



INNOVATIVE PUMP
AND FILTER TECHNOLOGY



RENNER

The Original.
Made in Germany.

Magnetic centrifugal pumps

Or where sealing and performance
go hand in hand

Our product range ...



Vertical centrifugal pumps

RENNER vertical centrifugal pumps are designed for vertical deployment in non-pressurized tanks, open basins or pits. They offer the same performance scope as magnetic centrifugal pumps, but provide additional possibilities through vertically submerged installation in containers or tanks. This design is used mainly in wet processes in industrial applications.

Individual adaptations are possible without additional cost thanks to our modular system. We also offer a wide range of sealing systems for critical applications, some of which are patented.



Filter units and equipment

RENNER filter units are designed and built for use in chemical baths and processes. They have proven their suitability for circulation and cleaning of pure, slightly contaminated or abrasive media, aqueous solutions, suspensions or liquid mixtures.

Our modular filter range offers a large selection of fully interchangeable filter units and complete filter systems for removal of impurities through deep and surface filtration.

All RENNER universal filter housings are designed to accommodate:

- wound cartridges
- activated carbon
- filter bags
- filter plates



Electronic process protection

Pump outages in most cases are not caused by technical failure but by unforeseen critical operating conditions such as dry or hot running or cavitation. Unfortunately, in many applications these conditions cannot always be avoided. This makes reliable, automated process monitoring all the more important.

The electronic process protection guards pumps and equipment against overload, clogged filters, dry run and dead head conditions. In critical situations, pumps are switched off before damage can occur. The module also monitors target flow rate thereby, preventing lengthy and costly failures.



... at a glance



Magnetic centrifugal pumps

Our magnetically coupled centrifugal pumps are hermetically sealed and absolutely leak-free thanks to their non-contact torque transmission. The pumps made of plastic or stainless steel are placed outside the medium or tank and are integrated into the installation system by means of corresponding piping.

We offer one- to three-stage magnetic centrifugal pumps for high pressures in metal-free environments.

NEW: Our fully submersible pump can be installed immersed in chemicals thanks to the complete plastic jacketing of the motor and pump housing.



The right magnetic centrifugal pump for your application

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Our innovative technology makes the difference

Our tireless quest to perfect our pumping solutions has resulted in an unrivaled technical standard in this application field and a great benefit to our customers.

RENNER magnetic centrifugal pumps are characterized by their robust, ergonomic design and construction. The components that are in contact with the medium are resistant to corrosion and chemicals due to the use of different materials. Other design advantages include sealless and non-contact torque transmission from the electric motor to the pump impeller. The otherwise required shaft feed-through, which requires mechanical seals, can therefore be omitted and is replaced by permanent magnets. This eliminates the possibility of leaks due to worn seals.

RENNER magnetic centrifugal pumps are sealless and are characterized by high safety standards and low maintenance.

Their specific design makes the pumps ideal for conveying clean, slightly contaminated or abrasive liquids, suspensions or liquid mixtures. The pumps are made of plastic or stainless steel. They are placed outside the medium or tank and are integrated into the system via appropriate piping system.

The most important conveying media

Acid and alkaline solutions, mixtures, solvents, alkaline degreasing baths, electrolytic baths, photo chemicals, radioactive, sterile or especially valuable fluids and many other low-viscosity media.

The advantages of RENNER technology are valued particularly in applications with high quality requirements.

RENNER magnetic centrifugal pumps are suitable for a wide range of applications:

- Mechanical and plant engineering
- Chemical and pharmaceutical industry
- Environmental and process engineering
- Water and wastewater treatment
- Textile and food industries
- Photographic and electroplating industries
- Equipment for etching and cleaning installations, refrigeration and solar systems

Reliable partner for plant construction

At RENNER, pumps and filters are designed and built in collaboration with customers to satisfy specific requirements of plant engineering applications.

Key data of the RM 1 to RM 5 series

Flow rate	up to 102 m ³ /h
Delivery head	up to 65 mH ₂ O
Motor power	5 W to 22 kW
Materials	PP, PVDF, PPS, ECTFE, stainless steel, ceramic
Seals	FKM, EPDM, Kalrez, FEP-covered, FFKM
Operating temperature	up to 100 °C
Density	up to 2.0 kg/dm ³

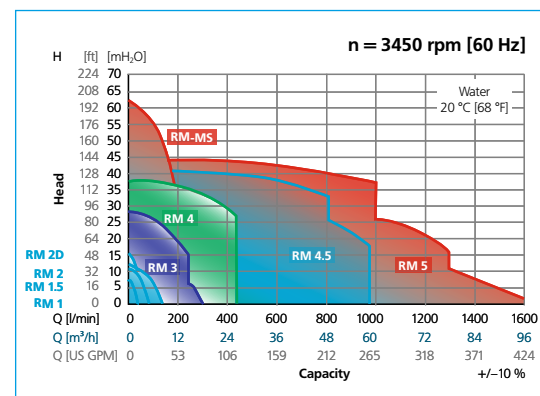
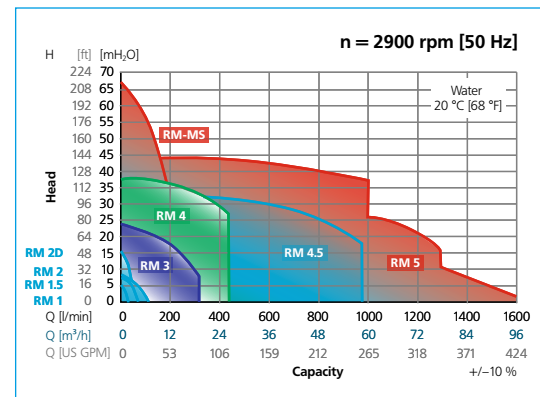
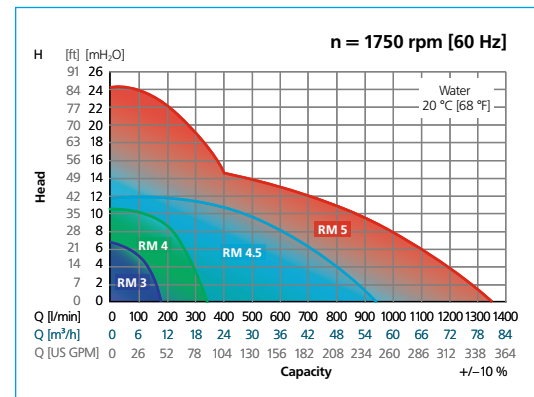
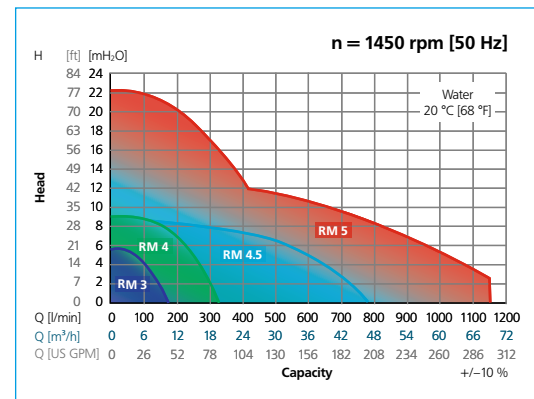
Materials and temperature ranges

We offer the required material combination for every medium dependent on temperature.

	°C	°F
PPS, PEEK, ECTFE, ceramic, stainless steel, titanium	100	212
PVDF	95	203
PP	80	176

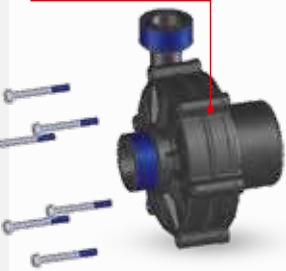


Viscosity

Media up to approx. 160 mPas (160 cP)



RENNER pump and drive technology

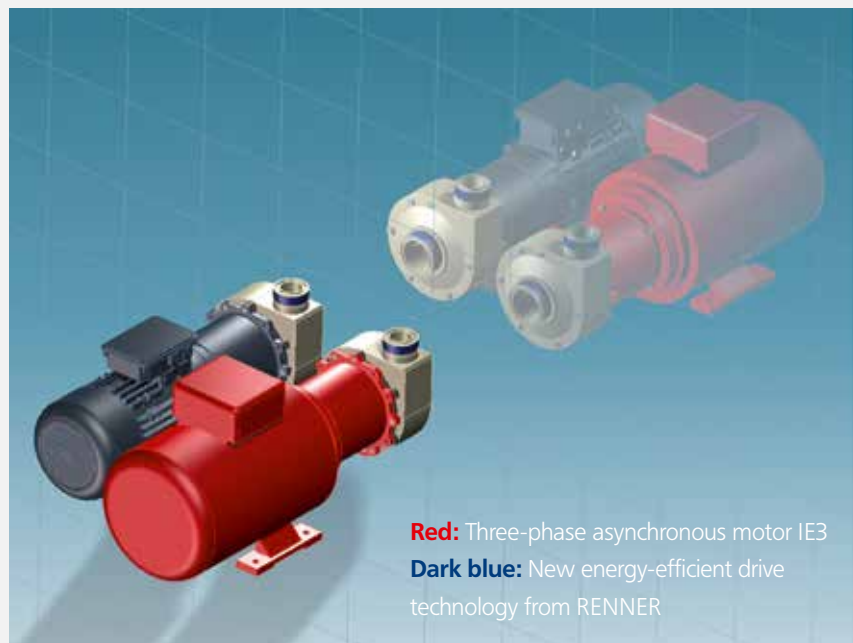
A comprehensive modular system – the right solution for every process

<p>Magnetic pump The pump chamber is hermetically sealed from the drive unit by means of a containment shell.</p>  <p>Pump</p>	<p>Drive magnet The rotating drive magnet outside the containment shell transfers the torque contact free to the internal magnet and thus to the impeller.</p>  <p>Lantern The lantern forms the housing for the magnetic coupling and connects the electric motor and pump.</p> <p>Magnetic coupling</p>	<p>Variable frequency drive Variable frequency drives can be optionally mounted directly on the electric motors.</p>  <p>Motor Electric motors in a wide range of designs are used to drive RENNER pumps.</p> <p>Variable frequency drive Motor</p>
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Compact sizes available/Less installation space

The combination of energy-saving drive technology with efficiency-optimized pump technology makes it possible to realize enormous space, weight and cost savings. This is particularly noticeable for so-called “small centrifugal pumps” in the power range < 7.5 kW.

The speed control now integrated in the new synchronous pump provides further savings, especially in partial-load operation.



Space savings thanks to new drive technology

RENNER pump and drive technology

Technical variations of magnetically coupled pumps from RENNER

Magnetically coupled centrifugal pumps RM	Magnetically coupled centrifugal pumps RM-MF (variable-speed)
<p>Centrifugal pumps use centrifugal force to convey liquids, which is thus the origin of their name. The medium to be transported enters the centrifugal pump via the suction pipe, is picked up by the rotating impeller and is carried outwards on a spiral path. The imparted radial speed of the liquid (which decreases as the liquid moves outwards, while the azimuthal speed increases) leads to an increasing pressure in the pump towards the outside, and this results in the liquid being conveyed into the pressure pipe.</p> <ul style="list-style-type: none"> + Hermetically sealed + Also in multi-stage design RM-MS + Plastic version without metallic parts in contact with the conveyed medium + No dynamic shaft seal + Wear-free, low-maintenance slide bearings + Simple assembly + Space-saving compact design 	<p>Centrifugal pumps with integrated speed control optionally combinable with innovative MF or PM synchronous motor technology or also conventional asynchronous motors with different efficiency classes. Continuous variable speed control allows permanent adaptation of the pump output to the installation requirements by changing pump characteristics.</p> <ul style="list-style-type: none"> + Energy-efficient thanks to high overall efficiency + Hermetically sealed + Also in multi-stage design RM-MS + Plastic version without metallic parts in contact with the conveyed medium + Wear-free, low-maintenance slide bearings + Simple assembly + Demand-based fluid control + Space-saving drive + Space-saving compact design + Reduced installation effort + No long and costly shielded cables + Gentle medium transport + No power loss in the control cabinet + No separate EMC filter required + Integrated motor protection function + No heating of the medium due to energy dissipation
Magnetically coupled side channel pumps RMS	Canned motor pumps RSPM
<p>Side channel pumps initiate medium delivery by automatic evacuation of the suction line in the priming process. Here, the gas contained in the suction line is extracted and the medium rises up to the pump.</p> <ul style="list-style-type: none"> + Self-priming + Gas-conveying + Hermetically sealed + No dynamic shaft seal + High pressures with low flow rate + Space-saving compact design + Mounted variable frequency drive (VFD) option 	<p>Canned motor pumps are also magnetically coupled centrifugal pumps, where by the magnetic coupling is omitted with this special pump technology, resulting in a significantly more compact pump design. Torque transmission to the impeller with the internal magnet is performed directly by the stator magnetic field of the synchronous motor.</p> <ul style="list-style-type: none"> + Extremely compact, space-saving design + Hermetically sealed + Maintenance-free (no ball bearings with limited service life in the motor!) + Energy-efficient thanks to high overall efficiency + Demand-based fluid control + High system pressures (up to 20 bar) possible + Increased safety through double jacket

Practical installations/processes

In practice, there are often installations where the consumption behavior is characterized by variable throttling or mixing operations. The task of the **continuously variable pump speed control** is to cover the system requirements with the lowest possible speed (= power).

Advantages

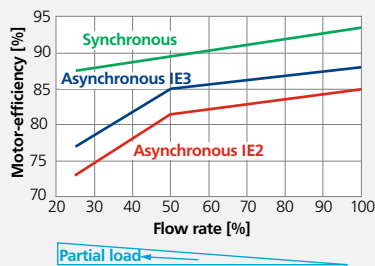
- Avoidance of excess pressure
- Soft pump starts at the variable speed drive
- Protection (wear reduction) of mechanical components
- Reduction of hydraulic feedback
- Power savings
- Low network load due to reduced starting current
- Reduction in lifecycle cost



Drive concepts

	Asynchronous IE2	Asynchronous IE2 + VFD	Asynchronous IE3	Asynchronous IE3 + VFD	Synchronous IE4 PM + VFD	MF – 120 Hz + VFD
EuP directive	Since January 2017 only < 0.75 kW	Since January 2017 ≥ 0.75 kW	Since January 2015 ≥ 7.5 kW Naturally also available for smaller power ratings	No binding EuP directive, technically possible and available for all power ratings ≥ 0.75 kW	No binding EuP directive, technically possible and available for all power ratings ≥ 0.75 kW	No binding EuP directive, technically possible and available for all power ratings between 0.55 kW and 7.5 kW
Mains voltage and frequency	Can be operated directly from mains supply. Voltage and frequency must be taken into account correspondingly!	Mains infeed takes place via variable frequency drive (VFD). Advantage: Since the variable frequency drives are normally capable of multi-range voltages and multi-range frequencies, this solution eliminates the need for voltage/frequency variations of pumps!	Can be operated directly from mains supply. Voltage and frequency must be taken into account correspondingly!	Mains infeed takes place via variable frequency drive (VFD). Advantage: Since the variable frequency drives are normally capable of multi-range voltages and multi-range frequencies, this solution eliminates the need for voltage/frequency variations of pumps!	Mains infeed takes place via variable frequency drive (VFD). Advantage: Since the variable frequency drives are normally capable of multi-range voltages and multi-range frequencies, this solution eliminates the need for voltage/frequency variations of pumps!	Mains infeed takes place via variable frequency drive (VFD). Advantage: Since the variable frequency drives are normally capable of multi-range voltages and multi-range frequencies, this solution eliminates the need for voltage/frequency variations of pumps!

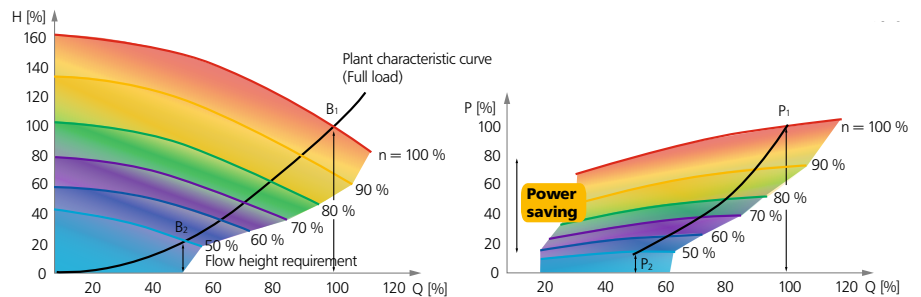
Motor-efficiency and behavior in partial load operation



If a motor is running in the partial load range, it consumes more current than necessary. This additional current is converted into heat, vibration and noise – unnecessary costs are the result. PM synchronous motors do not just have an intrinsically higher efficiency than three-phase asynchronous motors at the nominal point, but also have very good efficiency values in the partial load range, a fact that is decisive for absolute energy savings in pump systems.

What you should know about variable speed drives and variable frequency drives

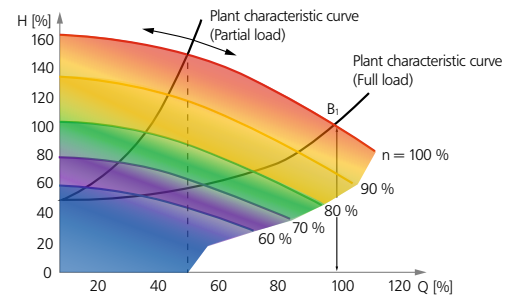
Flow rate modification by speed control



Principles of continuously variable speed control for centrifugal pumps

Continuously variable speed control allows permanent modification of the pump output to the installation requirements by changing the pump characteristics.

In the case of a linear increasing flow rate, the installation resistance increases quadratically. A centrifugal pump behaves in a similar way. With a linear increase in flow rate and a linear increase in speed, the resulting delivery head also increases quadratically.



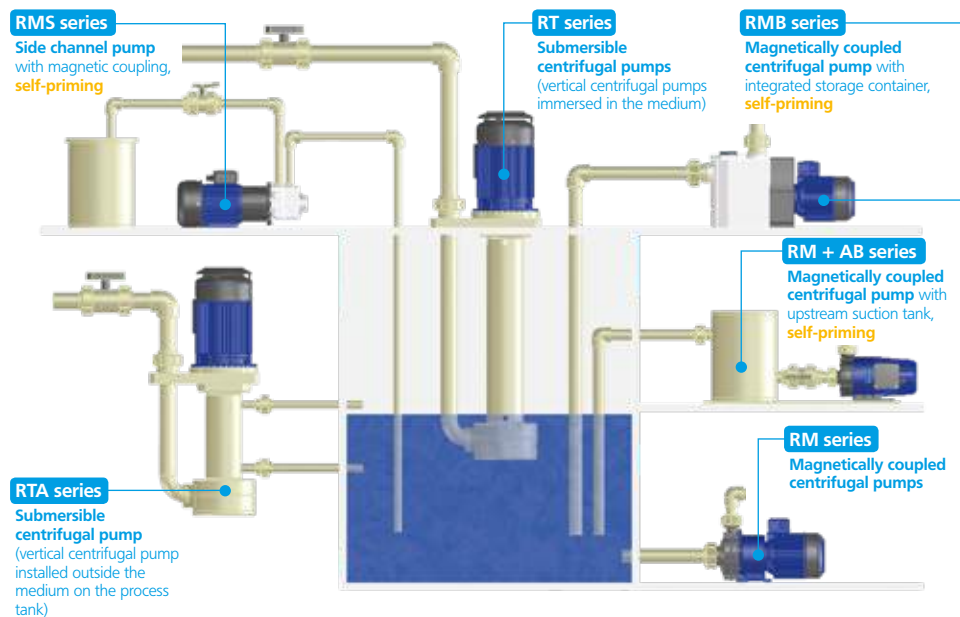
This principle means that a large working range can be covered with relatively small changes in speed.

The most important selection criteria at a glance

Series	RM	RMS	RMB	RM-MF	RM-MS	RM-TS	RM-KM
Type	Normal-priming Note: Self-priming with upstream suction tank RM-AB	Self-priming		Multi-frequency (special motor technology)	Multi-stage	Safe to run dry	Completely encapsulated in plastic
No. of stages	1	1		1	1...3	1	1
Series RM 1	○	-	-	-	-	-	-
Series RM 1.5	○	-	-	-	-	-	-
Series RM 2	○	-	-	-	-	○	-
Series RMS 2.1	-	●	-	-	-	-	-
Series RM 3	○	-	-	○	-	○	On request
Series RMB 3.1	-	-	●	-	-	-	-
Series RM 4	○	-	-	○	○	○	○
Series RM 4.5	○	-	-	○	-	-	On request
Series RM 5	○	-	-	○	-	-	-
Delivery head up to [mH₂O]	47	55	17	42	67	28	24
Volume flow up to [l/min]	1700	22	250	900	300	400	350
Motor power up to [kW]	22.0	0.75	0.75	11.0	4.0	4.0	1.5
Integrated variable speed drive available	○ (RM 2–RM 5)	○	○	○	○	○	○

Installation examples

You will find the right pump for every medium and every customer-specific installation design in the comprehensive RENNER product range.



Special versions of the RM series

RM-MF



Energy efficiency though variable speed drives.

The innovative drive concept of the RM-MF series combines compact design with energy-efficient fluid delivery.

RM-MS



High pressures for low flow rates thanks to multi-stage centrifugal pumps.

Multi-stage magnetically coupled centrifugal pumps made of plastic for conveying aggressive media with high pressure.

RM-TS



The world's first magnetically coupled centrifugal pumps without slide bearings that are absolutely safe to run dry.

Unrestricted dry running capability thanks to minimized friction, no heat buildup and need for liquid lubrication.

RM-KM



Comprehensive corrosion protection.

Magnetically coupled centrifugal pumps completely encapsulated in plastic.

RSPM



NEW

Energy efficiency thanks to optimized hydraulics coupled with highly-efficient motor technology.

The new pump generation: RSPM 40 canned motor pump in the power range 3.0–4.0 kW in a fully plastic design.

RM (classic)



Technology proven for over 35 years.

Magnetically coupled centrifugal pumps in "classic" design with slide bearings and three-phase asynchronous motors of efficiency class IE2, IE3 or IE4.

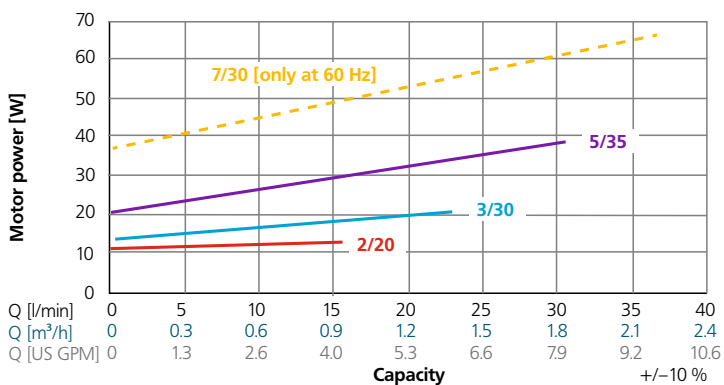
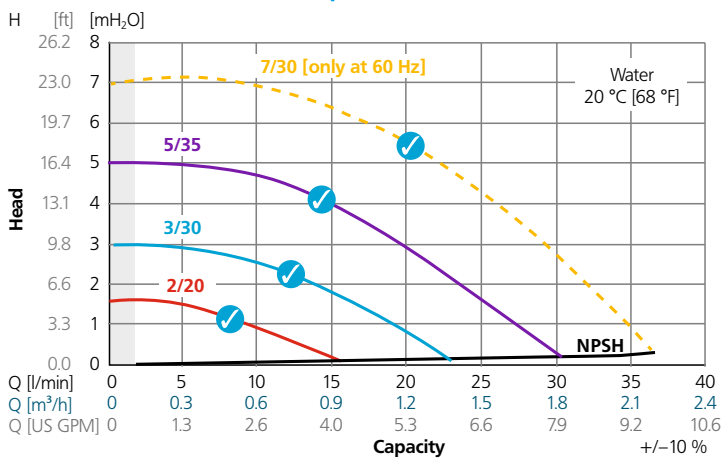
Magnetically coupled centrifugal pump

Series RM 1

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 1 performance curves



10 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black, gray or natural (available with and without additional fillers)



- PVDF natural (without additional fillers)



- Stainless steel



PP BLACK

PVDF NATURAL

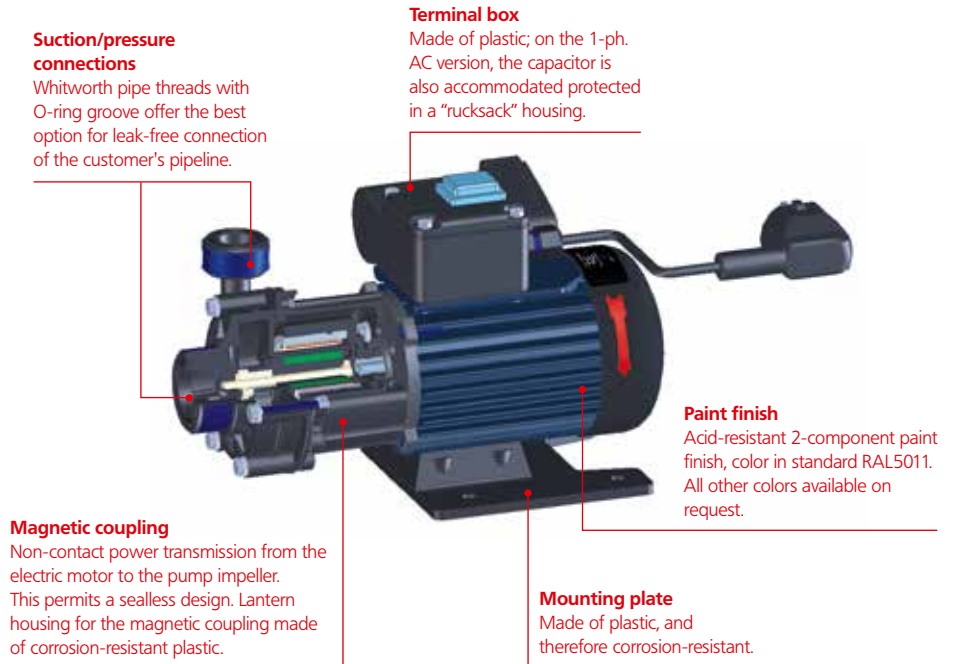
STAINLESS STEEL

Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 60 W–120 W
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Low-voltage DC motors 12 V–48 V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

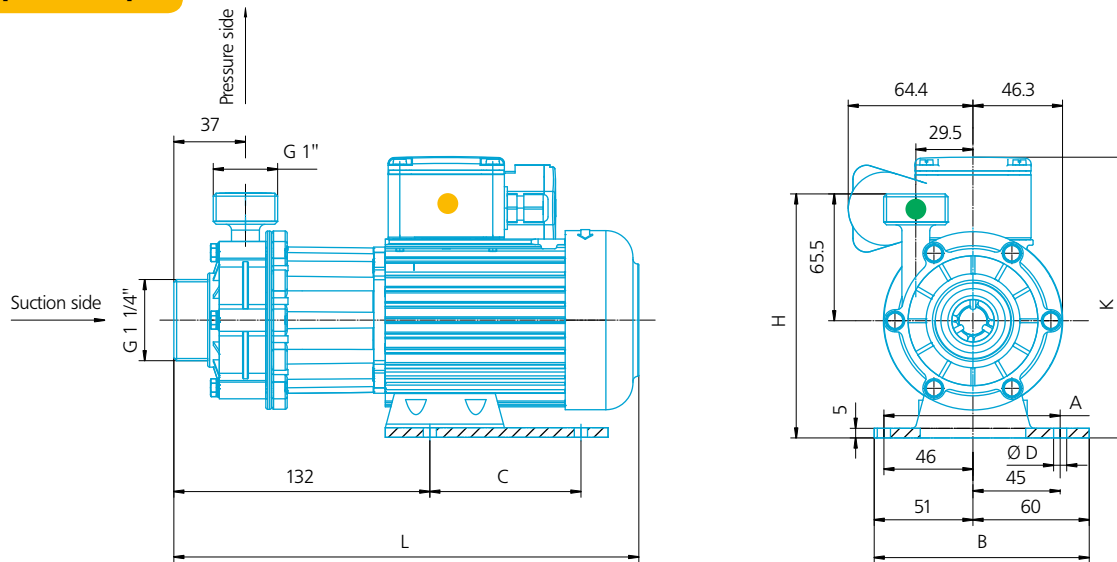
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

Magnetically coupled centrifugal pump

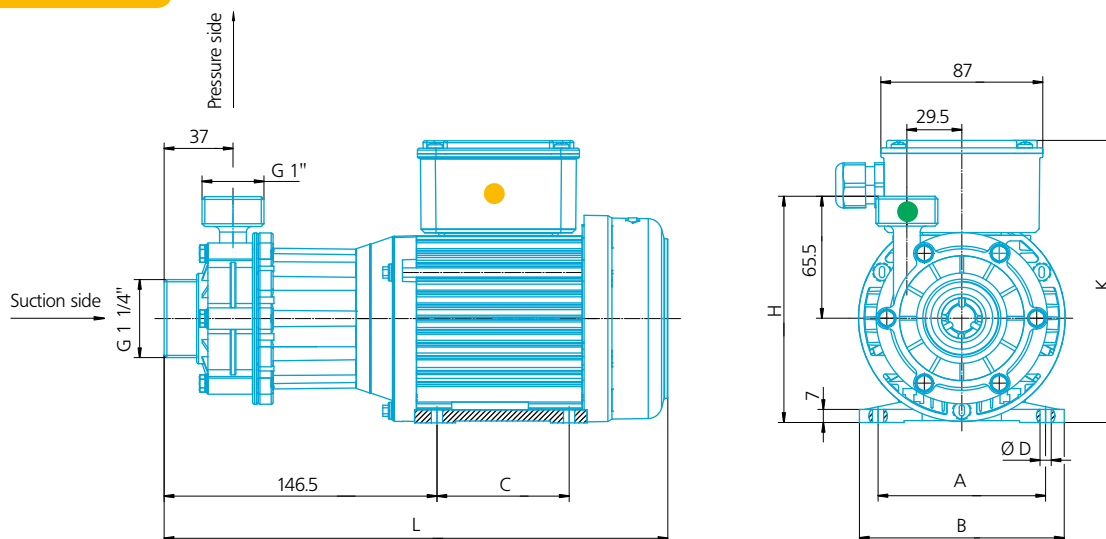
Series RM 1

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 60 W 1-ph.



