

PULSAFEEDER[®] ENGINEERED PRODUCTS



Flow: up to 33 gpm (125 lpm)



Differential Pressure: up to 150 psi (10.3 bar)





Temperature: from -40 to 150°F (-40 to 65°C)



Viscosity: up to 10,000 cPs



NSF/ANSI 61*  
*Non-metallic Only

ECLIPSE[®]
EXTERNAL GEAR PUMP
PULSA.COM/ECLIPSE

PULSAFEEDER EXPERTISE

For over 70 years, Pulsafeeder, Inc. continues to be a proven leader in fluid handling technology and innovation in chemical dosing. 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.

ECLIPSE GEAR PUMPS

The Eclipse Series represents a dramatic advance in pump technology. Combining proven design principles with patented features, our pumps are reliable, simple, and intuitive. Structurally rugged with corrosion-resistant materials, Eclipse is an ideal fit for many medium to highly corrosive liquids, covering the entire pH scale.

GEAR PUMP TECHNOLOGY

The innovative technology behind Eclipse supports its ability to handle the most corrosive chemicals with a simple to service, front pull-out design. Eclipse is available with wetted components in completely non-metallic construction, 316LSS, or Alloy C (this ensures corrosion resistance over a wide range of chemicals and temperatures.) These pumps are magnetically driven to eliminate mechanical seal wear and leak paths. The patented bearing design promotes constant hydrodynamic lubrication.

CONFIGURATIONS



RNAL GEAR

MARKETS & TYPICAL APPLICATIONS

Markets

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

Typical Applications

- Sodium Hypochlorite
- Hydrogen Peroxide
- Sulfuric Acid
- Solvents
- Caustics
- Polymers
- Bleaches
- Dyes & Inks
- pH Control
- Catalyst
- Cleaning Agents
- Flocculants
- Odor Control
- Adhesives & Resins
- Acids

MATERIALS OF CONSTRUCTION**

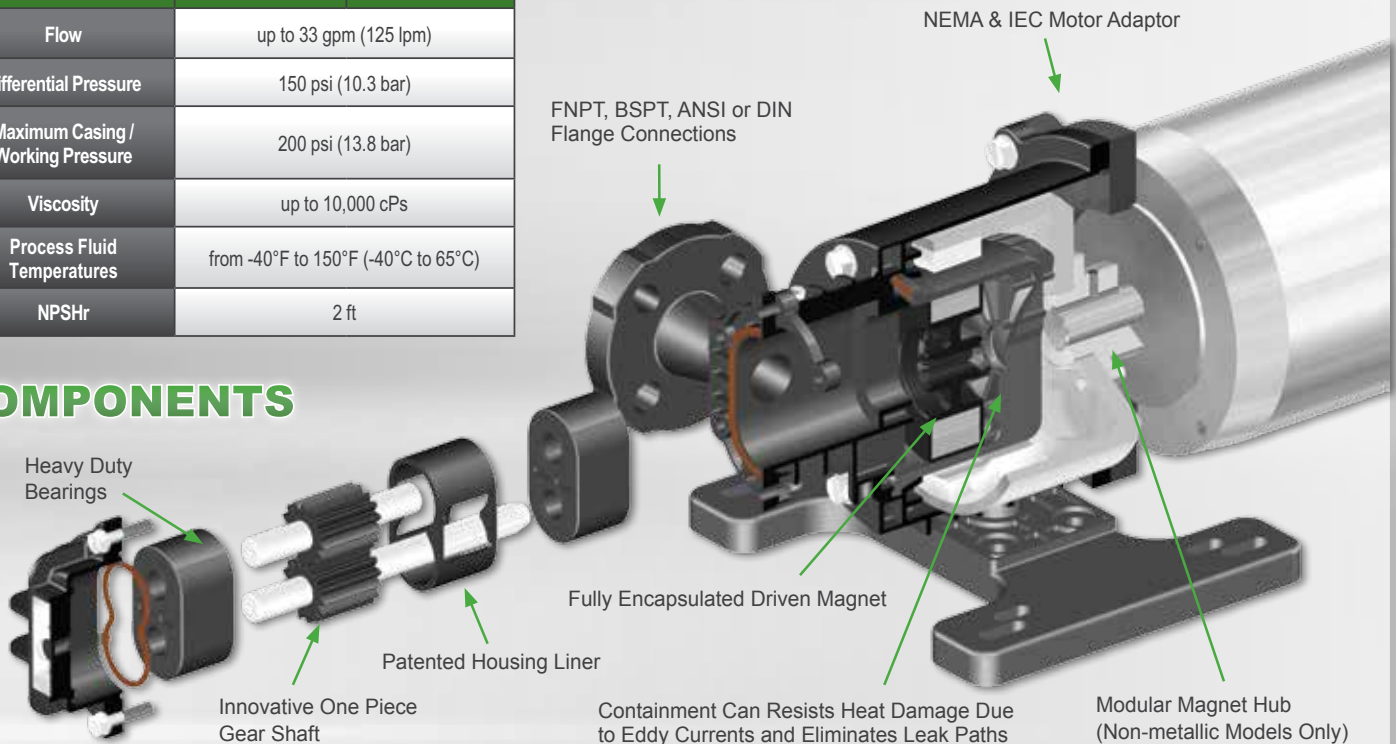
| Housing | PVDF | 316LSS | Alloy C |
|---------------|---|---|---|
| Magnet | Neodymium encapsulated in virgin PTFE | Neodymium in 316LSS welded | Neodymium in Alloy C welded |
| Gears & Liner | Carbon-reinforced PTFE | Carbon-reinforced PTFE | Carbon-reinforced PTFE |
| Shafts | Alumina Ceramic | 316LSS | Alloy C |
| Bearings | Carbon Graphite or Graphite-impregnated Silicon carbide | Carbon Graphite or Graphite-impregnated Silicon carbide | Carbon Graphite or Graphite-impregnated Silicon carbide |
| O-rings | Viton®-A or EPDM standard, others available | PTFE | PTFE |

