High Pressure Pump
Series HDP MC

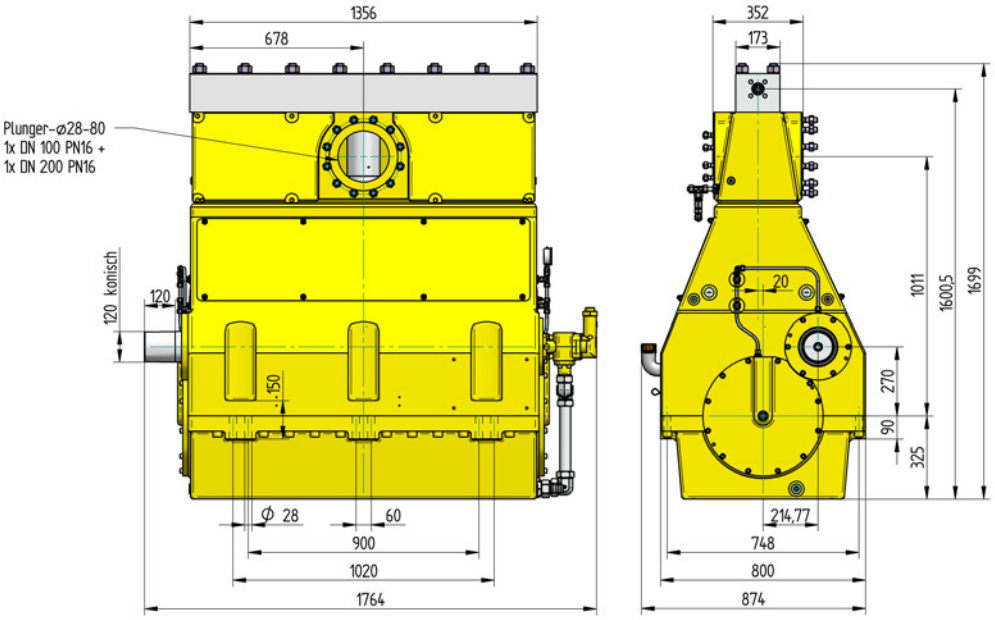
1100 kW

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 MC series, technical data

Performance parameters (Standard design)

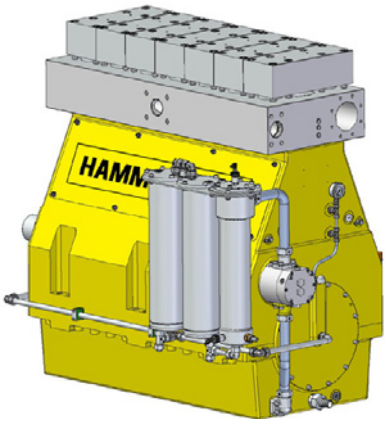
1100 kW

HDP	Q [l/min]	Required power rating [kW] / Operating pressure [bar] 710	800	900	1000	1100	D	r.p.m. n 1	n 2
MC 4	124*	2900*	3000*				28	1500	320
	149*	2400*	2800*	3000*				1500/1800	385
	178*	2000*	2300*	2600*	2900*	3000*		1800	460
	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
	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
MC 3	267	1440	1620	1670			40	1500	320
	322	1200	1350	1510	1670			1500/1800	385
	384	1000	1130	1270	1410	1550		1800	460
	342	1140	1280	1320			45	1500	320
	411	940	1060	1200	1320			1500/1800	385
	492	800	900	1000	1110	1220		1800	460
MC 2	422	920	1040	1070			50	1500	320
	508	760	860	970	1070			1500/1800	385
	607	640	720	810	900	1000		1800	460
	506	760	860	880			55	1500	320
	608	630	710	800	880			1500/1800	385
	727	530	600	670	750	820		1800	460
	608	640	720	740			60	1500	320
	732	530	600	670	740			1500/1800	385
	874	440	500	560	630	700		1800	460
	721	550	610	630			65	1500	320
	867	450	510	570	630			1500/1800	385
	1036	370	430	480	530	600		1800	460
	836	470	530	550			70	1500	320
	1006	390	440	500	550			1500/1800	385
	1202	320	370	410	460	510		1800	460
	960	410	460	480			75	1500	320
	1155	340	380	430	480			1500/1800	385
	1380	280	320	360	400	440		1800	460
	1058	360	400	420			80	1500	320
	1273	290	340	380	420			1500/1800	385
	1521	240	280	320	350	400		1800	460
MC 1 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
	1195	320	360	370			85	1500	320
	1438	260	300	340	370			1500/1800	385
	1718	220	250	280	310	340		1800	460
	1354	280	320	330			90	1500	320
	1629	240	270	300	330			1500/1800	385
	1946	200	220	250	280	310		1800	460
	1689	230	260	270			100	1500	320
	2032	200	220	240	270			1500/1800	385
	1428	160	180	200	230	250		1800	460
	2065	200	210	220			110	1500	320
	2484	160	180	200	220			1500/1800	385
	2968	130	150	170	200	200		1800	460

*Ultra high pressure

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 n_2
  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
MC4	Dynamic D 28	Tungsten carbide plunger & bushing
	Dynamic D 35	Tungsten carbide plunger / bronze bushing
MC3	Dynamic	Ceramic plunger / bronze bushing
	Packing	Ceramic plunger / packing
MC2	Dynamic D 50 -75	Ceramic plunger / bronze bushing
	Packing D 50 - 80	Ceramik plunger / packing
MC1	Packing	Ceramik plunger / packing

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

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