

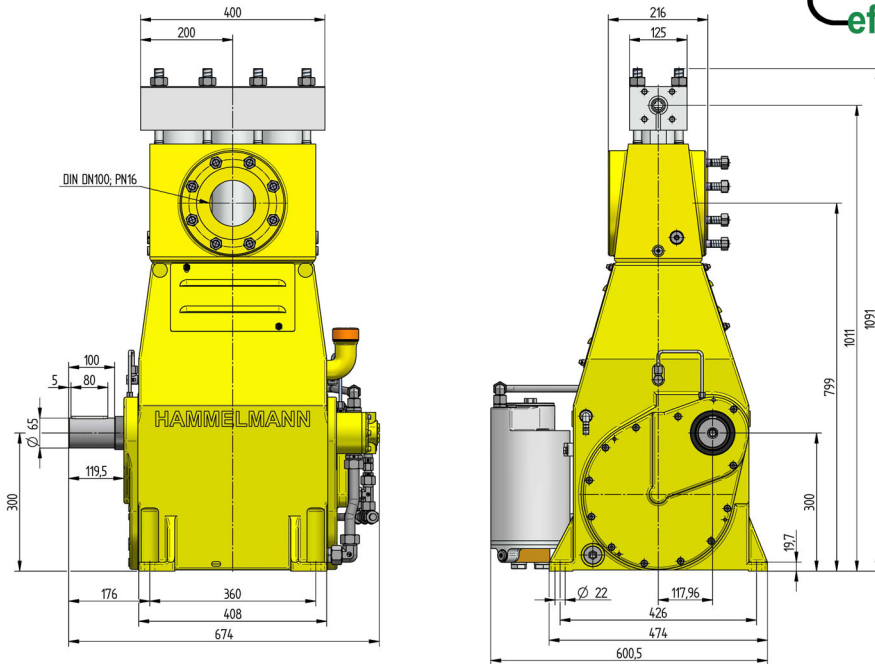
HDP 200 High Pressure Pump Series

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. 1,157 lbs



Features

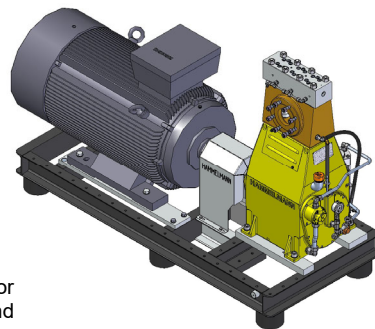
- Power ratings up to 270 HP
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

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

Stationary unit with electric motor

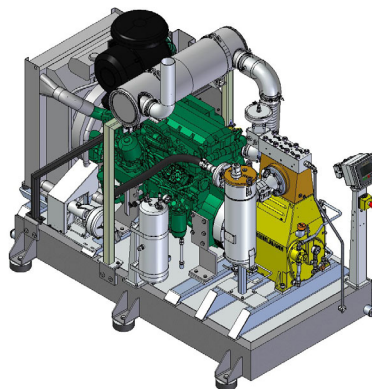
Length: 80.2 inch
 Width: 33.5 inch
 Height: 54.3 inch
 Weight: approx. 4,409 lbs at 215 HP



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: 100.8 inch
 Width: 60.6 inch
 Height: 80.7 inch
 Weight: approx. 7,055 lbs at 315 HP with full fuel tank



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HDP 200 series, technical data

Performance parameters (Standard design)

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

HDP	Q [gpm]	Required power rating [HP]						D	r.p.m.	
		100	120	150	175	215	270		n 1	n 2
		Operating pressure [psig]								
204	4.2/3.7*	37700*	49950*	55100*	65250*			1250/1500	416	
	5.0/4.5*	31900*	37700*	46400*	55100*	65250*	15	1500/1800	495	
	5.8/5.3*	26250*	31900*	39150*	46400*	56550*	65250*	1500/1800/2150	593	
	5.5/5.3*	27550	33350*	40600*	46400*			1250/1500	416	
	6.6/6.3*	23200	27700	33350*	40600*	46400*	17,5	1500/1800	495	
	7.9/7.4*	19290	23200	28280*	33350*	40600*	46400*	1500/1800/2150	593	
	6.9/6.6*	22620	27120	33350*	40600*	43500		1250/1500	416	
	8.2/7.9*	19000	22770	27840	33350*	40600	43500	19,3	1500/1800	495
	9.8/9.5*	15950	19000	23350	27990	33350	42050	1500/1800/2150	593	
	7.7/7.4*	21030	25330	30450*	37700*	40600*		1250/1500	416	
9.0/8.7*	17690	21320	26100	31900*	37700*	40600*	20	1500/1800	495	
10.8/10.3	14790	17690	21750	26100	31900*	39150*	1500/1800/2150	593		

