PULSAFEEDER®
ENGINEERED PRODUCTS

- **Max Flow:** up to 170 gph (643 lph)
- **Pressure:** up to 4,000 psi (276 bar)
- **Temperature:** up to 230˚F (110˚C)
- **Viscosity:** up to 3,000 cPs

CE Ex **API-675**

PULSAR®
HYDRAULIC & MECHANICAL METERING PUMPS

PULSA.COM/PULSAR

PULSAFEEDER EXPERTISE

For over 70 years, Pulsafeeder, Inc. continues to be a proven leader in diaphragm and dosing metering technologies. With extensive experience in providing fluid handling solutions, our pumps and systems are designed to handle your toughest applications. Known for their rugged construction and dependable performance, our products are of the highest level of manufacturing excellence and quality control.

PULSAR PUMPS

Pulsar leak-free, hydraulically balanced and mechanical diaphragm metering pumps represent a generation leap in chemical feed technology, combining optimum features and maximum benefits. They are engineered for precise dosing and long-term dependability to deliver superior value. Exclusive hydraulic diagnostics provide immediate visual intelligence about pump and system performance. The Pulsar HypoPump® configuration is the ideal choice for sodium hypochlorite, off-gassing or other difficult to handle fluids.

PRODUCT SPECIFICATIONS

- Flows from .018 gph to 170gph (.068 lph to 643 lph)
- Pressures up to 4,000 psi (276 bar)
- Temperatures up to 230°F (110°C)
- Viscosities up to 3000 cPs
- Turndown capacity adjustable up to 1,000:1
  - 10:1 Manual
  - 10:1 DLC
  - 1,000:1 MPC
  - 10:1 ECA
  - 50:1 DLCM
- Accuracies to +/-0.5% of set point

STANDARD MATERIALS OF CONSTRUCTION

- **Wet End:** 316LSS, PVC
- **Diaphragm:** Composite or Solid PTFE, PTFE-faced Composite
- **Pump Body:** Aluminum

Note: See Custom Engineering (page 7) for additional materials

- **Valve Ball:** 316LSS, Alumina Ceramic
- **Valve Gaskets:** PTFE
- **Valve Seat:** 316LSS, PVC

MOTOR POWER AND FRAME

- 25H: 0.33 hp (0.25 kW), NEMA 56C, IEC 71B14
- 55H: 0.75 hp (0.55 kW), NEMA 56C, IEC80B14
- Shadow: up to 0.75 hp (0.55 kW), NEMA 56C, IEC 71B14, 80 B14

CONNECTION TYPES

- NPT
- Raised-face Flange
- ANSI

PULSAR CONFIGURATIONS

Pulsar 25HJ
Pulsar 25HL

Pulsar 55H
Pulsa 55HL

Pulsar
Hypo$_2$Pump

Pulsar Shadow

Pulsar Shadow
Hypo$_2$Pump

MARKETS & TYPICAL APPLICATIONS

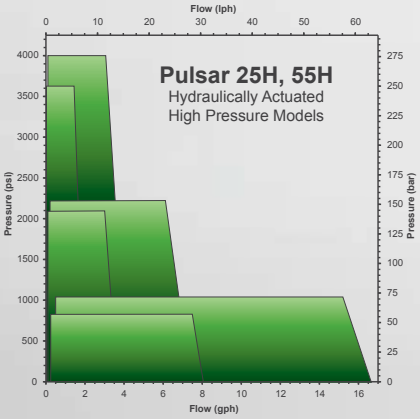
Markets

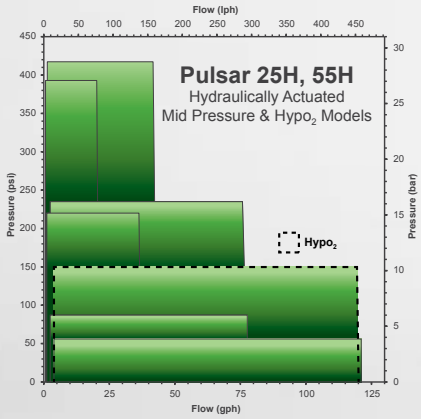
- Chemical Processing
- Petrochemical
- Oil & Gas
- Water Treatment – Municipal
- Water Treatment – Power
- Wastewater Treatment

