

Advance Technology for Human Beings & Earth.



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SANSO

PUMP de ECO 2018

*Pumps and motors
by SANSO ELECTRIC are full of ecological technologies.*

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SANSO

PUMP de ECO 2018

*The 21st Century and onward...
We will continue to challenge for future advanced technology,
world to be the only one global enterprise.*

PMD-0531
PMD-221
PMD-371
PMD-421
PMD-581
PMD-641
PMD-643
PMD-1561
PMD-1563
PMD-2571
PMD-2573
PMD-4033
PMD-7533
PMD-15013A-E3
PMD-22013A-E3
PMD-37013A-E3



Characteristics

• High performance and energy saving

Compared to the conventional products, the pump efficiency increased by 35%. This type became smaller, lighter, 5-dB quieter and 50% reduction in vibration.

• Long-life and no liquid leakage

There is no liquid leakage due to no shaft seal part, As made of resin, this type is appropriate for transporting highly-corrosive special liquid.

• Complete no liquid leakage

This type is seal-less pumps based on the magnet coupling system. The pump section will never have liquid leakage, corrosion, dirt around the pump and troublesome mechanical seal replacement.

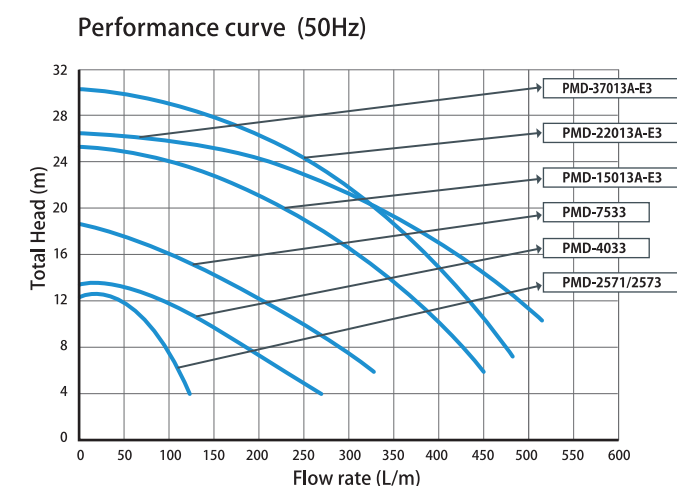
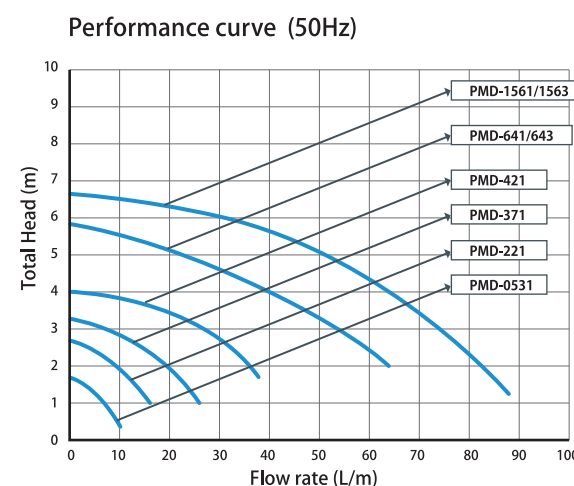
Application

- Circulation of sea water, culture tank and water tank, etc.
- Drain chemical liquid, transfer of chemical liquid, etc.
- Waste water treatment equipment, Aquarium equipment, PCB equipment, Solar heating system, Filter, Bubble bath, Etching equipment, Printing equipment, Chillers, Cooling of NC machine, Ice maker, etc.

Caution

- Chemical resistance must be verified before using the products by checking whether an intended purpose can be achieved with a preliminary test, etc.
- In order to use cold water, apply lagging materials and/or heat-insulating materials as measure againsts dew condensation if necessary.

Performance Curve



Excellent characteristics

Front-casing

- Hose-connection and screw-connection type.
- Integral molding by polypropylene mixed with filler to increase mechanical strength.
- Simple and compact connection to piping.
- Straight screw according to diameter as standard.

