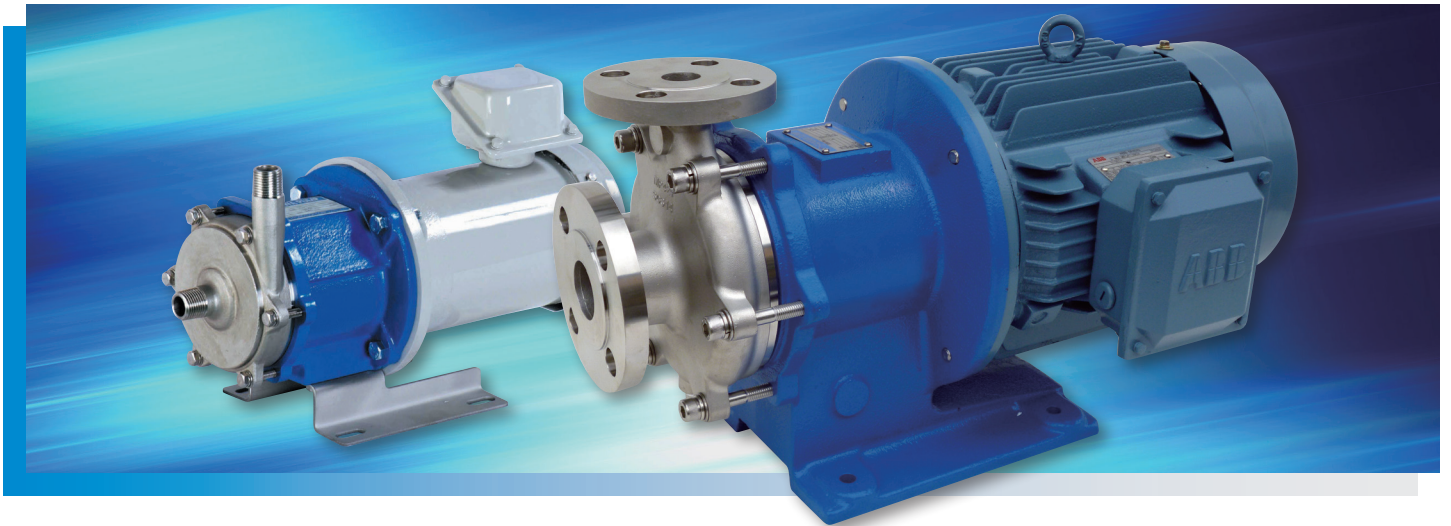


# IWAKI

# SANWA

Line

## Metallic Centrifugal Magnet Drive Pumps



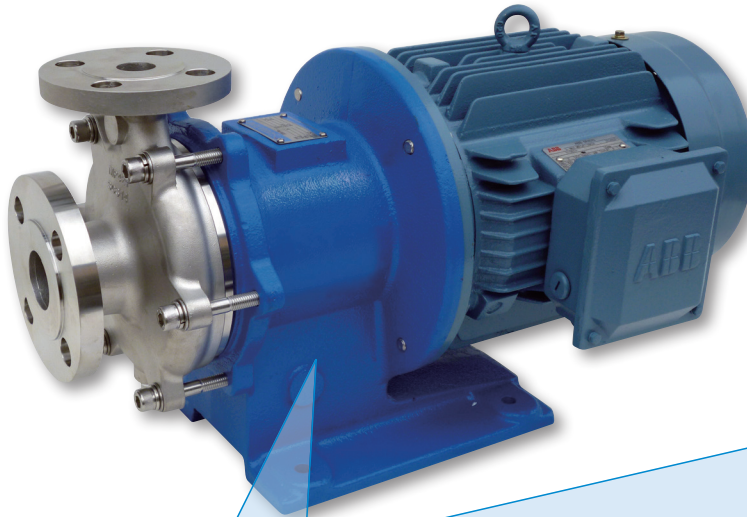
**Extensive Hydraulic Performance, Seal-less,  
Corrosion Resistant , Leak Free**



# MP

## Small / Medium Sized Standard Centrifugal Pumps

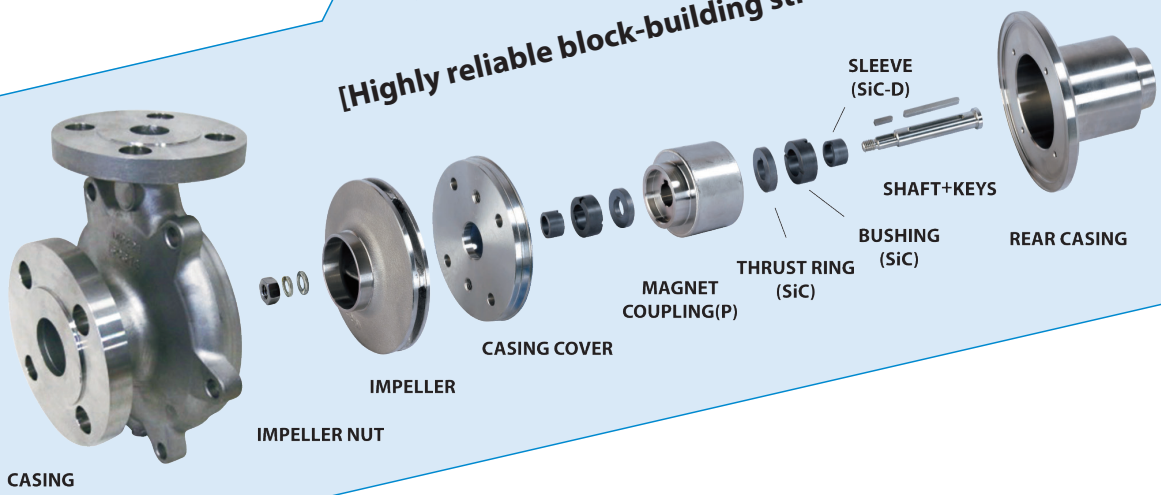
- » Compact, metallic centrifugal magnet drive pumps
- » Excellent heat and pressure resistance
- » Cover a wide range of motor capacities, up to 15 kW
- » Pump materials offer excellent corrosion resistance
- » This model can transfer liquid below freezing
- » Stainless Steel is standard. Other materials 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.