Type 60 W 3-ph.







● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		2/20	3/30	5/35	7/30 *
	Max. delivery head H_{\max} [mH ₂ O]	2	3	5	7
	Max. flow rate Q_{\max} [l/min]	20	30	30	35
	Max. density at Q_{\max} ** [g/cm ³]	2.0	1.8	1.4	1.0
	Motor power [kW]	0.06	0.06	0.06	0.072 [at 60 Hz]
	Rated current at 230 V 1-ph. 50 Hz [A]	0.7	0.7	0.7	0.89 [at 60 Hz]
	Rated current at 400 V 3-ph. 50 Hz [A]	0.24	0.24	0.24	0.24 [at 60 Hz]
	Rated speed at 50 Hz [rpm]	2900	2900	2900	-
	Rated speed at 60 Hz [rpm]	3440	3440	3440	3440
	Dimension L [1-ph. / 3-ph.] [mm]	240 / 271	240 / 271	240 / 271	240 / 271
	Dimension H [1-ph. / 3-ph.] [mm]	126 / 121.5	126 / 121.5	126 / 121.5	12 / 121.5
	Dimension K [1-ph. / 3-ph.] [mm]	145 / 151.5	145 / 151.5	145 / 151.5	145 / 151.5
	Dimension A [1-ph. / 3-ph.] [mm]	91 / 90	91 / 90	91 / 90	91 / 90
	Dimension B [1-ph. / 3-ph.] [mm]	111 / 110	111 / 110	111 / 110	111 / 110
	Dimension C [1-ph. / 3-ph.] [mm]	78 / 71	78 / 71	78 / 71	78 / 71
	Dimension D [1-ph. / 3-ph.] [mm]	6.8 / 6.0	6.8 / 6.0	6.8 / 6.0	6.8 / 6.0
	Weight approx. [PP/PVDF/ stainless steel] [kg]	2.7 / 2.8 / 3.4	2.7 / 2.8 / 3.4	2.7 / 2.8 / 3.4	2.7 / 2.8 / 3.4
	Suction connection ["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Pressure connection ["]	G 1	G 1	G 1	G 1

* Only for 60 Hz version.

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 1.0 bar
- PVDF 2.0 bar
- Stainless steel 8.0 bar

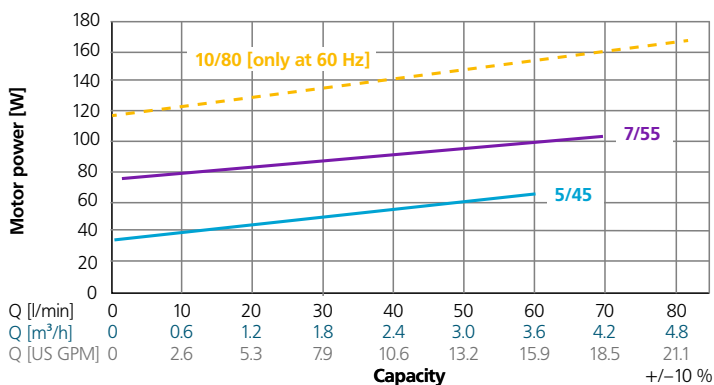
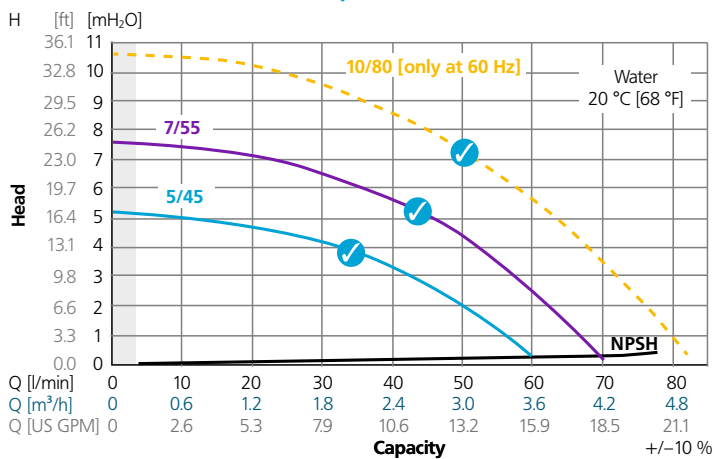
Magnetically coupled centrifugal pump

Series RM 1.5

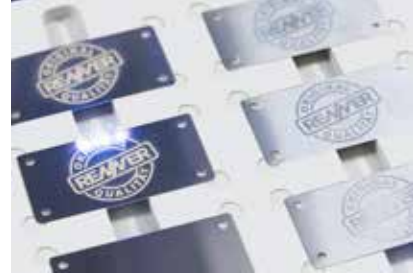
Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 1.5 performance curves



14 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

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Materials

- PP black, gray or natural (available with and without additional fillers)



- PVDF natural (without additional fillers)



- Stainless steel



PP BLACK

PVDF NATURAL

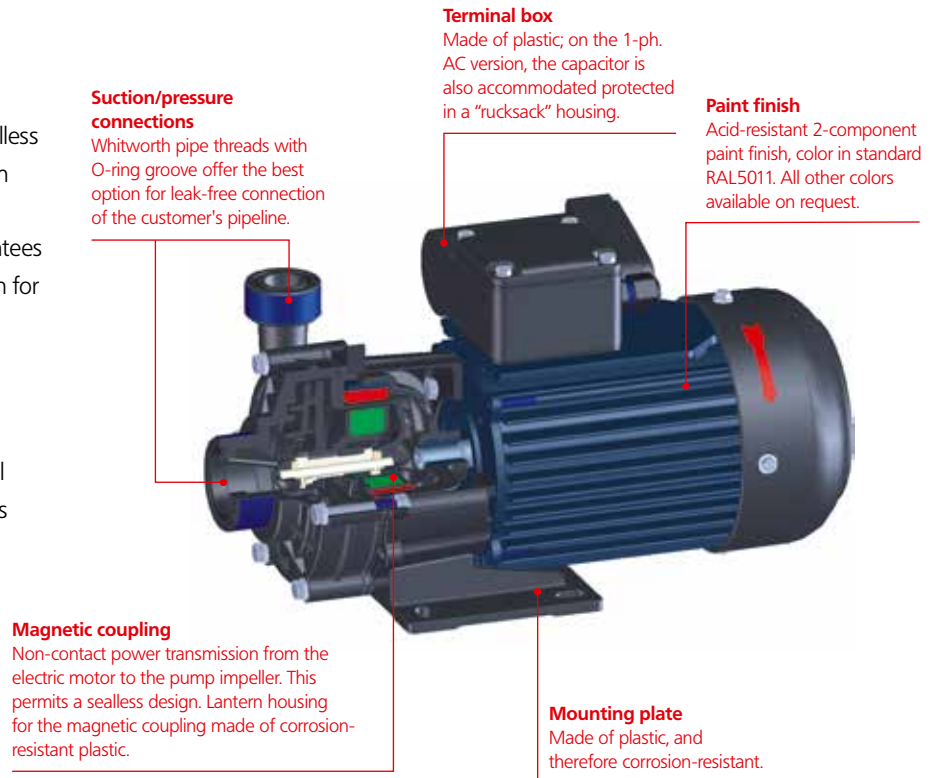
STAINLESS STEEL

Compelling product advantages – our ideas, your benefit

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Note

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Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 60 W–370 W
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Low-voltage DC motors 12 V–48 V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

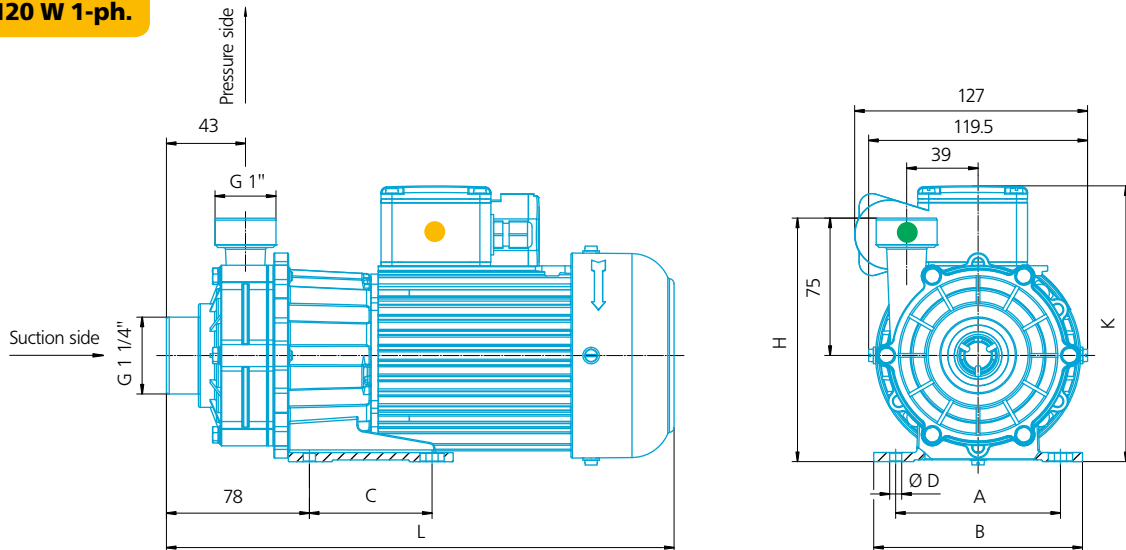
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

Magnetically coupled centrifugal pump

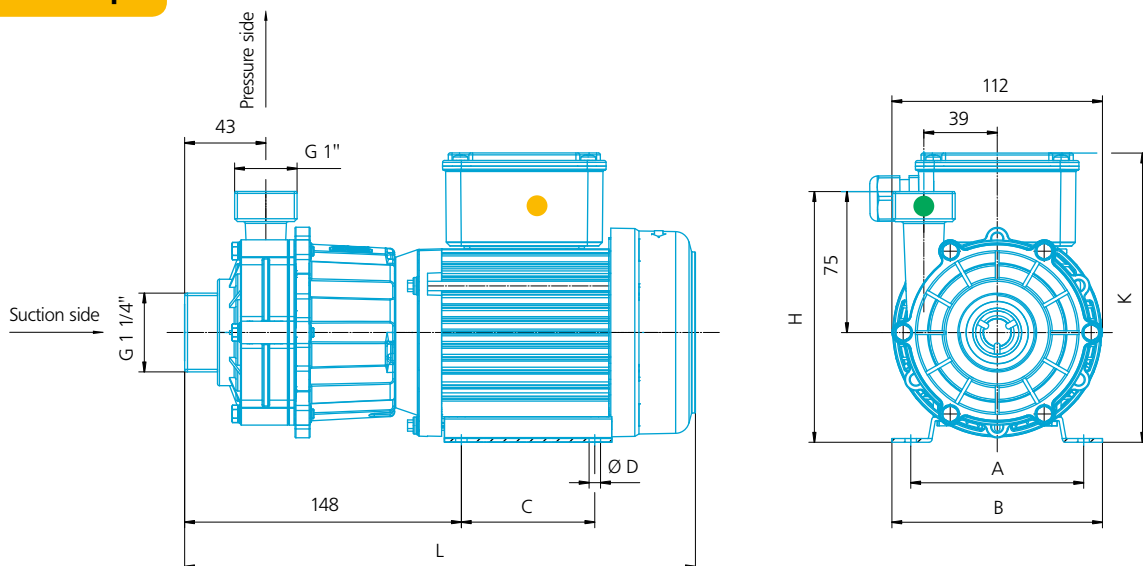
Series RM 1.5

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 120 W 1-ph.



Type 120 W 3-ph.







- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

- **Pressure connection port position**

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		5/45	7/55	10/80 *
	Max. delivery head H_{max} [mH ₂ O]	5	7	10
	Max. flow rate Q_{max} [l/min]	60	70	80
	Max. density at Q_{max} ** [g/cm ³]	1.8	1.2	1.1
	Motor power [kW]	0.12	0.12	0.18 [at 60 Hz]
	Rated current at 230 V 1-ph. 50 Hz [A]	1.61	1.61	1.61 [at 60 Hz]
	Rated current at 400 V 3-ph. 50 Hz [A]	0.41	0.41	0.41 [at 60 Hz]
	Rated speed at 50 Hz [rpm]	2900	2900	–
	Rated speed at 60 Hz [rpm]	3440	3440	3440
	Dimension L [1-ph. / 3-ph.] [mm]	277 / 272	277 / 272	277 / 272
	Dimension H [mm]	133	133	133
	Dimension K [mm]	154	154	154
	Dimension A [1-ph. / 3-ph.] [mm]	90 / 90	90 / 90	90 / 90
	Dimension B [1-ph. / 3-ph.] [mm]	114 / 110	114 / 110	114 / 110
	Dimension C [1-ph. / 3-ph.] [mm]	67 / 71	67 / 71	67 / 71
	Dimension D [mm]	6.6 / 6.1	6.6 / 6.1	6.6 / 6.1
	Weight approx. [PP / PVDF / stainless steel] [kg]	4.4 / 4.6 / 6.0	4.4 / 4.6 / 6.0	4.4 / 4.6 / 6.0
	Suction connection ["]	G 1 1/4	G 1 1/4	G 1 1/4
	Pressure connection ["]	G 1	G 1	G 1

* Only for 60 Hz version.

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 1.5 bar
- PVDF 2.5 bar
- Stainless steel 8.0 bar

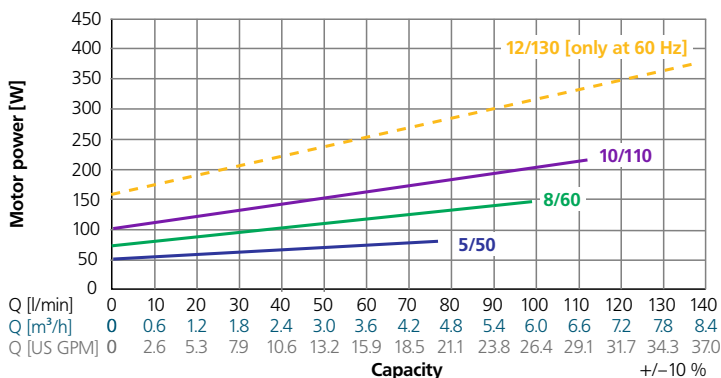
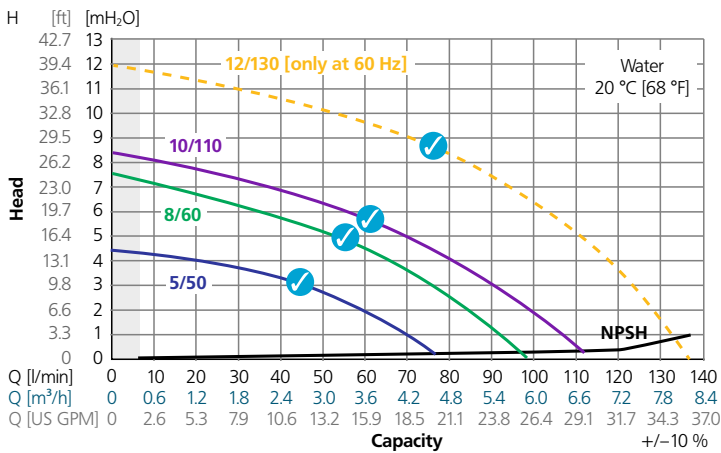
Magnetically coupled centrifugal pump

Series RM 2

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 2 performance curves



18 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.

Materials

- PP black, gray or natural (available with and without additional fillers)

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



- Stainless steel

STAINLESS STEEL

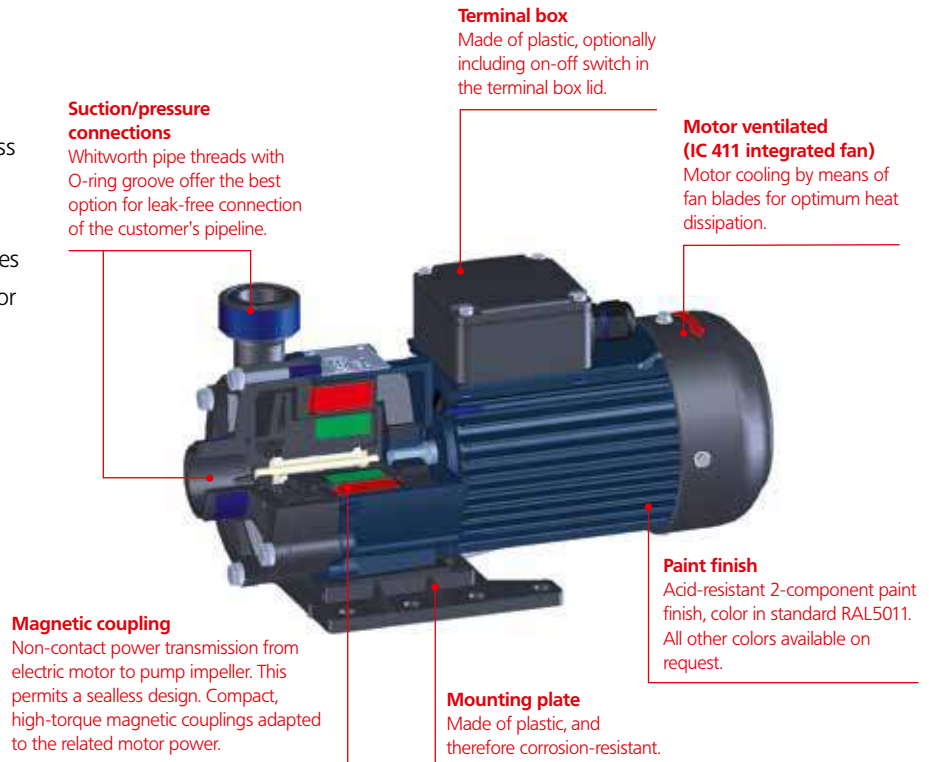


Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 0.125 kW–0.37 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Low-voltage DC motors 12 V–48 V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

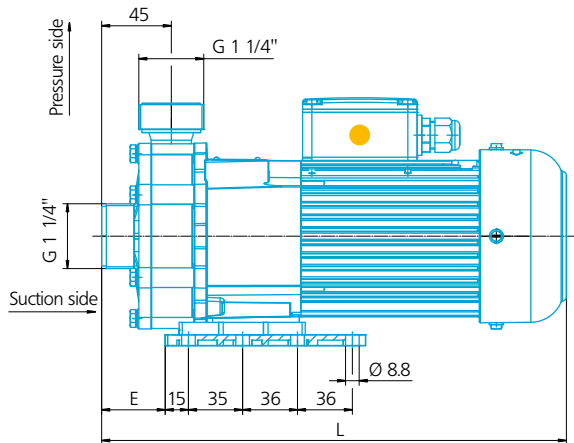
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

Magnetically coupled centrifugal pump

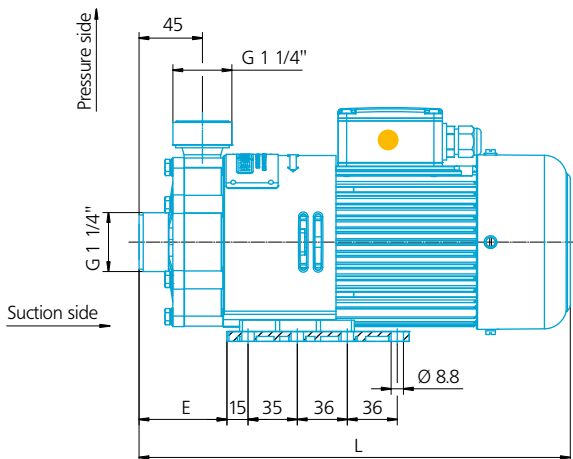
Series RM 2

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 0.125 kW–0.18 kW



Type 0.25 kW–0.37 kW




● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		5/50		8/60		10/110	12/130 *	
	Max. delivery head H_{max}	[mH ₂ O]	4.5	4.5	7.5	7.5	8.5	12
	Max. flow rate Q_{max}	[l/min]	75	75	95	95	110	130
	Max. density at Q_{max} **	[g/cm ³]	1.5	2.0	1.2	1.8	1.8	1.0
	Motor power	[kW]	0.125	0.180	0.180	0.250	0.370	0.370
	Rated current at 400 V 3-ph. 50 Hz	[A]	0.58	0.67	0.67	0.79	1.35	1.35
	Rated current at 230 V 1-ph. 50 Hz	[A]	1.1	1.3	1.3	3.0	3.4	3.4
	Rated speed at 50 Hz	[rpm]	2750	2750	2750	2750	2750	–
	Rated speed at 60 Hz	[rpm]	3400	3400	3400	3400	3400	3400
	Dimension L	[mm]	300	300	300	305	310	310
	Dimension E	[mm]	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60
	Weight approx. [PP / PVDF]	[kg]	5.0 / 5.8	5.0 / 5.8	5.0 / 5.8	5.2 / 6.0	6.8 / 7.6	6.8 / 7.6
	Suction connection	["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Pressure connection	["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4

* Only for 60 Hz version.

