

# PULSA SERIES<sup>®</sup>

HYDRAULIC DIAPHRAGM METERING PUMP



**Flow:**  
up to 2,292 gph (8,675 lph)



**Pressure:**  
up to 3,625 psi (250 bar)



**Temperature:**  
up to 250°F (121°C)



**Viscosity:**  
up to 1,000 cPs



Ex CE API-675

“NSF/ANSI/CAN 61”  
“NSF/ANSI 372”

**PULSAFEEDER<sup>®</sup>**

# PULSA SERIES

## PULSAFEEDER EXPERTISE

For over 80 years, Pulsafeeder, Inc. continues to be a global leader in chemical dosing innovation and fluid handling technology. 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.

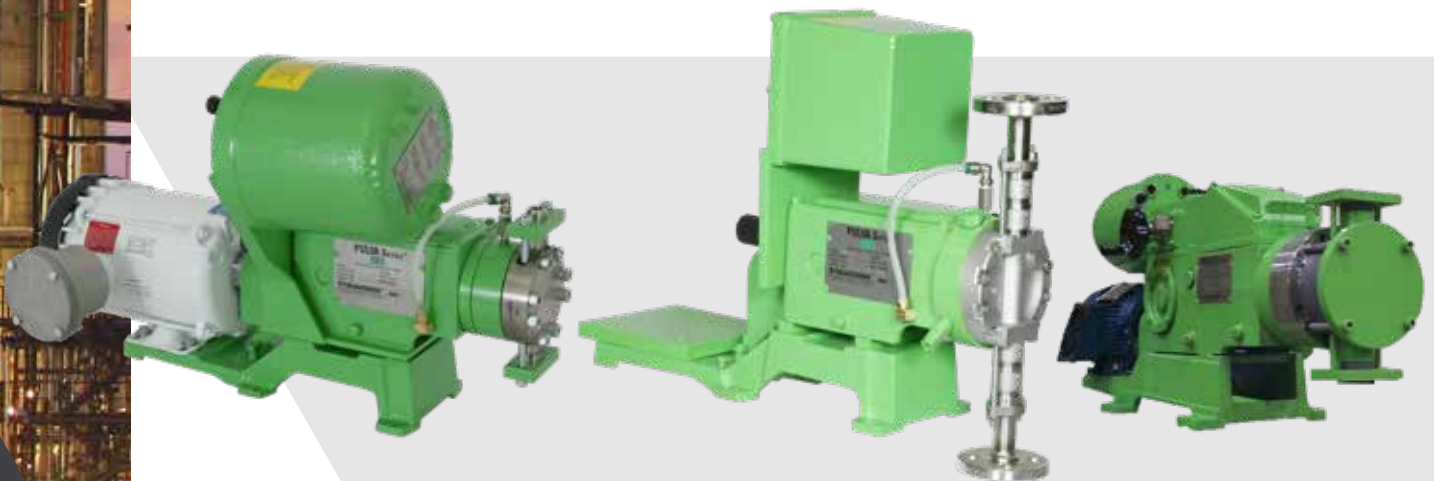
Well known for its rugged design and history of long service, the Pulsa Series positive displacement, reciprocating metering pump has remained a customer favorite for over seventy years. Pulsa Series pumps combine the high efficiency of a plunger pump with the sturdiness of a diaphragm seal to eliminate leakage. Available in a range of materials, Pulsa Series pumps can handle most chemicals. The Pulsa Series pump is the “go to” pump for reliability and success.

