

Magnetic drive pumps

A worldwide best-seller,
our high-quality compact magnetic drive pumps



Main material
GFRPP

Magnetic drive pumps

Magnetic drive seal-less pumps are free from leakage problems and the need for seal replacement.
This feature and their compact nature make them ideal for built-in applications.



A worldwide best-seller, our high-quality compact magnetic drive pumps

Our MD series leak-free compact magnetic pumps are a worldwide best-seller and are used in medical equipment, analyzers, constant-temperature baths and surface treatment equipment for chemical feeding in more than thirty countries worldwide.

Leak free

Magnetic drive seal-less pumps are free from leakage problems and the need for seal replacement. This feature and their compact nature make them ideal for built-in applications.

Large selection

The MD series comprises 50 models. The high-head type(MD-Z), the high flow type(MD-X) and threaded connection type(MD-M) are available as well as a standard type. The MD series offers the largest selection in the world.



MD-6



MD-10

MD-6·10



- Max Discharge capacity **5.5/6.0 - 11/12** l/min
- Max Discharge head **1.0/1.4 - 2.1/2.7** m



MD-15R



MD-20R



MD-30R

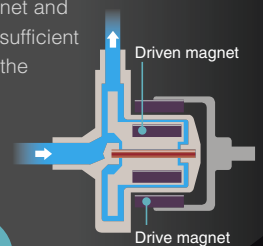
MD-15·20·30·40



- Max Discharge capacity **10/11 - 75/85** l/min
- Max Discharge head **1.8/2.5 - 11.5/13.5** m



The centrifugal pump is driven by a pair of magnets which are incorporated in the impeller and motor shaft. The sealless pump structure eliminates shaft seals such as conventional mechanical seals because the pump chamber is shielded by the casings and the impeller is operated by the magnets. The combined coupling torque of the drive magnet and impeller magnet gives sufficient driving power against the motor torque.



Operating Principle

High corrosion-resistance

GFRPP (Glass fiber reinforced polypropylene) wet ends of the MD series handle a wide range of chemicals.

Easy maintenance

The pump unit is comprised of a small number of integrated parts, so maintenance is greatly simplified.



MD-40R



MD-55R



MD-70R



MD-100R

MD-55·70·100

GFRPP
50/60Hz

- Max Discharge capacity **40/43 - 135/135** l/min
- Max Discharge head **5.6/8.2 - 14.3/20.3** m

Wide variation

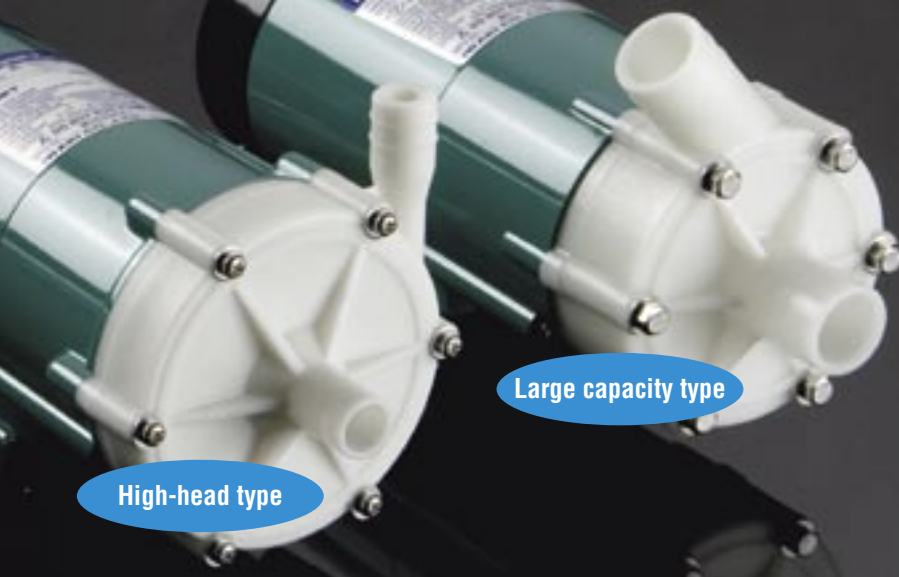
Easy maintenance

The MD series has GFRPP wet ends. Hose connections, threaded connections and flange connections (only 70·100 size) are available. A large selection of models offer a wide flow range of 8.0-135L/min.

