HDP 170 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 crank shaft speed, average plunger speed, plunger diameter and power rating.

High pressure pump
Weight: approx. 1150 lbs

Features
- Power ratings up to 230 HP
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

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

Stationary unit with electric motor
Length: 80 inch
Width: 34 inch
Height: 53 inch
Weight: approx. 4410 lbs at 210 HP

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

Stationary unit with diesel motor
Length: 94 inch
Width: 60 inch
Height: 78 inch
Weight: approx. 770 lbs at 250 HP with full fuel tank
### HDP 170 series, technical data

#### Performance parameters

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#### Rod force: 60,500 lbf

- Stroke: 2.95 inch
- Mean piston speed at n₂:
  - 385 r.p.m. = 3.2 feet/sec
  - 465 r.p.m. = 3.8 feet/sec
  - 555 r.p.m. = 4.6 feet/sec

#### Typical high pressure pump units

- Stationary unit with electric motor
- Road going trailer or stationary units with sound damping cover
- 10 or 20 foot sound damped container versions

#### Type designations

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<th>Sealing system</th>
<th>D</th>
<th>Type</th>
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<td>Hydrodynamic with tungsten carbide plungers</td>
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<td>Hydrodynamic with solid ceramic plungers</td>
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<td>Labyrinth with solid ceramic plungers</td>
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<tr>
<td>Packed sleeves with solid ceramic plungers</td>
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</table>

D = Plunger dia. [inch]

D = Piston/Plunger dia. [mm]

n₁ = Motor/Engine r.p.m.

n₂ = Crankshaft r.p.m.

*At pressures over 29,000 psi approx. 5% of the flow rate is lost due to the compressibility factor of water*