

SITRANS F flowmeters

SITRANS F M



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MAGFLO MAG 1100 Food

Overview



The electromagnetic flow sensor MAGFLO MAG 1100 Food is designed to meet applications in the food and beverage industry.

Benefits

- Sensor sizes: DN 10 ... DN 100 (3/8" ... 4")
- AISI 316 stainless steel enclosure
- Hygienic connection, 3A and EHEDG authorized construction
- Sanitary design for CIP / SIP cleaning
- Easy commissioning, the SENSORPROM unit automatically updates settings
- Hose proof IP67/NEMA 4X/6 enclosure rating
- Designed that patented in-situ verification can be conducted. Using SENSORPROM fingerprints

Application

The main applications of the SITRANS F M MAGFLO electromagnetic flow sensors can be found in the following fields:

- Food industry
- Beverage industry
- Pharmaceutical industry

Design

- Unique mechanical design with a wide range of customer specified sanitary connection
- Compact or remote mounting possible easy "plug & play" field changeable
- Simple on site upgrade to IP68/NEMA 6P

Mode of operation

The flow measuring principle is based on Faradays law of electromagnetic induction where the sensor converts the flow into an electrical voltage proportional to the velocity of the flow.

Integration

The complete flowmeter consists of a flow sensor and an associated transmitter SITRANS F M MAGFLO MAG 5000, 6000 and 6000 I. The flexible communication concept USM II simplifies integration and update to a variety of fieldbus systems such as PROFIBUS DP & PA, DeviceNet, HART, CANopen, MODBUS RTU/RS485.

Technical specifications

| | |
|-----------------------------|--|
| Measuring principle | Electromagnetic induction |
| Excitation frequency | DN 10 ... 65 (1/4" ... 2 1/2"): 12.5 Hz DN 80 ... 100 (3", 4"): 6.25 Hz |

Input

| | |
|---------------------------|--|
| Nominal size | DN 10 ... DN 100 (3/8" ... 4") |
| Process connection | Hygienic adapters available for: <ul style="list-style-type: none"> • Direct welding into pipe • Clamp fitting • Threaded fitting |

Rated operating conditions

Ambient conditions

| | |
|-------------------------------------|-----------------------------------|
| Ambient temperature | |
| • Remote transmitter | -40 ... +100 °C (-40 ... +212 °F) |
| • Compact transmitter MAG 5000/6000 | -20 ... +50 °C (-4 ... +122 °F) |
| • Transmitter MAG 6000 I | -20 ... +60 °C (-4 ... +140 °F) |

Temperature shock

| | |
|--|--|
| • MAG 1100 Food | |
| - Duration > 1 min | <ul style="list-style-type: none"> • DN 10, 15, 25: Max. $\Delta T \leq 15$ °C/min (3/8", 1/2", 1": Max. $\Delta T \leq 15$ K/min) • DN 40, 50, 65: Max. $\Delta T \leq 10$ °C/min (1 1/2", 2", 2 1/2": Max. $\Delta T \leq 10$ K/min) • DN 80, 100: Max. $\Delta T \leq 5$ °C/min (3", 4": Max. $\Delta T \leq 5$ K/min) |
| - Duration ≤ 1 min, followed by 10 min rest | <ul style="list-style-type: none"> • DN 10, 15, 25: Max. $\Delta T \leq 80$ °C/min (3/8", 1/2", 1": Max. $\Delta T \leq 80$ K/min) • DN 40, 50, 65: Max. $\Delta T \leq 70$ °C/min (1 1/2", 2", 2 1/2": Max. $\Delta T \leq 70$ K/min) • DN 80, 100: Max. $\Delta T \leq 60$ °C/min (3", 4": Max. $\Delta T \leq 60$ K/min) |
| • MAG 1100 Food PFA | Max. ± 100 °C (210 °F) momentarily |

Operating pressure

| | |
|---------------------|--|
| • MAG 1100 Food | DN 10 ... 65: 40 bar (3/8" ... 2 1/2": 580 psi) DN 80: 37.5 bar (3": 540 psi) DN 100: 30 bar (4": 435 psi) Vacuum: 1×10^{-6} bar (1.5×10^{-5} psi) |
| • MAG 1100 Food PFA | 20 bar (290 psi) Vacuum: 0.02 bar (0.3 psi) |

Mechanical load

18 ... 1000 Hz random, 3.17 G rms in all directions to EN 60068-2-36
For compact installation with the MAG 6000 I, transmitter to be supported to avoid tension on sensor part.

Technical specifications (continued)

| | |
|---|--|
| <u>Degree of protection (enclosure)</u> | IP67, higher on request |
| • Standard | IP67 to EN 60529 (NEMA 4X), 1 mH ₂ O for 30 min |
| • Option | IP68 to EN 60529 (NEMA 6), 10 mH ₂ O cont. |
| <u>Medium conditions</u> | |
| Temperature of medium | |
| • MAG 1100 Food | -20 ... +150 °C (-4 ... +300 °F) Suitable for steam sterilization |
| • MAG 1100 Food PFA | -30 ... +130 °C (-20 ... +270 °F) Suitable for steam sterilization at 150 °C (300 °F) |
| EMC | 89/336 EEC |
| Design | |
| Weight | See Dimensional drawings |
| Material | |
| • Enclosure | |
| - MAG 1100 Food ceramic | Stainless steel AISI 316L (1.4404) |
| - MAG 1100 Food PFA | Stainless steel AISI 316L (1.4404) |
| • Terminal box (remote version only) | |
| - Standard | Fibre glass-reinforced polyamide |
| - Option | <ul style="list-style-type: none"> • MAG 1100 Food: Stainless steel AISI 316 (1.4436) • MAG 1100 Food PFA: Stainless steel AISI 316 (1.4436) |
| Liner | |
| • MAG 1100 Food ceramic | Aluminium oxide Al ₂ O ₃ (ceramics) |
| • MAG 1100 Food PFA | Reinforced PFA (teflon) |
| Electrodes | |
| • MAG 1100 Food ceramic | Platinum with gold / Titanium brazing alloy |
| • MAG 1100 Food PFA | Hastelloy C276 |
| Cable entries | 4 Pg 13.5 |
| Certificates and approvals | |
| • MAG 1100 Food ceramic | 3A, EHEDG |
| • MAG 1100 Food PFA | 3A (EHEDG in preparation) |
| Conforms to | PED – 97/23 EC |