- Constant delivery independent of pressure changes
- High efficiency, low horsepower requirements
- Positive displacement pump, measured amount displaced with each revolution
- Accurate, repeatable, linear

## PRODUCT SPECIFICATIONS

- Flows to 2,292 gph (8,675 lph)
- Pressures to 3,625 psi (250 bar)
- Standard fluid temperatures from 40°F (4.4°C) to 180°F (82°C) for metal or 150°F (62°C) plastic reagent head. Extended temperatures available with special construction.
- Viscosities up to 1,000 cPs standard or 5,000 cPs with special construction
- 10:1 turndown
- Accuracy +/-1% rating

## MODELS



Pulsa Series 680 with NEMA 7  
ELMA Stroke Control

Pulsa Series 880 NEMA 4X with  
ELMA Stroke Control

Pulsa Series 7120 with  
NEMA 4X XAE Stroke  
Control



## MARKETS & TYPICAL APPLICATIONS

### MARKETS:

- Chemical Processing
- Petrochemical
- Oil & Gas
- Power & Energy
- Wastewater Treatment
- Potable Water Treatment
- General Industries

### TYPICAL APPLICATIONS AND FLUIDS

- Amines
- Oxygen Scavengers
- Oil additives
- Demulsifiers
- Methanol
- Corrosion inhibitors
- Anti-scalants
- Defoamers
- Disinfectants
- Acids
- Caustics
- Biocides
- Ethylene Glycol
- Polymers
- Bleaches
- pH Control
- Solvents
- Dyes/Inks
- Catalysts
- Cleaning Agents
- Slurries
- Other Chemical Feed

