

# Magnet pump

[For chemical and sea water]

## Model name

# PMD

Magnet type

0531	1511
211	1513
311	1531
25	2511
411	2513
571	2531
611	2533
613	4023
	7523

## Image photograph



## Application

- Circulation of sea water
- Culture tank and water tank
- Waste water treatment equipment
- Drain chemical liquid
- Aquarium equipment
- PCB equipment
- Solar heating system
- Filter
- Bubble bath
- Etching equipment
- Photo development equipment
- Transfer of chemical liquid
- Cooling of NC machine
- Ice maker
- Machines for plating etc.

## Characteristics

- Magnet type
- Totally enclosed indoor type motor
- Corrosion resistance performance
- Small size and excellent performance

## Features

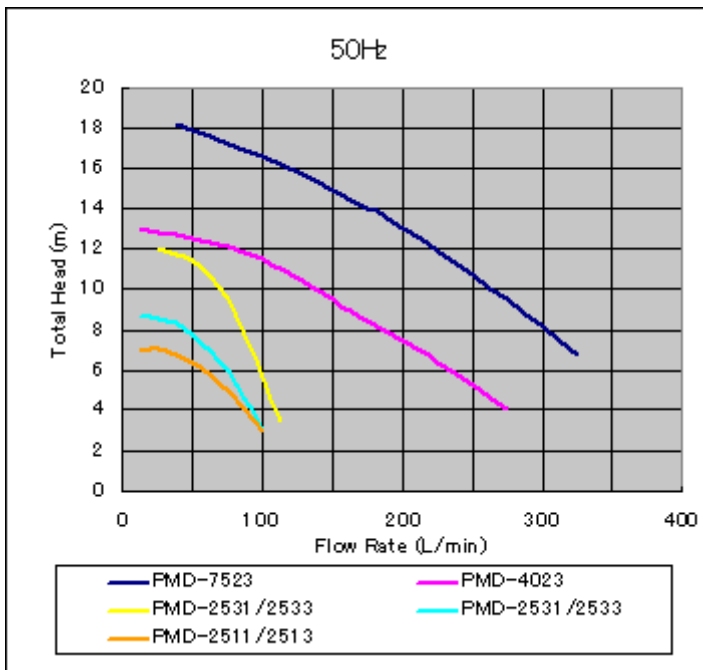
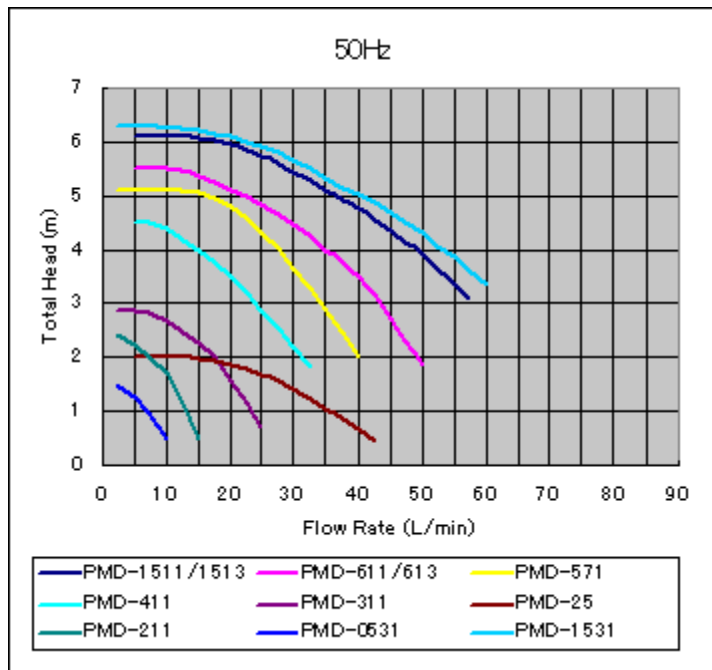
- Long life
- Complete liquid leakage free
- Excellent corrosion resistance
- Varieties of models
- High efficiency and high reliability

