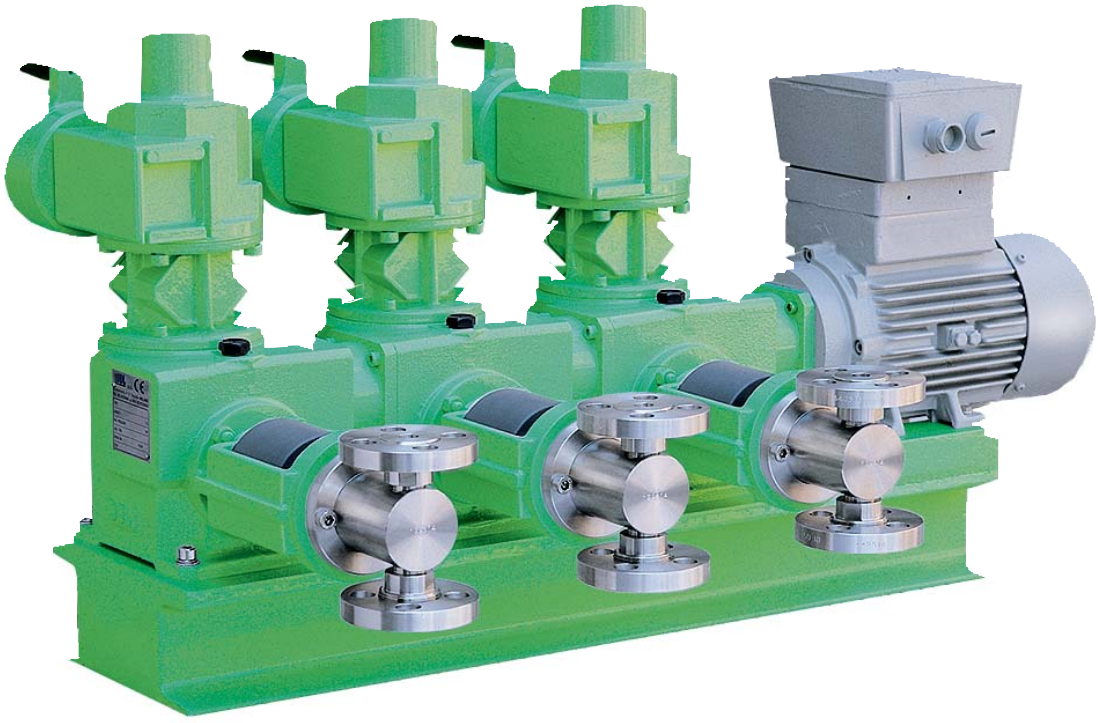
PULSAFEEDER®

An IDEX Water & Wastewater Business

pulsafeeder.com



PulsaPro® PL Series

Plunger Metering & Process Pumps

Pulsafeeder Expertise

Since 1936, Pulsafeeder has been the global leader in fluid handling technology and innovation in chemical dosing. Pulsafeeder has built a foundation of success with thousands of installations in fluid handling applications. Our extensive product breadth enables us to provide the convenience and efficiency of single-source solutions across various industries.

Meets API STD 675

PulsaPro PL Plunger Metering Pumps

The PulsaPro PL Series Positive Return Plunger Metering Pump is the intelligent choice of industrial plants worldwide. Each pump is backed with 35 years of solid technical experience to produce a durable, technically superior pump that can meter products as diverse as molten sulphur to diatomaceous earth. Their heavy-duty construction is designed for continuous 24/7 round-the-clock operation.

