

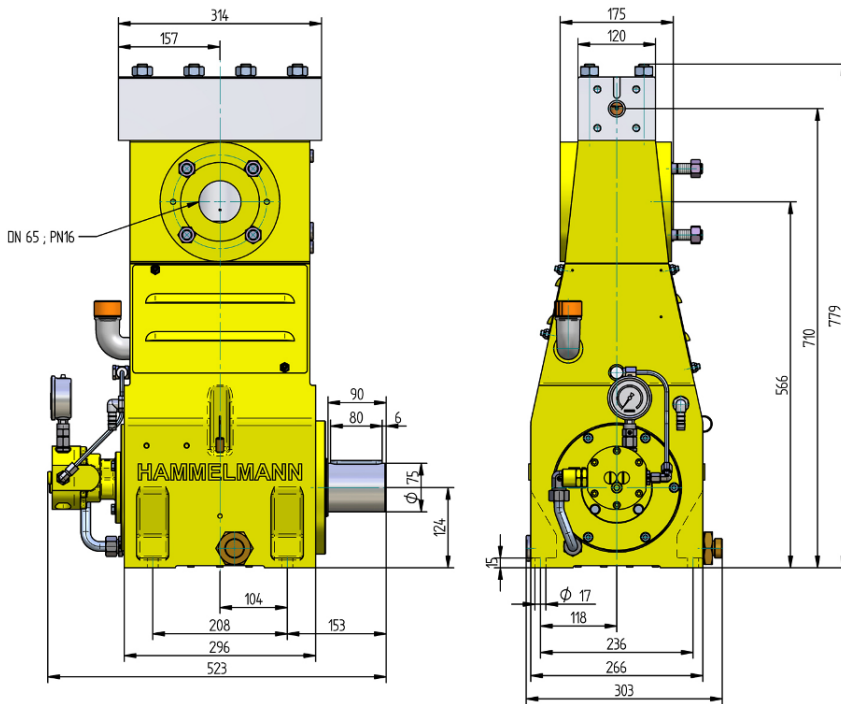
# HDP 40 High Pressure Pump Series

## Design criteria

Hammelmann high pressure pumps are built to operate at the continuous maximum duty stated in the performance parameters. Just compare the crank shaft speed, average plunger speed, plunger diameter and power rating.

### High pressure pump

Weight: approx. 440 lbs

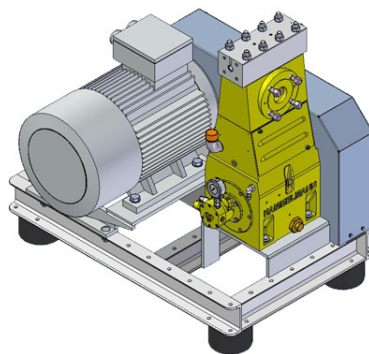


Dimensions: mm

### Stationary unit with electric motor

Length: 43 inch  
 Width: 32 inch  
 Height: 43 inch  
 Weight: approx. 1600 lbs at 40 HP

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.



### Features

- Power ratings up to 50 HP
- 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

**HAMMELMANN®**

# HDP 40 series, technical data

## Performance parameters

**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.	
		20	25	30	40	50		n 1	n 2
		Operating pressure [psig]							
44	1.5 / 1.5*	19600	23900	29700*	40600*	43500*	12	1500 / 1800 / 2150	625
	1.8 / 1.7*	16000	20300	23900	34100*	42100*	12		750
	2.2 / 1.9*	13500	16700	19600	26800	34800*	12		900
	2.2	12500	15400	18100	24700	31900*	15		625
	2.9	10400	12800	15200	21000	25400	15		750
	3.4	8700	10700	12800	17400	21800	15		900
	3.3	9100	11300	13500	18100	22500	17,5		625
	4.0	7700	9400	11200	15200	18900	17,5		750
	4.8	6400	7800	9400	12800	16000	17,5		900

\*Ultra high pressure

43	4.4	7000	8700	10300	14100	17400	20	1500/1800/ 2150	625
	5.3	5800	7300	8600	11700	14500	20		750

42	5.3	5800	7100	8600	11600	14200	22	1500 / 1800 / 2150	625
	6.3	4800	5900	7100	9700	11900	22		750
	6.3	4800	5900	7100	9700	12000	24		625
	7.7	4100	4900	5900	8100	10000	24		750
	7.4	4100	5100	6100	8300	10300	26		625
	9.0	3500	4200	5100	7000	86000	26		750
	10.0	3000	3800	4500	6200	7700	30		625
	11.9	2600	3200	3800	5200	6400	30		750
	13.7	2200	2800	3300	4500	5700	35		625
	16.4	1900	2300	2800	3800	4600	35		750
	18.0	1700	2200	2500	3500	4400	40		625
	21.6	1500	1800	2100	2900	3600	40		750
	22.7	1400	1700	2000	2800	3300	45		625
	27.2	1200	1400	1700	2300	2800	45		750
	28.2	1100	1400	1600	2200	2800	50		625
	33.8	900	1200	1400	1900	2300	50		750
	34.1	900	1200	1300	1800	2300	55		625
	41.0	700	900	1100	1500	1900	55		750

### Conversion table

Rating 1 hp = 0,746 kW  
Op.pressure 1 psi = 0,069 bar  
Flow rate 1 gpm = 0,227 m<sup>3</sup>/h

D = Piston/Plunger dia. [mm]

n1 = Motor/Engine r.p.m.

n2 = Crankshaft r.p.m.

- Rod force: 8,770 lbf
- Stroke: 1.18 inch
- Mean piston speed at n<sub>2</sub>  
625 r.p.m. = 2.1 feet/sec  
750 r.p.m. = 2.5 feet/sec  
900 r.p.m. = 3.0 feet/sec

Typical high pressure pump units



- Stationary unit with diesel motor



- Stationary unit with electric motor

HDP	Seal **	Sealing system
44	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger *** / packing
43	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
42	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. 36300 psig.

**Energy efficient** →

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



- Mobile electric unit with hose reel

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