

HDP 120 High Pressure Pump Series

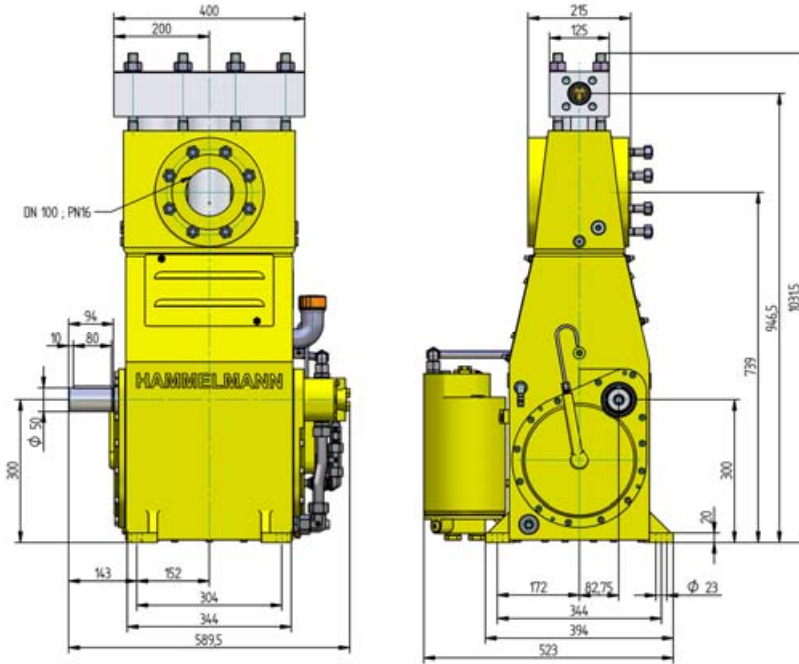
Design criteria

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. 840 lbs

Dimensions: inches

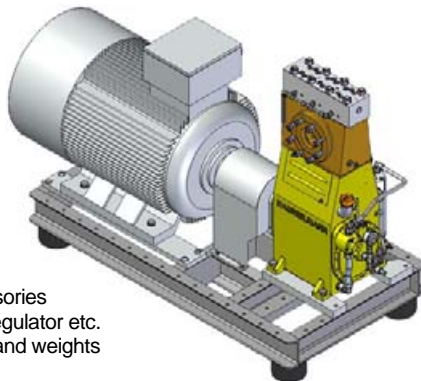


Features

- Power ratings up to 160 HP
- Vertical 3 cylinder design
- Wide variety of complementary ancillaries

Stationary unit with electric motor

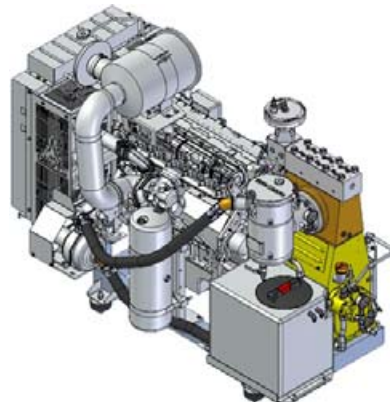
Length: 73 inch
 Width: 33 inch
 Height: 50 inch
 Weight: approx. 3,500 lbs at 150 HP



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: 78 inch
 Width: 45 inch
 Height: 55 inch
 Weight: approx. 3,100 lbs at 160 HP with full fuel tank



Quality and reliability

- Stainless steel pump head free of alternating stress
- 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

HDP 120 series, technical data

Performance parameters

Q (GPM)*	Required power rating (HP)**					D	r.p.m.	
	60	75	100	120	150/160		n 1	n 2
	Operating pressure (psig)							
3.4	26100	31900	43500			17,5	1500	370
4.2	21000	25400	35500	42100			1500/1800	440
5.0	17400	21800	29700	35500	43500		1800/2150	530
4.8	18900	23200	31200	36300	37700	20	1500	370
5.5	16000	19600	26800	31900	37700		1500/1800	440
6.6	13500	16700	22500	26800	32600/35500		1800/2150	530

* At pressures over 29,000 psi approx. 5% of the flow rate is lost due to the compressibility factor of water

7.4	12300	15200	20300	23900		25	1500	370
8.7	10200	12300	17400	21000	24700		1500/1800	440
10.6	8700	10200	14500	17400	21000		1800/2150	530

10.6	8700	10200	14500	17400		30	1500	370
12.7	7300	8700	11600	14500	16700		1500/1800	440
15.0	5800	7300	10200	12300	14500/16000		1800/2150	530

14.5	6200	7700	10400	12300		35	1500	370
17.4	5200	6400	8700	10400	12300		1500/1800	440
20.6	4500	5400	7400	8800	10900/11900		1800/2150	530

19.0	4800	6000	8100	9400		40	1500	370
23.0	4100	4900	6700	8000	9400		1500/1800	440
27.5	3300	4100	5700	6700	8300/9000		1800/2150	530

24.3	3800	4600	6400	7500		45	1500	370
29.3	3200	3900	5400	6400	7500		1500/1800	440
35.1	2600	3200	4500	5400	6500/7100		1800/2150	530

30.4	3000	3800	5200	6100		50	1500	370
36.4	2600	3200	4400	5200	6100		1500/1800	440
43.6	2200	2600	3600	4400	5200/5800		1800/2150	530

36.7	2600	3200	4200	5100		55	1500	370
43.8	2200	2600	3600	4200	5100		1500/1800	440
52.5	1700	2200	3000	3600	4400/4800		1800/2150	530

43.3	2200	2600	3600	4200		60	1500	370
52.0	1700	2200	3000	3600	4200		1500/1800	440
62.3	1500	1900	2500	3000	3600/3900		1800/2150	530

59.1	1600	1900	2600	3000		70	1500	370
70.8	1300	1600	2200	2600	3000		1500/1800	440
84.7	1200	1300	1900	2200	2800/3000		1800/2150	530

** Electric motor

Conversion table

Rating 1 hp = 0,746 kW
Op. pressure 1 psi = 0,069 bar
Flow rate 1 gpm = 0,227 m³/h

D = Piston/Plunger dia. [mm]
n1 = Motor/Engine r.p.m. [1/min]
n2 = Crankshaft r.p.m. [1/min]

Type designations

Sealing system	D	HDP Type
Hydrodynamic with tungsten carbide plungers	17,5 - 20	124
Hydrodynamic with solid ceramic plungers	25	123
Labyrinth with solid ceramic plungers	30 - 70	122
Packed sleeves with solid ceramic plungers	30 - 70	127

- Rod force: 18,430 lbf
- Stroke: 2.17 inch
- Mean piston speed at n₂
370 r.p.m. = 2.6 feet/sec
440 r.p.m. = 3.2 feet/sec
530 r.p.m. = 3.8 feet/sec

Typical high pressure pump units



- Stationary unit with electric motor



- Road going or stationary trailer units with sound damping cover



- 10 or 20 foot sound damped container versions

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