Product Specifications

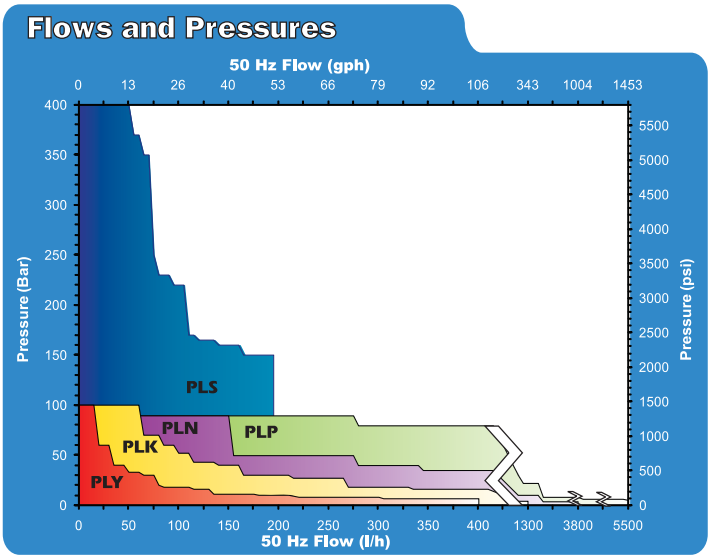
- Flows from 0.4 lph (0.1 gph) to 11,000 l/h (2,906 gph)
- Pressures to 400 bar (5,800 psi)
- API 675 full motion plunger pumps
- Flanged and threaded connections
- Motors 0.37KW to 4KW (0.5HP to 5HP)
- +/-1% steady state accuracy
- +/- 3% repeatability and linearity
- Max. liquid temperature:
  - SS head 90°C (194°F)
  - Special SS 280°C (536°F)
  - PVC 40°C (104°F)
  - PVDF 70°C (158°F)
- Viscosities to 2000 cP std (55,000 cP custom)

Materials of Construction

- Pump head materials-AISI 316L SS, PVC
- Plunger packing reinforced PTFE chevron rings
- Other materials such as Hastelloy, other alloys, PVDF, etc. can be supplied upon demand

Typical Applications

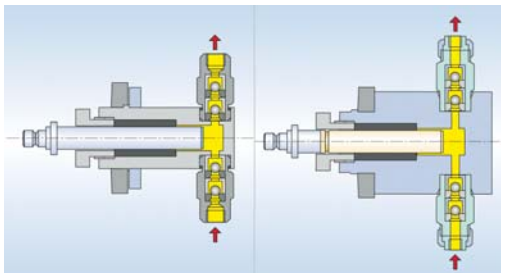
- Methanol (Oil and Gas)
- Polymers
- Pulp and Paper
- Filtration for beverages
- Scale inhibitor
- Demulsifier
- Corrosion inhibitor
- Hydrazine
- Chemical additives
- And many more



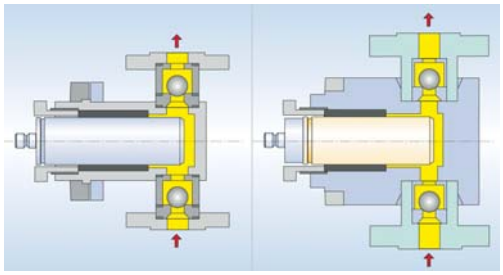
Note: The highest flow and highest pressure was selected to show the overall capability. Consult the individual techsheets for actual flows and pressures.

