

TYPE MP

SEALLESS

MID-SIZE STAINLESS STEEL MAGNETIC DRIVE PUMPS

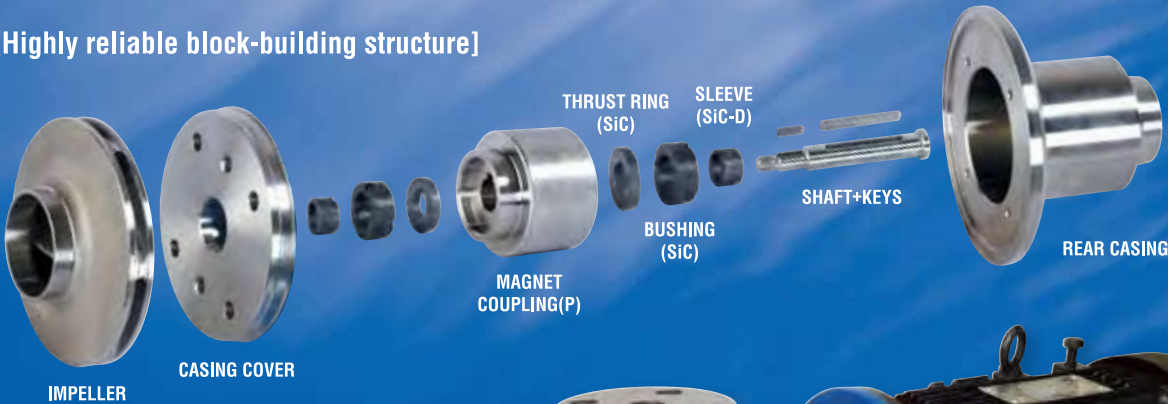
Motor output :
0.75kW to 15kW

Extention
11kW,15kW

The MP pumps are considered the core of the MAGPAC series pumps. Their three outstanding features, **sealless design**, **reliability** and **practically maintenance free** service makes them the most versatile of all the MAGPAC series pumps.

With efficiencies equaling mechanical seal pumps and **SiC-D dry-run-withstandable bearings**, these pumps are the logical choice for nearly all pump applications. For temperatures exceeding these specification select additional models below.

[Highly reliable block-building structure]



Seal less magnetic drive pump

TYPE MP
-30°C~+150°C
0.75kW~15kW
#Gasket material depends on the liquid temperature.

For liquid
of low temperature

TYPE ML
-80°C~+150°C
0.75kW~15kW

- ▶ Nitrogen purge port is provided to prevent moisture from freezing in the frame adapter.
- ▶ Rare earth Nd magnets are used.
- ▶ Low temperature gasket material is used.

For liquid
of high temperature

TYPE MH
RT~+280°C
0.75kW~15kW

- ▶ Fin type frame adapter dissipates heat away from pump.
- ▶ Rare earth SmCo magnets are used.
- ▶ High temperature gasket material is used.



