

HDP 250 High Pressure Pump series

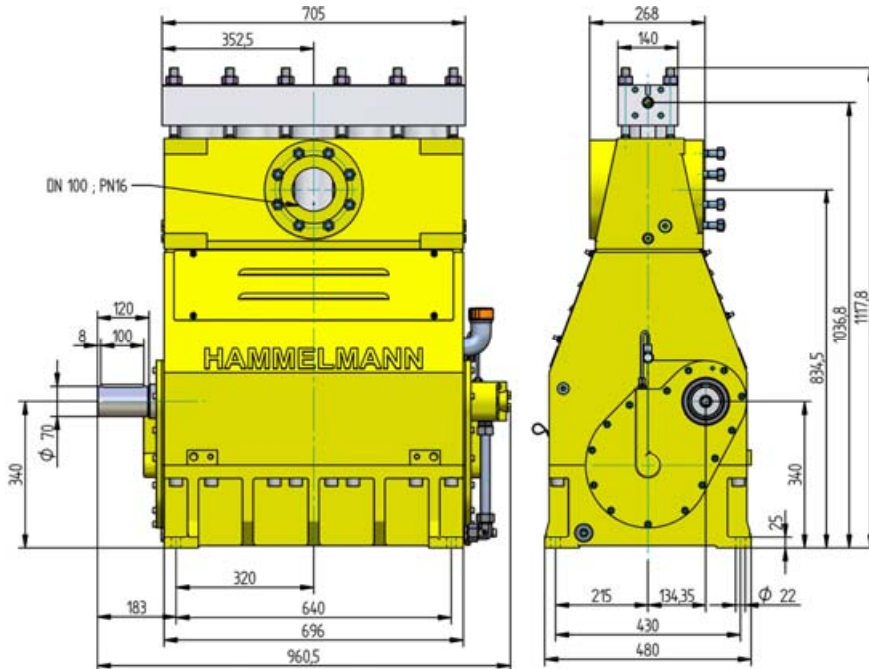
Design criteria

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. 2,360 lbs

Dimensions: mm



Features

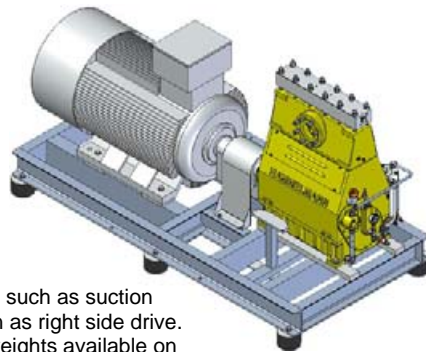
- Power ratings up to 335 HP
- Vertical 5 cylinder design
- Wide variety of complementary ancillaries

Quality and reliability

- Stainless steel pump head free of alternating stress
- Cross head piston bellows seal
- Choice of application specific seal assemblies
- Solid ceramic or tungsten carbide plungers
- Choice of bronze or stainless steel suction chamber
- Crank section calculation by 'Finite element method' ensures long working life under continuous load
- Crankshaft supported by 3 bearings and incorporating twin helical speed reducing gears
- Pressurised oil lubrication system with oil cooler/filter

Stationary unit with electric motor

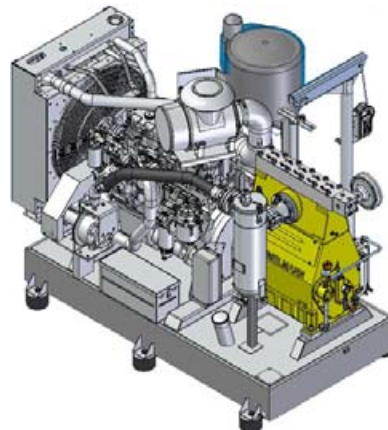
Length: 101 inch
 Width: 51 inch
 Height: 57 inch
 Weight: approx. 7,056 lbs at 335 HP



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.

Stationary unit with diesel engine

Length: 103 inch
 Width: 61 inch
 Height: 82 inch
 Weight: approx. 9,150 lbs at 200 HP with full fuel tank



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Technical data, series HDP 250

Performance parameters

Q [GPM]*	Required power rating [HP]				
	150	175	215	270	335
	Operating pressure [psig]				
8.5	26100	32600	39900	43500	
10.0	21800	26100	32600	41300	43500
12.2		21800	26100	34100	43500
11.1	19600	23900	30500	37700	
13.2		19600	23900	31200	37700
15.9			19600	24700	32600

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

17.7			18100	23200	23900
21.1				18900	23900
25.4					19600

25.6	8800	10600	12900	16000	16800
30.6	7400	8800	10700	13300	16700
36.7	6100	7400	9000	11200	13900
34.9	6500	7800	9400	11700	12300
41.7	5400	6500	7800	9900	12300
49.9	4500	5400	6500	8100	10300
46.0	4900	5900	7300	9000	9400
55.0	4100	4900	5900	7500	9400
65.8	3500	4100	4900	6200	7800
58.7	3900	4600	5700	7100	7400
70.3	3200	3900	4800	5900	7400
84.3	2800	3200	3900	4900	6200
73.2	3200	3800	4600	5800	6100
87.7	2600	3200	3800	4800	5900
105.2	2200	2600	3200	3900	4900
88.7	2600	3000	3800	4800	4900
105.6	2200	2600	3200	3900	4900
126.5	1700	2200	2600	3300	4100
104.4	2200	2600	3200	3900	4200
125.0	1700	2200	2600	3300	4100
149.8	1500	1700	2200	2800	3500
142.1	1600	1900	2300	2900	3000
170.1	1300	1600	1900	2500	3000
202.4	1000	1300	1600	2000	2500

Conversion table

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

D	r.p.m.	
	n 1	n 2

17,5	1500	390
	1500/1800	465
	1800/2150	555
20	1500	390
	1500/1800	465
	1800/2150	555

25	1500	390
	1500/1800	465
	1800/2150	555

30	1500	390
	1500/1800	465
	1800/2150	555

35	1500	390
	1500/1800	465
	1800/2150	555

40	1500	390
	1500/1800	465
	1800/2150	555

45	1500	390
	1500/1800	465
	1800/2150	555

50	1500	390
	1500/1800	465
	1800/2150	555

55	1500	390
	1500/1800	465
	1800/2150	555

60	1500	390
	1500/1800	465
	1800/2150	555

70	1500	390
	1500/1800	465
	1800/2150	555

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

- Rod force: 18,430 lbf
- Stroke: 2.95 inch
- Mean piston speed at n₂
390 r.p.m. = 3.2 feet/sec
465 r.p.m. = 3.8 feet/sec
555 r.p.m. = 4.6 feet/sec

Typical high pressure pump units



- Stationary diesel unit in BDF-Container with workshop



- Stationary electric unit

Type designations

Sealing system	D	HDP Type
Hydrodynamic with tungsten carbide plungers	17,5 - 20	254
Hydrodynamic with solid ceramic plungers	25	253
Labyrinth with solid ceramic plungers	30 - 70	252
Packed sleeves with solid ceramic plungers	30 - 70	257



- Electric unit in container

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