Model Series	50 HZ Max Flow LPH (GPH)	60 Hz Max Flow LPH (GPH)	Pressure Min-Max BAR (PSI)	Motor KW	Motor HP
PLY15	15 (4)	18 (4.8)	100 (1450)	0.37	0.5
PLY20	28 (7)	33.6 (8.9)	60-80 (870-1160)	0.37	0.5
PLY30	75 (20)	90 (23.8)	30-40 (435-580)	0.37	0.5
PLY40	130 (34)	156 (41.2)	16-22 (232-319)	0.37	0.5
PLY50	210 (55)	252 (66.6)	10-14 (145-203)	0.37	0.5
PLY65	300 (79)	360 (95.1)	8-10 (116-145)	0.37	0.5
PLY75	400 (106)	480 (127)	6.5-9 (94-131)	0.37	0.5
PLK20	58 (15)	69.6 (18.4)	100 (1450)	0.75	1
PLK25	93 (25)	111.6 (29.5)	60-80 (870-1160)	0.75	1
PLK30	135 (36)	162 (42.8)	43-70 (624-1015)	0.75	1
PLK40	250 (66)	300 (79.3)	25-40 (363-580)	0.75	1
PLK50	400 (106)	480 (127)	15-27 (218-392)	0.75	1
PLK65	665 (176)	798 (211)	9-16 (131-232)	0.75	1
PLK80	1000 (264)	1200 (317)	6-10 (87-145)	0.75	1
PLK100	1300 (343)	1560 (412)	4-6 (58-87)	0.75	1
PLN30	150 (40)	180 (47.6)	90 (1305)	1.5	2
PLN40	420 (111)	504 (133)	35-50 (508-725)	1.5	2
PLN50	650 (172)	780 (206)	20-30 (290-435)	1.5	2
PLN65	1100 (291)	1320 (349)	12-20 (174-290)	1.5	2
PLN80	1650 (436)	1980 (523)	8-14 (116-203)	1.5	2
PLN100	2700 (713)	3240 (856)	5-8 (73-116)	1.5	2
PLN120	3800 (1004)	4560 (1205)	3.5-6 (51-87)	1.5	2
PLP40	420 (111)	504 (133)	80-90 (1160-1305)	4	5
PLP50	650 (172)	780 (206)	45-65 (653-943)	4	5
PLP65	1100 (291)	1320 (349)	27-40 (392-580)	4	5
PLP80	1650 (436)	1980 (523)	17-27 (247-392)	4	5
PLP100	2700 (713)	3240 (856)	11-15 (160-218)	4	5
PLP120	3800 (1004)	4560 (1205)	8-10 (116-145)	4	5
PLP158	5500 (1453)	6600 (1744)	5-6 (73-87)	4	5
PLSY10	5.5 (1)	6.6 (1.7)	300 (4351)	0.37	0.5
PLSY15	13 (3)	15.6 (4.1)	140-160 (2031-2321)	0.37	0.5
PLSK10	10 (3)	12 (3.2)	350-400 (5076-5802)	0.75	1
PLSK15	20 (5)	24 (6.3)	220-250 (3191-3626)	0.75	1
PLSK20	42 (11)	50.4 (13.3)	120-160 (1740-2321)	0.75	1
PLSN15	18 (5)	21.6 (5.7)	350-400 (5076-5802)	1.5	2
PLSN20	68 (18)	81.6 (21.6)	180-260 (2611-3771)	1.5	2
PLSN25	105 (28)	126 (33.3)	110-150 (1595-2176)	1.5	2
PLSP20	70 (18)	84 (22.2)	350-400 (5076-5802)	4	5
PLSP25	105 (28)	126 (33.3)	220-250 (3191-3626)	4	5
PLSP30	195 (52)	234 (61.8)	150-170 (2176-2466)	4	5

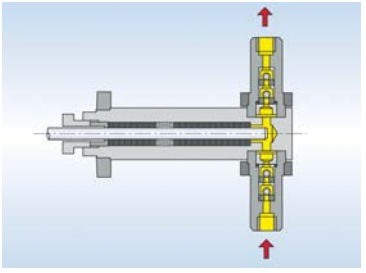
Plunger Pump Technology



PLY Plunger Pump



PLK, PLN and PLP Plunger Pump



PLS Plunger Pump

PulsaPro PL Configurations

PLY

- Max Flow Rate 400 l/h (106 gph)
- Max Pressure 100 bar (1,450 psi)
- Stroke: 11/17mm
- Flanged and threaded connections
- Materials: AISI 316LSS & PVC

PLK

- Max Flow Rate 1,300 l/h (343 gph)
- Max Pressure 100 bar (1,450 psi)
- Stroke: 30mm
- Flanged connections
- Materials: AISI 316L SS & PVC

PLN

- Max Flow Rate 3,800 l/h (1,004 gph)
- Max Pressure 90 bar (1,305 psi)
- Stroke: 50mm
- Flanged connections
- Materials: AISI 316L SS & PVC