## Materials for pump parts

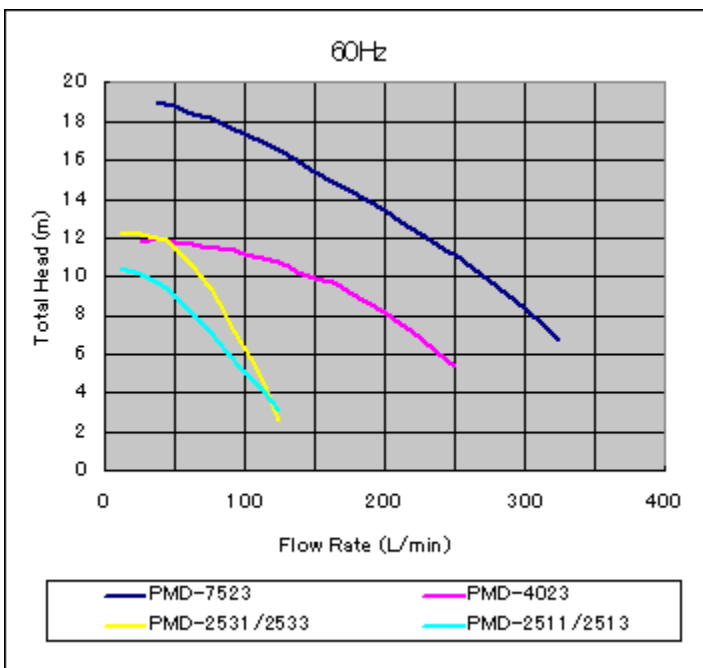
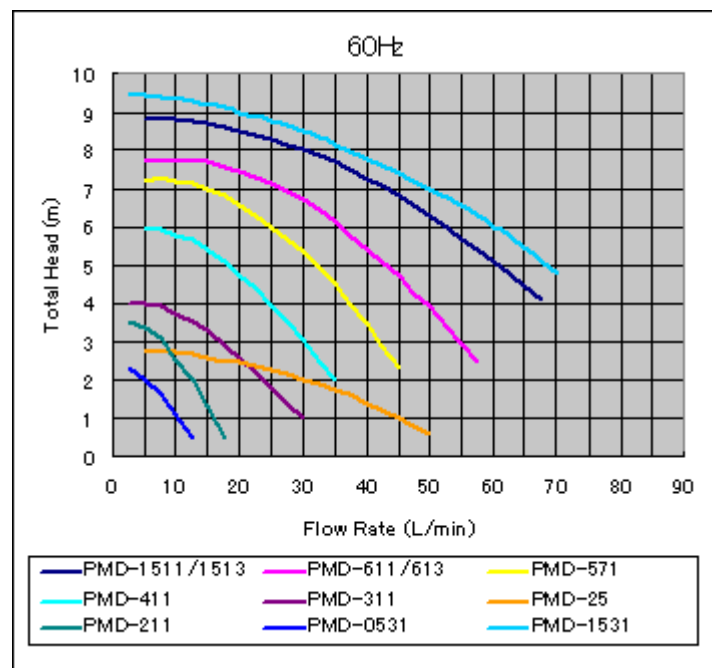
Part name	For chemical liquids and sea water	For hot water
Casing	Poly-Propylene with glass fiber	PPE with glass fiber
Back casing	Poly-Propylene with glass fiber	PPE with glass fiber

Impeller	Poly-Propylene with glass fiber	PPE with glass fiber
Pump shaft	Ceramic	Ceramic
Thrust washer	Ceramic	Ceramic
Bearing	Teflon	Carbon
O-ring	FKM (Fluoro rubber)	EPDM

■ Performance curve (50Hz)



■ Performance curve (60Hz)



■**Specification:** Last figure of model name : 1 means single phase and 3 means three phase.

Figures of performance indicate for 50/60Hz.

