

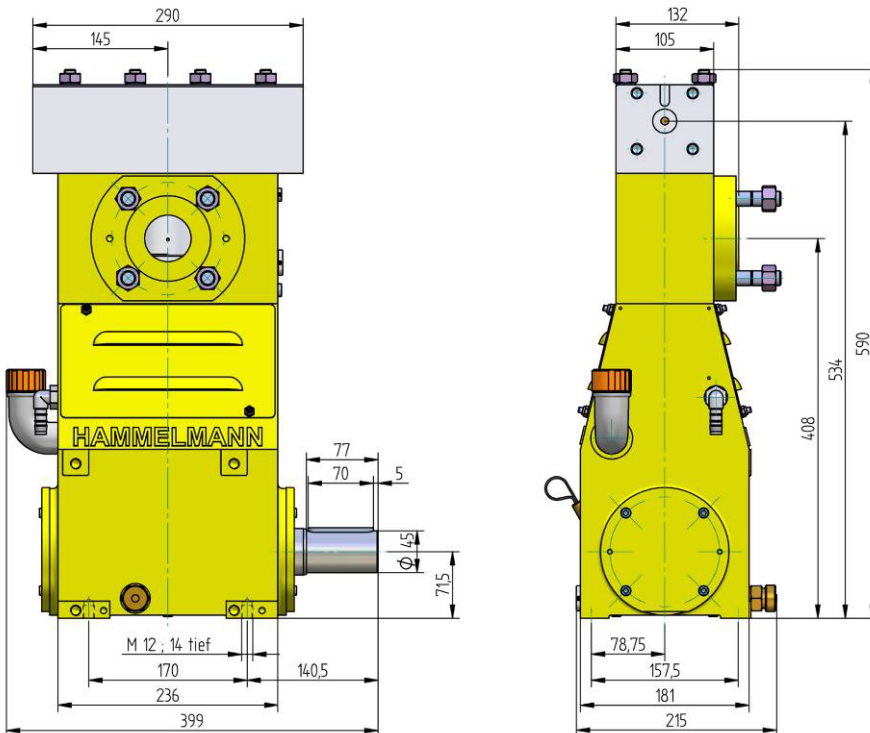
HDP 10 High Pressure Pump Series

Hammelmann process pumps are built to operate at continuous maximum duty. Just compare the crank shaft speed, average plunger speed and power rating.

High Pressure Pump

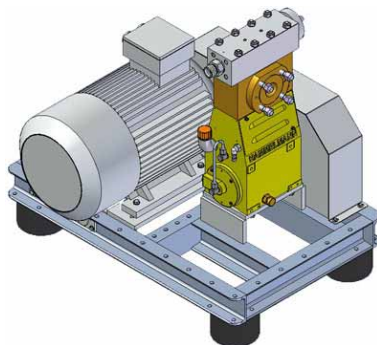
Weight: 94 kg

Energy efficient →



Stationary unit with electric motor

- Length: 1000 mm
- Width: 752 mm
- Height: 890 mm
- Weight: approx. 370 kg at 11 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.

Features

- Power ratings up to 11 kW
- Vertical 3 cylinder design

Quality and reliability

- Crank section calculation by 'Finite element method' ensures long working life under continuous load
- Splash lubricated crank section
- Bellows form hermetic seal between the suction chamber and crank section
- Stainless steel or bronze suction chamber
- Solid ceramic or tungsten carbide plungers
- Stainless steel pump head free of alternating stress
- Choice of performance and pumped medium specific seal and pump head assemblies
- Flow control achieved with variable speed gear or frequency converter
- Flow turndown ratio 1:10

HDP 10 series, technical data

Performance parameters

HDP	Q [l/min]	Required power rating [kW]			D	r.p.m.	
		5,5	7,5	11		n ₁	n ₂
		Operating pressure [bar]					
14	2,2	1100	1500	2200	8	1500/1800/2150	625
	2,7	900	1250	1850			750
	3,2	770	1050	1550			900
	3,5	700	950	1400	10	1500/1800/2150	625
	4,2	570	780	1150			750
5,1	490	660	980	900			
13	3,5	700	950	1400	10	1500/1800/2150	625
	4,2	570	780	1150			750
	5,1	490	660	980			900
	6	470	640	940	12	1500/1800/2150	625
	7	400	550	810			750
8	350	480	710	900			
12	9	310	420	630	15	1500/1800/2150	625
	11	260	350	520			750
	12	220	300	450	17,5		625
	15	190	250	380			750
	16	170	230	350	20		625
	20	145	190	290			750
	25	110	150	220	25		625
	31	95	130	190			750
	37	75	105	155	30		625
	45	65	85	130			750
	51	55	75	115	35		625
	62	45	65	95			750
	68	40	55	85	40		625
82	35	50	75	750			
86	35	45	70	45	625		
103	25	35	55		750		

- Rod force: 11,7 kN
- Stroke: 30 mm
- Mean piston speed at n₂

625 r.p.m. = 0,63 m/sec

750 r.p.m. = 0,75 m/sec

900 r.p.m. = 0,90 m/sec



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

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

D = Piston/Plunger dia. [mm]

n₁ = Motor/Engine r.p.m.

n₂ = Crankshaft r.p.m.

HDP	Seal*	Sealing system
14	Dynamic	Tungsten carbide plunger & bushing
	Packing	Special ceramic plunger** / packing
13	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
12	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. 2500 bar

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