....	20:1 Standard models 400:1 Deluxe models 4000:1 Digital models
Enclosure.....	Acceptable for outdoor use. NEMA 3R (IP23)
Amperage draw.....	115V/60Hz..... start 1.37 / run 1.95 230V/60Hz..... start 0.57 / run 0.37 220V/50Hz..... start 0.49 / run 0.34
O-ring seals.....	Viton [®] and TFE/P
Dimensions.....	6-1/4" H x 10" W x 9-1/4" D
Approximate shipping wt.....	10 lb. (4.2 kg)

C-1100 FIXED SPEED ORDERING GUIDELINES

STANDARD X MODELS with Stroke Adjustment

MODEL NUMBER	MAX OUTPUT AT 0 PSI	MAX STROKES PER MINUTE	MAX PSI
C11X3(*)4X000V00	57.7 GPD 2.4 GPH 9.1 LPH 5.1 OZ/MIN	60	150
C11X4(*)4X000V00	119.7	125	150
C11X4(*)1X000V00	155.9	125	150
C11X5(*)4X000V00	260.8	250	100
C11X5(*)3X000V00	360.0	250	25

DELUXE C MODELS with Stroke and Time Adjustment

MODEL NUMBER	MAX OUTPUT AT 0 PSI	MAX STROKES PER MINUTE	MAX PSI
C11C3(*)4X000V00	57.7 GPD 2.4 GPH 9.1 LPH 5.1 OZ/MIN	60	150
C11C4(*)4X000V00	119.7	125	150
C11C4(*)1X000V00	155.9	125	150
C11C5(*)4X000V00	260.8	250	100
C11C5(*)3X000V00	360.0	250	25

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

MODEL NUMBER	MAX OUTPUT AT 0 PSI	MAX STROKES PER MINUTE	MAX PSI
C11E3(*)4X000V00	57.7 GPD 2.4 GPH 9.1 LPH 5.1 OZ/MIN	60	150
C11E4(*)4X000V00	119.7	125	150
C11E4(*)1X000V00	155.9	125	150
C11E5(*)4X000V00	260.8	250	100
C11E5(*)3X000V00	360.0	250	25

VOLTAGE OPTIONS

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

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



STANDARD X MODEL
with Stroke Adjustment



DELUXE C MODEL
with Stroke Length & Time Interval Control



DIGITAL E MODEL
with Stroke Length & Time Interval Control



CHEM-FEED® C-1100 SERIES VARIABLE SPEED UNITS

Variable Speed Units feature Two Output Control Options.

DELUXE MODELS have stroke length and analog speed control. The pump's speed is adjustable from 5-100% of the maximum using a dial knob style controller. The minimum recommended output is .25% of maximum.

DIGITAL V MODELS feature stroke length, manual digital percentage and external input signal speed control. The unit accepts pulse inputs from 1-999 Hz 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.



DELUXE F MODEL - VARIABLE SPEED UNIT
with Stroke Length & Analog Speed Control



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

CHEM-FEED® C-1100 BENEFITS

- Superior pump head design.
- All ball bearing, permanently lubricated gear motor for smooth, powerful operation.
- Flow verification sensor option available.
- No special input signal connectors to buy.
- 1 amp alarm output (digital models).
- Pump head design and material options.
- Efficient, dependable design - each unit is factory tested.
- Private labeling for volume purchasers.
- 3/8" OD x 1/4" ID tubing connections.

CHEM-FEED® C-1100 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 VARIABLE SPEED SPECIFICATIONS

Max. Working Pressure.....	150 psig (10.3 bar)
Max. Fluid Temperature.....	130 °F (54 °C)
Ambient temp range.....	14" to 10" F (-10° to 43° C)
Max. viscosity.....	1000 Centipoise
Max. suction lift.....	10 ft. Water
Output accuracy.....	+/- 1% full scale repeatability
Turndown ratio.....	400:1
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.....	Viton® and TFE/P
Dimensions.....	6-1/4" H x 10" W x 9-1/4" D
Approximate shipping wt.....	12 lb. (5.4 kg)

C-1100 VARIABLE SPEED ORDERING GUIDELINES

DELUXE F MODELS with Stroke and Dial Knob Speed Adjustment

MODEL NUMBER	MAX OUTPUT AT 0 PSI			Max Strokes Per minute	MAX PSI
	GPD	GPH	LPH		
C11F3(*)4X000V00	57.7	2.4	9.1	5.1	60
C11F4(*)4X000V00	119.7	4.9	18.9	10.6	125
C11F4(*)1X000V00	155.9	6.4	24.6	13.8	125
C11F5(*)4X000V00	260.8	10.8	41.1	23.1	250
C11F5(*)3X000V00	360.0	15.0	56.8	32.0	250

