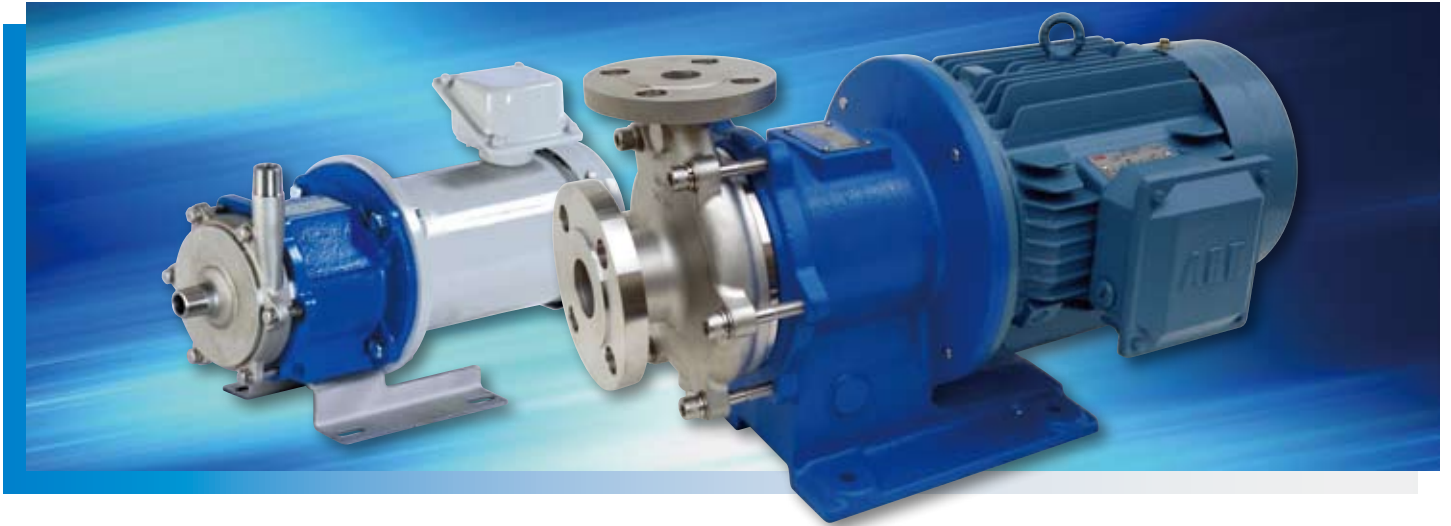


IWAKI

SANWA

Line

Metallic Centrifugal Magnet Drive Pumps



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

MP

Small / Medium Sized Standard Centrifugal Pumps

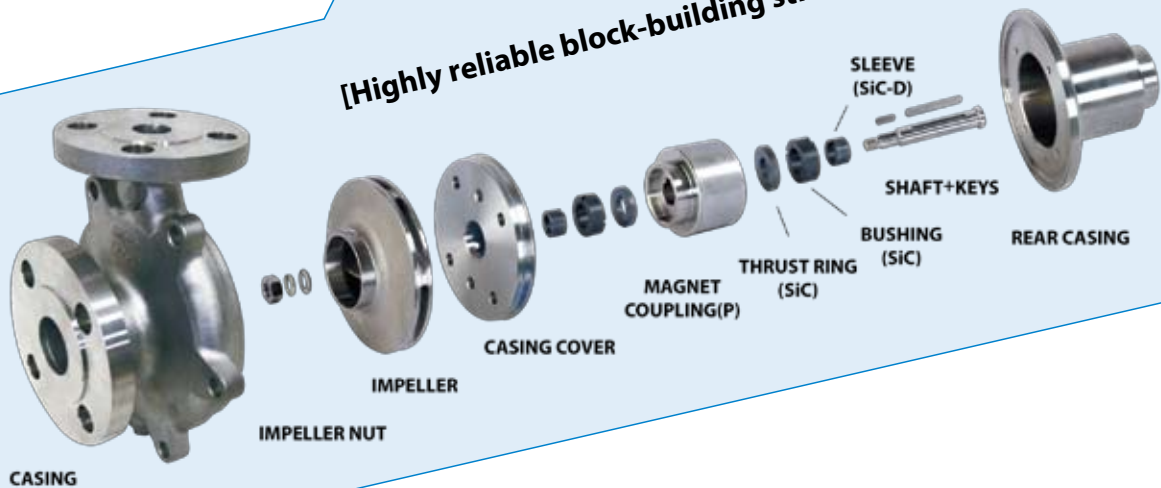
- » Compact, metallic centrifugal magnet drive pumps
- » Excellent heat and pressure resistance
- » Cover a wide range of motor capacities, up to 15 kW
- » Pump materials offer excellent corrosion resistance
- » This model can transfer liquid below freezing
- » Stainless Steel is standard. Other materials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

