



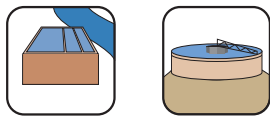
CHEM-PRO™ C3 Series Pumps

Digital Chemical Diaphragm Metering Pumps

Features

- High capacity chemical metering to 833 gpd (131.4 lph)
- Output pressures to 175 PSI
- Precise digital control system with LCD display
- Built-in Diaphragm Failure Detection (DFD) system
- Compatible with an exclusive Flow Verification System
- Rugged and reliable design

Applications



Ideal for applications including water and wastewater treatment, agriculture, plating and metal finishing, larger HVAC systems, and more.

Specifications

Max. Working Pressure	175 psig (12.1 bar)
Max. Fluid Temperature	130°F (54°C)
Max. Ambient Temperature	14 to 115°F (-10 to 46.1°C)
Output Adjustment Range	5 to 100% in 1% increments
Duty Cycle	Continuous
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	15' water, 0 psig (4.5 m, 0 bar)
Enclosure	NEMA 4X, (IP66)
Shipping Weight (Approx.)	29 lbs (13 kg)
Dimensions	13-1/8 x 9 x 8" (322.7 x 228 x 203.2mm)

Materials

Enclosure	413 aluminum (powder coated)
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Description

CHEM-PRO™ C3 Series pumps are designed for accurate and reliable high capacity chemical metering. The C3 pumps are well suited for many applications, including water and wastewater treatment, agriculture, plating and metal finishing, and larger HVAC systems.

The C3 features precise digital control and a user friendly digital touch pad with a large backlit LCD display. Built to be rugged and reliable, the C3 pumps have oversized PVDF double ball valves, a priming/degassing valve built into the PVDF pump head, and a weather-resistant housing made of durable, powder coated aluminum.

Chemical Spill Alarming

The C3 pumps feature a built in Diaphragm Failure Detection (DFD) system, which senses chemical leakage in the pump head and shuts off the pump before you have a troublesome chemical spill. The DFD system triggers a relay that may be connected to an external alarm or autodialer, such as

Global Water's AD200 Voice Alarm Autodialer (see page 138). The C3 pumps also accept an exclusive Flow Verification System (FVS). The optional FVS Micro-Flo device (see page 99) will shut down the pump and trigger an alarm if the chemical flow stops because of an empty tank, clogged valve, or anything that might prevent the flow of liquid through the pump system.

What's in the Box

Each CHEM-PRO C3 pump ships complete with a priming valve/pressure relief valve (located on pump head), pump head adapters, foot valve/strainer with 1/2" ceramic ball and 1/2" barbed adapter, injection/check valve fitting with 1/2" ceramic ball and one 1/2" barbed adapter, 10 feet of 1/2" clear PVC suction tubing, and mounting brackets with screws.

Please note that you should always check for chemical compatibility with the wet end materials before ordering a pump.

Ordering & Options

C3F 115 VAC/60 Hz Models

Order No.	Max gpd ¹	Max psi ²	Price
C3F141XVA	118	175	
C3F241XVA	270	150	
C3F142XVA	350	150	
C3F242XVA	833	80	

C3F 220 VAC/50 Hz Models

Order No.	Max lph ¹	Max bar ²	Price
C3F161XVA	18.6	12	
C3F261XVA	42.6	10.3	
C3F162XVA	55.2	10.3	
C3F262XVA	131.4	5.5	

1) Maximum liquid output at zero backpressure.

2) Maximum pressure output.

Replacement Parts & Accessories

Please call us for parts and accessories.

Pump Head Cover	413 aluminum (powder coated)
Cover Screws	300 stainless steel
DFD System Sensor Pins	Hastelloy C-276
Power Cord	3 conductor, SJTW-A Water-resistant
Mounting Brackets	Stainless steel
Diaphragm	Teflon (teflon coated hypalon)
Pump Head & Adapters	PVDF (natural)
Injection/Check Valve	Body & insert: PVDF (natural) Check Ball: Ceramic Spring: Hastelloy C-276 Elastomers (O-ring): Viton
Footvalve/Strainer	PVDF/Polypropylene (natural)
Suction Tubing	PVC (clear)
Warranty	2 year

FLEXFLO® A-100NV Series Pumps

Digital Peristaltic Pumps for Chemical Metering



Description

FLEXFLO® A-100NV Series Peristaltic Pumps are loaded with features that make them the ideal choice for a variety of water, wastewater, and industrial chemical metering applications. The pumps can easily handle higher viscosity liquids up to 5,000 cps, as well as liquids with up to a 50% solids content.