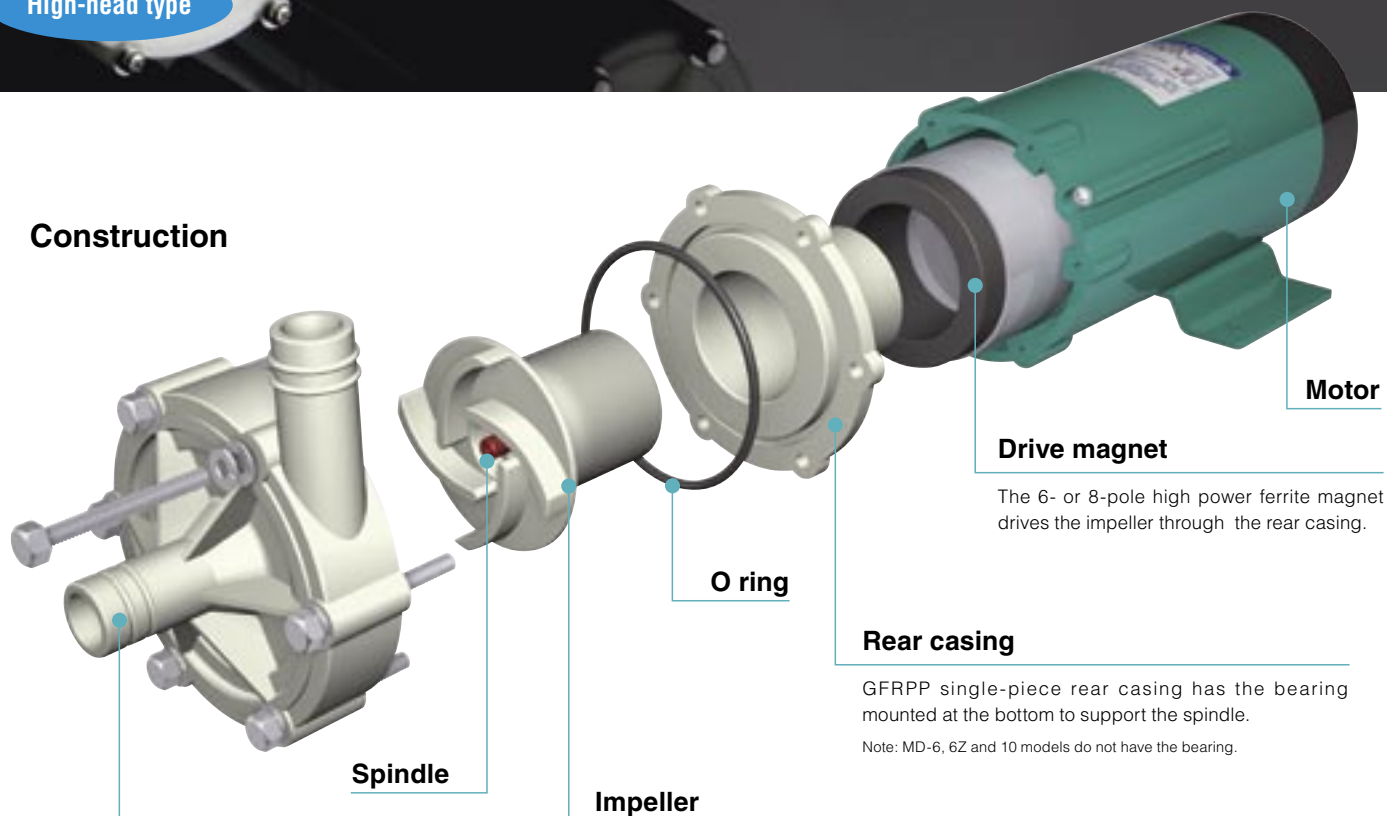


Outline of the series

Main Material	Models	Max. discharge capacity (l/min)								Max. discharge head (m)				Limit of specific gravity
		20	40	60	80	100	120	140		5	10	15	20	
GFRPP	MD-6	50Hz	8.0							1.0				1.2
	Standard type	60Hz	9.0							1.4				
	MD-6Z	50Hz	5.5							2.1				1.1
	High head type	60Hz	6.0							2.7				
	MD-10	50Hz	11							1.5				1.1
	Standard type	60Hz	12							2.1				
	MD-15R	50Hz	16							2.4				1.3
	Standard type	60Hz	19							3.4				
	MD-20R	50Hz	27							3.1				1.1
	Standard type	60Hz	31							4.3				
	MD-20RX	50Hz	46							1.8				1.3
	Large capacity type	60Hz	52							2.5				
	MD-20RZ	50Hz	10							4.6				1.1
	High head type	60Hz	11							6.9				
	MD-30R	50Hz	32							3.8				1.3
	Standard type	60Hz	38							5.4				
	MD-30RX	50Hz	62							2.9				1.1
	Large capacity type	60Hz	72							4.1				
	MD-30RZ	50Hz	15							8.0				1.0
	High head type	60Hz	17							11				
	MD-40R	50Hz	45							4.6				1.1
	Standard type	60Hz	52							6.5				
	MD-40RX	50Hz	75							3.3				1.1
	Large capacity type	60Hz	85							4.7				
	MD-40RZ	50Hz	22							10				1.0
	High head type	60Hz	22							13.5				
	MD-40RZ-5	50Hz only	11							11.5				1.0
	MD-55R	50Hz	60							5.6				1.2
	Standard type	60Hz	70							8.2				
	MD-55R-5	50Hz only	70							8.2				1.2
	MD-70R	50Hz	86							6.7				1.0
	Standard type	60Hz	97							9.7				
	MD-70RZ	50Hz	40							14.3				1.0
	High head type	60Hz	43							20.3				
	MD-100R	50Hz	120							8.6				1.2
	Standard type	60Hz	135							11.9				
	MD-100R-5	50Hz only	135							11.7				1.1



