

# IWAKI

**MMP**  
Series

## **Metallic Centrifugal Magnet Drive Pumps**



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



# MMP

## Small Sized Standard Centrifugal Pumps for Equipment Use

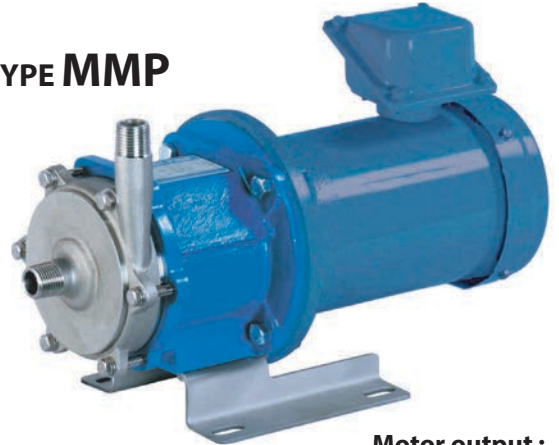
- » Compact, stainless steel magnet drive pump
- » Excellent heat and pressure resistance
- » Magnet drive is supported by SiC-D bearing
- » Can transfer liquid below freezing
- » Leak free design

### Specifications

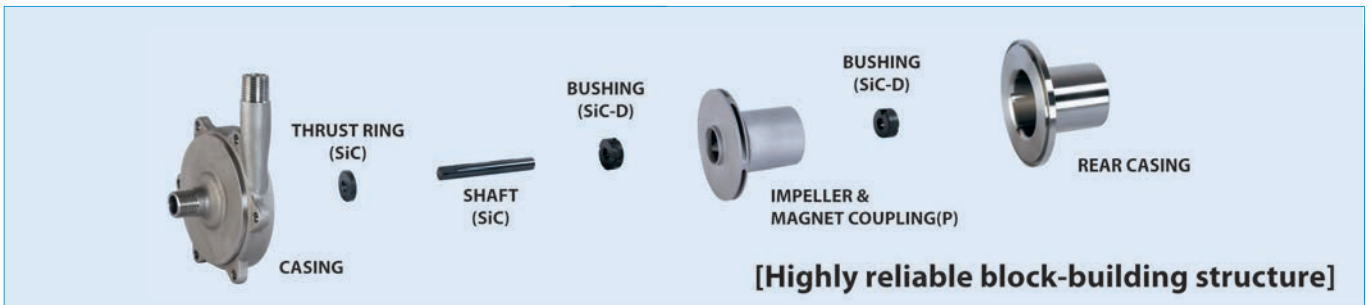
Pump Type	MMP	
Frequency Hz	50	60
Max. Head m (ft)	20 (66)	28 (92)
Max. Capacity LPM (GPM)	80 (21)	80 (21)
Operating Temperature °C (°F)	-30 (-22) to 150 (302) See note below	
Maximum Specific Gravity	2	
Maximum Viscosity (mPa·s,cP)	100	
Design pressure (MPaG)	0,6 ~ 1	
Flange standard	R Thread/ NPT Thread	
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.

### TYPE MMP



Motor output :  
**0,37kW to 0,55kW**

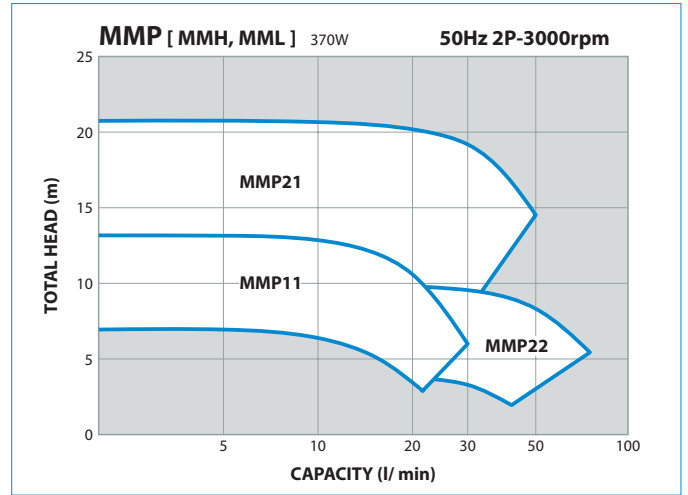
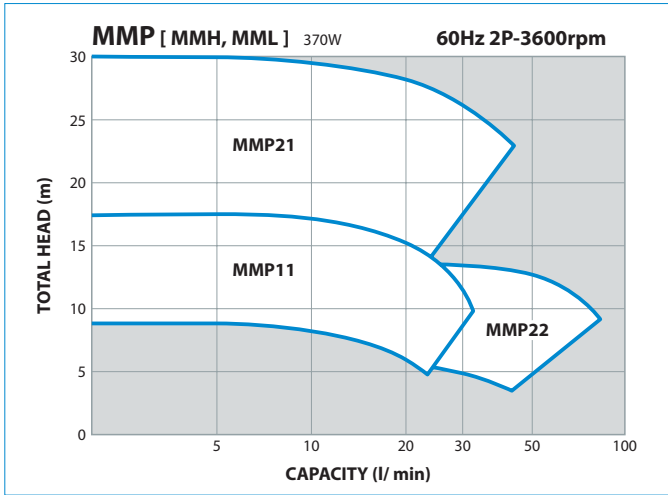