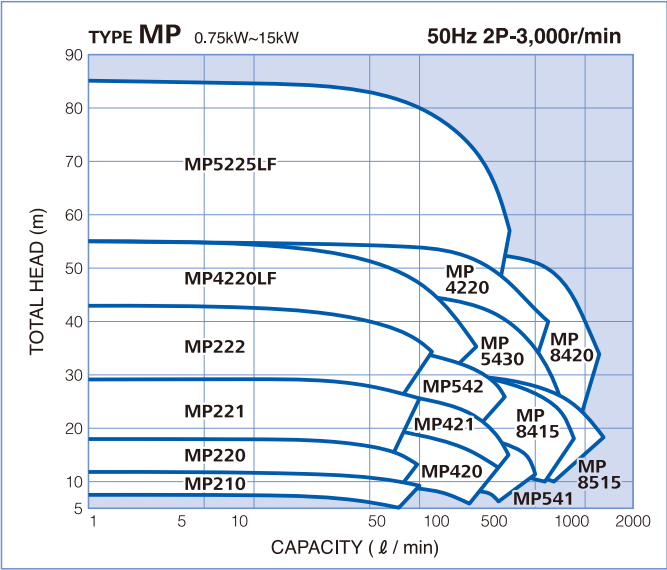
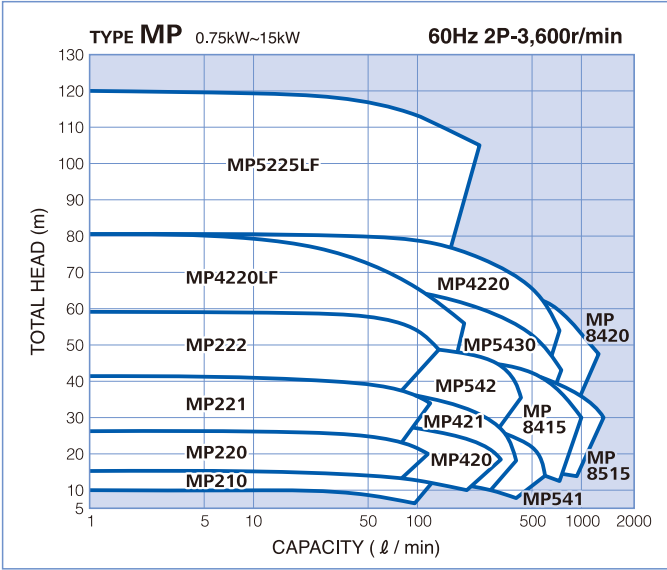
Specifications

	MP	MH	ML
Frequency	50Hz		60Hz
Max. total head	80m		120m
Max. capacity	1100 ℓ /min		1300 ℓ /min
Max. temperature applicable	150°C	280°C	150°C
Min. temperature applicable	-30°C	RT	-80°C
Max. liquid specific gravity	2		
Max. liquid viscosity	300mPa·s(cP)		
Design pressure	1.0MPaG(210, 220, 221, 222, 420, 421, 541, 542) 1.2MPaG(4220, 4220LF, 5430, 8415, 8420, 8515) 1.6MPaG(5225LF)		
Bore(suction x discharge)	25x20mm~80x50mm		
Flange standard	JIS 10K RF / ASME 150LB RF		
Type of impeller	Closed		
Motor output rating	0.75kW~15kW(2P)		
Pump material	SCS13(SUS304), SCS14(SUS316), ALLOY20, Hastelloy C equivalent		
Liquid-immersed bearings	SiC-D		

#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).



