HDP 300 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.

High pressure pump
Weight: approx. 1070 kg

Stationary unit with electric motor
Length: 2570 mm
Width: 1290 mm
Height: 1440 mm
Weight: approx. 3200 kg at 250 kW

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.

Stationary unit with diesel engine
Length: 3060 mm
Width: 1570 mm
Height: 2600 mm
Weight: approx. 4500 kg at 315 kW with full fuel tank

Features
- Power ratings up to 300 kW
- Vertical 5 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability
- Crank section calculation by ‘Finite element method’ ensures long working life under continuous load
- Stainless steel pump head free of alternating stress
- Integral speed reduction gear
- Pressurised oil lubrication system with oil cooler/filter
- Bellows form hermetic seal between the suction chamber and crank section
- Solid ceramic or tungsten carbide plungers
- Choice of application specific seal assemblies
- Choice of bronze (standard) or stainless steel suction chamber
Technical data, series HDP 300
Performance parameters (Standard design)

Note: Actual flow rates for water as pumped medium (volumetric efficiency has already been taken into account).

<table>
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<tr>
<th>HDP</th>
<th>Q [l/min]</th>
<th>Required power rating [kW]</th>
<th>D r. p. m.</th>
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** Ultra high pressure

Conversion table
Rating 1 kW = 1,34 HP
Op. Pressure 1 bar = 14.5 psi
Flow rate 1 l = 0.22 Imp. gallon
Flow rate 1 l = 0.264 US gallon

- Rod force: 88 kN
- Stroke: 75 mm
- Mean piston speed at n2 411 r.p.m. = 1.02 m/sec 493 r.p.m. = 1.23 m/sec 591 r.p.m. = 1.48 m/sec

Typical high pressure pump units

- Stationary diesel unit in BDF-Container with workshop
- Stationary electric unit
- Electric unit in container

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

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