Accessories

Adapter

Pipe connection/operating pressure

| | |
|--|---|
| Adapter for welding into dairy pipe | Tri-Clover ISP 2037, DIN 11850, SMS 3008, BS 4825-1 |
| • DN 10, 15, 25, 40, 50, 65 and 80 (3/8", 1/2", 1", 1 1/2", 2", 2 1/2" and 3") | PN 40 (600 psi) |
| • DN 100 (4") | PN 25 (350 psi) |
| Clamp adapter | Tri-Clamp ISP 2852, DIN 32676, SMS 3016, BS 4825-3 |
| • DN 10, 15, 25, 40 and 50 (3/8", 1/2", 1", 1 1/2", and 2") | PN 16 (200 psi) |
| • DN 65, 80 and 100 (2 1/2", 3" and 4") | PN 10 (150 psi) |
| Thread adapter | |
| • DIN 1181 | |
| - DN 10, 15, 25, and 40 (3/8", 1/2", 1", and 1 1/2") | PN 40 (600 psi) |
| - DN 50, 65, 80 and 100 (2", 2 1/2", 3" and 4") | PN 25 (350 psi) |
| • ISO 2853, SS 3351, BS 4825-4 | |
| - DN 10, 15, 25, 40, 50, 65 and 80 (3/8", 1/2", 1", 1 1/2", 2", 2 1/2" and 3") | PN 16 (200 psi) |
| • SMS 1145 | |
| - DN 25, 40, 50, 65 and 80 (1", 1 1/2", 2", 2 1/2" and 3") | PN 6 (80 psi) |

Design

Material

| | |
|------------|---|
| • Adapter | Stainless steel AISI 316 |
| • Gasket | |
| - Standard | EPDM (-20 ... +150 °C (-4 ... +302 °F)) |
| - Option | NBR (-20 ... +100 °C (-4 ... +212 °F)) |
| • Clamp | Stainless steel AISI 304, ISO 2852 |

Note:

When combined sensor and adapter, the working pressure is the lower rated of the pair.

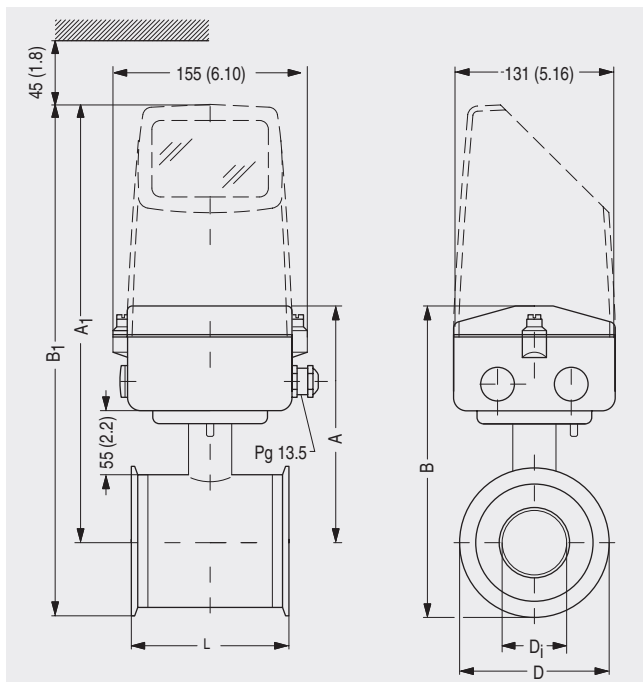
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MAGFLO MAG 1100 Food