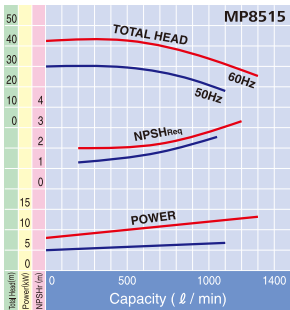
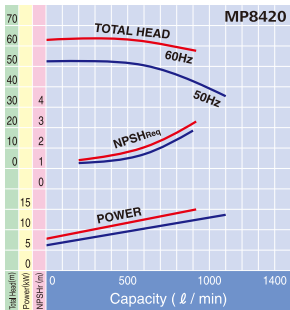
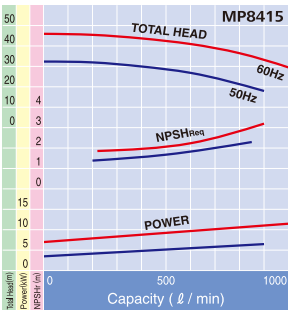
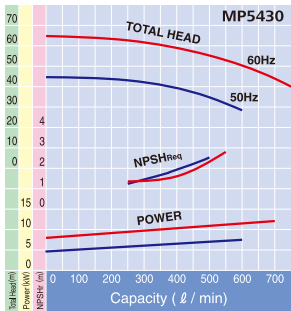
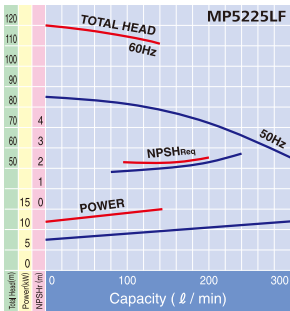
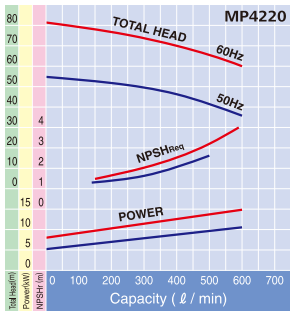
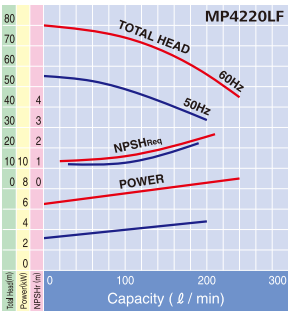
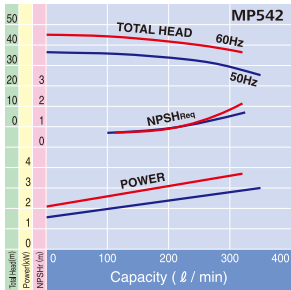
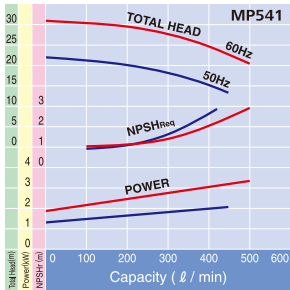
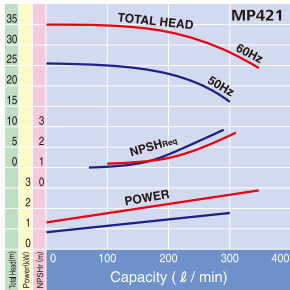
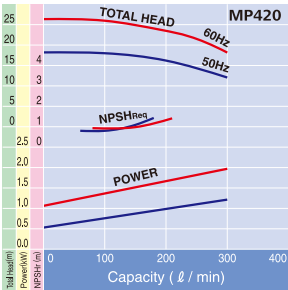
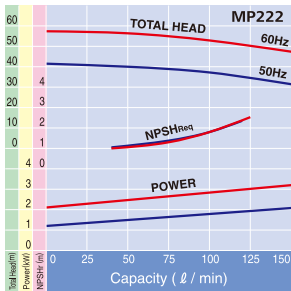
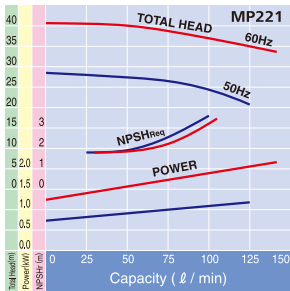
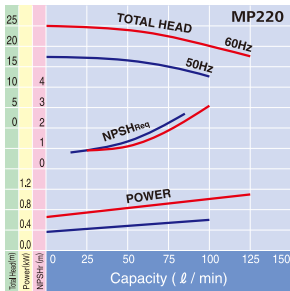
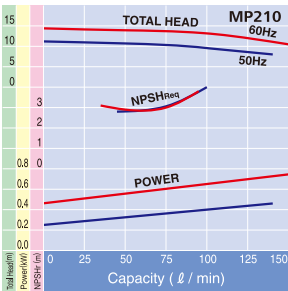
Selection charts



Performance curves for MH and ML are same as MP.