PLP

- Max Flow Rate 5,500 l/h (1,453 gph)
- Max Pressure 90 bar (1,305 psi)
- Stroke: 50mm
- Flanged connections
- Materials: AISI 316L SS & PVC

PLS

- Max Flow Rate 195 l/h (52 gph)
- Max Pressure 400 bar (5,800 psi)
- Stroke: 11, 17, 30, and 50mm
- Flanged and threaded connections
- Materials: AISI 316L SS, SAF 2205 Duplex Steel

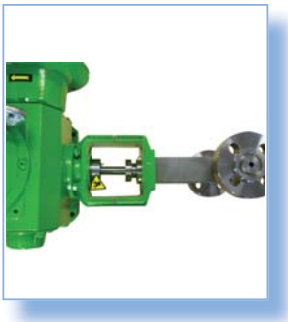
Features and Benefits

Heavy-Duty Industrial Construction Design

- 24/7 continuous operation
- Long gear and operational life, exceeds API 675
- Robust and intuitive design
- Full motion design

Smooth, Manual Flow Rate Adjustment

- Stroke can be set when the pump is stopped or running
- 100:1 turndown capability
- Large easy-to-turn stroke adjustment with a large easy-to-read dial scale
- +/-1% steady state accuracy within 10% and 100% of capacity
- +/- 3% repeatability and linearity within 10% and 100% of capacity



Unique Plunger Design

- Positive return mechanism with mechanical return of the plunger
- Easy to service and maintain
- Visual indication and access window for plunger and seal servicing
- Optional front warming jacket available
- Double check valves for higher dosing accuracy

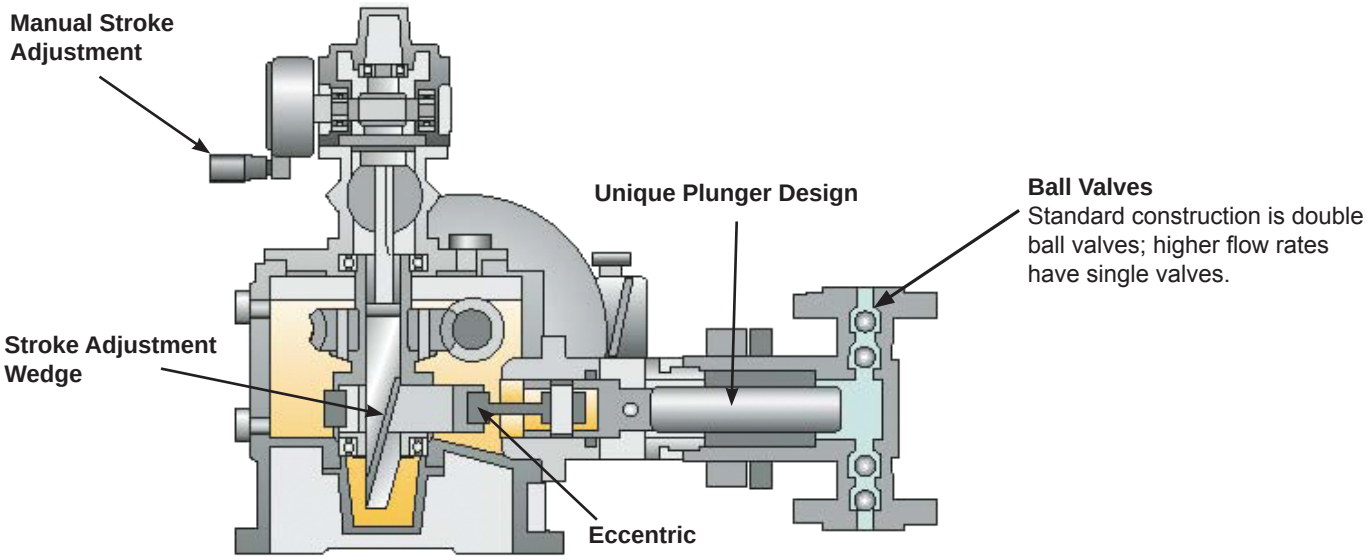
Multiplexing Units

- Optional common gravitational hand-wheel adjustment
- Power transmission through multiple units is easily achieved by common, low-torque shafts
- Each pumphead can have a different stroke rate, as each has its own reduction gear
- Simplex, duplex, triplex, quadraplex, etc
- Different sizes or models can be combined or built to specification