**Engineered configurations not shown may be available upon factory request

PRODUCT SPECIFICATIONS

| | Non-Metallic | Metallic |
|-----------------------------------|-------------------------------------|----------|
| Flow | up to 33 gpm (125 lpm) | |
| Differential Pressure | 150 psi (10.3 bar) | |
| Maximum Casing / Working Pressure | 200 psi (13.8 bar) | |
| Viscosity | up to 10,000 cPs | |
| Process Fluid Temperatures | from -40°F to 150°F (-40°C to 65°C) | |
| NPSHr | 2 ft | |

COMPONENTS



FEATURES & B



DESIGNED FOR SIMPLICITY

- Fewest component gear pump on the market
- Simplified ordering and inventory with fewer parts
- Self-aligning parts and piloted fits ensure proper assembly every time



RENEWABLE PERFORMANCE

- Patented housing liner protects the housing from wear
- Easy maintenance KOPkit® (Keep on Pumping kit) saves time and money
- Regain performance flow with a KOPkit®



HEAVY DUTY BEARINGS & TOLERANCE O-RING

- Bearings have large wear areas
- Bearings are made from self-lubricating materials and their patented geometry allows for run dry capabilities
- Tolerance O-ring maintains proper internal operating clearances



UNIVERSAL FLANGES WITH INSERTS*

- Standard housings mate to both ANSI and DIN flange connections
- PTFE or Viton®-A inserts act as a gasket and can be reused or replaced to ensure a proper seal



UNIVERSAL MOTOR ADAPTOR*

- Standard adaptors easily mate to multiple NEMA and IEC motors
- Wide range of motor adaptors allow for easy installation in retrofit applications

*Non-metallic Only



ENEFITS

MAGNETICALLY DRIVEN SEALLESS DESIGN

- Eliminates costly seal flush systems required for double mechanical seals
- Patented drive shaft spline design optimizes magnet alignment on shaft
- Fully encapsulated driven magnets offer maximum corrosion resistance
- Modular magnet hub: one drive magnet per pump size, with interchangeable hub; hubs fit both standard NEMA and IEC motors (Non-metallic only)
- Sealless design ensures zero leakage