### Construction and materials

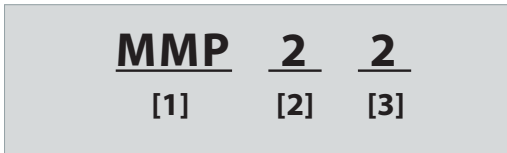
90	SPACER #1	SS400(304SS)	1
64	BOLT WITH WASHER	304SS	4 <sup>5</sup>
63	BOLT WITH WASHER	304SS	4 <sup>5</sup>
62	BOLT WITH WASHER	304SS	6 <sup>5</sup>
61	SET SCREW	SCM435	1
50	BASE	304SS	1
45	BUSHING	SiC-D	2
33	O RING #3	PTFE	1
29	THRUST RING	SiC	1
20B	MAGNET MAGNET COUPLING(M)	RARE EARTH FCD	1 <sup>5</sup> 1
20A	MAGNET MAGNET COUPLING(P)	RARE EARTH 316SS	1 <sup>5</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.

### Selection charts



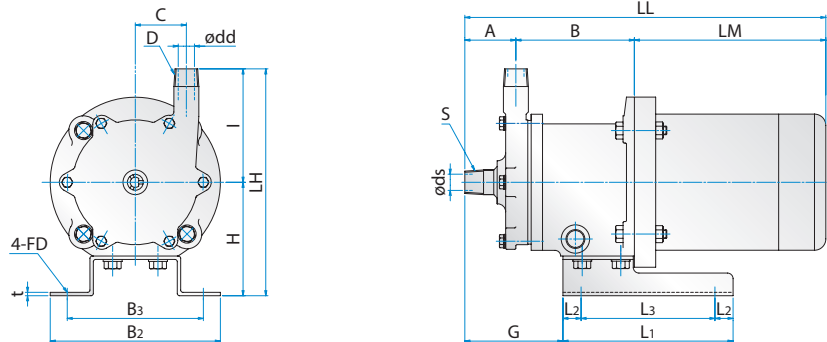
### Pump Type Identification



- [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

### Outline dimension



(Dimensions in 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	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.

### Special versions:

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

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

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

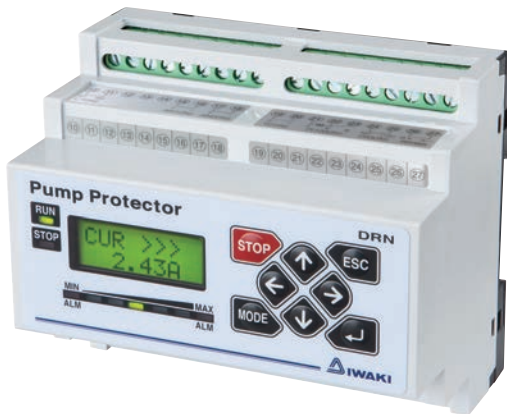
Sealed spacer protects motor from excess cold temperatures. Nd magnets and low temperature gasket material is used in these pumps. Nitrogen purge port is provided to prevent moisture from freezing in the frame adapter.

## Iwaki pump protector - DRN series

Detects unusual pump operating conditions including dry-running and overload

The DRN pump protector is an electric current sensing dry running protector.

It decreases load current (lower limit) to stop the pump when it runs dry or runs with air sucking. The DRN pump protector detects over-load as well.



### 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, MP, MTFO*	
External dimension in mm	D71 x W108 x H90	

\*: For other models please contact your local distributor

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



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