

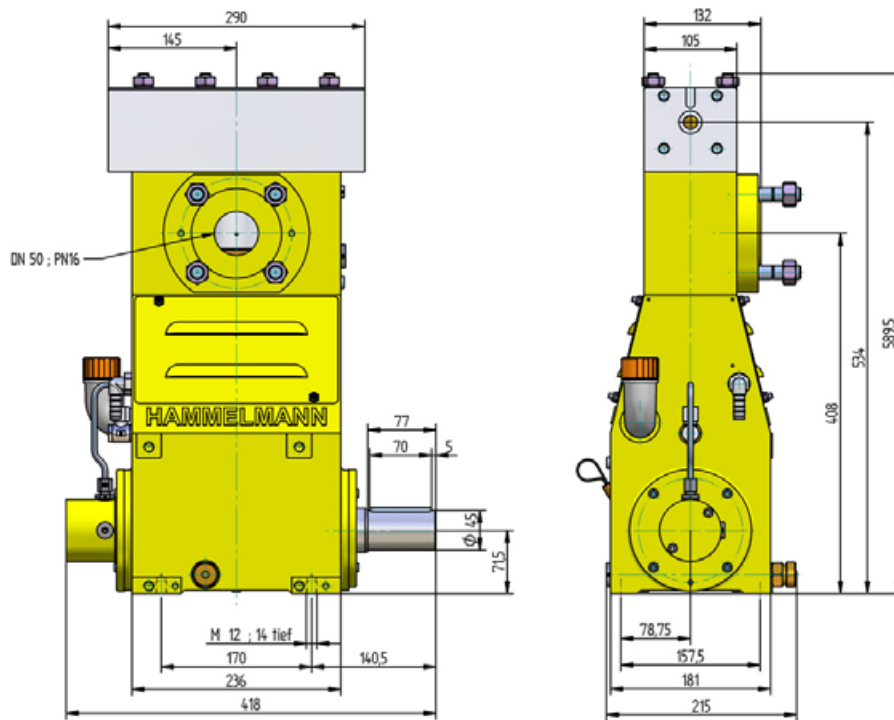
HDP 20 High Pressure Pump Series

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: 95 kg



Features

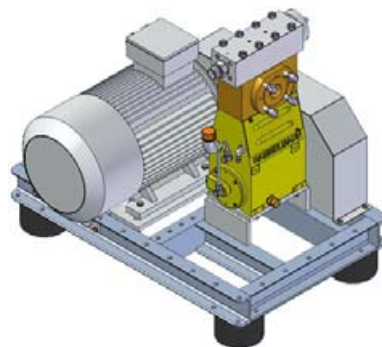
- Power ratings up to 18,5 kW
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

- Stainless steel pump head free of alternating stress
- 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
- Pressurised oil lubrication system
- Separate oil pump

Stationary unit with electric motor

Length: 1000 mm
 Width: 752 mm
 Height: 890 mm
 Weight: approx. 450 kg
 at 22 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.

HDP 20 series, technical data

Performance parameters

Q [l/min]*	Required power rating [kW]			D	r.p.m.	
	11	15	18,5		n ₁	n ₂
	Operating pressure [bar]					
2,2	2200	3000	3500	8	1500/1800/2150	625
2,7	1850	2500	3100			750
3,2	1550	2100	2600			900
3,5	1400	1950	2200	10	1500/1800/2150	625
4,2	1150	1600	2000			750
5,1	980	1300	1650			900

* At pressures over 2000 bar approx. 5% of the flow rate is lost due to the compressibility factor of water

3,5	1400	1800		10	1500/1800/2150	625
4,2	1150	1600	1800			750
5,1	980	1300	1800			900
6	940	1250	1550	12	1500/1800/2150	625
7	810	1100	1350			750
8	710	960	1150			900
9	630	860	990	15	1500/1800/2150	625
11	520	710	870			750
12	450	620	730	17,5	1500/1800/2150	625
15	380	520	640			750
16	350	480	560	20	1500/1800/2150	625
20	290	400	490			750
25	220	300	360	25	1500/1800/2150	625
31	190	250	310			750
37	150	210	250	30	1500/1800/2150	625
45	180	220	260			750
51	115	150	180	35	1500/1800/2150	625
62	95	130	160			750
68	85	120	140	40	1500/1800/2150	625
82	75	100	120			750
86	70	95	110	45	1500/1800/2150	625
103	55	75	95			750

Conversion table

Rating 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

D = Piston/Plunger dia. [mm]
 n₁ = Motor/Engine r.p.m.
 n₂ = Crankshaft r.p.m.

Type designations

Sealing system	D	HDP Type
Hydrodynamic with tungsten carbide plungers	8	24
Labyrinth with solid ceramic plungers	10 - 45	22
Packed sleeves with solid ceramic plungers	10 - 45	27

D = Piston/Plunger dia. [mm]

- Rod force: 17,6 kN
- Stroke: 30 mm
- Mean piston speed at n₂
 625 r.p.m. = 0,63 m/sec
 750 r.p.m. = 0,75 m/sec
 900 r.p.m. = 0,90 m/sec

Typical high pressure pump units



- Stationary unit with electric motor



- Stationary electric unit with sound damping cover

Hammelmann
 Maschinenfabrik GmbH

Postfach 3309 • D-59282 Oelde
 Zum Sundern 13-21 • Germany
 eMail: mail@hammelmann.de

Telefon (0 25 22) 76-0
 Telefax (0 25 22) 76-444
 Internet: www.hammelmann.de

HAMMELMANN®