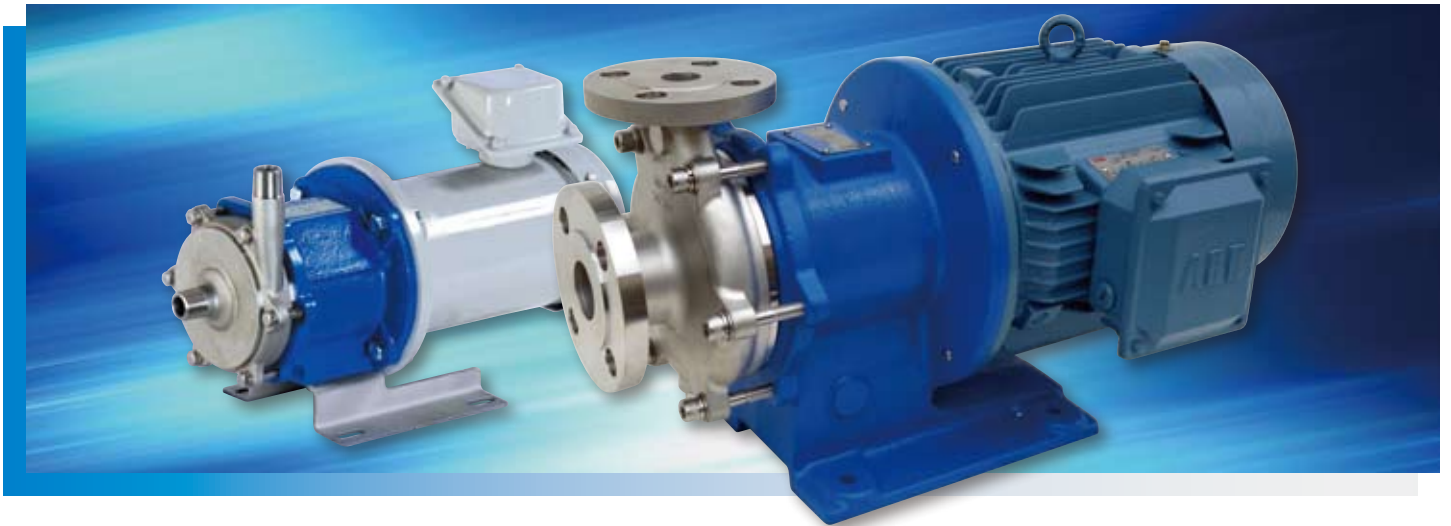


# IWAKI

# SANWA

Line  
(Europe Edition)

## Metallic Centrifugal Magnet Drive Pumps



**Extensive Hydraulic Performance, Seal-less,  
Corrosion Resistant , Leak Free**



Catalog No.  
ISX-E-1705-004



MP

## Small / Medium Sized Standard Centrifugal Pumps

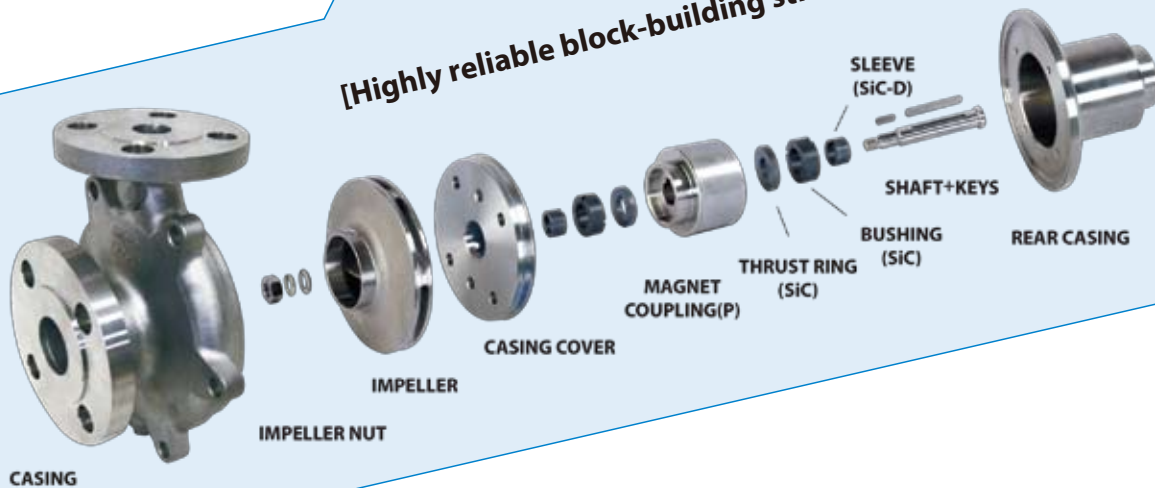
- » Compact, metallic centrifugal magnet drive pumps
- » Excellent heat and pressure resistance
- » Cover a wide range of motor capacities, up to 15 kW
- » Pump materials offer excellent corrosion resistance
- » This model can transfer liquid below freezing
- » Stainless Steel is standard. Other materials available on request
- » Magnet drive is supported by the exclusive SiC-D bearing
- » High efficiency and leak free design
- » Easy to disassemble and reassemble
- » Industry-leading support by Iwaki Europe



