

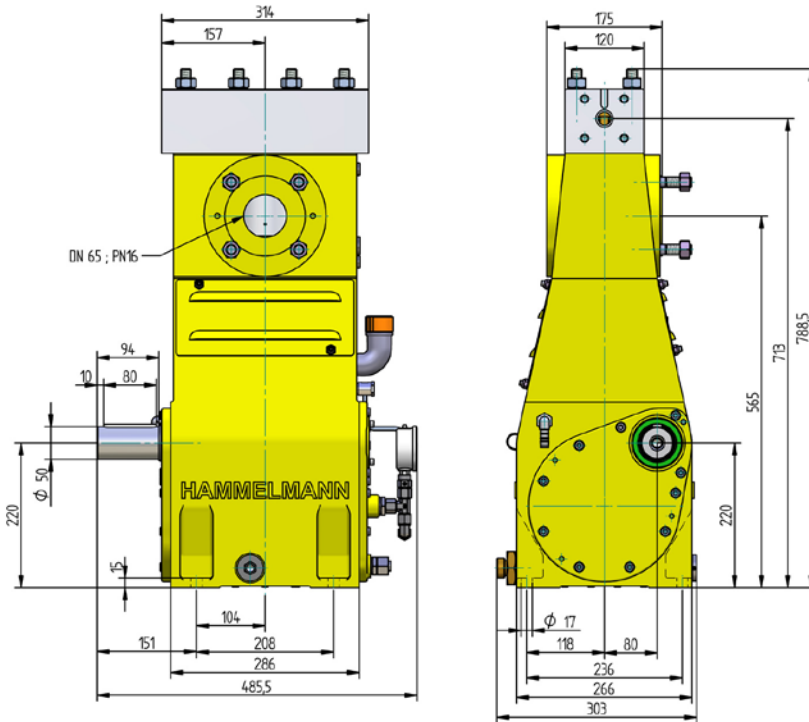
# HDP 70 High Pressure Pump Series

## 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. 215 kg



Energy efficient →



## Features

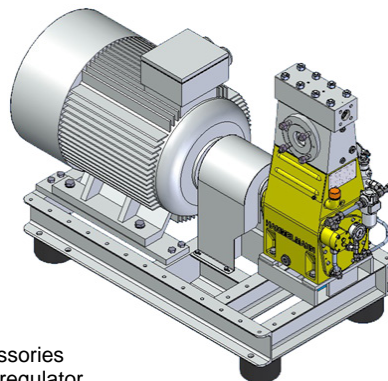
- Power ratings up to 70 kW
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

## 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
- Integral speed reduction gear
- Pressurised oil lubrication system with oil cooler/filter

## Stationary unit with electric motor

Length: 1502 mm  
Width: 720 mm  
Height: 1105 mm  
Weight: approx. 1150 kg at 75 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 70 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 [l/min]	Required power rating [kW]					D	r.p.m.		
		30	37	45	55	70		n 1	n 2	
		Operating pressure [bar]								
74	7,2 / 7,2* 9,2 / 8,7* 11 / 10,4*	2000* 1650 1400	2450* 2050* 1700	3000* 2500* 2100*	3000* 2550*	3000*	12	1500 1500/1800 1800/2150	625 750 900	
	11,9 / 11,3* 14,3 / 13,5* 17,2 / 16,2*	1250 1050 890	1550 1300 1100	1900 1600 1300	2350* 1950 1600	2400*		15	1500 1500/1800 1800/2150	625 750 900
	17 19,5 23	930 780 650	1150 970 810	1400 1150 980	1700 1400 1200	1500			17,5	1500 1500/1800 1800/2150

\*Ultra high pressure

73	21	710	880	1050	1300	20	1500	625
	26	600	740	900	1100		1500/1800	750

72	26	600	740	900	1100	1130	22	1500	625												
	32	500	610	750	910	1130		1500/1800	750												
	32	500	620	750	920	950			24	1500	625										
	38	420	520	630	780	950				1500/1800	750										
	38	430	530	640	780	810					26	1500	625								
	45	350	440	530	650	810						1500/1800	750								
	50	320	390	480	590	30							1500	625							
	59	260	330	400	490								600	1500/1800	750						
	69	230	290	350	430								35		1500	625					
	81	190	240	290	360										440	1500/1800	750				
	91	180	220	270	330										40		1500	625			
	107	150	180	220	270												340	1500/1800	750		
	115	140	170	210	260												45		1500	625	
	135	110	140	170	210														270	1500/1800	750
	142	110	130	170	210														50		1500
167	90	110	140	170	210		1500/1800														750
172	90	110	140	170	55			1500													625
201	70	90	110	140				180	1500/1800												750

HDP	Seal **	Sealing system
74	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
73	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
72	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. 2600 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: 43 kN
- Stroke: 40 mm
- Mean piston speed at n2  
625 r.p.m. = 0,84 m/sec  
750 r.p.m. = 1,00 m/sec  
900 r.p.m. = 1,20 m/sec

Typical high pressure pump units



- Stationary unit with electric motor



- Trolley



- Road going or stationary trailer units with sound damping cover
- 10 or 20 foot sound damped container versions



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

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