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 1.5 bar
- PVDF 2.5 bar
- Stainless steel 8.0 bar

Magnetically coupled centrifugal pump

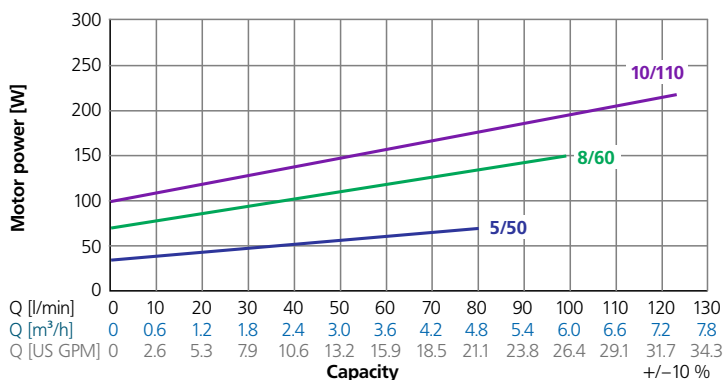
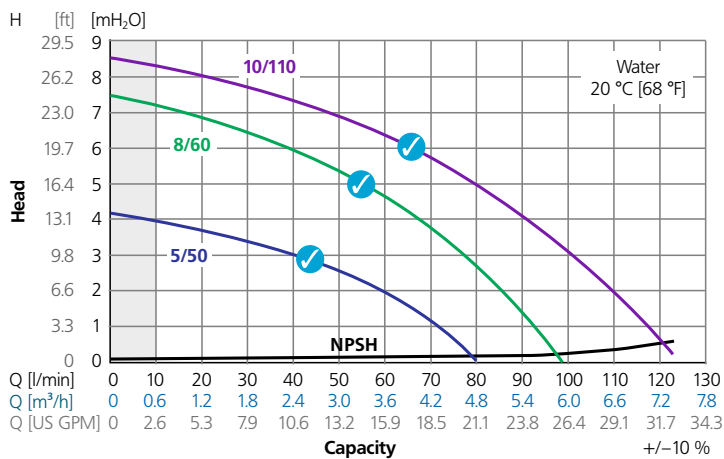
Series RM-TS 2

Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM-TS 2 performance curves



Note: Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



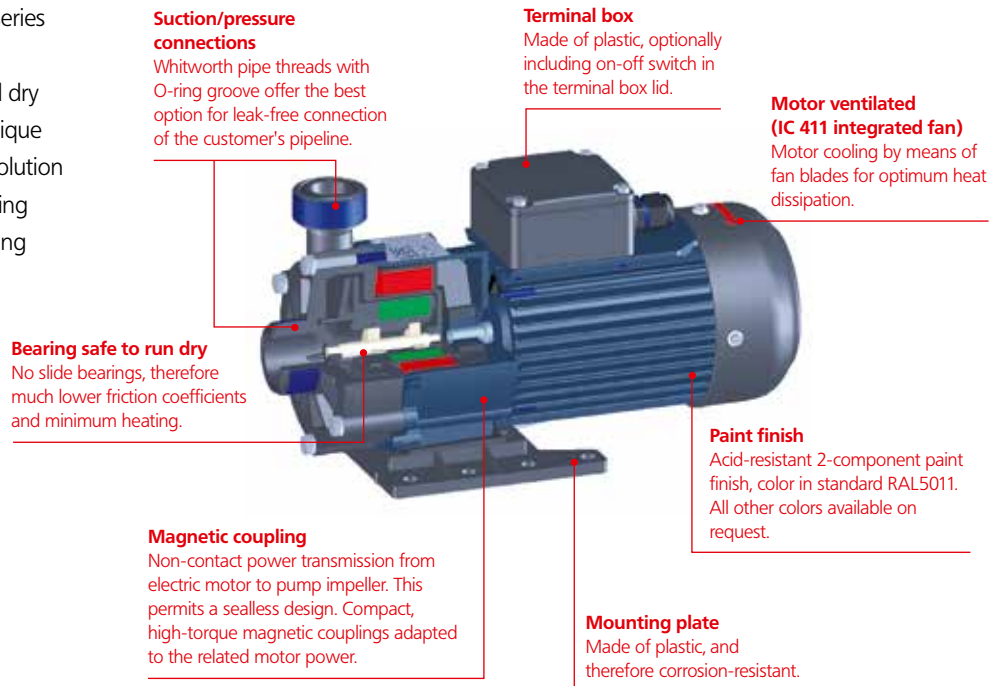
- Material pairings for "TS" bearing system: SIC/PTFE/PEEK or SIC/PTFE/PPS-HPV

Compelling product advantages – our ideas, your benefit

The bearing system in the RM-TS series has been specially developed by RENNER and guarantees unlimited dry run capability. These pumps are unique worldwide and provide the ideal solution for applications that require emptying of process tanks, e.g. when emptying tanker trucks.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +70 °C
- PVDF 0 to +80 °C



Drives

- Motor power: 0.125 kW–0.37 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Low-voltage DC motors 12 V–48 V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

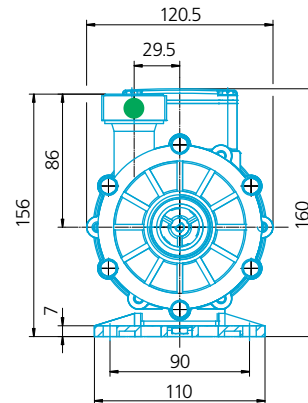
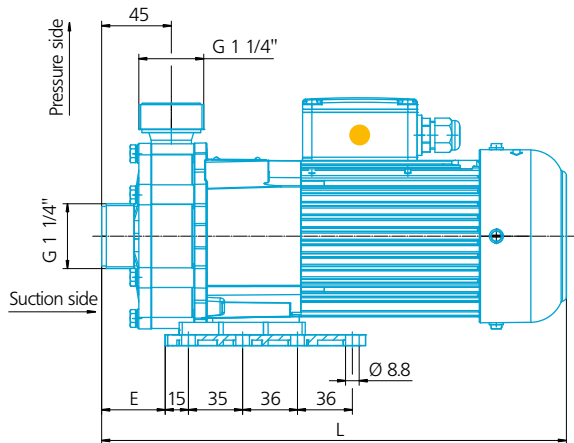
Magnetically coupled centrifugal pump

Series RM-TS 2

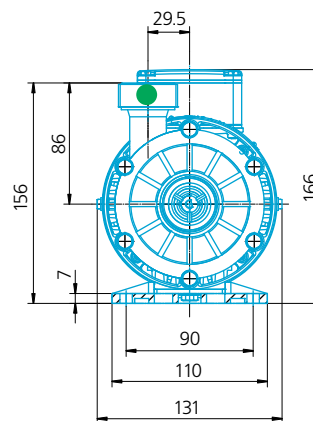
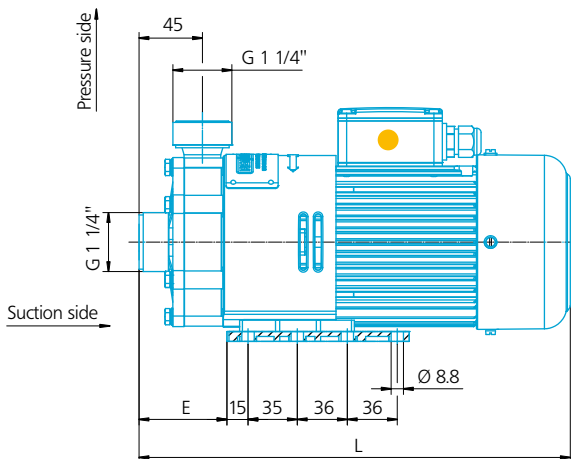
Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design

Type 0.125 kW–0.18 kW



Type 0.25 kW–0.37 kW








● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		5/50		8/60		10/110	
	Max. delivery head H_{max}	[mH ₂ O]	4.1	4.1	7.5	7.5	8.5
	Max. flow rate Q_{max}	[l/min]	75	75	95	95	110
	Max. density at Q_{max}**	[g/cm ³]	1.5	2.0	1.2	1.7	1.7
	Motor power	[kW]	0.125	0.180	0.180	0.250	0.370
	Rated current at 400 V 3-ph. 50 Hz	[A]	0.58	0.67	0.67	0.79	1.35
	Rated current at 230 V 1-ph. 50 Hz	[A]	1.1	1.3	1.3	3.0	3.4
	Rated speed at 50 Hz	[rpm]	2750	2750	2750	2750	2750
	Rated speed at 60 Hz	[rpm]	3400	3400	3400	3400	3400
	Dimension L	[mm]	300	300	300	305	310
	Dimension E	[mm]	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60
	Weight approx. [PP / PVDF]	[kg]	5.0 / 5.8	5.0 / 5.8	5.0 / 5.8	5.2 / 6.0	6.8 / 7.6
	Suction connection	["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
	Pressure connection	["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 1.5 bar
- PVDF 2.5 bar

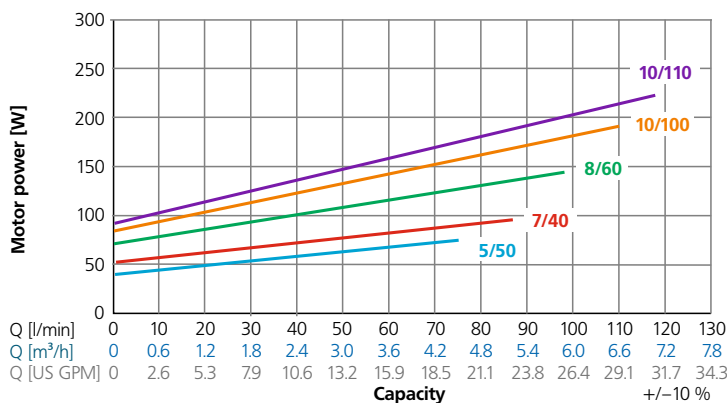
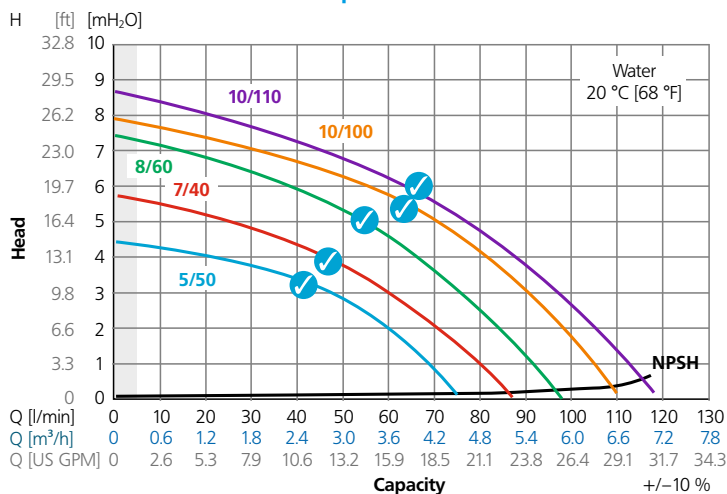
Magnetically coupled centrifugal pump

Series RM 2U

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 2U performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black, gray or natural (available with and without additional fillers)

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL

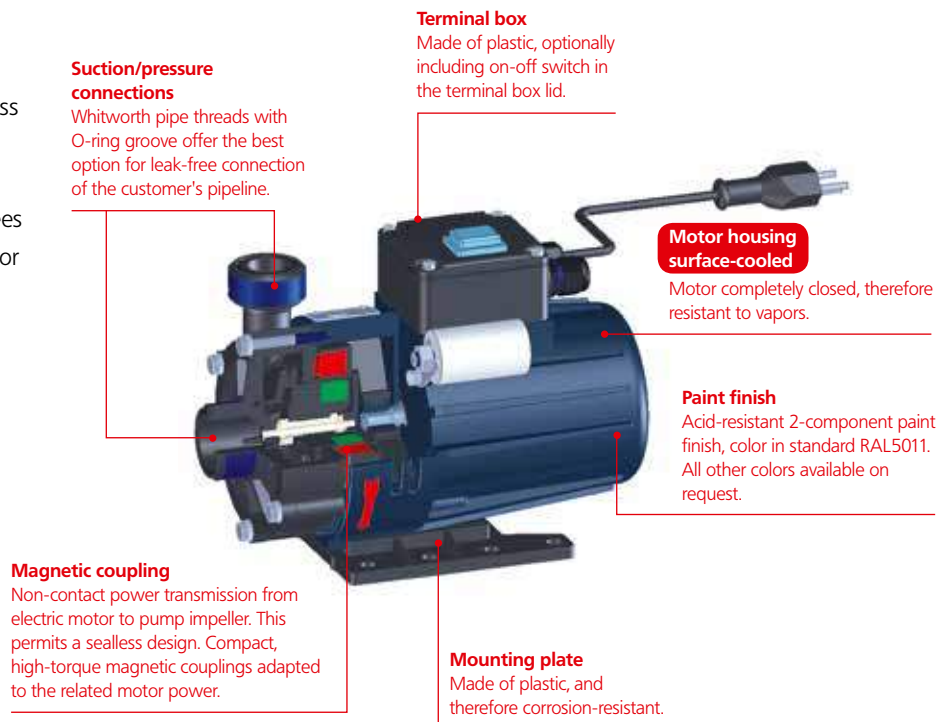


Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +90 °C



Drives

- Motor power: 0.09 kW–0.25 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Protection classes: IP55, IP56, IP66
- Thermal protection
- Tropical insulation
- Motor cooling IC 410 (surface cooling)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

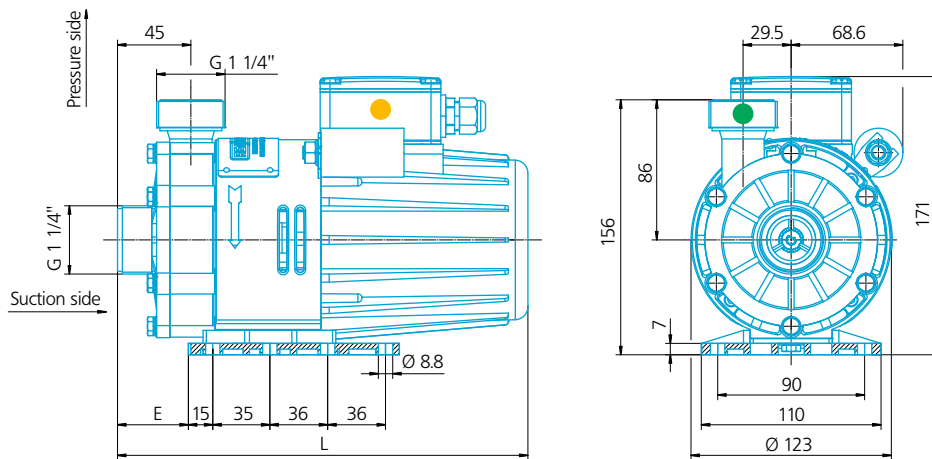
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

Magnetically coupled centrifugal pump

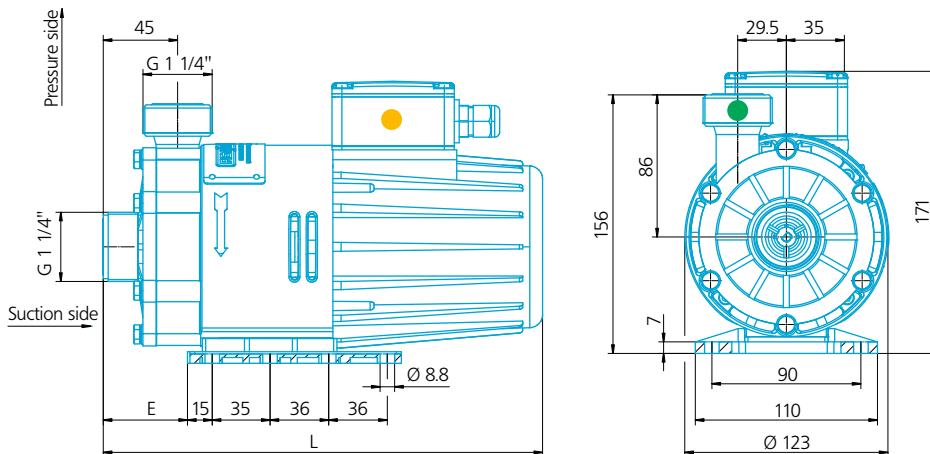
Series RM 2U

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type RM 2U Alternating current



Type RM 2U Three-phase current















- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

- **Pressure connection port position**

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Size	
	Max. delivery head H_{max}
	Max. flow rate Q_{max}
	Max. density at Q_{max}^{**}
Motor power	
	Rated current at 400 V 3-ph. 50 Hz
	Rated current at 230 V 1-ph. 50 Hz
	Rated speed at 50 Hz
	Rated speed at 60 Hz
	Dimension L
	Dimension E
	Weight approx. [PP / PVDF]
	Suction connection
	Pressure connection

Technical data

	5/50		7/40		8/60			10/100		10/110	
[mH ₂ O]	4.5	4.5	6	6	7.5	7.5	7.5	8	8	9	9
[l/min]	75	75	85	85	65	95	95	110	110	90	120
[g/cm ³]	1.2	2.0	1.2	2.0	1.0	1.3	1.8	1.0	1.4	1.0	1.1
[kW]	0.09	0.18	0.12	0.25	0.12	0.18	0.25	0.18	0.25	0.18	0.25
[A]	0.35	0.67	0.45	0.67	0.45	0.67	0.67	0.67	0.67	0.67	0.67
[A]	0.7	1.9	0.7	1.9	0.7	1.9	1.9	1.9	1.9	1.9	1.9
[rpm]	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750
[rpm]	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400
[mm]	235	250	250	265	250	265	265	265	265	265	265
[mm]	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60	stepless 20–60
[kg]	4.5 / 5.3	5.0 / 5.8	5.2 / 6.0	6.5 / 7.3	5.2 / 6.0	6.5 / 7.3	6.5 / 7.3	6.6 / 7.4	6.6 / 7.4	6.6 / 7.4	6.6 / 7.4
["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4
["]	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4	G 1 1/4

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 1.5 bar
- PVDF 2.5 bar

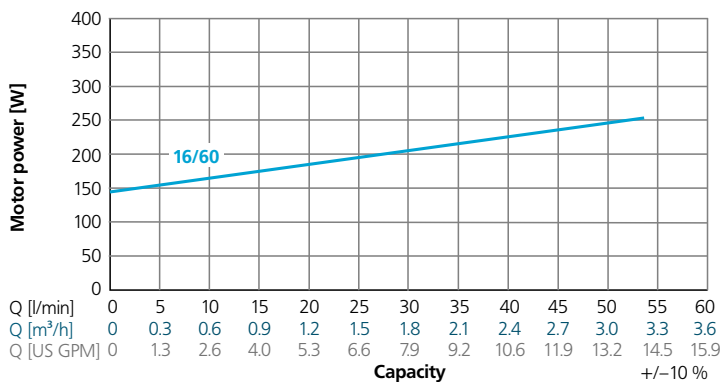
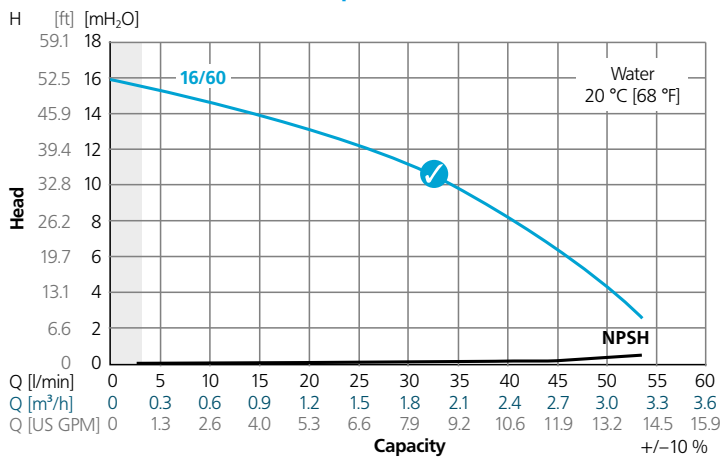
Magnetically coupled centrifugal pump

Series RM 2D

Normal-priming, two-stage, horizontal and manufactured in monobloc design.



RM 2D performance curves



30 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.

Materials

- PP gray, black or natural (available with and without additional fillers)



PP GRAY

- PVDF natural

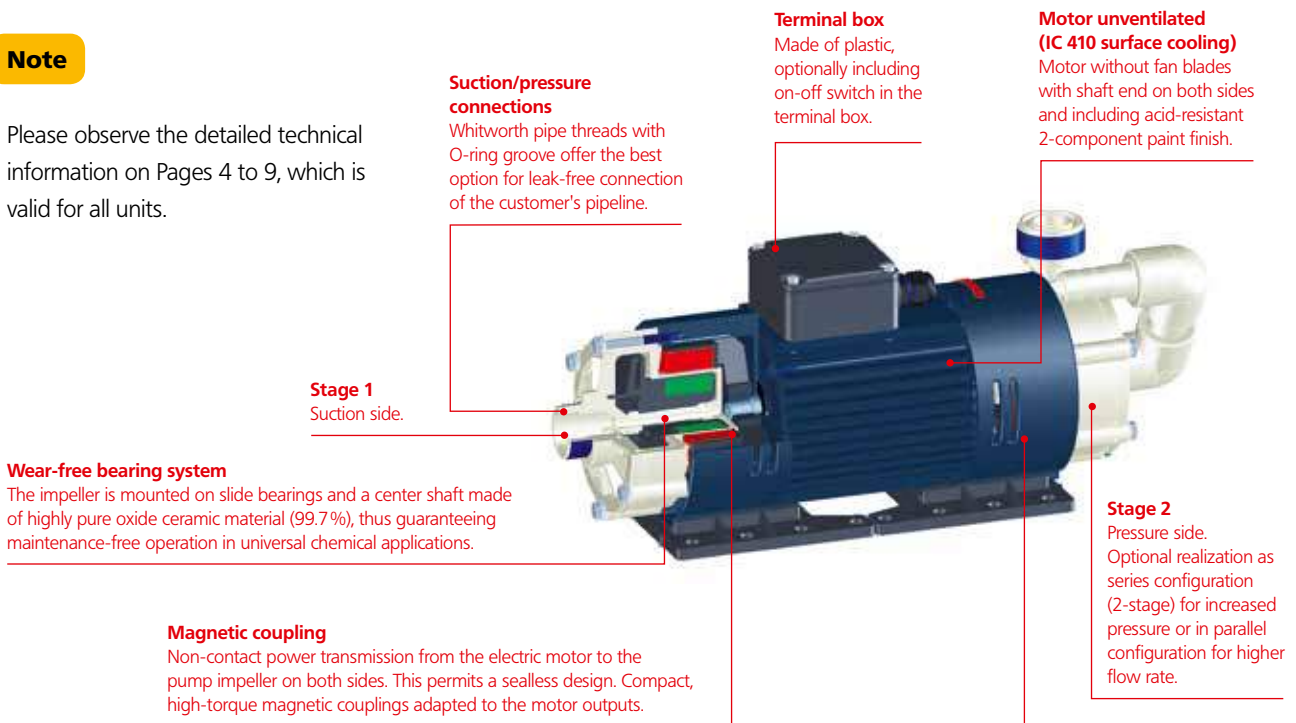


PVDF NATURAL

Compelling product advantages – our ideas, your benefit

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 1.1 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C



Drives

- Motor power: 250 W
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- Protection class: IP55
- Thermal protection
- Tropical insulation
- Motor cooling: IC 410 (surface cooling)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

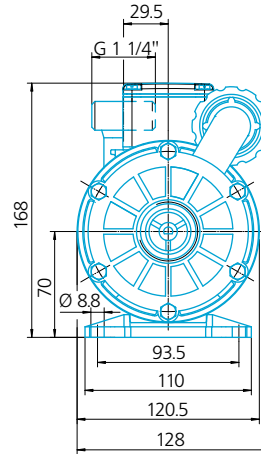
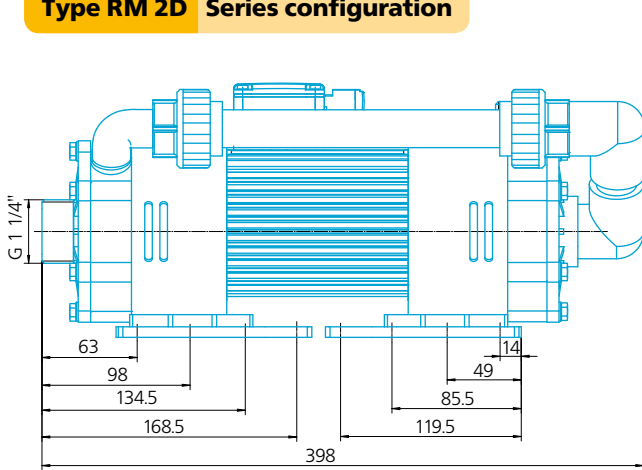
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug
- On-off switch in terminal box

Magnetically coupled centrifugal pump

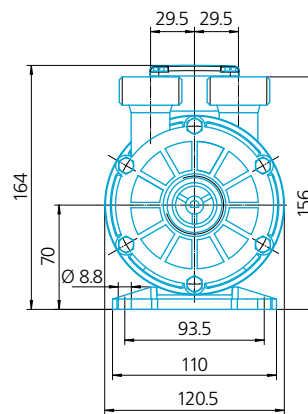
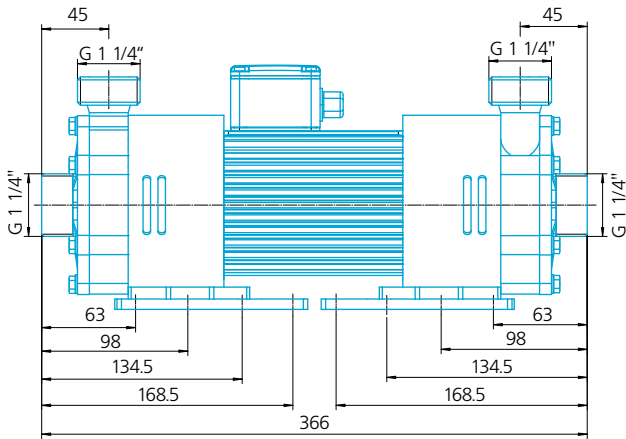
Series RM 2D

Normal-priming, two-stage, horizontal and manufactured in monobloc design.





Type RM 2D Series configuration



Type RM 2D Parallel configuration



Technical data

Size		16/60	8/180	
	Max. delivery head H_{\max}	[mH ₂ O]	16	8
	Max. flow rate Q_{\max}	[l/min]	55	180
	Max. density at Q_{\max}	[g/cm ³]	1.1	1.0
	Motor power	[kW]	0.25	0.25
	Rated current at 400 V 3-ph. 50 Hz	[A]	0.67	0.67
	Rated current at 230 V 1-ph. 50 Hz	[A]	1.9	1.9
	Rated speed at 50 Hz	[rpm]	2900	2900
	Rated speed at 60 Hz	[rpm]	3400	3400
	Weight approx. [PP / PVDF]	[kg]	9.0 / 10.0	9.0 / 10.0
	Suction connection	["]	G 1 1/4	G 1 1/4
	Pressure connection	["]	G 1 1/4	G 1 1/4

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 2.5 bar
- PVDF 3.5 bar

Magnetically coupled side channel pump

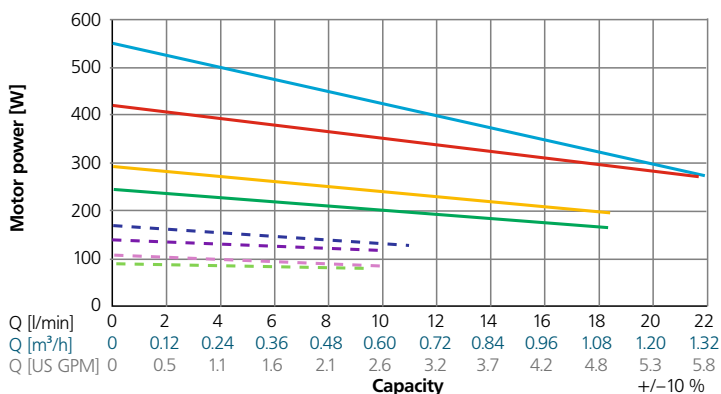
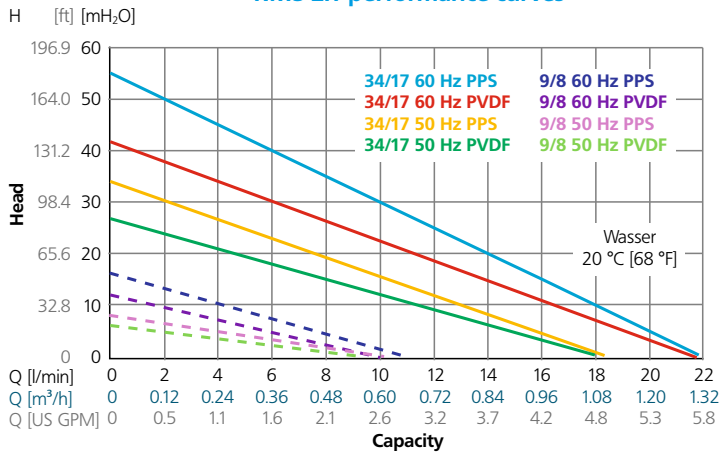
Series RMS 2.1

Self-priming

Single-stage, horizontal and manufactured in monobloc design.



RMS 2.1 performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PPS (Ryton®)



- PVDF natural (without additional fillers)



PPS

PVDF NATURAL

Compelling product advantages – our ideas, your benefit

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.

Gas-conveying

A suction lift of up to 7 m is possible after the pump chamber has been filled once.

Characteristics of the side channel pump

- Self-priming
- Gas-conveying
- High pressures, low flow rate (steep characteristic)
- Maximum power requirement for lowest flow rate
- Very narrow gap, thus sensitive to abrasive materials in the conveyed fluid

Hermetically encapsulated hydraulics

With extremely high running smoothness.

High pressures

Pressures of up to 5.5 bar with low flow rate (steep characteristic).

Energy-efficient, compact design

Optionally with mounted variable frequency drive.

Highly-efficient motor technology

Efficiency class: IE2, IE3, IE4.

Magnetic coupling

Non-contact power transmission from the electric motor to the pump impeller. This permits a sealless design. Compact, high-torque magnetic couplings adapted to the related motor power.