Controller Ready

- MPC Vector (panel mounted only) - speed control
- Electronic Actuator Z type - stroke control
- Electronic Actuator (explosion proof) - stroke control
- Pneumatic Actuator - stroke control

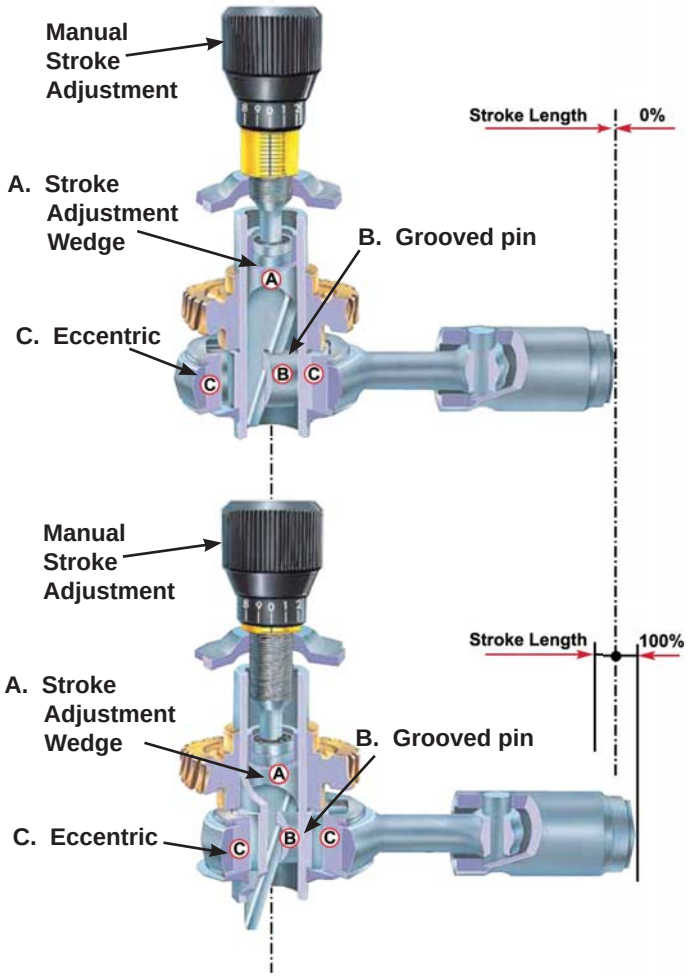
PulsaPro PL Components



Stroke Adjustment

The adjustment of the plunger stroke is linear, accurate and without backlash. Turning the adjustment knob causes the wedge “A” to slide vertically within the grooved pin “B” fitted, with zero clearance, in the eccentric “C”.

The result is that the vertical movement of the wedge is translated into horizontal movement of the eccentric and, in turn, the plunger. High adjustment accuracy is further enhanced by the use of the gravitational hand-wheel dial.



Controls

Electric Actuator Z Type

- IP 66 STD (NEMA 4X)
- Manual emergency override
- Anti-condensation heater (optional)
- Non-standard voltages and frequencies
- External automatic/manual selector
- Flow rate is adjusted according to following input signals:
  - 4-20 mA, 0-20 mA, 20-4 mA, 0-10 V
  - Pulses (0-2 Hz, 0-30 Hz)
  - RS 485 protocol
  - PROFIBUS DP - VØ

Electric Actuator Z Type

Electric Actuator - Explosion Proof

Electric Actuator - Explosion Proof

- ATEX II 2GD EEx-d IIB T4 IP6X
- 115/230V-1-50/60 Hz
- 4-20 mA signal and feedback
- Manual emergency override
- Anticondensation heater (on demand)