DIGITAL V MODELS with

Stroke, Pulse Input and 4-20mA Analog Input Speed Adjustment

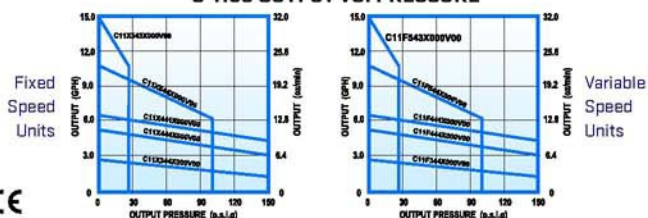
MODEL NUMBER	MAX OUTPUT AT 0 PSI				Max Strokes Per minute	MAX PSI
	GPD	GPH	LPH	OZ/MIN		
C11V3(*)4X000V00	57.7	2.4	9.1	5.1	60	150
C11V4(*)4X000V00	119.7	4.9	18.9	10.6	125	150
C11V4(*)1X000V00	155.9	6.4	24.6	13.8	125	150
C11V5(*)4X000V00	260.8	10.8	41.1	23.1	250	100
C11V5(*)3X000V00	360.0	15.0	56.8	32.0	250	25

VOLTAGE OPTIONS

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

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

C-1100 OUTPUT VS. PRESSURE



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 Patented Pump Tube Design! It's a Breeze to Install, and Doesn't Need to be Manually Advanced.

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 Injector - Get FLEXFLO!



FLEXFLO[®] BENEFITS

- Self priming, even against line pressure.
- Outputs to 95.1 GPD, pressures to 100 PSI.
- Tube Failure Detection System (TFD).
- Compatible with Blue-White's Micro-Flo Verification Sensor.
- De-gassing design eliminates gas or air accumulation in the head.
- Precise output control to 20:1 turndown by means of dial knob.
- Preset 60 second recycle time (other time cycles available).
- Output amount is not affected by changes in back pressure.
- Durable housing of rugged Valox.
- Advanced cooling system.

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[®] 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.

TUBE FAILURE DETECTION SYSTEM

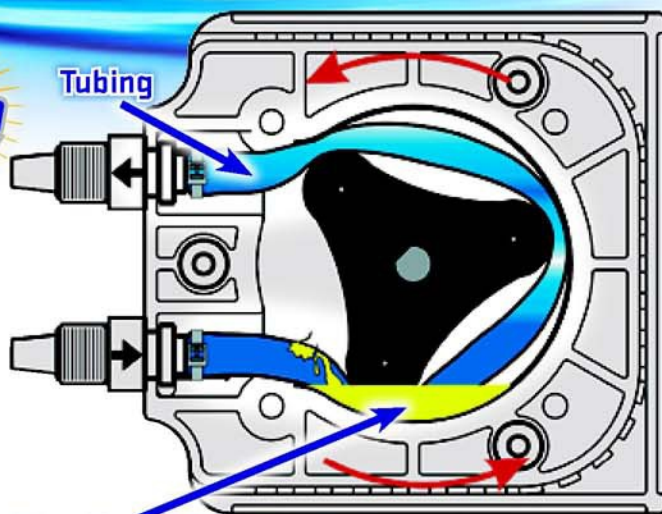
TFD system

Tube Failure Detection

Exclusive
PATENTED
TECHNOLOGY

The TFD System is breakthrough technology for Peristaltic Metering Pumps. Blue-White developed this system for peristaltic pumps, and is the only manufacturer able to offer the Patented TFD System (U.S. Patent 7,001,153). The TFD System is able to detect a wide range of chemicals (i.e. chlorine, acids, soaps, etc.). This exclusive technology was designed to disregard pump compatible fluids; such as water and lubricants. If there is a rupture in the pump tube, and a chemical is detected in the pump head, the pump will automatically shut off and energize a relay, permitting communications with external equipment, such as an alarm or a SCADA system. The chemical must be cleaned from the pump head before the pump will restart. The TFD System is a Standard Feature on Blue-White's FLEXFLO A-100N Series Peristaltic Metering Pumps.

* Viton[®] is a registered trademark of DuPont.



Non-Compatible Fluid is immediately detected in the pump head. The pump shuts down.

FLEXFLO® A-100N PERISTALTIC FIXED SPEED UNITS



FLEXFLO® STANDARD MODEL A-100NC BENEFITS

- Self priming against maximum line pressure.
- Outputs to 95.1 GPD, pressures to 100 PSI.
- Tube Failure Detection System (TFD).
- Compatible with Blue-White's Micro-Flo Verification sensor.
- De-gassing design eliminates gas or air accumulation in the head.
- 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 a high frequency of small injections per minute.
- Output amount is not effected by changes in back pressure.
- Durable housing of rugged valox.
- Advanced cooling system.