Low Maintenance Design

The A-100NV's low maintenance peristaltic pump is designed to be naturally clog resistant and self priming— even against the maximum rated line pressure. The pump also cannot vapor lock or lose prime, so no bypass system is required. Built to last, each A-100NV pump is housed in a weatherproof NEMA 3R housing and has a continuous duty motor with advanced cooling to ensure a long service life.

User Friendly Touch Pad and Display

The A-100NV has a user friendly touch pad and a bright LCD display, which make the pump easy to operate. The pump has service and alarm indicator icons, motor speed or input signal values, and a prime mode for quick priming without program changes.

Pump Control and Alarm Relays

The pump's precise, variable speed feed rate may be externally controlled by a 4-20 mA or pulse/frequency signal from a flowmeter, PLC, or process control device.

The A-100NV pumps include exclusive Tube Failure Detection system (TFD), which senses chemical in the pump head and shuts off the pump, and activates an alarm relay (dry contact closure). The pumps are also compatible with an output Flow Verification Sensor system (such as the Micro-Flo on page 99), which can shut down the pump

and alert you if the chemical stops flowing for any reason.

What's in the Box

The A-100NV pumps ship with 2 pump tubes, 10' of suction and discharge tubing, a suction strainer/foot valve with a ceramic weight, and an injection/check valve assembly.

Specifications

Max. Working Pressure	100 psig (6.9 bar)
Max. Fluid Temperature	130°F (54°C)
Max. Ambient Temperature	14 to 115°F (-10 to 46.1°C)
Output Adjustment Range	5 to 100% in 1% increments
Duty Cycle	Continuous
Maximum Viscosity	5,000 Centipoise
Maximum Suction Lift	30' water, 0 psig
Maximum Solids	50% by volume
Enclosure	NEMA type 2, (IP21)
Shipping Weight (Approx.)	12 lbs (5.4 kg)
Dimensions	6-1/4 x 10 x 9-1/4" (158.7 x 254 x 235mm)

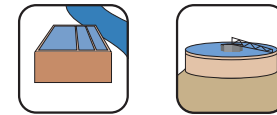
Materials

Pump Head & Enclosure	Valox (PBT) thermoplastic
Pump Head Cover	Clear PVC
Cover Screws	300 stainless steel w/polypropylene cap
Roller Assembly	Rotor: Valox (PBT) Rollers: Nylon Roller Bearings: Bronze Motor Shaft: Nickel plated steel
TFD System Sensor Pins	Hastelloy C-276
Pump Tubing	Norprene
Tube Connection Fittings	PVDF
Suction Tubing	Clear PVC
Suction Strainer	Natural Polypropylene
Discharge Tubing	Natural Polyethylene (LLDPE)
Injection/Check Valve Assembly	Body & insert: Polypropylene (optional PVDF) Check Ball: Ceramic Spring: Hastelloy C-276 Ball Seat O-ring: TFE/P Static Seal O-ring: Viton

Features

- Low maintenance peristaltic design
- Handles liquids with higher viscosities and solids content
- Precise variable speed control
- Automatically detects a tube failure and disables pump

Applications



Ideal for a variety of water, wastewater, and industrial chemical metering applications.

Ordering & Options

C3F 115 VAC/60 Hz Models

Order No.	Max GPD ¹	Max PSI ²	Tube OD	Price
A1N10V-4T	4.9	100	1/4"	
A1N20V-4T	8.0	100	1/4"	
A1N10V-6T	16.0	100	3/8"	
A1N20V-6T	24.0	100	3/8"	
A1N10V-7T	52.5	50	7/16"	
A1N30V-7T	95.1	50	7/16"	

C3F 220 VAC/50 Hz Models

Order No.	Max ¹ ml/min	Max BAR ²	Tube OD	Price
A1N11V-4T	4.9	100	1/4"	
A1N21V-4T	8.0	100	1/4"	
A1N11V-6T	16.0	100	3/8"	
A1N21V-6T	24.0	100	3/8"	
A1N11V-7T	52.5	50	7/16"	
A1N31V-7T	95.1	50	7/16"	

1) Maximum liquid output at zero backpressure.