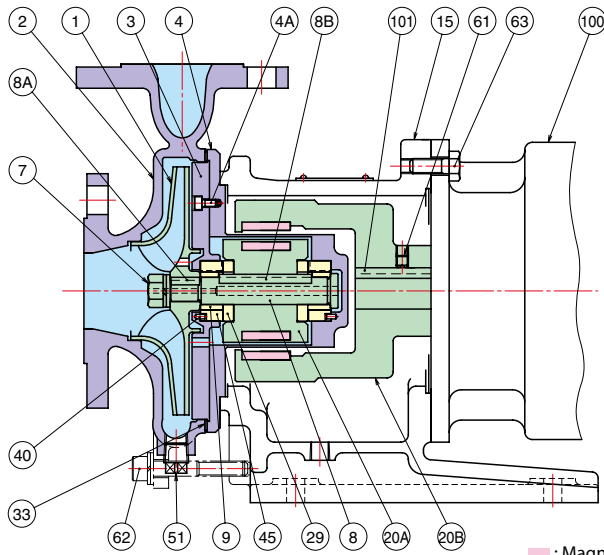
For the urgent trouble shooting the pump can be recovered from shutdown only by replacing the rotating PB assembly.



Construction and materials

Magnet Coupling Type : K Type

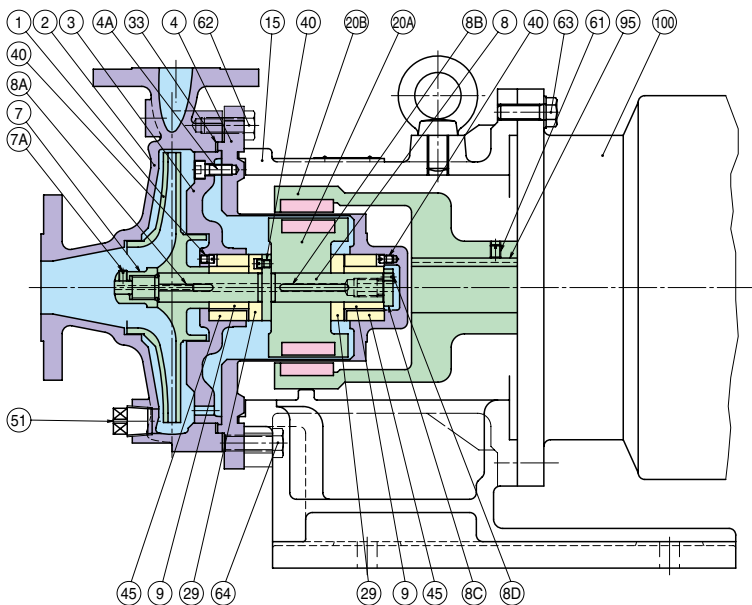
(MP210, 220, 221, 222, 420, 421, 541, 542)



101	COUPLING KEY(M)	S45C	1
100	MOTOR	-	1
63	HEXAGON HEAD BOLT	SUS304	4
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 MAGNET COUPLING(M)	RARE EARTH FCD	1 ^S 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH FCD	1 ^S 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

Magnet Coupling Type : V Type

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



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 MAGNET COUPLING(M)	RARE EARTH FCD	1 ^S 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH FCD	1 ^S 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.

Significance of SiC-D

- Increased dry running capability -

- » SiC-D bearings can withstand accidental dry run for extended 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)