FRONT PULL-OUT DESIGN

- Does not require special tools for servicing
- Easily serviced in place without disturbing piping or electrical connections
- Reduced down time equals less maintenance cost and more production time



CLOSE-COUPLED MOUNTING

- Eliminates the potential for damage due to misalignment
- Helps to eliminate replacement costs due to wear and tear from misalignment



ENVIRONMENTAL SAFETY

- Zero leakage allows for a safe working environment; no emissions of hazardous or regulated chemicals



OPERATING BENEFITS

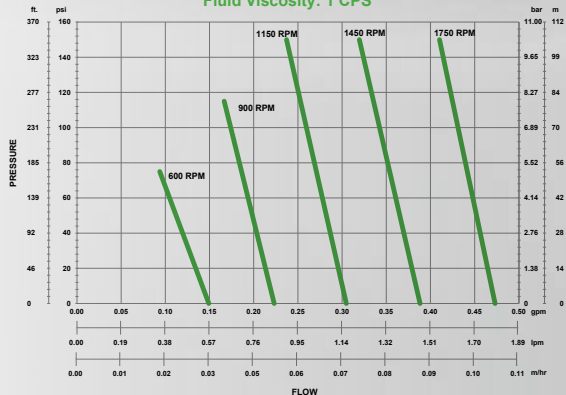
- Piping and electrical remain intact during servicing, requiring less labor
- Ease of maintenance with front pull-out design
- Constant, non-pulsating flow uses smaller pipe and ancillary equipment



