

HDP 30 High Pressure Pump Series

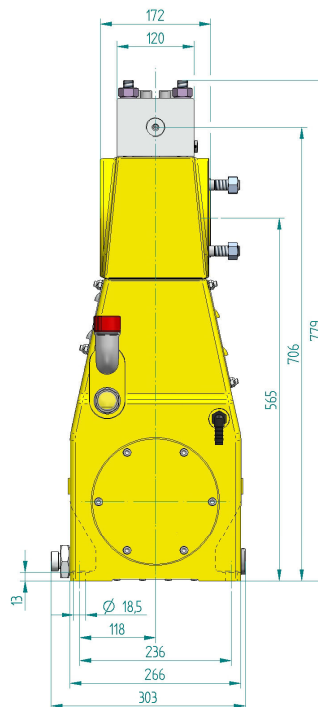
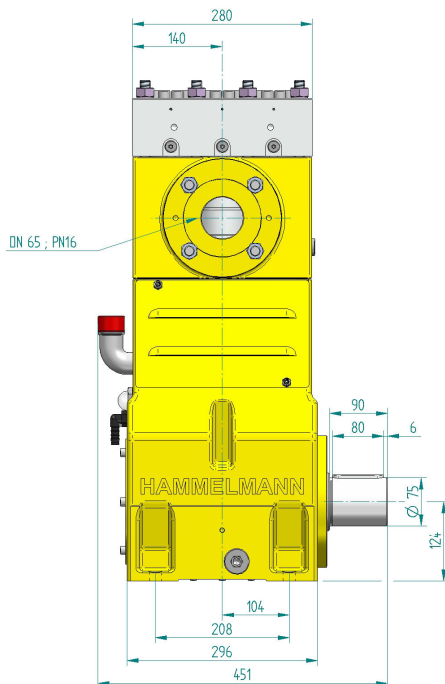
Design criteria

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

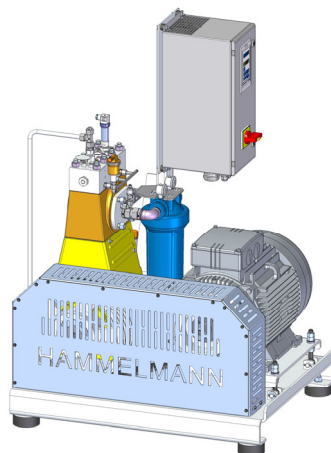
Quality and reliability

- 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

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*				8	1500 / 1800 / 2150	450
	2,1*	2200*	3000*	3700*	3800*				625
	2,6*	1850	2500*	3100*	3700*				750
	3,1*	1540	2100*	2600*	3100*	3800*			900
	3,2 / 2,4*	1970	2700*	3300*	3800*		10		450
	4,4 / 3,4*	1420	1940	2400*	2800*	3800*			625
	5,3 / 4,1*	1180	1610	2000*	2400*	3200*			750
	6,4 / 4,9*	1000	1340	1660	1970	2700*			900
	4,3 / 3,9*	1370	1870	2300*	2700*	2800*	12		450
	5,9 / 5,4*	1000	1340	1660	1970	2700*			625
	7,1 / 6,5*	820	1120	1380	1640	2200*			750
	8,5 / 7,8*	680	930	1150	1370	1870			900
	8,9 / 8,9*	630	860	1060	1260	1700	15		625
	11 / 11*	530	720	880	1050	1430			750
	13 / 13*	440	600	740	880	1200			900
	12	460	630	780	930	1250	17,5		625
	15	400	530	650	770	1050			750
	18	320	440	540	640	880			900

*Ultra high pressure

33	17	350	480	600	710	950	20	1500/1800/ 2150	625	
	20	300	400	500	600	810			750	
32	20	300	400	500	600	800	22	1500 / 1800 / 2150	625	
	24	240	330	410	500	670			750	
	24	250	340	410	500	660			625	
	29	210	280	350	410	560			750	
	27	210	300	350	420	570			625	
	32	170	240	300	350	480			750	
	38	160	220	270	320	420			625	
	45	130	180	220	260	360			750	
	52	120	160	200	230	310			625	
	62	100	130	160	200	260			750	
	68	100	120	150	180	240			625	
	81	70	100	120	150	200			750	
	86	70	100	120	140	200			625	
	103	60	80	100	120	160			750	
	107	60	80	100	110	150			625	
	129	50	60	80	100	130			750	
	130	50	60	80	100	130			55	625
	156	40	50	70	80	110				750

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.

- 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



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

- Stationary electric unit for cutting

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