2) Maximum pressure output.

Replacement Pump Tubes

Order No.	Pump Suffix	Tube OD	Price
A-002N-4T	-4T	1/4"	
A-002N-6T	-6T	3/8"	
A-002N-7T	-7T	7/16"	

Replacement Parts

Order No.	Description	Price
A-014N-6A	Injection/Check Valve Assembly	
C-340A	Strainer/Foot Valve Assembly	

Phone: 1-800-561-3600



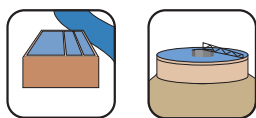
C-1100V Series Metering Pumps

Digital Diaphragm Metering Pumps for Chemical Injection

Features

- User friendly touch pad controls and LCD display
- Built in diaphragm failure detection system
- Highly accurate and repeatable chemical dosing
- Can be externally paced by a flowmeter, analyzer, or other device
- Works with a Flow Verification System

Applications



Ideal for applications requiring precise water, wastewater, and industrial chemical metering.

Specifications

Max. Working Pressure	175 psig (12.1 bar)
Max. Fluid Temperature	130°F (54°C)
Max. Ambient Temperature	14 to 115°F (-10 to 46.1°C)
Output Adjustment Range	5 to 100% in 1% increments
Duty Cycle	Continuous
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	15' water, 0 psig (4.5 m, 0 bar)
Enclosure	NEMA 4X, (IP66)
Shipping Weight	29 lbs (13 kg)
Dimensions	10-1/2 x 6-1/4 x 10" (26.7 x 15.9 x 25.4 cm)

Materials

Diaphragm	Teflon® (Teflon coated hypalon)
Pump Head & Adapters	PVDF (natural)
Injection/Check Valve	Body & insert: PVDF (natural) Check Ball: Ceramic Spring: Hastelloy C-276
Elastomers (O-ring)	Viton® (optional EP)
Footvalve/Strainer	PVDF/Polypropylene (natural)
Suction Tubing	PVC (clear)
Enclosure & Pump Head Cover	413 aluminum (powder coated)
Cover Screws	300 stainless steel
DFD System Sensor Pins	Hastelloy C-276
Power Cord	3 conductor, SJTW-A Water-resistant
Mounting Brackets	Stainless steel

Description

The C-1100V Series Metering Pumps are state of the art, digitally controlled diaphragm pumps designed for precise chemical metering. The C-1100 pumps are loaded with advanced features including: a user friendly touch pad and LCD display, external control inputs, stroke length and speed control, $\pm 1\%$ full scale repeatability, and injection into piping systems against pressures up to 150 psi (10.4 bar).

Reliable Operation

The C-1100V is designed for reliable and consistent operation with oversize PVDF double-stage check valves, a built in priming/degassing valve, and a durable powder coated aluminum housing.

Pump Control and Alarm Relay

The C-1100V includes a front-mounted mechanical flow rate adjustment, and is also equipped with an external input control circuitry that allows the pump to be

controlled externally by either a 4-20 mA input signal or a pulsed input signal. The C-1100V includes a diaphragm failure detection system that will shut down the pump and trigger an alarm long before you get a troublesome chemical spill. In addition, the C-1100V is compatible with an exclusive Flow Verification System (FVS). The FVS Micro-Flow device (see page 99) will shut down the pump and trigger an alarm if the flow of chemical stops because of an empty tank, clogged valve, or anything that might prevent the flow of liquid through the pump system.

What's in the Box

Each C-1100V pump ships complete with 10' of suction and discharge tubing, a suction strainer/foot valve with ceramic weight, and an injection/check valve assembly. Please note that you should always check for chemical compatibility with the wet end materials before ordering a pump.