**TYPE MP**  
Motor output :  
**0,75 kW to 15 kW**



[Highly reliable block-building structure]



### PB Assembly

PB Assembly is a completely assembled wet end rotating element including impeller, casing cover, bearings, inner magnet coupling(P), shaft and rear casing.

PB assembly enable you to replace the wet end of the pump easily and quickly.

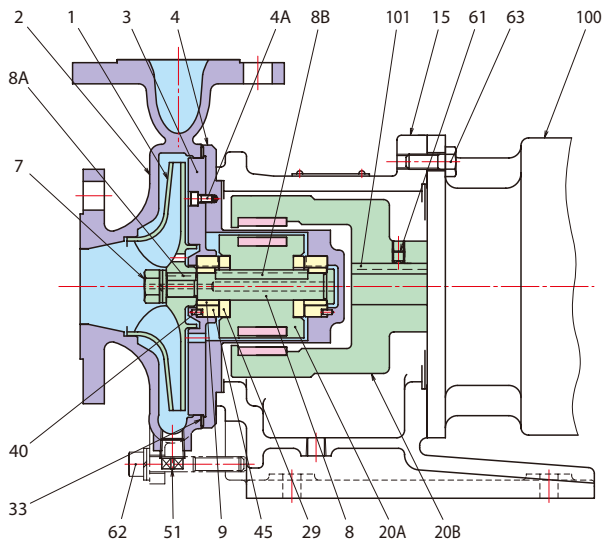
For the urgent trouble shooting the pump can be recovered from shutdown only by replacing the rotating PB assembly.



## Construction and materials

### Magnet Coupling Type : K Type

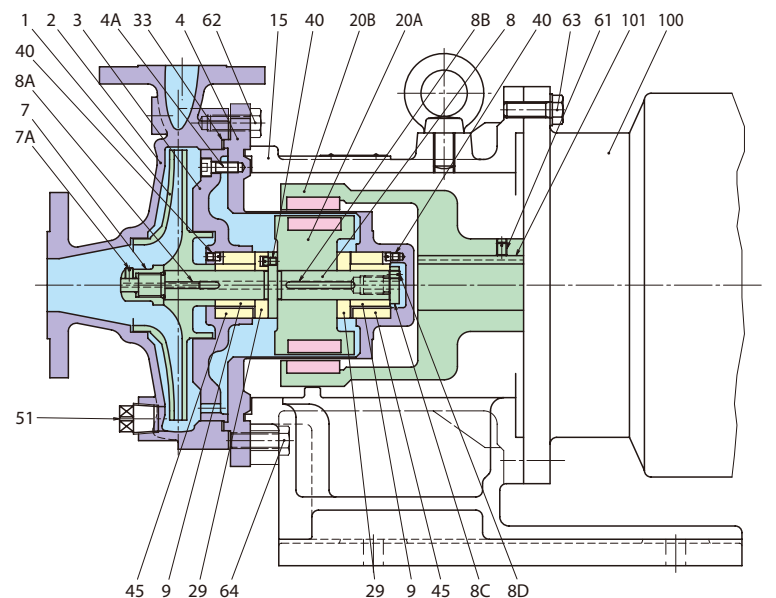
(MP210, 220, 221, 222, 420, 421, 541, 542)



101	COUPLING KEY(M)	S45C	1
100	MOTOR	-	1
63	HEXAGON HEAD BOLT	304SS	4
62	HEXAGON SOCKET HEAD CAP SCREW WITH WASHER	304SS	6 <sup>S</sup>
61	SET SCREW	SCM435	1
51	PLUG	316SS	1
45	BUSHING	SiC	2
40	PIN	316SS	2
33	SHEET GASKET	PTFE	1
29	THRUST RING	SiC	2
20B	MAGNET MAGNET COUPLING(M)	RARE EARTH FCD	1 <sup>S</sup> 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH FCD	1 <sup>S</sup> 1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SiC-D	2
8B	COUPLING KEY(P)	316SS	1
8A	IMPELLER KEY	316SS	1
8	SHAFT	316SS	1
7	IMPELLER NUT WITH WASHER	316SS	1 <sup>S</sup>
4A	HEXAGON SOCKET HEAD CAP SCREW	316SS	4
4	REAR CASING	316SS	1
3	CASING COVER	316SS	1
2	CASING	316SS	1
1	IMPELLER	316SS	1
MARK	NAME OF PART	MAT'L	No.REQ'D