Paint finish

Acid-resistant 2-component paint finish, color in standard RAL5011. All other colors available on request.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PPS 0 to +100 °C
- PVDF -20 to + 80 °C



Drives

- Motor power: 0.37 kW–0.75 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Hose connector
- NPT adapter
- Cable + plug

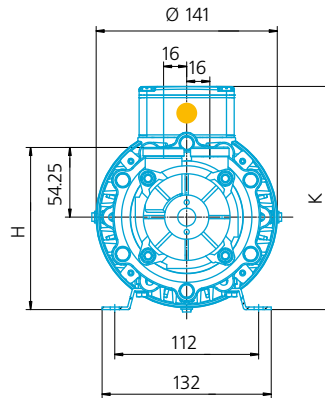
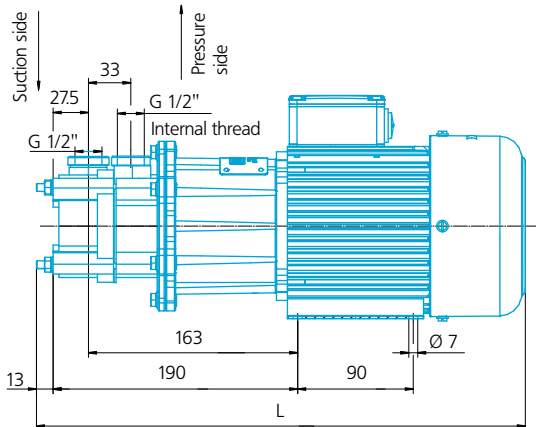
Magnetically coupled side channel pump

Series RMS 2.1

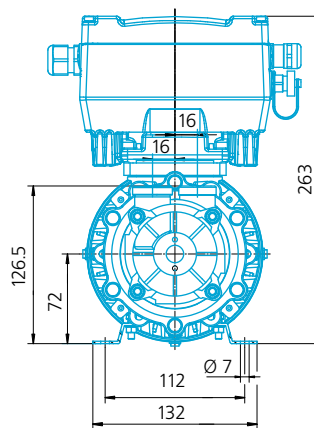
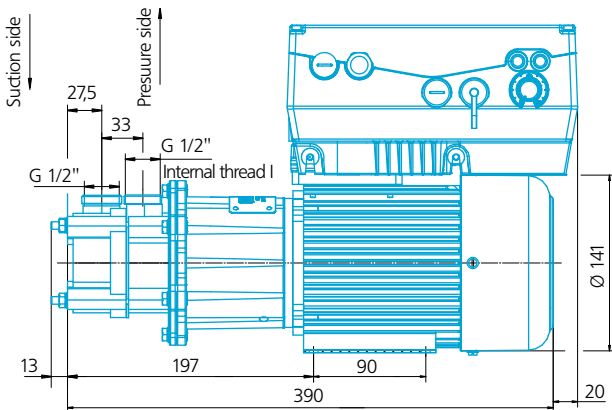
Self-priming

Single-stage, horizontal and manufactured in monobloc design.

Type 0.37 kW–0.75 kW








Type 0.55 kW–0.75 kW Including variable frequency drive



● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

Size	
Material	
	Max. delivery head H_{max} at 50 Hz or 60 Hz
	Max. flow rate Q_{max} at 50 Hz or 60 Hz
	Max. suction lift at 20 °C
	Max. density for Q_{min} at 50 Hz or 60 Hz
	Max. temperature
	Motor power
	Rated current at 400 V 50 Hz
	Rated speed at 50 Hz
	Rated speed at 60 Hz
	Dimension L
	Dimension K
	Dimension H
	Weight approx.
	Suction connection
	Pressure connection

Technical data

	9/8 *		10/15 *, **		34/17						55/23 **			
	PPS	PVDF	PPS	PVDF	PPS	PVDF	PPS	PVDF	PPS	PVDF	PPS	PVDF	PPS	PVDF
[mH ₂ O]	8	6	15	11	38	26	38	26	38	26	55	40	55	40
[l/min]	10	8	10	10	17	16	17	16	17	16	22	20	22	20
[mH ₂ O]	3	1	3	1	7	1	7	1	7	1	7	1	7	1
[g/cm ³]	2.0	2.0	1.8	1.8	1.25	1.5	1.8	2.0	2.0	2.0	1.1	1.4	1.35	1.8
[°C]	100	80	100	80	100	80	100	80	100	80	100	80	100	80
[kW]	0.37	0.37	0.37	0.37	0.37	0.37	0.55	0.55	0.75 - IE2	0.75 - IE2	0.55	0.55	0.75 - IE2	0.75 - IE2
[A]	1.21	1.21	1.21	1.21	1.02	1.02	1.6	1.6	1.9	1.9	1.6	1.6	1.9	1.9
[rpm]	1450	1450	1450	1450	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750
[rpm]	1750	1750	1750	1750	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400
[mm]	390	390	390	390	381	381	396	396	416	416	396	396	416	416
[mm]	181	181	181	181	174	174	174	174	174	174	174	174	174	174
[mm]	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5	126.5
[kg]	7.0	9.5	7.0	9.5	7.0	9.0	8.0	9.5	9.0	11.0	8.0	9.5	9.0	11.0
["]	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG
["]	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG	G 1/2 IG

* 4-pole.

** Suitable only for 60 Hz operation.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PPS (Ryton®) 8.0 bar
- PVDF 6.0 bar

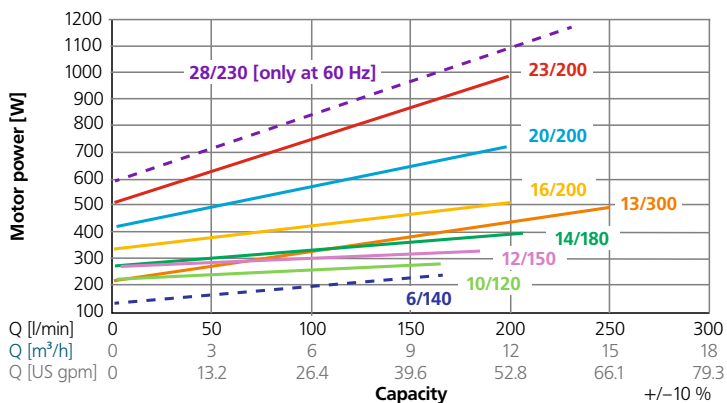
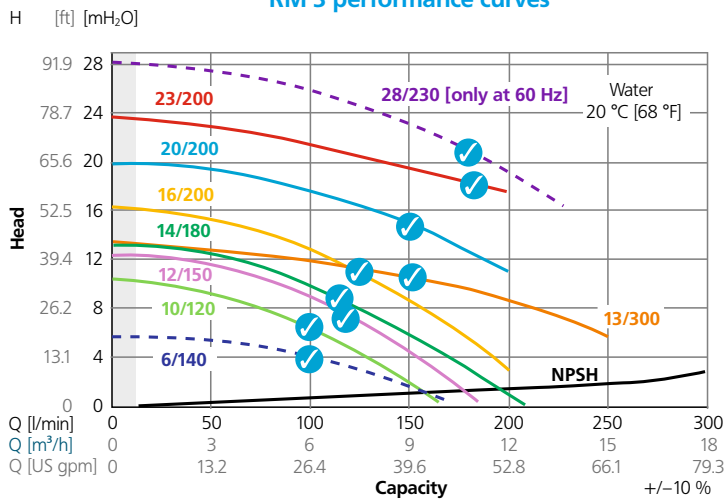
Magnetically coupled centrifugal pump

Series RM 3

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 3 performance curves



38 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black, gray or natural (available with and without additional fillers)



PP BLACK

- PVDF natural (without additional fillers)



PVDF NATURAL

- Stainless steel



STAINLESS STEEL

Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.

Suction/pressure connections

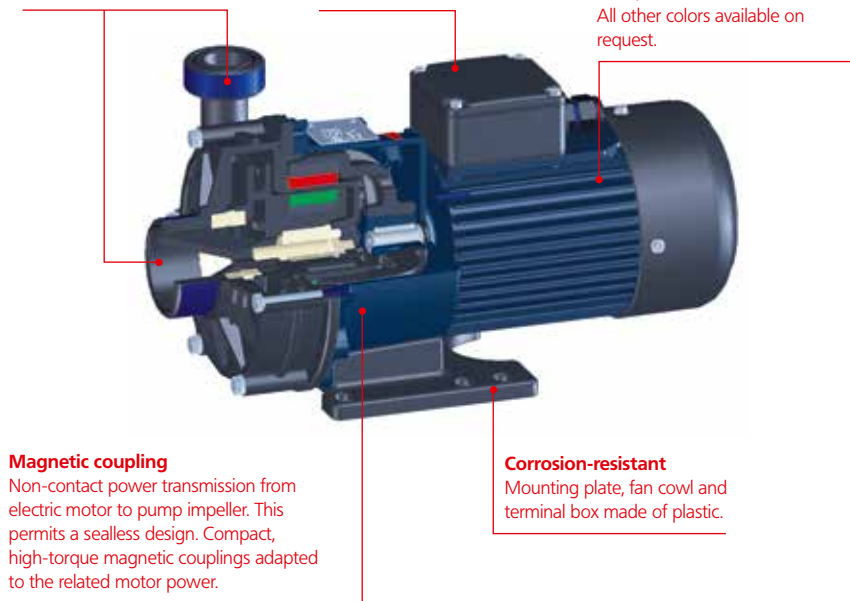
Whitworth pipe threads with O-ring groove offer the best option for leak-free connection of the customer's pipeline.

Terminal box

Made of plastic.

Paint finish

Acid-resistant 2-component paint finish, color in standard RAL5011. All other colors available on request.



Magnetic coupling

Non-contact power transmission from electric motor to pump impeller. This permits a sealless design. Compact, high-torque magnetic couplings adapted to the related motor power.

Corrosion-resistant

Mounting plate, fan cowl and terminal box made of plastic.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- | | |
|-------------------|---------------|
| • PP | 0 to +80 °C |
| • PVDF | -20 to +95 °C |
| • Stainless steel | -20 to +95 °C |



Drives

- Motor power: 0.25 kW–1.5 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Low-voltage DC motors 12V–48V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

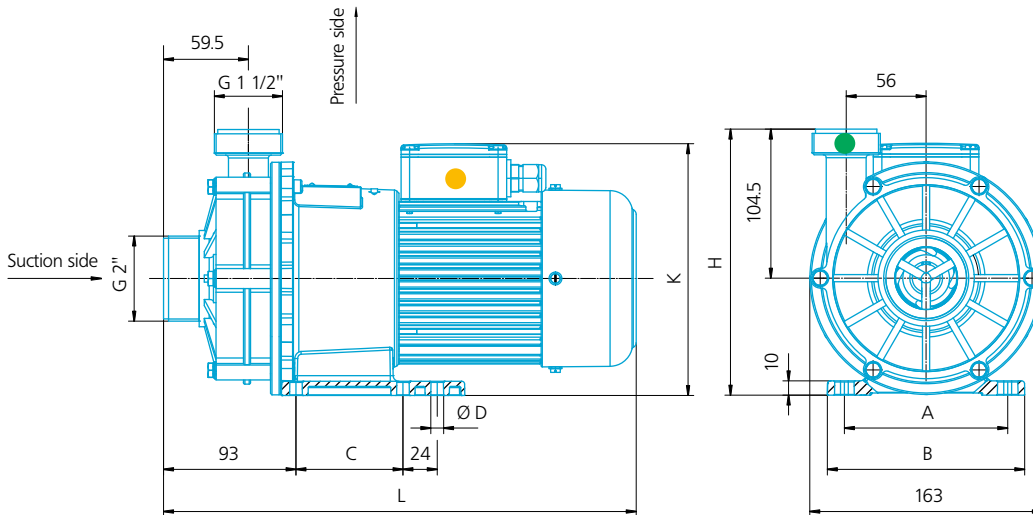
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

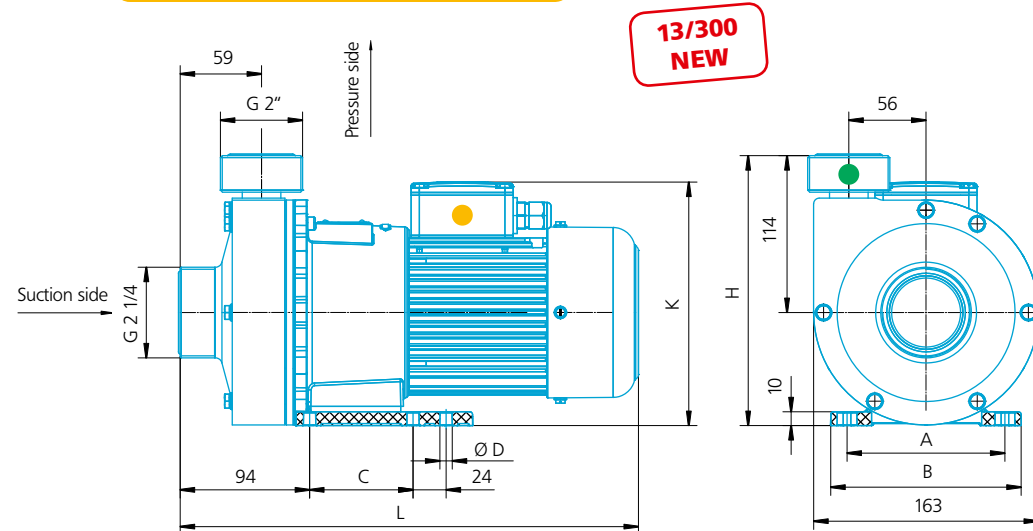
Series RM 3

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type G 2" / G 1 1/2" 0.25 kW–1.5 kW



Type G 2 1/4" / G 2" 0.55 kW–1.1 kW



13/300
NEW

Size	
	Max. delivery head H_{max} [mH ₂ O]
	Max. flow rate Q_{max} [l/min]
	Max. density at Q_{max}^{**} [g/cm ³]
	Motor power [kW]
	Rated current at 400 V 3-ph. 50 Hz [A]
	Rated current at 230 V 1-ph. 50 Hz [A]
	Rated speed at 50 Hz [rpm]
	Rated speed at 60 Hz [rpm]
	Dimension L [mm]
	Dimension H [mm]
	Dimension K [mm]
	Dimension A [mm]
	Dimension B [mm]
	Dimension C [mm]
	Dimension D [mm]
	Weight approx. [PP / PVDF] [kg]
	Weight approx. [stainless steel] [kg]
	Suction connection ["]
	Pressure connection ["]

● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

6/140		10/120		12/150			NEW: 13/300			14/180			16/200			20/200			23/200		28/230*
6	10	10	10	12	12	12	13	13	13	14	14	14	17	17	17	20	20	20	23	23	28
140	160	160	160	180	180	180	250	250	250	200	200	200	200	200	200	200	200	200	200	200	230
1.6	1.0	1.45	2.2	1.15	1.7	2.2	1.0	1.35	2.0	1.0	1.5	2.0	1.15	1.5	2.2	1.1	1.6	2.2	1.1	1.5	1.2
0.37	0.25	0.37	0.55	0.37	0.55	0.75	0.55	0.75	1.1	0.37	0.55	0.75	0.55	0.75	1.1	0.75	1.1	1.5	1.1	1.5	1.5
1.21	0.68	1.1	1.45	1.1	1.45	1.9	1.45	1.9	3	1.1	1.45	1.9	1.45	1.9	3.0	1.9	3.0	3.25	3.0	3.25	3.0
2.7	1.7	2.7	3.5	2.7	3.5	4.8	3.5	4.8	6.4	2.7	3.5	4.8	3.5	4.8	6.4	4.8	6.4	8.2	6.4	8.2	-
1450	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	-
1750	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400
352	331	331	341	331	341	387	341	387	400	331	341	387	341	387	400	387	400	400	400	400	400
186.5	186.5	186.5	186.5	186.5	186.5	186.5	196	196	196	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5
185	177	177	177	177	177	184	177	184	191.5	177	177	184	177	184	191.5	184	191.5	191.5	191.5	191.5	191.5
114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5
136	138.5	138.5	138.5	138.5	138.5	136	138.5	136	136	138.5	138.5	136	138.5	136	136	136	136	136	136	136	136
75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
8.5	9	9	9	9	9	8.5	9	8.5	8.5	9	9	8.5	9	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
90/95	65/70	70/75	85/90	70/75	85/90	120/125	90/100	125/135	150/160	70/75	85/90	120/125	85/90	120/125	145/150	120/125	145/150	160/170	145/150	160/170	160/170
12.0	-	11.0	11.5	-	11.5	-	-	-	-	-	11.5	14.5	11.5	15.0	18.0	-	18.5	19.0	-	19.0	19.0
G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2 1/4	G 2 1/4	G 2 1/4	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2
G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 2	G 2	G 2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2

* Only for 60 Hz version.

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 2.5 bar
- PVDF 3.5 bar
- Stainless steel 8.0 bar

Magnetically coupled centrifugal pump

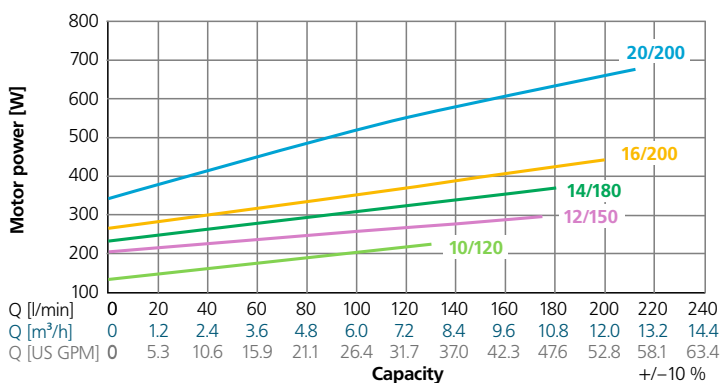
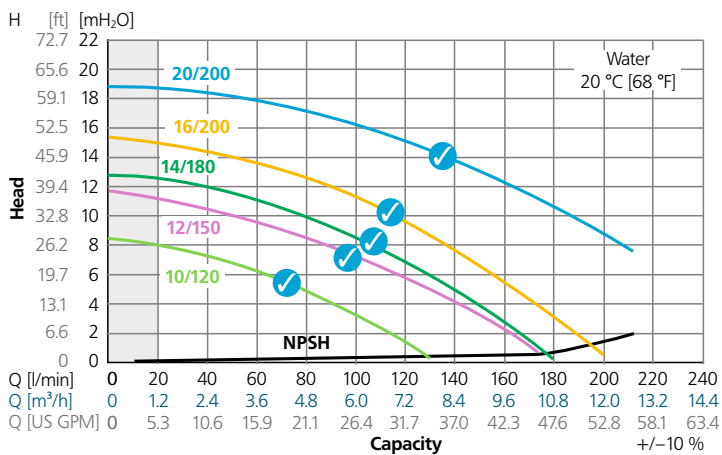
Series RM-TS 3

Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM-TS 3 performance curves



42 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black



- PVDF natural (without additional fillers)



- Material pairings for "TS" bearing system: SIC/PTFE/PEEK or SIC/PTFE/PPS-HPV

PP BLACK

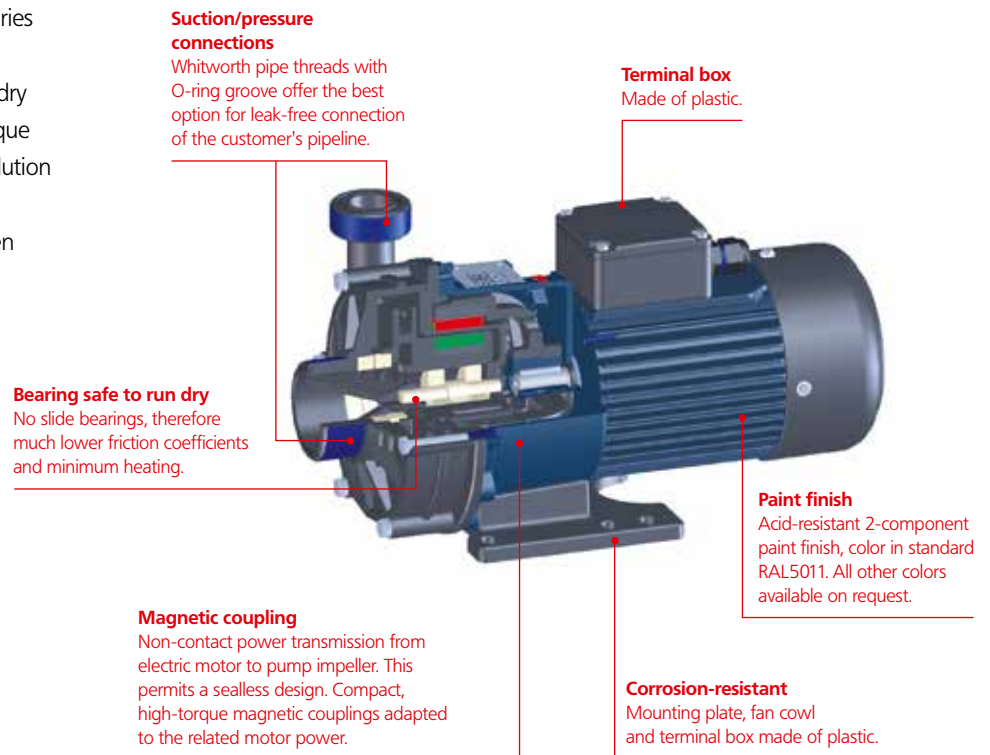
PVDF NATURAL

Compelling product advantages – our ideas, your benefit

The bearing system in the RM-TS series has been specially developed by RENNER and guarantees unlimited dry run capability. These pumps are unique worldwide and provide the ideal solution for applications with unavoidable emptying of process tanks, e.g. when emptying tanker trucks.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +70 °C
- PVDF 0 to +80 °C



Drives

- Motor power: 0.25 kW–1.5 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Low-voltage DC motors 12 V–48 V
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

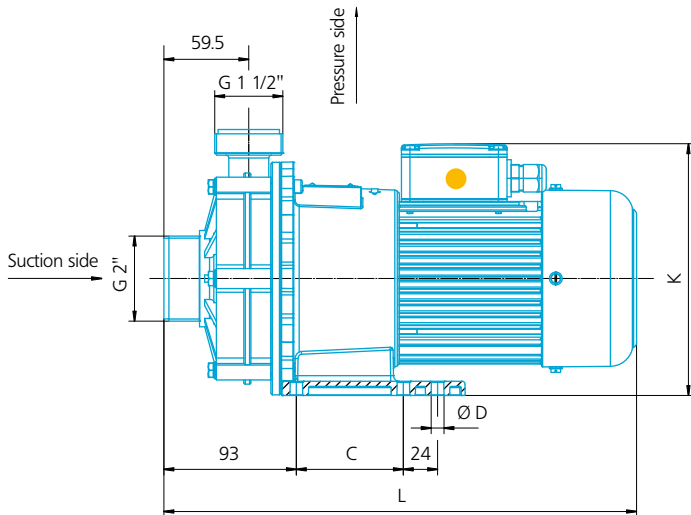
Magnetically coupled centrifugal pump

Series RM-TS 3

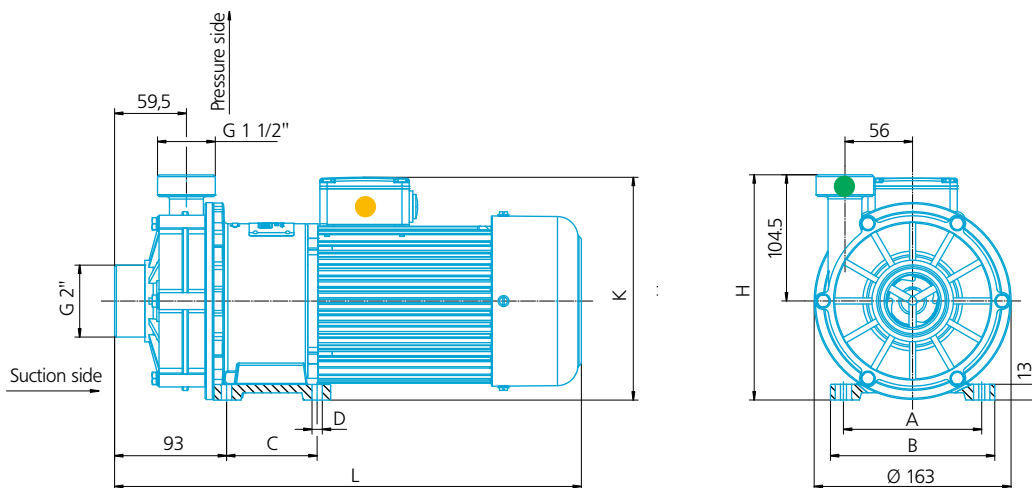
Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type G 2" / G 1 1/2" 0.25 kW–0.65 kW



Type G 2" / G 1 1/2" 0.75 kW–1.5 kW



● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Size	
	Max. delivery head H_{max}
	Max. flow rate Q_{max}
	Max. density at Q_{max}^{**}
Motor power	
	Rated current at 400 V 3-ph. 50 Hz
	Rated current at 230 V 1-ph. 50 Hz
	Rated speed at 50 Hz
	Rated speed at 60 Hz
	Dimension L
	Dimension H
	Dimension K
	Dimension A
	Dimension B
	Dimension C
	Dimension D
	Weight approx. [PP / PVDF]
	Suction connection
	Pressure connection

Technical data

	10/120			12/150			14/180			16/200			20/200		
[mH ₂ O]	9	9	9	12	12	12	13	13	13	16	16	16	19	19	19
[l/min]	120	120	120	160	160	160	170	170	170	180	180	180	230	230	230
[g/cm ³]	1.1	1.7	2.2	1.20	1.8	2.2	1.0	1.5	2.0	1.3	1.8	2.2	1.1	1.5	2.1
[kW]	0.25	0.37	0.55	0.37	0.55	0.75	0.37	0.55	0.75	0.55	0.75	1.1	0.75	1.1	1.5
[A]	0.68	1.1	1.45	1.1	1.45	1.9	1.1	1.45	1.9	1.45	1.9	3.0	1.9	3.0	3.25
[A]	1.7	2.7	3.5	2.7	3.5	4.8	2.7	3.5	4.8	3.5	4.8	6.4	4.8	6.4	8.2
[rpm]	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750	2750
[rpm]	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400	3400
[mm]	331	331	341	331	341	387	331	341	387	341	417	430	417	430	430
[mm]	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5	186.5
[mm]	177	177	177	177	177	184	177	177	184	177	184	191.5	184	191.5	191.5
[mm]	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5	114.5
[mm]	138.5	138.5	138.5	138.5	138.5	136	138.5	138.5	136	138.5	136	136	136	136	136
[mm]	75	75	75	75	75	75	75	75	75	75	75	75	75	75	75
[mm]	9	9	9	9	9	8.5	9	9	8.5	9	8.5	8.5	8.5	8.5	8.5
[kg]	6.5 / 70	70 / 75	8.5 / 9.0	70 / 75	8.5 / 9.0	12.0 / 12.5	70 / 75	8.5 / 9.0	12.0 / 12.5	8.5 / 9.0	12.0 / 12.5	14.5 / 15.0	12.0 / 12.5	14.5 / 15.0	16.0 / 170
["]	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2
["]	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 2.5 bar
- PVDF 3.5 bar

Magnetically coupled centrifugal pump

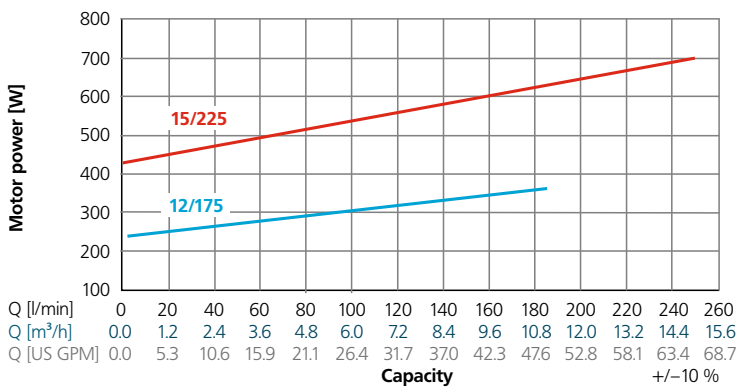
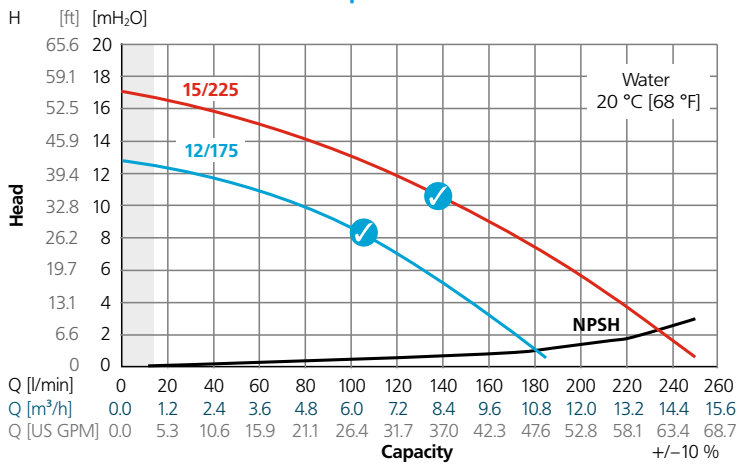
Series RMB 3.1

Self-priming

Single-stage, horizontal and manufactured in monobloc design.