## MATERIALS OF CONSTRUCTION

**Wet End:** 316LSS, PVC, PTFE, Alloy C, Monel®, Nickel, Polypropylene and more

**Flat Diaphragm:** PTFE, PFA and metallic

**HYDRAtube Diaphragm:** FKM, CSM, PFA

**HYDRAcone Diaphragm:** FKM, CSM

**Pump Body:** Cast Iron

**Pump Base:** Steel, Stainless Steel



Pulsa Series 7440



Pulsa Series 7660

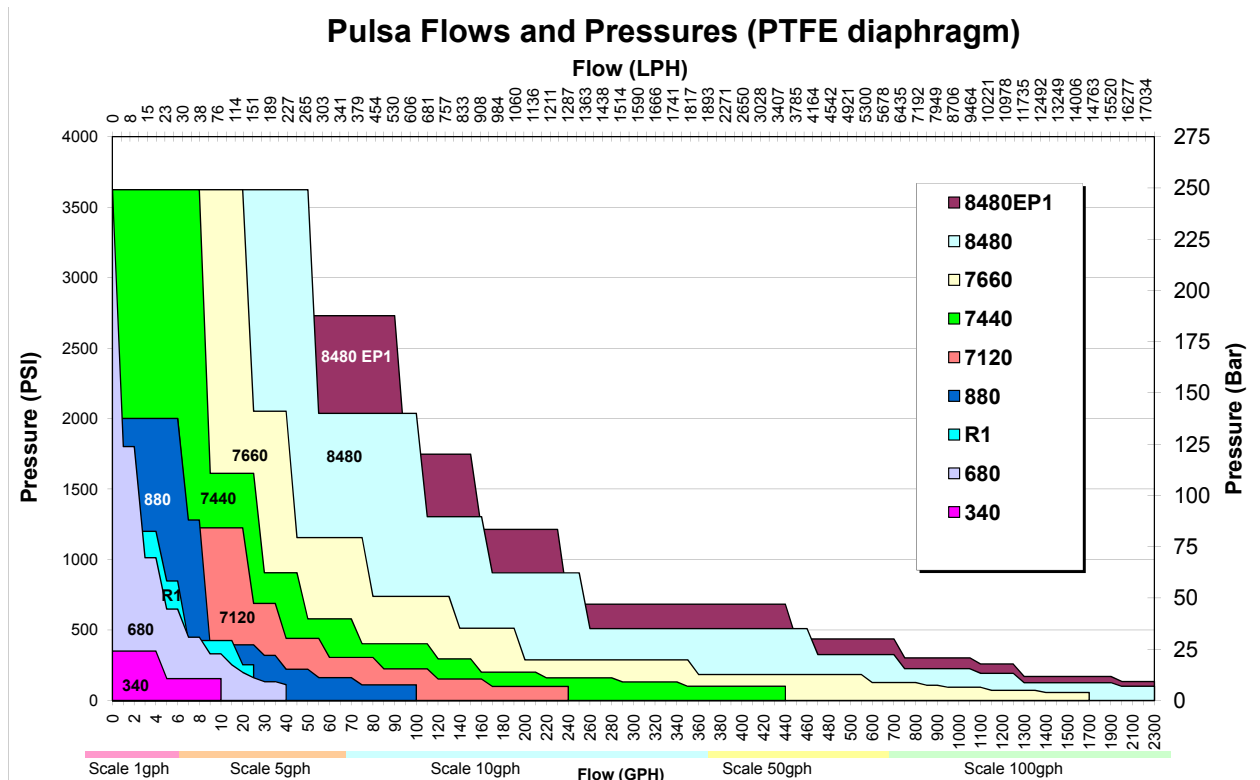


Pulsa Series 8480 NEMA 7  
XAE Stroke Control

Monel® is a registered trademark of Special Metals Corporation.

# PULSA SERIES

## PERFORMANCE



## CONTROL OPTIONS

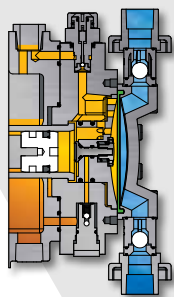
### XAE



- Available for PULSA 680, 880, 7120, 7440, 7660, and 8480
- API compliant design to meet tough industrial specifications
- NEMA 4 or NEMA 7 option for protection in most hazardous environments
- Simple user interface – manual override
- Isolated 0-20 mA input and output to assure signal integrity for accurate position control and feedback
- Brushless DC stepping motor for precise positional control and long life
- Sealed planetary gear box generates high output torque for actuation under pressure
- Continuously tracks manual setting adjustments (even when the power is removed) eliminating zeroing on startup for ready-to-go operation
- Designed for control panel integration – accommodates industrial grade wire gauges, dry contact inputs

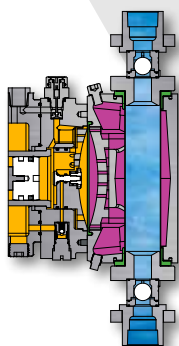


# TECHNOLOGY



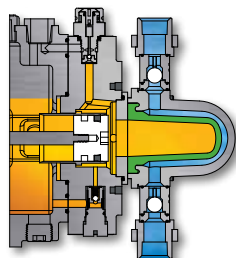
## FLAT DIAPHRAGM

The flat diaphragm construction is the standard design ensuring high performance metering in a leak-free operation. Pulsa Series diaphragms are available in a variety of materials and can handle a wide range of chemicals. As with all Pulsa Series diaphragm constructions, the flat diaphragm is hydraulically balanced and operates stress free, providing exceptional life and accuracy. The dish plates prevent over deflection of the diaphragm. There is no contact with moving parts. With typical diaphragm thicknesses of .060" (1.52mm), this is one durable diaphragm.



## HYDRATUBE®

The HYDRATube® is the choice for sheer sensitive, high viscosity fluids and slurries. Its straight, large, flow through design eliminates clogging and flow restrictions. It offers double diaphragm safety as standard as well as optional slurry valves. Available in FKM, CSM or PFA, it can be utilized with the most corrosive or acidic chemicals. Optional ChemAlarm monitors the electrical conductivity of the intermediate liquid between the HYDRATube® and secondary diaphragm to detect diaphragm failure and, can signal an alarm or stop the pump.



## HYDRACONE®

The HYDRACone's self-priming head features a conical elastomer diaphragm. It is particularly well suited for high-lift conditions, high viscosities, and low density slurries. It has a straight, flow through design and optional slurry valves. The HYDRACone® is available in high performance fluorocarbon elastomers such as FKM and chlorosulfonated polyethylene (CSM).