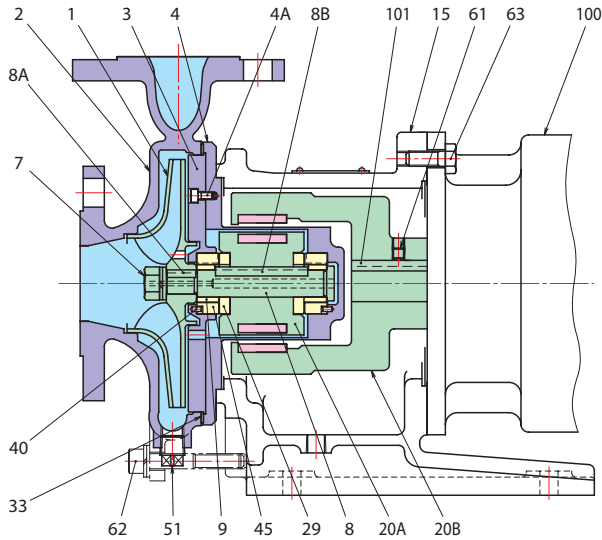
For the urgent trouble shooting the pump can be recovered from shutdown only by replacing the rotating PB assembly.



## Construction and materials

### Magnet Coupling Type : K Type

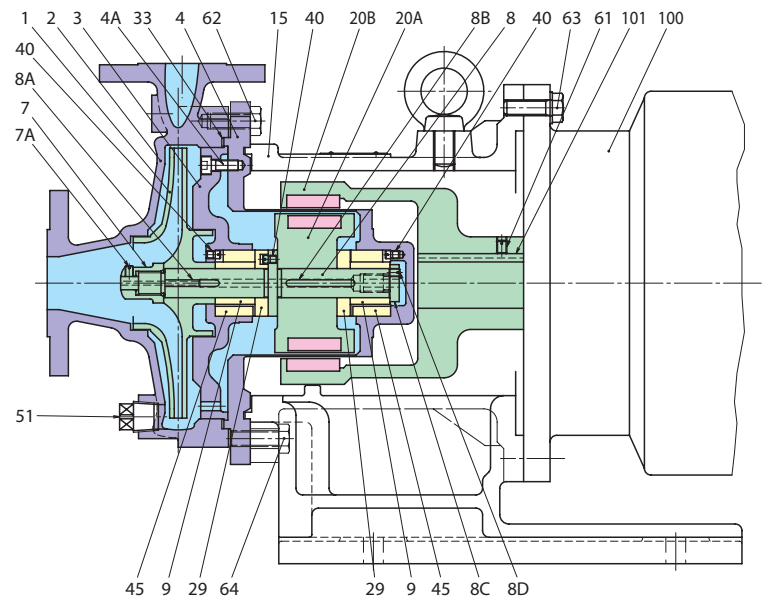
(MP210, 220, 221, 222, 420, 421, 541, 542)



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)



SLEEVE (SiC-D)

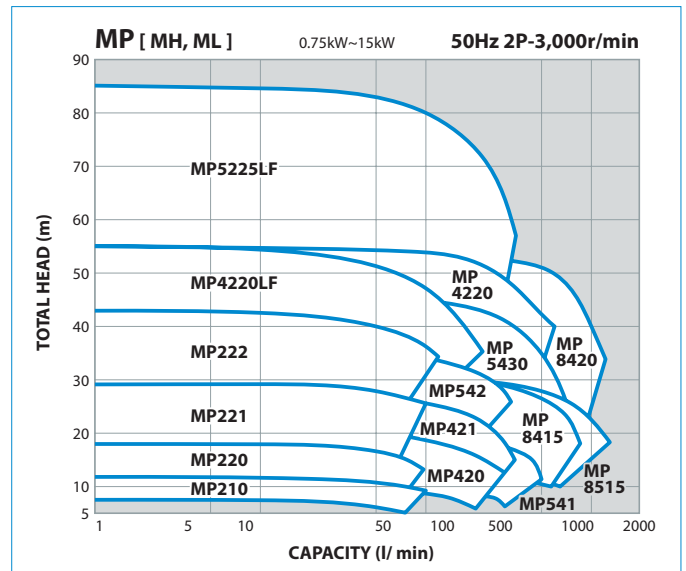
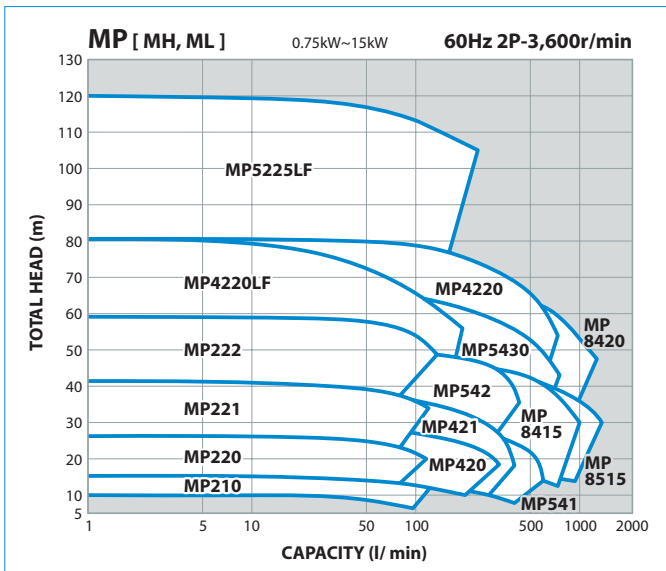


## Specifications

Pump Type	<b>MP</b>	
Frequency Hz	50	60
Max. Head m (ft)	80 (262)	120 (394)
Max. Capacity LPM (GPM)	1100 (290)	1300 (343)
Operating Temperature °C (°F)	-30 (-22) to 150 (302) 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**

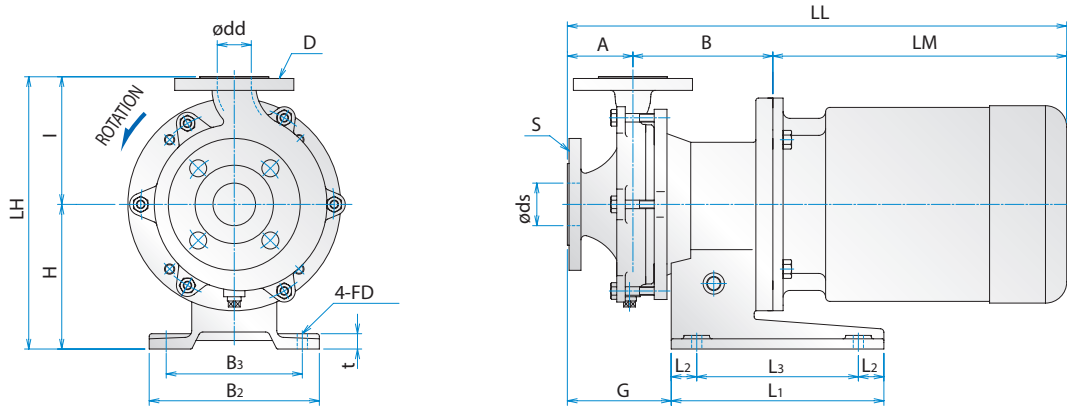
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]