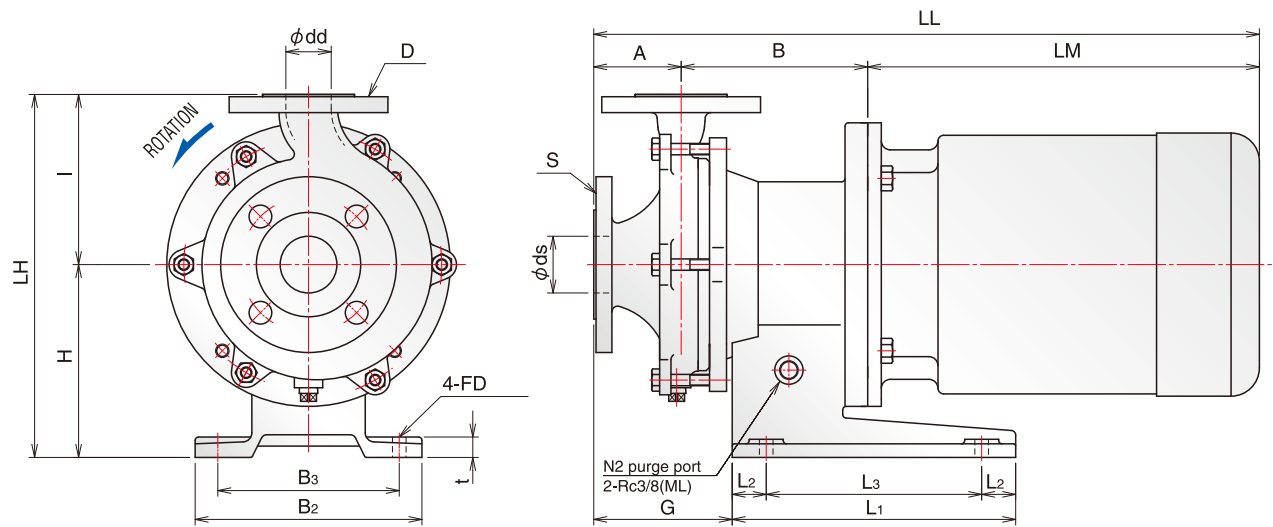
Performance curves

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



■ : Total Head(m)
■ : Power(kW)
■ : NPSHreq(m)