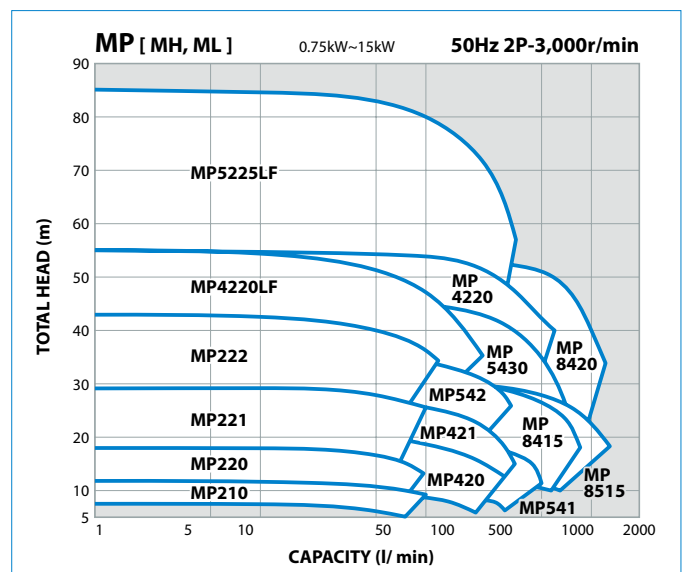
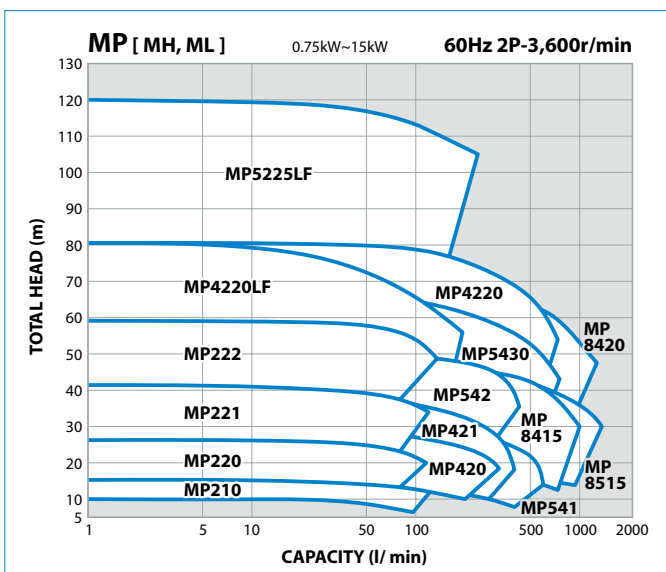


Specifications

Pump Type	MP	
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. Specifications 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

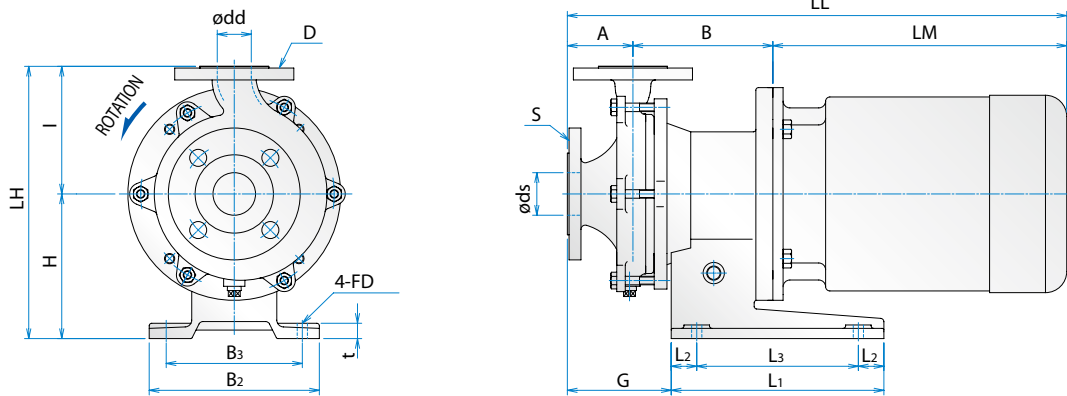
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10]

- [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						WEIGHT APPROX(kg)					
	FRAME SIZE	OUTPUT (kW)	SUCT		DISCH		A	B	H	I	LH	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP	MOTOR	TOTAL
			ds	S	dd	D																		
MP210	80M	0.75	25	20	75	170	110	105	215	233	478	125	180	30	120	160	130	12	ø12	22	12.5	34.5		
	90L	1.5																		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																		23	16.5	39.5		
MP221	90L	1.5,2.2	25	20	65	165	170	130	300	275	505	110	250	30	190	200	160	18	ø12	27	18	45		
	(100L)112M	(2.2),3.7																		30	37	67		
MP222	90L	1.5,2.2	25	20	65	165	170	140	310	275	505	110	250	30	190	200	160	18	ø12	29	18	47		
	(100L)112M	(2.2),3.7																		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																		29	18	47		
MP421	90L	1.5,2.2	40	25	75	170	170	135	305	275	520	125	250	30	190	200	160	18	ø12	30	18	48		
	(100L)112M	(2.2),3.7																		34	37	71		
MP541	90L	2.2	50	40	80	170	170	140	310	275	525	130	250	30	190	200	160	18	ø12	31	18	49		
	(100L)112M	(2.2),3.7																		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																		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																		70	80	150		
	160M,L	11,15																		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																		70	80	150		
	160M,L	11,15																		86	110	196		
MP5430	112M	3.7	50	40	102	258	212	165	377	355	715	175	350	50	250	250	200	20	ø15	72	47	119		
	132S,M	5.5,7.5																		74	80	154		
	160M,L	11,15																		90	110	200		
MP8415	112M	3.7	80	40	102	258	212	165	377	355	715	175	350	50	250	250	200	20	ø15	72	47	119		
	132S,M	5.5,7.5																		74	80	154		
	160M,L	11,15																		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																		76	80	156		
	160M,L	11,15																		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																		76	80	156		
	160M,L	11,15																		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																		86	80	166		
	160M,L	11,15																		102	110	212		

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

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.