- [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	DISCH S	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	175	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	175	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	180	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	180	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	175	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	165	377	355	715	175	350	50	250	250	200	20	ø15	68	47	115				
	132S,M	5.5,7.5									415	485	875									450	350	300	250	70	80	150
	160M,L	11,15									415	485	875									450	350	300	250	86	110	196
MP4220	112M	3.7	40		25		102	258	212	165	377	355	715	175	350	50	250	250	200	20	ø15	68	47	115				
	132S,M	5.5,7.5									415	485	875									450	350	300	250	70	80	150
	160M,L	11,15									415	485	875									450	350	300	250	86	110	196
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	485	875									450	350	300	250	74	80	154
	160M,L	11,15									420	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	485	875									450	350	300	250	74	80	154
	160M,L	11,15									420	485	875									450	350	300	250	90	110	200
MP8420	112M	3.7	80		40		102	263	212	215	427	355	720	180	350	50	250	250	200	20	ø15	74	47	121				
	132S,M	5.5,7.5									427	400	765									450	350	300	250	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	210	422	355	720	180	350	50	250	250	200	20	ø15	74	47	121				
	132S,M	5.5,7.5									422	400	765									450	350	300	250	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	215	427	355	720	180	350	50	250	250	200	20	ø15	84	47	131				
	132S,M	5.5,7.5									427	400	765									450	350	300	250	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 ]**

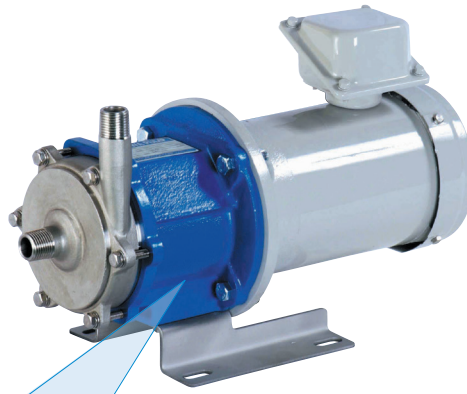
Fin type frame adapter dissipates heat away from pump.  
Rare earth SmCo magnets are used.  
High temperature gasket material is used.

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

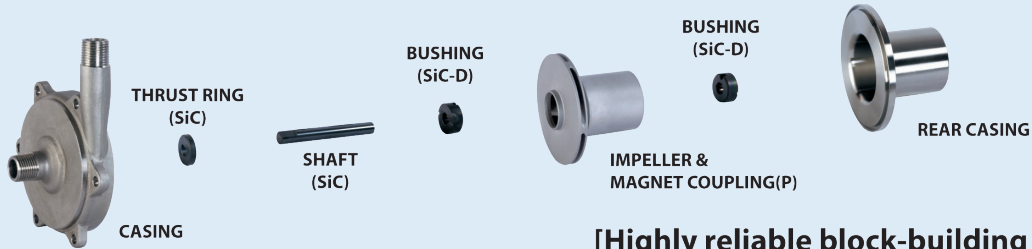
Nitrogen purge port is provided to prevent moisture from freezing in the frame adapter.  
Rare earth Nd magnets are used.  
Low temperature gasket material is used.

# MMP

## Small Sized Standard Centrifugal Pumps for Equipment Use

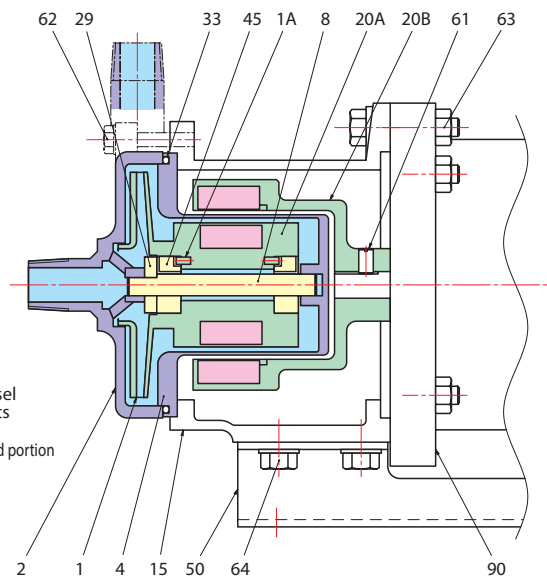


**TYPE MMP**  
**Motor output :**  
**0.37kW to 0.55kW**



**[Highly reliable block-building structure]**

### Construction and materials



90	SPACER #1	SS400(304SS)	1
64	BOLT WITH WASHER	304SS	4 <sup>S</sup>
63	BOLT WITH WASHER	304SS	4 <sup>S</sup>
62	BOLT WITH WASHER	304SS	6 <sup>S</sup>
61	SET SCREW	SCM435	1
50	BASE	304SS	1
45	BUSHING	SiC-D	2
33	O RING #3	PTFE	1
29	THRUST RING	SiC	1
20B	MAGNET MAGNET COUPLING(M)	RARE EARTH FCD	1 <sup>S</sup> 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH 316SS	1 <sup>S</sup> 1
15	FRAME ADAPTER #2	FC200	1
8	SHAFT	SiC	1
4	REAR CASING	316SS	1
2	CASING	316SS	1
1A	PIN	316SS	2
1	IMPELLER	316SS	1
MARK	NAME OF PART	MAT'L	No.REQ'D

#1. Spacer "90" is attached to MMH and MML.

#2. Frame adapter "15" for MMH and MML comes in 304SS.

#3. ORING "33" for MMH and MML comes in GASKET.

### Specifications

Pump Type	MMP	
Frequency Hz	50	60
Max. Head m (ft)	20 (66)	28 (92)
Max. Capacity LPM (GPM)	80 (21)	80 (21)
Operating Temperature °C (°F)	-30 (-22) to 150 (302) See note below	
Maximum Specific Gravity	2	
Maximum Viscosity (mPa·s,cP)	100	
Design pressure (MPaG)	0.6 ~ 1	
Flange standard	R Thread/ NPT Thread	
Impeller type	Closed	
(Synchronized) rotation speed(rpm)	1500 / 1800 / 3000 / 3600	
Bore (Suction x Discharge) mm	15 x 15 to 25 x 20	
Motor Output kW	0.37 to 0.55	
Pump Material	Stainless Steel 316	