Dimensional drawings

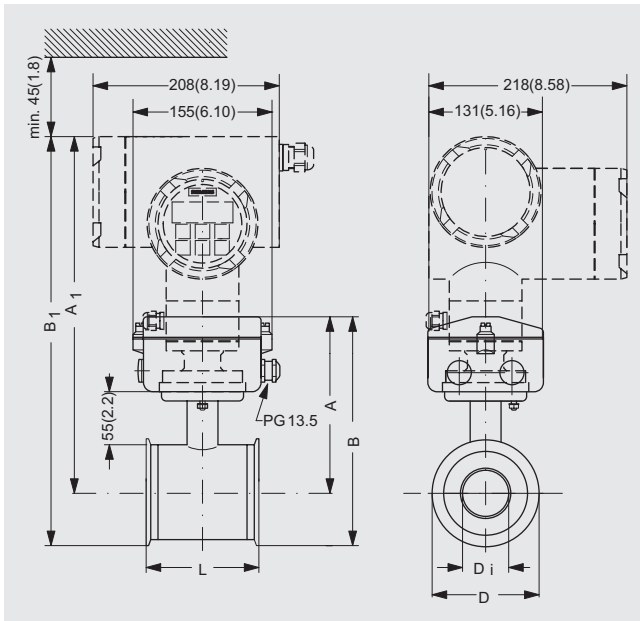
Sensor MAG 1100 Food compact/remote



| Size | L | A | A ₁ | B | B ₁ | D | D _i (Al ₂ O ₃) | D _i PFA | Weight*) |
|------|------|------|----------------|-------|----------------|-------|---|-----------------------|----------|
| DN | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg] |
| 10 | 64 | 161 | 305 | 193.0 | 346.0 | 64.0 | 10 | 10 | 2.2 |
| 15 | 64 | 161 | 314 | 193.0 | 346.0 | 64.0 | 15 | 16 | 2.2 |
| 25 | 79 | 169 | 322 | 207.8 | 360.8 | 77.5 | 25 | 26 | 2.7 |
| 40 | 94 | 181 | 334 | 226.5 | 379.5 | 91.0 | 40 | 38 | 3.4 |
| 50 | 104 | 189 | 342 | 248.5 | 401.5 | 119.0 | 50 | 50 | 4.2 |
| 65 | 131 | 199 | 352 | 264.0 | 417.0 | 130.0 | 65 | 66 | 5.5 |
| 80 | 156 | 205 | 358 | 282.5 | 435.5 | 155.0 | 80 | 81 | 7.0 |
| 100 | 186 | 218 | 371 | 309.5 | 462.5 | 183.0 | 100 | 100 | 10.0 |

| Size | L | A | A ₁ | B | B ₁ | D | D _i (Al ₂ O ₃) | D _i PFA | Weight*) |
|--------|--------|--------|----------------|--------|----------------|--------|---|-----------------------|----------|
| [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [lb] |
| 3/8 | 2.52 | 6.34 | 11.96 | 7.60 | 13.63 | 2.52 | 0.39 | 0.39 | 4.8 |
| 1/2 | 2.52 | 6.34 | 11.96 | 7.60 | 13.63 | 2.52 | 0.59 | 0.63 | 4.8 |
| 1 | 3.11 | 6.66 | 12.29 | 8.18 | 14.21 | 3.05 | 0.98 | 1.02 | 4.9 |
| 1 1/2 | 3.70 | 7.13 | 12.83 | 8.92 | 14.94 | 3.58 | 1.57 | 1.50 | 7.5 |
| 2 | 4.09 | 7.44 | 12.97 | 9.79 | 15.81 | 4.68 | 1.97 | 1.97 | 9.2 |
| 2 1/2 | 5.16 | 7.84 | 13.48 | 10.40 | 16.42 | 5.12 | 2.56 | 2.60 | 12.0 |
| 3 | 6.14 | 8.07 | 13.50 | 11.13 | 17.15 | 6.10 | 3.15 | 3.19 | 15.0 |
| 4 | 7.32 | 8.59 | 13.97 | 12.19 | 18.21 | 7.20 | 3.94 | 3.94 | 22.0 |

*) With transmitter MAG 5000 or MAG 6000 installed, weight is increased by approximately 0.8 kg (1.8 lb)



| Size | L | A | A ₁ | B | B ₁ | D | D _i (Al ₂ O ₃) | D _i PFA | Weight ^{*)} |
|------|------|------|----------------|-------|----------------|-------|---|-----------------------|----------------------|
| DN | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [kg] |
| 10 | 64 | 161 | 303.7 | 193.0 | 335.7 | 64.0 | 10 | 10 | 2.2 |
| 15 | 64 | 161 | 303.7 | 193.0 | 335.7 | 64.0 | 15 | 16 | 2.2 |
| 25 | 79 | 169 | 312.2 | 207.8 | 350.9 | 77.5 | 25 | 26 | 2.7 |
| 40 | 94 | 181 | 325.9 | 226.5 | 371.4 | 91.0 | 40 | 38 | 3.4 |
| 50 | 104 | 189 | 329.5 | 248.5 | 389 | 119.0 | 50 | 50 | 4.2 |
| 65 | 131 | 199 | 342.4 | 264.0 | 407.4 | 130.0 | 65 | 66 | 5.5 |
| 80 | 156 | 205 | 342.9 | 282.5 | 420.4 | 155.0 | 80 | 81 | 7.0 |
| 100 | 186 | 218 | 354.9 | 309.5 | 446.4 | 183.0 | 100 | 100 | 10.0 |

| Size | L | A | A ₁ | B | B ₁ | D | D _i (Al ₂ O ₃) | D _i PFA | Weight ^{*)} |
|--------|--------|--------|----------------|--------|----------------|--------|---|-----------------------|----------------------|
| [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [inch] | [lb] |
| 3/8 | 2.52 | 6.34 | 11.96 | 7.60 | 13.22 | 2.52 | 0.39 | 0.39 | 4.8 |
| 1/2 | 2.52 | 6.34 | 11.96 | 7.60 | 13.22 | 2.52 | 0.59 | 0.63 | 4.8 |
| 1 | 3.11 | 6.66 | 12.29 | 8.18 | 13.81 | 3.05 | 0.98 | 1.02 | 4.9 |
| 1 1/2 | 3.70 | 7.13 | 12.83 | 8.92 | 14.62 | 3.58 | 1.57 | 1.50 | 7.5 |
| 2 | 4.09 | 7.44 | 12.97 | 9.79 | 15.31 | 4.68 | 1.97 | 1.97 | 9.2 |
| 2 1/2 | 5.16 | 7.84 | 13.48 | 10.40 | 16.04 | 5.12 | 2.56 | 2.60 | 12.0 |
| 3 | 6.14 | 8.07 | 13.50 | 11.13 | 16.55 | 6.10 | 3.15 | 3.19 | 15.0 |
| 4 | 7.32 | 8.59 | 13.97 | 12.19 | 17.57 | 7.20 | 3.94 | 3.94 | 22.0 |