Outline dimension



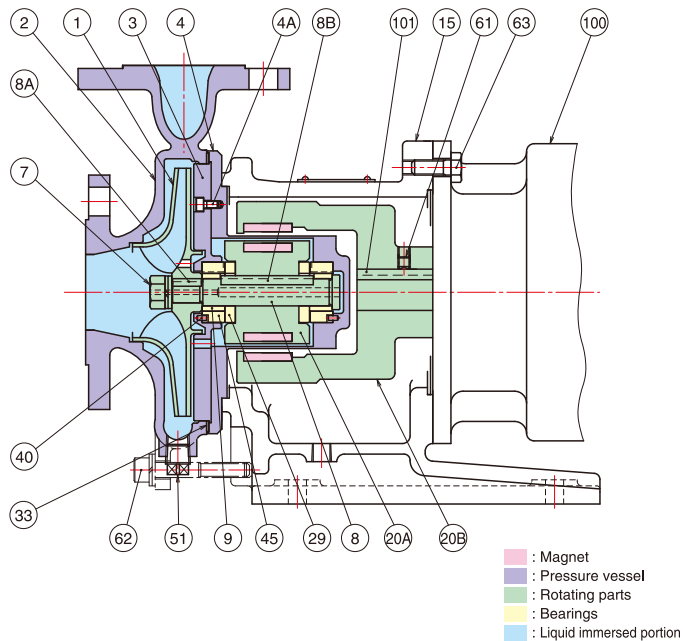
(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR						BASE PLATE										WEIGHT APPROX(kg)			
	FRAME SIZE	OUTPUT (kW)	SUCT		DISCH		A	B	H	I	LH	LM	LL	G	L ₁	L ₂	L ₃	B ₂	B ₃	t	FD					
			ds	S	dd	D																PUMP	MOTOR	TOTAL		
MP210	80M	0.75	25	JIS 10K RF or ASME 150LB RF	20	JIS 10K RF or ASME 150LB RF	75	170	110	105	215	235.5	480.5	125	180	30	120	160	130	12 _#	φ12	22	13.5	35.5		
	90L	1.5										273	518										19.5	41.5		
MP220	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	
MP221	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											326	566										30	36	66
MP222	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											326	566										33	36	69
MP420	80M	0.75	40				25	75	170	170	135	305	235.5	480.5	125	250	30	190	200	160	18	φ12	29	13.5	42.5	
	90L	1.5,2,2											302	547										24	53	
MP421	90L	1.5,2,2	40				25	75	170	170	135	305	302	547	125	250	30	190	200	160	18	φ12	30	24	54	
	(100L)112M	(2.2),3.7											326	581										34	36	70
MP541	90L	2.2	50				40	80	170	170	140	310	302	552	130	250	30	190	200	160	18	φ12	31	24	55	
	(100L)112M	(2.2),3.7											326	586										35	36	71
MP542	90L	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											326	566										38	36	74
MP4220LF	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											503	893										86	109	195
MP4220	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		503	893	86							109	195												
MP5430	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								503	893										90	109	199			
MP8415	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								503	893										90	109	199			
MP8420	112M	3.7	80	40	102	263	212	215	427	326	691	180	350	50	250	250	200	20	φ15		74	36	110			
	132S,M	5.5,7,5								369.5	734.5										76	63	139			
	160M,L	11,15								503	898										92	109	201			
MP8515	112M	3.7	80	50	102	263	212	210	422	326	691	180	350	50	250	250	200	20	φ15		74	36	110			
	132S,M	5.5,7,5								369.5	734.5										76	63	139			
	160M,L	11,15								503	898										92	109	201			
MP5225LF	112M	3.7	50	25	102	263	212	215	427	326	691	180	350	50	250	250	200	20	φ15		84	36	120			
	132S,M	5.5,7,5								369.5	734.5										86	63	149			
	160M,L	11,15								503	898										102	109	211			

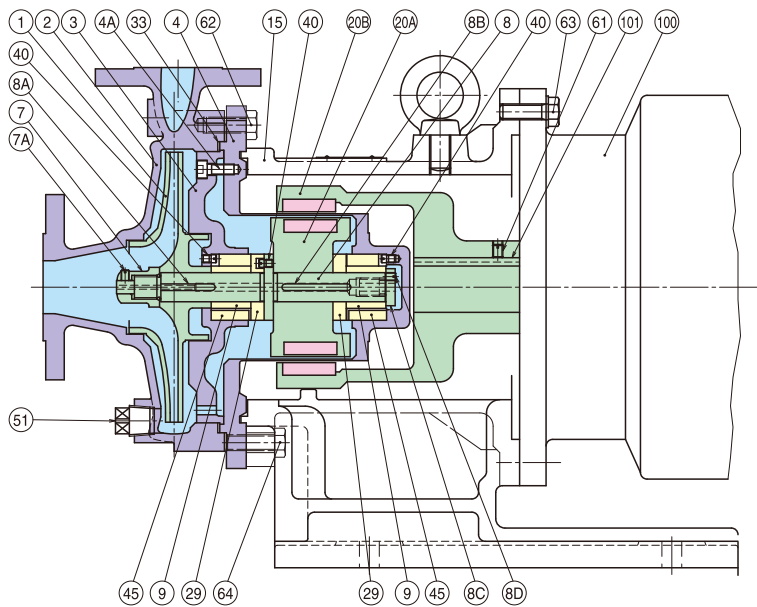
LM,LL dimensions and motor weight may vary depending on motor used. # Figures in brackets are for MH220 and ML220.