Impeller

- Material is PP and permanent magnet is contained inside.
- PTFE bearing is inserted between impeller is open or closed or semi-closed type, depending on performance characteristics.

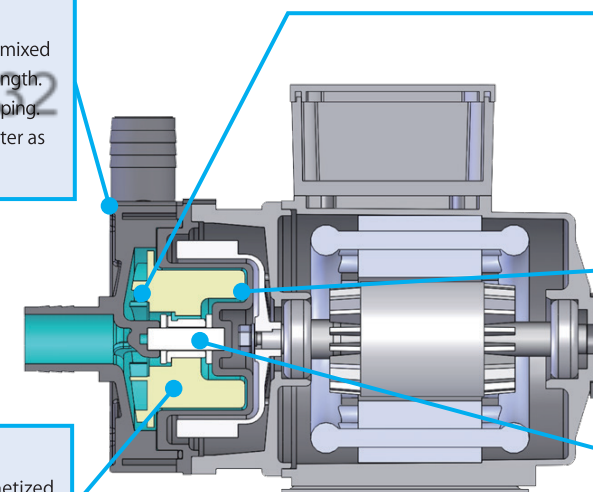
Back casing

- 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 form outside of back casing.

Bearing



Corrosion resistance Table

Fluid	Criterion
Sodium hypochlorite	Up to 5 ppm of concentration
Caustic soda	Up to 5 % of concentration
Hydrochloric acid	Up to 30 % of concentration
Sulfuric acid	Up to 10 % of concentration
Citric acid	Up to 15 % of concentration

■ The above corrosion resistance table shows the standards when a fluid temperature is normal (0~40°C).

Part name and material

Material of water contact part

Part name	Classification	2
Casing		PP(with glass)
Impeller		PP(with glass)
Pump shaft		Alumina ceramics
Thrust block		Alumina ceramics
Pump bearing		PTFE
O-ring		FKM