Item Model	Diameter		Maximum		Rated Flow Rate	Motor			Weight
	Hose	Screw	Flow Rate	Head		Rated Output	Power Consumption	Voltage	
	A(mm)	B(G-)	L/min	m	m-L/min	W	W	V	kg
PMD-0531	14	—	10/12	1.7/2.5	1-6.0/1-9.0	4/6	18/20	100	0.75
PMD-211	14	3/8	17/18	2.5/3.5	1.5-11.0/1.5-15.0	10/15	27/34	100	1.9
PMD-311	17	1/2	26/30	3.5/4.5	2-16.0/2-22.0	20/30	45/55	100	2.5
PMD-25	26	1	45/57	2.0/2.9	1-35.0/1-47.0	20/30	51/61	100	2.5
PMD-411	20	3/4	43/44	4.4/5.9	2.5-27.0/2.5-33.0	30/45	60/75	100	4.0
PMD-571	20	3/4	53/57	5.0/7.1	4-26.0/4-38.0	50/65	90/135	100	4.6
PMD-611	20	3/4	60/68	5.6/7.7	4-33.0/4-50.0	75/115	130/175	100	6.0
PMD-613	20	3/4	60/68	5.5/7.7	4-33.0/4-50.0	75/115	120/160	200	6.0
PMD-1511	20	3/4	67/80	6.6/9.0	4-45.0/4-61.0	85/150	180/240	100	7.5
PMD-1513	20	3/4	67/80	6.6/9.0	4-45.0/4-61.0	85/150	150/205	200	7.5
PMD-1531	26.5	1	95/97	6.3/8.7	4-50.0/4-75.0	85/150	180/240	100	7.5
PMD-2511	26.5	1	95/110	6.9/9.8	5-50.0/7-60.0	150/250	270/380	100	11.5
PMD-2513	26.5	1	95/110	6.9/9.8	5-50.0/7-60.0	150/250	270/380	200	10.5
PMD-2531(50Hz)	26.5	1	125	12.0	8-70.0	260	430	100	11.5
PMD-2533(50Hz)	26.5	1	125	12.0	8-70.0	260	430	200	10.5
PMD-2531(60Hz)	26.5	1	120/130	8.6/12.3	6-60/8-70	150/260	280/430	100	11.5
PMD-2533(50Hz)	26.5	1	120/130	8.6/12.3	6-60/8-70	150/260	280/430	200	10.5
PMD-4023(50Hz)	40	1 1/2	300	12.3	10-120	400	540	200	18.0
PMD-4023(60Hz)	40	1 1/2	250/300	8.9/12.6	6-120/10-120	250/400	450/700	200	18.0
PMD-7523(50Hz)	40	1 1/2	380	18.7	12-220	750	901	200	28.0
PMD-7523(60Hz)	40	1 1/2	330/380	13.4/19.0	7-220/12-220	450/750	601/1000	200	28.0

Conditions of liquids : Ambient Temp : 0 to 60°C Viscosity : below 30mm<sup>2</sup>/s, Specific Gravity : below 1.1

Note (1) Slurry liquids reduce life of pump. (2) Pressure shall be less than 100kPa. (3) Indoor use.

(4) Shock pressure and abnormal pressure etc will damage the pump part.

(5) Voltage can be adjusted to customer's requirement.

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## Magnet pump [For hot water]

■**Model name**

# PMD

Magnet type

0311

0411

111

121

331

521(50Hz)

521(60Hz)