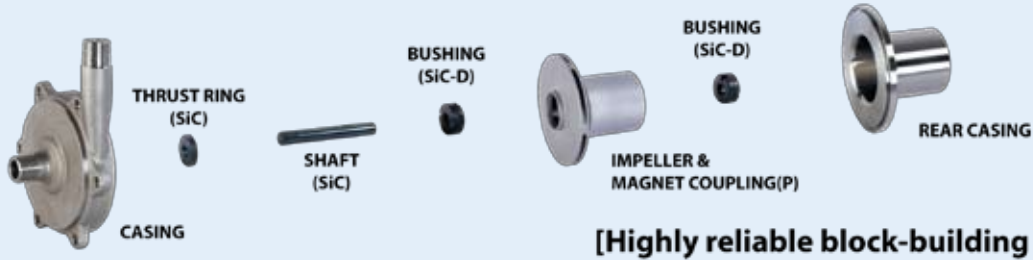


MMP

Small Sized Standard Centrifugal Pumps for Equipment Use

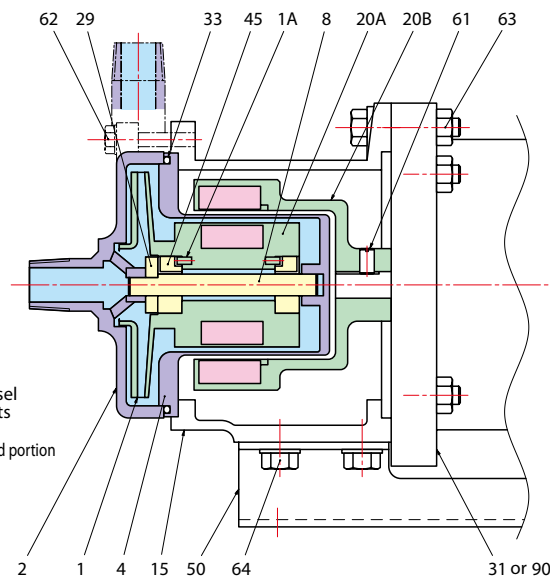


TYPE MMP
Motor output :
0.37kW to 0.55kW



[Highly reliable block-building structure]

Construction and materials



31(90)	SPACER #2	SS400(SUS304)	1
64	BOLT WITH WASHER	SUS304	4 ^S
63	BOLT WITH WASHER	SUS304	4 ^S
62	BOLT WITH WASHER	SUS304	6 ^S
61	SET SCREW	SCM435	1
50	BASE #1	SUS304	1
45	BUSHING	SiC-D	2
33	O RING #4	PTFE	1
29	THRUST RING	SiC	1
20B	MAGNET MAGNET COUPLING(M)	RARE EARTH FCD	1 ^S 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH SUS316	1 ^S 1
15	FRAME ADAPTER #1 #3	FC200	1
8	SHAFT	SiC	1
4	REAR CASING	SUS316	1
2	CASING	SCS14	1
1A	PIN	SUS316	2
1	IMPELLER	SCS14	1
MARK	NAME OF PART	MAT'L	No.REQ'D

- #1. With MMP10, frame adapter "15" and base "50" come in one body.
 #2. Spacer "31" is attached to MMP10 only.
 Spacer "90" is attached to MMH and MML.
 #3. Frame adapter "15" for MMH and MML comes in SCS13.
 #4. 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	90W to 550W	
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