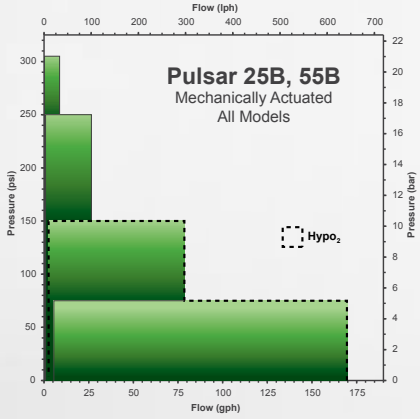
Typical Applications

- Corrosion Inhibitors
- Anti-scalants
- Sodium Hypochlorite Injection
- Disinfection
- pH and Odor Control
- Chemical Feed

PERFORMANCE







PULSAR TECHNOLOGY

Hydraulically Actuated Diaphragm Technology (Pulsar 25H, 55H)

Pulsar's diaphragm is hydraulically balanced between the process and hydraulic fluids. The piston reciprocates through a precisely sized cylinder resulting in positive displacement of a controlled volume of hydraulic fluid. This action causes the diaphragm to reciprocate and precisely dose process fluid through the suction and discharge valve mechanism. The benefits of this include:

- Hydraulically balanced diaphragm does no work
- Pump and diaphragm life is maximized
- Optimum accuracy and performance
- Maximized pressure capabilities

Mechanically Actuated Diaphragm Technology (Pulsar Shadow)

Pulsar Shadow's mechanically actuated diaphragm is attached to the reciprocating piston. The reciprocating diaphragm displaces a controlled volume of process fluid through the suction and discharge valve mechanism. The benefits of this include:

- Eliminates hydraulic fluid
- Simplifies commissioning and maintenance
- Minimizes power requirements
- Economical

Duplex Configurations

The coupling of two pumps to provide one or all of the following features:

- Provide precise proportioning or synchronization
- Provide a greater turndown ratio
- Improve efficiency
- Reduce pulsations

De-gas Solution: $HYPO_2$ Valve Option

- The ideal solution for injection of sodium hypochlorite and other off-gassing fluids
- Fully integrated closed loop design, no external valves or piping required
- Balanced, low stress, dynamic seal ensures extended operating life
- 3 year valve warranty
- Prevents vapor lock

FEATURES & BEN

PATENTED HYDRAULIC DIAGNOSTICS

- Immediate visual indication of pump performance
- Simple to monitor
- Instantaneous auditing of system overpressurization, entrained air in hydraulic oil, diaphragm integrity and proper oil level

PUSH-TO-PRIME VALVE

- External spring-loaded button allows hydraulic fluid priming
- Releases entrained air trapped in the oil
- Visual indication of air bleed through diagnostic window

HYDRAULIC PERFORMANCE VALVE

- Threads directly into pump head for a secure, leak-free attachment
- Provides resilience to system upsets
- Replenishes hydraulic oil on suction stroke only
- Eliminates the need for process side dish plate
- Lowers NPIP requirement to 3 psi

HYDRAULIC BYPASS VALVE

- Provides protection for pump overpressurization
- Externally adjustable
- Continuous visual inspection

FOUR BOLT TIE BAR

- Provides stability and resistence to pipe stress
- Helps to promote leak free operation
- Contributes to quick removal of check valves without removing piping
- Intergral O-ring eliminates leaks

