GENERAL DESCRIPTION

Chemsteel pumps are designed to handle highly corrosive liquids that must be pumped under pressure. Manufactured to extremely precise tolerance, the Chemsteel pump line prevents system contamination while maintaining the purity and integrity of the liquid being pumped. Its rugged, three-section, o-ring sealed thru-bolt construction provides ease of servicing and parts replacement. Helical gearing offers noise reduction by as much as 10dB. Additionally, Chemsteel pumps offer bi-directional operation for applications requiring reversing flow.

LIFE CYCLE/COST OF OWNERSHIP

Pump design and materials selection, together provide the longest life available from a gear pump. Key attributes include:
- Gear & bearing combinations of metallic and nonmetallic wear surfaces.
- Slotted bearings to lubricate shaft and gear surfaces.
- Hydraulic porting to balance axial thrust and to reduce wear.
- Ample port sizing to reduce the likelihood of cavitation when inlet pressure is marginal.
- Effective housing seals with elastic memory prevent leakage of corrosives.
- Recirculation heat port versatility.
- Containment can flush & drain connections. prevent leakage of corrosives.

SPECIFIC SOLUTIONS

Gear/bearing design allows for “trimming” for optimizing the pump’s maximum flow to reach minimum turndown or to match flow to a specific OEM’s requirement. Special materials combinations are available for specific liquids:
- Reinforced Ryton® housing construction.
- Gears available in Metallic Alloy C. Also in Teflon®, Ryton® and PEEK®.
- Shafts are Alloy C.
- Bearings available in Carbon, Teflon® and Rulon®
- Neodymium Iron Magnet
- Ryton® containment can
  (Optional Alloy C containment can)

FIT

Connections are 1/2” female NPT or BSPT, pump hardware is metric and close couple adapters mount to both NEMA and IEC standard motor frame sizes for worldwide acceptance.

MAINTENANCE

A three-part housing provides easy disassembly and service. Full size bearings match the gear diameter, and eliminate the need for separate wear plates. TFE encapsulating silicone o-ring pump housing seals provide elastic memory to assure an effective long lasting seal and thus avoiding the re-torquing required of pumps using pure TFE.

To order a CHEMkit®, simply add a “K” to the end of the model number. A repair kit contains the following parts:
- bearings, gears, o-rings, shafts, keys and retaining ring.
SM203NM

MODEL SM203NM
Maximum Flow (gpm) @1750 RPM 1.5
Theoretical Displacement (cc/revolution) 4.2
Maximum Differential Pressure (psig) 100
Maximum System Pressure (psig) 200
Maximum Speed (RPM) 1800
Maximum Fluid Temperature 200° F
Minimum Fluid Temperature -40°F
NPSHR @ 1750 (feet) 2
Standard Port Size 1/2 inch FNPT
weight-less motor (lbs) 19

SM204NM

MODEL SM204NM
Maximum Flow (gpm) @1750 RPM 2
Theoretical Displacement (cc/revolution) 5.6
Maximum Differential Pressure (psig) 100
Maximum System Pressure (psig) 200
Maximum Speed (RPM) 1800
Maximum Fluid Temperature 200° F
Minimum Fluid Temperature -40°F
NPSHR @ 1750 (feet) 2
Standard Port Size 1/2 inch FNPT
weight-less motor (lbs) 19

SM205NM

MODEL SM205NM
Maximum Flow (gpm) @1750 RPM 3
Theoretical Displacement (cc/revolution) 7.4
Maximum Differential Pressure (psig) 100
Maximum System Pressure (psig) 200
Maximum Speed (RPM) 1800
Maximum Fluid Temperature 200° F
Minimum Fluid Temperature -40°F
NPSHR @ 1750 (feet) 3
Standard Port Size 1/2 inch FNPT
weight-less motor (lbs) 19

Notes: For continuous service:
Plastic / Plastic gear combinations are limited to 50 psi.
Metal / Plastic gear combinations are limited to 100 psi.
SM207NM

- **Maximum Flow (gpm) @1750 RPM**: 4
- **Theoretical Displacement (cc/revolution)**: 11.2
- **Maximum Differential Pressure (psig)**: 100
- **Maximum System Pressure (psig)**: 200
- **Maximum Speed (RPM)**: 1800
- **Maximum Fluid Temperature**: 200° F
- **Minimum Fluid Temperature**: -40°F
- **NPSHR @ 1750 (feet)**: 4
- **Standard Port Size**: 1/2 inch FNPT
- **Weight-less motor (lbs)**: 19

SM210NM

- **Maximum Flow (gpm) @1750 RPM**: 5.6
- **Theoretical Displacement (cc/revolution)**: 14.9
- **Maximum Differential Pressure (psig)**: 100
- **Maximum System Pressure (psig)**: 200
- **Maximum Speed (RPM)**: 1800
- **Maximum Fluid Temperature**: 200° F
- **Minimum Fluid Temperature**: -40°F
- **NPSHR @ 1750 (feet)**: 6
- **Standard Port Size**: 1/2 inch FNPT
- **Weight-less motor (lbs)**: 19

SM214NM

- **Maximum Flow (gpm) @1750 RPM**: 8
- **Theoretical Displacement (cc/revolution)**: 22.2
- **Maximum Differential Pressure (psig)**: 100
- **Maximum System Pressure (psig)**: 200
- **Maximum Speed (RPM)**: 1800
- **Maximum Fluid Temperature**: 200° F
- **Minimum Fluid Temperature**: -40°F
- **NPSHR @ 1750 (feet)**: 6
- **Standard Port Size**: 1/2 inch FNPT
- **Weight-less motor (lbs)**: 19
**DIMENSIONS**

**SM2 RYTON MAG DRIVE DIMENSIONS**

**SM2 RYTON MAG DRIVE W/ FOOT ACCESSORY DIMENSIONS**

<table>
<thead>
<tr>
<th>Mag Chemsteel Option</th>
<th>Power Kit Part No.</th>
<th>Motor Frame</th>
<th>AC*</th>
<th>D</th>
<th>2F</th>
<th>H</th>
<th>AE</th>
<th>AD</th>
<th>°O</th>
<th>°XO</th>
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* Dimensions AC, O XO and XP may vary depending on HP, Enclosure, Speed and Manufacturer.