FLEXFLO® STANDARD MODEL A-100NE BENEFITS

- Self priming against maximum line pressure.
- Outputs to 95.1 GPD, pressures to 100 PSI.
- De-gassing design eliminates gas or air accumulation in the head.
- 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.
- Output amount is not effected by changes in back pressure.
- Durable housing of rugged valox.
- Advanced cooling system.

FLEXFLO® A-100N 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.



A-100N FIXED SPEED 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 1.15V/60Hz, 230V/60Hz, 220V/50Hz
 O-ring Seals Viton®
 Dimensions 6-1/4" H x 10" W x 9-1/4" D
 Approx. Shipping Weight 10 lb. (4.5 kg)

PUMP TUBING MATERIAL SELECTION GUIDE

Norprene®

Alcohol general
 Alum, 5% in water
 Ammonium chloride
 Ammonium hydroxide
 Benzyl alcohol
 Bleach
 Brine solutions
 Calcium hypochlorite 20%
 Ethylene glycol
 Ferric chloride
 Ferric nitrate
 Ferric sulfate
 Ferrous chloride
 - 43% in water
 Ferrous sulfate
 Formic acid
 Glucose
 Hydrochloric acid 33%

Tygothane®

Hydrocyanic acid
 Hydrogen peroxide
 Hypochlorous acid
 Iodine
 Lactic acid
 Magnesium chloride
 Magnesium sulfate
 Phosphoric acid
 Plating solutions
 Potassium hydroxide
 Potassium permanganate
 Propylene glycol
 Sodium hydroxide 40%
 Sodium Bisulfite
 Sodium Hypochlorite 12.5%
 Sodium sulfide
 Sulfuric acid 50%
 Tannic acid

Viton®

Allyl Alcohol
 Ethylene bromide
 Hydrofluoric acid
 Hydrobromic acid
 Isopropyl Alcohol
 Toluene

A-100N FIXED SPEED ORDERING GUIDELINES

FIXED and VARIABLE SPEED MODELS

MODEL NUMBER	GPD	GPH	LPH	ML/MIN	MAX PSI
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

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 VARIABLE SPEED UNITS

FLEXFLO® ANALOG MODEL A-100NF BENEFITS

- Self priming against maximum line pressure.
- Outputs to 95.1 GPD, pressures to 100 PSI.
- Output amount is not affected by changes in back pressure.
- Tube Failure Detection System (TFD).
- Compatible with Blue-White's Micro-Flo Verification sensor.
- Easy to use dial knob style output control.
- Variable speed results in near continuous chemical injection.
- De-gassing design eliminates gas or air accumulation in the head.
- Durable housing of rugged Valox.

FLEXFLO® DIGITAL MODEL A-100NV BENEFITS

- Self priming against maximum line pressure.
- Outputs to 95.1 GPD, pressures to 100 PSI.
- Output amount is not affected by changes in back pressure.
- Tube Failure Detection System (TFD).
- 1 amp alarm output relay switch.
- Compatible with Blue-White's Micro-Flo Verification sensor.
- Precise output control with digital touch and LCD display.
- Variable speed results in near continuous chemical injection.
- Accepts 4-20mA, 0-10Vdc, and Pulse inputs for external speed control.
- Easy to read Service and Alarm indicator icons on LCD display.
- Display motor speed or input signal values on the LCD display.
- De-gassing design eliminates gas or air accumulation in the head.
- Durable housing of rugged Valox.

FLEXFLO® A-100N 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.

A-100N VARIABLE SPEED 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
 O-ring Seals Viton®
 Dimensions 6-1/4" H x 10" W x 9-1/4" D
 Approx. Shipping Weight... 10 lb. (4.5 kg)

A-100N VARIABLE SPEED ORDERING GUIDELINES

FIXED and VARIABLE SPEED MODELS

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

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-100NF - VARIABLE SPEED UNIT
with Percentage Speed Control



FLEXFLO A-100NV - VARIABLE SPEED UNIT
with 4-20mA, 0-10Vdc, and Pulse Input Speed Control

FLEXFLO® A-1600

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.
- Patented pump tube design for easy installation and trouble free operation.
- 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.....	5 psig (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



A-1600

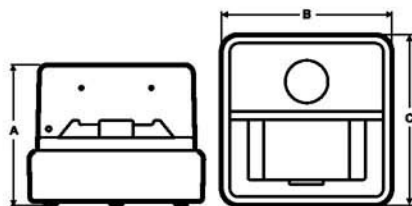
FLEXFLO® STAR III METERING SYSTEM

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.