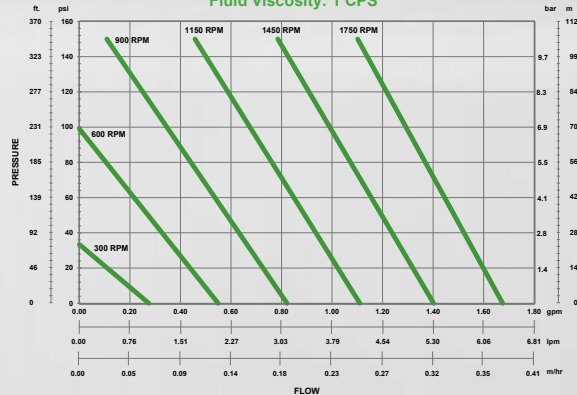
CURVES & CON

FLOW CURVES for sizing reference only

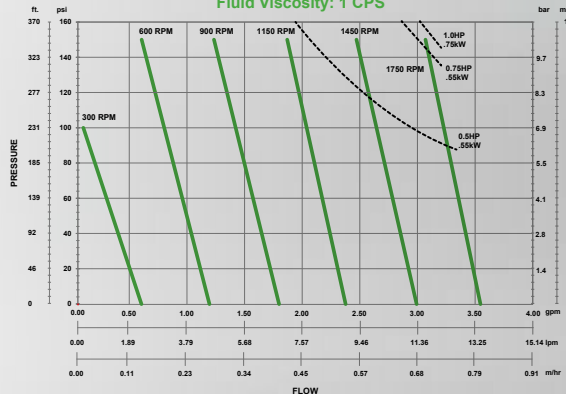
ECLIPSE 2
Fluid Viscosity: 1 CPS



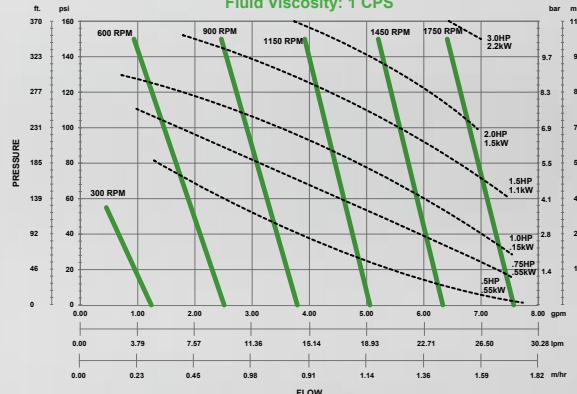
ECLIPSE 5
Fluid Viscosity: 1 CPS



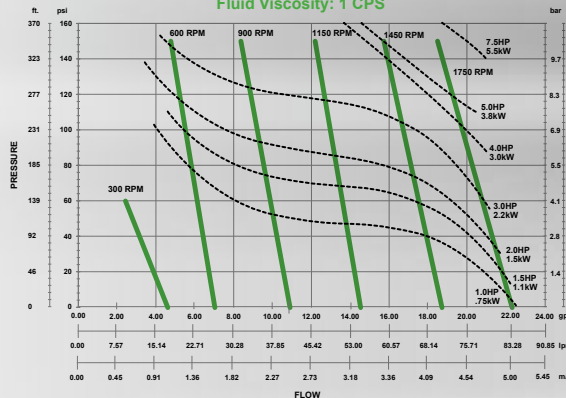
ECLIPSE 12
Fluid Viscosity: 1 CPS



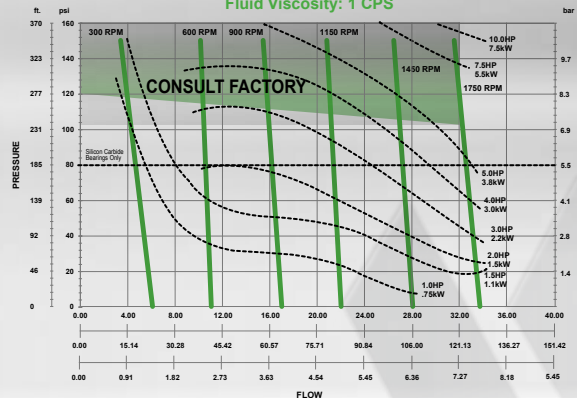
ECLIPSE 25
Fluid Viscosity: 1 CPS



ECLIPSE 75
Fluid Viscosity: 1 CPS



ECLIPSE 125
Fluid Viscosity: 1 CPS



Note: Flow and Pressure Values subject to change without notice

FIGURATIONS

PUMP CONFIGURATION STRING

| Pump Selection | Available Model | Code | Description | E _ _ _ _ _ | |
|---|---|--|---|-----------------------|--|
| Positions 1-3 PUMP SIZE | E | 02 | Maximum Capacity .45 gpm (1.7 lpm) | | |
| | | 05 | Maximum Capacity 1.6 gpm (6 lpm) | | |
| | | 12 | Maximum Capacity 3.4 gpm (12.9 lpm) | | |
| | | 25 | Maximum Capacity 7.4 gpm (28 lpm) | | |
| | | 75 | Maximum Capacity 22 gpm (83.3 lpm) | | |
| | | 125 | Maximum Capacity 33 gpm (125 lpm) | | |
| Position 4 BASE MATERIAL | 02,05,12,25 | A | 316LSS / FNPT | | |
| | 02,05,12,25 | G | 316LSS / BSPT, ISO 7-1 | | |
| | 02,05 | C | ALLOY C / FNPT | | |
| | 02,05 | J | ALLOY C / BSPT, ISO 7-1 | | |
| | 02,05 | K | PVDF / FNPT | | |
| | 02,05 | M | PVDF / BSPT, ISO 7-1 | | |
| | Export Restrictions May Apply to the Following Sizes Listed Below: | | | | |
| | 12,25 | C | ALLOY C / FNPT | | |
| | 12,25 | J | ALLOY C / BSPT, ISO 7-1 | | |
| | 12 | K | PVDF / FNPT | | |
| | 12 | M | PVDF / BSPT, ISO 7-1 | | |
| 25,75,125 | N | PVDF / Flange | | | |
| Position 5 BEARINGS | 02,05,12,25,75,125 | L | Carbon | | |
| | | B | Silicon Carbide | | |
| Position 6 O-RINGS | 02,05,12,25,75,125 | V | Viton®-A | | |
| | | E | EPDM | | |
| | | K | Kalrez® Grade 4079 | | |
| | | U | PTFE (Select for Metallic construction, not available on Non-Metallic) | | |
| Position 7 MOTOR MOUNTING ARRANGEMENTS | 02,05,12,25,75 | F | NEMA 56C (C-face, rigid base, 5/8" shaft diameter, 4x 3/8"-16 tapped holes on a 5-7/8" bolt circle) | | |
| | 02,05,12,25,75,125 | O | NEMA 143/5TC-182/4C (C-face, rigid base, 7/8" shaft diameter, 4x 3/8"-16 tapped holes on a 5-7/8" bolt circle) | | |
| | 75,125 | R | NEMA 182TC-184TC (C-face, rigid base, 1-1/8" shaft diameter, 4x 1/2"-13 tapped holes on a 7-1/4" bolt circle) | | |
| | 75,125 | W | NEMA 213TC-215TC (C-face, rigid base, 1-3/8" shaft diameter, 4x 1/2"-13 tapped holes on a 7-1/4" bolt circle) | | |