■**Image photograph**



1521  
1523

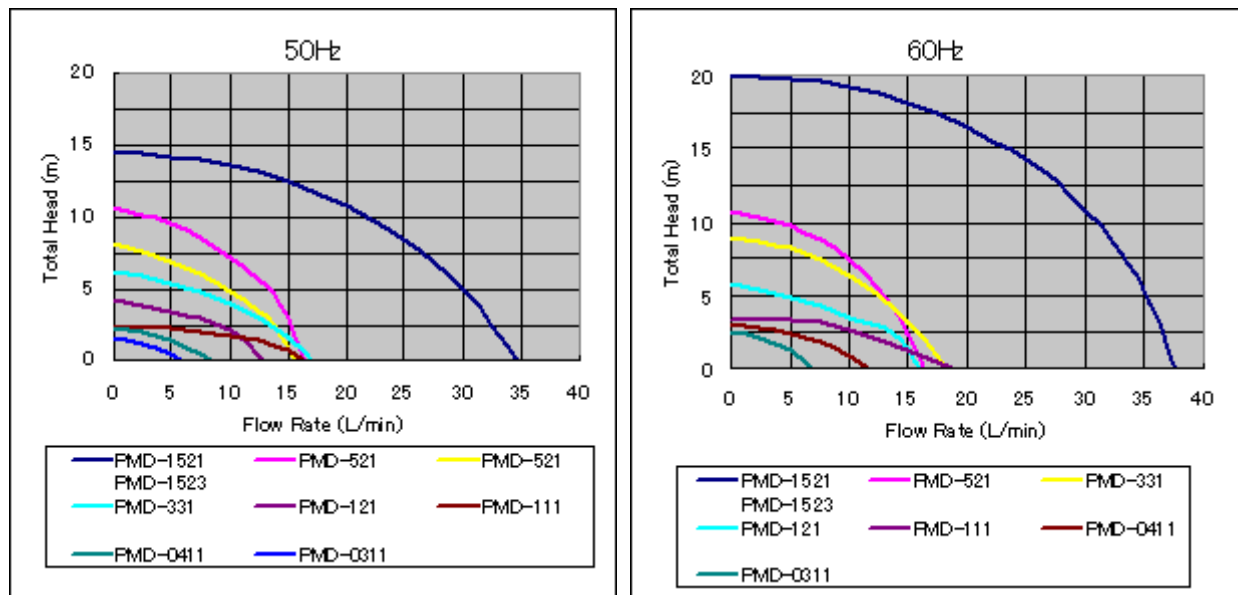
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■ **Application**

- Floor heating
  - Hot water supplier
  - Tea server
  - Chiller
  - Solar system
  - Dish washing machine
  - Temperature controller for semiconductor equipment and molding machine
  - Chilling for projector
  - For drinking water
- 
- PPO(including glass) is used for resin component. No leakage without shaft seal part.
  - Sufficient discharge is available despite of big pipe resistance.
  - Sufficient heat resistance to endure high temperature liquid and atmosphere.

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■ **Performance curve**



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■ **Specification** : Last figure of model name :1 means single phase and 3 means three phase.

Item Model	Diameter		Maximum		Rated Flow Rate	Motor			Weight kg
	Hose A(mm)	Screw B(G-)	Flow Rate L/min	Head m		Rated Output W	Power Consumption W	Voltage V	
					m-L/min				
PMD-0311	14	1/2	6.4 / 7.5	1.6 / 2.5	1-3.5 / 1.5-3.0	3/3	29/26	100	0.9
PMD-0411	14	-	9.5 / 11.0	2.2 / 3.0	1.5-4.8 / 2.0-5.2	3/4	15/19	100	1.3
PMD-111	14	-	16.5 / 18.5	2.5 / 3.5	2.0-7.8 / 3.0-7.4	10/15	27/34	100	1.6
PMD-121	14	3/8	14.0 / 15.5	4.2 / 5.6	3.5-6 / 5.0-3.0	10/15	26/35	100	1.7
PMD-331	17	1/2	16.0 / 18.0	6.5 / 8.7	5.0-6.5 / 7.0-6.5	20/30	45/60	100	3.4
PMD-521(50Hz)	19	1/2	16.5	10.3	9.0-7.0	50	95	100	3.8
PMD-521(60Hz)	19	1/2	15.0 / 15.5	8.5 / 11.1	7.0-6.5 / 9.0-7.0	40/50	81/96	100	3.8
PMD-1521	20	3/4	33.0 / 36.0	14.0 / 19.8	12-17 / 18-15	100/150	190/280	100	6.9
PMD-1523	20	3/4	33.0 / 36.0	14.0 / 19.5	12-17 / 18-15	100/150	180/260	200	6.8

Conditions of liquids : Liquid Temp : up to 90°C (from -20°C in case of anti-freeze solution)  
Note (1) Slurry liquids reduce life of pump. (2) Pressure shall be less than 100kPa.  
(3) Indoor use. (4) Shock pressure and abnormal pressure etc will damage the pump part.  
(5) Voltage can be adjusted to customer's requirement.