### Magnet Coupling Type : V Type

(MP4220LF, 4220, 5225LF, 8415, 8420, 8515, 5430)



101	COUPLING KEY(M)	S45C	1
100	MOTOR	-	1
64	HEXAGON HEAD BOLT	S5400	4
63	HEXAGON HEAD BOLT	S5400	4
62	HEXAGON HEAD BOLT	304SS	8
61	SET SCREW	SCM435	1
51	PLUG	316SS	1
45	BUSHING	SiC	2
40	SET SCREW	316SS	3
33	SHEET GASKET	PTFE	1
29	THRUST RING	SiC	2
20B	MAGNET MAGNET COUPLING(M)	RARE EARTH FCD	1 <sup>S</sup> 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH FCD	1 <sup>S</sup> 1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SiC-D	2
8D	SLEEVE BOLT SET SCREW	316SS	1
8C	SLEEVE BOLT	316SS	1
8B	COUPLING KEY(P)	316SS	1
8A	IMPELLER KEY	316SS	1
8	SHAFT	316SS	1
7A	IMPELLER NUT SET SCREW	316SS	1
7	IMPELLER NUT	316SS	1
4A	HEXAGON SOCKET HEAD CAP SCREW	316SS	4
4	REAR CASING	316SS	1
3	CASING COVER	316SS	1
2	CASING	316SS	1
1	IMPELLER	316SS	1
MARK	NAME OF PART	MAT'L	No.

## Significance of SiC-D

- Increased damage prevention -

- » SiC-D bearings can withstand accidental dry run for certain periods.
- » Unique materials and manufacturing techniques of our specially treated SiC-D bearings provide a coefficient of friction 1/4 that of SiC.
- » The very low coefficient of friction of our SiC-D bearings results in much less heat being generated in upset or dry running conditions. SiC-D bearings are more forgiving of dry running conditions frequently encountered at start up, during upset conditions or in batch services. Extremely hard surfaces minimize wear and prolong service life; resistance to chemicals is maintained for extended bearing life.

BUSHING (SiC)

THRUST RING (SiC)

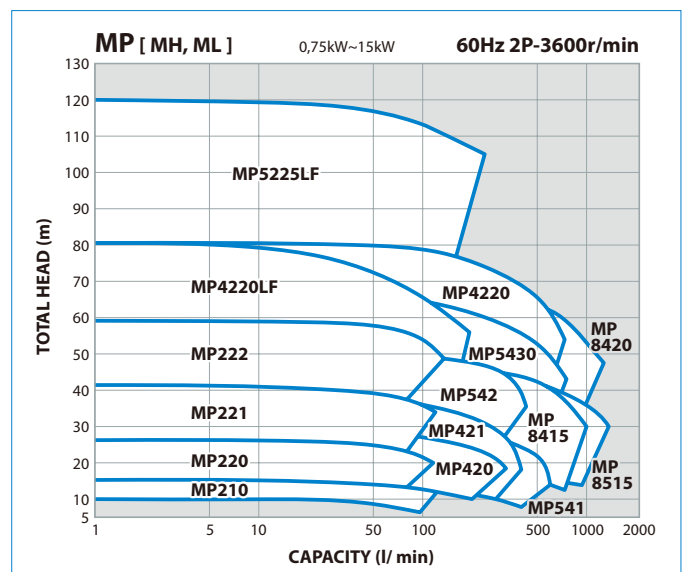
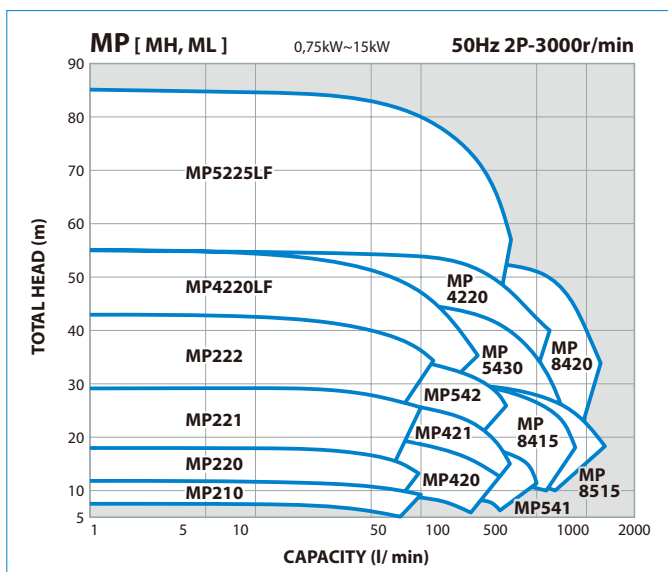