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

### Pump Type Identification

**MMP**    2    2  
 [1]            [2]    [3]

[1] Pump type

[2] Suction Bore    x    [3] Discharge Bore

MMP11 ; 15mm x 15mm

MMP21 ; 20mm x 20mm

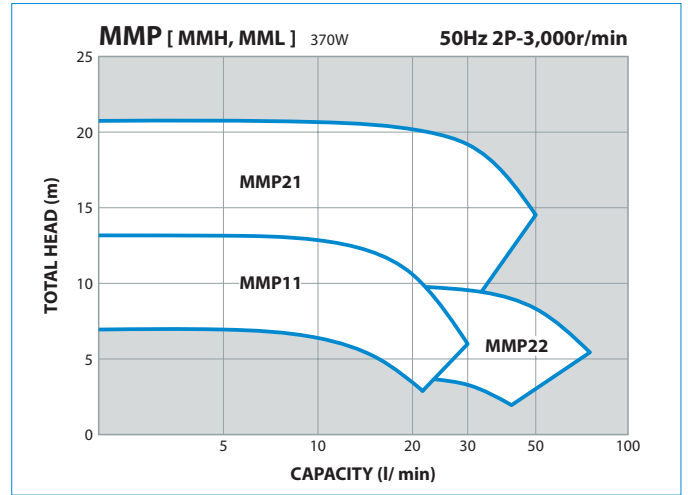
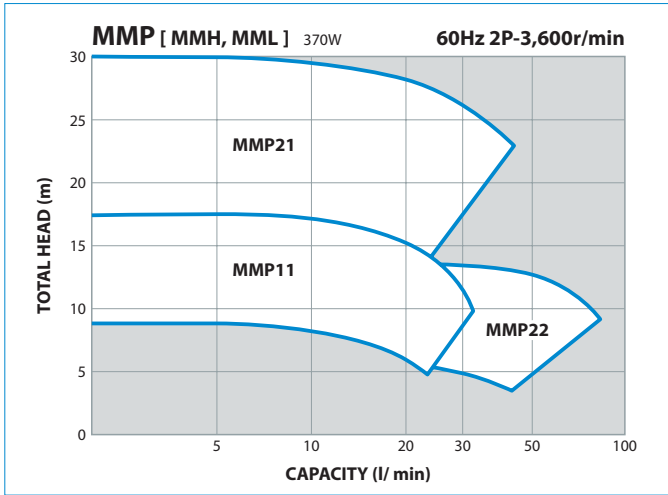
MMP22 ; 25mm x 20mm

MMP Suction x Discharge

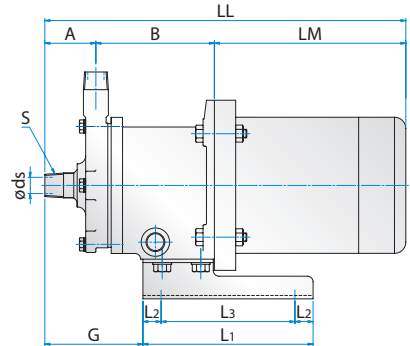
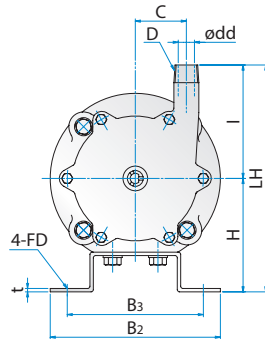
Standard: R Thread

Optional: NPT Thread, Flange

Selection charts



Outline dimension



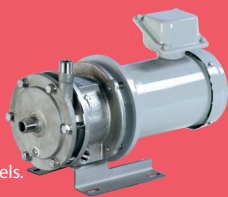
(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR							BASE PLATE						MASS APPROX(kg)					
	FRAME SIZE	OUTPUT (W)	SUCT ds	S S	DISCH dd	D D	A	B	C	H	I	LH	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP	MOTOR	TOTAL
MMP11	71	370	15	R1/2	15	R1/2	45	111	45	100	100	200	231	387	86	150	16	118	150	120	3	ø9.5	8.0	11.0	19.0
MMP21	71	400/550	20	R3/4	20	R3/4	50	112	50	100	120	220	231	393	(70) 77	150	16	118	150	120	3	ø9.5	11.0	11.0	22.0
MMP22	71	400/550	25	R1	20	R3/4	60	113	45	100	100	200	231	404	103 (87)	150	16	118	150	120	3	ø9.5	10.0	11.0	21.0

#LM,LL dimensions and motor weight may vary depending on motor used.  
#Figures in brackets are for MMH11,22 and MML11,22.

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

Open spacer between pump and motor eliminates excess heat transfer to motor. For high temperatures, SmCo magnets and high temperature gasket material are used. High pressure containment is standard on these models. >230°C, Flange Fitting and No Casing Drain.



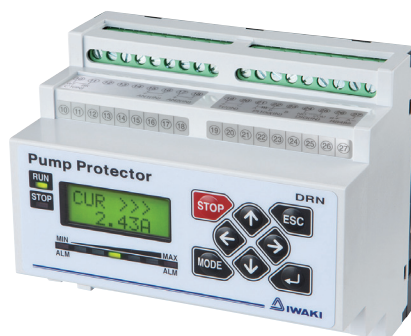
For liquid of low temperature  
TYPE MML [ -80°C~+150°C ]

Sealed spacer protects motor from excess cold temperatures. Nd magnets and low temperature gasket material is used in these pumps. Nitrogen purge port is provided to prevent moisture from freezing in the frame adapter.



Iwaki dry running protector  
DRN series (Option)

Model DRN is electric current sensing type dry running protector. It decrease load current (lower limit) to stop the pump when it runs dry or runs with air sucking in. It can detect over-load, too.



Specifications

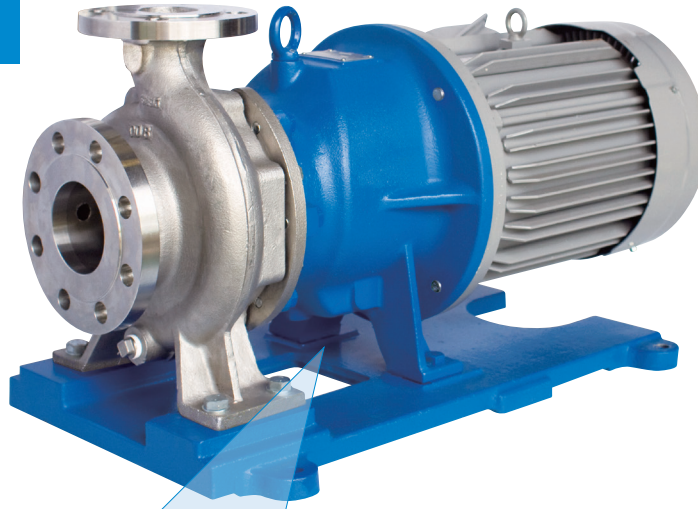
Model	DRN-01	DRN-02
Amperometric range	0-30.00A	0-200.0A
Unit's source voltage	AC100-240V 50/60Hz 10VA	
Operating temperature	0-40°C	
Operating humidity	35-85%RH	
Current sensor	JS10FL	JS24FL
Analog input 1	0-20mA or 0-5V	
Analog input 2	0-20mA or 0-5V	
Temperature range	-50-200°C (Pt100, K thermocouple)	
Digital contact input	No-voltage contact signal (also for external reset)	
Contact output	For pre-alarm: AC250V 8A (load resistance) 1c For pump-stopping: AC250V 8A (load resistance) 1a	
Logging capability	Past records (with the calendar)	
Communication	RS485 incorporated	
Supported models	MX, SMX, MXM, MDM, MDE, MDW	
External dimension in mm	D71 x W108 x H90	