Construction



Front casing

Hose or threaded connections can be selected according to application. Also flanges or union joints can be installed on threaded connection models.

Note: MD-6, 6Z and 10 models do not have thread connection type.



Hose connection type



Thread connection type



Standard type R



High-head type RZ

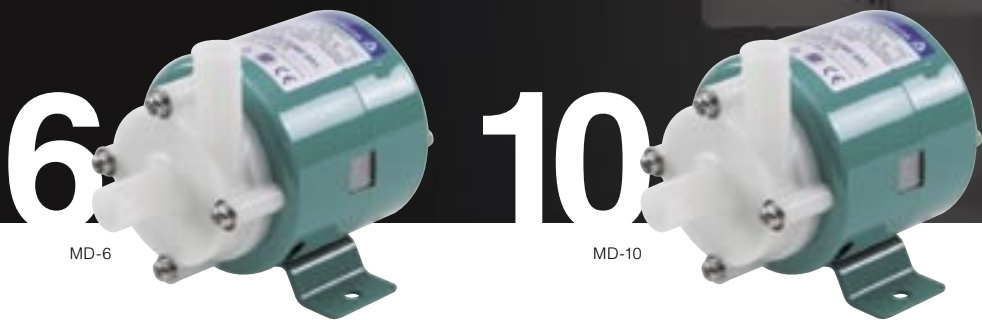


Large-capacity type RX

MD-6.10

GRRPP
50/60 Hz

- Range of Max. discharge capacity: **5.5/6.0 - 11/12** L/min
- Range of Max. discharge head: **1.0/1.4 - 2.1/2.7** m



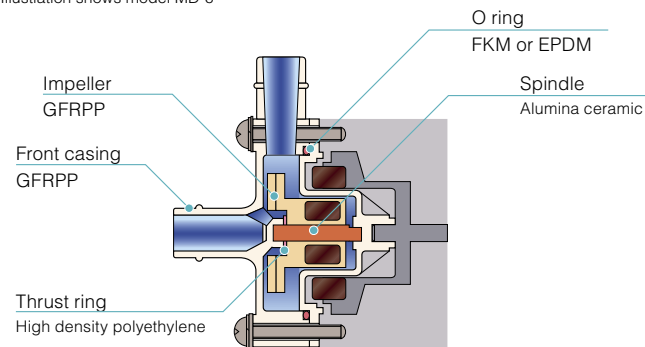
Specifications (50/60Hz)

Model	Hose connection		Max. Capacity L/min	Max.Head m	S.G.	Output W	Input W	Phase	Mass kg
	Inlet (mm)	Outlet (mm)							
MD-6	14	14	8.0 / 9.0	1.0 / 1.4	1.2	5 / 5	12 / 12	100V Single phase	0.9
MD-6Z			5.5 / 6.0	2.1 / 2.7	1.1		13 / 16		
MD-10			11 / 12	1.5 / 2.1	1.1		13 / 15		

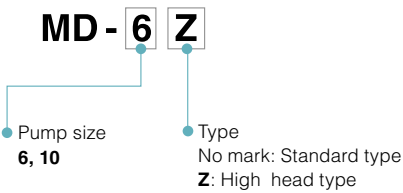
• Temperature range: 0 - 80°C (Contact us for applications below zero.) • Limit of viscosity: 30 mPa·s (at 1 S.G.) • Ambient temperature: 0 - 40°C
• Motor type: Capacitor-run induction motor • MD-6, 6Z and 10 do not have thread connection type.