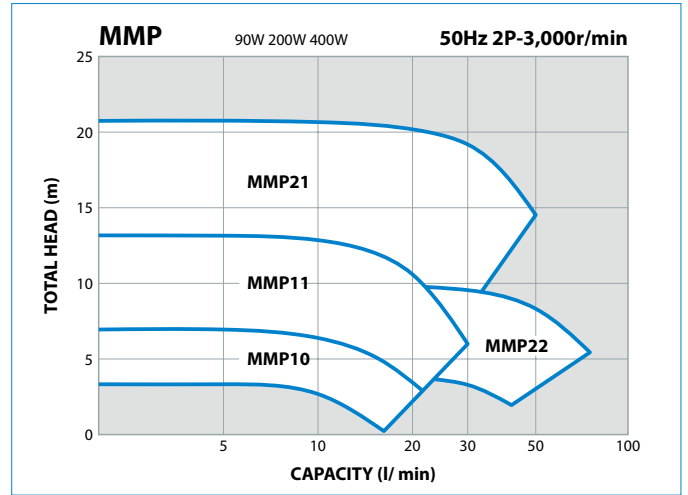
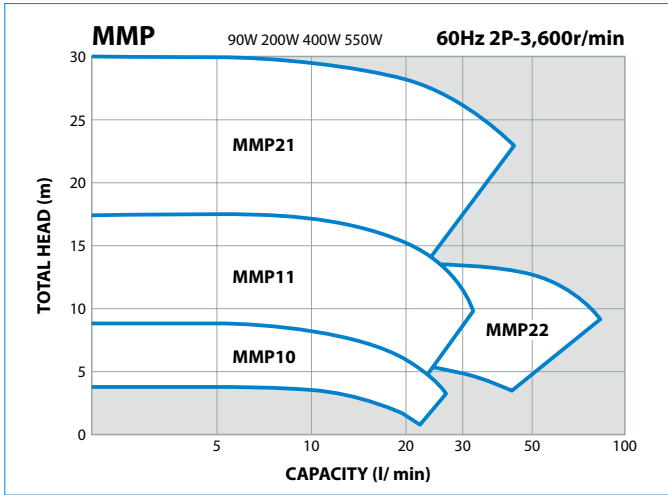
MMP22 ; 25mm x 20mm

MMP Suction x Discharge

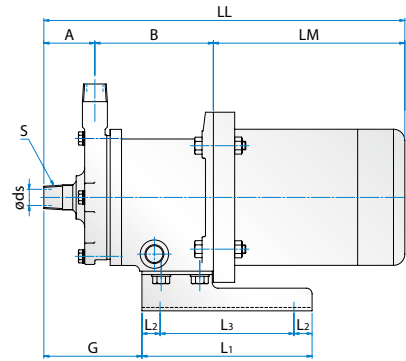
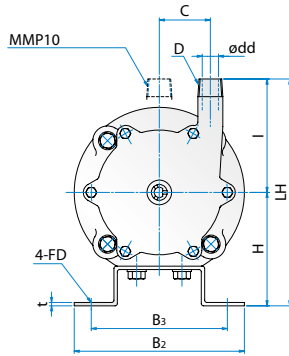
Standard: RC Thread

Optional: Flange

Selection charts



Outline dimension



(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR							BASE PLATE						WEIGHT APPROX(kg)					
	FRAME SIZE	OUTPUT (W)	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																			
MMP10	-	90	15	R1/2	13	R1/2	45	118	0	65	70	135	120	283	60	90	15	60	110	95	6	ø 9	6.8	2.5	9.3
	-	150											135	298									6.8	3.2	10.0
MMP11	63M	200	15	R1/2	15	R1/2	45	104	45	100	100	200	209	358	86	150	16	118	150	120	3	ø9.5	8.0	8.0	16.0
	71M	400											231	387									(70)	8.0	11.0
MMP21	71M/71S	400/550	20	R3/4	20	R3/4	50	112	50	100	120	220	231	393	77	150	16	118	150	120	3	ø9.5	11.0	11.0	22.0
MMP22	71M/71S	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 MMH1,22 and MML1,22.

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 decreased 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
Rangeometric range	0-30.00A	0-200.0A
Watt's source voltage	AC100-240V 50/60Hz 10VA	
Operating temperature	0-40°C	
Operating humidity	35-85%RH	
Current sensor	J510FL	J524FL
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) 1c	
Logging capability	Past records (with the calendar)	
Communication	RS485 incorporated	
Supported models	MX, S4XC, M3M, M3M, M3E, M3W	
External dimension to mm	D71 x W108 x H90	

*Not used as an inverter
*Safety US, 61010-1
CAN/CSA-C22.2 No. 61010-1-12
EN13101-1 EN13101-1, EN13101-1

*EMC EN61326-1
*Ruhs EN60581

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 regarding piping connection.