\* Not used as an inverter.  
\* Safety: UL 61010-1  
CAN/CSA-C22.2 No. 61010-1-12  
EN61010-1 EN61326-1, EN50581  
\* EMC: EN61326-1  
\* RoHS: EN50581

# MTFO

## Open impeller, Close Coupled Standard Centrifugal Pumps

- » Wide range of application. Up to 22kW including 4 pole line up.
- » Back pullout system.
- » Open impeller.
- » Comply with international standard ISO2858.



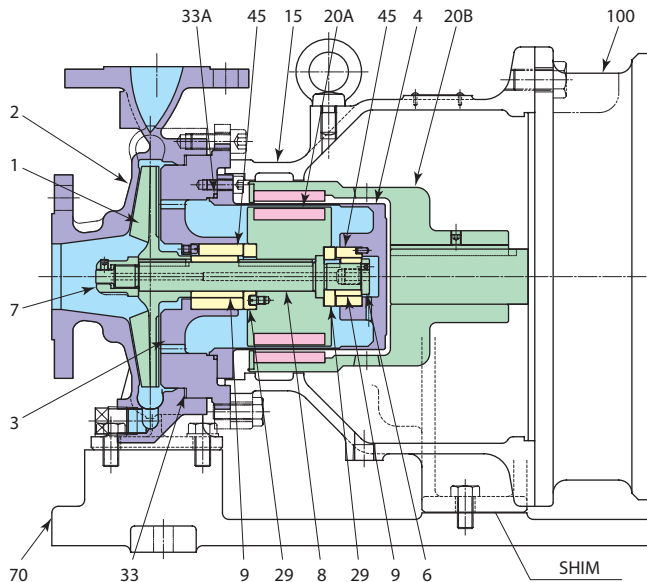
**TYPE MTFO**  
**Motor output :**  
**2.2 kW to 22 kW**



### [SIMPLE STRUCTURE & EASY MAINTENANCE]

SiC bearing parts are virtually erosion / corrosion proof.  
 Robust rear-casing shuts off leakage.

## Construction and materials



- : Magnet
- : Pressure vessel
- : Rotating parts
- : Bearings
- : Liquid immersed portion

100	MOTOR	-	1
70	BASE PLATE	FC200	1
45	BUSHING	SiC	1+1
33A	O RING	PTFE	1
33	GASKET	PTFE	1
29	THRUST RING	SiC	1+1
20B	MAGNET COUPLING(M)	FCD400	1
20A	MAGNET COUPLING(P)	316SS	1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SiC	1+1
8	INNER MAGNET SHAFT	316SS	1
7	IMPELLER NUT	316SS	1
6	SLEEVE BOLT	316SS	1
4	REAR CASING	316SS	1
3	CASING COVER	316SS	1
2	CASING	316SS	1
1	IMPELLER	316SS	1
<b>MARK</b>	<b>NAME OF PART</b>	<b>MAT'L</b>	<b>No.REQ'D</b>

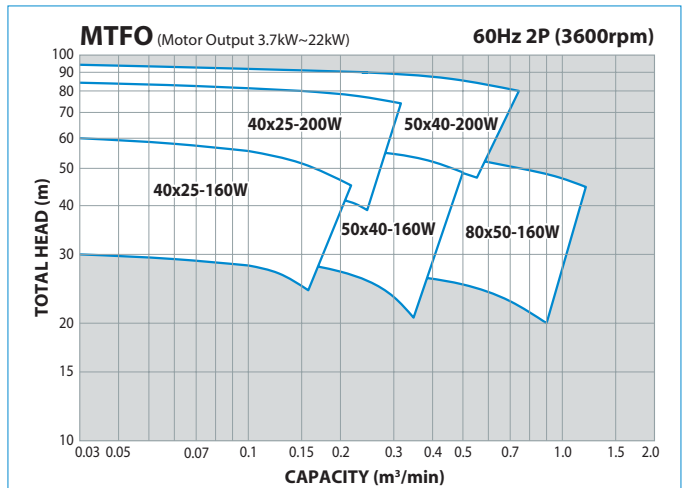
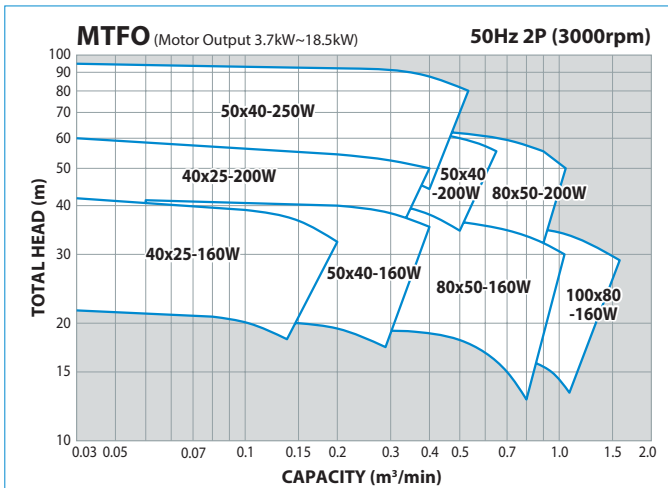
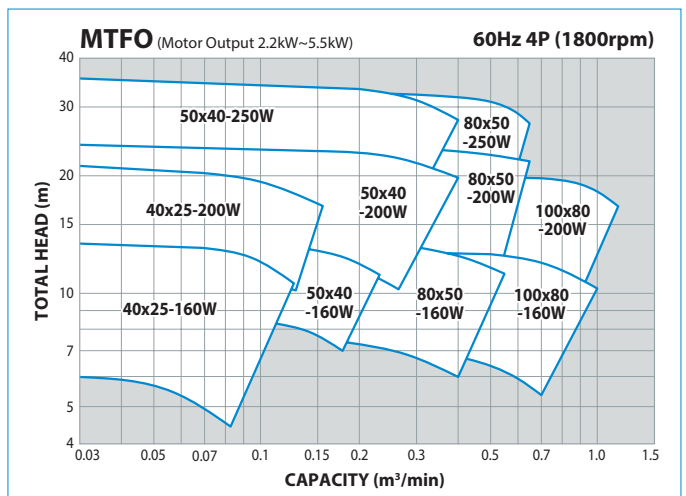
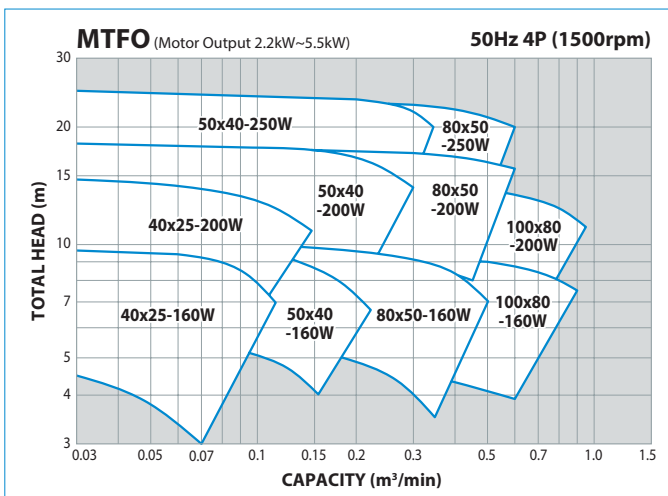