Construction and materials

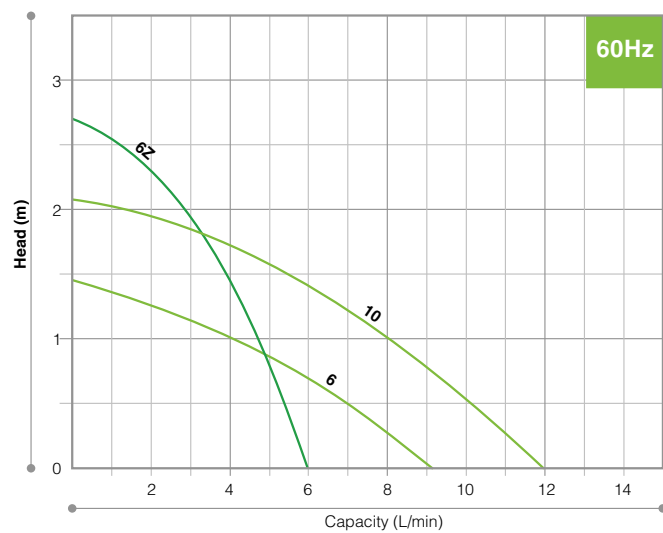
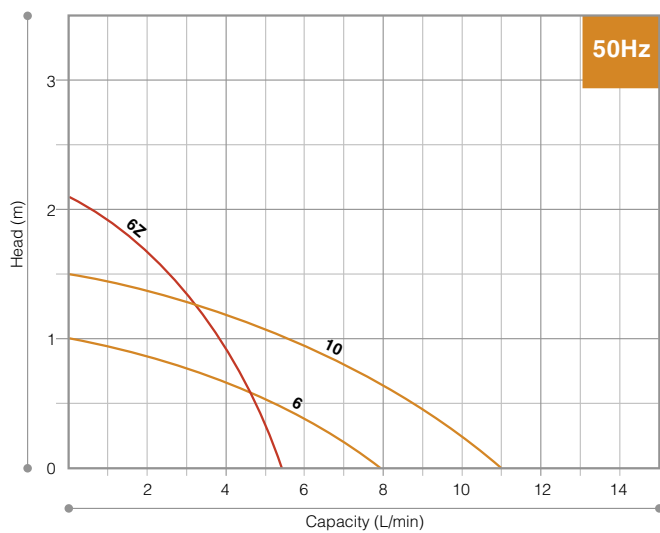
Illustration shows model MD-6



Pump identification

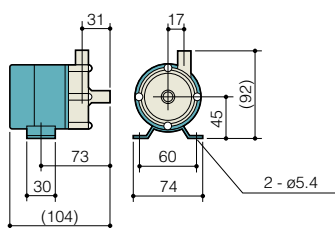


Performance curves

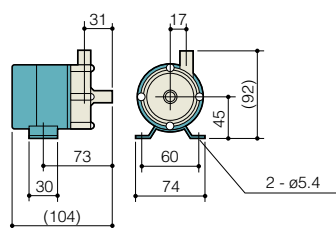


Dimensions (mm)

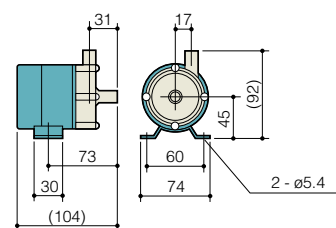
MD-6



MD-6Z



MD-10



MD-15·20·30·40

GRRPP
50/60 Hz

- Range of Max. discharge capacity: **10/11 - 75/85 L/min**
- Range of Max. discharge head: **1.8/2.5 - 11.5/13.5 m**

15

MD-15R



20

MD-20R



Specifications (50/60Hz)

