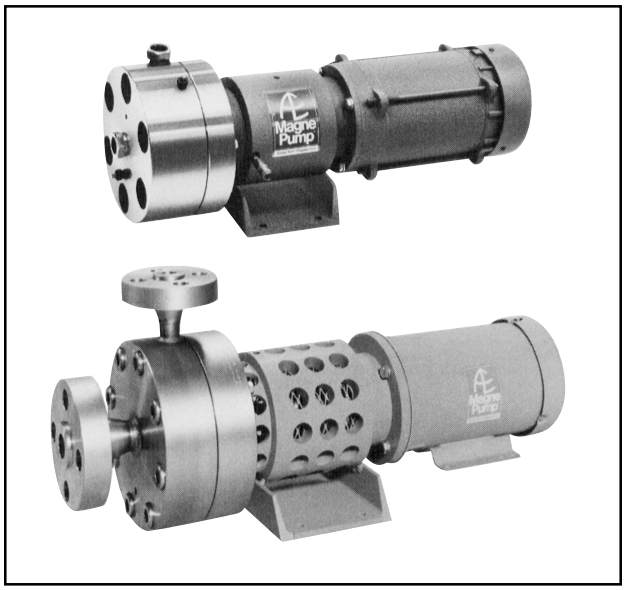
Autoclave Engineers
Division of Snap-tite, Inc.

## Autoclave Engineers
***Providing Tools for Research and Industry***

MagnePumps



# MagnePump

**At A Glance**

***3/4 Horsepower***

| | |
|---|---|
| MAWP: | 5000 psi @ 650° F (345 bar @ 343° C) |
| Operating Speed: | 3450 rpm @ 60 Hz<br>2875 rpm @ 50 Hz |
| Static Torque: | 15 in-lbs. (1.7 N-m) |

***5 Horsepower***

| | |
|---|---|
| MAWP: | 2500 psi @ 650° F (172 bar @ 343° C) |
| Operating speed | 3450 rpm @ 60 Hz<br>2875 rpm @ 50 Hz |
| Static Torque | 150 in-lbs (17 N-m) |

Autoclave Engineers MagnePumps eliminate or reduce many of the problems associated with conventional pumps, such as leakage, contamination and packing heat generation. They are ideal for applications where purity of the fluid is a major consideration or where leakage of material could be hazardous.

In addition, power loss is eliminated due to no seal friction, delivering full motor horsepower to the pumping unit. Also, when adverse conditions exist the magnet drive functions as a clutch, eliminating overload and motor burnout.

## 3/4 HP MagnePumps

The 3/4 horsepower MagnePump is a packless design that provides improved efficiency: high torque with reduced heat losses. It is designed for liquid service and is rated for up to 5,000 psi (345 bar) system pressure.

## 5 HP MagnePumps

The 5 horsepower MagnePump is a packless design which requires no supplemental cooling source. A built-in centrifugal air circulator cools the magnet zone. The 5 HP MagnePump has outlet and inlet flanges in the same plane for easy piping. It is designed for liquid service and is rated for up to 2500 psi (172 bar).

## Technical Specification

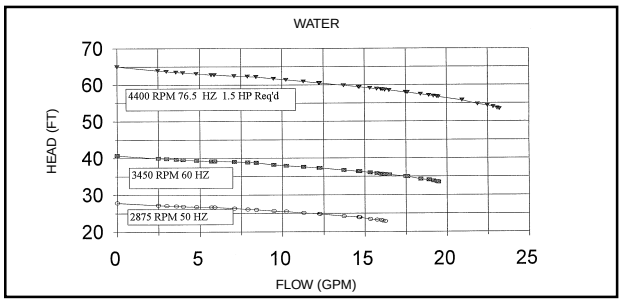
| | | | 3/4 HP | 5 HP |
|---|---|---|---|---|
| **Operating Conditions** | | Maximum allowable working pressure | 5000 psi (345 bar) | 2500 psi (172 bar) |
| | | *Maximum temperature* | *650°F (343°C)* | *650°F (343°C)* |
| | | Operating speed | 3450 rpm @ 60 HZ<br>2875 rpm @ 50 HZ | 3450 rpm @ 60 HZ<br>2875 rpm @ 50 HZ |
| | | *MagneDrive static torque* | *15 in.-lbs (1.7 N-m)* | *150 in.-bs. (17 N-m)* |
| | | Magnet cooling | Water cooling must be used at all times. | No cooling required |
| **Pump Construction** | Material | *Pump/casing housing* | *316 SS/A286* | *316 SS/A286* |
| | | Impeller | 316 SS | 316 SS |
| | | *Shaft* | *316 SS* | *316 SS* |
| | | Fasteners | 300 series stainless | 300 series stainless |
| | | *Bearings* | *Carbon graphite** | *Carbon graphite* |
| | | Seals | 316/321 SS/silver plated | Nickel and silver |
| | Port size | *Inlet* | *SF-1000 CX conn. (1.0" O.D. tubing, I.D. .688")* | *1-1/2" 2500 lb. ANSI flange conn.1.5" I.D.* |
| | | Outlet | SF-1000 CX conn. (1.0" O.D. tubing, I.D. .688") | 1" 2500 lb. ANSI flange conn. .95" I.D. |
| | Motor rating | *Type* | *60 HZ: Exp-proof class 1, group D or 50 HZ: TEFC* | *50/60 HZ TEFC* |
| | | Power | 3/4 HP | 5 HP |
| | | *Voltage* | *115/230 vac, 60 HZ single phase or 110/220 vac, 50 HZ single phase* | *230/460 vac 50/60 HZ 3 phase* |

