High Pressure Pump
Series HDP MC

Design criteria

Hammelmann high pressure pumps are built to operate at the continuous maximum duty stated in the performance parameters. Just compare the crankshaft speed, average plunger speed, plunger diameter and power rating.

Features

- Power ratings up to 1100 kW
- Vertical 7 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

- Stainless steel pump head free of alternating stress
- Cross head piston bellows seal
- Choice of 'application specific' seal assemblies
- Solid ceramic or tungsten carbide plungers
- Choice of bronze or stainless steel suction chamber
- Crank section calculation by ‘Finite element method’ ensures long working life under continuous load
- Twin helical integral reduction gear with crankshaft supported by 4 bearings
- Pressurised oil lubrication system with oil cooler/filter
# HDP MC series, technical data

## Performance parameters (Standard design)

### HDP MC4

<table>
<thead>
<tr>
<th>HDP</th>
<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>Operating pressure [bar]</th>
</tr>
</thead>
<tbody>
<tr>
<td>MC1</td>
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<td>MC2</td>
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<td>MC3</td>
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### HDP MC3

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<tr>
<th>HDP</th>
<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>Operating pressure [bar]</th>
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<tr>
<td>MC1</td>
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<tr>
<td>MC2</td>
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### HDP MC2

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<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>Operating pressure [bar]</th>
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</thead>
<tbody>
<tr>
<td>MC1</td>
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### HDP MC1

<table>
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<tr>
<th>HDP</th>
<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>Operating pressure [bar]</th>
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### HDP Seals

- **MC4**: Dynamic D 28 - Tungsten carbide plunger & bushing
- **MC3**: Dynamic - Ceramic plunger / bronze bushing
- **MC2**: Dynamic D 50 - 75 - Ceramic plunger / bronze bushing
- **MC1**: Packing - Ceramic plunger / packing

### Conversion table

- **Rat. 1 kW = 1.34 HP**
- **Op. pressure 1 bar = 14.5 psi**
- **Flow rate 1 l = 0.264 US gallon**
- **1 l = 0.22 Imp. gallon**

###Note:
- Actual flow rates for water as pumped medium (volumetric efficiency has already been taken into account).
- Rod force: 210 kN
- Stroke: 100 mm
- Mean piston speed at n2 = 320 r.p.m. = 1.06 m/sec
  385 r.p.m. = 1.28 m/sec
  460 r.p.m. = 1.54 m/sec

**The dynamic high pressure sealing extends the advantages of the labyrinth design with further increased efficiency.**