Ordering & Options

C3F 115 VAC/60 Hz Models

Order No.	Max gpd ¹	Max psi ²	Price
C-11V141X000V00	38.0	150	
C-11V344X000V00	57.7	150	
C-11V341X000V00	73.0	150	
C-11V444X000V00	119.7	150	
C-11V441X000V00	155.9	150	

C3F 220 VAC/50 Hz Models

Order No.	Max lph ¹	Max bar ²	Price
C-11V151X000V00	6.0	10.34	
C-11V354X000V00	9.1	10.34	
C-11V351X000V00	11.5	10.34	
C-11V454X000V00	18.9	10.34	
C-11V451X000V00	24.6	10.34	
C-11V554X000V00	41.1	6.89	

1) Maximum liquid output at zero backpressure.

2) Maximum pressure output.

Replacement Parts

Order No.	Description	Price
C-406VT-15N	Diaphragm, Teflon Coated EP	
C-535A6-6	Pump Head Kit w/ Valves & Diaphragm	
C-535	Pump Head	
K-568A-6A	Inlet & Outlet Valve Kit	
C-340A	Foot Valve/Suction Strainer	
A-014N-6A	Injection/Anti-siphon Valve Assembly	
K-568A-4	4-pack of Check Balls for Inlet/Outlet Valves	
700000-638	5' Suction Tubing w/Flow Indicator	

C-1500N Pumps

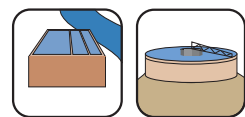
Digital Diaphragm Metering Pumps



Description

The popular C-1500N Series metering pumps are well-suited for a variety of water, wastewater, and industrial chemical treatment applications. Built to last, the C-1500N pumps feature high quality wet end materials, a weather resistant housing, and an all-ball bearing motor for smooth, reliable operation. The pumps also feature an exclusive heavy-duty head, with bullet cartridge valves constructed of chemical resistant PVDF. Each valve assembly has two ceramic check balls, which provide a double seal for faster priming and a reduced chance of air locking due to off-gas buildup.

Applications



Ideal for a variety of water, wastewater, and industrial chemical treatment applications.

Specifications

Max. Working Pressure	125 psig (8.6 bar)
Max. Fluid Temperature	130°F (54°C)
Max. Ambient Temperature	14 to 110°F (-10 to 43°C)
Output Adjustment Range	5 to 100% stroke length
Duty Cycle	Continuous
Maximum Viscosity	1,000 Centipoise
Maximum Suction Lift	10'
Enclosure	NEMA type 3R, (IP23)
Pump Head	Polypropylene
Pump Head Inlet/Outlet Valves	Cartridge Valve Body: PVDF Tube Adapters: PVDF Check Balls: Ceramic Ball Seat O-ring: TFE/P Static Seal O-ring: Viton®
Suction Tubing	Clear PVC (5')
Flow Indicator	Clear PVC body, glass ball
Discharge Tubing	Natural Polyethylene (LLDPE)
Suction Foot Valve/Strainer	Body & Tubing adapter: PVDF (optional Teflon®) Strainer: Polypropylene Check Ball: Ceramic Ball Seat O-ring: TFE/P Static Seal O-ring: Viton®
Injection/Check Valve Assembly	Body & Insert: Polypropylene (optional PVDF) Check Ball: Ceramic Spring: Hastelloy C-276 Ball Seat O-ring: TFE/P Static Seal O-ring: Viton
Dimensions	4-1/2 x 9-1/6 x 5-3/4" (11.4 x 23 x 14.6 cm)
Shipping Weight (Approx.)	8 lbs (3.6 kg)

Features

- Reliable and easy to maintain
- All ball bearing gear motor for smooth operation
- High quality wet end materials

Each C-1500N pump ships with a foot valve and strainer, a suction tube weight, suction tubing, discharge tubing, an injection valve with a check valve, and mounting hardware. Please note that you should always check for chemical compatibility before ordering a pump.