*Ultra high pressure 46400 psig only for stationary units

203	11.6	13490	16240	19720	23780	26100		1500	416
	13.7	11310	13630	16680	20010	24220	26100	1500/1800	495
	16.4	9430	11310	13920	16680	20300	25230	1500/1800/2150	593
	14.5	10730	13050	15950	18900	20740		1500	416
	17.2	8990	10880	13200	15950	19290	20740	1500/1800	495
	20.6	7540	7540	11020	13340	16100	20300	1500/1800/2150	593

202	16.4	9430	11310	13780	16530	17980		1500	416	
	19.3	7830	9430	11600	13920	16820	17980	30	1500/1800	495
	23.2	6530	7830	9570	11600	14070	17550	1500/1800/2150	593	
	20.6	7690	9280	11310	13630	14940		1500	416	
	24.3	6530	7320	9570	11600	13920	14940	33	1500/1800	495
	29.3	5370	6530	7980	9570	11600	14500	1500/1800/2150	593	
	22.2	6820	8270	10150	12180	13200		1500	416	
	26.4	5800	6960	8700	10150	12330	13200	35	1500/1800	495
	31.4	4790	5800	7250	8700	10300	13050	1500/1800/2150	593	
	29.3	5220	6380	7690	9280	10150		1500	416	
	34.8	4500	5370	6530	7830	9430	10150	40	1500/1800	495
	41.7	3630	4500	5370	6530	7830	9860	1500/1800/2150	593	
	37.2	4350	4930	6090	7400	7980		1500	416	
	44.4	3480	4350	5080	6090	7400	7980	45	1500/1800	495
	53.3	2900	3480	4350	5080	6240	7830	1500/1800/2150	593	
	46.5	3340	4060	4930	5950	6530		1500	416	
	55.4	2900	3340	4350	4930	6090	6530	50	1500/1800	495
	66.5	2320	2900	3480	4350	5080	6380	1500/1800/2150	593	
	56.2	2900	3340	4060	4930	5370		1500	416	
	67.1	2320	2900	3480	4060	4930	5370	55	1500/1800	495
	80.3	1890	2320	2900	3480	4350	5220	1500/1800/2150	593	
	66.3	2320	2900	3480	4060	4500		1500	416	
	78.9	2030	2320	2900	3480	4350	4500	60	1500/1800	495
	94.5	1600	2030	2470	2900	3480	4350	1500/1800/2150	593	
	78.7	2030	2470	3480	3480	3920		1500	416	
	93.7	1740	2030	2900	2900	3630	3920	65	1500/1800	495
	112.2	1450	1740	2470	2470	3050	3770	1500/1800/2150	593	
	90.3	1740	2030	2470	3050	3340		1500	416	
	107.4	1450	1740	2180	2610	3050	3340	70	1500/1800	495
	128.8	1160	1450	1740	2180	2610	3190	1500/1800/2150	593	

HDP	Seal **	Sealing system
204	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
203	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
202	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. 43,500 psi

- Rod force: 19,783 lbf
- Stroke: 2.95 inch
- Mean piston speed at n2
416 r.p.m. = 3.4 feet/sec
495 r.p.m. = 4.1 feet/sec
593 r.p.m. = 4.9 feet/sec

Typical high pressure pump units



- Mobile unit with electric motor



- Road going trailer or stationary units with sound damping cover



- 10 or 20 foot sound damped container versions

Energy efficient →

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 hp = 0,746 kW

Op. pressure 1 psi = 0,069 bar

Flow rate 1 gpm = 0,227 m³/h

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