RMB 3.1 performance curves



46 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP white



- PVDF natural (without additional fillers)



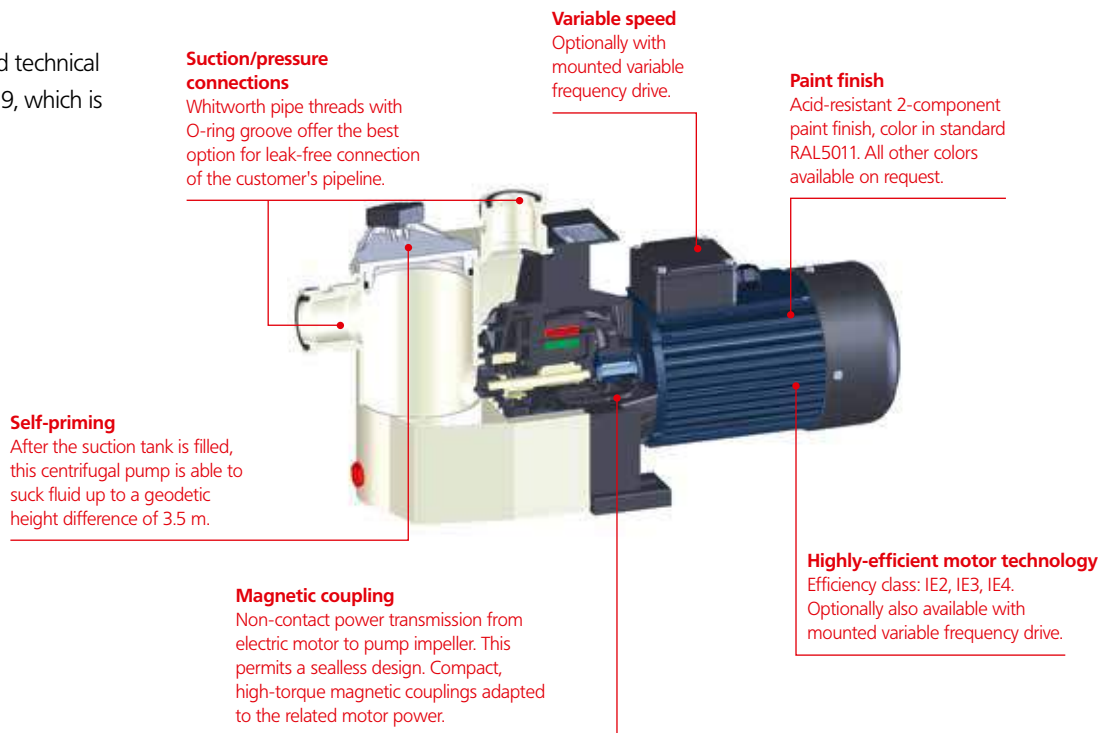
PP WHITE

PVDF NATURAL

Compelling product advantages – our ideas, your benefit

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +65°C
- PVDF -20 to +85°C



Drives

- Motor power: 0.55 kW–0.75 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

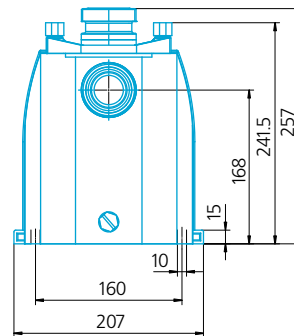
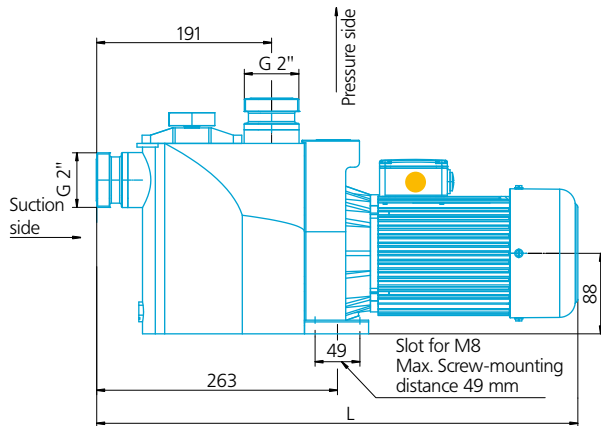
Magnetically coupled centrifugal pump

Series RMB 3.1

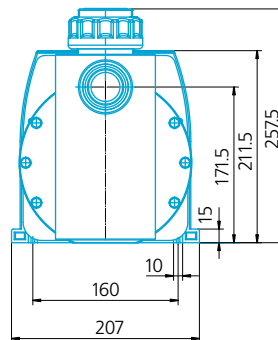
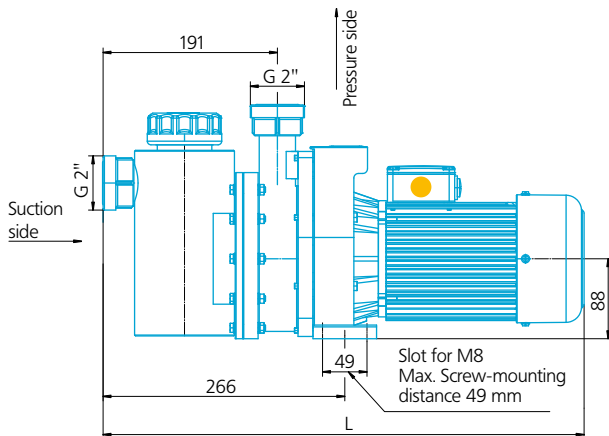
Self-priming

Single-stage, horizontal and manufactured in monobloc design.

Type 0.55 kW–0.75 kW PP








Type 0.55 kW–0.75 kW PVDF



● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

Technical data

Size		12/175		15/225	
	Max. delivery head H_{\max}	[mH ₂ O]	13	13	16
	Max. flow rate Q_{\max}	[l/min]	180	180	230
	Max. suction lift at 20 °C	[mH ₂ O]	3.0	3.0	3.5
	Max. density at Q_{\max} **	[g/cm ³]	1.4	1.8	1.0
	Max. temperature PP	[°C]	65	65	65
	Max. temperature PVDF	[°C]	85	85	85
	Motor power	[kW]	0.55	0.75	0.75
	Rated current at 400 V 3-ph. 50 Hz	[A]	1.6	1.9	1.9
	Rated speed at 50 Hz	[rpm]	2750	2750	2750
	Rated speed at 60 Hz	[rpm]	3400	3400	3400
	Dimension L	[mm]	510	530	530
	Weight approx. [PP / PVDF]	[kg]	10.0 / 12.5	13.5 / 15.5	13.5 / 15.5
	Suction connection	["]	G 2	G 2	G 2
	Pressure connection	["]	G 2	G 2	G 2

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 2.5 bar
- PVDF 3.5 bar

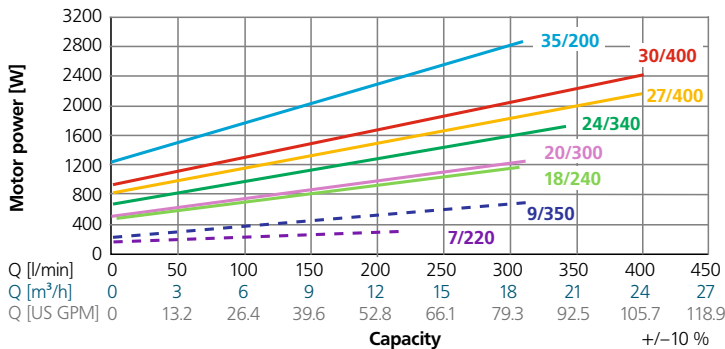
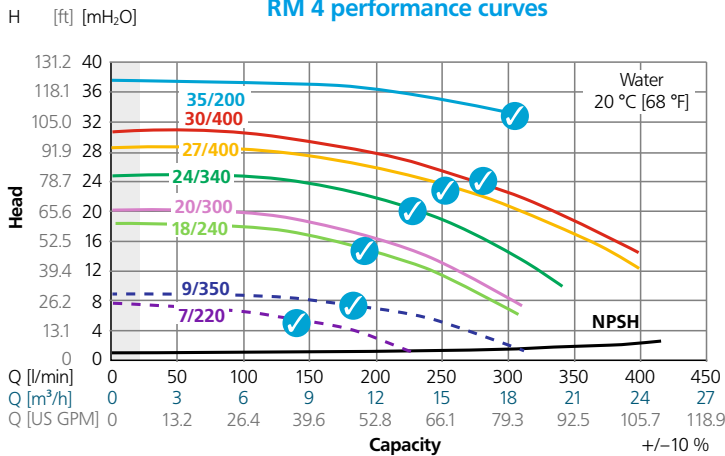
Magnetically coupled centrifugal pump

Series RM 4

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 4 performance curves



50

Note: Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black, gray or natural (available with and without additional fillers)

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



- Stainless steel

STAINLESS STEEL



Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.

Suction/pressure connections

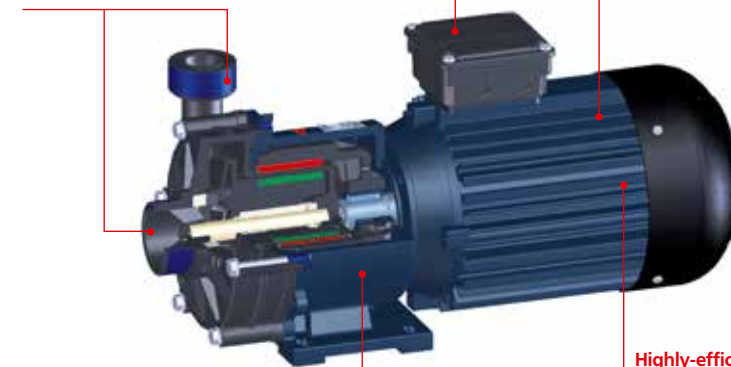
Whitworth pipe threads with O-ring groove offer the best option for leak-free connection of the customer's pipeline.

Terminal box

Made of plastic.

Paint finish

Acid-resistant 2-component paint finish, color in standard RAL5011. All other colors available on request.



Magnetic coupling

Non-contact power transmission from electric motor to pump impeller. This permits a sealless design. Compact, high-torque magnetic couplings adapted to the related motor power.

Highly-efficient motor technology

Efficiency class: IE2, IE3, IE4. Optionally also available with mounted variable frequency drive.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 0.55 kW–5.5 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

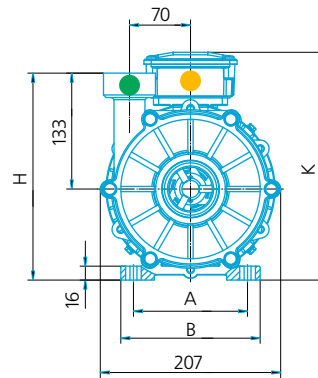
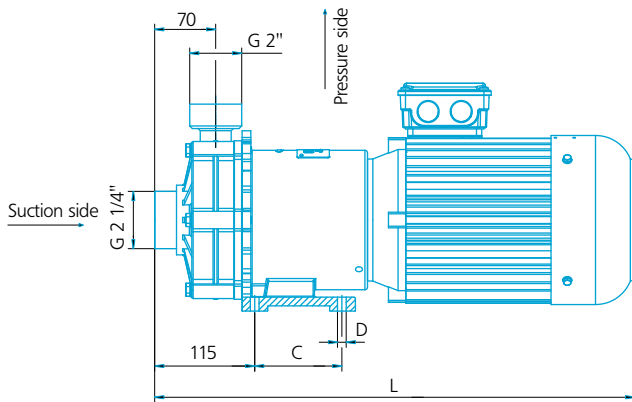
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

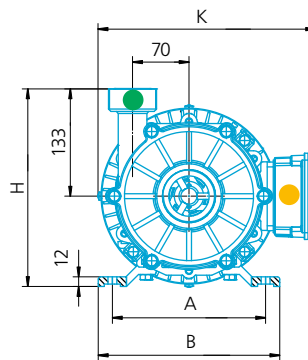
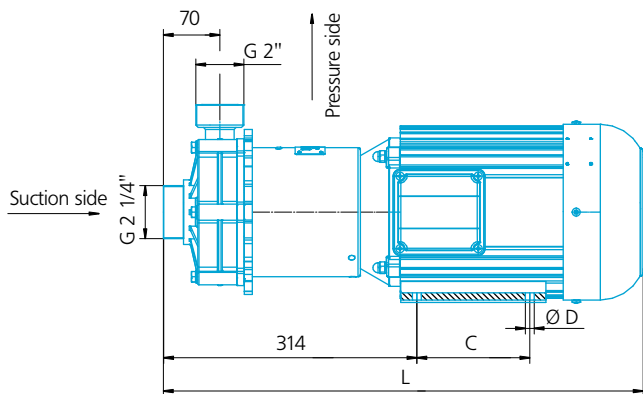
Series RM 4

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 0.75 kW–4.0 kW



Type 5.5 kW



Size	
	Max. delivery head H_{max}
	Max. flow rate Q_{max}
	Max. density at Q_{max}^{**}
	Motor power
	Rated current at 400 V 3-ph. 50 Hz
	Rated speed at 50 Hz
	Rated speed at 60 Hz
	Dimension L
	Dimension H
	Dimension K
	Dimension A
	Dimension B
	Dimension C
	Dimension D
	Weight approx. [PP / PVDF]
	Weight approx. [stainless steel]
	Suction connection
	Pressure connection

- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

- **Pressure connection port position**

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

	7/220		9/350		18/240			20/300			24/340			27/400				30/400				35/200	
[mH ₂ O]	7	9	9	9	18	18	18	20	20	20	24	24	24	27	27	27	27	30	30	30	30	35	35
[l/min]	220	300	300	300	300	300	300	300	300	300	350	350	350	400	400	400	400	400	400	400	400	300	300
[g/cm ³]	1.7	1.0	1.5	2.0	1.0	1.3	2.0	1.2	1.7	2.4	1.2	1.7	2.2	1.0	1.3	1.7	2.2	1.0	1.3	1.7	2.2	1.0	1.35
[kW]	0.55	0.75	1.1	1.5	1.1	1.5	2.2	1.5	2.2	3.0	2.2	3.0	4.0	2.2	3.0	4.0	5.5	2.2	3.0	4.0	5.5	3.0	4.0
[A]	1.8	1.8	2.6	3.4	3.0	3.25	4.75	3.25	4.75	6.0	4.75	6.0	8.6	4.75	6.0	8.6	10.3	4.75	6.0	8.6	10.3	6.0	8.6
[rpm]	1450	1450	1450	1450	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900
[rpm]	1750	1750	1750	1750	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
[mm]	455	452	556	616	452	452	532	452	532	552	532	552	552	532	552	552	610	532	552	552	610	552	552
[mm]	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	245	2375	2375	2375	245	2375	2375
[mm]	213	213	225	225	213	213	225	213	225	261.5	225	261.5	261.5	225	261.5	261.5	270	225	261.5	261.5	270	261.5	261.5
[mm]	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	190	131	131	131	190	131	131
[mm]	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	225	160	160	160	225	160	160
[mm]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	140	100	100	100	140	100	100
[mm]	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	11	10	10	10	11	10	10
[kg]	15 / 17	20 / 22	21 / 23	22 / 24	17 / 19	18 / 20	23 / 27	18 / 20	23 / 27	36 / 37	23 / 27	36 / 37	38 / 40	23 / 27	36 / 37	38 / 40	56 / 58	24 / 28	37 / 38	38 / 40	56 / 58	37 / 38	39 / 41
[kg]	36	39	43	48	36	37	42	38	44	55	44	55	57	44	55	57	75	44	55	57	75	56	58
["]	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4
["]	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar
- Stainless steel 10.0 bar

Magnetically coupled centrifugal pump

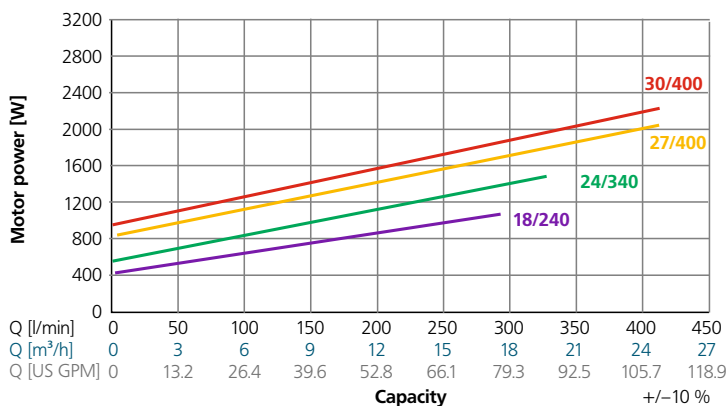
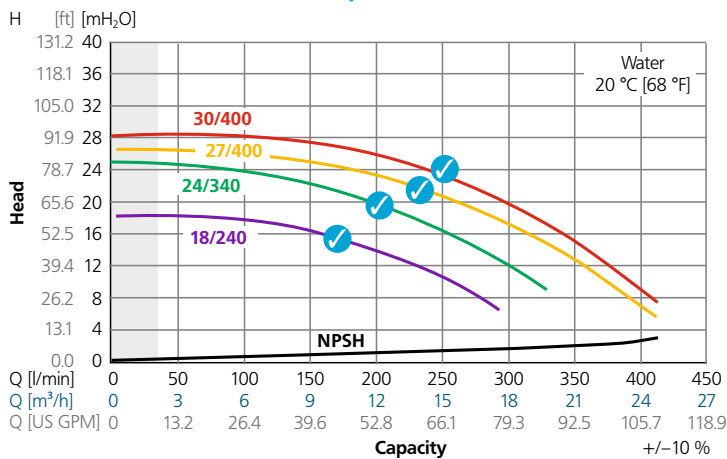
Series RM-TS 4

Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM-TS 4 performance curves



Note: Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



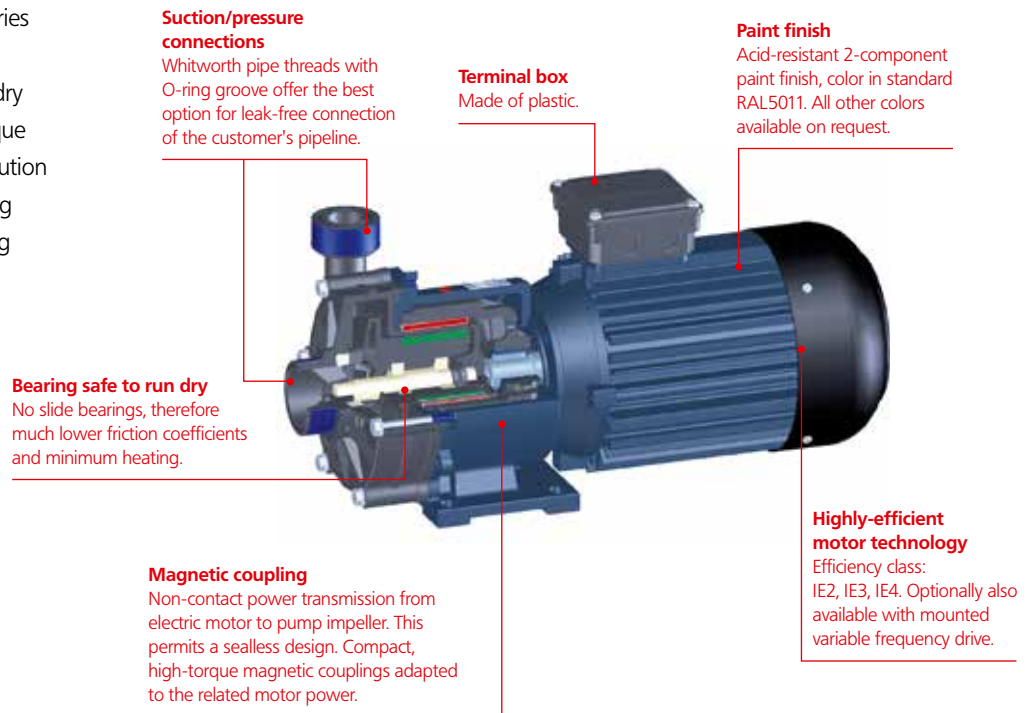
- Material pairings for "TS" bearing system: SIC/PTFE/PEEK or SIC/PTFE/PPS-HPV

Compelling product advantages – our ideas, your benefit

The bearing system in the RM-TS series has been specially developed by RENNER and guarantees unlimited dry run capability. These pumps are unique worldwide and provide the ideal solution for applications that require emptying of process tanks, e.g. when emptying tanker trucks.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +70 °C
- PVDF 0 to +80 °C



Drives

- Motor power: 1.1 kW–4.0 kW
- All common worldwide voltages/frequencies
- Asynchronous single- or three-phase
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

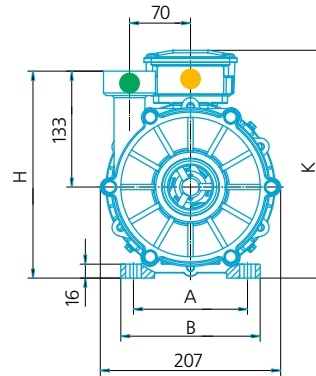
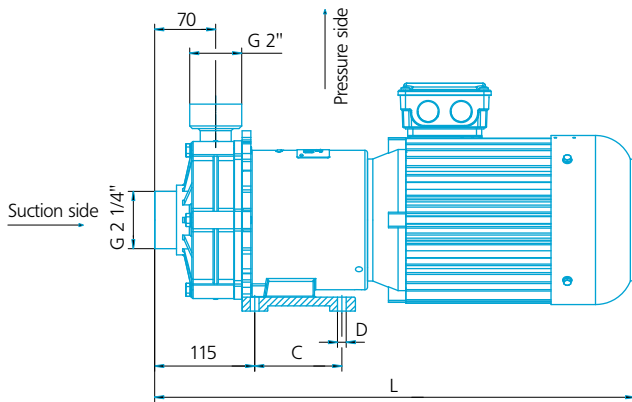
Magnetically coupled centrifugal pump

Series RM-TS 4

Safe to run dry

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 1.1 kW–4.0 kW







- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

- **Pressure connection port position**

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		18/240			24/340			27/400			30/400		
	Max. delivery head H_{\max}	[mH ₂ O]	18	18	18	24	24	24	27	27	27	28	28
	Max. flow rate Q_{\max}	[l/min]	300	300	300	330	350	350	400	400	400	400	400
	Max. density at Q_{\max}**	[g/cm ³]	1.0	1.3	2.0	1.0	1.4	1.8	1.0	1.3	1.7	1.3	1.7
	Motor power	[kW]	1.1	1.5	2.2	1.5	2.2	3.0	2.2	3.0	4.0	3.0	4.0
	Rated current at 400 V 3-ph. 50 Hz	[A]	3.0	3.25	4.75	3.25	4.75	6.0	4.75	6.0	8.6	6.0	8.6
	Rated speed at 50 Hz	[rpm]	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900
	Rated speed at 60 Hz	[rpm]	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
	Dimension L	[mm]	452	452	532	484	552	552	532	552	552	552	552
	Dimension H	[mm]	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375	2375
	Dimension K	[mm]	213	213	225	213	225	261.5	225	261.5	261.5	261.5	261.5
	Dimension A	[mm]	131	131	131	131	131	131	131	131	131	131	131
	Dimension B	[mm]	160	160	160	160	160	160	160	160	160	160	160
	Dimension C	[mm]	100	100	100	100	100	100	100	100	100	100	100
	Dimension D	[mm]	10	10	10	10	10	10	10	10	10	10	10
	Weight approx. [PP / PVDF]	[kg]	17 / 19	18 / 20	23 / 27	20 / 22	23 / 27	36 / 37	23 / 27	36 / 37	38 / 40	37 / 38	38 / 40
	Suction connection	["]	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4
	Pressure connection	["]	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2	G 2

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar

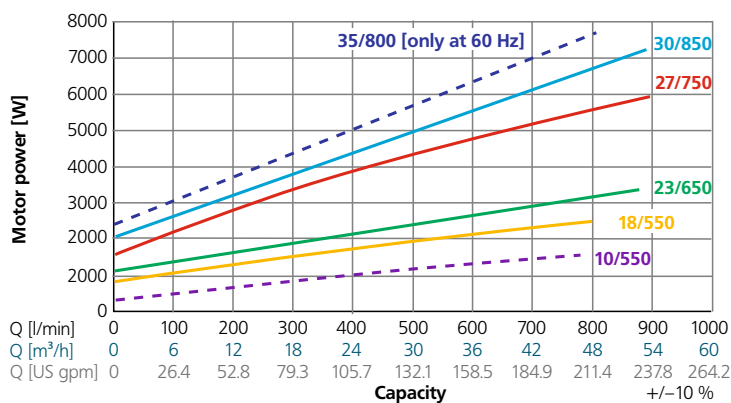
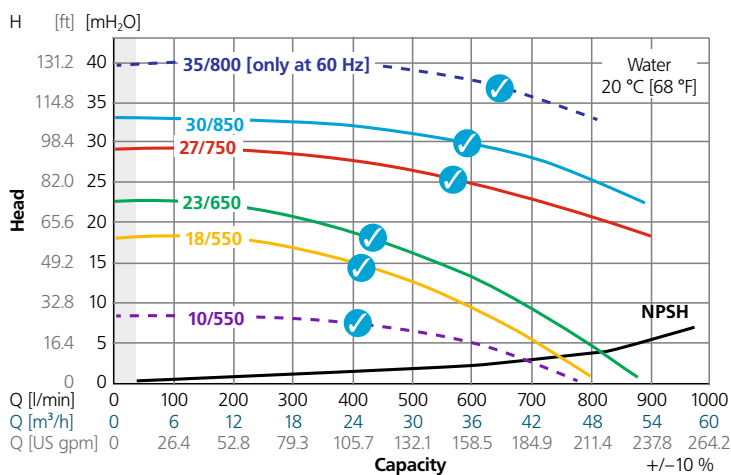
Magnetically coupled centrifugal pump

Series RM 4.5

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 4.5 performance curves



58 **Note:** Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP gray, black or natural (available with and without additional fillers)

PP GRAY



PVDF NATURAL

- PVDF natural (without additional fillers)



Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.

