IWAKI

MMP
series

Metallic Centrifugal Magnet Drive Pumps



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

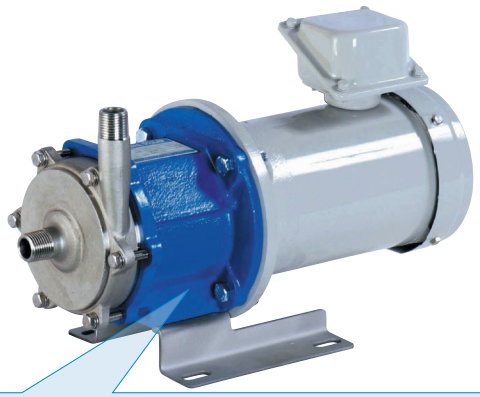
- » Compact, metallic centrifugal magnet drive pumps
- » Excellent heat and pressure resistance
- » Pump materials offer excellent corrosion resistance
- » Can transfer liquid below freezing
- » Magnet drive is supported by the exclusive SiC-D bearing.
- » High efficiency and leak free design
- » Easy to disassemble and reassemble

Pump Type	**MMP**	
Frequency (Hz)	50	60
Max. Head (m)	20	28
Max. Capacity (LPM)	80	80
Operating Temperature (°C)	-30 to 150 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.

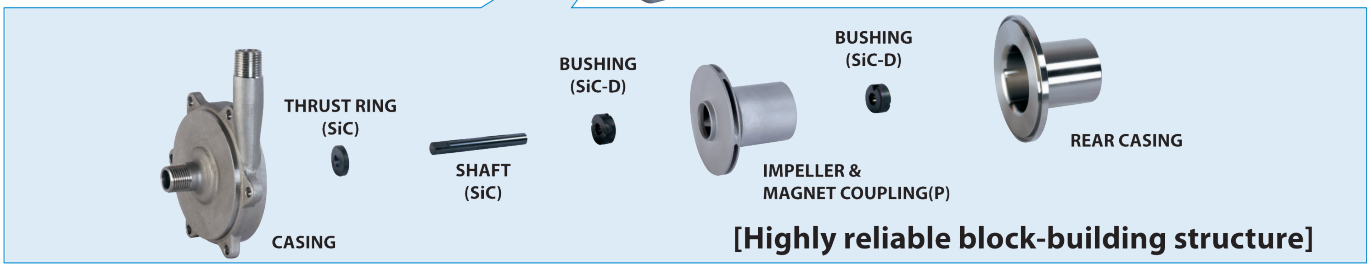
SANWA PUMP

Small Sized Standard Centrifugal Pumps for Equipment Use



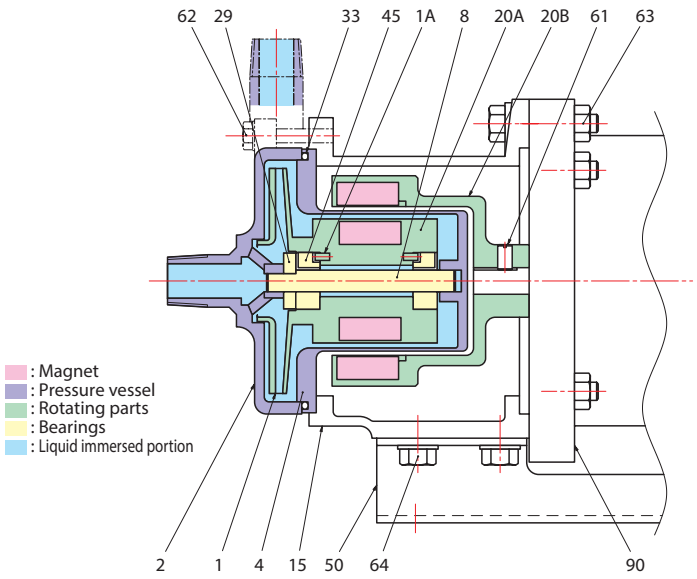
TYPE MMP
Motor output :

0,37kW to 0,55kW



[Highly reliable block-building structure]

Construction and materials



MARK	NAME OF PART	MAT'L	No.REQ'D
90	SPACER #1	SS400(304SS)	1
64	BOLT WITH WASHER	304SS	4S
63	BOLT WITH WASHER	304SS	4S
62	BOLT WITH WASHER	304SS	6S
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	1S 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH 316SS	1S 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

#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.

