

High Pressure Pump Series HDP MC

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.



1100 kW

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

Hammelmann
Maschinenfabrik GmbH
Zum Sundern 13-21
D-59302 Oelde • Germany

Telefon (0 25 22) 76-0
Telefax (0 25 22) 76-444
eMail: mail@hammelmann.de
Internet: www.hammelmann.com

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HDP MC series, technical data

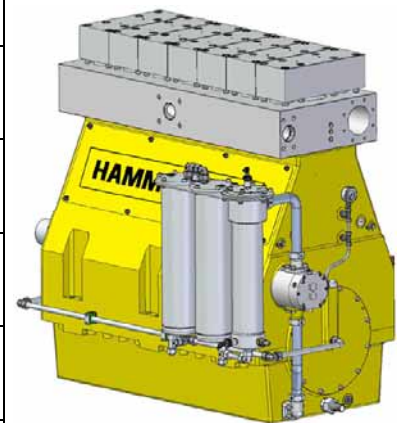
Performance parameters (Standard design)

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

HDP	Q [l/min]	Required power rating [kW]					D	r.p.m.	
		710	800	900	1000	1100		n 1	n 2
		Operating pressure [bar]							
MC 4	126*	3000*					28	1500	320
	147*	2550*	2850*	3000*		1500/1800		385	
	178*	2100*	2400*	2700*	3000*		1800	460	
MC 3	204 / 198*	1850	2200*			35	1500	320	
	241 / 238*	1550	1750	1950	2200*		1500/1800	385	
	288 / 285*	1300	1450	1650	1800		1800	460	
*Ultra high pressure									
MC 3	267	1450	1600	1650		40	1500	320	
	320	1200	1350	1500	1650		1500/1800	385	
	384	990	1100	1250	1400		1800	460	
MC 2	338	1150	1290	1320		45	1500	320	
	407	940	1060	1190	1320		1500/1800	385	
	487	780	880	990	1100		1800	460	
MC 2	422	930	1040	1070		50	1500	320	
	508	760	860	970	1070		1500/1800	385	
	607	630	710	800	890		1800	460	
		505	770	860	880		55	1500	320
	605	630	710	800	880	1500/1800		385	
	727	520	590	660	740	1800		460	
		601	640	720	740		60	1500	320
	722	530	600	670	740	1500/1800		385	
	879	440	500	560	620	1800		460	
		713	550	620	630		65	1500	320
	856	450	510	570	630	1500/1800		385	
	1043	370	420	470	530	1800		460	
	827	470	530	540		70	1500	320	
993	390	440	490	540	1500/1800		385		
1210	320	360	410	460	1800		460		
	950	410	460	470		75	1500	320	
1140	340	380	430	470	1500/1800		385		
1388	280	320	360	400	1800		460		
	1047	360	410	370	410	80	1500	320	
1256	290	330	370	410	1500/1800		385		
1531	240	280	310	350	1800		460		
MC 1 High flow	1047	360	410			80	1500	320	
	1256	290	330	370	410		1500/1800	385	
	1531	240	280	310	350		1800	460	
		1182	320	360	370		85	1500	320
	1418	260	290	330	370	1500/1800		385	
	1737	220	240	280	310	1800		460	
		1339	280	320	330		90	1500	320
	1607	230	260	300	330	1500/1800		385	
	1958	190	220	250	280	1800		460	
		1671	230	260			100	1500	320
	2005	190	210	240	260	1500/1800		385	
	2443	160	180	200	220	1800		460	
	2042	190	210	220		110	1500	320	
2451	155	175	200	220	1500/1800		385		
2987	130	145	165	185	1800		460		

1100 kW

- 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
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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