Conventional magnetically coupled pumps can hardly cope with dry running. In fact, their sleeve bearings need continuous liquid-film lubrication to keep bearing friction and the resulting frictional heat as low as possible and also to provide the bearing with sufficient cooling.

With its pumps of the RM-TS type, Renner offers the first magnetically coupled centrifugal pumps in the world that are absolutely safe to run dry. The coefficient of friction of the new RM-TS bearing is so small that only a minimum of heat is generated. Therefore, the bearing does not require any liquid lubrication. All wet-end components of the pump head are still metal-free and made exclusively of materials that assure maximum chemical resistance against aggressive fluids.

Renner sealless pumps will not leak, are hermetically sealed, and maintenance-free.
Non-self-priming magnetically coupled centrifugal pumps of the RM type
Non-self-priming magnetically coupled centrifugal pumps with extra priming tank
Self-priming magnetically coupled centrifugal pumps of the RMB type
Self-priming side-channel pumps of the RMS type
Vertical centrifugal immersion pumps of the RT type for wet pit operation
Vertical centrifugal immersion pumps of the RTA type for dry-well installation

RANGES OF APPLICATION

1. Non-self-priming magnetically coupled centrifugal pumps of the RM type
2. Non-self-priming magnetically coupled centrifugal RM pumps with extra priming tank
3. Self-priming magnetically coupled centrifugal pumps of the RMB type
4. Self-priming side-channel pumps of the RMS type
5. Vertical centrifugal immersion pumps of the RT type for wet pit operation
6. Vertical centrifugal immersion pumps of the RTA type for dry-well installation
**Non-self-priming centrifugal pumps**

- **RM 1**
  - Delivery rate: 1 to 9.5 GPM
  - Delivery head: up to 16 feet

- **RM 1.5**
  - Delivery rate: 1 to 22 GPM
  - Delivery head: up to 23 feet

- **RM 2**
  - Delivery rate: 1.3 to 34 GPM
  - Delivery head: up to 30 feet

- **RM 2D**
  - Delivery rate: 1 to 16 GPM
  - Delivery head: up to 52 feet

- **RM 3**
  - Delivery rate: 2 to 60 GPM
  - Delivery head: up to 75 feet

- **RM 4**
  - Delivery rate: 2 to 106 GPM
  - Delivery head: up to 118 feet

- **RM 4.5**
  - Delivery rate: 5 to 238 GPM
  - Delivery head: up to 115 feet

- **RM 5**
  - Delivery rate: 8 to 330 GPM
  - Delivery head: up to 197 feet
The magnetically coupled centrifugal mini-pump of the RM-Cool type is the ideal high-performance cooling system to remove heat from laser devices, computers, plasma-arc cutters etc. Made of PP, PPS or PVDF.

**Self-priming side-channel pumps**

**RM 2.1**
- Delivery rate: 1 to 6 GPM
- Delivery head: up to 177 feet
- Suction head: up to 23 feet

**RM 3.1**
- Delivery rate: 2 to 63 GPM
- Delivery head: up to 59 feet
- Suction head: up to 11.5 feet

**Mini Mag Drive**

**RM Cool 0.5**
- Delivery rate: up to 1.3 GPM
- Delivery head: up to 6.5 feet

**The following materials are available for RM pumps:**

**Material**

<table>
<thead>
<tr>
<th>Component</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypropylene (PP)</td>
<td>0 to +176°F</td>
</tr>
<tr>
<td>Polyvinylidene fluoride (PVDF)</td>
<td>-4 to +203°F</td>
</tr>
<tr>
<td>Polyphenylene sulphide (PPS)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Stainless steel (1:4305, 1:4571)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Oxide ceramic (aluminium oxide 99.7%)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>PTFE graphite</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Ethylene-propylene-diene rubber (EPDM)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Fluorinated rubber (FKM)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Perfluoroethylene copolymer (FEP coated)</td>
<td>-4 to +212°F</td>
</tr>
<tr>
<td>Nitrile-butadiene rubber (NBR)</td>
<td>-4 to +212°F</td>
</tr>
</tbody>
</table>

**O-Rings**

- Ethylene-propylene-diene rubber (EPDM)  -4 to +212°F
- Fluorinated rubber (FKM)  -4 to +212°F
- Perfluoroethylene copolymer (FEP coated)  -4 to +212°F
- Nitrile-butadiene rubber (NBR)  -4 to +212°F

**Characteristic curves of RM-type pumps**

- [Delivery Rate (liters/minute)]
- [Delivery Head (meters)]

- Heavy-duty durable design
- Neodymium magnets
- True union connections
- NPT, flange, hose
- Motors: TEFC 1.25SF
- XP + special enclosures available
- Thrust bearings for all conditions
- Hydraulically balanced shafts
- ISO 9001
- Each unit individually tested and certified
**RT CENTRIFUGAL IMMERSSION PUMPS FOR WET-PIT AND DRY-WELL INSTALLATION**

**RT IMMERSION PUMPS FOR WET-PIT OPERATION** (FOR DRY-WELL INSTALLATION WITH IDENTICAL FEATURES)

**RT 1**
- Delivery rate: up to 8 GPM
- Delivery head: up to 15 feet
- Immersion depth: 8 to 19 inches

**RT 2**
- Delivery rate: up to 24 GPM
- Delivery head: up to 26 feet
- Immersion depth: 8 to 20 inches

**RT 3**
- Delivery rate: up to 61 GPM
- Delivery head: up to 65.5 feet
- Immersion depth: 8 to 21 inches

**RT 4**
- Delivery rate: up to 92 GPM
- Delivery head: up to 115 feet
- Immersion depth: 10 to 20 inches

**RT 5**
- Delivery rate: up to 158 GPM
- Delivery head: up to 131 feet
- Immersion depth: 11 to 19 inches

**RTM magnetically coupled centrifugal immersion pumps**
- Delivery rate: up to 106 GPM
- Delivery head: up to 131 feet
- Immersion depth: 10 to 79 inches
Electronic monitoring of motor currents reliably protects the pump from dry running, overheating and overload. If the above mentioned malfunctions cannot be completely ruled out with your installation, you should use an electronic protector to switch off the pump before it is damaged. Such protectors will not only avoid damage to the pump, but also down time and costs resulting thereof. Once the cause of the malfunction is eliminated, the pump is immediately ready to continue operation.

**Electronic pump protectors and filter monitors**

Electronic monitoring of motor currents reliably protects the pump from dry running, overheating and overload. If the above mentioned malfunctions cannot be completely ruled out with your installation, you should use an electronic protector to switch off the pump before it is damaged. Such protectors will not only avoid damage to the pump, but also down time and costs resulting thereof. Once the cause of the malfunction is eliminated, the pump is immediately ready to continue operation.

Electronic pump protectors and flow monitors come in three designs. Type 2 also monitors the pressure drop of the filter and indicates a clogged filter.
MARKETS:
Printed circuit board
Semi conductor
Plating
WWT
OEM
CPI
Textile
Automotive
Pharmaceutical
More

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