

# TYPE MPL

**SEALLESS**

## LARGE-SIZE STAINLESS STEEL MAGNET DRIVE PUMPS

Motor output :

**3.7kW to 15kW**

Type MPL pumps are the largest of the MAGPAC series and handle larger flows and higher heads with **power up to 15 KW (20HP)**. These excellent pumps were designed to be economical, as well as safe and friendly to personnel and the environment. The MPL pumps were developed by Sanwa after many years of designing and manufacturing magnetically driven pumps, which add significantly to the MAGPAC product range. Type MPL are modified for expanded temperature ranges : MHL for temperatures up to 280°C. MLL for temperatures down to -80°C. SiC bearings are standard (SiC-D are optional) which provide maintenance free, cost effective operation. In addition to their long life and outstanding reliability, the sealless construction makes them ideal for handling hazardous and toxic liquids.



### Seal less magnet drive pump

**TYPE MPL** -30°C~+150°C 3.7kW~15kW

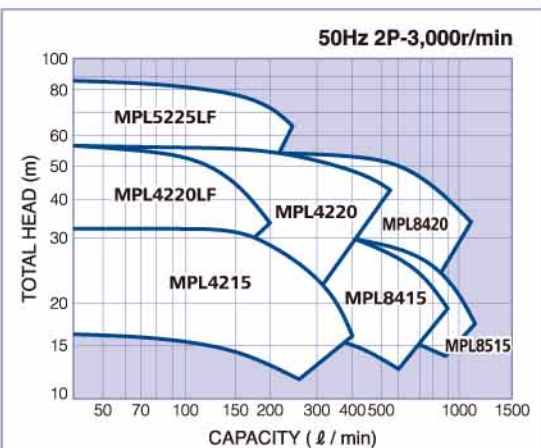
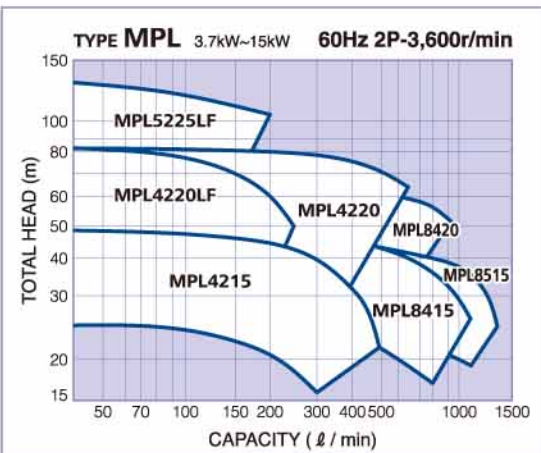
**For liquid of high temperature**

**TYPE MHL** RT~+280°C 3.7kW~15kW

- ▶ Fin type frame adapter dissipates heat away from pump.
- ▶ High temperature SmCo magnets are used for temperatures above 150°C.
- ▶ High temperature gasket material is used.

- ▶ For low temperatures, Type MLL pumps are used down to -80°C.

### Selection charts



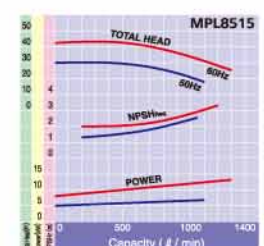
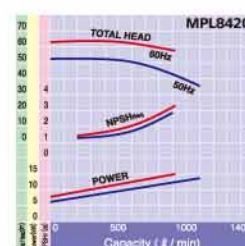
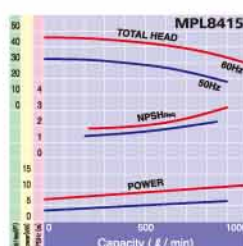
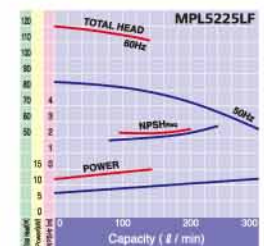
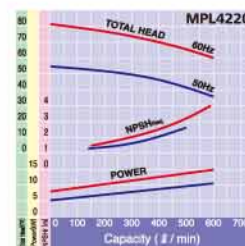
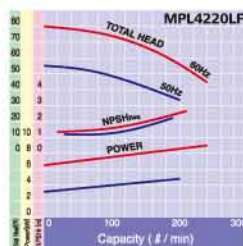
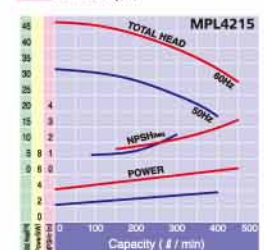
### Specifications