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)

FLEXFLO® STAR III BENEFITS

- The Star System 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.



STAR III
with 15 GALLON

MICRO-FLO FLOW VERIFICATION SYSTEM

An Effortless Means of Accessing Critical 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 25' of Cable.
- Six Digit LCD, up to Four decimal points.
- 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.
- Weather resistant Valox PBT enclosure.
- LCD is not recommended for direct sunlight installation.

MICRO-FLO SPECIFICATIONS

Max. Working Pressure.....150 psig (10.3 bar) @ 70°F (21°C)
Max. Fluid Temperature.....200°F (93°C) @ 0 PSI
Body, Paddle, Axle Material.....PVDF
Connector Material.....3/8" Tubing connectors: PVDF
O-ring Seals.....Viton®
Compression Seal to Pump.....PVC
Approx. Shipping Weight.....1 lb. (.45 kg)

MICRO-FLO ORDERING GUIDELINES

MODELS with PVC LENS CAP

MODEL NUMBER	GPD	OPERATING FLOW RANGE OZ/MIN	ML/MIN
FV-100-6V	11.4 to 114	1 to 10	30 to 300
FV-200-6V	38.0 to 380	3.5 to 35	100 to 1000
FV-300-6V	76.0 to 760	7 to 70	200 to 2000
FV-400-6V	114 to 1440	10 to 100	300 to 3000
FV-500-6V	190 to 1900	17 to 170	500 to 5000
FV-600-6V	266 to 2660	24 to 240	700 to 7000

MODELS with PVDF LENS CAP

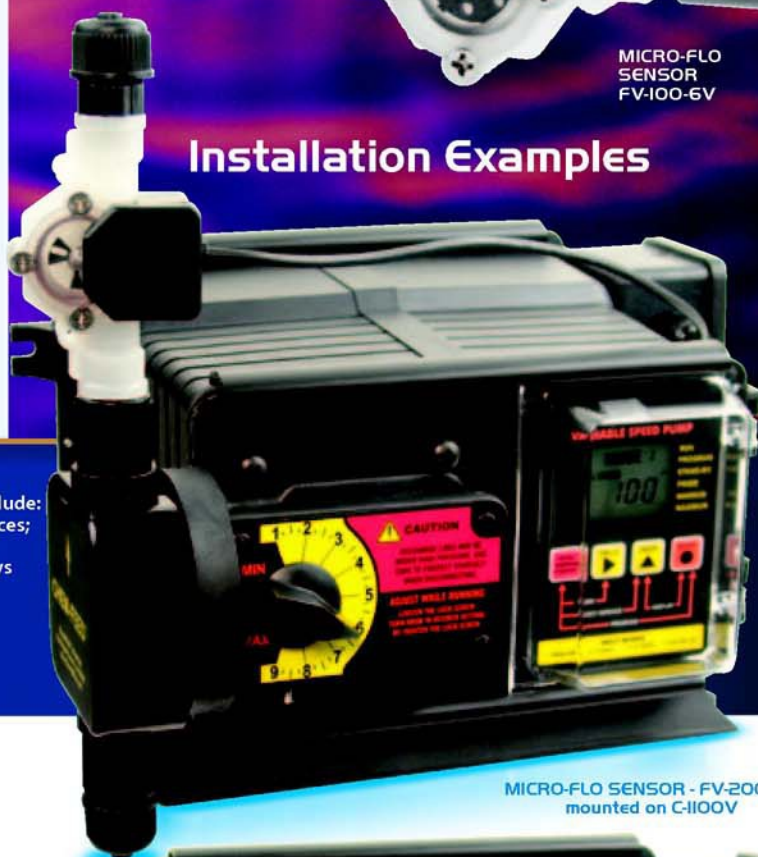
MODEL NUMBER	GPD	OPERATING FLOW RANGE OZ/MIN	ML/MIN
FV-101-6V	11.4 to 114	1 to 10	30 to 300
FV-201-6V	38.0 to 380	3.5 to 35	100 to 1000
FV-301-6V	76.0 to 760	7 to 70	200 to 2000
FV-401-6V	114 to 1440	10 to 100	300 to 3000
FV-501-6V	190 to 1900	17 to 170	500 to 5000
FV-601-6V	266 to 2660	24 to 240	700 to 7000



MICRO-FLO
SENSOR
FV-200-6V

MICRO-FLO
SENSOR
FV-100-6V

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 to choose from.

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" - 2"
- 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.

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.

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
[Tank sold separately]



OPTION 2 - A-100N PERISTALTIC PUMP SYSTEM

F-2000 FLOWMETER MODEL NUMBER: PCP120K8GM1-ZW
A-100N PUMP MODEL NUMBER: A1N10A-6T
[Tank sold separately]