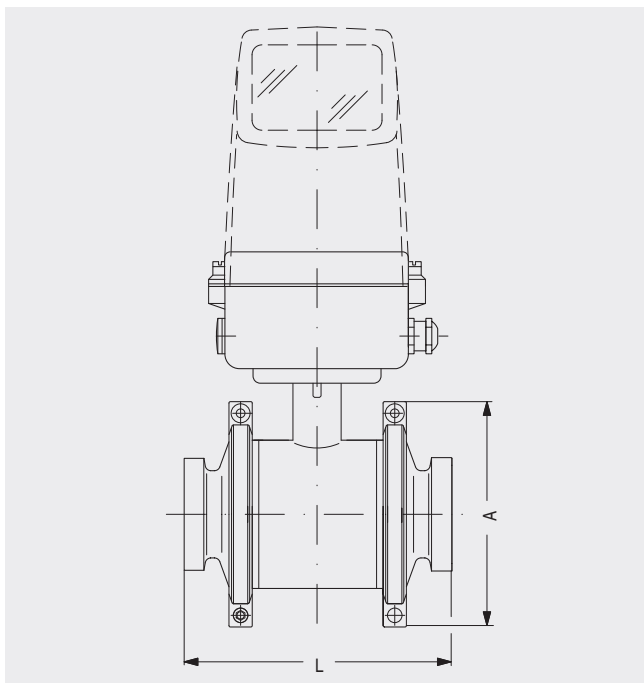
^{*)} With transmitter MAG 6000 I, weight is increased by approximately 5.5 kg (12.1 lb).

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Sensor MAG 1100 Food compact/separate – build-in length



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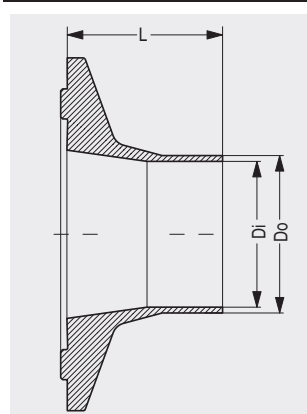
| Size | | A | | L ¹⁾ | |
|------|-------|------|--------|-----------------|--------|
| DN | Inch | [mm] | [inch] | [mm] | [inch] |
| 10 | 3/8 | 99 | 3.90 | 146 | 5.75 |
| 15 | 1/2 | 99 | 3.90 | 146 | 5.75 |
| 25 | 1 | 113 | 4.45 | 161 | 6.34 |
| 40 | 1 1/2 | 126 | 4.96 | 176 | 6.93 |
| 50 | 2 | 154 | 6.06 | 186 | 7.32 |
| 65 | 2 1/2 | 165 | 6.50 | 223 | 8.78 |
| 80 | 3 | 200 | 7.87 | 258 | 10.16 |
| 100 | 4 | 225 | 8.86 | 288 | 11.34 |

1) The total build-in length "L" is independent of the adapter type selected.

Accessories

Weld-in type adapter

| [inch] | Adapter size | Sensor size | L | Weld-in type | |
|--------|--------------|-------------|-------|-------------------------|--------|
| | | | | Tri-Clover [®] | |
| | | | | Di | Do |
| | | | | [inch] | [inch] |
| 3/8 | 3/8 | 3/8 | 1 1/2 | 0.37 | 1/2 |
| 1/2 | 1/2 | 1/2 | 1 1/2 | 0.62 | 3/4 |
| 1 | 1 | 1 | 1 1/2 | 0.87 | 1 |
| 1 1/2 | 1 1/2 | 1 1/2 | 1 1/2 | 1.37 | 1 1/2 |
| 2 | 2 | 2 | 1 1/2 | 1.87 | 2 |
| 2 1/2 | 2 1/2 | 2 1/2 | 1 3/4 | 3/4 | 2 1/2 |
| 3 | 3 | 3 | 2 | 2.87 | 3 |
| 4 | 4 | 4 | 2 | 3.83 | 4 |