## Specifications

Pump Type	<b>MTFO</b>	
Frequency Hz	50	60
Max. Head m (ft)	80 (262)	85 (279)
Max. Capacity LPM (GPM)	1600 (423)	1200 (317)
Operating Temperature °C (°F)	-80 (112) to 280 (536) See note below	
Maximum Specific Gravity	2	
Maximum Viscosity (mPa·s,cP)	300	
Design pressure (MPaG)	1.6	
Flange standard	ASME / JIS / DIN flange	
Impeller type	Open	
(Synchronized) rotation speed(rpm)	1500 / 1800 / 3000 / 3600	
Bore (Suction x Discharge) mm	40 x 25 to 100 x 80	
Motor Output kW	2.2 to 22	
Pump Material	Stainless Steel 316	

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

## Selection charts

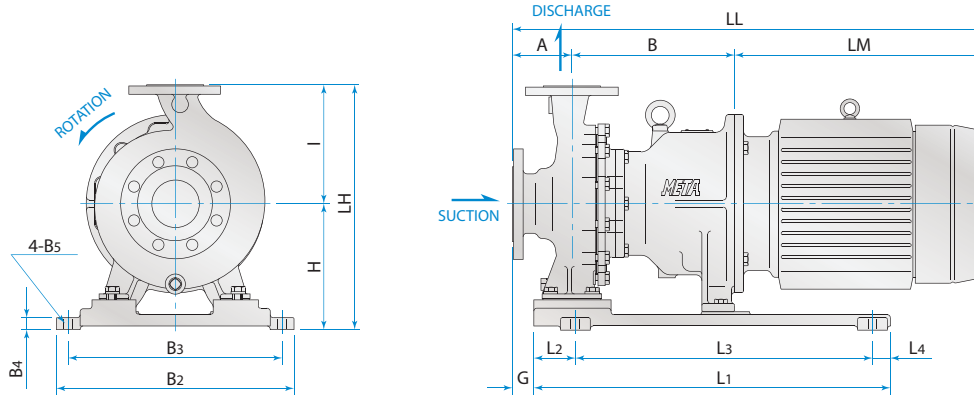


## Pump Type Identification

**MTFO** **40** x **25** - **160** **W**  
 [1] [2] [3] [4] [5]

- [1] PUMP TYPE ... MTFO
- [2] SUCTION BORE ... 40 ~ 100 (mm)
- [3] DISCHARGE BORE ... 25 ~ 80 (mm)
- [4] IMPELLER NOMINAL DIAMETER ... 160, 200, 250
- [5] DRIVE UNIT TYPE ... TYPE-W

Outline dimension



(In the unit of mm)

PUMP SIZE	MOTOR FRAME	PUMP						BASE PLATE & MOTOR										MASS APPROX(kg)		
		A	B	I	H	LH	G	L1	L2	L3	L4	B2	B3	B4	B5	LM	LL	PUMP	MOTOR	TOTAL
40x25-160W	112M	80	238	150	210	360	0	600	70	500	30	400	360	20	ø15	355	673	59	40	99
	132S,132M	80	258	150	210	360	0	600	70	500	30	400	360	20	ø15	400	738	66	80	146
	160M,160L	80	288	150	210	360	0	600	70	500	30	400	360	20	ø15	485	853	73	110	183
	180M,180L	80	288	150	235	385	0	660	70	550	40	420	370	22	ø19	575	943	76	195	271
40x25-200W	112M	80	238	180	210	390	0	600	70	500	30	400	360	20	ø15	355	673	64	40	104
	132S,132M	80	258	180	210	390	0	600	70	500	30	400	360	20	ø15	400	738	71	80	151
	160M,160L	80	288	180	210	390	0	600	70	500	30	400	360	20	ø15	485	853	78	110	188
	180M,180L	80	288	180	235	415	0	660	70	550	40	420	370	22	ø19	575	943	81	195	276
50x40-160W	112M	80	238	160	210	370	0	600	70	500	30	400	360	20	ø15	355	673	62	40	102
	132S,132M	80	258	160	210	370	0	600	70	500	30	400	360	20	ø15	400	738	70	80	150
	160M,160L	80	288	160	210	370	0	600	70	500	30	400	360	20	ø15	485	853	77	110	187
	180M,180L	80	288	160	235	395	0	660	70	550	40	420	370	22	ø19	575	943	80	195	275
50x40-200W	112M	80	238	180	210	390	0	600	70	500	30	400	360	20	ø15	355	673	67	40	107
	132S,132M	80	258	180	210	390	0	600	70	500	30	400	360	20	ø15	400	738	75	80	155
	160M,160L	80	288	180	210	390	0	600	70	500	30	400	360	20	ø15	485	853	81	110	191
	180M,180L	80	288	180	235	415	0	660	70	550	40	420	370	22	ø19	575	943	84	195	279
50x40-250W	112M	100	254	225	210	435	36	600	70	500	30	400	360	20	ø15	355	709	86	40	126
	132S,132M	100	274	225	210	435	36	600	70	500	30	400	360	20	ø15	400	774	94	80	174
	160M,160L	100	304	225	210	435	36	600	70	500	30	400	360	20	ø15	485	889	100	110	210
	180M,180L	100	304	225	235	460	36	660	70	550	40	420	370	22	ø19	575	979	103	195	298
80x50-160W	112M	100	238	180	210	390	20	600	70	500	30	400	360	20	ø15	355	693	66	40	106
	132S,132M	100	258	180	210	390	20	600	70	500	30	400	360	20	ø15	400	758	74	80	154
	160M,160L	100	288	180	210	390	20	600	70	500	30	400	360	20	ø15	485	873	81	110	191
	180M,180L	100	288	180	235	415	20	660	70	550	40	420	370	22	ø19	575	963	84	195	279
80x50-200W	112M	100	254	200	210	410	36	600	70	500	30	400	360	20	ø15	355	709	75	40	115
	132S,132M	100	274	200	210	410	36	600	70	500	30	400	360	20	ø15	400	774	82	80	162
	160M,160L	100	304	200	210	410	36	600	70	500	30	400	360	20	ø15	485	889	89	110	199
	180M,180L	100	304	200	235	435	36	660	70	550	40	420	370	22	ø19	575	979	92	195	287
80x50-250W	112M	125	254	225	210	435	61	600	70	500	30	400	360	20	ø15	355	734	90	40	130
	132S,132M	125	274	225	210	435	61	600	70	500	30	400	360	20	ø15	400	799	98	80	178
	160M,160L	125	304	225	210	435	61	600	70	500	30	400	360	20	ø15	485	914	104	110	214
	180M,180L	125	304	225	235	460	61	660	70	550	40	420	370	22	ø19	575	1004	107	195	302
100x80-160W	112M	100	254	200	210	410	36	600	70	500	30	400	360	20	ø15	355	709	80	40	120
	132S,132M	100	274	200	210	410	36	600	70	500	30	400	360	20	ø15	400	774	88	80	168
	160M,160L	100	304	200	210	410	36	600	70	500	30	400	360	20	ø15	485	889	95	110	205
	180M,180L	100	304	200	235	435	36	660	70	550	40	420	370	22	ø19	575	979	98	195	293
100x80-200W	112M	100	254	225	210	435	36	600	70	500	30	400	360	20	ø15	355	709	79	40	119
	132S,132M	100	274	225	210	435	36	600	70	500	30	400	360	20	ø15	400	774	87	80	167
	160M,160L	100	304	225	210	435	36	600	70	500	30	400	360	20	ø15	485	889	93	110	203
	180M,180L	100	304	225	235	460	36	660	70	550	40	420	370	22	ø19	575	979	96	195	291

