MG200 Gear Pump With DC Motor

Flow to 190 LPH

DESCRIPTION

The "MG 200" Series magnet drive gear pumps are compact precision performance products for high technology applications. The magnet drive principle provides a totally sealed pump chamber which is capable of handling a wide range of corrosive liquids with a high degree of safety. The housing of the pump and the internal metal parts are in AISI 316 stainless steel and the gears are available in PTFE or PEEK.

In operation the MG 200 Series pumps are noiseless, pulsation-free and capable of handling relatively hot liquids i.e. 120°C (248°F) at a low coefficient of expansion. The principle of the magnet drive comprises an inner magnet, embodied in the pump, connected to the driving gear and an outer magnet connected to the motor shaft. The pole-to-pole alignment of the magnets provides the driving motion to the pump. Decoupling occurs when the pump load exceeds the coupling torque between the magnets.

In/out ports have 1/8" NPT female threads. A built-in relief valve is available upon request.

Models are offered with a choice of 12 VDC or 24 VDC motors.

SPECIFICATIONS

Flow Range: Three pump sizes- 4 mm, 9 mm or 13 mm gears, see flow charts (Fig. 1)
Temperature ranges:
PTFE : -45°C (-49 F) / + 50°C (122F)
PEEK : -45°C (-49 F) / + 120°C (+248 F)

Max system pressure : 20 bar (290 psi)
Rotational Speed Limit: 5000 rpm
Priming With Water: 8m (26.7 ft), varies with operating conditions and fluid characteristics
Max Vacuum: 724 mm Hg (28.5” Hg)

FLOW WITH STANDARD PUMP HEADS & MOTORS

Note: Characteristics with water at 20°C (68°F) and without relief valve, max vacuum 754 mm Hg. Use filter before pump (not larger than 10 microns). Unit weight 1.1 kg ( 2.4 lb).

TYPICAL APPLICATIONS

- Medical and surgical equipment
- Hemodialysis apparatus
- Exhaust fumes treatment
- Cooling systems
- Ink-jet printing systems
- Water purification and ultra-filtration
- Lubrication
- Seal flush
- Sampling
- Lab instrumentation
- Laser apparatus
Table 1: DC Motor Coupling Components

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Note</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Ferrite Drive Magnet</td>
<td>For 5 mm bore</td>
<td>MGAF05S</td>
</tr>
<tr>
<td>A+B</td>
<td>Complete Adaptor</td>
<td>For M56B14 Motor</td>
<td>MGBF42S</td>
</tr>
<tr>
<td>A+B+C</td>
<td>Complete Motor Assembly</td>
<td>See Table Below</td>
<td>MGCF04S  MGCF11S</td>
</tr>
</tbody>
</table>

Table 2: Motor Assembly

<table>
<thead>
<tr>
<th>Voltage</th>
<th>12 VDC</th>
<th>24 VDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Speed (rpm)</td>
<td>3300</td>
<td>3000</td>
</tr>
<tr>
<td>Current Consumption (A)</td>
<td>3.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Output Power (W/HP)</td>
<td>25.9/0.0347</td>
<td>23.6/0.0316</td>
</tr>
<tr>
<td>Weight (g/lb)</td>
<td>700/1.54</td>
<td>700/1.54</td>
</tr>
</tbody>
</table>

**DIMENSIONS**

![Fig. 2](image1)

**ORDERING INFORMATION**

1) Order Complete Motor Assembly Per Tables 1 & 2
   Example: MGCF11S

2) Order Pump Per Table 3: ABCDEFG
   Example: MG204XD1PT

Table 3

<table>
<thead>
<tr>
<th>A Pump Model</th>
<th>B Gear Width</th>
<th>C Housing Material</th>
<th>D Connections</th>
<th>E Relief Valve</th>
<th>F Gear Material</th>
<th>G Static Seal</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG2= Ferrite Magnet, PTFE</td>
<td>04= 4 mm</td>
<td>X= 316 SS</td>
<td>D= 1/8” NPT</td>
<td>1= Yes</td>
<td>P= PEEK</td>
<td>T= PTFE</td>
</tr>
<tr>
<td>Flat Seal</td>
<td>09= 9 mm</td>
<td></td>
<td></td>
<td>0= No</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13= 13 mm</td>
<td></td>
<td></td>
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</tbody>
</table>

Dimensions in mm [inches]