Suction/pressure connections

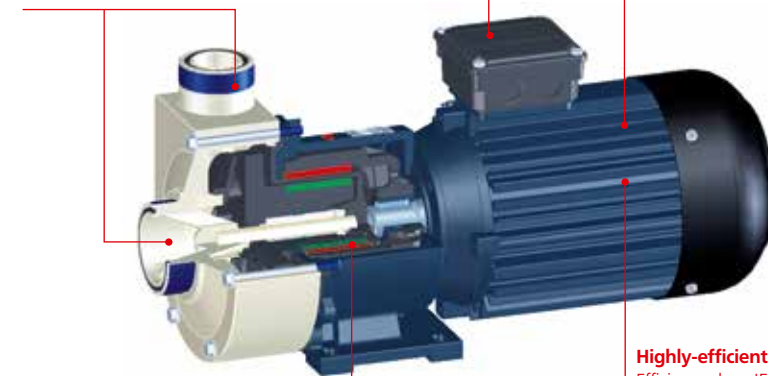
Whitworth pipe threads with O-ring groove offer the best option for leak-free connection of the customer's pipeline.

Terminal box

Made of plastic.

Paint finish

Acid-resistant 2-component paint finish, color in standard RAL5011. All other colors available on request.



Magnetic coupling

Non-contact power transmission from electric motor to pump impeller. This permits a sealless design. Compact, high-torque magnetic couplings adapted to the related motor power.

Highly-efficient motor technology

Efficiency class: IE2, IE3, IE4. Optionally also available with mounted variable frequency drive.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 2.2 kW–15.0 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

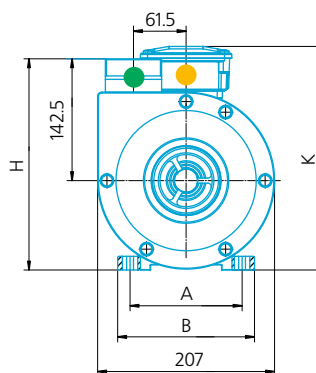
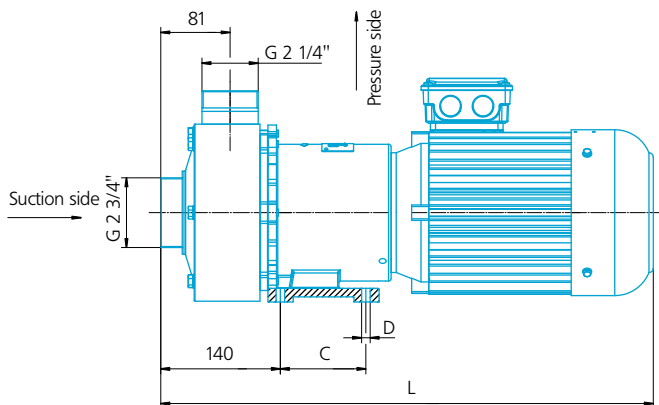
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

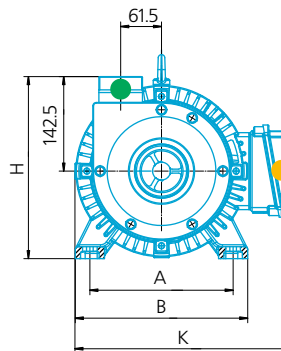
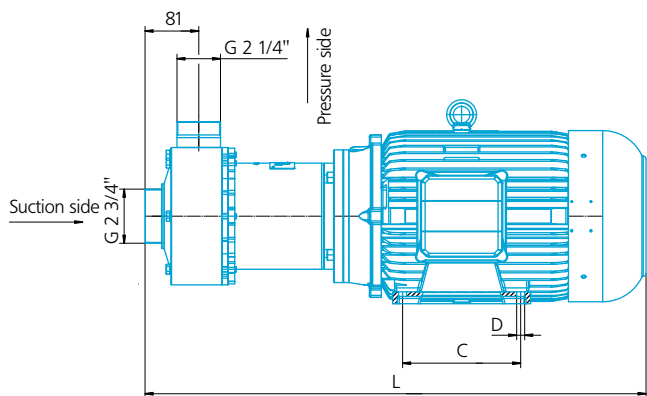
Series RM 4.5

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 2.2 kW–4.0 kW



Type 5.5 kW–15.0 kW



Size	
	Max. delivery head H_{max}
	Max. flow rate Q_{max}
	Max. density at Q_{max}^{**}
	Motor power
	Rated current at 400 V 3-ph. 50 Hz
	Rated speed at 50 Hz
	Rated speed at 60 Hz
	Dimension L
	Dimension L with IE3 motor
	Dimension H
	Dimension K
	Dimension A
	Dimension B
	Dimension C
	Dimension D
	Weight approx. [PP / PVDF] with IE2 motor
	Weight approx. [PP / PVDF] with IE3 motor
	Weight approx. [stainless steel]
	Suction connection
	Pressure connection

● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

	10/550		18/550			23/650			27/750			30/850			35/800 *		
[mH ₂ O]	8.5	8.5	18	18	18	23	23	23	29	29	29	33	33	33	40	40	40
[l/min]	780	780	700	700	700	900	900	900	800	900	900	900	900	900	800	800	800
[g/cm ³]	1.37	1.9	1.2	1.6	2.2	1.1	1.5	2.1	1.0	1.25	1.8	1.0	1.5	2.0	1.0	1.45	1.9
[kW]	2.2	3.0	3.0	4.0	5.5	4.0	5.5	7.5	5.5	7.5	11	7.5	11	15	7.5	11	15
[A]	5.3	6.7	6.0	8.6	10.3	8.6	10.3	13.5	10.5	13.5	22.0	13.5	22.0	27.0	13.5	22.0	27.0
[rpm]	1450	1450	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	-	-	-
[rpm]	1750	1750	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
[mm]	606	636	547	577	630	577	630	700	630	700	785	700	785	800	700	785	800
[mm]	620	620	560	620	700	620	700	735	700	735	785	735	785	800	735	785	800
[mm]	247	247	247	247	255	247	255	275	255	275	275	275	275	275	275	275	275
[mm]	230	262	262	262	270	262	270	331	270	331	324	331	324	324	331	324	324
[mm]	131	131	131	131	190	131	190	216	190	216	216	216	216	216	216	216	216
[mm]	160	160	160	160	225	160	225	256	225	256	266	256	266	266	256	266	266
[mm]	100	100	100	100	140	100	140	140	140	140	178	140	178	178	140	178	178
[mm]	10	10	10	10	Ø 11	10	Ø 11	Ø 12	Ø 11	Ø 12	Ø 12	Ø 12	Ø 12	Ø 12	Ø 12	Ø 12	Ø 12
[kg]	42 / 44	44 / 46	35 / 37	37 / 39	58 / 60	37 / 39	58 / 60	91 / 95	59 / 61	92 / 96	92 / 96	92 / 96	92 / 96	100 / 105	92 / 96	92 / 96	100 / 105
[kg]	44 / 46	46 / 48	40 / 42	42 / 44	96 / 98	42 / 44	96 / 98	99 / 103	96 / 98	99 / 103	99 / 103	99 / 103	100 / 105	100 / 105	99 / 103	100 / 105	100 / 105
[kg]	50	54	-	-	-	-	-	-	105	110	110	-	-	-	-	-	-
["]	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4
["]	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4

* Only in 60 Hz version.

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar
- Stainless steel 10.0 bar

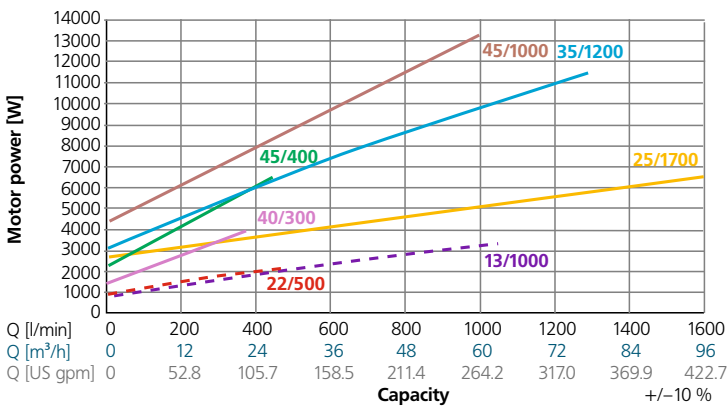
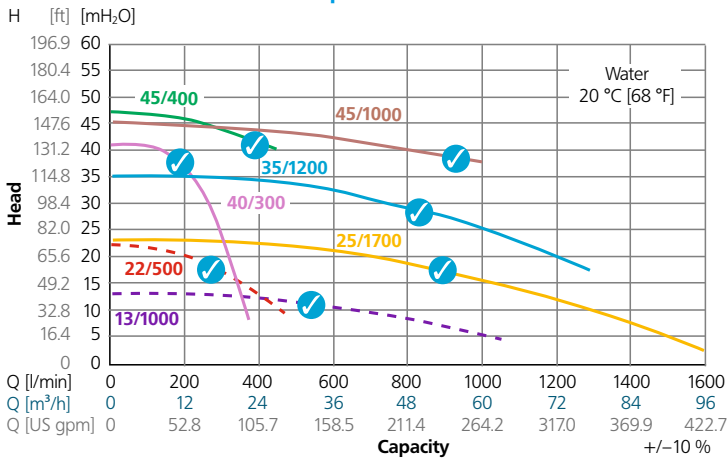
Magnetically coupled centrifugal pump

Series RM 5

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



RM 5 performance curves



Note: Our performance curves apply for both 50 Hz and 60 Hz operation. Performance curves which can be achieved only in 60 Hz are identified accordingly.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP gray, black or natural (available with and without additional fillers)

PP GRAY



- PVDF natural (without additional fillers)

PVDF NATURAL



Compelling product advantages – our ideas, your benefit

This RM series comprises the classic version of magnetically coupled, sealless centrifugal pumps. The robust design combined with optimally matched pump and drive technologies guarantees a safe choice in continuous operation for practically every application.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.

Suction/pressure connections

Flanges to DIN or Whitworth pipe threads with O-ring groove offer the best option for leak-free connection to the customer's pipeline.

Paint finish

Acid-resistant 2-component paint finish, color in standard RAL5011. All other colors available on request.



Magnetic coupling

Non-contact power transmission from electric motor to pump impeller. This permits a sealless design. Compact, high-torque magnetic couplings adapted to the related motor power.

Highly-efficient motor technology

Efficiency class: IE2, IE3, IE4. Optionally also available with mounted variable frequency drive.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF –20 to +95 °C



Drives

- Motor power: 2.2 kW–22.0 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

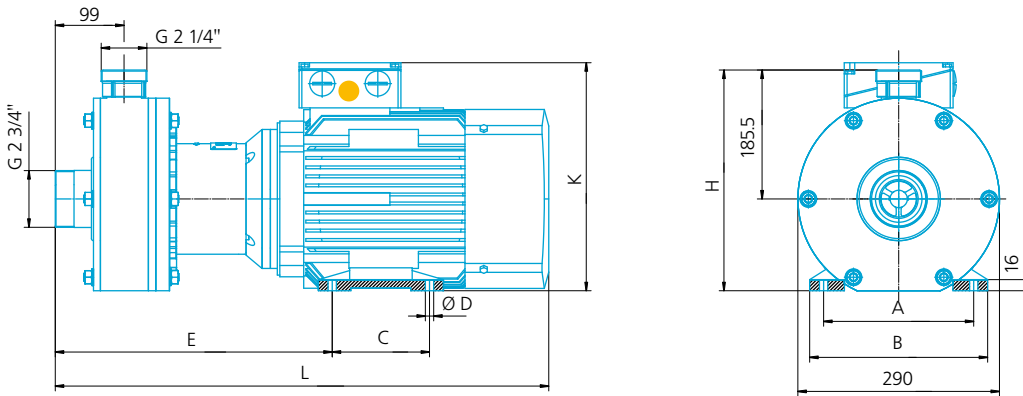
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

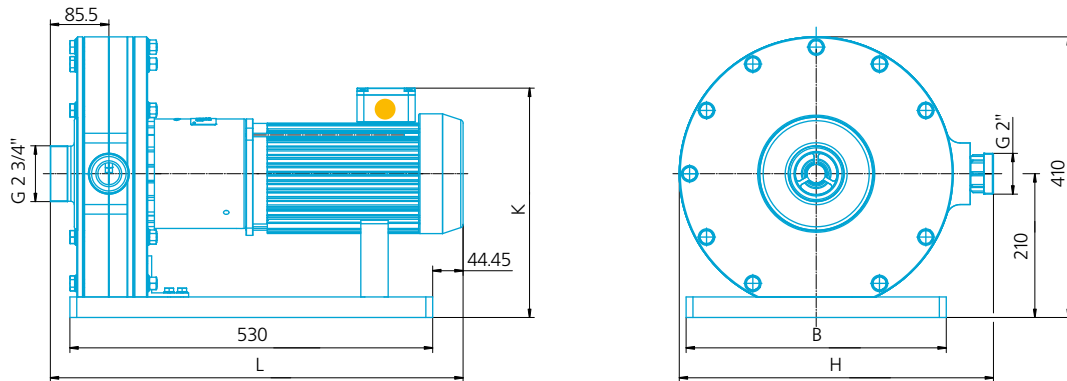
Series RM 5

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

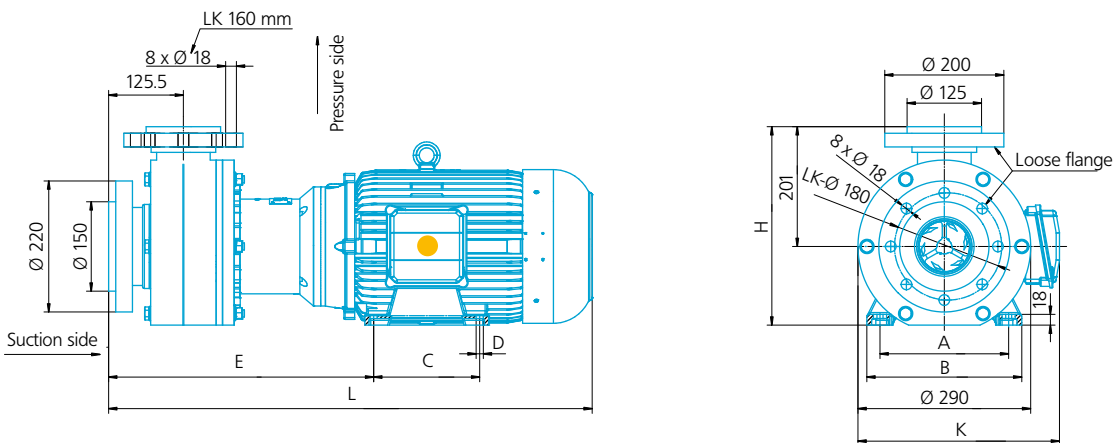
Type 7.5–15.0 kW 2-pole “High-pressure housing” with threaded connections



Type 2.2 kW 4-pole



Type 5.5 kW 4-pole and 7.5 kW–15.0 kW 2-pole “Large flow rate” with flange connections



- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

Size



Technical data

	22/500	13/1000		40/300		45/400		25/1700			35/1200		45/1000	
Max. delivery head H_{max} [mH ₂ O]	22	13	13	40	40	47	47	24	24	24	36	36	45	45
Max. flow rate Q_{max} [l/min]	500	1200	1200	400	400	450	450	1700	1700	1700	1200	1400	800	1200
Max. density at Q_{max}** [g/cm ³]	1.0	1.0	1.4	1.0	1.4	1.15	1.4	1.1	1.6	2.0	1.0	1.35	1.0	1.1
Motor power [kW]	2.2	4.0	5.5	4.0	5.5	7.5	11.0	7.5	11.0	15.0	11.0	15.0	11.0	15.0
Rated current at 400 V3-ph. 50 Hz [A]	5.0	8.2	10.6	8.6	10.3	13.5	19.1	13.5	19.1	26.0	19.1	26.0	19.1	26.0
Rated speed at 50 Hz [rpm]	1450	1450	1450	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900	2900
Rated speed at 60 Hz [rpm]	1750	1750	1750	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	3500
Dimension L [mm]	605	716	757	616	670	710	760	757	771	815	771	815	771	815
Dimension L with IE3 motor [mm]	-	751	757	659	750	760	835	757	771	815	771	815	771	815
Dimension H [mm]	459	345	333	330	330	317.5	345.5	333	361	361	361	361	361	361
Dimension K [mm]	335	290	328	302	328	340	410	340	410	410	410	410	410	410
Dimension A [mm]	-	206	216	206	206	216	254	216	254	254	254	254	254	254
Dimension B [mm]	380	250	260	250	250	260	314	260	314	314	314	314	314	314
Dimension C [mm]	-	120	178	120	120	178	254	178	254	254	254	254	254	254
Dimension D [mm]	-	Ø 13	Ø 12	Ø 13	Ø 13	Ø 12	Ø 14.5	Ø 12	Ø 14.5	Ø 14.5	Ø 14.5	Ø 14.5	Ø 14.5	Ø 14.5
Dimension E [mm]	-	256.5	445	210.5	210.5	398.5	417.5	445	464	464	464	464	464	464
Weight approx. [PP / PVDF] with IE2 motor [kg]	55	65 / 75	70 / 80	55 / 63	60 / 70	97 / 102	132 / 136	97 / 102	170 / 180	170 / 180	170 / 180	170 / 180	170 / 180	170 / 180
Weight approx. [PP / PVDF] with IE3 motor [kg]	58	68 / 78	100 / 110	58 / 66	90 / 100	100 / 105	135 / 140	100 / 105	190 / 200	190 / 200	190 / 200	190 / 200	190 / 200	190 / 200
Suction connection	G 2 3/4"	FF d110	FF d110	G 2 3/4"	G 2 3/4"	G 2 3/4"	G 2 3/4"	FF d110	FF d110	FF d110	FF d110	FF d110	FF d110	FF d110
Pressure connection	G 2"	FF d90	FF d90	G 2 1/4"	G 2 1/4"	G 2 1/4"	G 2 1/4"	FF d90	FF d90	FF d90	FF d90	FF d90	FF d90	FF d90

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 6.0 bar
- PVDF 6.0 bar

Magnetically coupled centrifugal pump

Series RM-KM

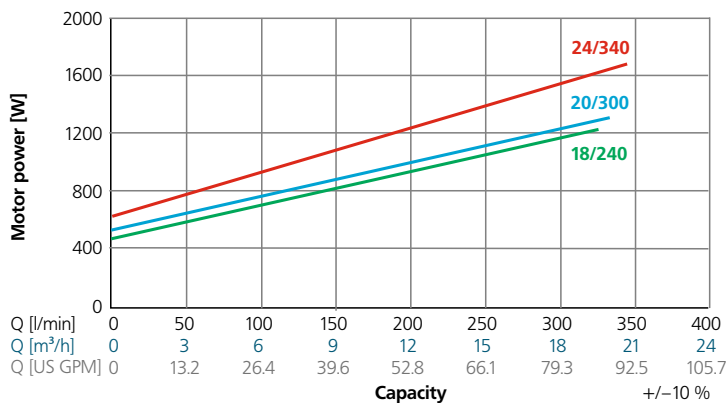
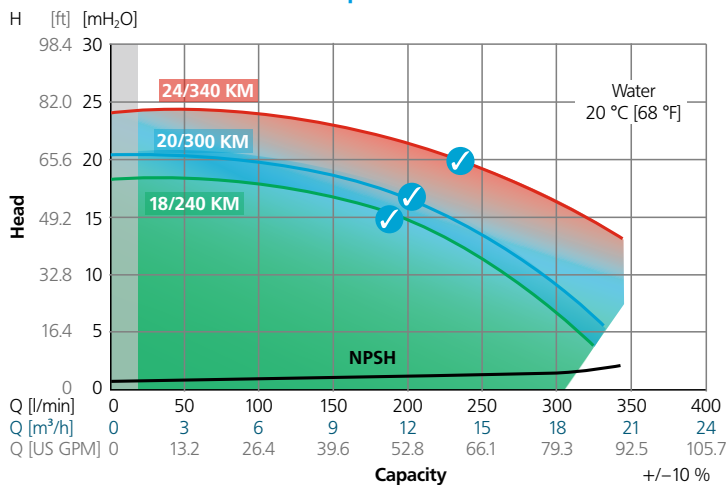
Completely encapsulated in plastic

Normal-priming, single-stage, horizontal and manufactured in monobloc design.



PM synchronous motor, therefore suitable only for variable frequency drive operation.

RM-KM performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP gray, black or natural (available with and without additional fillers)

PP GRAY



PVDF NATURAL

- PVDF natural (without additional fillers)

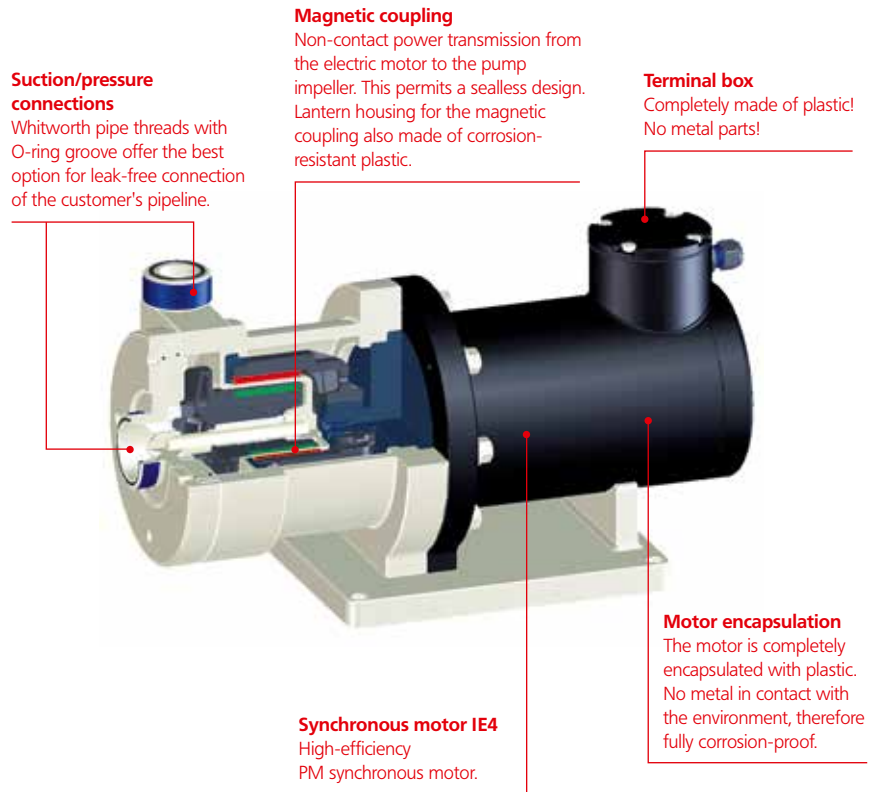


Compelling product advantages – our ideas, your benefit

These pumps from the RM-KM series offer comprehensive corrosion protection. The pumps of the RM-KM series are characterized by complete plastic encapsulation of the pump and drive motor as well as fanless cooling.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 1.3 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +90 °C



Drives

- Motor power: 1.5 kW
- All common worldwide voltages/frequencies
- PM synchronous (completely encapsulated with plastic)
- Protection class: IP67
- Thermal protection
- Motor cooling IC 410 (surface cooling)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

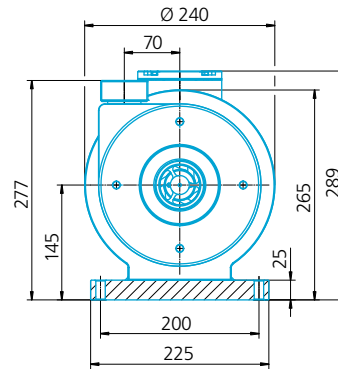
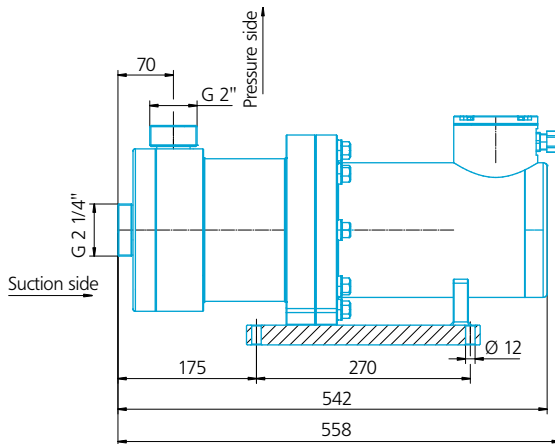
Magnetically coupled centrifugal pump

Series RM-KM





Completely encapsulated in plastic

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

Type 1.5 kW



Technical data

Size		18/240	20/300	24/340	
	Max. delivery head H_{\max}	[mH ₂ O]	18	20	24
	Max. flow rate Q_{\max}	[l/min]	300	300	280
	Max. density at Q_{\max} **	[g/cm ³]	1.3	1.1	1.1
	Motor power	[kW]	1.5	1.5	1.5
	Rated current	[A]	2.4	2.4	2.4
	Rated speed	[rpm]	3000	3000	3000
	Weight approx. [PP]	[kg]	32	32	32
	Suction connection	["]	G 2 1/4	G 2 1/4	G 2 1/4
	Pressure connection	["]	G 2	G 2	G 2

** All pumps are also available with smaller impeller diameters for liquids with higher specific weights. However, the flow rates and delivery heads are then reduced accordingly. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar

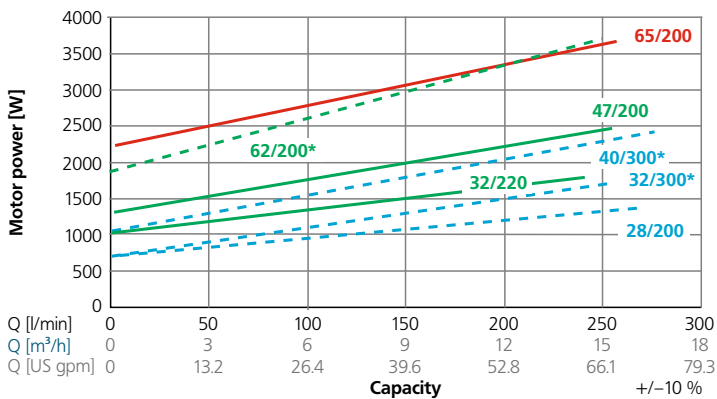
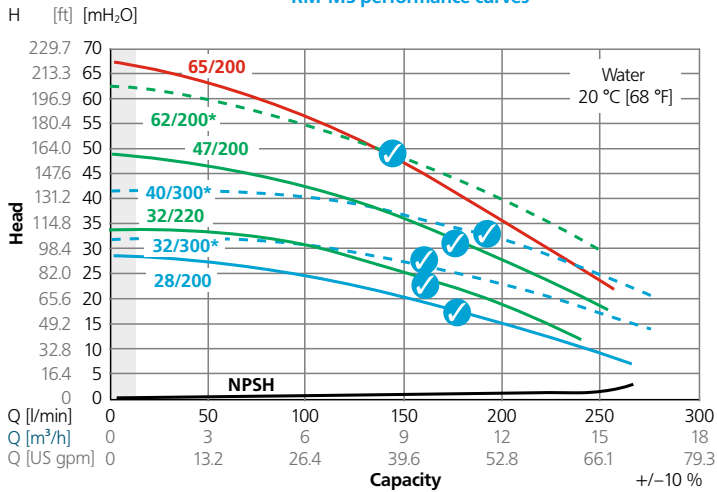
Magnetically coupled centrifugal pump

Series RM-MS

Normal-priming, multi-stage, horizontal and manufactured in monobloc design.