■ Specification

TYPE I

Model	Motor				Diameter		50Hz		60Hz	
	Rated output W(50Hz/60Hz)	Phase Φ	Rated voltage V	Frequency Hz	Hose mm	Screw inch	Total head m	Rated flow rate L/min	Total head m	Rated flow rate L/min
PMD-0531	18	Single	220	50	14	—	1 · 0.7	6 · 8	—	—
PMD-221	10/15	Single	220, 220~240	50/60	14	—	2 · 1	6 · 13	3 · 2	6 · 13
	10/15	Single	220, 220~240	50/60	—	G3/4	2 · 1	6 · 13	3 · 2	6 · 13
	10/15	Single	110	50/60	14	—	2 · 1	6 · 13	3 · 2	6 · 13
PMD-371	15/20	Single	220, 220~240	50/60	17	—	2 · 1.5	18 · 22	3 · 2	19 · 26
	15/20	Single	220, 220~240	50/60	—	G3/4	2 · 1.5	18 · 22	3 · 2	19 · 26
	15/20	Single	110	50/60	17	—	2 · 1.5	18 · 22	3 · 2	19 · 26
	15/20	Single	110	50/60	—	G3/4	2 · 1.5	18 · 22	3 · 2	19 · 26
PMD-421	35/45	Single	220, 220~240	50/60	20	—	3 · 2	21 · 30	4 · 3	26 · 35
	35/45	Single	220, 220~240	50/60	—	G3/4	3 · 2	21 · 30	4 · 3	26 · 35
	35/45	Single	110	50/60	—	G3/4	3 · 2	21 · 30	4 · 3	26 · 35
PMD-581	40/60	Single	220, 220~240	50/60	20	—	4 · 3	23 · 35	6 · 5	23 · 35
	40/60	Single	220, 220~240	50/60	—	G3/4	4 · 3	23 · 35	6 · 5	23 · 35
PMD-641	65/100	Single	110(220)	50/60	26	—	5 · 3	23 · 50	7 · 5	25 · 50
	65/100	Single	110(220)	50/60	—	G1	5 · 3	23 · 50	7 · 5	25 · 50
	65/100	Single	220, 220~240	50/60	26.5	—	5 · 3	23 · 50	7 · 5	25 · 50
	65/100	Single	220~240	50/60	—	G1	5 · 3	23 · 50	7 · 5	25 · 50
PMD-643	65/100	Three	380·400·415	50/60	—	G1	4 · 3	34 · 46	6 · 5	35 · 48
	65/100	Three	220(380)	50/60	26	—	5 · 3	23 · 50	7 · 5	25 · 50
	65/100	Three	220(380)	50/60	—	G1	5 · 3	23 · 50	7 · 5	25 · 50
PMD-1561	120/160	Single	110(220)	50/60	26	—	5.5 · 4	40 · 60	8 · 6	40 · 63
	120/160	Single	110(220)	50/60	—	G1	5.5 · 4	40 · 60	8 · 6	40 · 63
	120/160	Single	220, 220~240	50/60	26.5	—	5.5 · 4	40 · 60	8 · 6	40 · 63
	120/160	Single	220~240	50/60	—	G1	5.5 · 4	40 · 60	8 · 6	40 · 63
PMD-1563	120/160	Three	380·400·415	50/60	—	G1	5 · 4	42 · 56	7 · 5	50 · 72
	120/160	Three	220(380)	50/60	26	—	5.5 · 4	45 · 64	8 · 6	45 · 70
	120/160	Three	220(380)	50/60	—	G1	5.5 · 4	45 · 64	8 · 6	45 · 70
PMD-2571	250	Single	220, 220~240	50	26.5	—	10 · 8	50 · 75	—	—
	250	Single	220~240	50	—	G1	10 · 8	50 · 75	—	—
	250	Single	110(220)	60	26.5	—	—	—	10 · 8	55 · 80
	250	Single	110(220)	60	—	G1	—	—	10 · 8	55 · 80
	250	Single	220	60	26.5	—	—	—	10 · 8	45 · 70
PMD-2573	250	Three	380·400·415	50	26.5	—	10 · 8	70 · 95	—	—
	250	Three	380·400·415	50	—	G1	10 · 8	70 · 95	—	—
	250	Three	220(380)	50	26.5	—	10 · 8	70 · 95	—	—
	250	Three	220(380)	50	—	G1	10 · 8	70 · 95	—	—
PMD-4033	400	Three	380, 380~415	50	—	G1 1/2	10 · 6	130 · 230	—	—
	400	Three	380	50	—	G1 1/2	10 · 6	120 · 200	—	—
	400	Three	380~415	60	—	G1 1/2	—	—	10 · 6	140 · 240
PMD-7533	750	Three	380, 380~415	50	—	G1 1/2	15 · 12	130 · 210	—	—
	750	Three	380	50	—	G1 1/2	14 · 10	135 · 230	—	—
	750	Three	380~415	60	—	G1 1/2	—	—	15 · 12	155 · 225

TYPE II

Model	Motor				Diameter*	50Hz		60Hz	
	Rated output W(50Hz/60Hz)	Phase Φ	Rated voltage V	Frequency Hz		Total head m	Rated flow rate L/min	Total head m	Rated flow rate L/min
PMD-15013A-E3	1500	Three	380·400·415	50	JIS 10K·Flange 50A×40A	20.5 · 9.5	120 · 355	—	—
PMD-22013A-E3	2200	Three	380·400·415	50	JIS 10K·Flange 50A×40A	25 · 13.5	120 · 360	—	—
PMD-37013A-E3	3700	Three	380·400·415	50	JIS 10K·Flange 50A×40A	19.2 · 14.8	250 · 360	—	—

■ Conditions of liquids : ambient Temp : 0~60℃ ■ Viscosity : below 30mm²/s ■ Specific gravity : below 1.1

