

HDP 30 High Pressure Pump Series

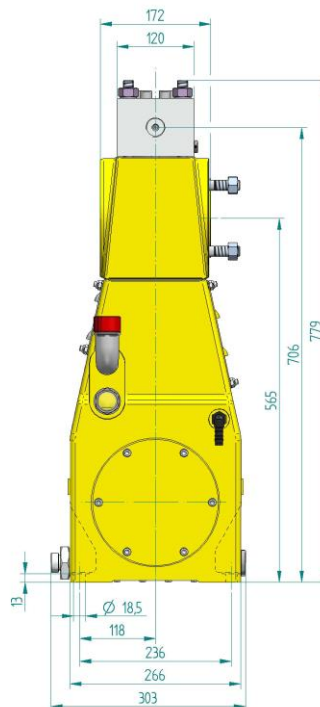
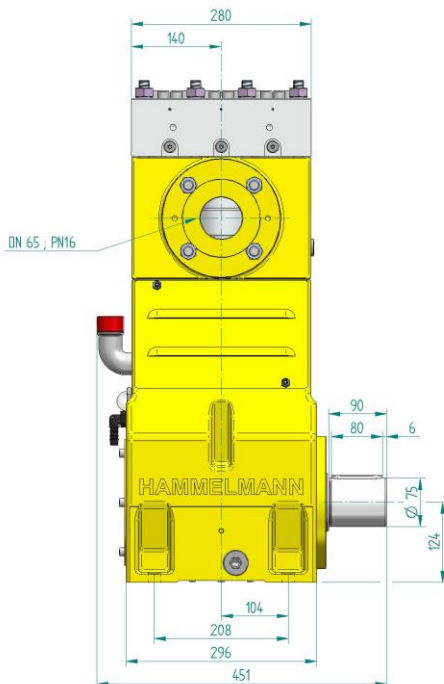
Design criteria

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. 190 kg

Energy efficient →



Features

- Power ratings up to 30 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
- Splash lubrication

Stationary unit with electric motor

Length: 1060 mm
Width: 840 mm
Height: 1490 mm
Weight: approx. 760 kg at 30 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 30 series, technical data

Performance parameters (Standardausführung)

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

HDP	Q [l/min]	Required power rating [kW]					D	r. p. m.	
		11	15	18,5	22	30		n 1	n 2
		Operating pressure [bar]							
34	1,5*	3100*	3800*				1500 / 1800 / 2150	450 625 750 900	
	2,1*	2200*	3000*	3700*	3800*				
	2,6*	1850	2500*	3100*	3700*				
	3,1*	1540	2100*	2600*	3100*	3800*			
	3,2 / 2,4*	1970	2700*	3300*	3800*				
	4,4 / 3,4*	1420	1940	2400*	2800*	3800*			
	5,3 / 4,1*	1180	1610	2000*	2400*	3200*			
	6,4 / 4,9*	1000	1340	1660	1970	2700*			
	4,3 / 3,9*	1370	1870	2300*	2700*	2800*			
	5,9 / 5,4*	1000	1340	1660	1970	2700*			
	7,1 / 6,5*	820	1120	1380	1640	2200*			
	8,5 / 7,8*	680	930	1150	1370	1870			
	8,9 / 8,9*	630	860	1060	1260	1700			
	11 / 11*	530	720	880	1050	1430			
13 / 13*	440	600	740	880	1200				
12	460	630	780	930	1250	17,5	625 750 900		
15	400	530	650	770	1050				
18	320	440	540	640	880				

*Ultra high pressure

33	17	350	480	600	710	950	20	1500/1800/ 2150	625 750
	20	300	400	500	600	810			

32	20	300	400	500	600	800	1500 / 1800 / 2150	625 750
	24	240	330	410	500	670		
	24	250	340	410	500	660		
	29	210	280	350	410	560		
	27	210	300	350	420	570		
	32	170	240	300	350	480		
	38	160	220	270	320	420		
	45	130	180	220	260	360		
	52	120	160	200	230	310		
	62	100	130	160	200	260		
	68	100	120	150	180	240		
	81	70	100	120	150	200		
	86	70	100	120	140	200		
	103	60	80	100	120	160		
	107	60	80	100	110	150		
	129	50	60	80	100	130		
130	50	60	80	100	130	55	625 750	
156	40	50	70	80	110			

HDP	Seal **	Sealing system
34	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
33	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
32	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramik plunger / packing

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

*** Special ceramic plungers up to max. 2500 bar.



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

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

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

- Rod force: 30 kN
- Stroke: 30 mm
- Mean piston speed at n₂
450 r.p.m. = 0,45 m/sec
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 diesel motor



- Stationary unit with electric motor



- Stationary electric unit for cutting

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