RM-MS performance curves



70

— 3-stage 50 Hz — 2-stage 50 Hz - - 2-stage 60 Hz
 — 1-stage 50 Hz - - 1-stage 60 Hz

*Only for 60 Hz operation.



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP gray or natural (available with and without additional fillers)

PP GRAY



- PVDF natural (without additional fillers)

PVDF NATURAL

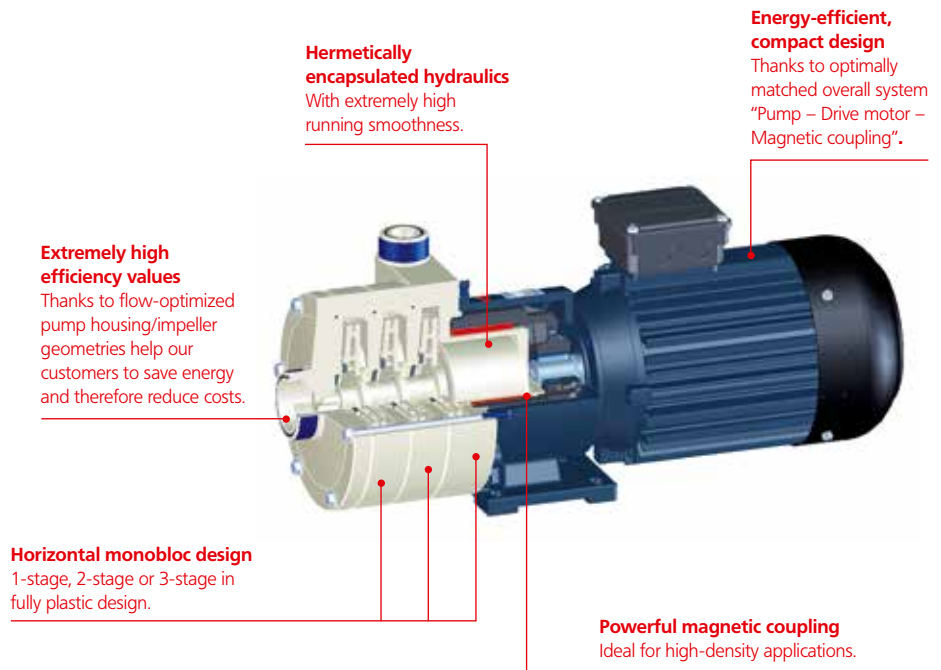


Compelling product advantages – our ideas, your benefit

These multi-stage centrifugal pumps from the RM-MS series in fully plastic design are unique in the world. They were developed specifically to efficiently convey aggressive media at high pressures in combination with low flow rates.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Hermetically encapsulated hydraulics
 With extremely high running smoothness.

Energy-efficient, compact design
 Thanks to optimally matched overall system "Pump – Drive motor – Magnetic coupling".

Extremely high efficiency values
 Thanks to flow-optimized pump housing/impeller geometries help our customers to save energy and therefore reduce costs.

Horizontal monobloc design
 1-stage, 2-stage or 3-stage in fully plastic design.

Powerful magnetic coupling
 Ideal for high-density applications.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80°C
- PVDF –20 to +90°C



Drives

- Motor power: 1.5 kW–4.0 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- PM synchronous
- Protection classes: IP55, IP56, IP66, IP67, IP68
- Thermal protection
- Tropical insulation
- Anti-condensation heater
- VIK version
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan), IC 410 (surface cooling)
- Explosion-protected motors (ATEX)



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Accessories

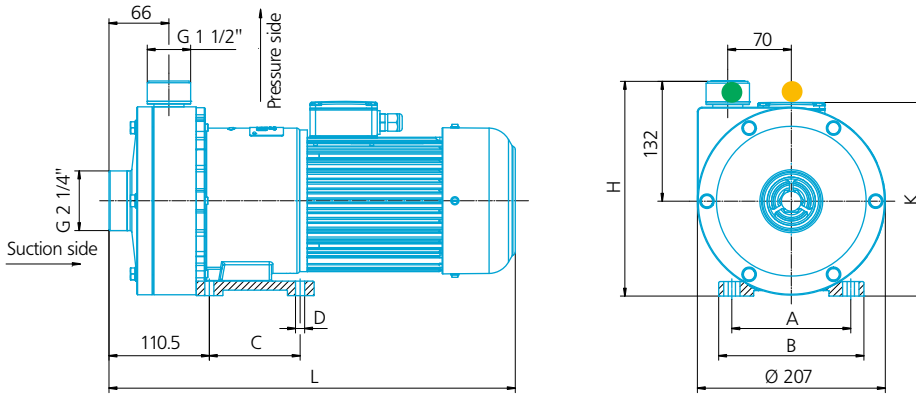
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

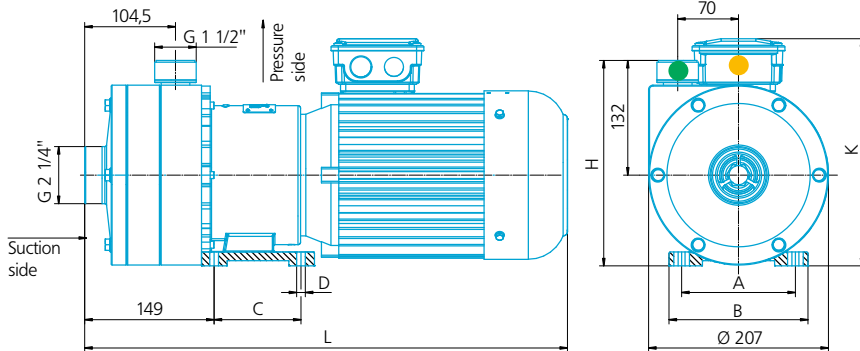
Series RM-MS

Normal-priming, multi-stage, horizontal and manufactured in monobloc design.

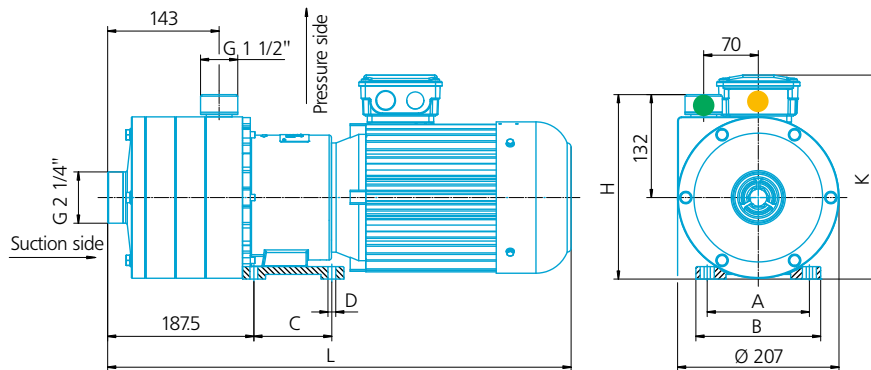
Type 1.5–4.0 kW 1-stage



Type 2.2–4.0 kW 2-stage



Type 3.0–4.0 kW 3-stage



● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Size	
Number of stages	
	Max. delivery head H_{max} [mH ₂ O]
	Max. flow rate Q_{max} [l/min]
	Max. density at Q_{max} [g/cm ³]
	Motor power [kW]
	Rated current at 400 V 3-ph. 50 Hz [A]
	Rated speed at 50 Hz [rpm]
	Rated speed at 60 Hz [rpm]
	Dimension L [mm]
	Dimension L with IE3 motor [mm]
	Dimension H [mm]
	Dimension K [mm]
	Dimension A [mm]
	Dimension B [mm]
	Dimension C [mm]
	Dimension D [mm]
	Weight approx. [PP / PVDF] with IE2 motor [kg]
	Weight approx. [PP / PVDF] with IE3 motor [kg]
	Suction connection ["]
	Pressure connection ["]

Technical data

1-stage										2-stage						3-stage			
28/200 1-stage			32/300 * 1-stage (only for 60 Hz)				40/300 * 1-stage (only for 60 Hz)			32/220 2-stage			47/200 2-stage			62/200 * 2-stage (only for 60 Hz!)		65/200 3-stage	
28	28	28	32	32	32	32	40	40	40	32	32	32	48	48	48	62	62	65	65
270	270	270	160	300	300	300	240	300	300	250	250	250	220	250	250	150	250	120	250
1.1	1.7	2.2	1.0	1.2	1.6	2.2	1.0	1.3	1.6	1.3	1.7	2.2	1.0	1.3	1.7	1.0	1.0	1.0	1.1
1.5	2.2	3.0	1.5	2.2	3.0	4.0	2.2	3.0	4.0	2.2	3.0	4.0	2.2	3.0	4.0	3.0	4.0	3.0	4.0
3.25	4.75	6.0	3.25	4.75	6.0	8.6	4.75	6.0	8.6	4.75	6.0	8.6	4.75	6.0	8.6	6.0	8.6	6.0	8.6
2900	2900	2900	-	-	-	-	-	-	-	2900	2900	2900	2900	2900	2900	-	-	2900	2900
3500	3500	3500	3500	3500	3500	3500	3500	3500	3500	-	-	-	-	-	-	3500	3500	-	-
450	500	520	450	500	520	520	500	520	520	540	560	560	540	560	560	560	560	600	600
495	514	533	495	514	533	563	514	533	563	554	573	603	554	573	603	573	603	613	643
236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5	236.5
213	225	261.5	213	225	262	262	225	262	262	225	262	262	225	262	262	262	262	262	262
131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160	160
100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
19 / 22	24 / 27	26 / 29	19 / 22	24 / 27	26 / 29	28 / 31	24 / 27	26 / 29	28 / 31	28 / 32	30 / 34	32 / 36	28 / 32	30 / 34	32 / 36	30 / 34	32 / 36	34 / 40	36 / 42
21 / 24	28 / 31	31 / 34	21 / 24	28 / 31	31 / 34	33 / 36	28 / 31	31 / 34	33 / 36	32 / 36	35 / 39	37 / 41	32 / 36	35 / 39	37 / 41	35 / 39	37 / 41	39 / 45	41 / 47
G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4
G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2

* Only in 60 Hz version!

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 8.0 bar
- PVDF 8.0 bar

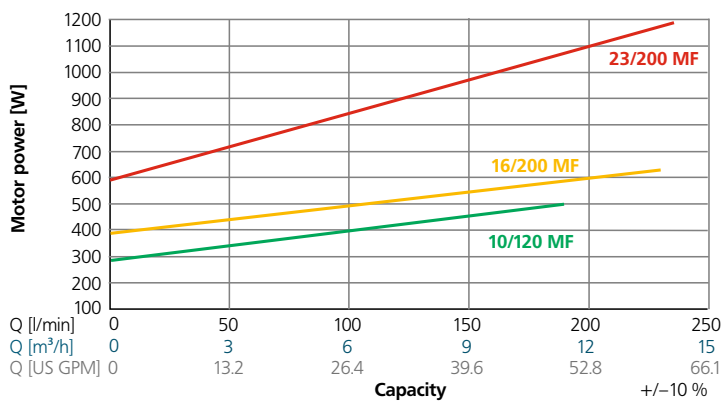
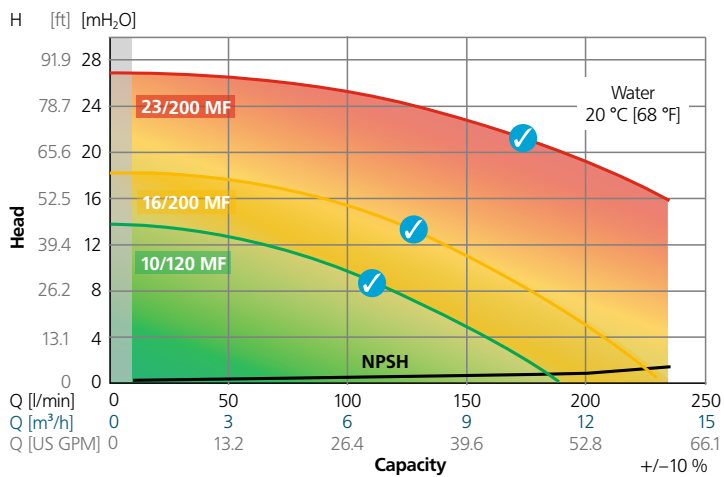
Magnetically coupled centrifugal pump

Series RM-MF 3

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.



RM-MF 3 performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.

Materials

- PP black, gray or natural (available with and without additional fillers)

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



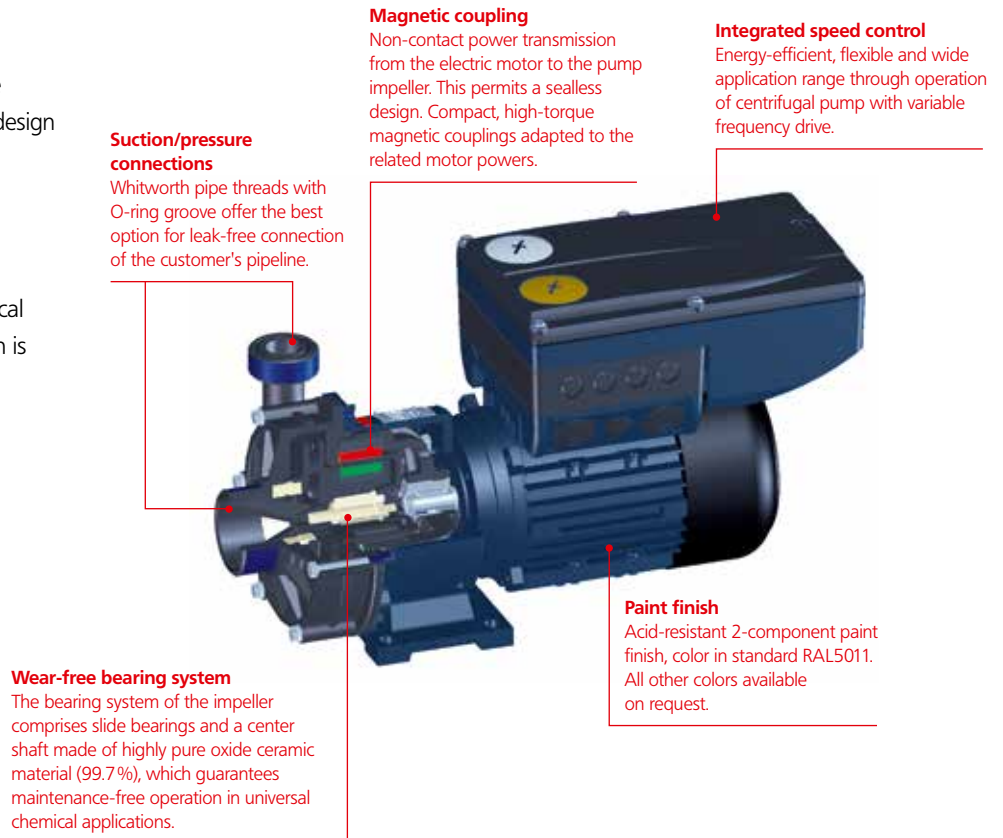
- Stainless steel on request

Compelling product advantages – our ideas, your benefit

The innovative drive concept of the RM-MF series combines compact design with energy-efficient fluid delivery.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)

Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C

Drives

- Motor power: 0.55 kW–1.5 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- Protection classes: IP55, IP56
- Thermal protection
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan)

Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased

Accessories

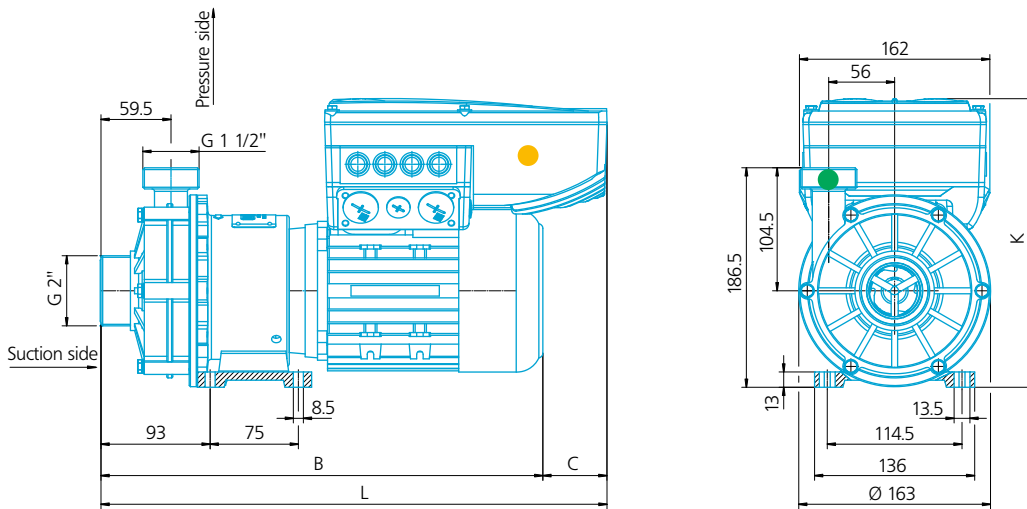
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

Series RM-MF 3

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.

Type 0.55 kW–1.5 kW








● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		10/120	16/200	23/200		
	Max. delivery head at 3450 rpm	[mH ₂ O]	14	22	27	27
	Max. flow rate Q_{max}	[l/min]	160	200	200	230
	Max. density at Q_{max}**	[g/cm ³]	1.1	1.3	1.0	1.25
	Motor power	[kW]	0.55	0.75	1.1	1.5
	Mains voltage	[V]	400 // 480			
	Mains frequency	[Hz]	50 // 60			
	Voltage range	[V]	3/PE AC 320 V ... 528 V			
	Frequency range	[Hz]	45 Hz ... 65 Hz			
	Protection class		jet-proof IP55			
	Temperature class		F			
	Communication module, VFD*		Standard I/O	Standard I/O	Standard I/O	Standard I/O
	Rated current, input	[A]	1.8 // 1.5	2.4 // 2.0	3.2 // 2.7	3.8 // 3.1
	Rated frequency	[Hz]	120	120	120	120
	Power factor cos φ		0.68	0.69	0.77	0.80
Rated speed	[rpm]	3440	3400	3490	3450	
	Dimension L	[mm]	423	423	430	430
	Dimension K	[mm]	236	236	245	245
	Dimension B	[mm]	351	351	375.5	375.5
	Dimension C	[mm]	71	71	54.5	54.5
	Weight approx. [PP / PVDF]	[kg]	10.5 / 11.5	11 / 12.5	14.0 / 15.5	14.0 / 15.5
	Suction connection	["]	G 2	G 2	G 2	G 2
	Pressure connection	["]	G 1 1/2	G 1 1/2	G 1 1/2	G 1 1/2

* Other communication modules (e.g. Profibus, Profinet, Ethernet, etc.) optionally available.

** All MF pumps are also available with higher output power ratings for fluids with higher specific weights. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 2.5 bar
- PVDF 3.5 bar
- Stainless steel 8.0 bar

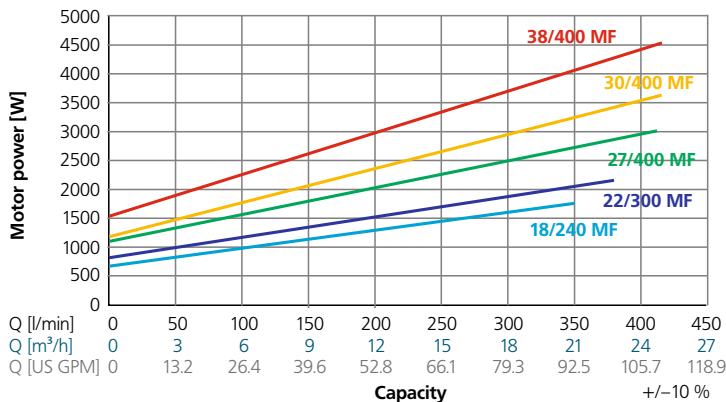
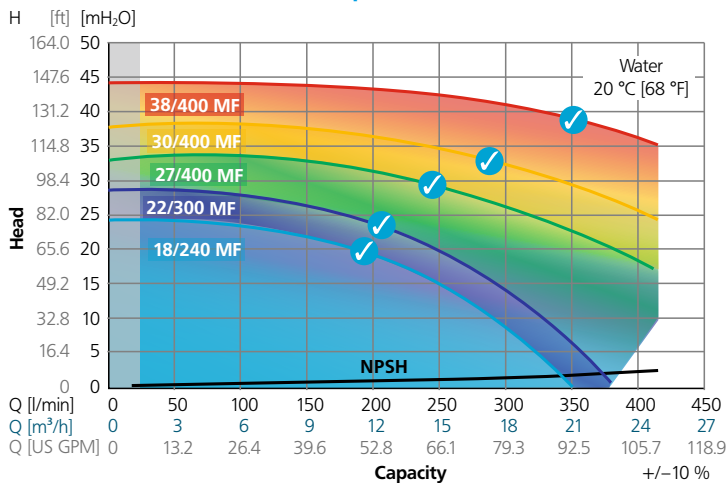
Magnetically coupled centrifugal pump

Series RM-MF 4

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.



RM-MF 4 performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP black, gray or natural (available with and without additional fillers)

PP BLACK



- PVDF natural (without additional fillers)

PVDF NATURAL



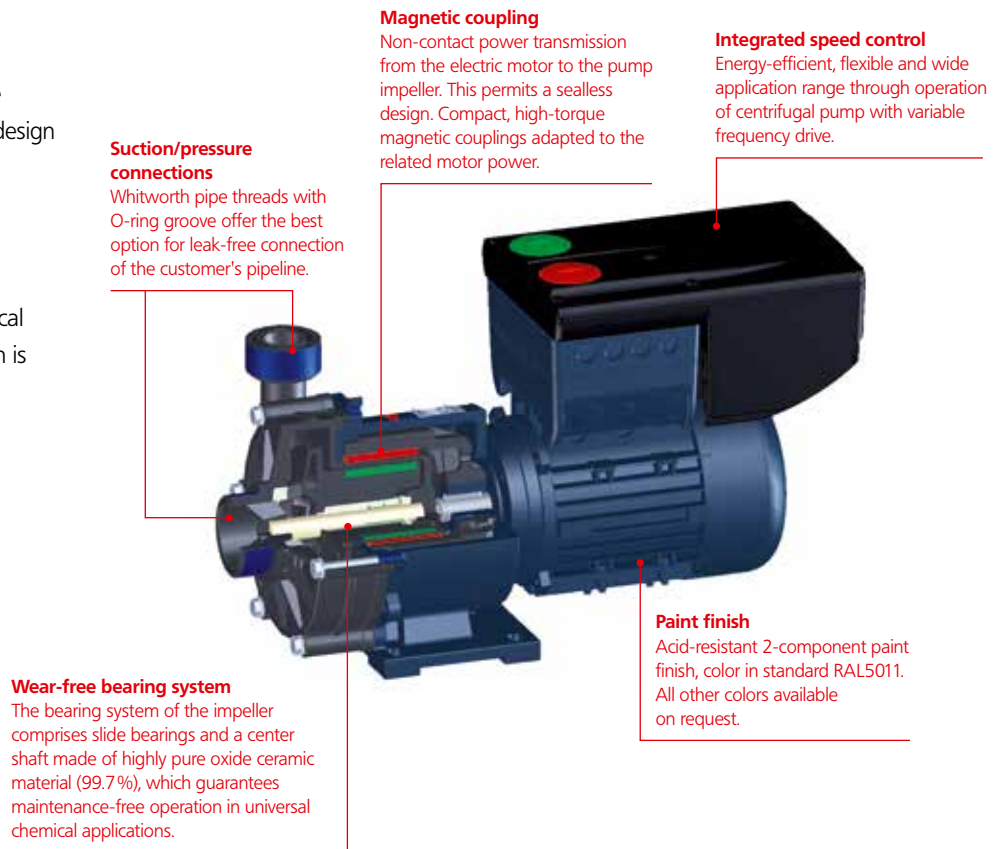
- Stainless steel on request

Compelling product advantages – our ideas, your benefit

The innovative drive concept of the RM-MF series combines compact design with energy-efficient fluid delivery.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)

Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF –20 to +95 °C
- Stainless steel –20 to +95 °C

Drives

- Motor power: 1.5 kW–5.5 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- Protection classes: IP55, IP56
- Thermal protection
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan)

Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased

Accessories

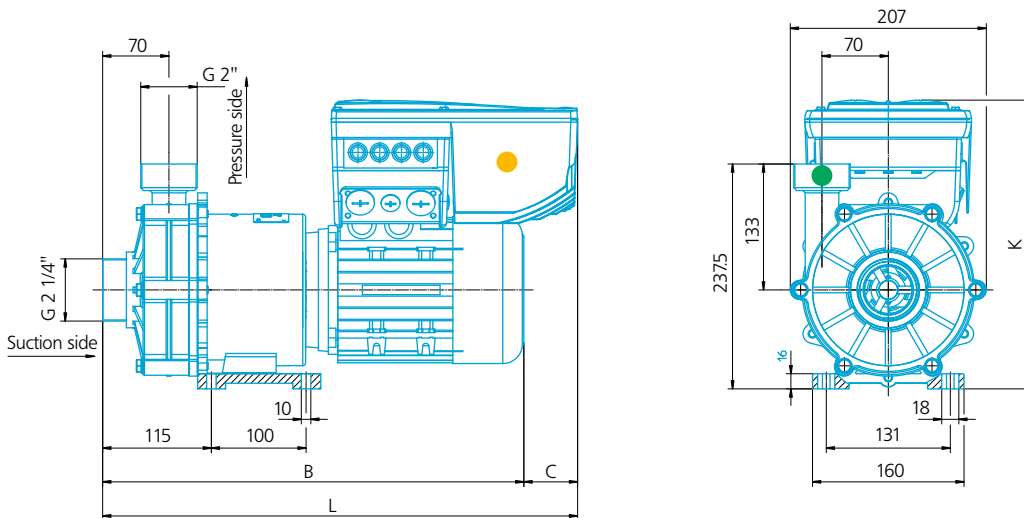
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

Series RM-MF 4

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.