	MPL	MHL
Frequency	50Hz	60Hz
Max. total head	80m	120m
Max. capacity	1100 l/min	1300 l/min
Max. temperature applicable	150°C	280°C
Min. temperature applicable	-30°C	RT
Max. liquid specific gravity	2	
Max. liquid viscosity	300mPa·s(cP)	
Design pressure	1.2MPaG (5225LF; 1.6MPaG)	
Bore (suction x discharge)	40 x 25mm ~ 80 x 50mm	
Flange standard	JIS 10K RF / ASME 150LB RF	
Type of impeller	Closed	
Motor output rating	3.7kW~15kW(2P)	
Pump material	SCS14 (SUS316), ALLOY20, Hastelloy C equivalent	
Liquid-immersed bearings	SiC (SiC-D as optional)	

### Performance curves

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

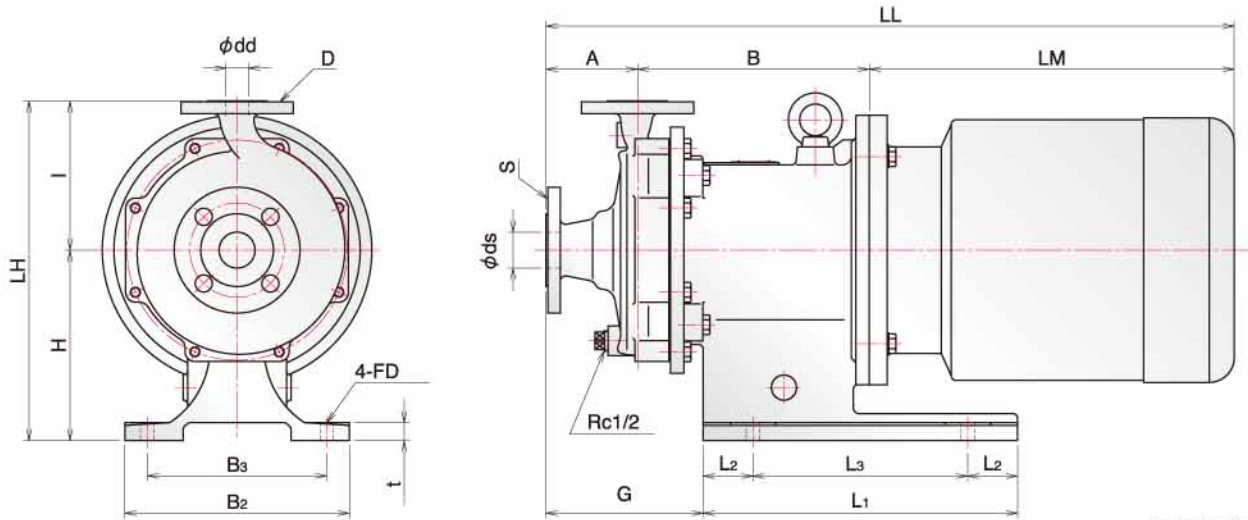
— Total Head(m) — Power(kW)  
— NPSHreq(m)



