

CHEMSTEEL®

CHEMSTEEL SERIES S105 METALLIC



A full range of accessories are available including:

- close coupled mounting kits
- baseplate/pedestal mounting kits
- line mounted pressure relief valves

GENERAL DESCRIPTION

Chemsteel pumps are designed to handle common and 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 thru-bolt construction provides ease of servicing and parts replacement.

Additionally, Chemsteel pumps offer bi-directional operation for applications requiring reversing flow.

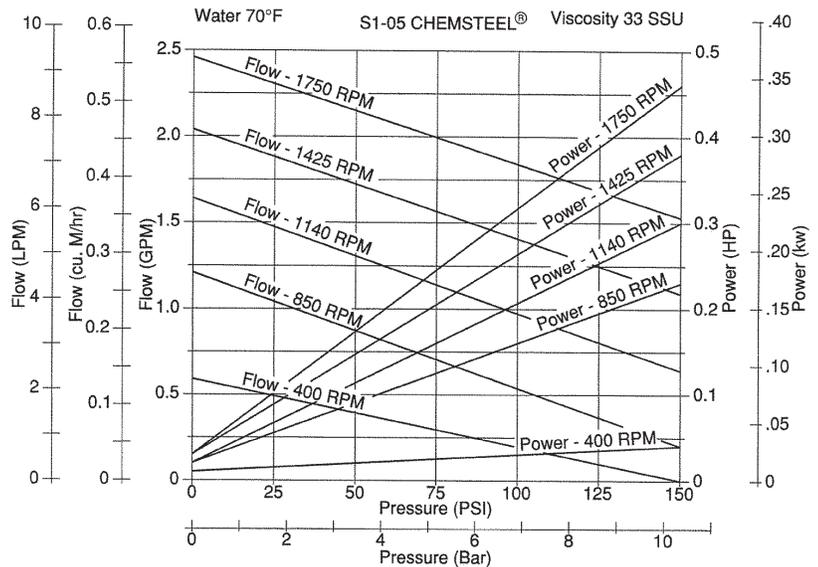
LIFE CYCLE/COST OF OWNERSHIP

Pump design and materials selection, together provide the longest life available from a gear pump.

Key attributes include:

- 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.

PERFORMANCE



FEATURES:

- Stainless housing construction.
- Gears: Non-Galling Stainless Steel, Spur
- Shafts: hardened 440C stainless
- Bearings: Carbon
- Mechanical Seal options available: A, B, C, J, Z

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 world wide acceptance. "Near" dimensional interchangeability offers easy upgrade to Chemsteel pump. The port size is the same as competitive pumps.

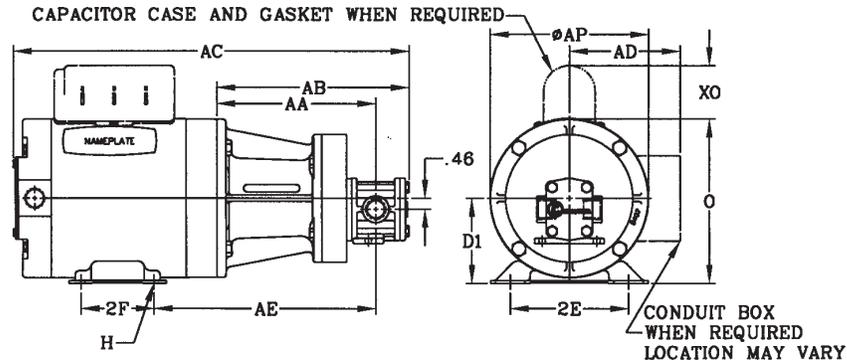
MAINTENANCE

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. The upper shaft configuration lends itself to in-line pump seal maintenance without the leakage of trapped pump chemicals from an incompletely drained pump.

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

| MODEL | S105 |
|--|---------------|
| maximum flow (gpm) @1750 rpm | 2.5 |
| theoretical displacement (cc/revolution) | 6.6 |
| maximum differential pressure (psig) | 150 |
| maximum system pressure (psig) | 300 |
| maximum speed (RPM) | 1800 |
| maximum fluid temperature | 450° F |
| minimum fluid temperature | -50° F |
| standard port size | 1/2 inch FNPT |
| weight (lbs) | 4 |