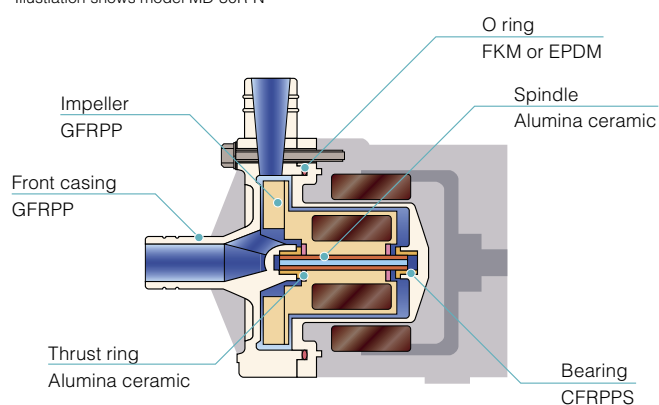
Model	Hose connection		Screwed connection		Max. Capacity (L/min)	Max.Head (m)	S.G.	Output (W)	Input (W)	(Note2) Power source	Mass (kg)
	R · RZ · RX		R-M · RZ-M · RX-M								
	Inlet (mm)	Outlet (mm)	Inlet/Outlet	Union (mm) (Note1)							
MD-15R	14	14	G3/4	13	16 / 19	2.4 / 3.4	1.3	10 / 10	26 / 31	100V/200V Single phase 220V - 240V Single phase	1.6
MD-20R	18	17	G3/4	16	27 / 31	3.1 / 4.3	1.1	20 / 20	40 / 50		2.0
MD-20RX	26	26	G1	20	46 / 52	1.8 / 2.5	1.3				
MD-20RZ	17.5	17	G3/4	13	10 / 11	4.9 / 6.9	1.1				
MD-30R	20	20	G3/4	16	32 / 38	3.8 / 5.4	1.3	45 / 45	60 / 80	100V/200V Single phase 220V - 240V Single phase	3.5
MD-30RX	26	26	G1	20	62 / 72	2.9 / 4.1	1.1		70 / 90		
MD-30RZ	17.5	17	G3/4	13	15 / 17	8.0 / 11	1.0				
MD-40R	20	20	G3/4	16	45 / 52	4.6 / 6.5	1.1	65 / 65	90 / 130	100V/200V Single phase 220V - 240V Single phase	3.9
MD-40RX	26	26	G1	20	75 / 85	3.3 / 4.7			85 / 120		
MD-40RZ	20	20	G3/4	16	22 / 22	10 / 13.5	1.0	65 / 65	140 / 200		
MD-40RZ-5					11 / –	11.5 / –			140 / –		

- Temperature range: 0 - 80°C (Contact us for applications below zero.) • Limit of viscosity: 30 mPa·s (at 1 S.G.) • Ambient temperature: 0 - 40°C
- Motor type: Capacitor-run induction motor

Note 1: The union field shows the nominal diameter of the applicable VP vinyl chloride hose. Heat resistance of the standard union is 0 - 55°C and that of the heat resistant union is 0 - 80°C.
Note 2: Single phase of 200V model is special order. Please contact us for details.

Construction and materials

Illustration shows model MD-30R-N



MD - 30 RZ - 5 M - 200 E N

- Pump size
15, 20, 30, 40
- Type
R: Standard type
RZ: High head type
RX: High capacity type
- Frequency
No mark: common 50/60Hz
- 5: 50Hz only (for 40RZ)
- Material of O ring
No mark: FKM (Standard)
E: EPDM (Special order)
- Motor
No mark: 100V single phase
200: 200V single phase
220: 220V - 240V single phase
- Connection
No mark: Hose type
M: G thread connection

30

MD-30R

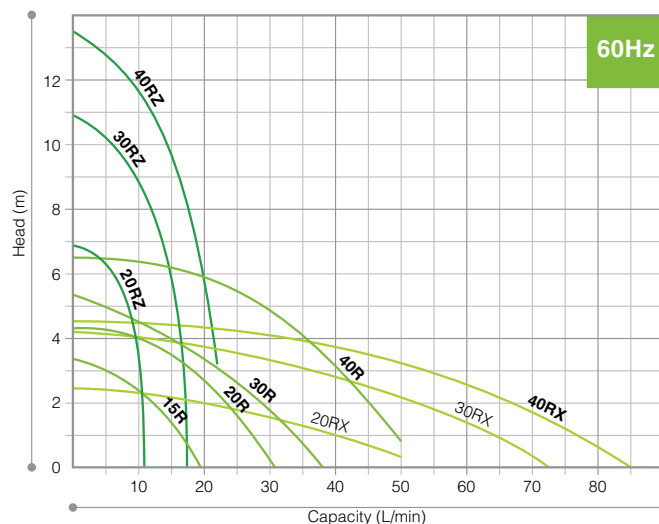
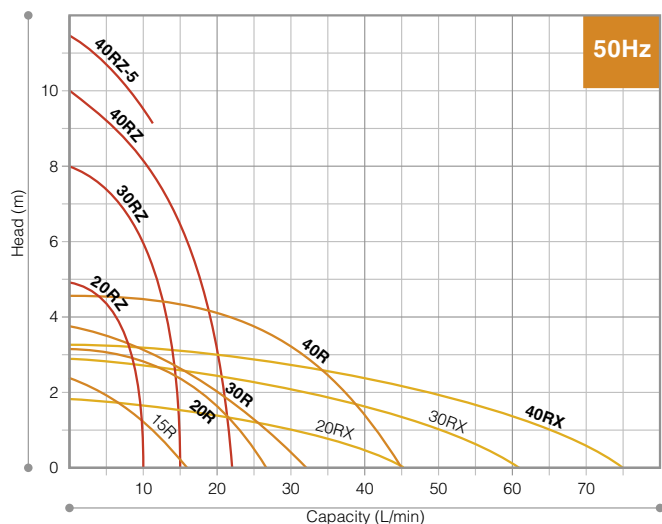


