**APPLICATIONS**

- Medical and surgical equipment
- Hemodialysis apparatus
- Laser apparatus
- Lubrication
- Ink-jet printing systems
- Cooling systems
- Laboratory instrumentation
- Water purification and ultra-filtration
- Sampling
- Food processing equipment

**DESCRIPTION**

The MK200, MK300 and MK300 High Viscosity series pumps are designed to complete the existing MG200 series. They offer improved performance in terms of flow rate, pressure, capability to handle high viscosity fluids and a wider offer of materials to suit most applications from food to industrial and chemical markets. The housing of the pump and the internal metal parts are available in AISI 303, AISI 316L or SAF 2205. The gears are available in PTFE or PEEK™. The PEEK™ encapsulated driving magnet, available in Ferrite or in rare earths, is able to drive the pump at high pressure. The quality of the materials of the assembled components allows handling of fluids with temperatures up to 120°C (248°F).

Metric and NEMA 56C motor adaptor assemblies with pump drive magnets are offered for customer supplied motors.

The pulsation-free and noiseless operation is the result of precision gears accurately assembled and balanced within the housing combined with the magnetic coupling in perfect alignment.

**SPECIFICATIONS**

- Self priming
- Connections: \(\frac{1}{2}\)“ NPT ports
- Temperature range: PTFE \(-45\) to \(50\)°C/\(-49\) to \(122\)°F
  - PEEK™ \(-45\) to \(120\) °C/\(-49\) to \(248\) °F
- Max system pressure: 20 bar/290 psi
- Flow: See performance curves
- Motor Adaptors & Drive Magnets: See table 1
- Relief valve: available for MGK200 series only

**MGK304 Performance at Different Viscosities**

![Graphs showing performance curves for different viscosities at various RPMs.](image)

**MGK Without Motor**

![Image of a pump without motor.](image)

**CLARK**

**MK200/300 Magnetic Drive Gear Pumps, PTFE/PEEK Gears**

*Flow to 69 GPH, Pressure to 290 PSI, Metric & NEMA 56C Motor Adaptors*

**Applications**

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**NSF**

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MGK309 Performance at Different Viscosities

MGK309 @ 1450 RPM

MGK309 @ 1725 RPM

MGK309 @ 2900 RPM

MGK309 @ 3450 RPM

A = 1 cSt  B = 26 cSt  C = 75 cSt  D = 180 cSt  E = 210 cSt

MGK313 Performance at Different Viscosities

MGK313 @ 1450 RPM

MGK313 @ 1725 RPM

MGK313 @ 2900 RPM

MGK313 @ 3450 RPM

A = 1 cSt  B = 26 cSt  C = 75 cSt  D = 180 cSt  E = 210 cSt

Operating Range with Ferrite Magnet

Operating Range with Rare Earth Magnet
MGK313 High Viscosity Performance at Different Viscosities

MGK317 Performance at Different Viscosities

MGK317 High Viscosity Performance at Different Viscosities

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DIMENSIONS (MM) PUMP WITHOUT MOTOR

56C MOTOR COUPLING ASSEMBLY

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKBF5BS</td>
<td>Includes MKAF5BS, 5/8&quot; bore ferrite magnet (A1) and 92-06-05 NEMA 56C adaptor (B)</td>
</tr>
<tr>
<td>MKBS5BS</td>
<td>Includes MKAS5BS, 5/8&quot; bore rare earth magnet (A2) and 92-06-05 NEMA 56C adaptor (B)</td>
</tr>
<tr>
<td>MKBF56S</td>
<td>Includes MKAF09S, 9 mm bore ferrite magnet (A1) and 92-06-06 M56 B14 adaptor (B)</td>
</tr>
<tr>
<td>MKBS56S</td>
<td>Includes MKAS09S, 9 mm bore rare earth magnet (A2) and 92-06-06 M56 B14 adaptor (B)</td>
</tr>
<tr>
<td>MKBF63S</td>
<td>Includes MKAF11S, 11 mm bore ferrite magnet (A1) and 60058 M63 B14 adaptor (B)</td>
</tr>
<tr>
<td>MKBS63S</td>
<td>Includes MKAS11S, 11 mm bore rare earth magnet (A2) and 60058 M63 B14 adaptor (B)</td>
</tr>
</tbody>
</table>

Consult us for motor sizing

ORDERING INFORMATION

1) Order Pump From Table 2 Below- ABCDEFG

   **EXAMPLE:** MK309X170PV

2) Order Motor Adapter from Table 1

   **EXAMPLE:** MKBF5BS

<table>
<thead>
<tr>
<th>A Pump Series</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 Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>MK2= PTFE Flat Seals</td>
<td>09= 9mm</td>
<td>X= AlSi 316</td>
<td>17= 1/4&quot; NPT</td>
<td>0= without</td>
<td>T= PTFE</td>
<td>- =MK2 ordered</td>
</tr>
<tr>
<td>MK3= O-ring Seal</td>
<td>13= 13mm</td>
<td></td>
<td></td>
<td>1= with MK3 is not available with relief valve</td>
<td>P= PEEK™</td>
<td>S= Silicone</td>
</tr>
<tr>
<td></td>
<td>17= 17mm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>N= NBR</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>T= PTFE</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>V= Viton</td>
</tr>
</tbody>
</table>

*Each pump has three seals, two for the pump body and one for the magnet cup. Model type MK2 has all PTFE flat seals. Model MK3 is offered with a choice of o-ring seal material. Note that the material chosen in the order matrix is used for all three seal locations. If a relief valve is ordered the seal for the relief valve is always PTFE.