Ordering & Options

C3F 115 VAC/60 Hz Models

Order No.	Max gpd ¹	Max psi ²	Price
C-15N002X000V00	6.6	125	
C-15N102X000V00	16.3	125	
C-15N202X000V00	26.6	125	
C-15N204X000V00	49.0	125	
C-15N304X000V00	57.7	125	
C-15N402X000V00	68.4	125	
C-15N404X000V00	119.7	70	

C3F 220 VAC/50 Hz Models

Order No.	Max lph ¹	Max bar ²	Price
C-15N012X000V00	1.0	8.62	
C-15N112X000V00	2.5	8.62	
C-15N212X000V00	4.2	8.62	
C-15N214X000V00	7.7	8.62	
C-15N314X000V00	9.1	8.62	
C-15N412X000V00	10.8	8.62	
C-15N414X000V00	18.9	4.83	

- 1) Maximum liquid output at zero backpressure.
- 2) Maximum pressure output.

Replacement Parts

Order No.	Description	Price
R-106VT-15N	Diaphragm, Teflon Coated EP	
C-535A6-6	Pump Head Kit w/Valves & Diaphragm	
C-535	Pump Head	
K-568A-6A	Inlet & Outlet Valve Kit	
C-340A	Foot Valve/Suction Strainer	
A-014N-6A	Injection/Anti-Siphon Valve Assembly	
K-568A-4	4-pack of Check Balls for Inlet/Outlet Valves	
700000-638	5' Suction Tubing w/Flow Indicator	

Flow Verification System

Sensor for Monitoring Chemical Flows



Features

- Detects loss of chemical flow
- Installs directly on A-100NV and C-1100V metering pumps
- Easy, three-wire connection made in the pump's junction box
- No special connectors to buy and no calibration required

Description

The Micro-Flow Flow Verification System (FVS) can be connected directly to A-100NV (page 97) and C-1100V (page 98) metering pumps to verify that a chemical is actually flowing. The FVS works with the pump's sophisticated electronics to constantly monitor chemical flow. If the 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.

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	PVDF
O-Ring Seals	Viton
Compression Seal to Pump	PVC
Approx. Shipping Weight	1 lb (0.45 kg)

Ordering & Options

Order No.	gpd	ml/min	Price
FV-100-6V	11.4 to 114	30 to 300	
FV-200-6V	38.0 to 380	100 to 1000	
FV-300-6V	76.0 to 760	200 to 2000	
FV-400-6V	114 to 1140	300 to 3000	
FV-500-6V	190 to 1900	500 to 5000	
FV-600-6V	266 to 2660	700 to 7000	



Features

- Simple operation
- Non-Toxic
- Stores 100 user-defined routine measurements
- User-friendly on screen guidance for easy operation

Specifications

Measuring principle	Respirometric (manometric)
Measured of	BOD _n (oxygen drift according to DIN 38409 T 52)
Pressure range	7.25 to 19.5 psi (500 to 1350 hPa(mbar))
Accuracy	+ 1% of measured value, + 7% of measuring range
Resolution	0.015 psi (1 hPa)
Display	LED pilot lamps
Power supply	Lithium batteries (260 mAh), 2 x type CR 2430 (3V)
Battery run time	~ 2 years with normal use
Protection class	3 IEC 1010, EN61010 part 1
Protection type	IP 54 DIN 40050
Admissible measuring temperature	68°F ± 1.8 F (20°C ± 1 C)
Admissible sample temperature (when being filled)	59-68°F (15-20°C)

OxiTop BOD Measurement Instrumentation

Pressure sensors for BOD testing and measurements.

Description

OxiTop® Control Biological Oxygen Demand (BOD) Instrumentation is an advanced version of the successful Oxi-Top® BOD Instrumentation system that uses software-controlled functions and an infrared interface to communicate with a handy controller, the OC 100. This BOD instrumentation system enables the simultaneous and grouped start, management, storage and tracking of 100 BOD measuring heads via the controller and allows them to be tracked on a large display with graphic evaluation. BOD measurement data can be transferred to the PC for evaluation and documentation via the AK-540/B cable (order no. 902842) and the communication program Achat OC (order no. 208990).

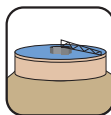
The Biological Oxygen Demand (BOD) data can be called up at any time, even during sampling, thus enabling checking of the samples for errors. The display of the progress curve allows immediate detection of irregularities and interferences, such as having the BOD value set too high for the volume used or undesired nitrification. BOD measurement corrections can thus be made at an early stage. OxiTop® Control BOD instrumentation offers you simple operation, improved controllability, non-toxicity, and measuring ranges of up to 4,000 mg/l BOD.