| | 02,05,12 | H | IEC 63 B3/B14 (rigid base, face, 11 mm motor shaft diameter, 4x M5 tapped holes on a 75 mm bolt circle) | | |
| | 02,05,12 | J | IEC 71 B3/B14 (rigid base, face, 14 mm motor shaft diameter, 4x M6 tapped holes on a 85 mm bolt circle) | | |
| | 02,05,12,25,75 | K | IEC 80 B3/B14 (rigid base, face, 19 mm motor shaft diameter, 4x M6 tapped holes on a 100 mm bolt circle) | | |
| | 25,75 | L | IEC 90 B3/B14 (rigid base, face, 24 mm motor shaft diameter, 4x M8 tapped holes on a 115 mm bolt circle) | | |
| | 25,75,125 | P | IEC 100/112 B3/B14 (rigid base, face, 28 mm motor shaft diameter, 4x M8 tapped holes on a 130 mm bolt circle) | | |
| 02,05,12,25,75,125 | Y | No Motor Mounting Kit (Pump Includes Drive Magnet. Non-metallic Only) | | | |
| Position 8 | 02,05,12,25,75,125 | - | Dash | | |
| Position 9 OPTIONS | 02,05,12,25,75,125 | X | Standard (Complete Pump - No Options) | | |
| | 05,12,25,75,125 | A | Bearing Flush Port (1x 1/8" FNPT / BSPT Connection located in the center of the front cover) | | |
| | 02,05,12,25,75,125 | N | Pump Wet End Only (Non-metallic in conjunction with 7th position "Y". Metallic in conjunction with 7th position "F-P"). | | |
| | 05,12,25,75,125 | B | Combination of 9th Position Options "A" and "N" | | |
| | 02,05,12,25,75,125 | X-ATEX | Standard Pump with ATEX Directive - CE Ex II 2G T6 II 2D T6 | | |
| | 05,12,25,75,125 | A-ATEX | Bearing Flush with ATEX Directive - CE Ex II 2G T6 II 2D T6 | | |
| | 02,05,12,25,75,125 | N-ATEX | Wet End Only with ATEX Directive - CE Ex II 2G T6 II 2D T6 | | |
| 05,12,25,75,125 | B-ATEX | Wet End Only and Bearing Flush with ATEX Directive - CE Ex II 2G T6 II 2D T6 | | | |

Viton® and Kalrez® are a registered trademark of DuPont.



PARTS, KITS, & ACCESSORIES



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



Pressure Relief Valves prevent an over pressurization situation from damaging your pump or system.



Pressure Gauges are relied on to measure pressure in the system. Proper pressure is necessary to ensure flow. Our pressure gauges are accurate and reliable.



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.



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.



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 Eclipse® pump. In the event of a breakdown, one kit will put you back in business fast!

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