## Specifications

Pump Type	<b>MP</b>	
Frequency (Hz)	50	60
Max. Head (m)	80	120
Max. Capacity (LPM)	1100	1300
Operating Temperature (°C)	-30 to 150 See note below	
Maximum Specific Gravity	2	
Maximum Viscosity (mPa·s,cP)	300	
Design pressure (MPaG)	1,0 / 1,2 / 1,6	
Flange standard	ASME / JIS / DIN flange	
Impeller type	Closed	
(Synchronized) rotation speed(rpm)	3000 / 3600	
Bore (Suction x Discharge) (mm)	25 x 20 to 80 x 50	
Motor Output (kW)	0,75 to 15	
Pump Material	Stainless Steel 316	

Note: Below -20°C or above 120°C please contact your dealer/distributor.

## Selection charts



## Pump Type Identification

**MP222 - 170 - 6 KD F 022 K3290 D - 2 T1**

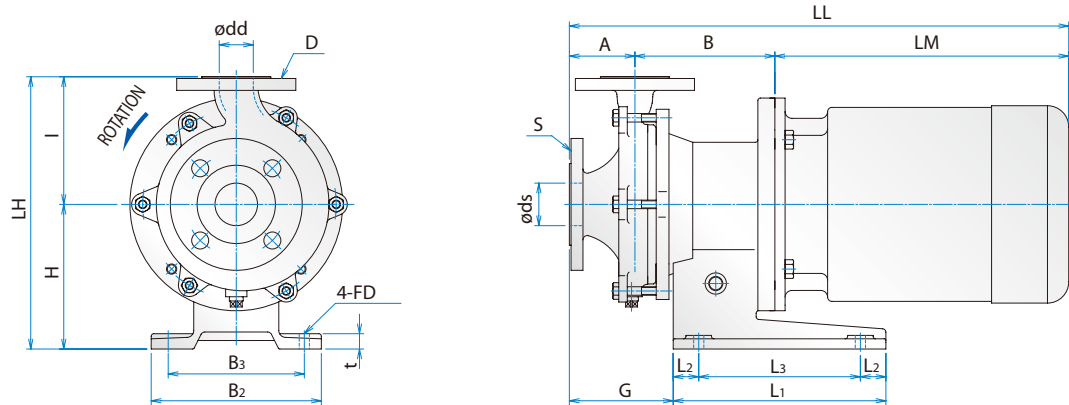
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]

- [1] PUMP TYPE & SIZE
- [2] IMPELLER SIZE ; 80~255mm
- [3] WET-END MAIN MATERIAL ; "6": 316SS
- [4] MATERIAL OF BEARING ; "KD": SiC/SiC-D
- [5] TYPE OF MOTOR ; "F": FLANGE MOTOR
- [6] MOTOR OUTPUT ; "007": 0,75kW / "011": 1,1kW / "015": 1,5kW / "022": 2,2kW / "040": 4kW / "055": 5,5kW / "075": 7,5kW / "110": 11kW / "150": 15kW
- [7] MAGNET COUPLING-MOTOR FRAME ; See Table.1
- [8] STANDARD FOR PIPE CONNECTION AND MOTOR ; "J": JIS10k RF FLANGE + IEC-MOTOR  
"A": ASME150lb RF FLANGE + IEC-MOTOR  
"D": DIN FLANGE + IEC-MOTOR
- [9] MOTOR POLE ; "2": 2POLE
- [10] SPECIAL CODE ; "(BLANK)": -20 ~ +120°C / "T1": +121 ~ +150°C / "T2": -30 ~ -21°C

Table.1

CODE	MAGNET COUPLING TYPE	MOTOR FRAME
K2680	K20x6	80M
K2090	K20	90L
K3290	K32	90L
K3211	K32	100L 112M
V2511	V25	112M
V4013	V40	132S/M
V4016	V40	160M/L
V6516	V65	160M/L