40

MD-40R



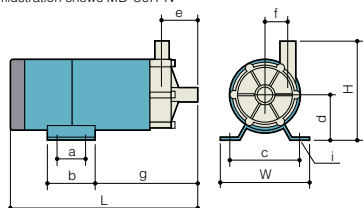
Performance curves



Dimensions (mm)

MD-15R·20R·30R·40R

Illustration shows MD-30R-N

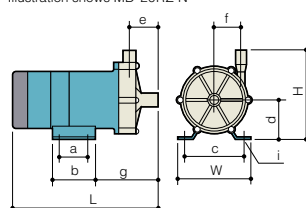


Model	W	H	L	a	b	c	d	e	f	g	i
MD-15R	95	109 (114)	180 (179)	—	50	68	55	39	22	92	2 - ø5.6
MD-20R	106	105 (107)	209 (203)	44	60	90	45	39 (33)	29	94 (88)	4 - 6×10
MD-30R	120	130	248	40	64	100	60	48	31	137	4 - ø9
MD-40R			250								

Note1: Dimension of the () inside are thread connection type.

MD-20RZ·30RZ·40RZ

Illustration shows MD-20RZ-N



Model	W	H	L	a	b	c	d	e	f	g	i
MD-20RZ	106	125	211	44	60	90	55	40	39	98	4 - 6×10
MD-30RZ		130	230							120	
MD-40RZ	120	150	241	40	64	100	60	39	45	128	4 - ø9
MD-40RZ-5											
MD-20RX	106	119 (122)	220	44	60	90	45	47	—	105	4 - 6×10
MD-30RX		137 (140)	254								
MD-40RX	120	137 (141)	256	40	64	100	60	50	—	143	4 - ø9

Note1: Dimension of the () inside are thread connection type.

Note2: RZ type (Hose connection) and RZM type (Thread connection type) are the same dimensions.

MD-55·70·100

GRRPP
50/60 Hz

- Range of Max. discharge capacity: **40/43 - 135/135 L/min**
- Range of Max. discharge head: **5.6/8.2 - 14.3/20.3 m**

55

MD-55R



7

Specifications (50/60Hz)

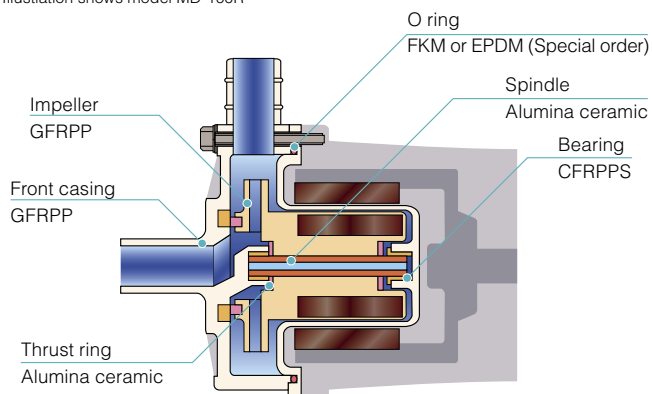
Model	Hose connection R · RZ		Screwed connection R-M · RZ-M		Diameter of flange	Max. Capacity (L/min)	Max. Head (m)	S.G.	Output (W)	Input (W)	Power source ^(Note2)		Mass (kg)
	Inlet (mm)	Outlet (mm)	Inlet/Outlet	Union (mm) ^(Note1)							Single phase	Three phase	
MD-55R	26	26	G1	20	—	60 / 70	5.6 / 8.2	1.2	90 / 90	130 / 170	100V/200V/ 220V - 240V	—	5.4
MD-55R-5					—	70 / —	8.2 / —		90 / —	170 / —			
MD-70R	26	26	G1	20	20A	86 / 97	6.7 / 9.7	1.0	150 / 180	235 / 365		220V/380V/ 400V/440V	6.0
MD-70RZ	20	20	G3/4	16	—	40 / 43	14.3 / 20.3		180 / 216	275 / 395			
MD-100R	26	26	G1	20	25A	120 / 135	8.6 / 11.9	1.2	260 / 265	245 / 365			8.5
MD-100R-5						135 / —	11.7 / —	1.1	260 / —	365 / —			