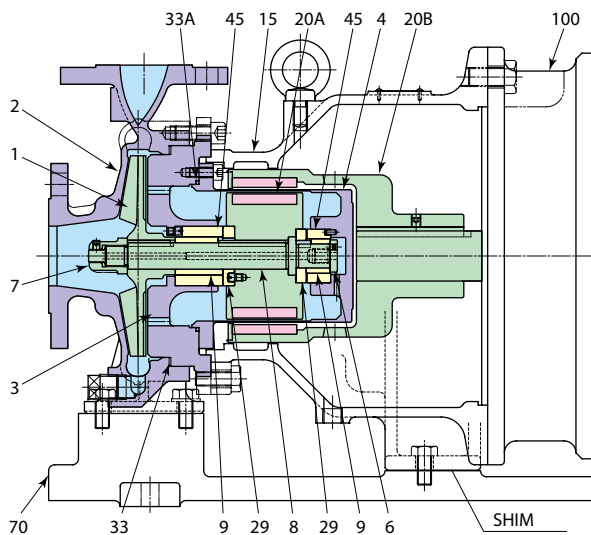
TYPE MTFO
Motor output :
2.2 kW to 22 kW



[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

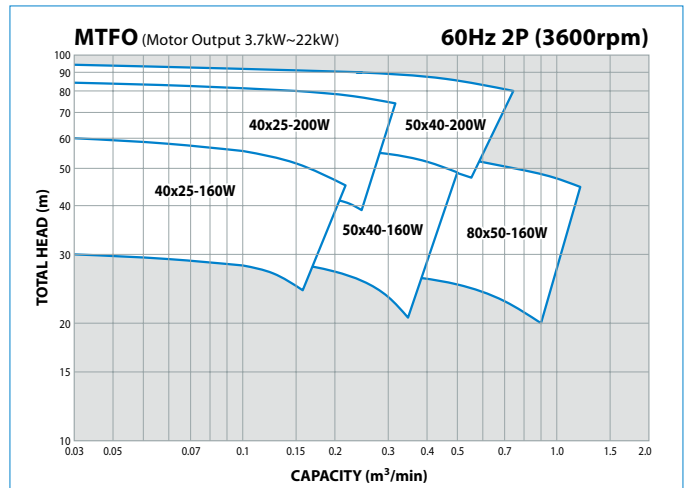
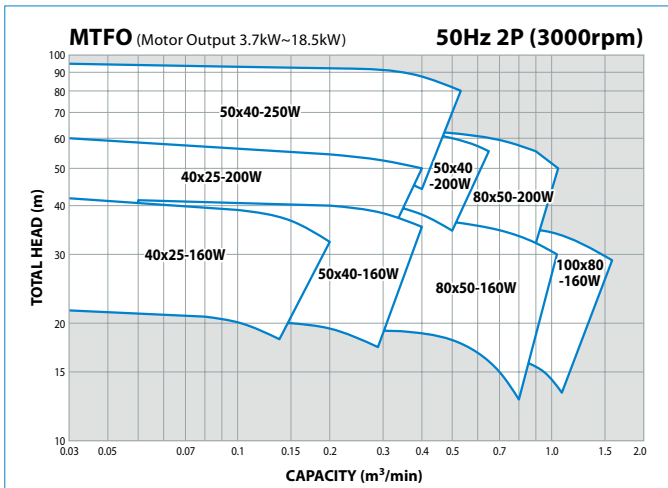
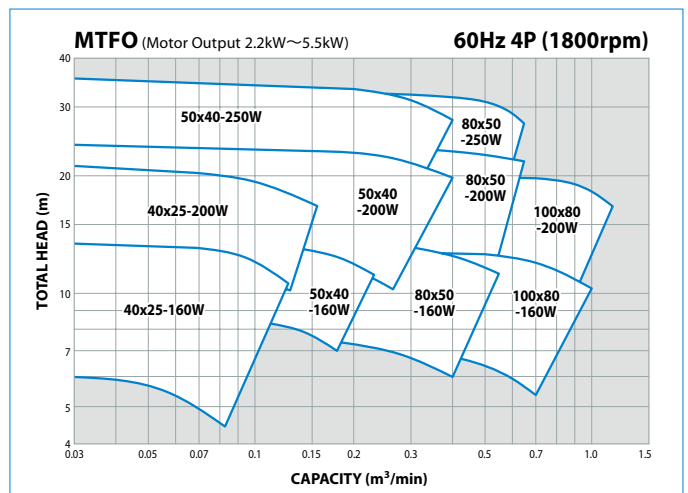
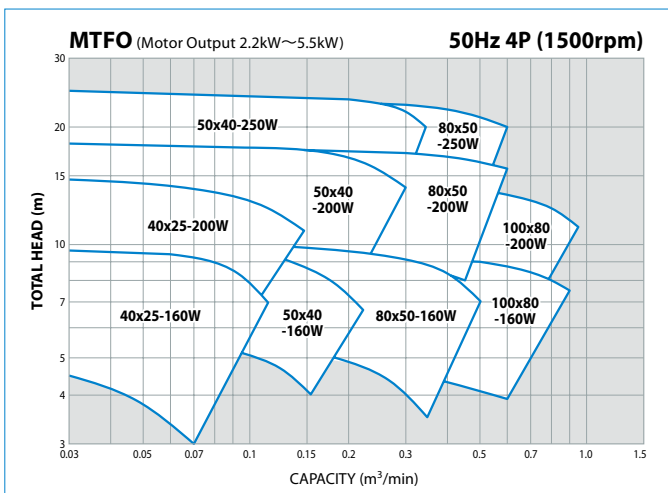
100	MOTOR	-	1
70	BASE PLATE	FC200	1
45	BUSHING	SiC	1+1
33A	O RING	PTFF	1
33	GASKET	PTFF	1
29	THRUST RING	SiC	1+1
20B	MAGNET COUPLING(M)	FCD400	1
20A	MAGNET COUPLING(P)	304SS or 316SS	1
15	FRAME ADAPTER	FC200	1
9	SLEEVE	SiC	1+1
8	INNER MAGNET SHAFT	304SS or 316SS	1
7	IMPELLER NUT	304SS or 316SS	1
6	SLEEVE BOLT	304SS or 316SS	1
4	REAR CASING	304SS or 316SS	1
3	CASING COVER	304SS or 316SS	1
2	CASING	304SS or 316SS	1
1	IMPELLER	304SS or 316SS	1
MARK	NAME OF PART	MAT'L	No.REQ'D