Pneumatic Actuator

- ATEX II 2G c IIC T6
- Pneumatic actuator type WA
- Air instrument 3-15 psi
- Air supply 4-6 bar (58-87 psi)
- Emergency manual override

Pneumatic Actuator

Manual Adjustment

Manual Stroke Adjustment

0-100% manual adjustment via:

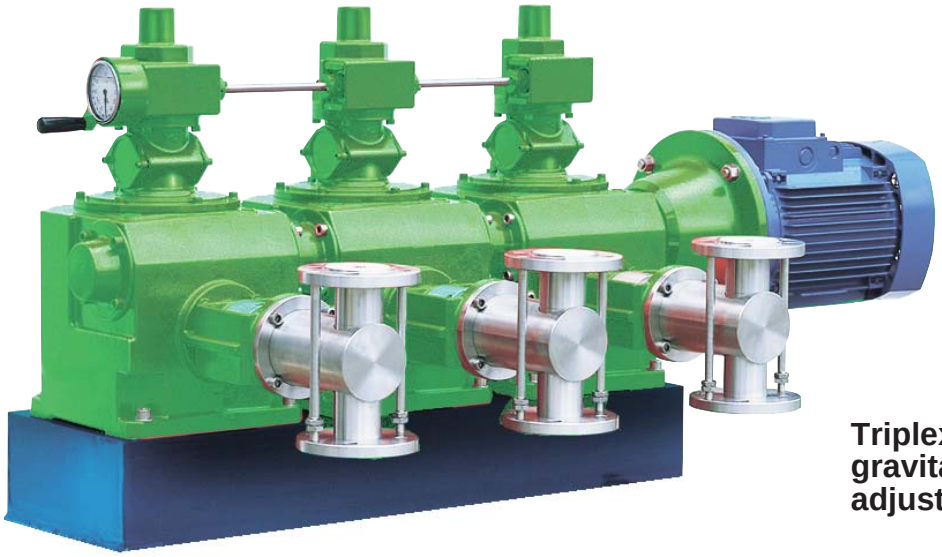
- Knob with micrometer scale
- Gravitational dial handwheel

MPC Vector

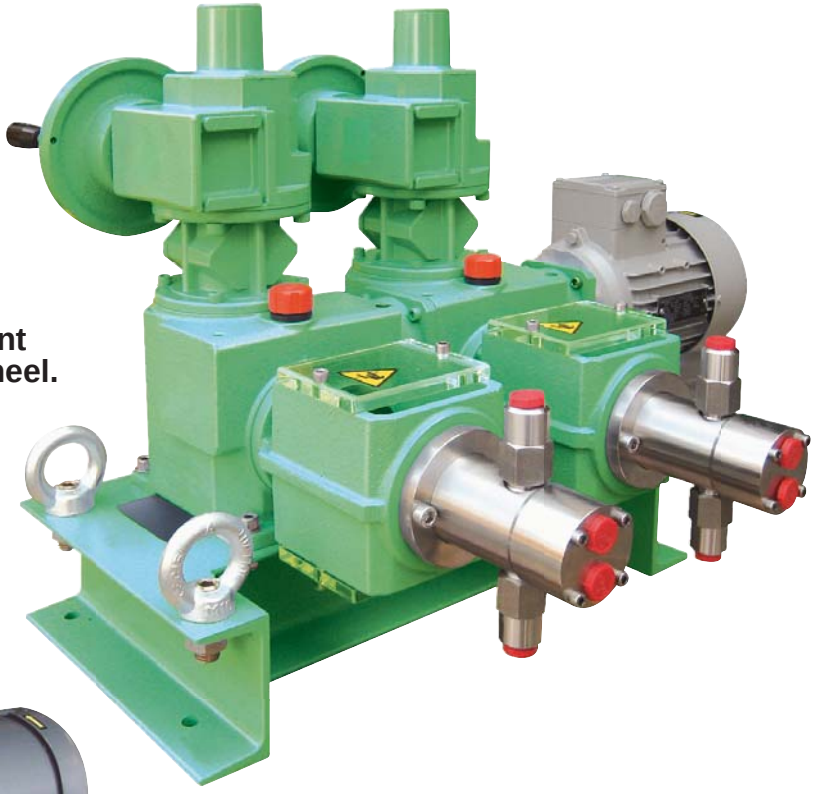
- Automatically controls and displays flow with a 4-20 mA input, handheld keypad, and manual stroke control
- Controls Pulsafeeder metering pumps up to 10:1 turn down ratio
- Optionally, the handheld can be mounted up to 304 meters (1,000 feet) away from the pump
- Handheld displays flow rate of the pump in GPM, GPH, LPM, LPH