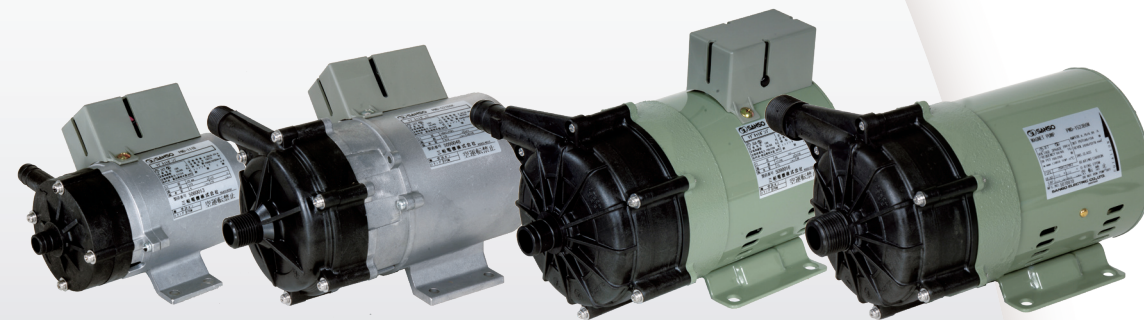
■ (1) Slurry liquids reduce life of pump. (2) Allowable primary side pressure : Less than 100kpa. (3) Indoor use. (4) Shock pressure and abnormal pressure etc will damage the pump part. (5) Voltage can be adjusted to customer's requirement.

※ A phase flange, flange packing, and the mounting bolt doesn't come with the products.

■ Please purchase the optional flange sets (sell separately), or, please find commercially available product (JIS 10K product).

■ Please contact Sanso for any custom spec. power supply needed.

PMD-111
PMD-121
PMD-521
PMD-1521
PMD-1523



PMD-111

PMD-521

PMD-1521

PMD-1523

■ Characteristics

• No shaft seal part, no leakage

Since this type is small-sized but with high head water (high pressure), this pump economically generates sufficient discharge rate even against higher pipe resistance.

■ Caution

• In order to use cold water, apply lagging materials and/or heat-insulating materials as measure againsts dew condensation if necessary.

• [Deteriorated unfrozen-liquid] and [unfrozen liquid of viscosity increase at the low temperature] might damage the pump.

■ Part name and material

(Note 1) Material of water contact part

Part name	Classification
Casing	PPE (with glass)
Impeller	PPE (with glass)
Pump shaft	Alumina ceramics
Thrust block	Alumina ceramics
Pump bearing	Carbon
O-ring	EPDM

■ Specification

PMD - Hot water

Model	Motor				Diameter		50Hz		60Hz	
	Rated output W(50Hz/60Hz)	Phase Φ	Rated voltage V	Frequency Hz	Hose mm	Screw inch	Total head m	Rated flow rate L/min	Total head m	Rated flow rate L/min
PMD-111	10/15	Single	220	50/60	14	—	2.5(MAX)	16(MAX)	3.5(MAX)	19(MAX)
	10	Single	240	50	14	—	2.5(MAX)	16(MAX)	—	—
PMD-121	10/15	Single	220	50/60	14	—	4.2	13	5.5	15
PMD-521	40/50	Single	110, 220	50/60	—	G1/2	8.5	14	11	15
PMD-1521	85/150	Single	110/220, 220	50/60	20	G3/4	14.5	34.5	19.8	38
PMD-1523	100/150	Three	220/380	50/60	20	G3/4	14.5	34.5	19.8	38

■ Ambient Temp : 0~40℃

■ Liquid Temp : 0~90℃

■ Some models can be used at -20℃.

■ Contact us, In case of possible condensation, take measures.

■ Slurry solutions will harm the life of pump. Max viscosity : 30mm²/s

■ Specific gravity : Less than 1.1

■ Allowable primary side pressure : Less than 100kpa.

■ Site : For indoor use

■ Abnormal pressure and shock might damage the pump.

■ Please contact Sanso for any custom spec. power supply needed.