

Chem/Meter 200 Series

Performance Under Pressure

Principle of Operation:

- The 200 Series pumps from **Chem/Meter** are high performance, diaphragm, metering pumps; delivering Best Available Current Technology via the hermetically sealed pumphead and a high precision pump drive. The pump drive converts rotary motion from the motor into reciprocation by means of an eccentric crankshaft. The crankshaft actuates a plunger which in turn displaces hydraulic fluid, allowing the diaphragm to operate hydraulically balanced as it does the actual process fluid pumping. As the diaphragm moves to its rearmost position, the process fluid is drawn into the pumphead, past the suction check valve. When the diaphragm moves forward to displace the process fluid, the suction check valve seats and the fluid is metered into the discharge piping past the discharge check valve.

Design Features:

- The performance envelope of the 200 Series pumps (flows to 91 gph and pressures to 2,000 psig) enables these sealless metering pumps to perform tasks previously handled only by the more complicated and expensive designs. Eliminating this unnecessary complexity and its attendant problems allows the **Chem/Meter** 200 Series pumps to deliver consistent performance, excellent space and energy efficiency, as well as greatly increased Mean Time Between Preventative Maintenance.

These features combine to provide users with the maximum value in controlled volume, positive displacement, reciprocating, metering pumps.

- The modular design of the 200 Series pumps creates flexibility for the future while simplifying maintenance today. Changes in capacity, operating speed or design pressure can be easily accomplished by the exchange of sub-assemblies. Downtime for maintenance is reduced by just exchanging subassemblies instead of having to disassemble the pump.

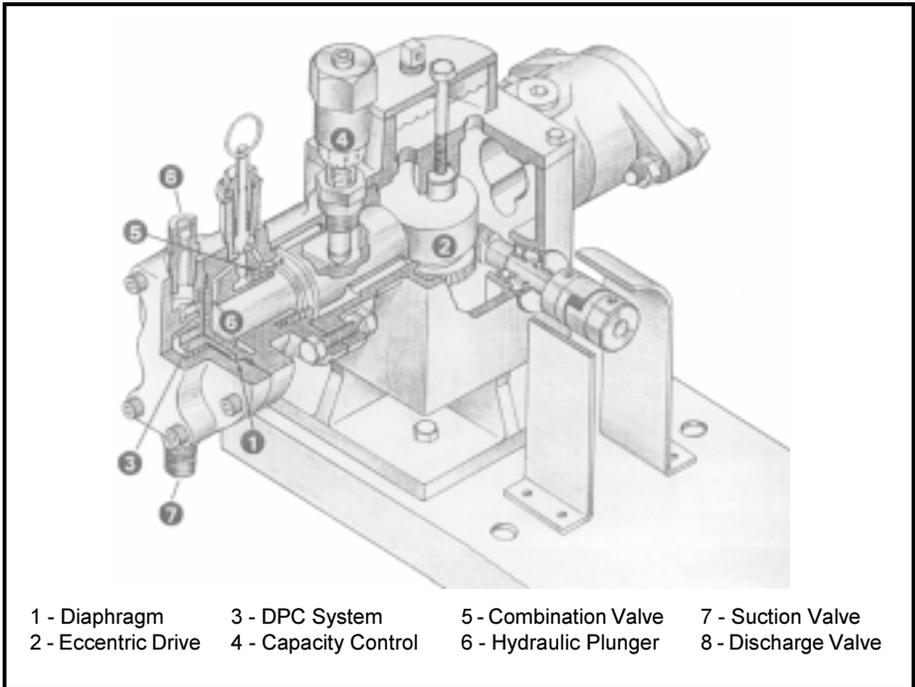
- An optimized liquid end provides reduced hydraulic losses, lessens the NPSH required, and allows the pump to handle high viscosity fluids and slurries. The Chem/Meter Diaphragm Position Control System (DPC System) offers users the industry's best suction lift capabilities and prevents damage from suction line cavitation.

- Precise flow regulation, over the 10:1 turndown ratio, is achieved through the use of manual stroke length adjustment. The desired pump capacity is set by the control knob and the pump delivers at that rate. The adjustment is linear, accurate and maintains its setting during steady-state operation.

- Sinusoidal flow profile lessens the cavitation and pressure spikes common to competitive pumps. It also lessens the mechanical and hydraulic shocks, preventing premature failures.

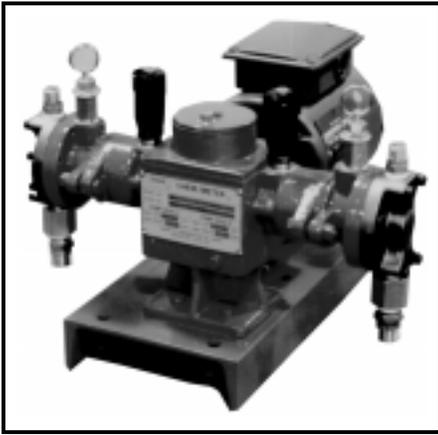
- Unique ball check valves on both the suction and discharge ensure very precise operation. The high efficiency valve design allows a wide range of process fluids to be handled without loss in accuracy, repeatability or linearity.

- All moving parts in the pump operate submerged in an oil bath for excellent lubrication and long pump life.



Chem/Meter

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Custom Feature Selection:

Materials of Construction:

Code	Liquid End	Diaphragm
P	PVC	PTFE
S	316 SS	PTFE
A	Alloy 20	PTFE
H	Hastelloy C	PTFE

Power Supplies Available:

Voltage	Phase	Hertz
115/230	1	60
230/460	3	60
110/220	1	50
220/380	3	50

Options and Accessories:

Alternate Diaphragm Materials.

Back Pressure Valves.

Chemical Feed Systems.

Diaphragm Status Indication.

High Vacuum Liquid Ends.

Liquid End Jacketing.

Piping Manifolds.

Pulsation Dampeners.

Relief Valves.

Spare Parts Kits.

Steady Flow - To eliminate pulsation.

Stroke Counter.

Stroke Frequency Controller.

Stroke Length Controller.

Technical Data:

Accuracy: +/- 1%

NPSHr: 1 psia

Weight: 75 lbs. simplex

Horsepower: 1/8 - 1/2 Hp

Performance Table:

Model Number	Stroke Volume (cubic inches)	Rated Flow (GPH) @ SPM					Max. Operating Pressure	Connection Size
		43	58	87	116	175		
201	0.0018	0.38	0.5	0.75	1	1.5	2,000	3/8" NPT
202	0.0828	0.85	1.1	1.7	2.2	3.4	1,600	3/8" NPT
203	0.1473	1.5	2	3	4	6	800	3/8" NPT
204	0.3313	3.3	4.4	6.6	8.8	13.2	400	3/8" NPT
205	0.589	6	8	12	16	24	200	1/2" X 3/8"
206	1.114	11.4	15	22.7	30.4	45.5	135	3/4" X 1/2"