- Temperature range: 0 - 80°C (Contact us for applications below zero.) • Limit of viscosity: 30 mPa·s (at 1 S.G.) • Ambient temperature: 0 - 40°C
- Motor type: Capacitor-run induction motor

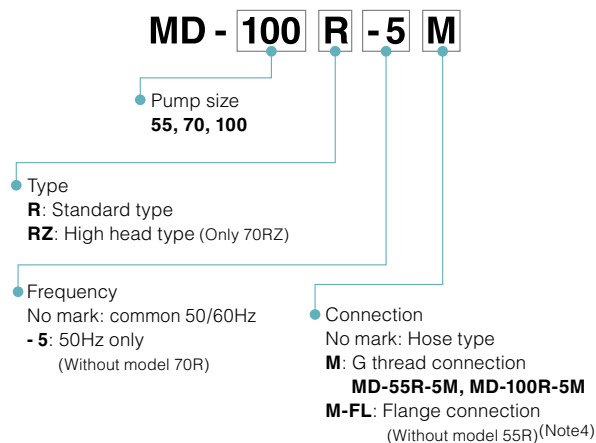
Note 1: The union field shows the nominal diameter of the applicable VP vinyl chloride hose. Heat resistance of the standard union is 0 - 55°C and that of the heat resistant union is 0 - 80°C.
Note 2: Single phase of 200V model is special order. Please contact us for details.

Construction and materials

Illustration shows model MD-100R



Pump identification



Note3: Specify the pump model and power specification at an inquiry phase.

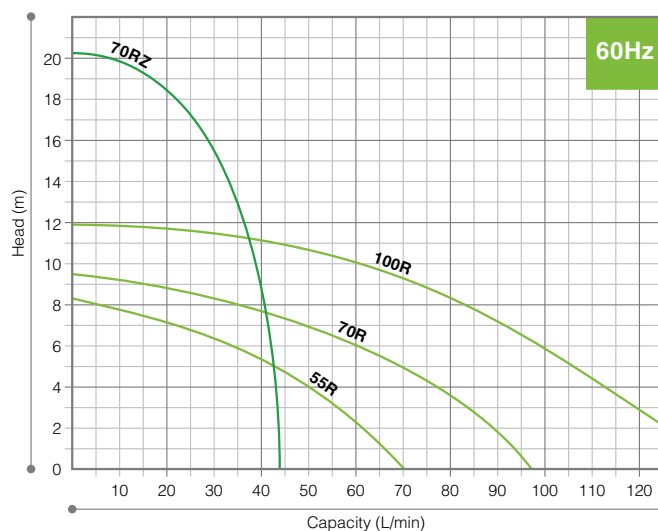
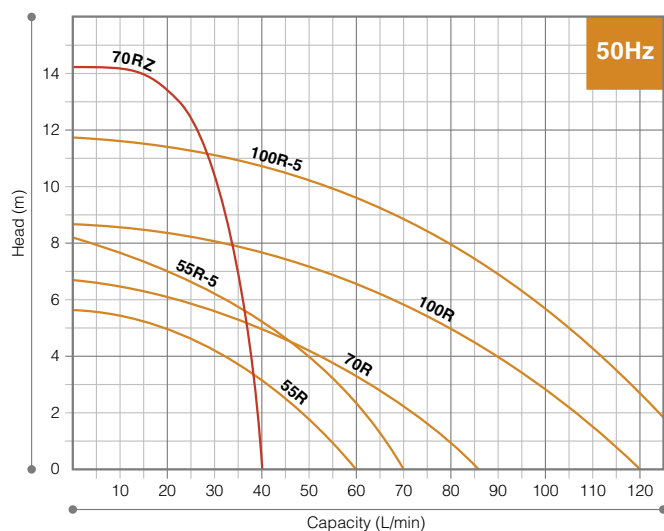
Note4: For the MD-100 of 50Hz flange connection type, the model code is different from others. **MD-100RM-5-FL**

0 100

MD-70R

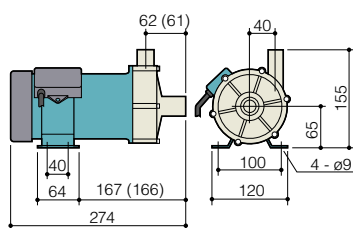
MD-100R

Performance curves

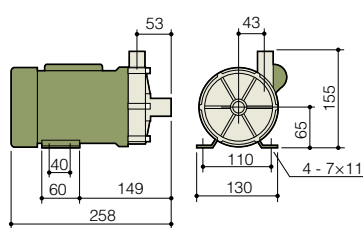


Dimensions (mm)