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## Magnet pump

### [ For chemical and sea water ]

International protection(IP44)

#### ■ Model name

# PMD

Magnet type

0531	1561
221	1563
371	2571
421	2573
581	4033
641	7533
643	

#### ■ Image photograph



PMD-2573

PMD-4033

#### ■ Features of new models

- Efficiency                      About 35% improved
- Electric power costs        About 20% can be reduced
- Noise                            About less 5dB than conventional models
- Vibration                        About 50% less than conventional models
- Small and light                About 10% lighter than conventional models

### ■Application

- Circulation of sea water
- Culture tank and water tank
- Waste water treatment equipment
- Drain chemical liquid
- Aquarium equipment
- PCB equipment
- Solar heating system
- Filter
- Bubble bath
- Etching equipment
- Photo development equipment
- Transfer of chemical liquid
- Cooling of NC machine
- Ice maker
- Machines for plating etc.

### ■Characteristics

- Magnet type
- Totally enclosed indoor type motor
- Corrosion resistance performance
- Small size and excellent performance

### ■Features

- Long life
- Complete liquid leakage free
- Excellent corrosion resistance
- Varieties of models

Structure with very simple components prevents liquid leakage and corrosion.



### ◆Front-casing with hose-connection



Integral molding by polypropylene mixed with filler to increase mechanical strength.



### ◆Front-casing with screw-connection



Integral molding as well as hose-connection type.  
 Straight screw according to diameter as standard.  
 Simple and compact connection to piping.

◆ **Impeller**

Material is polypropylene or PPE and permanent magnet is contained inside.  
 Teflon or Carbon bearing is inserted between impeller and shaft.  
 Shape of impeller is open or closed or semi-closed type, depending on performance characteristics.

◆ **Back casing**

Integral molding by polypropylene or PPE as well as front-casing.

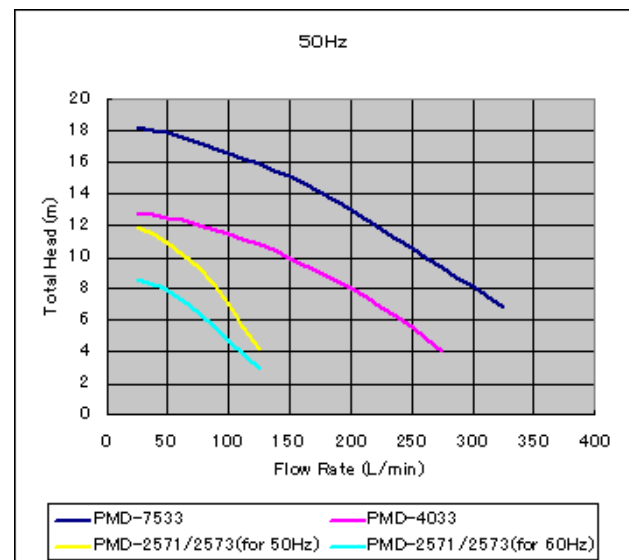
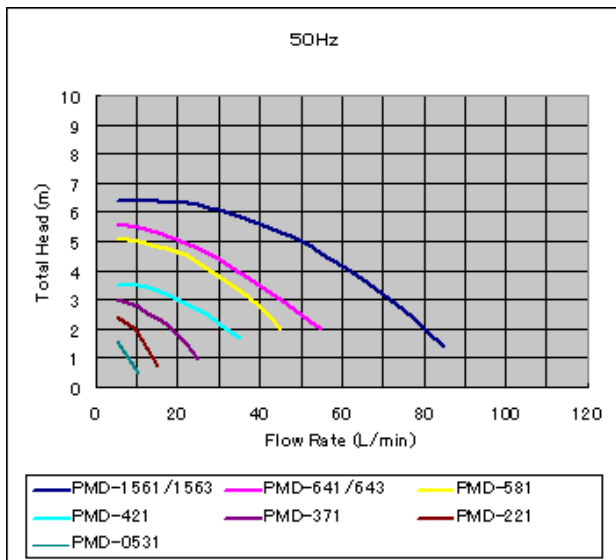
◆ **Drive magnet**

Made of permanent magnet magnetized from 6 poles to 10 poles.  
 Impeller is rotated by magnet from outside of back casing.