Ordering & Options

Order No.	Description	Price
208202	BOD Measurement Instrumentation Control 6	
208205	BOD Measurement Instrumentation Control 12	
208990	PC communication program	
902842	Interface Cable	
AK 540/B		

EMC	Emissions: EN 50081-1, FCC Class A Immunity: EN 50082-2
Climate class	2, VDI/VDE 3540
Ambient temperature	Storage: -13°F to +149°F (-25°C to +65°C) Operation: 41°F to 122°F (5°C to +50°C)
Test mark	CE, UL, CUL(UL/CSA)
Dimensions	H: 2.8in, dia. 2.8in (70 mm, dia. 70 mm)
Weight	3.4 oz. (95 g)

Applications



Ideal for applications requiring wastewater and water resource management.

“Whiskey is for drinking; water is for fighting over.”

– Mark Twain

OxiTop BOD Measurement Instrumentation

Pressure sensors for BOD testing and measurements.

Description

OxiTop IS 6, IS 12

Measurement using OxiTop® Biological Oxygen Demand (BOD) Instrumentation is based on pressure measurement in a closed system: microorganisms in the sample consume the oxygen and form CO₂. This is absorbed by NaOH, creating a vacuum, which can be read directly as a measured value in mg/l BOD.

The sample volume being tested regulates the amount of oxygen available for a complete BOD measurement. BOD measurement ranges of up to 4,000 mg/l can be measured using different sample volumes.

The OxiTop® BOD instrumentation heads (green and yellow for differentiation of

inflow/outflow) have an AutoTemp function: if the sample temperature is too cold, the start of BOD measurement is automatically delayed (by at least 1 hour) until a constant temperature has been reached.

Apart from the automatic storage of 5 measured values (1 value per day), further measured BOD values can be read at all times during or after the period of 5 days, which permits the tracking of check values or measurements over longer periods. The OxiTop BOD Instrumentation measurement system also offers simple operation, improved controllability, and non-toxicity.



Features

- Simple operation
- Non-Toxic
- Stores 100 user-defined routine measurements
- User-friendly on screen guidance for easy operation

Specifications

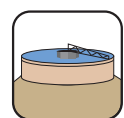
Measuring principle	Respirometric (manometric)
Display	2-digit 7-segment LED, 10 mm
Measured parameter	Digits
Measuring range	0 to 40 digits (+10 digits for overranging)
Accuracy	+ 0.03 psi (+ 2 hPa) or + 1 digit
Admissible measuring temperature	68°F ± 1.8°F (20°C ± 1°C)
Admissible sample temperature (when being filled)	59-68°F (15-20°C)
Power supply	Lithium batteries (260 mAh), 2 x type CR 2430 (3V)
Power consumption	Max. 25 mA (during measurement)
Battery run time	~ 3 years with normal use
Protection class	3 IEC 1010
Protection system	IP 54 IEC 529

EMC	Emissions: EN 50081-1, FCC Class A Immunity: EN 50082-2, NAMUR recommendation
Climate class	2, VDI/VDE 3540
Ambient temperature	Storage: -13°F to +149°F (-25°C to +65°C) Operation: 68°F ± 1.8 F (20°C ± 1 C)
Test mark	CE
Dimensions	H: 2.7in, dia. 2.8in (69 mm, dia. 70 mm)
Weight	Approx. 3 oz. (85 g)

Ordering & Options

Order No.	Description	Price
208214	BOD Measurement OxiTop® Instrumentation IS 6	
208215	BOD Measurement OxiTop® Instrumentation IS 12	
208433	Thermostat Box OxiTop® Thermostat Box	

Applications



Ideal for applications requiring wastewater and water resource management.

“Man— despite his artistic pretensions, his sophistication, and his many accomplishments— owes his existence to a six inch layer of topsoil and the fact that it rains.”

– Unknown

BAP Equipment Ltd

www.bapecquipment.com

Phone: 1-800-561-3600

Global Water