Specifications

Pump Type	MTFO	
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



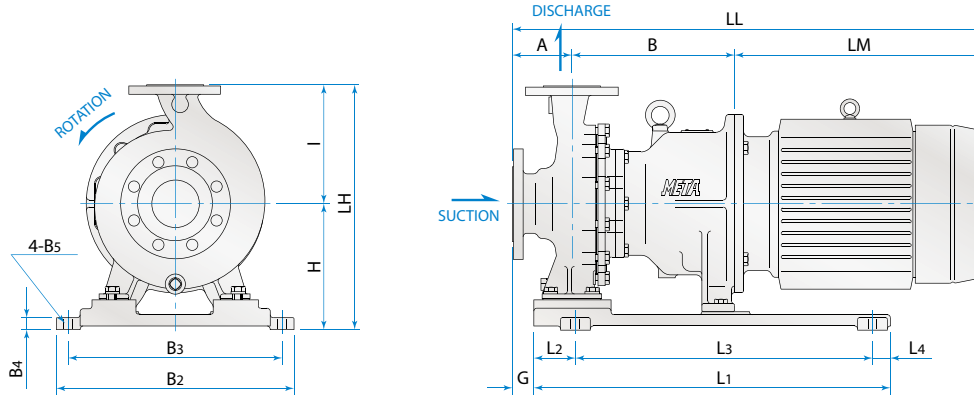
Pump Type Identification

MTFO 40 x 25 - 160 W

[1] [2] [3] [4] [5]

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

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.



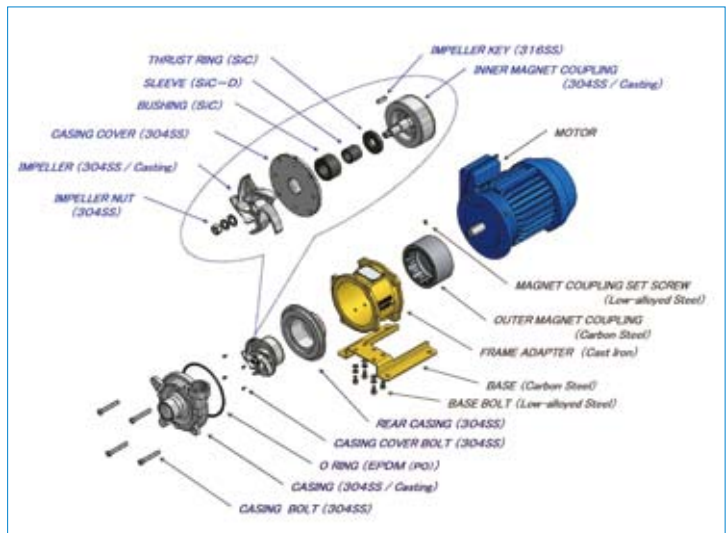
TYPE M

Motor output :