CLOSE-COUPLED DIMENSION



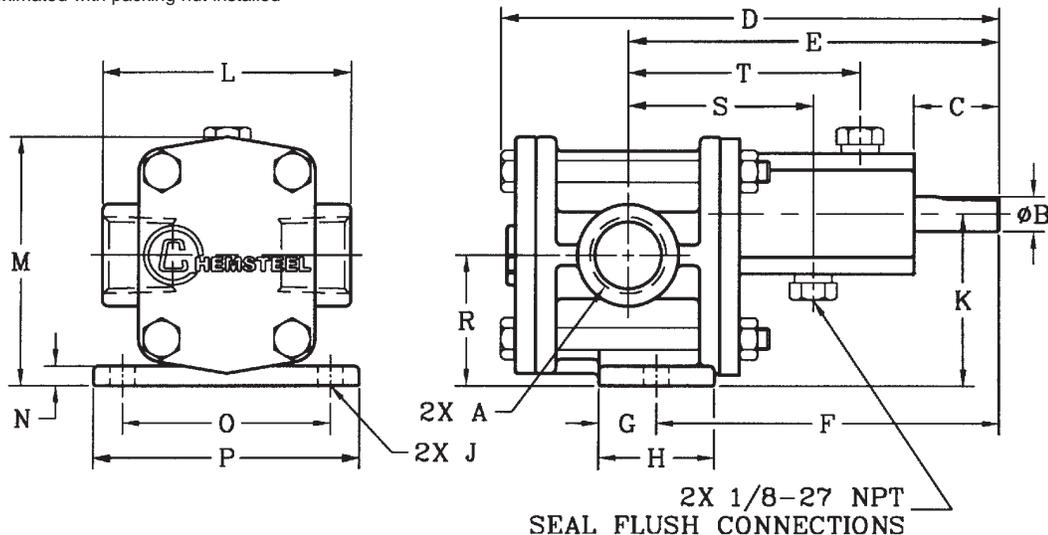
| adapter code | kit part no. | motor frame | | D1 | 2E | 2F | H | [1] | [1] | [1] | AA | AB | AC | AD | AE |
|--------------|--------------|------------------|-------------|------|------|-------|-----------|-------|-------|------|-------|-------|-------|------|-------|
| C1 | M1AD56 | 56C | INCHES | 3.50 | 4.88 | 3.00 | ø.34 SLOT | 6.88 | 6.63 | 2.25 | 6.55 | 7.93 | 16.31 | - | 9.11 |
| | | | MILLIMETERS | 88.9 | 124 | 76.2 | ø8.6 SLOT | 174.8 | 168.4 | 57.2 | 166.4 | 201.4 | 414.3 | - | 231.4 |
| C3 | M1AD71E | IEC 71, B14 FACE | INCHES | 2.80 | 4.41 | 3.54 | ø.28 SLOT | 5.14 | 4.69 | - | 6.05 | 7.43 | 16.74 | 4.00 | 7.82 |
| | | | MILLIMETERS | 71 | 112 | 89.9 | ø7 SLOT | 130.6 | 119.1 | - | 153.7 | 188.7 | 425.2 | 102 | 198.6 |
| C4 | M1AD80E | IEC 80, B14 FACE | INCHES | 3.15 | 4.92 | 3.94 | ø.39 SLOT | 6.00 | 5.69 | - | 6.05 | 7.43 | 16.97 | 4.51 | 8.02 |
| | | | MILLIMETERS | 80 | 125 | 100.1 | ø10 SLOT | 152.4 | 144.5 | - | 153.7 | 188.7 | 431 | 116 | 203.7 |

¹ These dimensions vary depending on hp, enclosure, speed and motor manufacturer. Specifications are subject to change without notification.

PEDESTAL MOUNT DIMENSIONS

| | A | B | C | | | D | E | F | G | H | J | K | | L | M | N | O | P | R |
|-------------|------|------|------------|-------------------|-------|-------|------|------|------|------|------|----------|----------------|------|------|------|------|------|------|
| | | | Mechanical | Pack ² | Lip | | | | | | | Diameter | Standard drive | | | | | | |
| inches | 0.50 | 0.38 | 0.92 | 0.72 | 1.25 | 5.36 | 4.00 | 3.69 | 0.63 | 1.25 | 0.28 | 1.88 | 0.95 | 2.69 | 2.69 | 0.22 | 2.25 | 2.88 | 1.41 |
| millimeters | 9.5 | 23.4 | 18.3 | 31.8 | 136.1 | 101.6 | 93.7 | 16.0 | 31.8 | 7.1 | 47.6 | 24.0 | 68.3 | 68.3 | 5.6 | 57.2 | 73.2 | 35.8 | |

2.Dimension is approximated with packing nut installed



*Standard Upper Drive Shown