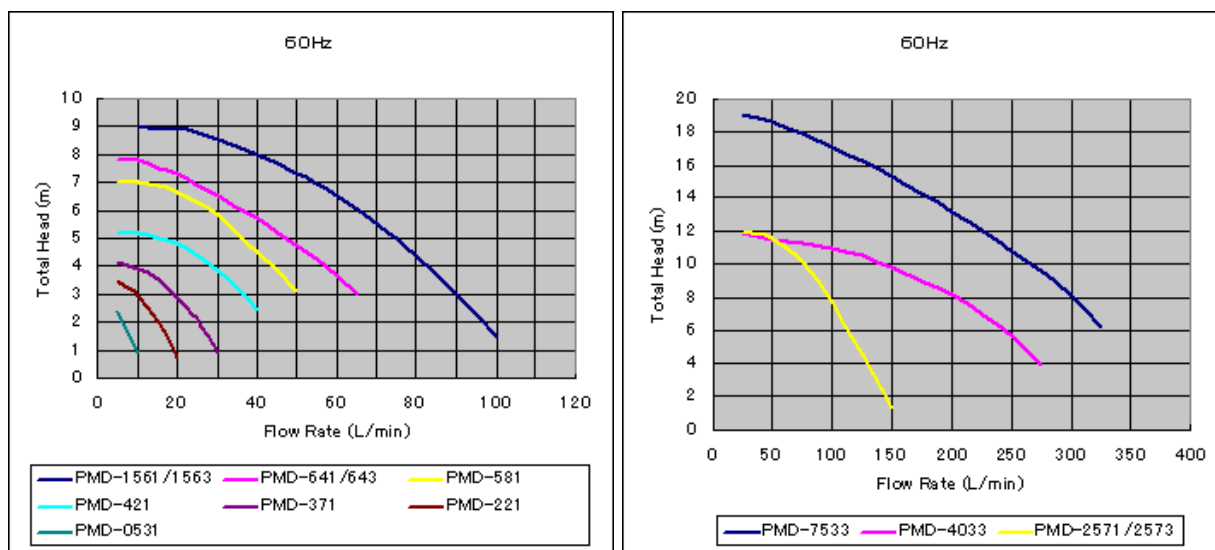
■ **Materials for pump parts**

Part name	For chemical liquids and sea water
Casing	Poly-Propylene with glass fiber
Back casing	Poly-Propylene with glass fiber
Impeller	Poly-Propylene with glass fiber
Pump shaft	Ceramic
Thrust washer	Ceramic
Bearing	Teflon
O-ring	FKM (Fluoro rubber)

■ **Performance curve (50Hz)**



■ Performance curve (60Hz)



■ **Specification** : Last figure of model name : 1 means single phase and 3 means three phase.