*Consult factory for alternate bearing materials.

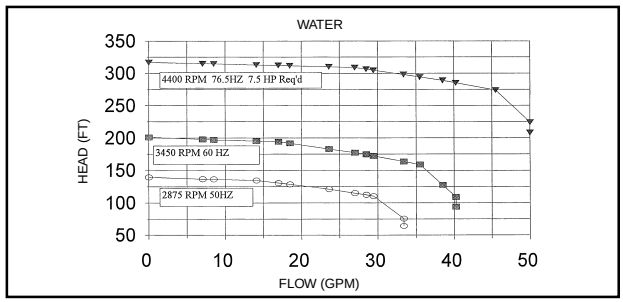
# General Information

| | 3/4 HP | 5 HP |
|---|---|---|
| Mounting position | Horizontal | Horizontal |
| Weight (approximate) | 170 lbs. (77 kg) | 380 lbs. (172 kg) |
| Maximum flow | 19 GPM (72 LPM) | 40 GPM (151 LPM) |
| Maximum head (3450 rpm) | 40 feet (approx. 17 psi) | 194 feet (approx. 84 psi) |

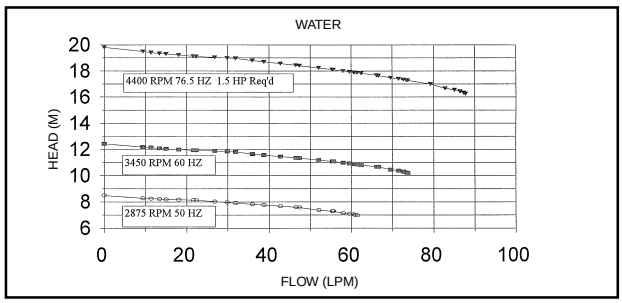
### 3/4 HP – Flow vs Head – GPM



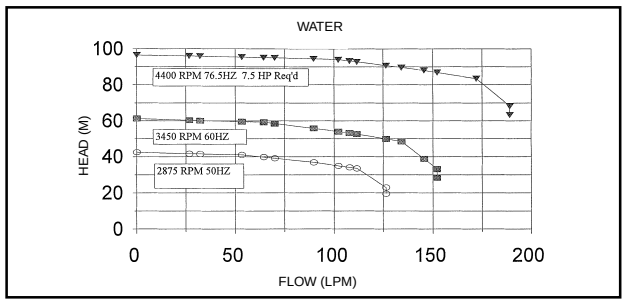

### 5 HP – Flow vs Head – GPM




### 3/4 HP – Flow vs Head – LPM




### 5 HP – Flow vs Head – LPM



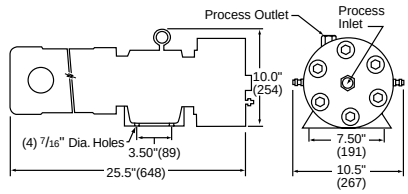

**Note:** Higher and lower curves are calculated.

# Ordering Information

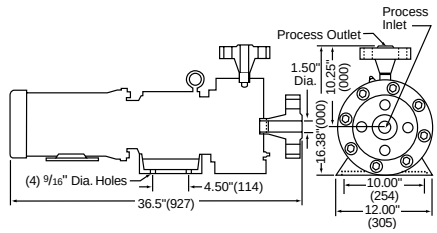
| Horsepower | Catalog order no. | Voltage |
|---|---|---|
| 3/4 HP | MP2040 05 65 50 | 50 HZ |
| 3/4 HP | MP2040 05 65 60 | 60 HZ |
| 5 HP | MP4093 02 65 60 | 50 HZ |

# Dimensions -inches (mm)

**3/4 HP**




**5 HP**




All dimensions are subject to change.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