# M

## Small Sized Standard Centrifugal Pumps for Equipment Use

- » Compact design.
- » Proven pump for OEM applications.
- » Competitively priced.
- » Impeller type: Closed (Motor: 0.37kW, 0.55kW)  
Open (Motor: 0.75kW, 1.5kW, 2.2kW)
- » Simple construction of single wet bearing design.

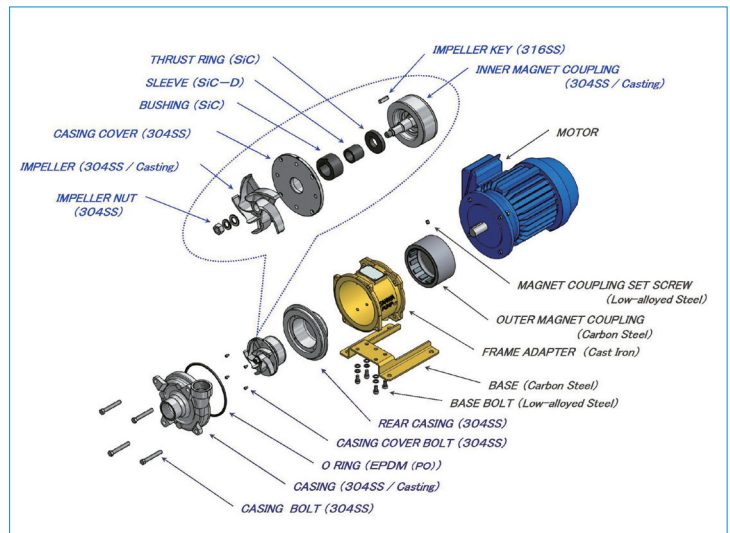


### TYPE M

Motor output:  
**0.37 kW to 2.2 kW**



### Construction and materials

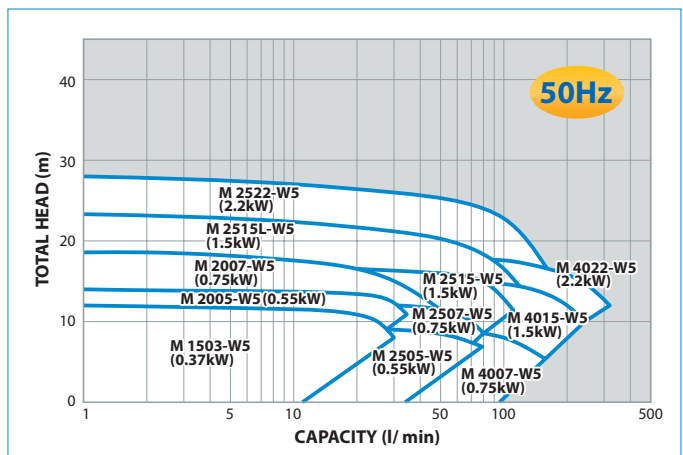
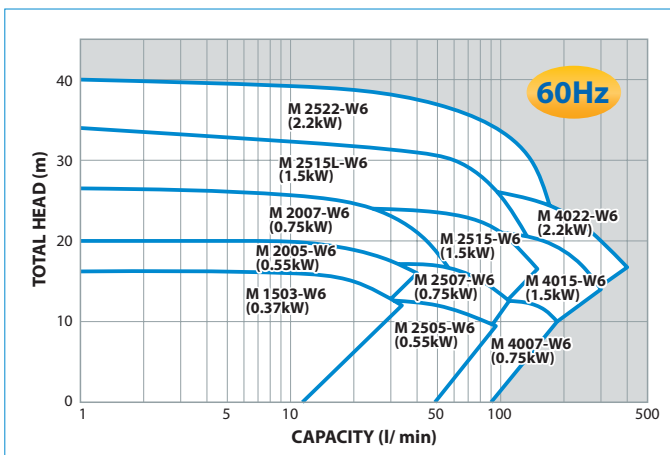


### Specifications

	<b>M</b>	
Pump Type		
Frequency Hz	50	60
Max. Head m (ft)	39 (128)	28 (91.9)
Max. Capacity LPM (GPM)	260 (68.7)	360 (95.1)
Operating Temperature °C (°F)	-20 to 100 (212) See note below	
Maximum Specific Gravity	1	
Maximum Viscosity (mPa·s,cP)	10	
Design pressure (MPaG)	0.4 (0.37 to 0.55kW) , 0.6 (0.75 to 2.2kW)	
Flange standard	R Thread	
Impeller type	Close (0.37 to 0.55kW) , Open (0.75 to 2.2kW)	
(Synchronized) rotation speed(rpm)	3000	3600
Bore (Suction x Discharge) mm	15 x 15 to 40 x 40	
Motor Output kW	0.37 to 2.2	
Pump Material	Stainless Steel 304	

Note: The temperature range of FKM O ring is from 0 to 100°C.