Model	Item	Diameter		Maximum		Rated Flow Rate	Motor			Weight kg
		Hose A(mm)	Screw B(G-)	Flw Rate L/min	Head m	50Hz/60Hz m-L/min	Rated Output W	PowerConsumption W	Voltage V	
PMD-0531		14	-	10/12	1.7/2.5	1-6 / 1-9	4/6	18/20	100	0.7
PMD-221		14	3/4	15/20	2.5/3.6	1-13 / 2-13	10/15	22/30	100	1.7
PMD-371		17	3/4	25/28	3.0/4.2	2-18 / 3-19	15/20	32/43	100	1.7
PMD-421		20	3/4	35/42	3.5/5.1	3-21 / 4-26	35/45	55/75	100	3.4
PMD-581		20	3/4	43/48	5.1/6.8	3-35 / 5-35	40/60	70/110	100	3.4
PMD-641		26	1	62/72	5.7/8.0	3-50 / 5-50	65/100	105/155	100	4.8
PMD-643		26	1	62/72	5.7/8.0	3-50 / 5-50	65/100	100/150	200	4.7
PMD-1561		26	1	87/100	6.3/8.9	4-60 / 6-63	120/160	160/230	100	5.4
PMD-1563		26	1	87/100	6.3/8.9	4-64 / 6-70	120/160	160/240	200	5.0
PMD-2571 (50Hz)		26.5	1	125/-	12.3/-	8-75 / -	250/-	430/-	100	8.0
PMD-2571 (60Hz)		26.5	1	115/150	8.6/12	4-90 / 8-80	150/250	270/410	100	8.0
PMD-2573 (50Hz)		26.5	1	125/-	12.3/-	8-75 / -	250/-	410/-	200	7.5
PMD-2573 (60Hz)		26.5	1	115/150	8.6/12	4-90 / 8-80	150/250	260/400	200	7.5
PMD-4033 (50Hz)		40	1-1/2	300/-	12.3/-	10-140 / -	400/-	540/-	200	17.0
PMD-4033 (60Hz)		40	1-1/2	250/300	8.2/11.6	6-120 / 10-140	250/400	450/700	200	17.0
PMD-7533 (50Hz)		40	1-1/2	380/-	18.2/-	12-210 / -	750/-	901/-	200	21.0
PMD-7533 (60Hz)		40	1-1/2	330/380	13.4/19	7-220 / 12-225	450/750	601/1000	200	21.0

Conditions of liquids: Ambient Temp: 0 to 60°C Viscosity: below 30mm<sup>2</sup>/s, Specific Gravity: below 1.1

Note (1) Slurry liquids reduce life of pump. (2) Pressure shall be less than 100kPa. (3) Indoor use.

(4) Shock pressure and abnormal pressure etc will damage the pump part.

(5) Voltage can be adjusted to customer's requirement.



# Magnet pump

[ For chemical and sea water ]

International protection(IP44)

## ■ Model name

# PMD

Magnet type

PMD-15013A2Z

PMD-15013B2Z

PMD-22013A2Z

PMD-22013B2Z

PMD-37013B2Z

A for 50Hz

B for 60Hz

*High power type*

## ■ Image photograph



PMD-15013A · B

PMD-22013A · B



PMD-37013B

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## ■ Features of new models

- |                       |  |
|-----------------------|--|
| ●Efficiency           | About 35% improved                         |
| ●Electric power costs | About 20% can be reduced                   |
| ●Noise                | About less 5dB than conventional models    |
| ●Vibration            | About 50% less than conventional models    |
| ●Small and light      | About 10% lighter than conventional models |

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## ■ Application

- Circulation of sea water
- Culture tank and water tank
- Waste water treatment equipment
- Drain chemical liquid
- Aquarium equipment
- PCB equipment
- Solar heating system
- Filter
- Bubble bath
- Etching equipment
- Photo development equipment
- Transfer of chemical liquid

## ■ Characteristics

- Magnet type
- Totally enclosed indoor type motor
- Corrosion resistance performance
- Small size and excellent performance

## ■ Features

- Long life
- Complete liquid leakage free
- Excellent corrosion resistance
- Varieties of mode 1 s

- Cooling of NC machine
- Ice maker etc.

### ■Materials for pump parts

Part name	For chemical liquids and sea water
Casing	Poly-Propylene with glass fiber
Back casing	Poly-Propylene with glass fiber
Impeller	Poly-Propylene with glass fiber
Pump shaft	Ceramic
Thrust washer	Ceramic
Bearing	Teflon
O-ring	FKM (Fluoro rubber)

## Excellent characteristics

### ◆Shaft

- Endurance of shaft is much improved because of being supported from both sides.
- Shaft can be changed individually.
- SIC with excellent endurance is available, if required.

