

Certified according to DIN EN ISO 9001

Technical Datasheet



HM...R

Turbine Flow Meters with Female Inch Threads

Description

Turbine flow meters provide accurate measurement of instantaneous or total flow rates of low-viscosity-fluids

Application:

- Tap and demineralised water
- Fuels
- Liquefied gases
- Pharmaceutical fluids
- Light fuel oil
- Solvents

Advantages

Fast response time and high resolution

The response time ranges from 5 up to 50 msec subject to turbine size. Thus rapidly increasing or varying flow rates may be detected. The resolution may amount to as much as approx. 139,000 pulses per litre (cf. »Technical Data«).

Wide temperature range from –276 up to +350 °C

Standard versions: –20 up to +120 °C

Versions with special bearings for cryogenic fluids: down to –276 °C

Versions with special pickups for heated fluids: up to +350 °C

Resistant to contamination with solids

Turbine wheel and bearings are designed in a way that solids are flushed through the turbine with the medium. Therefore the turbine does not get blocked.

Technical Data

| Type | Measuring Range, ltr./min | K-Factor*, pulses/ltr. | Frequency*, in Hz |
|------------|------------------------------|---------------------------|----------------------|
| HM 9 RP | 00.3 up to 0.8 | 139,000 | 1,900 |
| HM 3/1.5 R | 0.3 up to 1.5 | 32,000 32,500 | 1,000 |
| HM 3/4 R | 0.5 up to 4 | 24,000 19,500 | 1,250 |
| HM 5/6 R | 0.8 up to 6 | 17,800 17,800 | 1,740 |
| HM 5/10 R | 1.2 up to 10 | 11,000 11,000 | 1,750 |
| HM 7 R | 2.0 up to 20 | 5,200 5,200 | 1,800 |
| HM 9 R | 3.3 up to 33 | 1,900 4,200 | 1,080 2,200 |
| HM 11 R | 6.0 up to 60 | 1,300 2,730 | 1,350 2,700 |
| HM 13 R | 8.5 up to 85 | 900 1,900 | 1,300 2,600 |
| HM 19 R | 15 up to 150 | 310 650 | 925 2,000 |
| HM 28 R | 30 up to 360 | 155 320 | 960 2,000 |
| HM 30 R | 35 up to 400 | 130 270 | 860 1,800 |

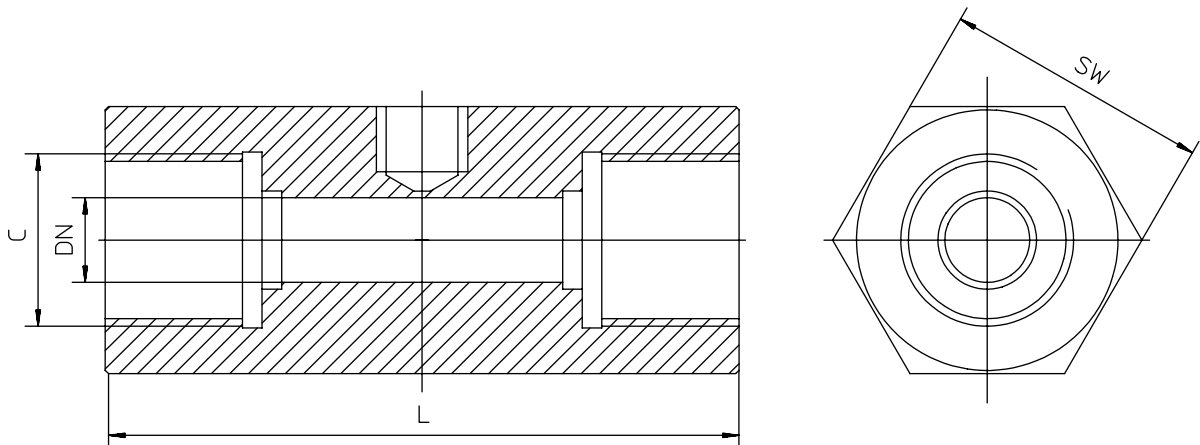
* For viscosities from 8 mm²/s onwards the wheel's axial pitch will be halved, thus K-factors will be higher. The specifications for K-factor and output signal are average values. Individual values are recorded during calibration.

Materials

Stainless steel as per DIN (AISI)

| Component | Standard material | Special material |
|----------------|-------------------|-----------------------------------|
| Housing | 1.4305 | 1.4571 (316 Ti) or 1.4404 (316 L) |
| Internal parts | 1.4305 (303) | 1.4571 (316 Ti) or 1.4404 (316 L) |
| Wheel | 1.4122 (303) | 1.4460 (329) |
| Bearing | Tungsten carbide | Tungsten carbide or teflon |

Dimensional Drawings (mm)



| Typ | DN (dia) | L | C | SW | Pressure, bar |
|-------------|----------|-----|----------|----|---------------|
| HM 3/1.5 R | 4 | 60 | G 1/4" | 30 | 630 |
| HM 3/4 R | 4 | 60 | G 1/4" | 30 | 630 |
| HM 5 R | 5 | 70 | G 3/8" | 30 | 630 |
| HM 7 R | 7 | 74 | G 3/8" | 30 | 630 |
| HM 9 R & RP | 9 | 79 | G 3/8" | 30 | 630 |
| HM 11 R | 11 | 86 | G 3/8" | 30 | 400 |
| HM 13 R | 13 | 97 | G 3/4" | 41 | 400 |
| HM 19 R | 19 | 125 | G 1" | 46 | 400 |
| HM 28 R | 28 | 161 | G 1 1/2" | 60 | 315 |
| HM 30 R | 30 | 181 | G1 1/2" | 60 | 315 |

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