Pump Type Identification

MMP21 - 1 F05 R N
[1] [2] [3] [4][5]

[1] Pump type & size
[2] Impeller dia.: MMP11: 93
MMP21: 122
MMP22: 84

[3] Motor Type, Output & Magnet Coupling

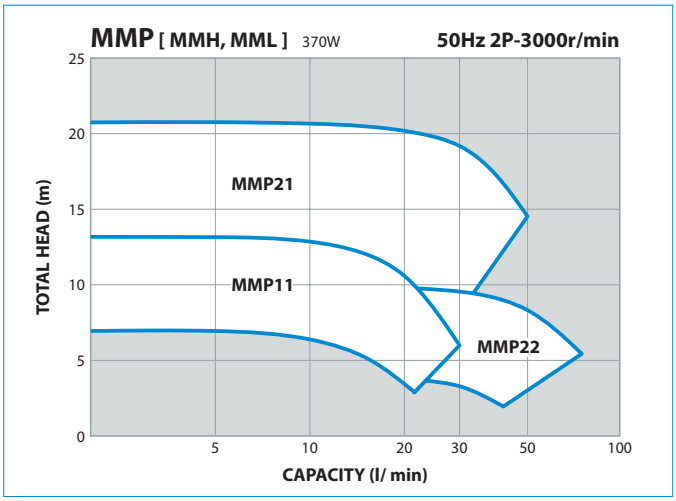
Code	Motor Type	Motor Output (kW)	Magnet Coupling Type	Motor Frame
F03	Flange IEC Motor	0,37	R25x6N	71
F05		0,55		

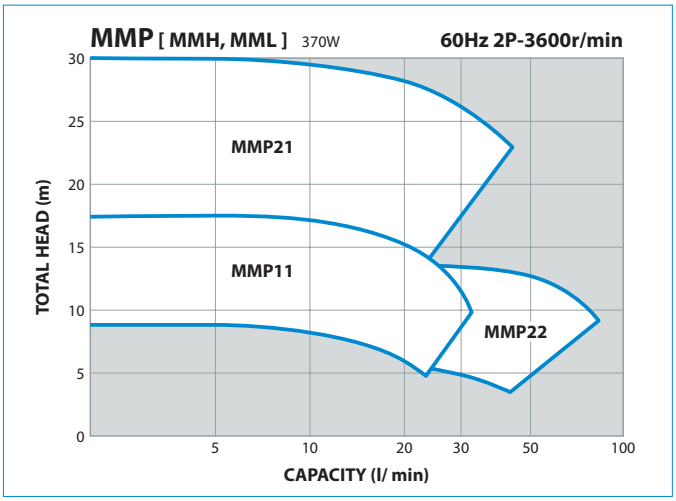
[4] Pipe Connection & Pump Material: R: R Threads & 316SS
N: NPT Threads & 316SS

[5] Temp. Code

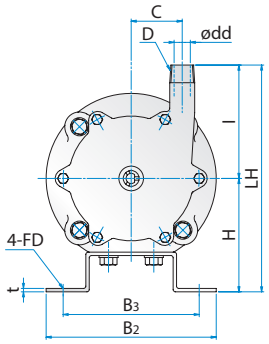
MMP11 & MMP22	L: -30 ~ - 21°C	N: -20 ~ +150°C
MMP21	L: -30 ~ - 21°C	N: -20 ~ +120°C H: +121 ~ +150

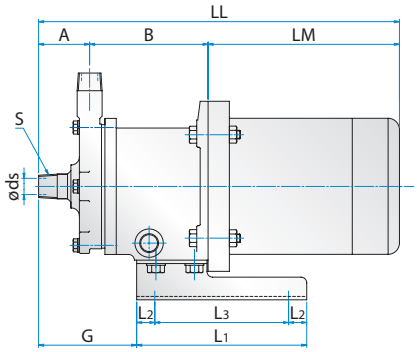
Selection charts





Outline dimension





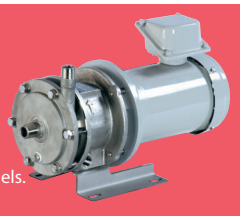
(In the unit of mm)

PUMP SIZE	MOTOR		BORE				PUMP & MOTOR								BASE PLATE								MASS APPROX(kg)		
	FRAME SIZE	OUTPUT (W)	SUCT		DISCH		A	B	C	H	I	LH	LM	LL	G	L1	L2	L3	B2	B3	t	FD	PUMP	MOTOR	TOTAL
			ds	S	dd	D																			
MMP11	71	370	15	R1/2	15	R1/2	45	111	45	100	100	200	231	387	86 (70)	150	16	118	150	120	3	ø9.5	8,0	11,0	19,0
MMP21	71	370/550	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	71	370/550	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.

Dry running protector DRN series (Option)

Model DRN is electric current sensing type dry running protector. It detects the 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
Amperometric range	0-30,00A	0-200,0A
Unit's source voltage	AC100-240V 50/60Hz 10VA	
Operating temperature	0-40℃	
Operating humidity	35-85%RH	
Current sensor	JS10FL	JS24FL
Analog input 1	4-20mA or 1-5V	
Analog input 2	4-20mA or 1-5V	
Temperature range	-50-200℃ (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	M, MMP, MP, MTFO	
External dimension in mm	D71 x W108 x H90	

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

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