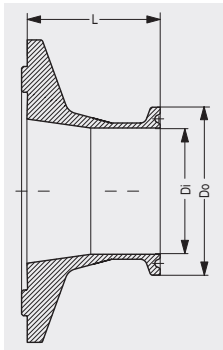


| Adapter DN | Sensor DN | L | Weld-in type | | | | | | | | | |
|------------|-----------|------|--------------|---------|-------------|---------|----------|---------|------------|---------|-------------|---------|
| | | | DIN 11850 | | DS/ISO 2037 | | SMS 3008 | | BBS 4825-1 | | Tri-Clover® | |
| [mm] | [mm] | [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] |
| 10 | 10 | 40 | 10.0 | 13.0 | 10.0 | 13.0 | 10.0 | 13.0 | 10.0 | 13.0 | 9.4 | 12.7 |
| 15 | 15 | 40 | 16.0 | 19.0 | 16.0 | 19.0 | 16.0 | 19.0 | 16.0 | 19.0 | - | - |
| 15.9 | 15 | 40 | - | - | - | - | - | - | - | - | 15.75 | 19.05 |
| 20 | 15 | 40 | 20.0 | 23.0 | 20.0 | 23.0 | 20.0 | 23.0 | 20.0 | 23.0 | - | - |
| 25 | 25 | 40 | 26.0 | 29.0 | 22.6 | 25.6 | 22.6 | 25.6 | 22.6 | 25.6 | 22.1 | 25.4 |
| 28 | 25 | 40 | - | - | 25.6 | 28.6 | - | - | - | - | - | - |
| 32 | 25 | 40 | - | - | - | - | 29.6 | 32.0 | - | - | - | - |
| 32 | 25 | 40 | 32.0 | 35.0 | - | - | - | - | - | - | - | - |
| 33.7 | 25 | 40 | - | - | 31.3 | 34.3 | 31.3 | 34.3 | - | - | - | - |
| 38 | 40 | 40 | - | - | 35.6 | 38.6 | 35.6 | 38.6 | 35.6 | 38.6 | 34.8 | 38.1 |
| 40 | 40 | 40 | 38.0 | 40.0 | 37.6 | 40.6 | - | - | - | - | - | - |
| 50 | 50 | 40 | - | - | 48.6 | 51.6 | 48.6 | 51.6 | 48.6 | 51.6 | 47.5 | 50.8 |
| 50 | 50 | 40 | 50.0 | 53.0 | - | - | - | - | - | - | - | - |
| 63.5 | 65 | 45 | - | - | 60.3 | 64.1 | 60.3 | 64.1 | 60.3 | 64.1 | 60.2 | 63.5 |
| 65 | 65 | 45 | 66.0 | 70.0 | - | - | - | - | - | - | - | - |
| 70 | 65 | 45 | - | - | 66.8 | 70.6 | - | - | - | - | - | - |
| 76 | 65 | 45 | - | - | - | - | 72.0 | 76.0 | - | - | - | - |
| 76.1 | 80 | 50 | - | - | 72.9 | 76.7 | 72.9 | 76.7 | 72.9 | 76.7 | 72.9 | 76.2 |
| 80 | 80 | 50 | 81.0 | 85.0 | - | - | - | - | - | - | - | - |
| 88.9 | 80 | 50 | - | - | 84.9 | 89.8 | 84.9 | 89.8 | - | - | - | - |
| 100 | 50 | 50 | 100 | 104 | - | - | - | - | - | - | - | - |
| 101.6 | 50 | 50 | - | - | 97.6 | 102.5 | 97.6 | 102.5 | 97.6 | 102.6 | 97.38 | 101.6 |
| 114.3 | 50 | 50 | - | - | 110.3 | 115.6 | 110.3 | 115.6 | 110.3 | 115.6 | - | - |

Tri-Clover® is a registered trademark for Ladish Co.

Clamp type adapter

| Adapter size | Sensor size | L | Clamp type | |
|--------------|-------------|--------|------------|-----------|
| | | | Di [inch] | Do [inch] |
| [inch] | [inch] | [inch] | Tri-Clamp® | |
| 3/8 | 3/8 | 1½ | 0.37 | 0.98 |
| ½ | ½ | 1½ | 0.62 | 0.98 |
| 1 | 1 | 1½ | 0.87 | 1.99 |
| 1½ | 1½ | 1½ | 1.37 | 1.99 |
| 2 | 2 | 1½ | 1.87 | 2.52 |
| 2½ | 2½ | 1¾ | 2.37 | 3.05 |
| 3 | 3 | 2 | 2.87 | 3.58 |
| 4 | 4 | 2 | 3.83 | 4.70 |



| Adapter DN | Sensor DN | L | Clamp type | | | | | | | | | |
|------------|-----------|------|------------|---------|----------|---------|----------|---------|------------|---------|------------|---------|
| | | | DIN 32676 | | ISO 2852 | | SMS 3016 | | BBS 4825-3 | | Tri-Clamp® | |
| [mm] | [mm] | [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] |
| 10 | 10 | 40 | 10.0 | 34.0 | 10.0 | 34.0 | 10.0 | 34.0 | - | - | 9.4 | 25.0 |
| 15 | 15 | 40 | 16.0 | 34.0 | 16.0 | 34.0 | 16.0 | 34.0 | - | - | 15.75 | 25.0 |
| 20 | 15 | 40 | 20.0 | 34.0 | 20.0 | 34.0 | - | - | - | - | - | - |
| 25 | 25 | 40 | - | - | 22.6 | 50.5 | 22.6 | 50.5 | 22.6 | 50.5 | 22.1 | 50.5 |
| 25 | 25 | 40 | 26.0 | 50.5 | 26.0 | 50.5 | - | - | - | - | - | - |
| 33.7 | 25 | 40 | 31.3 | 50.5 | 31.3 | 50.5 | 31.3 | 50.5 | - | - | - | - |
| 38 | 40 | 40 | - | - | 35.6 | 50.5 | 35.6 | 50.5 | 35.6 | 50.5 | 34.8 | 50.5 |
| 40 | 40 | 40 | 38.0 | 50.5 | 38.0 | 50.5 | - | - | - | - | - | - |
| 50 | 50 | 40 | 50.0 | 64.0 | - | - | - | - | - | - | - | - |
| 51 | 50 | 40 | 48.6 | 64.0 | 48.6 | 64.0 | 48.6 | 64.0 | 47.5 | 64.0 | - | - |
| 63.5 | 65 | 45 | - | - | 60.3 | 77.5 | 60.3 | 77.5 | 60.3 | 77.5 | 60.2 | 77.5 |
| 65 | 65 | 45 | 66.0 | 91.0 | - | - | - | - | - | - | - | - |
| 76.1 | 80 | 50 | - | - | 72.9 | 91.0 | 72.9 | 91.0 | 72.9 | 91.0 | 72.9 | 91.0 |
| 80 | 80 | 50 | 81.0 | 106.0 | - | - | - | - | - | - | - | - |
| 100 | 100 | 50 | 100.0 | 119.9 | - | - | - | - | - | - | - | - |
| 101.6 | 100 | 50 | - | - | 97.6 | 119.0 | 97.6 | 119.0 | 97.6 | 119.0 | 97.38 | 119.0 |

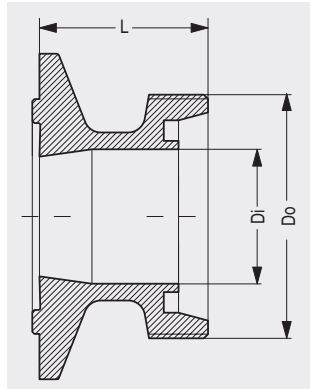
Tri-Clamp® is a registered trademark for Ladish Co.