# Type MHL shares the same performance curves with MPL.



**Outline dimension**

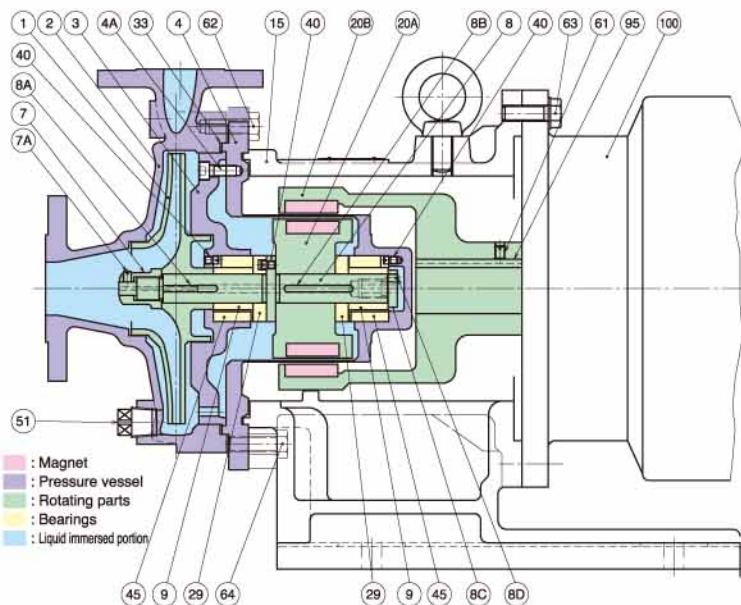


(In the unit of mm)

PUMP SIZE	MOTOR		BORE		PUMP & MOTOR							BASE PLATE					WEIGHT APPROX(kg)					
	FRAME SIZE	OUTPUT (kW)	SUCT ds	DISCH S	A	B	H	I	LH	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP	MOTOR	TOTAL
MPL4215	112M	3.7	40	25	102	258	212	165	377	400	760	175	350	50	250	250	200	20	φ 15	68	47	115
	132S,M	5.5, 7.5																		70	80	150
	160M,L	11, 15																		86	110	196
MPL4220LF	112M	3.7	40	25	102	258	212	165	377	400	760	175	350	50	250	250	200	20	φ 15	68	47	115
	132S,M	5.5, 7.5																		70	80	150
	160M,L	11, 15																		86	110	196
MPL4220	112M	3.7	40	25	102	258	212	165	377	400	760	175	350	50	250	250	200	20	φ 15	72	47	119
	132S,M	5.5, 7.5																		74	47	121
	160M,L	11, 15																		90	110	200
MPL8415	112M	3.7	80	40	102	258	212	165	377	400	760	175	350	50	250	250	200	20	φ 15	74	47	121
	132S,M	5.5, 7.5																		76	80	156
	160M,L	11, 15																		92	110	202
MPL8420	112M	3.7	80	40	102	263	212	215	427	400	765	180	350	50	250	250	200	20	φ 15	74	47	121
	132S,M	5.5, 7.5																		76	80	156
	160M,L	11, 15																		92	110	202
MPL8515	112M	3.7	80	50	102	263	212	210	422	355	720	180	350	50	250	250	200	20	φ 15	74	47	121
	132S,M	5.5, 7.5																		76	80	156
	160M,L	11, 15																		92	110	202
MPL5225LF	112M	3.7	50	25	102	263	212	215	427	400	765	180	350	50	250	250	200	20	φ 15	84	47	131
	132S,M	5.5, 7.5																		86	80	166
	160M,L	11, 15																		102	110	212

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

**Construction and materials**



100	MOTOR	-	1
95	COUPLING KEY(M)	S45C	1
64	HEXAGON HEAD BOLT	SS400	4
63	HEXAGON HEAD BOLT	SS400	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 <sup>S</sup>
	MAGNET COUPLING(M)	FCD	1
20A	MAGNET	RARE EARTH	1 <sup>S</sup>
	MAGNET COUPLING(P)	SUS	1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SIC	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