Construction and materials



101	COUPLING KEY(M)	S45C	1
100	MOTOR	-	1
63	HEXAGON HEAD BOLT	SUS304	4 ^S
62	HEXAGON SOCKET HEAD CAP SCREW WITH WASHER	SUS304	6 ^S
61	SET SCREW	SCM435	1
51	PLUG	SUS	1
45	BUSHING	SIC	2
40	PIN	SUS	2
33	SHEET GASKET	PTFE	1
29	THRUST RING	SIC	2
20B	MAGNET	RARE EARTH	1 ^S
	MAGNET COUPLING(M)	FCD	1
20A	MAGNET	RARE EARTH	1 ^S
	MAGNET COUPLING(P)	SUS	1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SIC-D	2
8B	COUPLING KEY(P)	SUS	1
8A	IMPELLER KEY	SUS	1
8	SHAFT	SUS	1
7	IMPELLER NUT WITH WASHER	SUS	1 ^S
4A	HEXAGON SOCKET HEAD CAP SCREW	SUS	4
4	REAR CASING	SUS	1
3	CASING COVER	SUS	1
2	CASING	SCS	1
1	IMPELLER	SCS	1
MARK	NAME OF PART	MAT'L	No.REQ'D



101	COUPLING KEY(M)	S45C	1
100	MOTOR	-	1
64	HEXAGON HEAD BOLT	SUS304	4
63	HEXAGON HEAD BOLT	SUS304	4
62	HEXAGON HEAD BOLT	SUS304	8
61	SET SCREW	SCM435	1
51	PLUG	SUS	1
45	BUSHING	SIC	2
40	SET SCREW	SUS	3
33	SHEET GASKET	PTFE	1
29	THRUST RING	SIC	2
20B	MAGNET	RARE EARTH	1 ^S
	MAGNET COUPLING(M)	FCD	1
20A	MAGNET	RARE EARTH	1 ^S
	MAGNET COUPLING(P)	SUS	1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SIC-D	2
8D	SLEEVE BOLT SET SCREW	SUS	1
8C	SLEEVE BOLT	SUS	1
8B	COUPLING KEY(P)	SUS	1
8A	IMPELLER KEY	SUS	1
8	SHAFT	SUS	1
7A	IMPELLER NUT SET SCREW	SUS	1
7	IMPELLER NUT	SCS	1
4A	HEXAGON SOCKET HEAD CAP SCREW	SUS	4
4	REAR CASING	SUS	1
3	CASING COVER	SCS	1
2	CASING	SCS	1
1	IMPELLER	SCS	1
MARK	NAME OF PART	MAT'L	No.REQ'D

Examples of applicable liquid

Acrylic acid	Chlorosulfonic acid	Butadiene
Acetaldehyde	Hot oil, hot water	Fluorinert
Acetone	Acetic acid	Freon
Ammoniacal liquor	Phosphorus trichloride	Hexane
Isopropyl alcohol	Ethylene oxide	Hexamethylene Diisocyanate
Ethanol	Cyclohexane	Benzene
Ethylene glycol	Pure water	Formalin
Oxy phosphorus chloride	Styrene	Maleic acid
Octanol	Hydrocarbon	Methanol
Hydrogen peroxide water	Trichloroethylene	Methyl ethyl ketone
Caustic soda	Toluene	Sulfuric acid
Xylene	Kerosene	Various chemicals
Glycine soda	Oleum Fuming sulfuric acid	Various heat medium liquid
Chloroform(TrichloroMethane)	Phenol	Various coolant liquid

Efficiency compared with seal pump (our products)

	Pump performance	Efficiency
MAGPAC MP542	300 ℓ /min x 26m	55%
Mechanical seal pump	3,000 rpm	JIS (A) 53%

Example - Spare parts savings in Jap.Yen (10 to 20 pumps in service)

Mechanical seal pump	MAGPAC, MP	Difference
Sleeve <50%> @25,000yen x 5sets	Liquid- immersed bearings <10%> @50,000yen x 1set	Store space is cut down to 1/10th
Mechanical <50%> @35,000yen x 5sets		
Total 300,000yen	50,000yen	250,000yen+α