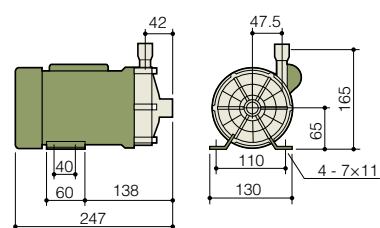
MD-55R-55R-5
Illustration shows MD-55R



MD-70R

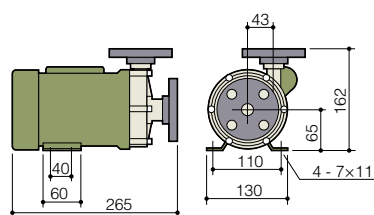


MD-70RZ

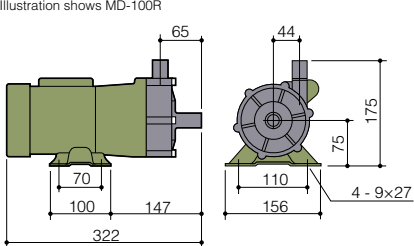


(): Thread connection type

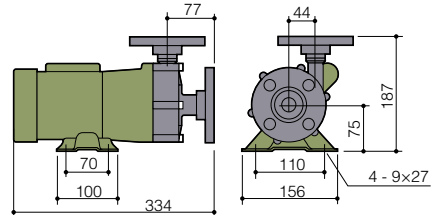
MD-70RM-FL



MD-100R-100R-5
Illustration shows MD-100R



MD-100RM-FL-100RM-5-FL



Special accessories

• Union joint

Special-purpose union joints are available to cope with three types (13mm, 16mm and 20mm dia.) of piping. Tight sealing O-rings are used to prevent thread damage caused by over tightening.



• Self-priming chamber

Once fill up liquid, repriming is not required. It is very easy to use MD pump with self-priming chamber.



Specifications

Model	13A	H13A	16A	H16A	20A	H20A
Material	PVC	HT-PVC	PVC	HT-PVC	PVC	HT-PVC
Range of temp.	0 - 55°C	0 - 80°C	0 - 55°C	0 - 80°C	0 - 55°C	0 - 80°C
Material of O ring	FKM or EPDM					

Specifications

Model	SC-4V	SC-4E	SC-7V	SC-7E
Material of O ring	FKM	EPDM	FKM	EPDM
Connection	G3/4		G1	
Suction limit	0.8 m		1.2 m	
Range of tank	0.8 L		1.3 L	
Applicable pump	MD-30RM-N, MD-40RM-N		MD-70RM	

Note: Self-priming height depends on liquid temperature and characteristics.

Compact & Lightweight

The canned motor pump offers a solution for built-in application

Direct drive pumps **RD** series

- Lightweight & sealless structure
- Plastic canned motor pump
- DC 24 V brushless motor
- Employ built-in type driver for the motor
- The variable flow and pressure control by DC 1 to 5 V signal
- Corresponds to high temperature range Max. 80°C
- The connection of three types can be chosen, thread, hose and quick fastener.



Specification

RD-05, RD-05H, RD-20, RD-30

Model	Connection (IN x OUT) mm	Max. capacity L/min	Max. head m	Motor					Weight kg
				Output W	Power consumption W	Revolution speed min ⁻¹	Power voltage VDC	Rated	
RD-05	14 × 8	4	3	4	10	3500	24	continuous	0.4
RD-05H		6	9	18	39	6000		Intermittent	0.45
RD-20	18 × 18	15	8	28	60	3200		continuous	1.3
RD-30		20	10	45	77	3500		continuous	

RD-12, RD-12Z (Power source 24 VDC Input signal 5.0 VDC)

Model	Connection (IN x OUT)			Max. capacity L/min	Max. head m	Power consumption W	Rated voltage VDC	Operating condition	Ambient temperature °C	Liquid temperature range °C	Mass kg
	Quick fastener	Thread	Hose mm								
RD-12	P16 × P14	NPT3/8 × NPT3/8	18 × 18	10	6	24	24	continuous	0 - 50	0 - 75	0.4
RD-12Z	P16 × P10	NPT3/8 × NPT1/4	18 × 10	3	9	28.8	24	continuous	0 - 50	0 - 60	

Please contact us for details.

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Thailand : IWAKI (Thailand) Co., Ltd.	TEL: (84)613 933456	FAX: 613 933399
Vietnam : IWAKI Pumps Vietnam Joint Venture Co., Ltd.		

() Country codes



Caution for safety use: Before use of pump, read instruction manual carefully to use the product correctly.

Actual pumps may differ from the photos. Specifications and dimensions are subject to change without prior notice. For further details please contact us.