### ◆Back casing

- Special structure of rear casing and structure of impeller for preventing the air retention is excellent against the air lock.
- Endurance of rear casing is much improved, because carbon fiber is used for reinforcing the rear casing.

### ◆Exclusive motor (with terminal box)

- This pump can be used in the chemical environment, because reinforced plastics is used for terminal box.
  - Wiring works are easy, because terminal box is equipped at the upside of pump.
  - Oil seal is used against gas and liquid leakage to prevent the motor corrosion.
- Lifetime is much improved.

### ◆Impeller and magnet

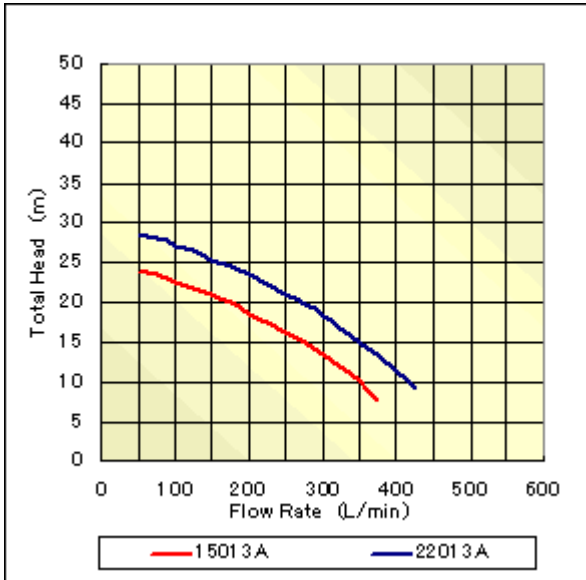
- Strong rare earth magnet is used for over 1.5Kw.
- Problem in high temperature and reverse rotation can be prevented, because impeller and magnet is coupled.
- Efficiency is improved because of special impeller.

## ◆ Loose flange

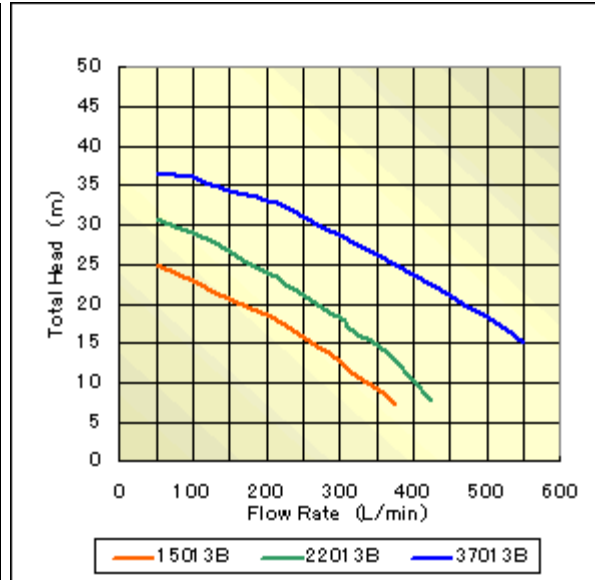
- Loose flange is used to be adjusted to the opposite side.

### ■ Performance curve

#### ◆ (50Hz)



#### ◆ (60Hz)



### ■ Specification

Item Model	Diameter	Maximum		Rated Flow Rate	Motor			Weight kg
		Flow Rate	Head		Rated Output	Power Consumption	Voltage	
		L/min	m	m-L/min	kw	kw	V	
PMD-15013 (50Hz)	50A×40A	430	26	15-320	1.5	1.7	200	27.0
PMD-15013 (60Hz)	50A×40A	420	26	20-310	1.5	1.6	200	27.0
PMD-22013 (50Hz)	50A×40A	480	30	20-320	1.9	2.2	200	29.0
PMD-22013 (60Hz)	50A×40A	470	32	20-330	1.9	2.2	200	29.0
PMD-37013 (60Hz)	50A×40A	550	39	25-410	3.0	3.7	200	52.0

Note(1) PMD-37013(50Hz) is not available. (2) Voltage can be adjusted to customer's requirement.

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