

TYPE MPO

SEALLESS

OPEN-IMPELLER STAINLESS STEEL MAGNETIC DRIVE PUMPS

Motor output :
0.2kW to 15kW

- ▶ Sealless magnetic drive pump with **open impeller**.
- ▶ Sealless magnetic drive construction will not leak !
- ▶ Capable of **handling some sludge and slurries**.
- ▶ **Very low NPSH**.
- ▶ Pumps **can be electro polished** for handling DI, H2O, etc (Option).
- ▶ Very easy to disassemble and reassemble when required.
- ▶ **SiC-D bearings withstand accidental dry-run on start up**.



Open type
impeller

Extention
11kW,15kW



TYPE MPO -30°C~+150°C
0.75kW~15kW

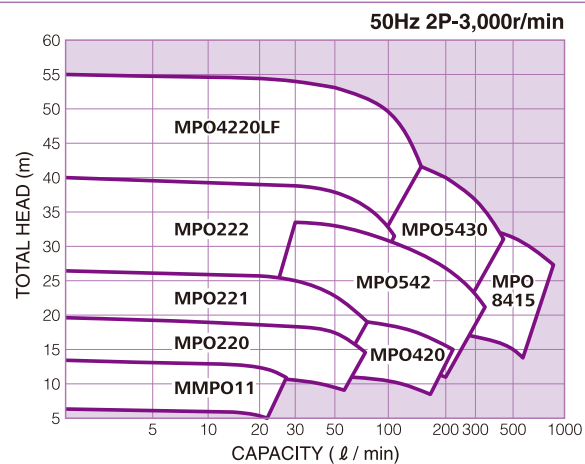
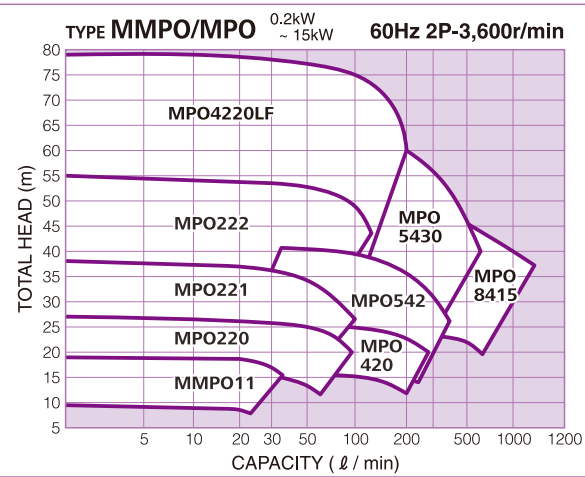
#Gasket material depends on the liquid temperature.

TYPE MMPO -30°C~+150°C
200W,400W

#O-ring material depends on the liquid temperature.



Selection charts



Specifications

	MMPO		MPO	
Frequency	50Hz	60Hz	50Hz	60Hz
Max. total head	12m	18m	54m	73m
Max. capacity	40 l / min	45 l / min	800 l / min	1100 l / min
Max. temperature applicable	150°C			
Min. temperature applicable	-30°C			
Max. liquid specific gravity	2			
Max. liquid viscosity	100mPa · s(cP)		300mPa · s(cP)	
Design pressure	0.6MPaG		1.0MPaG(220, 221, 222, 420, 542) 1.2MPaG(4220LF, 5430, 8415)	
Bore(suction x discharge)	15x15mm		25x20mm~80x40mm	
Flange standard	R thread / NPT thread		JIS 10K RF / ASME 150LB RF	
Type of impeller	Open type		Open type	
Motor output rating	200, 400W		0.75~15kW	
Pump material	SCS13(SUS304), SCS14(SUS316)		SCS13(SUS304), SCS14(SUS316), ALLOY20, Hastelloy C equivalent	
Liquid-immersed bearings	SiC-D		SiC-D	

Applicable slurry liquid

Waste water	Clay, active carbon, catalyst
Inorganic slurry	Iron sulfide,silica
Iron oxide, titanium oxide	Various organic slurry liquid



Can correspond to liquid such as this;

Please inquire about the corresponding conditions.