HYDRAULICALLY BALANCED DIAPHRAGM DESIGN

- Diaphragm is “sandwiched” between process fluid and hydraulic oil
- No stress on diaphragm contributes to a longer life
- Assists in providing a precise, metered dose every time
- Integral O-ring eliminates leaks

E F I T S

MANUAL STROKE ADJUSTMENTS

- Large easy-grip hand wheel
- Easy to read dial with large numbers
- Adjustable from 0%-100% stroke length
- Resolution of +/-0.5% for accurate control
- Automatic stroke lock mechanism to maintain the desired setting

PRECISION BALL VALVE DESIGN

- Knife edge seats
- Accurate, efficient, flow transfer
- Simple three component design
- 4-point flute guided

NON-VENTED GEAR BOX DESIGN

- Designed with fins for strength and heat dissipation
- Double rotary lip seals protect against contaminants
- Can be mounted on either side of the eccentric box
- Modular design for easy removal

THREE MOTOR MOUNTING ARRANGEMENTS

- Provide options for placement in existing footprints
- Vertical, Horizontal and 45˚ inclines
- Sturdy, safe and secure

CLOSE-COUPLED MOUNTING

- Eliminates the potential for damage due to misalignment
- Helps eliminate replacement costs due to wear and tear from misalignment
- Motor rotation does not affect pump performance

5 YEAR DRIVE TRAIN WARRANTY

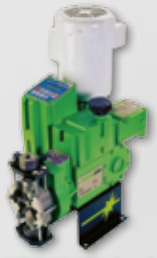
- 5 year warranty on gearbox
- 1 year warranty on all wet end replacement items
- Extended warranty also available

CONTROL & LEAK DETECTION OPTIONS

Pulsafeeder offers a wide variety of control options, from the simplistic ECA to the state-of-the-art MPC. Microprocessor controlled DLC, DLCM, and ECA provide system diagnostics and recovery unparalleled by any other manufacturer. System health monitoring such as PULSAlarm® leak detection systems respond to diaphragm rupture. Combining PULSAlarm® leak detection with exclusive Pulsar digital logic controllers provides the industry's only system monitoring and automatic reaction to process variations and system fluctuations.

MPC METERING PUMP CONTROLLER

- Up to 1,000:1 turndown within +/-2% accuracy on set point
- Security code to lock out unauthorized users
- Detachable handheld keypad with 4.5 ft (1.3 cm) of cable which can be mounted up to 1,000 ft (304 m) away from pump)
- UL, cUL, CE (0.5 HP to 1 HP only)
- Displays pump output in units of flow (gph or lph)
- NEMA Type 4X, IP 56 rating on both pump mounted and handheld keypad enclosures (requires different rated motor)



PULSAR DLC DIGITAL STROKE LENGTH CONTROLLER
PULSAR DLCM DIGITAL STROKE LENGTH & MOTOR SPEED CONTROLLER

- 10:1 (DLC) and 50:1 (DLCM) turndown within 0.5% accuracy on setpoint
- Exclusive on-board flow and signal calibration
- Local and remote motor start and stop control
- Standard NEMA Type 4X, IP 66
- UL, cUL, CE
- PULSAlarm® leak detection system interface
- Monitors and reacts to process variations such as loss of power or signal
- Modular design is easy to retrofit to an existing manually controlled pump

ECA ELECTRONIC CONTROL ACTUATOR

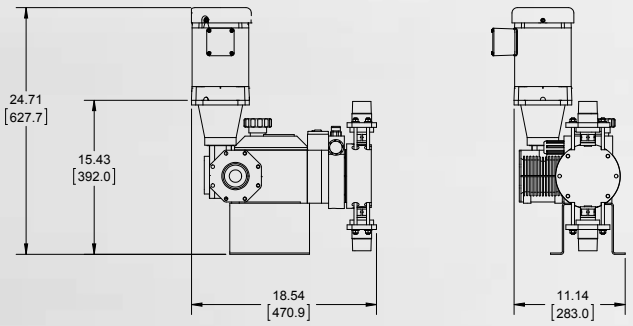
- Stroke length controller
- NEMA Type 4X, IP 66
- NEMA Type 7, IP 66 (ECA-XP)
- UL, cUL, CE
- ATEX, IECEx (ECA-XP)
- Simple 4-20 mA analog input and output calibration