### Selection charts



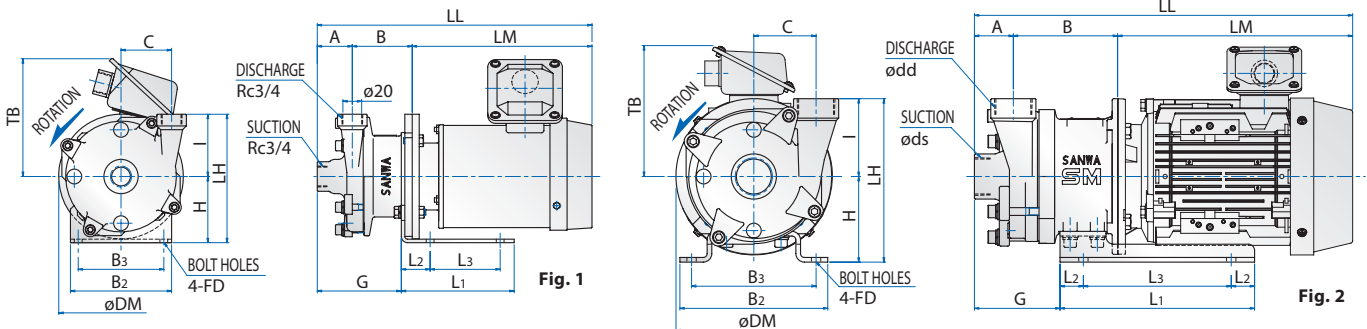
## Pump Type Identification

**M 25 15 - W 5 - F J P**  
**[1] [2] [3] [4] [5] [6] [7] [8]**

- [1] PUMP TYPE
- [2] PUMP SIZE [SUCTION BORE]; "15": Rc 1/2, "20": Rc 3/4, "25": Rc 1, "40": Rc 1 1/2
- [3] PUMP SIZE [OUTPUT (FRAME SIZE)]; "03": 0.37kW (71M), "05": 0.55kW (71M),  
"07": 0.75kW (80M), "15": 1.5kW (90L), "22": 2.2kW (90L)
- [4] MOTOR [CONSTRUCTION]; "W": With BASE ... For IEC B5 Flange mounted MOTOR  
"E": With BASE ... For IEC B5 Flange mounted MOTOR (CE, ATEX)
- [5] MOTOR [FREQUENCY]; "5": 50Hz, "6": 60Hz
- [6] OPTION #1 [O RING MATERIAL]; "(BLANK)": Standard ... EPDM (PO) #2, "F": Fluorine Rubber ... FKM #3,  
"V": Silicon Rubber ... VMQ
- [7] OPTION #1 [CONNECTION]; "(BLANK)": Standard ... Rc Thread, "J": PIPE With FLANGE ... ISO 7005-1,  
"A": PIPE With FLANGE ... ASME 150lb RF, "D": PIPE With FLANGE ... DIN PN16 RF
- [8] OPTION #1 [OTHERS]; "(BLANK)": Standard, "P": With Casing Drain & Air Vent (Plugged) #4

#1. For standard pump without any options, please keep the optional code blank.  
 #2. The heat-resistance of EPDM(PO) is greater than that of conventional EPDM.  
 #3. The temperature range of FKM O ring is from 0 to 100°C.  
 #4. Plug size : Rc1/8 (1503,2505) Rc1/4 (other models)

## Outline dimension



( In the unit of mm )

TYPE	CODE	SIZE	MOTOR		BORE		PUMP & MOTOR										BASE PLATE						MASS APPROX(kg)			Fig.		
			FLAME SIZE	OUTPUT (kW)	SUCT. ds	DISCH. dd	A	B	C	H	I	LH	øDM	TB	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP		MOTOR	TOTAL
			M	1503	W5 W6	71M	0.37	15 (Rc 1/2)	15 (Rc 1/2)	30	72	50	85	65	150	160	142	209	311	88	145	37	90	130	110		4.5	ø10
2005	W5 W6	71M	0.55	20 (Rc 3/4)	20 (Rc 3/4)	45	77	65	85	80	165	160	151	231	353	108	145	37	90	130	110	4.5	ø10	6.4	11.0	17.4		
2505	W5 W6	71M	0.55	25 (Rc 1)	25 (Rc 1)	35	87	55	85	60	145	160	151	231	353	108	145	37	90	130	110	4.5	ø10	5.8	11.0	16.8		
M	2007	W5 W6	80M	0.75	20 (Rc 3/4)	20 (Rc 3/4)	45	109	65	110	80	190	200	157	235.5	389.5	80	250	30	190	190	160	6	ø10	12	13.5	25.5	2
	2507	W5 W6	80M	0.75	25 (Rc 1)	25 (Rc 1)	55	114	65	110	80	190	200	157	235.5	404.5	95	250	30	190	190	160	6	ø10	13	13.5	26.5	
	2515	W5 W6	90L	1.5	25 (Rc 1)	25 (Rc 1)	55	124	65	110	80	190	200	168	273	452	105	250	30	190	190	160	6	ø10	13	19.5	32.5	
	2515L	W5 W6	90L	1.5	25 (Rc 1)	25 (Rc 1)	60	119	80	110	90	200	200	168	273	452	105	250	30	190	190	160	6	ø10	14	19.5	33.5	
	2522	W5 W6	90L	2.2	25 (Rc 1)	25 (Rc 1)	60	119	80	110	90	200	200	168	302	481	105	250	30	190	190	160	6	ø10	14	24	38	
	4007	W5 W6	80M	0.75	40 (Rc 1 1/2)	40 (Rc 1 1/2)	50	124	80	110	100	210	200	157	235.5	409.5	100	250	30	190	190	160	6	ø10	15	13.5	28.5	
	4015	W5 W6	90L	1.5	40 (Rc 1 1/2)	40 (Rc 1 1/2)	50	134	80	110	100	210	200	168	273	457	110	250	30	190	190	160	6	ø10	15	19.5	34.5	
	4022	W5 W6	90L	2.2	40 (Rc 1 1/2)	40 (Rc 1 1/2)	50	134	80	110	100	210	200	168	302	486	110	250	30	190	190	160	6	ø10	15	24	39	

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