Outline dimension



(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR						BASE PLATE						MASS APPROX(kg)							
	FRAME SIZE	OUTPUT (kW)	SUCT ds	S	DISCH dd	D	A	B	H	I	LH	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP	MOTOR	TOTAL		
MP210	80M	0,75	25		20		80	170	110	110	220	233	478	125	180	30	120	160	130	12	ø12	22	12,5	34,5		
	90L	1,5					(75)				(105)	(215)	275									520	22	16,5	38,5	
MP220	80M	0,75	25		20		60	170	110	120	230	233	463	110	180	30	120	160	130	12	ø12	23	12,5	35,5		
	90L	1,5											275									505	23	16,5	39,5	
MP221	90L	1,5 / 2,2	25		20		65	170	130	300	275	505	110	250	30	190	200	160	18	ø12	27	18	45			
	(100L)112M	(2,2) / 3,7																			326	566	30	37	67	
MP222	90L	1,5 / 2,2	25		20		65	170	140	310	275	505	110	250	30	190	200	160	18	ø12	29	18	47			
	(100L)112M	(2,2) / 3,7																			326	566	33	37	70	
MP420	80M	0,75	40		25		75	170	170	135	305	233	478	125	250	30	190	200	160	18	ø12	29	12,5	41,5		
	90L	1,5 / 2,2											275									520	29	18	47	
MP421	90L	1,5 / 2,2	40		25		75	170	135	305	275	520	125	250	30	190	200	160	18	ø12	30	18	48			
	(100L)112M	(2,2) / 3,7																			326	581	34	37	71	
MP541	90L	2,2	50		40		80	170	140	310	275	525	130	250	30	190	200	160	18	ø12	31	18	49			
	(100L)112M	(2,2) / 3,7																			326	586	35	37	72	
MP542	90L	2,2	50		40		65	165	170	150	320	275	505	110	250	30	190	200	160	18	ø12	34	18	52		
	(100L)112M	(2,2) / 3,7											326									566	38	37	75	
MP4220LF	112M	3,7	40		25		102	258	212		377	355	715	175	350	50	250	250	200	20	ø15	68	47	115		
	132S,M	5,5 / 7,5							165	377	400	760	350									250	200	70	80	150
	160M,L	11 / 15								415	485	875	450									350	300	250	86	110
MP4220	112M	3,7	40		25		102	258	212		377	355	715	175	350	50	250	250	200	20	ø15	68	47	115		
	132S,M	5,5 / 7,5							165	377	400	760	350									250	200	70	80	150
	160M,L	11 / 15								415	485	875	450									350	300	250	86	110
MP5430	112M	3,7	50		40		102	258	212	170	382	355	715	175	350	50	250	250	200	20	ø15	72	47	119		
	132S,M	5,5 / 7,5					(165)	420	400	760	350	250	200									74	80	154		
	160M,L	11 / 15						(415)	485	875	450	350	300									250	90	110	200	
MP8415	112M	3,7	80		40		102	258	212	170	382	355	715	175	350	50	250	250	200	20	ø15	72	47	119		
	132S,M	5,5 / 7,5					(165)	420	400	760	350	250	200									74	80	154		
	160M,L	11 / 15						(415)	485	875	450	350	300									250	90	110	200	
MP8420	112M	3,7	80		40		102	263	212		427	355	720	180	350	50	250	250	200	20	ø15	74	47	121		
	132S,M	5,5 / 7,5					215	427	400	765	350	250	200									76	80	156		
	160M,L	11 / 15						465	485	880	450	350	300									250	92	110	202	
MP8515	112M	3,7	80		50		102	263	212		422	355	720	180	350	50	250	250	200	20	ø15	74	47	121		
	132S,M	5,5 / 7,5					210	422	400	765	350	250	200									76	80	156		
	160M,L	11 / 15						460	485	880	450	350	300									250	92	110	202	
MP5225LF	112M	3,7	50		25		102	263	212		427	355	720	180	350	50	250	250	200	20	ø15	84	47	131		
	132S,M	5,5 / 7,5					215	427	400	765	350	250	200									86	80	166		
	160M,L	11 / 15						465	485	880	450	350	300									250	102	110	212	

# LM,LL dimensions and motor weight may vary depending on motor used.  
# Dimensions of A, I, LH in parentheses are for JIS and ASME.

**For liquid of high temperature  
TYPE MH [ RT~+280°C ]**

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

**For liquid of low temperature  
TYPE ML [ -80°C~+150°C ]**

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.