MPC Vector

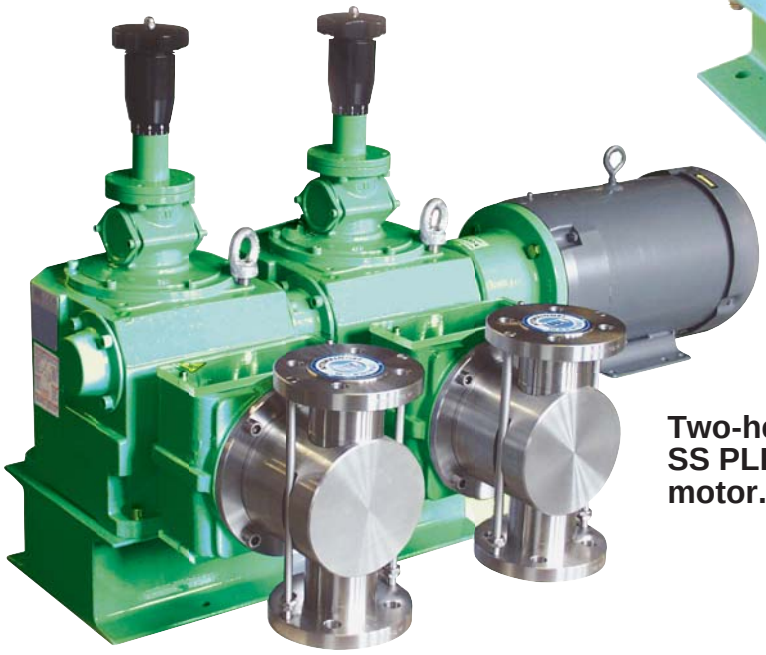
Systems & Multiplexing



Triplex pump with common gravitational dial handwheel adjustment.



Two-headed PLY with frontal warming jacket and independent manual adjustment via handwheel.



Two-headed AISI 316 L SS PLP pump with NEMA motor.

Parts & Accessories

PULSAFEEDER pulsafeeder.com GENUINE PARTS

A **KOPkit (Keep On Pumping)** can help reduce downtime and put you back in business fast. Use KOPkits for preventive maintenance and to ensure continuous high performance from your Pulsafeeder metering pump.

Y-Strainers arrest out debris in pipelines, protecting equipment and processes. They prevent premature wear of the rotating components within a pump.

Calibration Columns are constructed of clear PVC tubes with PVC end caps, or an option for Borosilicate glass with Teflon end caps, and should be sized for a 30-second draw down or greater.

Pressure Relief Valves prevent an overpressurization situation from ever damaging your pumps or pipes. Overpressurization can occur when a valve is closed or a blockage occurs. They are always recommended equipment for any pump or skid system.

PulsaLube is the only oil Pulsafeeder recommends for use in metering and transfer pumps. Pulsalube is a superior blend of oils designed to provide optimal lubrication and extend equipment life.

Pressure Gauges are relied on to measure pressure in the system. Proper pressure is necessary to insure flow. Pulsafeeder Pressure Gauges are accurate and reliable.

Pulsation Dampeners improve pump system efficiency by removing pulsating flows from positive displacement pumps.

Back Pressure Valves provide positive back pressure for systems with less than the minimum required pressure difference between the discharge and suction side of the metering pump to assure best metering performance.

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An ISO 9001 and ISO 14001 Certified Company