



## Alfa Laval MR-166S, -185S, -200S, -300 Liquid-Ring Pump

### The Choice for Air and Gas Applications

#### Application

MR is a liquid-ring pump specially designed for pumping liquids containing air or gas. The pump is for use in food, chemical, pharmaceutical and similar industries. The pump is mainly used for CIP-return applications.

#### Standard design

All product wetted parts, i.e. pump casing, casing cover and impeller are made of acid resistant steel, duplex grade. Seals are made of EPDM rubber.

Cap nuts, legs, leg brackets, adaptor and shroud are made of stainless steel. The shroud has noise absorbing lining inside.

#### Shaft seal

On MR-166S, -185S and 200S, the mechanical single seals have stationary seal rings of acid resistant steel, duplex grade and rotating seal rings of carbon.

The MR-300 has mechanical single seal with stationary seal rings of carbon and rotating seal rings of acid resistant steel, duplex grade.



#### TECHNICAL DATA

##### 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.

##### Motor sizes

| 50 Hz                     | 60 Hz                    |
|---------------------------|--------------------------|
| 2.2 kW (166S)             | 2.2 kW (166S)            |
| 5.5, 7.5 kW (MR-185S)     | 4.5, 7.5 kW (MR-185S)    |
| 5.5, 7.5, 11 kW (MR-200S) | 7.5, 11 kW (MR-200S)     |
| 15, 18.5, 22 kW (MR-300)  | 15, 16.5, 22 kW (MR-300) |

50Hz, 230VD/400-415VY

60Hz, 440-460VY

For other voltages, please refer to Anytime Configurator.

#### OPERATING DATA

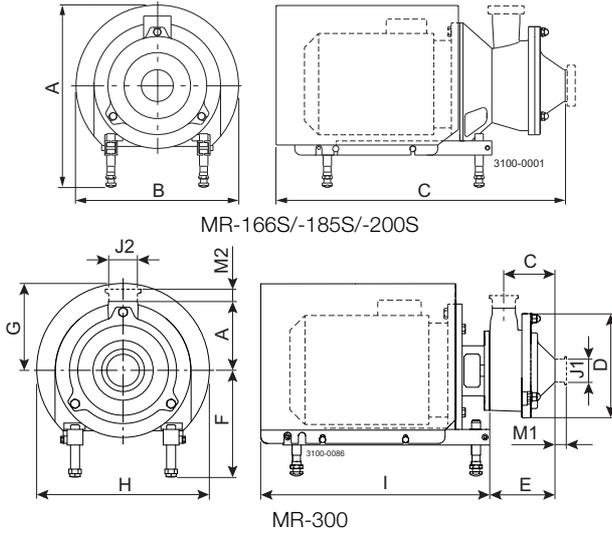
##### Pressure

Max. inlet pressure: . . . . . 400 kPa (4 bar).

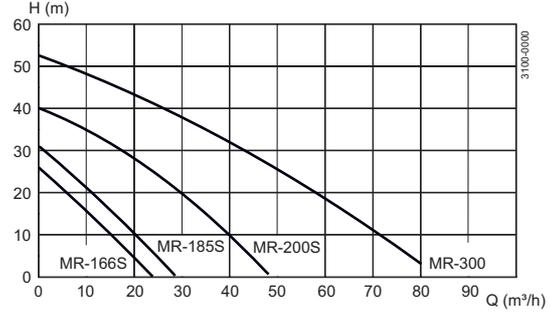
##### Temperature

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

### Dimensions (mm)



### Volumetric flow MR-166S, -185S, -200S and -300



### Pump specific measures

| Pump Model | MR-166S | MR-185S/200S | MR-300 |
|------------|---------|--------------|--------|
| A          | 129     | 154          | 205    |
| B          | -       | -            | 190    |
| C          | 117     | 140          | -      |
| D          | 233     | 260          | 350    |
| E          | 150     | 173          | 198    |

### Motor specific measures

| Motor IEC | IEC100 | IEC132  | IEC160 | IEC180  |
|-----------|--------|---------|--------|---------|
| Motor kW  | 2.2    | 5.5/7.5 | 11/15  | 18.5/22 |
| F(max)*   | 302    | 304     | 332    | 352     |
| G         | 185    | 196     | 262    | 286     |
| H         | 323    | 383     | 282    | 533     |
| I         | 455    | 533     | 749    | 674     |

\*Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

### Motor overview

| Pump Model        | MR-166S | MR-185S/200S  | MR-300        |
|-------------------|---------|---------------|---------------|
| Motor range (IEC) | IEC100  | IEC132-IEC160 | IEC160-IEC180 |

Dimensional data are based on 4 pole, ABB motors.

### Connections

| Pump Model     |    | MR-166S | MR-185S/200S | MR-300    |
|----------------|----|---------|--------------|-----------|
| Clamp ISO 2037 | M1 | 21      | 21           | 21        |
|                | M2 | 21      | 12           | -         |
| Union ISO(IDF) | M1 | 21      | 21           | 21        |
|                | M2 | 21      | 21           | -         |
| Union DIN/ISO  | M1 | 22      | 22           | 30        |
|                | M2 | 22      | 32           | -         |
| Union SMS      | M1 | 20      | 24           | 24        |
|                | M2 | 20      | 24           | -         |
| Union (BS)RJT  | M1 | 22      | 22           | 22        |
|                | M2 | 22      | 22           | -         |
| J1*            |    | 51 / 2" | 76,1 / 3"    | 76,1 / 3" |
| J2*            |    | 51 / 2" | 76,1 / 3"    | 76,1 / 3" |

\* Other dimensions available on request.

**Options**

- A. Other voltage and frequency.
- B. Pump without shroud and legs.
- C. Pump without shroud.
- D. Noise reduction valve.
- E. Product wetted seals of Nitrile (NBR) or Fluorinated rubber (FPM).
- F. Stationary seal ring with sealing surface of Silicon Carbide and rotating seal ring of Silicon Carbide. (MR-185S and MR-200S only).

**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 ESE00675 and ESE02051.

Alfa Laval reserves the right to change specifications without prior notification.

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**How to contact Alfa Laval**

Contact details for all countries  
are continually updated on our website.  
Please visit [www.alfalaval.com](http://www.alfalaval.com) to  
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