

High Pressure Pump Series HDP 750

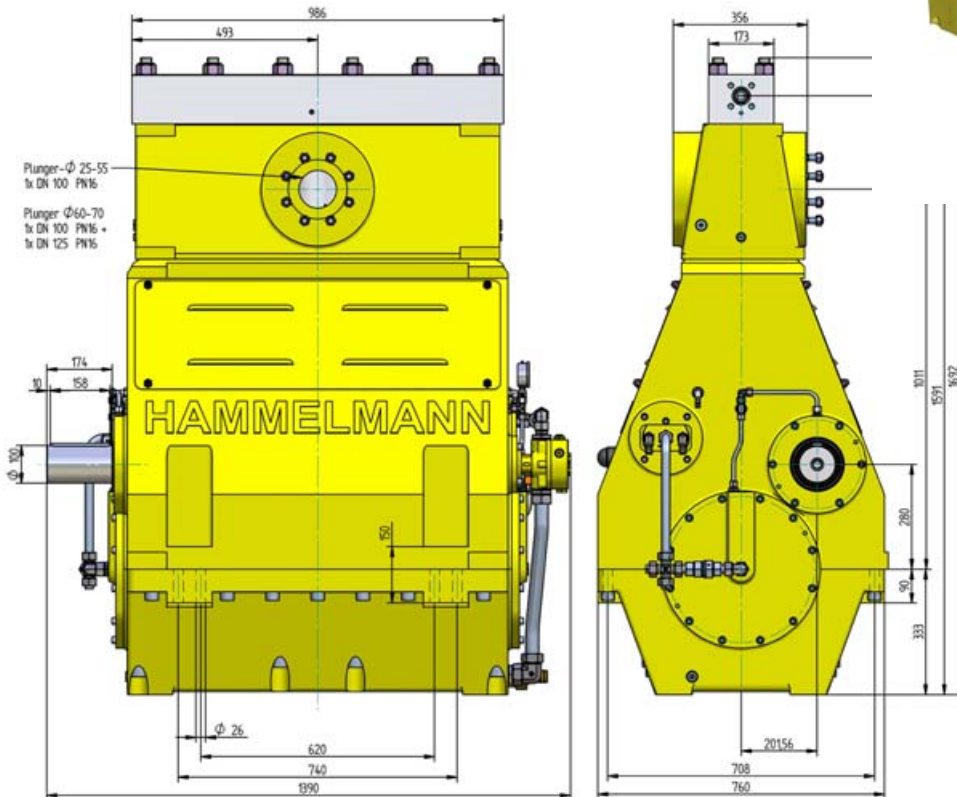
Design criteria

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. 7,700 lbs

Dimensions: mm



Features

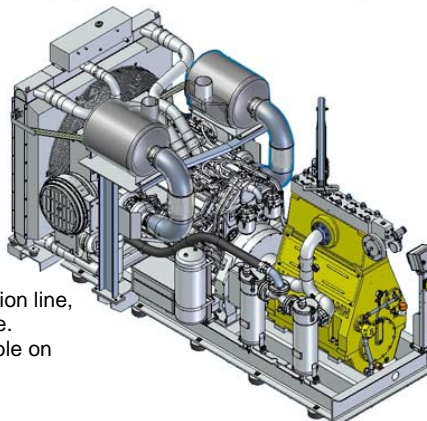
- Power ratings up to 1000 HP
- Vertical 5 cylinder design
- Wide variety of complementary ancillaries

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
- Twin helical integral reduction gear with crankshaft supported by 4 bearings
- Pressurised oil lubrication system with oil cooler/filter

Stationary unit with diesel engine

Length: 156 inch
Width: 83 inch
Height: 87 inch
Weight: approx. 20,300 lbs
at 1100 HP and without
full fuel tank



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.

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HDP 750 series, technical data

Calculated performance parameters

Q [GPM]	Required power rating [HP]						D	r.p.m.	
	670	750	800	870	940	1000		n 1	n 2
Operating pressure [psig]									
23.2	43500						28	1500	315
27.7	36300	40600	43500					1500/1800	380
33.8	30500	34100	36300	39200	42800	43500		1800	465
36.7	26800	29000					35	1500	315
43.8	21800	24700	26100	29000	29700			1500/1800	380
53.6	18100	20300	21800	23900	25400	27600		1800	465
48.3	20300	23200					40	1500	315
58.1	16700	18900	20300	21800	23200			1500/1800	380
70.8	14200	16000	16700	18100	19600	21000		1800	465
61.8	16000	18100					45	1500	315
74.2	13500	14900	16000	17400	18100			1500/1800	380
90.3	11200	12500	13500	14500	15700	16700		1800	465
77.1	13200	14800					50	1500	315
92.4	10900	12200	13100	14200	14800			1500/1800	380
112.7	9000	10200	10900	11700	12600	13600		1800	465
94.2	10900	12200					55	1500	315
113.3	9000	10000	10700	11700	12200			1500/1800	380
137.8	7400	8400	9000	9700	10400	11200		1800	465
113.5	9100	10300					60	1500	315
136.2	7500	8400	9000	9900	10300			1500/1800	380
165.8	6200	7000	7500	8100	8800	9400		1800	465
134.4	7800	8700					65	1500	315
161.3	6400	7300	7700	8400	8700			1500/1800	380
196.7	5400	5900	6400	7000	7500	8000		1800	465
156.0	6700	7500					70	1500	315
187.2	5500	6200	6700	7300	7500			1500/1800	380
228.1	4600	5100	5500	5900	6400	7000		1800	465
203.8	5100	5800					80	1500	315
244.5	4200	4800	5100	5500	5700			1500/1800	380
297.8	3500	3900	4200	4500	4900	5200		1800	465
257.9	4100	4500					90	1500	315
309.4	3300	3800	4100	4400	4500			1500/1800	380
377.0	2800	3000	3300	3600	3900	4200		1800	465
318.4	3300	3600					100	1500	315
382.0	2600	3000	3200	3500	3600			1500/1800	380
465.4	2200	2500	2600	2900	3200	3300		1800	465

- Rod force: 45,000 lbf
- Stroke: 3.94 inch
- Mean piston speed at n₂
315 r.p.m. = 3.5 feet/sec
380 r.p.m. = 4.2 feet/sec
465 r.p.m. = 5.1 feet/sec

Typical high pressure pump units



- Stationary unit with diesel motor



- Diesel unit in container with workshop



- Stationary unit with 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	28 - 35	754
Hydrodynamic with solid ceramic plungers	40	753
Labyrinth with solid ceramic plungers	45 - 100	752
Packed sleeves with solid ceramic plungers	45 - 100	757

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