PULSALARM® PRESSURE LEAK DETECTION

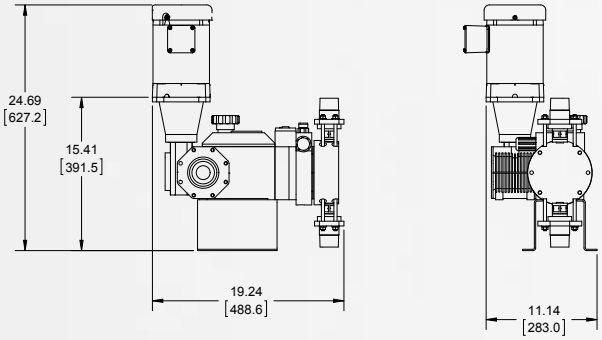
- Activates an alarm or stops the pump at the first sign of leakage
- Designed to contain full rated pressure up to 3,000 psi (207 bar)
- Supplied with a dual Teflon® diaphragm
- Can be directly interfaced with ECA, DLC and DLCM
- Available for both metallic and non-metallic reagent heads
- Rated NEMA Type 7, EEMAC7 Class 1, Division 1, Groups C&D, Class 1, Zone 1, Groups IIA and IIB
- UL, cUL, CE, ATEX

DIMENSIONAL DRAWINGS - PULSAR 25H & 55H

25H



55H



The dimensions shown may differ depending on pump configuration. Dimensions subject to change without notice.

CUSTOM ENGINEERING

- Additional materials: Alloy C, Alloy 20, Monel, DuplexSS, Titanium, PVDF
- Minimum temperature to -10°F (-23°C)
- Multiplex configurations: up to eight reagent heads
- Manual de-gas valve
- Custom electronic controls
- Chemical feed systems
- Application consulting

ENGINEERED SOLUTIONS

Pulsafeeder, Inc. is a leader in providing metering pump technologies for both stand-alone pumps and skid mounted configurations. By listening to the needs of our customers, Pulsafeeder engineers and fabricates skids to your specifications, and ensures they are compliant with industry and international standards.

We understand that each chemical has its own unique set of challenges that must be taken into consideration in the design, selection, and application of the pump systems. No matter what chemicals you are dosing, safety, reliability, and precise control are required to optimize the chemical reaction and reduce operating costs.

Known for their rugged construction and dependability, our pumps and systems are manufactured to the highest level of performance and quality. Along with providing integrated engineering solutions, we offer full warranty packages along with exceptional after sales service.

PULSAFEEDER®
GENUINE PARTS

PARTS, KITS, & ACCESSORIES

Pressure Relief Valves protect system and sensitive instruments from overpressurization.

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

Pulsation Dampeners are used as an energy storage device. They provide a constant velocity stream to or from the pump. They can also be used as a system shock suppressor and thermal expansion compensator.

Pressure Gauges are relied on to measure pressure in the system. Proper pressure is necessary to accurately ensure flow.

Calibration Columns are Borosilicate glass columns available with PVDF end caps, clear PVC tubes with PVC end caps and should be sized for a 30-second draw down.

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. They assure optimum metering performance and prevent siphoning.

We offer KOPKit® (Keep on Pumping kits) designed to guard against unnecessary downtime and assure the highest level of efficient and uninterrupted service from your pump. In the event of a breakdown, one kit will put you back in business fast!

PULSAFEEDER®
ENGINEERED PRODUCTS

For More Information, Contact Your Authorized Pulsafeeder Representative

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FIND AN AUTHORIZED REPRESENTATIVE

IDEX FLUID & METERING

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