0.37 kW to 2.2 kW



Construction and materials

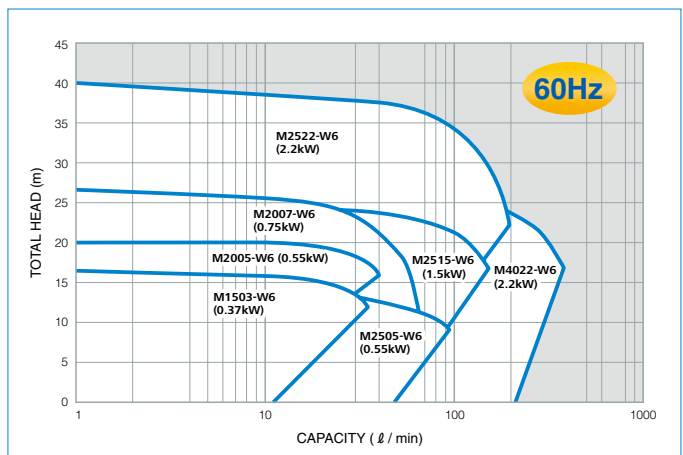
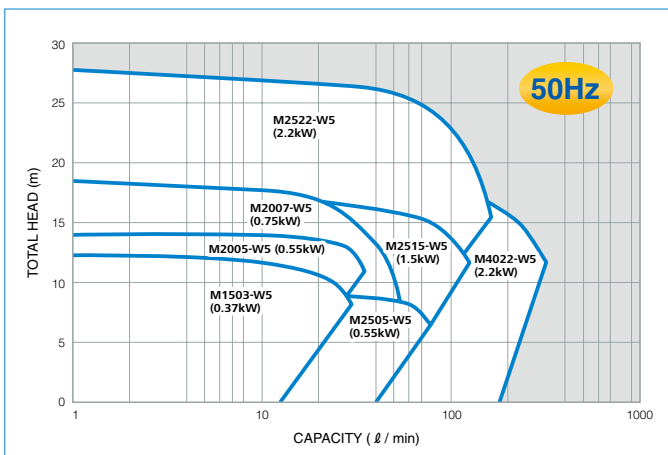


Specifications

	M	
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	Open (0.37 to 0.55kW) , Close (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 , EPDM (Option: FKM,VQM)	

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

Selection charts



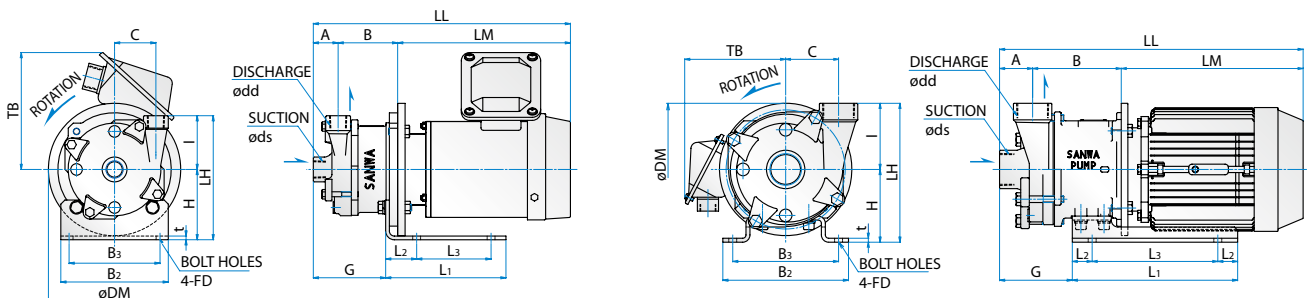
Pump Type Identification

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
- [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 PN 16RF
- [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						WEIGHT 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	71M	0.37	15 (Rc 1/2)	15 (Rc 1/2)	30	79	50	85	65	150	160	142	231	340	88	145	37	90	130	110	4.5	ø10	5.5	11.0	16.5	1	
		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		
	2005	W5	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		
		W6	71M	0.75	20 (Rc 3/4)	20 (Rc 3/4)	45	109	65	110	80	190	200	157	233	387	80	250	30	190	190	160	6	ø12	12.0	12.5	24.5		
	2515	W5	90L	1.5	25 (Rc 1)	25 (Rc 1)	55	124	65	110	80	190	200	153	275	454	105	250	30	190	190	160	6	ø12	13.0	16.5	29.5		2
		W6	90L	2.2	25 (Rc 1)	25 (Rc 1)	60	119	80	110	90	200	200	153	275	454	105	250	30	190	190	160	6	ø12	14.0	18.0	32.0		
	4022	W5	90L	2.2	40 (Rc1 1/2)	40 (Rc1 1/2)	50	134	80	110	100	210	200	153	275	459	110	250	30	190	190	160	6	ø12	15.0	18.0	33.0		

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