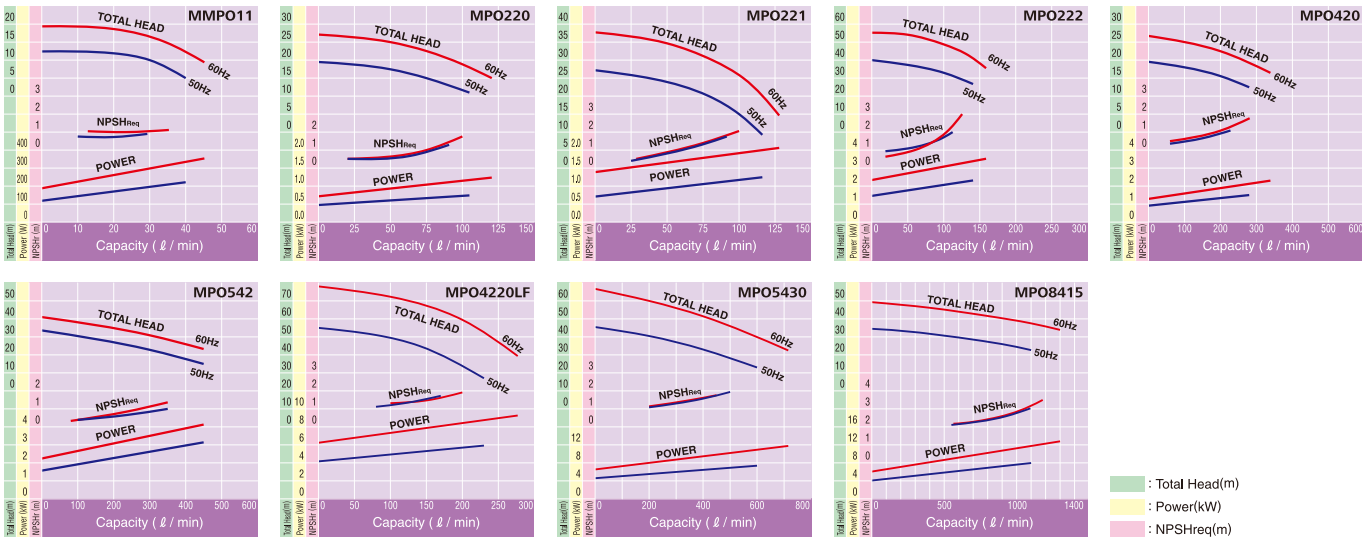
#In the case of low temperature liquid (0C°or less), problems may occur depending on the installation environment. Please contact us before purchasing (before using).



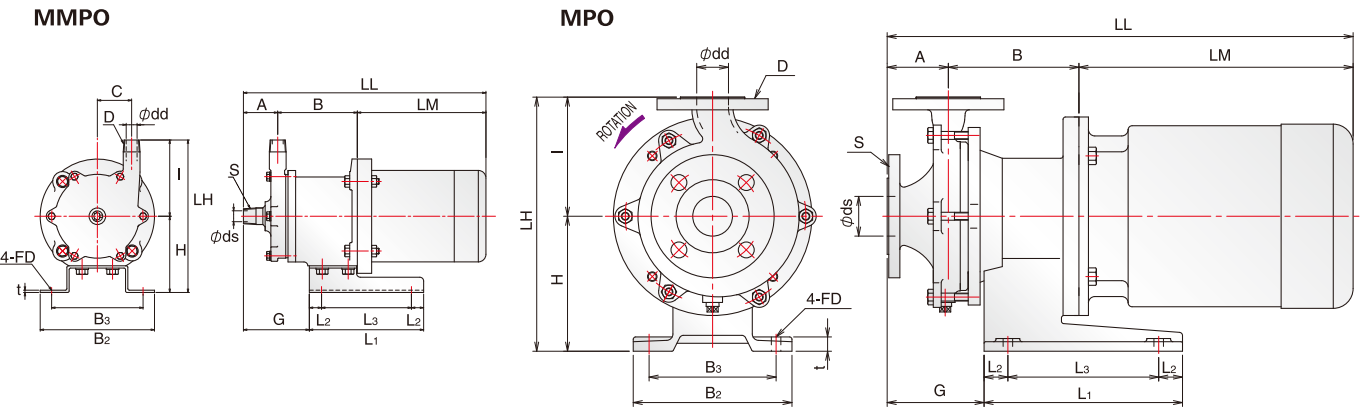
MAGPAC®series
MPO / MMPO

Performance curves

(60Hz 2P-3,600r/min,50Hz 2P-3,000r/min)



