

HDP 30 High Pressure Pump Series

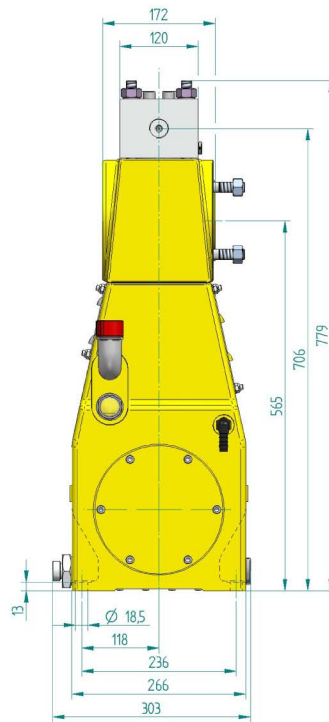
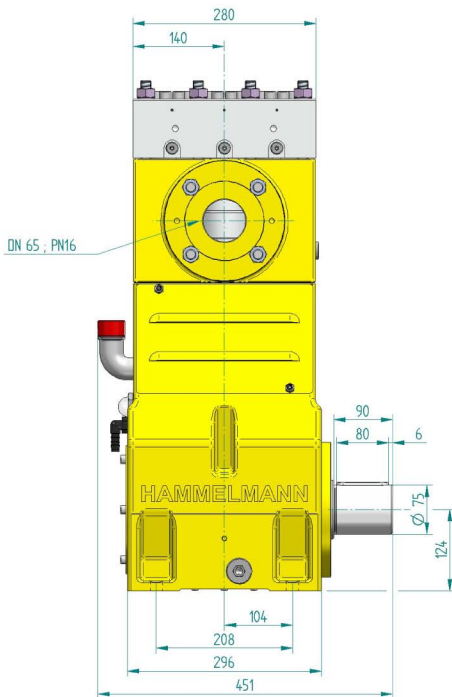
Design criteria

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
- Pressurised oil lubrication system

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*		625		
	5,3 / 4,1*	1180	1610	2000*	2400*		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			24	625
	29	210	280	350	410	560				750
	27	210	300	350	420	570			26	625
	32	170	240	300	350	480				750
	38	160	220	270	320	420			30	625
	45	130	180	220	260	360				750
	52	120	160	200	230	310			35	625
	62	100	130	160	200	260				750
	68	100	120	150	180	240			40	625
	81	70	100	120	150	200				750
	86	70	100	120	140	200			45	625
	103	60	80	100	120	160				750
	107	60	80	100	110	150			50	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.

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

Energy efficient

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