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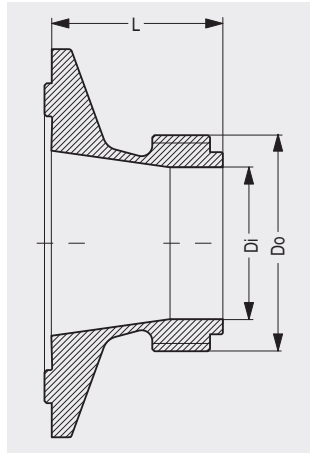
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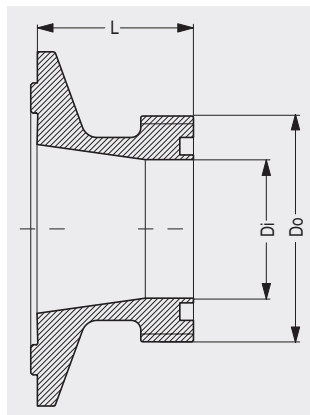
Threaded type adapter



| Adapter DN | Sensor DN | L | Threaded type | |
|------------|-----------|------|---------------|---------|
| | | | DIN 11850 | |
| [mm] | [mm] | [mm] | Di [mm] | Do [mm] |
| 10 | 10 | 40 | 10.0 | 28.0 |
| 15 | 15 | 40 | 16.0 | 34.0 |
| 20 | 15 | 40 | 20.0 | 44.0 |
| 25 | 25 | 40 | 26.0 | 52.0 |
| 32 | 25 | 40 | 32.0 | 58.0 |
| 40 | 40 | 40 | 38.0 | 65.0 |
| 50 | 50 | 40 | 50.0 | 78.0 |
| 65 | 65 | 45 | 66.0 | 95.0 |
| 80 | 80 | 50 | 81.0 | 110.0 |
| 100 | 100 | 50 | 100.0 | 130.0 |



| Adapter DN | Sensor DN | L | Threaded type | | | | | |
|------------|-----------|------|---------------|---------|---------|---------|-----------------|---------|
| | | | IS 2852 | | SS 3351 | | BS 4825-4 (IDF) | |
| [mm] | [mm] | [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] | Di [mm] | Do [mm] |
| 25 | 25 | 40 | 22.6 | 37.0 | 22.6 | 37.0 | 22.6 | 37.0 |
| 38 | 40 | 40 | 35.6 | 51.0 | 35.6 | 51.0 | 35.6 | 51.0 |
| 51 | 50 | 40 | 48.6 | 64.0 | 48.6 | 64.0 | 48.6 | 64.0 |
| 63.5 | 65 | 45 | 60.3 | 78.0 | 60.3 | 78.0 | 60.3 | 78.0 |
| 76.1 | 80 | 50 | 72.9 | 91.0 | 72.9 | 91.0 | 72.9 | 91.0 |
| 101.6 | 100 | 50 | - | - | - | - | 97.6 | 126.0 |
| 101.6 | 100 | 50 | 97.6 | 118.0 | 97.6 | 118.0 | - | - |



| Adapter DN | Sensor DN | L | Threaded type | |
|------------|-----------|------|---------------|---------|
| | | | SMS 1145 | |
| [mm] | [mm] | [mm] | Di [mm] | Do [mm] |
| 25 | 25 | 40 | 22.6 | 40.0 |
| 32 | 25 | 40 | 29.6 | 48.0 |
| 38 | 40 | 40 | 35.6 | 60.0 |
| 51 | 50 | 40 | 48.6 | 70.0 |
| 63.5 | 65 | 45 | 60.3 | 85.0 |
| 76 | 65 | 45 | 72.0 | 98.0 |

SITRANS F flowmeters

SITRANS F M

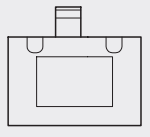
MAGFLO MAG 1100 Food

| Selection and Ordering data | Order No. |
|--|----------------------------|
| Flowsensor SITRANS F M MAGFLO MAG 1100 Food | 7 ME 6 1 4 0 - |
| Pg 13.5, compact version, M25 | ■ ■ A ■ 0 - ■ ■ A 0 |
| Diameter | |
| DN 10 (3/8") | ▶ 1 R |
| DN 15 (1/2") | ▶ 1 V |
| DN 25 (1") | ▶ 2 D |
| DN 40 (1 1/2") | ▶ 2 R |
| DN 50 (2") | ▶ 2 Y |
| DN 65 (2 1/2") | ▶ 3 F |
| DN 80 (3") | ▶ 3 M |
| DN 100 (4") | ▶ 3 T |
| Liner material | |
| PFA | ▶ 1 |
| Ceramic | ▶ 2 |
| Electrode material | |
| Hastelloy C276 (only with PFA liner) | ▶ 1 |
| Platinum (only with ceramic liner) | ▶ 2 |
| Transmitter | |
| No transmitter | ▶ A |
| MAG 6000 industry, 18 V ... 220 V, standard | ▶ C |

▶ Available ex stock.