Outline dimension



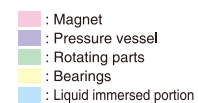
(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR								BASE PLATE										WEIGHT APPROX(kg)		
	FRAME SIZE	OUTPUT (kW)	SUCT		DISCH		A	B	C	H	I	LH	LM	LL	G	L ₁	L ₂	L ₃	B ₂	B ₃	t	FD	PUMP	MOTOR	TOTAL		
			ds	S	dd	D																					
MMPO11	63M	0.2	15	R1/2	15	R1/2	45	104	45	100	100	200	209	358	86	150	16	118	150	120	3	φ9.5	8	8	16		
	71M	0.4						111					231	387										11	19		
MPO220	80M	0.75	25		20		60	170	—	110	120	230	235.5	465.5	110	180	30	120	160	130	12	φ12	23	13.5	36.5		
	90L	1.5						273					503	19.5										42.5			
MPO221	90L	1.5, 2.2	25		20		65	165	—	170	130	300	302	532	110	250	30	190	200	160	18	φ12	27	24	51		
	(100L)112M	(2.2), 3.7						175					326	566									30	36	66		
MPO222	90L	1.5, 2.2	25		20		65	165	—	170	140	310	302	532	110	250	30	190	200	160	18	φ12	29	24	53		
	(100L)112M	(2.2), 3.7						175					326	566									33	36	69		
MPO420	90L	1.5, 2.2	40		25		75	170	—	170	135	305	302	547	125	250	30	190	200	160	18	φ12	29	24	53		
	(100L)112M	(2.2), 3.7						180					326	581									34	36	70		
MPO542	90L	1.5, 2.2	50		40		65	165	—	170	150	320	302	532	110	250	30	190	200	160	18	φ12	34	24	58		
	(100L)112M	(2.2), 3.7						175					326	566									38	36	74		
MPO4220LF	112M	3.7	40		25		102	258	—	212	165	377	326	686	175	350	50	250	250	200	20	φ15	68	36	104		
	132S,M	5.5, 7.5											369.5	729.5									70	63	133		
	160M,L	11, 15											415	503									893	86	109	195	
MPO5430	112M	3.7	50		40		102	258	—	212	165	377	326	686	175	350	50	250	250	200	20	φ15	72	36	108		
	132S,M	5.5, 7.5											369.5	729.5									74	63	137		
	160M,L	11, 15											415	503									893	90	109	199	
MPO8415	112M	3.7	80		40		102	258	—	212	165	377	326	686	175	350	50	250	250	200	20	φ15	72	36	108		
	132S,M	5.5, 7.5											369.5	729.5									74	63	137		
	160M,L	11, 15											415	503									893	90	109	199	

Outline dimensions are quite same as type MMP and MP.

LM,LL dimensions and motor weight may vary depending on motor used.

Construction and materials

MMPO

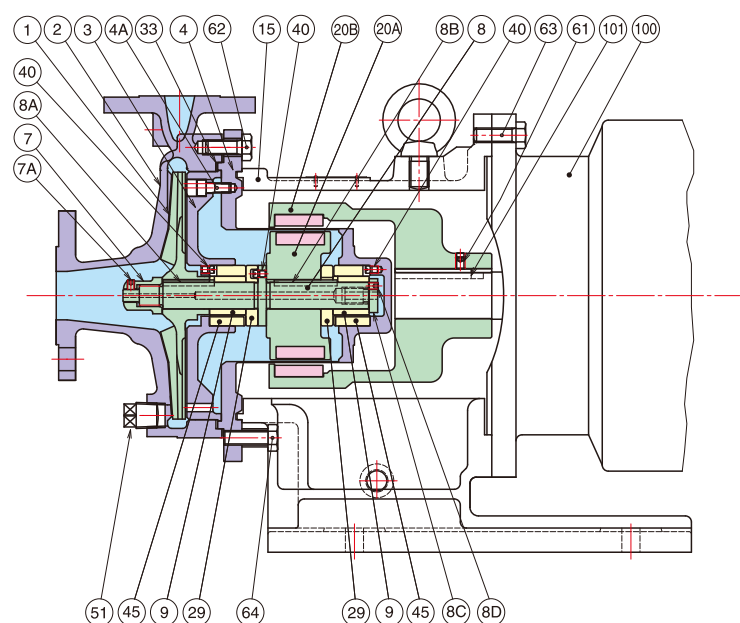
MARK	NAME OF PART	MAT'L	No.REQ'D
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MPO



MARK	NAME OF PART	MAT'L	No.REQ'D
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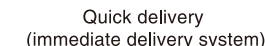
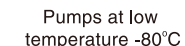
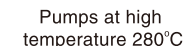
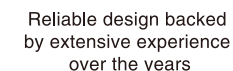
MPO(4220LF, 5430, 8415)



MARK	NAME OF PART	MAT'L	No.REQ'D
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We're exploring a new era for stainless steel "Magnetic Drive Pumps" without seals

Developing a pump without seals brought the following three features. All of them expand the range of applications for Magnetic Drive Pumps even further into existing and new fields.



This leaflet shows the various features of each magnetic drive pump using the icons above.

Three features of Magnetic drive pumps

1st feature : **No leaks, at all, of any kind**

Seal pumps inevitably leak from the seal due to the construction of shaft seal.

In order to eliminate this problem, the seal-less magnetic drive pumps eliminate the power-transfer shaft, which is connected to the impeller directly. Instead, magnetic drive pumps are designed to perform power-transfer with a permanent magnet through the wall of pump rear casing.

No shaft seal is required and therefore no-leak. This no-leak feature makes it reliable and safe.

2nd feature : Tough and highly durable

The working temperature and pressure range of seal-less magnetic drive pump is much wider than that of conventional seal pump.

Seal pumps have limited resistance to heat & cold and low pressure withstanding capability due to the shaft seal.

3rd feature : Easy to maintain

The magnetic drive pumps have a long MTBF (Mean Time Between Failure) rating. Simple and compact design provides easy maintenance.