

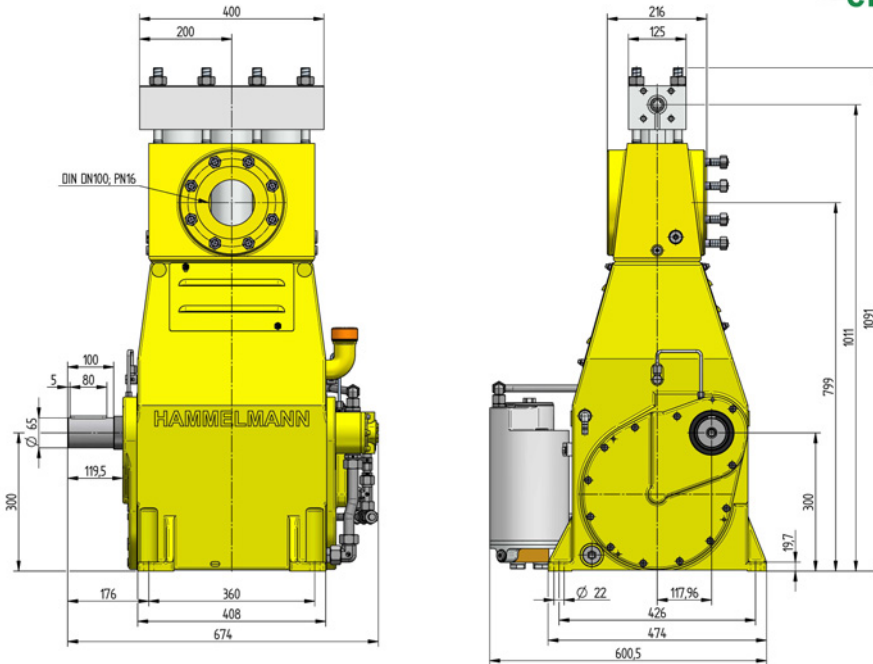
# HDP 200 High Pressure Pump Series

## 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



Energy efficient →



### Features

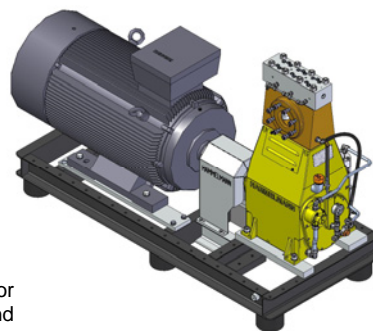
- Power ratings up to 270 HP
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

### 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

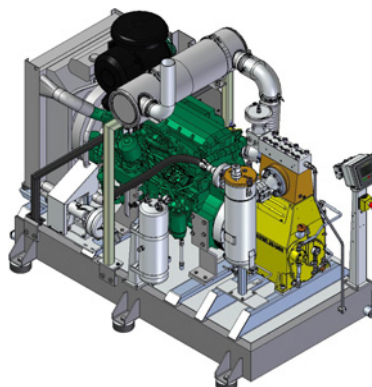
Length: 80.2 inch  
Width: 33.5 inch  
Height: 54.3 inch  
Weight: approx. 4,409 lbs at 215 HP



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



**HAMMELMANN®**

# 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	3.7*	41320*	49300*	58000*	60900*			15	1250/1500	416
	4.5*	34070*	41320*	50020*	58000*	60900*			1500/1800	495
	5.3*	29000*	34070*	42050*	50750*	58000*	60900*		1800/2150	593
	5.5/5.3*	27550	33350*	41330*	46400*			17,5	1500	416
	6.6/6.1*	22480	27550	34080*	40600*	46400*			1500/1800	495
	7.9/7.4*	19580	23200	29000*	34080*	41330*	46400*		1800/2150	593
7.7/7.4*	21030	25380	30450*	36250*	40600*		20	1500	416	
9.0/8.7*	17400	21030	25380	31180*	37700*	40600*		1500/1800	495	
10.8/10.6*	14500	17400	21750	25380	31180*	40600*		1800/2150	593	
		*Ultra high pressure 46400 psig only for stationary units								
203	11.4	13780	16680	19580	23930	26100		25	1500	416
	13.7	11600	14500	16680	19580	23930	26100		1500/1800	495
	16.4	9430	11600	13780	16680	20300	25380		1800/2150	593
	14.5	10880	13050	15950	18850	20740		28	1500	416
	17.2	8700	10880	13050	15950	18850	20740		1500/1800	495
20.6	7250	8700	10880	13050	15950	20300	1800/2150		593	
202	16.1	9430	11170	13780	16680	17980		30	1500	416
	19.3	7830	9430	11600	13780	16680	17980		1500/1800	495
	23.0	6530	7980	9430	11600	13780	17400		1800/2150	593
	20.6	7540	9140	11170	13490	14940		33	1500	416
	24.3	6380	7690	9430	11310	13780	14940		1500/1800	495
	29.0	5370	6530	1980	9570	11600	14500		1800/2150	593
	22.2	6820	8270	10010	12040	13200		35	1500	416
	26.4	5800	6960	8410	10150	12330	13200		1500/1800	495
	31.7	4790	5800	7110	8410	10300	12760		1800/2150	593
	29.3	5220	6380	7690	9280	10150		40	1500	416
	34.8	4350	5370	6530	7830	9430	10150		1500/1800	495
	41.7	3630	4500	5370	6530	7830	10010		1800/2150	593
	37.8	4210	5080	6090	7400	7980		45	1500	416
	44.6	3480	4210	5080	6090	7400	7980		1500/1800	495
	53.3	2900	3480	4350	5220	6240	7830		1800/2150	593
	47.0	3340	4060	4930	5950	6530		50	1500	416
	55.7	2900	3340	4210	4930	6090	6530		1500/1800	495
	66.5	2320	2900	3480	4210	5080	6380		1800/2150	593
	57.0	2760	3340	4060	4930	5370		55	1500	416
	67.1	2320	2760	3480	4060	4930	5370		1500/1800	495
	80.0	2030	2320	2900	3480	4210	5220		1800/2150	593
	67.1	2320	2760	3480	4060	4500		60	1500	416
	79.2	2030	2320	2900	3480	4210	4500		1500/1800	495
	94.8	1600	2760	2470	2900	3480	4350		1800/2150	593
78.7	2030	2470	2900	3480	3920		65	1500	416	
93.7	1740	2030	2470	2900	3630	3920		1500/1800	495	
112.2	1450	1740	2030	2470	3050	3770		1800/2150	593	
91.3	1740	2030	2470	3050	3340		70	1500	416	
108.0	1450	1740	2180	2610	3050	3340		1500/1800	495	
129.1	1160	1450	1740	2180	2610	3190		1800/2150	593	

- 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.

HDP	Seal **	Sealing system
174	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
173	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
172	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramik plunger / packing

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

\*\* 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

**Hammelmann Corp.** 436 Southpointe Drive  
Miamisburg, Ohio 45342  
eMail: mail@hammelmann.com

Phone (001) 937-859-8777  
Fax: (001) 937-859-9188  
http://www.hammelmann.com

**HAMMELMANN®**