## ELMA



- Available for PULSA 680 and 880
- Four standard analog inputs (4-20 mA, 1-5 VDC, 1-5 mA, 10-50 mA)
- Fast response time (0-100% in 15 seconds)
- NEMA 4 or NEMA 7 option for protection in most hazardous environments
- Easy installation and start up
- Simplified service
- Low power consumption (60 watt max)
- Easy to install, field retrofit kit

## PNEUMATIC

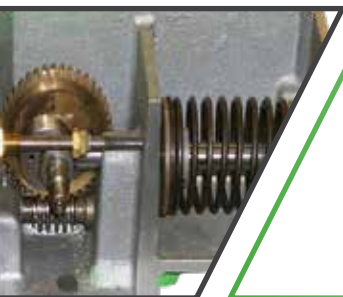
- Available for PULSA 680, 880, 7120, 7440, 7660, and 8480
- 0%-100% signal (optional on 680 and 880)
- Fully enclosed operating mechanism
- 3-15 psi instrument signal standard
- Alternative psi signal standards available, including split ranging
- Ideal for stringent XP areas
- Designs for natural gas operations available
- Transducer options available for converting mA signal to pneumatic signal

# FEATURES & BEN



## 3 HYDRAULIC VALVES

- Automatic Air Bleed automatically releases any air in the hydraulic system
- Hydraulic Make-Up Valve replenishes any oil lost during normal operation
- Hydraulic Bypass Valve releases excessive hydraulic pressure



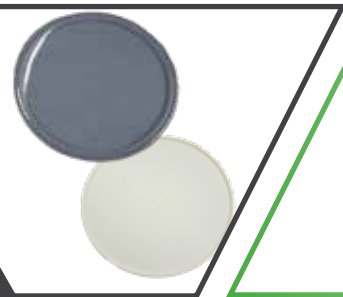
## WARRANTY

- 5 year on gear rain
- 1 year on wear parts
- Extended warranty also available



## HYDRAULIC BYPASS VALVE

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



## DURABLE FLAT DIAPHRAGM

- Material choices: PTFE, CSM, FKM and metallic construction
- Integral o-ring seal design assures solid seal with no leakage
- Hydraulically balance, no wear point on diaphragm



## NON-VENTED GEARBOX DESIGN

- Fully sealed, non-vented gearbox prevents ingress of contaminants
- Gearbox meets IP56 rating for use in the harshest environments
- Super compact design allows for installation in the tightest areas



# EFITS

## 4-BOLT TIE BAR

- Provides stability and resistance to pipe stress
- Helps to promote leak-free operation
- Allows for easy check valve removal without disconnecting piping



## MANUAL STROKE ADJUSTMENT

- Large easy-grip hand wheel with easy-to-read dial
- Adjustable from 0%-100% stroke length
- Resolution of +/-1.0% for accurate control
- Stroke length control ready



## PRECISION BALL VALVE DESIGN

- Knife edge seats to maintain top-notch accuracy
- Accurate, efficient flow transfer
- Simple, four-point guiding to assure precise valve action and valve
- Easily replaced without disconnecting piping seat life



## DISK VALVES

- Maintains pump accuracy at high flows (375 gph)
- Easily replace without disconnecting piping
- Metallic and plastic construction
- Standard an slurry seats



## ENGINEERED SYSTEMS

- Easily integrated to any skid system
- Offers a multitude of multiplexing opportunities
- Engineered systems offer easy, out of the box ready installation



# CUSTOM ENGINEERING

## 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.



## PARTS, KITS & ACCESSORIES



### KOPKIT® (KEEP ON PUMPING KIT)

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, KOPkit® will put you back in business fast!



### METERING PUMP ACCESSORIES:

- Pulsation Dampeners
- Back Pressure Valves
- Pressure Relief Valves
- Calibration Columns
- Y-Strainers
- Pressure Gauges



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