Type 1.5 kW–5.5 kW








- **Terminal box position**

Top as standard. (If right or left wished, please state when ordering.)

- **Pressure connection port position**

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		18/240	22/300	27/400	30/400	38/400	
	Max. delivery head at 3450 rpm	[mH ₂ O]	24	28	34	38	44
	Max. flow rate Q_{max}	[l/min]	300	380	420	420	420
	Max. density at Q_{max}**	[g/cm ³]	1.0	1.0	1.0	1.1	1.2
	Motor power	[kW]	1.5	2.2	3.0	4.0	5.5
	Mains voltage	[V]	400 // 480				
	Mains frequency	[Hz]	50 // 60				
	Voltage range	[V]	3/PE AC 320 V ... 528 V				
	Frequency range	[Hz]	45 Hz ... 65 Hz				
	Protection class		jet-proof IP55				
	Temperature class		F				
	Communication module, VFD*		Standard I/O	Standard I/O	Standard I/O	Standard I/O	Standard I/O
	Rated current, input	[A]	3.8	5.6	7.2	9.3	12.8
	Rated frequency	[Hz]	120	120	120	120	120
	Power factor cos φ		0.80	0.86	0.86	0.85	0.81
	Rated speed	[rpm]	3450	3500	3480	3480	3525
	Dimension L	[mm]	485	502	502	580	589
	Dimension K	[mm]	267	305	305	380	380
	Dimension B	[mm]	430	445	445	512	571
	Dimension C	[mm]	55	57	57	68	18
	Weight approx. [PP / PVDF]	[kg]	22 / 24	23 / 25	23 / 25	30 / 33	39 / 41
	Suction connection	["]	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4
	Pressure connection	["]	G 2	G 2	G 2	G 2	G 2

* Other communication modules (e.g. Profibus, Profinet, Ethernet, etc.) optionally available.

** All MF pumps are also available with higher output power ratings for fluids with higher specific weights. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar
- Stainless steel 10.0 bar

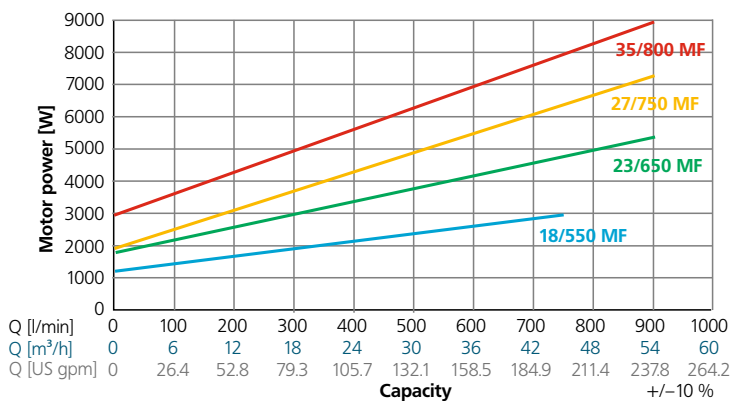
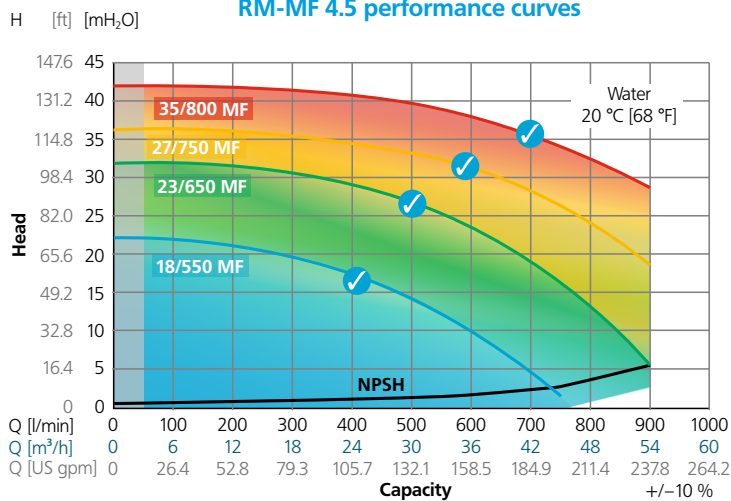
Magnetically coupled centrifugal pump

Series RM-MF 4.5

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.



RM-MF 4.5 performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.



Materials

- PP gray, black or natural (available with and without additional fillers)

PP GRAY



- PVDF natural (without additional fillers)

PVDF NATURAL



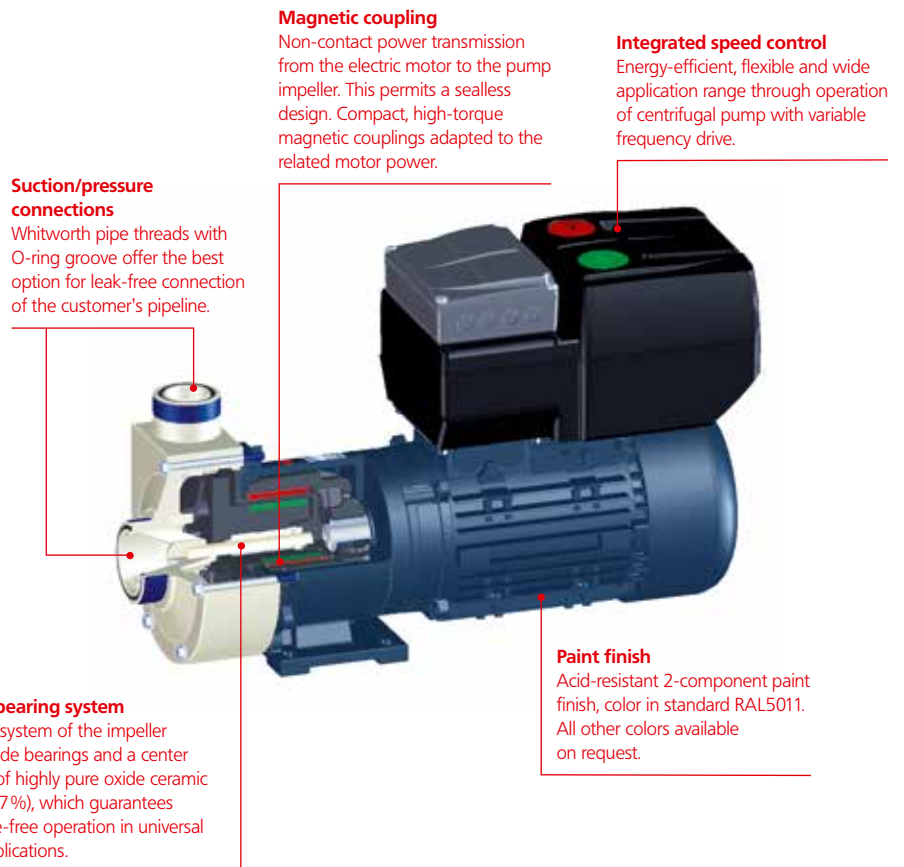
- Stainless steel on request

Compelling product advantages – our ideas, your benefit

The innovative drive concept of the RM-MF series combines compact design with energy-efficient fluid delivery.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Media

- Acids, alkalis and mixtures
- Density up to max. 2.0 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

- PP 0 to +80 °C
- PVDF -20 to +95 °C
- Stainless steel -20 to +95 °C



Drives

- Motor power: 3.0 kW–75 kW
- All common worldwide voltages/frequencies
- Three-phase asynchronous
- Protection classes: IP55, IP56
- Thermal protection
- UL, CSA-c/US version
- Motor cooling IC 411 (integrated fan)



Seals

- EPDM
- FKM
- Kalrez
- FFK
- FEP-encased



Accessories

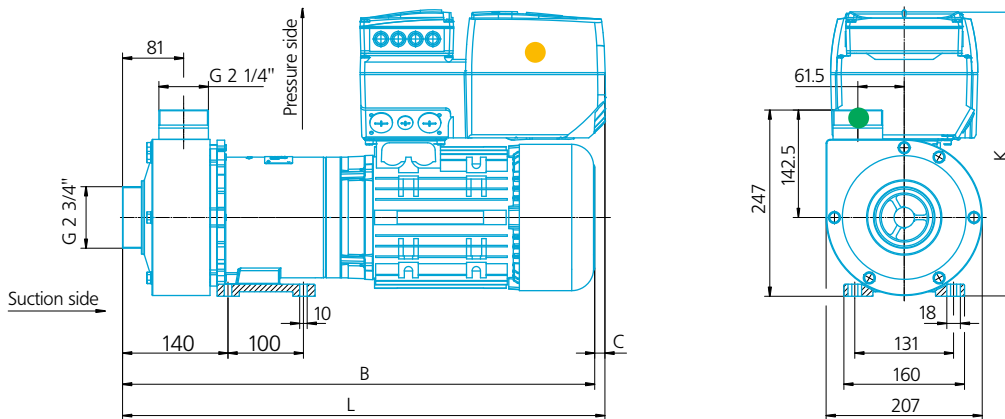
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Magnetically coupled centrifugal pump

Series RM-MF 4.5

Normal-priming, variable speed, single-stage, horizontal and manufactured in monobloc design.

Type 3.0 kW–7.5 kW








● Terminal box position

Top as standard. (If right or left wished, please state when ordering.)

● Pressure connection port position

Vertically upwards as standard. (12 x 30° rotated possible, please state when ordering.)

Technical data

Size		18/550	23/650	27/750	35/800	
	Max. delivery head at 3450 rpm	[mH ₂ O]	22	32	36	42
	Max. flow rate Q_{max}	[l/min]	750	600	600	700
	Max. density at Q_{max}**	[g/cm ³]	1.0	1.0	1.0	1.0
	Motor power	[kW]	3.0	4.0	5.5	7.5
	Mains voltage	[V]	400 // 480			
	Mains frequency	[Hz]	50 // 60			
	Voltage range	[V]	3/PE AC 320 V ... 528 V			
	Frequency range	[Hz]	45 Hz ... 65 Hz			
	Protection class		jet-proof IP55			
	Temperature class		F			
	Communication module, VFD*		Standard I/O	Standard I/O	Standard I/O	Standard I/O
	Rated current, input	[A]	7.2	9.3	12.8	16.3
	Rated frequency	[Hz]	120	120	120	120
	Power factor cos φ		0.86	0.85	0.81	0.81
	Rated speed	[rpm]	3480	3480	3525	3515
	Dimension L	[mm]	526	600	640	640
	Dimension K	[mm]	305	368	377	377
	Dimension B	[mm]	470	536	626	626
	Dimension C	[mm]	56	64	14	14
	Weight approx. [PP / PVDF]	[kg]	32 / 34	34 / 36	38 / 41	40 / 43
	Suction connection	["]	G 2 3/4	G 2 3/4	G 2 3/4	G 2 3/4
	Pressure connection	["]	G 2 1/4	G 2 1/4	G 2 1/4	G 2 1/4

* Other communication modules (e.g. Profibus, Profinet, Ethernet, etc.) optionally available.

** All MF pumps are also available with higher output power ratings for fluids with higher specific weights. Please inquire if applicable.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

- PP 5.0 bar
- PVDF 6.0 bar
- Stainless steel 10.0 bar

Canned motor pump

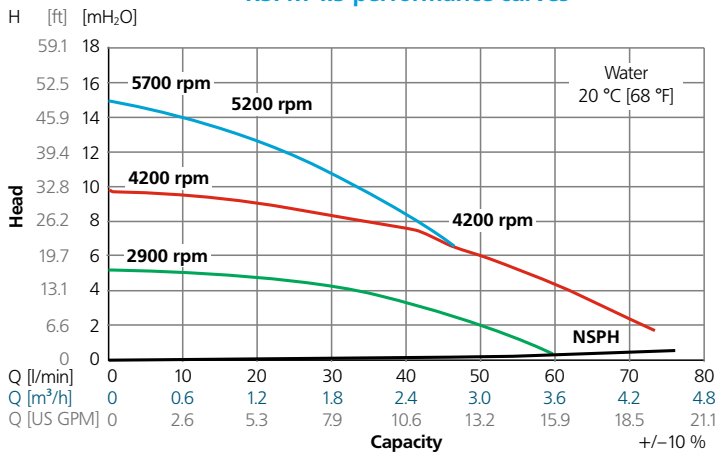
Series RSPM

Normal-priming, single-stage, horizontal and manufactured in monobloc design.

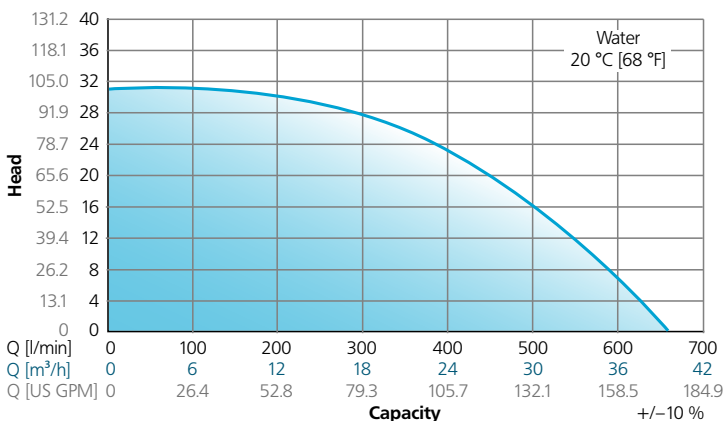
NEW



RSPM 1.5 performance curves



RSPM 40 performance curves



Precise documentation and planning security for your design department

On the basis of exact performance data, you can accurately select the pumps that you need for your installation. In addition, the RENNER design and manufacturing principle means that it is possible to configure custom solutions.

Series

- RSPM 1.5



- RSPM 40



RSPM 1.5

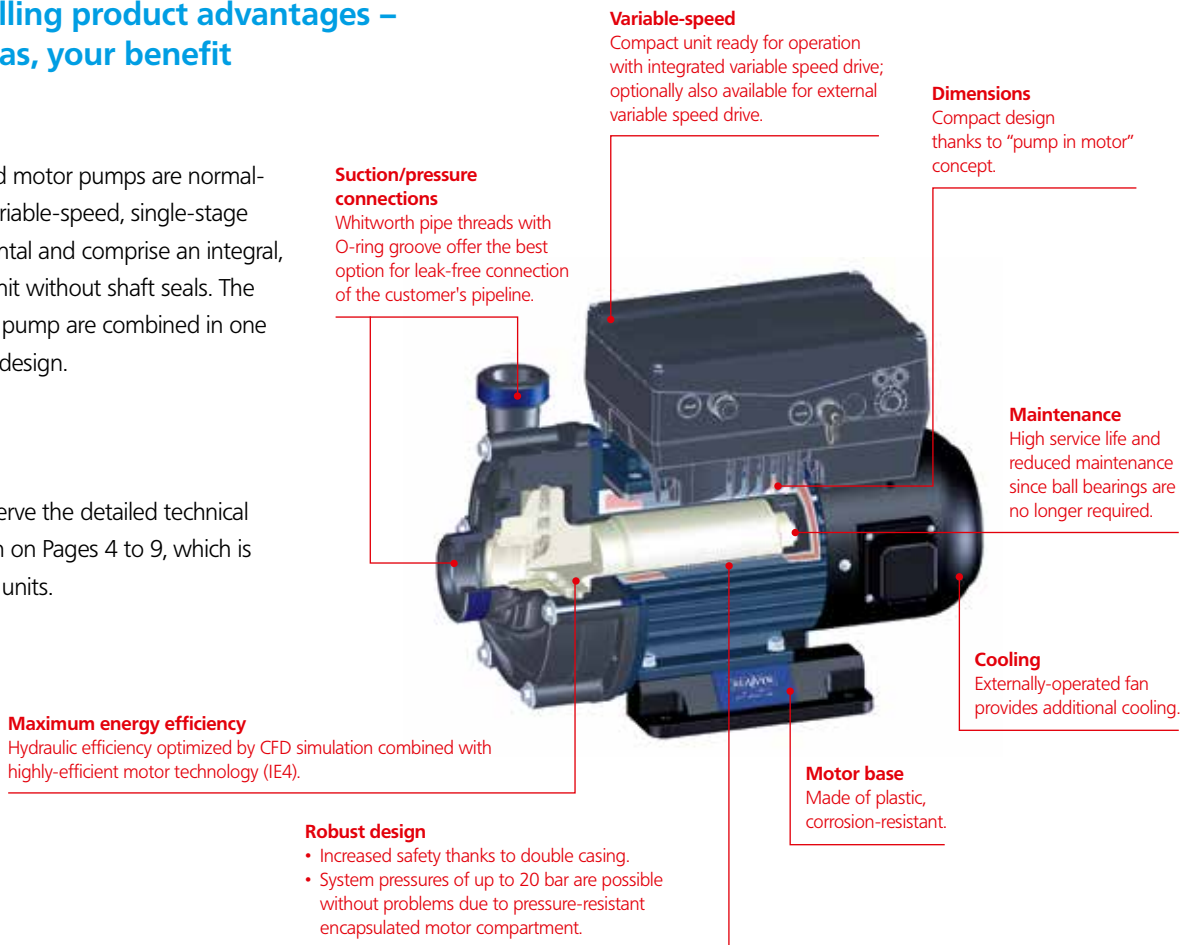
RSPM 40

Compelling product advantages – our ideas, your benefit

The canned motor pumps are normal-priming, variable-speed, single-stage and horizontal and comprise an integral, compact unit without shaft seals. The motor and pump are combined in one unit in this design.

Note

Please observe the detailed technical information on Pages 4 to 9, which is valid for all units.



Materials

RSPM 1.5

- PVDF natural (without additional fillers)

RSPM 40

- PP gray, black or natural (available with and without additional fillers)
- PVDF natural (without additional fillers)



Media

RSPM 1.5

- Acids and mixtures
- Density up to max. 1.2 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)

RSPM 40

- Acids, alkalis and mixtures
- Density up to max. 1.2 kg/dm³
- Viscosity up to max. approx. 160 mPas (cP)



Media temperature

When selecting the materials, it is necessary to take into account both the temperature resistance and chemical resistance depending on the medium to be conveyed.

RSPM 1.5

- PVDF –20 to +60 °C

RSPM 40

- PP 0 to +60 °C
- PVDF –20 to +80 °C



Seals

- EPDM
- FKM
- Kalrez
- FFKM
- FEP-encased



Drives

- Motor power: 0.12 kW or 3.0 kW–4.0 kW
- All common worldwide voltages/frequencies
- PM synchronous
- Protection classes: IP55, IP56, IP65
- Thermal protection



Accessories

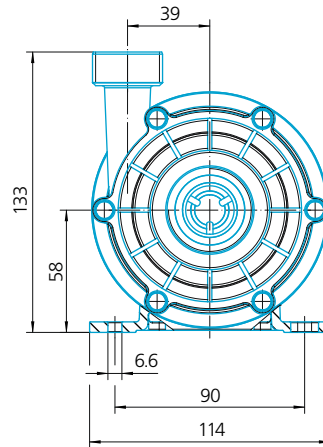
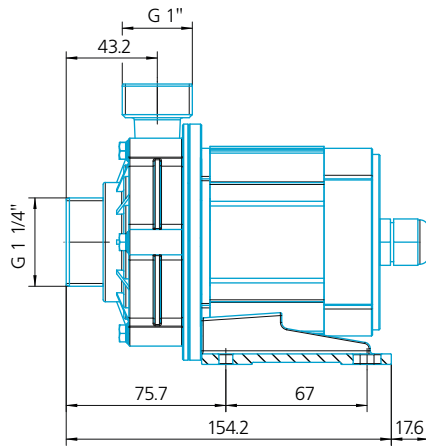
- Flanges (DIN, ANSI)
- Hose connector
- NPT adapter
- Cable + plug

Canned motor pump

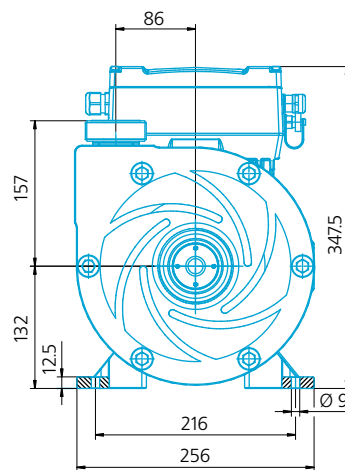
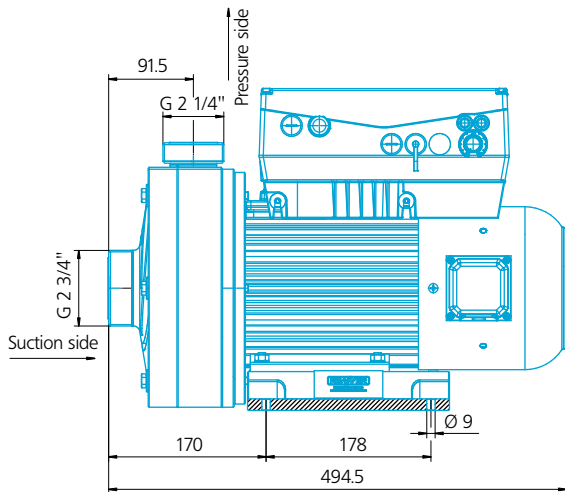
Series RSPM

Normal-priming, single-stage, horizontal and manufactured in monobloc design.





Type RSPM 1.5







Type RSPM 40



Technical data

Serie		RSPM 1.5
Size		15/80
	Max. delivery head H_{max} [mH ₂ O]	15
	Max. flow rate Q_{max} [l/min]	80
	Max. density at Q_{max} [g/cm ³]	1.2
	Motor power [kW]	0.12
	Direct voltage DC [V]	24
	Rated current [A]	5.7
	Max. current [A]	75
	Speed control range [rpm]	600 ... 6000
	Rated speed [rpm]	6000
	Protection class	IP65
	Temperature class	F
	Analog input	0–5 V or 0–20 mA
	Digital input	1
	Monitoring	integrated temperature monitoring
	Cooling	surface-cooled (without external fan)
	Weight approx. [PVDF] [kg]	1.9
	Suction connection ["]	G 1 1/4
	Pressure connection ["]	G 1

Serie		RSPM 40
Size		50/500
	Max. delivery head H_{max} [mH ₂ O]	50
	Max. flow rate Q_{max} [l/min.]	500
	Max. density at Q_{max} [g/cm ³]	1.2
	Motor power [kW]	4.0
	Mains voltage [V]	400 // 480
	Mains frequency [Hz]	50 // 60
	Voltage range [V]	3/PE AC 320 V ... 528 V
	Frequency range [Hz]	45 Hz ... 65 Hz
	Protection class	jet-proof IP55
	Temperature class	F
	Communication module, VFD*	Standard I/O
	Rated current, input [A]	7.7
	Rated frequency [Hz]	150 Hz
	Power factor cos φ	0.93
	Rated speed [rpm]	3000
	Cooling	external fan
	Weight approx. [PP / PVDF] [kg]	34 / 36
	Suction connection	G 2 3/4
	Pressure connection	G 2 1/4

* Other communication modules (e.g. Profibus, Profinet, Ethernet, etc.) optionally available.

Guide values for max. flow velocities

- Suction side 1.0 m/s
- Pressure side 3.0 m/s

Max. system pressure at 20 °C

RSPM 1.5

- PVDF 3.0 bar

RSPM 40

- PP 10.0 bar
- PVDF 15.0 bar

Turn our experience into your success

Reliable, efficient liquid processes for over 35 years

In 1981, Wolfgang RENNER laid the foundation for the company in a production space of just 36 square meters. Today, we are a world leader in the field of magnetically coupled centrifugal pumps. This success is based on our expert know-how, a passionate emphasis on quality and early adoption of innovative technologies.

We create originals

Your goals are our goals. With our flexibly combinable component range, we create individual solutions and tailor them perfectly to your requirements.



By employing the latest design methods, it is possible to realize even unusual ideas in a short time



Outstanding cost-benefit ratio thanks to rational series production of components

High degree of vertical integration

We have a critical view of outsourcing. In order to guarantee genuine quality, we manufacture all the most critical parts ourselves. In addition, our customers benefit from a unique maintenance service, something which is possible only if a manufacturer knows his products in detail.



High-tech production: the production machines are permanently kept up to date with the latest state-of-the-art

Research as an investment

In close cooperation with our customers and universities, our engineers are constantly further developing our products.



State-of-the-art production facilities for rational tool management

Recognized outstanding quality

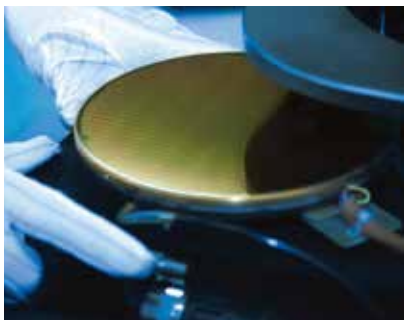
We have certified our company and all our production processes. Before one of our products leaves our premises, we subject it to a 100% inspection. With the RENNER quality logo, you can be sure that you will have optimal support for your processes.



We know your industry and understand your processes

Reliable wet processes

Pumps and filters from RENNER are a reliable partner when it comes to optimized transport of liquids **from "A" like alkalis through to "Z" like zinc sulfate**. We support practically all processes in which liquids up to a viscosity of 160 mPas and a density of up to 2.0 kg/dm³ have to be transported, sprayed or circulated. In addition to fast production of customized solutions, we also offer a wide range of standard products.



Wafer production in a clean-room environment

PCB industry

Our corrosion-resistant pumps and filters have proven themselves **in numerous companies worldwide**. Regardless of whether for **developing, etching, stripping or purging**, RENNER pumps always ensure the necessary pressure and sufficient volume flow for **flooding or circulating processes**.

Special locking mechanisms for fast filter changes additionally increase the productivity of your plant.



Surface finishing and corrosion and wear protection by coating with chromium, gold, silver, platinum or rhodium

Semiconductor industry

Hermetically encapsulated pumps from RENNER also guarantee optimum results in clean-room environments – in wafer manufacturing processes, for example, or for silicon treatment by spray- or dip etching.

Electroplating and surface finishing

Depending on purpose, we use different materials for our pumps and filters. Numerous processes with toxic or aggressive liquids in surface finishing applications are only made possible as a result.

Solar cell production and energy storage systems

Our pumps also make a reliable contribution to manufacture of solar cells in wet processes as well as circulation of electrolytes.

Further applications of our pumps, filters and solutions:

- Water treatment and environmental engineering
- Tank emptying and filling in the chemical industry
- Pesticide and fertilizer transport in agriculture
- Cleaning processes in the food industry
- Airless transport in the pharmaceutical industry
- Refrigerant transport in refrigeration applications
- Safe cooling circuits in nuclear engineering
- Mobile applications in marine engineering as well as the aerospace industry

Whatever the situation, you can rely on **RENNER quality.**



Safe handling of chemicals is essential for large-scale processes in the chemical industry



Reduced use of pesticides through controlled application



INNOVATIVE PUMP
AND FILTER TECHNOLOGY



RENNER is the competent partner when it comes to making industrial processes with liquid media more reliable and cost-effective.

- **Magnetic centrifugal pumps**
- **Vertical centrifugal pumps**
- **Universal filters**
- **Quick change filters**
- **Filter units**
- **Filter systems**
- **Electronic process protection**
- **Accessories**



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