

1100 kW

High Pressure Pump Series HDP 1200

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.



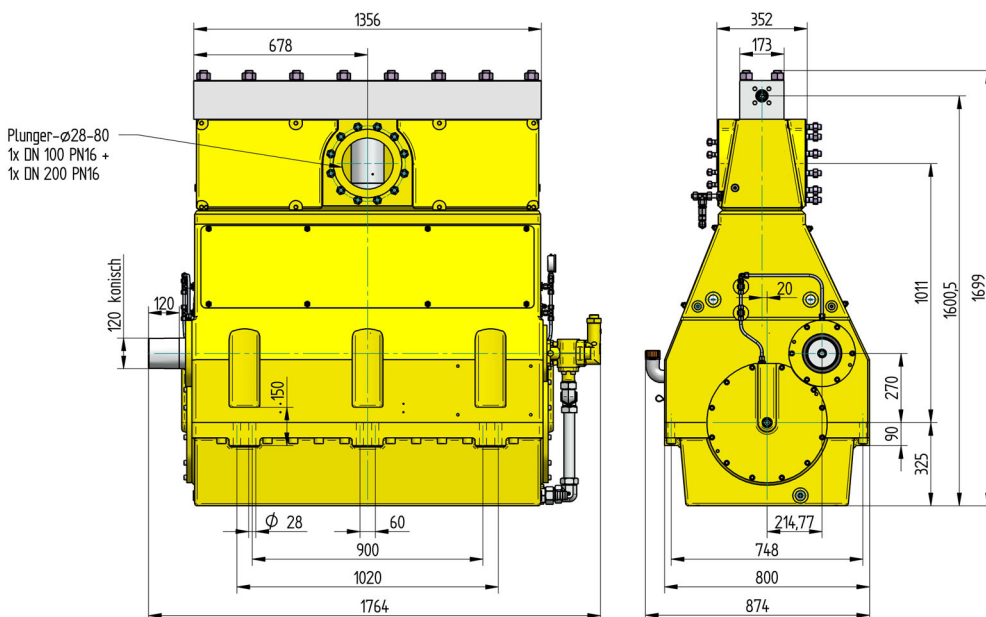
High pressure pump
Weight: 5361 kg

Features

- Power ratings up to 1100 kW
- Vertical 7 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



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HDP 1200 series, technical data

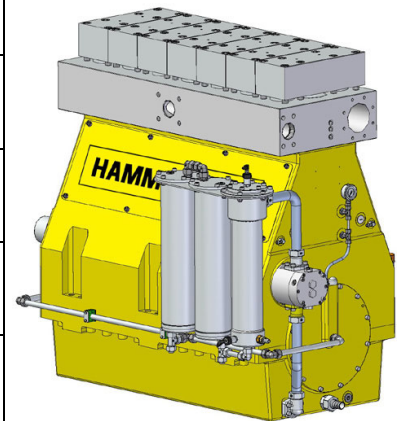
Performance parameters (Standard design)

1100 kW

HDP	Q [l/min]	Required power rating [kW]					D	r.p.m.		
		710	800	900	1000	1100		n 1	n 2	
		Operating pressure [bar]								
1204	124*	2900*	3000*				28	1500	320	
	149*	2400*	2800*	3000*		1500/1800		385		
	178*	2000*	2300*	2600*	2900*	3000*		1800	460	
1204	166 / 164*	2300*	2500*	2600*			32	1500	320	
	199 / 197*	1870	2100*	2400*	2600*			1500/1800	385	
	238 / 236*	1560	1760	1980	2200*	2400*		1800	460	
1204	203 / 198*	1880	2100*	2200*			35	1500	320	
	244 / 239*	1560	1760	1980	2200*			1500/1800	385	
	291 / 285*	1310	1470	1660	1840	2000*		1800	460	
*Ultra high pressure										
1203	267	1440	1620	1670			40	1500	320	
	322	1200	1350	1510	1670			1500/1800	385	
1203	384	1000	1130	1270	1410	1550	45	1500	320	
	342	1140	1280	1320				1500/1800	385	
1203	411	940	1060	1200	1320		45	1500	320	
	492	800	900	1000	1110	1220		1800	460	
1202	422	920	1040	1070			50	1500	320	
	508	760	860	970	1070			1500/1800	385	
	607	640	720	810	900	1000		1800	460	
	1202	506	760	860	880			55	1500	320
		608	630	710	800	880			1500/1800	385
		727	530	600	670	750	820		1800	460
	1202	608	640	720	740			60	1500	320
		732	530	600	670	740			1500/1800	385
		874	440	500	560	630	700		1800	460
	1202	721	550	610	630			65	1500	320
		867	450	510	570	630			1500/1800	385
		1036	370	430	480	530	600		1800	460
1202	836	470	530	550			70	1500	320	
	1006	390	440	500	550			1500/1800	385	
	1202	320	370	410	460	510		1800	460	
1202	960	410	460	480			75	1500	320	
	1155	340	380	430	480			1500/1800	385	
	1380	280	320	360	400	440		1800	460	
1202	1058	360	400	420			80	1500	320	
	1273	290	340	380	420			1500/1800	385	
	1521	240	280	320	350	400		1800	460	
1201 High flow	1058	360	400	420			80	1500	320	
	1273	300	340	380	420			1500/1800	385	
	1521	250	280	320	350	400		1800	460	
	1201 High flow	1195	320	360	370			85	1500	320
		1438	260	300	340	370			1500/1800	385
		1718	220	250	280	310	340		1800	460
	1201 High flow	1354	280	320	330			90	1500	320
		1629	240	270	300	330			1500/1800	385
		1946	200	220	250	280	310		1800	460
	1201 High flow	1689	230	260	270			100	1500	320
		2032	200	220	240	270			1500/1800	385
		1428	160	180	200	230	250		1800	460
1201 High flow	2065	200	210	220			110	1500	320	
	2484	160	180	200	220			1500/1800	385	
	2968	130	150	170	200	200		1800	460	

Note: Actual flow rates for water as pumped medium (volumetric efficiency has already been taken into account).

- Rod force: 210 kN
- Stroke: 100 mm
- Mean piston speed at n₂
320 r.p.m. = 1,06 m/sec
385 r.p.m. = 1,28 m/sec
460 r.p.m. = 1,54 m/sec



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

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

HDP	Seal **	Sealing system
1204	Dynamic D 28	Tungsten carbide plunger & bushing
	Dynamic D 35	Tungsten carbide plunger / bronze bushing
1203	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
1202	Dynamic D 50 -75	Ceramic plunger / bronze bushing
	Packing D 50 - 80	Ceramik plunger / packing
1201	Packing	Ceramik plunger / packing

** The dynamic high pressure sealing extends the advantages of the labyrinth design with further increased efficiency.

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