Note: Connection fittings must be ordered separately

| Additional information | Order code |
|---|------------|
| Please add "-Z" to Order No. and specify Order code(s) and plain text. | |
| Customer specific converter setup | Y20 |
| Tag name made, stainless steel fixed with SS wire (add plain text) | Y17 |
| Tag name plate, plastic (self adhesive) | Y18 |
| Factory certificate according to EN 10204-2.1 | C15 |
| Factory certificate according to EN 10204-2.2 | C14 |
| Power cable wired, specify cable order no. | Y40 |
| Junction box IP68 NEMA 4X/6P with wired cable | Y41 |
| Customer specific test | Y90 |
| Special version with order no/date (add desired text) | Y99 |

| Description | Order No. | Symbol |
|--------------------------|---------------------|---|
| HART (for MAG 6000 I/Ex) | FDK:085U0321 |  |
| MODBUS RTU/RS485 | FDK:085U0234 | |
| PROFIBUS PA | FDK:085U0232 | |
| PROFIBUS DP | FDK:085U0230 | |
| CANopen | FDK:085U0228 | |
| DeviceNet | FDK:085U0229 | |

Spare parts

| | Order No. | Symbol |
|---------|---------------------|--------|
| Display | FDK:085U3122 | |

Complete spare part PCB unit

| | Order No. | Symbol |
|-------------------------------|----------------------|--------|
| Not Ex | FDK: 085U3123 | |
| Ex d version 18 ... 30 V DC | FDK: 085U3124 | |
| Ex d version 115 ... 230 V AC | FDK: 085U3125 | |

4

SITRANS F flowmeters

SITRANS F M

MAGFLO MAG 1100 Food

Accessories

Order No.

Weld in connection fittings for MAGFLO MAG 1100 Food

Each of the following accessory order nos. comprises:

- 2 off fittings
- 2 off clamps (to join flow sensor and fitting)
- 2 off EPDM gaskets

DIN 11850

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|----------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 13 | 10 | 10 | ▶ FDK:083G2116 |
| 15 | 19 | 16 | 15 | ▶ FDK:083G2117 |
| 20 | 23 | 20 | 15 | ▶ FDK:083G2118 |
| 25 | 29 | 26 | 25 | ▶ FDK:083G2119 |
| 32 | 35 | 32 | 25 | ▶ FDK:083G2120 |
| 40 | 41 | 38 | 40 | ▶ FDK:083G2121 |
| 50 | 53 | 50 | 50 | ▶ FDK:083G2122 |
| 65 | 70 | 66 | 65 | ▶ FDK:083G2123 |
| 80 | 85 | 81 | 80 | ▶ FDK:083G2124 |
| 100 | 104 | 100 | 100 | ▶ FDK:083G2125 |

DS/ISO 2037

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|----------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 13 | 10 | 10 | ▶ FDK:083G2116 |
| 15 | 19 | 16 | 15 | ▶ FDK:083G2117 |
| 20 | 23 | 20 | 15 | ▶ FDK:083G2118 |
| 25 | 25.6 | 22.6 | 25 | ▶ FDK:083G2109 |
| 28 | 28.6 | 25.6 | 25 | ▶ FDK:083G2100 |
| 33.7 | 34.3 | 31.3 | 25 | ▶ FDK:083G2110 |
| 38 | 38.6 | 35.6 | 40 | ▶ FDK:083G2111 |
| 40 | 40.6 | 37.6 | 40 | ▶ FDK:083G2101 |
| 51 | 51.6 | 48.6 | 50 | ▶ FDK:083G2112 |
| 63.5 | 64.1 | 60.3 | 65 | ▶ FDK:083G2113 |
| 70 | 70.6 | 66.8 | 65 | ▶ FDK:083G2103 |
| 76.1 | 76.7 | 72.9 | 80 | ▶ FDK:083G2114 |
| 88.9 | 88.9 | 84.9 | 80 | ▶ FDK:083G2104 |
| 101.6 | 102.5 | 97.6 | 100 | ▶ FDK:083G2115 |
| 114.3 | 115.6 | 110.3 | 100 | ▶ FDK:083G2105 |

SMS 3008

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|----------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 13 | 10 | 10 | ▶ FDK:083G2116 |
| 15 | 19 | 16 | 15 | ▶ FDK:083G2117 |
| 20 | 23 | 20 | 15 | ▶ FDK:083G2118 |
| 25 | 25.6 | 22.6 | 25 | ▶ FDK:083G2109 |
| 32 | 32 | 29.6 | 25 | ▶ FDK:083G2102 |
| 33.7 | 34.3 | 31.3 | 25 | ▶ FDK:083G2110 |
| 38 | 38.6 | 35.6 | 40 | ▶ FDK:083G2111 |
| 51 | 51.6 | 48.6 | 50 | ▶ FDK:083G2112 |
| 63.5 | 64.1 | 60.3 | 65 | ▶ FDK:083G2113 |
| 76 | 76 | 72 | 65 | ▶ FDK:083G2106 |
| 76.1 | 76.7 | 72.9 | 80 | ▶ FDK:083G2114 |
| 88.9 | 88.9 | 84.9 | 80 | ▶ FDK:083G2104 |
| 101.6 | 102.5 | 97.6 | 100 | ▶ FDK:083G2115 |
| 114.3 | 115.6 | 110.3 | 100 | ▶ FDK:083G2105 |

Accessories

Order No.

Weld in connection fittings for MAGFLO MAG 1100 Food

Each of the following accessory order nos. comprises:

- 2 off fittings
- 2 off clamps (to join flow sensor and fitting)
- 2 off EPDM gaskets

BS 4825-1

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|----------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 13 | 10 | 10 | ▶ FDK:083G2116 |
| 15 | 19 | 16 | 15 | ▶ FDK:083G2117 |
| 20 | 23 | 20 | 15 | ▶ FDK:083G2118 |
| 25 | 25.6 | 22.6 | 25 | ▶ FDK:083G2109 |
| 38 | 38.6 | 35.6 | 40 | ▶ FDK:083G2111 |
| 51 | 51.6 | 48.6 | 50 | ▶ FDK:083G2112 |
| 63.5 | 64.1 | 60.3 | 65 | ▶ FDK:083G2113 |
| 76.1 | 76.7 | 72.9 | 80 | ▶ FDK:083G2114 |
| 101.6 | 102.5 | 97.6 | 100 | ▶ FDK:083G2115 |
| 114.3 | 115.6 | 110.3 | 100 | ▶ FDK:083G2105 |

