HDP 800
High Pressure Pump Series

**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 800 kW
- Vertical 5 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

**Stationary unit with diesel engine**

Length: 3970 mm
Width: 2100 mm
Height: 2225 mm
Weight: approx. 9200 kg

Main dimensions without accessories such as suction line, pressure regulator etc. All shown as right side drive. Detailed dimensional drawings and weights available on request.

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### HDP 800 series, technical data

**Performance parameters (Standard design)**

#### HDP 800 series, technical data

<table>
<thead>
<tr>
<th>HDP</th>
<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>D</th>
<th>r. p. m.</th>
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#### HDP 804

- **Seal**: Dynamic D 28
- **Sealing system**: Tungsten carbide plunger & bushing

#### HDP 803

- **Seal**: Dynamic D 35
- **Sealing system**: Tungsten carbide plunger & bronze bushing

#### HDP 802

- **Seal**: Ceramic plunger & bronze bushing
- **Sealing system**: Ceramic plunger & packing

#### HDP 801

- **Seal**: Ceramic plunger & packing

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**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: 315 r.p.m. = 1.06 m/sec
- 380 r.p.m. = 1.27 m/sec
- 465 r.p.m. = 1.54 m/sec

**Typical high pressure pump units**

- Stationary unit with diesel motor
- Diesel unit in container with workshop
- Stationary unit with electric motor

**Conversion table**

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

**Hammelmann**

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**Energy efficient**

Hammelmann plunger pumps convert 93 to 98 % of the shaft power to hydraulic energy.

**Conversion table**

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

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**D** = Piston/Plunger dia. [mm]

- **n1 = Motor/Engine r.p.m. [1/min]**
- **n2 = Crankshaft r.p.m./[1/min]**

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