



For High Purity Applications with Air/Gas

MR UltraPure Liquid-Ring Pump

Application

The MR UltraPure is a liquid ring pump specially designed for pumping liquids containing air/gas. It is ideally suited to CIP return applications whereby complete tank emptying is necessary to avoid any product contamination.

Standard design

In standard specification the MR UltraPure pump has metallic product wetted parts manufactured from AISI 316L/329 stainless steel with elastomers from USP Class VI EPDM. The internal surface finish is 0.8 Ra and material traceability is supplied as standard for all product wetted parts.

Alternative elastomer materials, surface finishes are available as options.

Shaft seal

The mechanical single seals have stationary and rotating seal rings of silicon carbide. Stationary seal rings in stainless steel AISI 329 and rotating seal rings of carbon is optional.

Materials

Product wetted steel parts: Acid-resistant steel 1.4404 (316L) with material traceability 3.1 acc. to EN 10204

Other steel parts: Stainless steel 1.4301 (304).

Technical data

Surface finish: Ra 0.8 (option Ra. 0.5)

Productwetted steel parts: Stainless steel AISI 316L and AISI 329L. (1.4404)

Other stainless steel parts: Stainless steel AISI 304.

Adaptor Mild steel grade.

Productwetted seals: EPDM- USP Class 6.

Max. inlet pressure: 4 bar.

Temperature range -10° C to 140° C (EPDM).



MR UltraPure.

Motor

Standard foot-flanged motor acc. to IEC metric standard 4 pol = 1500/1800 rpm. at 50/60 Hz.

IP55 (with drain holes with labyrinth plug), insulation class F.

Voltage and frequency (MR-166 UP)

3~, 50 Hz, 220-240V Δ/380-420VY

3~, 60 Hz, 250-280V Δ/440-480VY

Voltage and frequency (MR-185 UP, -200 UP)

3~, 50 Hz, 380-420V Δ/660-690VY

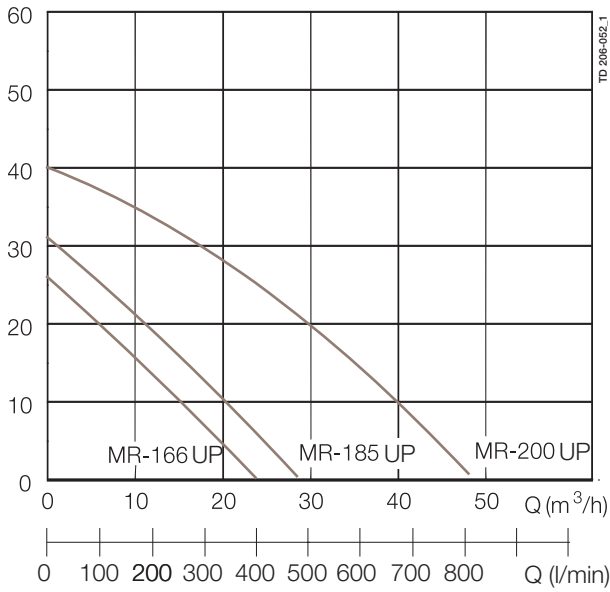
3~, 60 Hz, 440-480V Δ

Motor sizes

| 50 Hz | 60 Hz |
|------------------------|--------------------------|
| 2.2 kW (MR-166 UP) | 2.6 kW (MR-166 UP) |
| 5.5 kW (MR-185 UP) | 6.3 kW (MR-185 UP) |
| 7.5, 11 kW (MR-200 UP) | 8.6, 12.5 kW (MR-200 UP) |

Volumetric flow MR-166 UP, -185 UP, -200 UP

H (m)



Standard documentation package

- 3.1 certificate according to EN10204
- FDA certificate of conformity for product wetted elastomers.
- USP class 6 certificate of conformity- EPDM only.
- Pump performance test certificate.

Options

- A. Other voltage and frequency.
- B. Flameproof motors (EEXE and EEXD).
- C. Pump with shroud.
- D. Adaptor with stainless steel AISI 304.
- E. Product wetted seals of Fluorinated rubber (FPM).
- F. Surface finish Ra 0.5.
- G. Electro polishing.
- H. No drain in casing.

Ordering

Please state the following when ordering:

- Pump type.
- Voltage and frequency.
- Connections.
- Flow rate, pressure and temperature.
- Density and viscosity of product.
- Options.

Note!

For further information, see also instruction IM70719 and M70733.

Connections (mm)

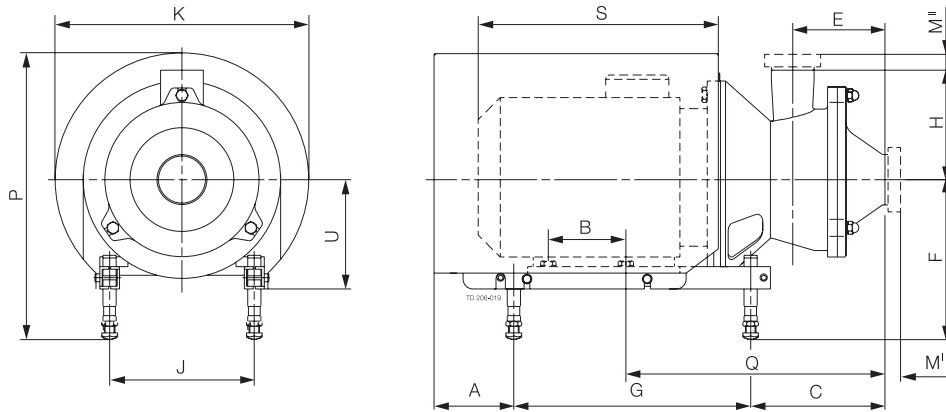
MR-166 UP: Inlet and outlet: 51 mm (2").

| Dim. | ISO clamp | ISO male | DIN male | SMS male | BS male |
|-----------------|-----------|----------|----------|----------|---------|
| M ⁱ | 21 | 21 | 22 | 20 | 22 |
| M ⁱⁱ | 21 | 21 | 22 | 20 | 22 |

MR-185 UP and MR-200 UP: Inlet and outlet: 76.1 mm (3").

| Dim. | ISO clamp | ISO male | DIN male | SMS male | BS male |
|-----------------|-----------|----------|----------|----------|---------|
| M ⁱ | 21 | 21 | 22 | 24 | 22 |
| M ⁱⁱ | 12 | 21 | 32 | 24 | 22 |

Dimensions (mm) 900141/0



MR-166S/-185S/-200S

Dimensions (mm) 900141/0

| Size | MR-166 UP | MR-185 UP/200 UP |
|-------------|-----------|------------------|
| A | 78 | 81 |
| B | 140 | 178 |
| C | 185 | 204 |
| E | 117 | 140 |
| F min. | 185 | 184 |
| F max. | 295 | 317 |
| G | 320 | 400 |
| H | 129 | 154 |
| J | 160 | 216 |
| K | 323 | 383 |
| P min. | 357 | 380 |
| P max. | 469 | 513 |
| Q | 280 | 339 |
| *S | 299 | 402 |
| U | 145 | 167 |
| Weight (kg) | 55 | 77/85 |