Tri-Clover®

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|----------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 12.7 | 9.4 | 10 | ▶ FDK:083G2276 |
| 15.9 | 19.05 | 15.75 | 15 | ▶ FDK:083G2277 |
| 25 | 25.4 | 22.1 | 25 | ▶ FDK:083G2279 |
| 38 | 38.1 | 34.8 | 40 | ▶ FDK:083G2281 |
| 51 | 50.8 | 47.5 | 50 | ▶ FDK:083G2282 |
| 63.5 | 63.5 | 60.2 | 65 | ▶ FDK:083G2283 |
| 76.1 | 76.2 | 72.9 | 80 | ▶ FDK:083G2284 |
| 102 | 101.6 | 97.38 | 100 | ▶ FDK:083G2285 |

Tri-Clover® is a registered trademark of Ladish Co.

- ▶ Available ex stock.
- D_o: outer diameter
- D_i: inner diameter

| Accessories | | | | Order No. |
|--|---------------------|---------------------|---------|---------------------|
| Clamp-type connection fittings for MAGFLO MAG 1100 Food | | | | |
| Sanitary pipe fittings for Clamp types | | | | |
| Each of the following accessory order nos. comprises: | | | | |
| 2 off fittings | | | | |
| 2 off clamps (to join flow sensor and fitting) | | | | |
| 2 off EPDM gaskets | | | | |
| DIN 32676 | | | | |
| Adapter | | Sensor | | |
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 34 | 10 | 10 | FDK:083G2186 |
| 15 | 34 | 16 | 15 | FDK:083G2187 |
| 20 | 34 | 20 | 15 | FDK:083G2188 |
| 25 | 50.5 | 26 | 25 | FDK:083G2179 |
| 33.7 | 50.5 | 31.3 | 25 | FDK:083G2190 |
| 40 | 50.5 | 38 | 40 | FDK:083G2181 |
| 50 | 64 | 50 | 50 | FDK:083G2182 |
| 65 | 91 | 66 | 65 | FDK:083G2183 |
| 80 | 106 | 81 | 80 | FDK:083G2184 |
| 100 | 119 | 100 | 100 | FDK:083G2185 |
| ISO 2852 | | | | |
| Adapter | | Sensor | | |
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 34 | 10 | 10 | FDK:083G2186 |
| 15 | 34 | 16 | 15 | FDK:083G2187 |
| 20 | 34 | 20 | 15 | FDK:083G2188 |
| 25 | 50.5 | 22.6 | 25 | FDK:083G2189 |
| 25 | 50.5 | 26 | 25 | FDK:083G2179 |
| 33.7 | 50.5 | 31.3 | 25 | FDK:083G2190 |
| 38 | 50.5 | 35.6 | 40 | FDK:083G2191 |
| 40 | 50.5 | 38 | 40 | FDK:083G2181 |
| 51 | 64 | 48.6 | 50 | FDK:083G2192 |
| 63.5 | 77.5 | 60.3 | 65 | FDK:083G2193 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2194 |
| 101.6 | 119 | 97.6 | 100 | FDK:083G2195 |
| SMS 3016 | | | | |
| Adapter | | Sensor | | |
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 34 | 10 | 10 | FDK:083G2186 |
| 15 | 34 | 16 | 15 | FDK:083G2187 |
| 25 | 50.5 | 22.6 | 25 | FDK:083G2189 |
| 33.7 | 50.5 | 31.3 | 25 | FDK:083G2190 |
| 38 | 50.5 | 35.6 | 40 | FDK:083G2191 |
| 51 | 64 | 48.6 | 50 | FDK:083G2192 |
| 63.5 | 77.5 | 60.3 | 65 | FDK:083G2193 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2194 |
| 101.6 | 119 | 97.6 | 100 | FDK:083G2195 |
| BS 4825-3 | | | | |
| Adapter | | Sensor | | |
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 25 | 50.5 | 22.6 | 25 | FDK:083G2189 |
| 38 | 50.5 | 35.6 | 40 | FDK:083G2191 |
| 51 | 64 | 48.6 | 50 | FDK:083G2192 |
| 63.5 | 77.5 | 60.3 | 65 | FDK:083G2193 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2194 |
| 101.6 | 119 | 97.6 | 100 | FDK:083G2195 |

| Accessories | | | | Order No. |
|--|---------------------|---------------------|---------|---------------------|
| Clamp-type connection fittings for MAGFLO MAG 1100 Food | | | | |
| Sanitary pipe fittings for Clamp types | | | | |
| Each of the following accessory order nos. comprises: | | | | |
| 2 off fittings | | | | |
| 2 off clamps (to join flow sensor and fitting) | | | | |
| 2 off EPDM gaskets | | | | |
| Tri-Clamp® | | | | |
| Adapter | | Sensor | | |
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 34 | 10 | 10 | FDK:083G2286 |
| 15 | 34 | 16 | 15 | FDK:083G2287 |
| 25 | 50.5 | 22.6 | 25 | FDK:083G2289 |
| 38 | 50.5 | 35.6 | 40 | FDK:083G2291 |
| 51 | 64 | 48.6 | 50 | FDK:083G2292 |
| 63.5 | 77.5 | 60.3 | 65 | FDK:083G2293 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2294 |
| 101.6 | 119 | 97.6 | 100 | FDK:083G2295 |
| Tri-Clamp® is a registered trademark of Ladish Co. | | | | |
| D _o : outer diameter | | | | |
| D _i : inner diameter | | | | |

SITRANS F flowmeters

SITRANS F M

MAGFLO MAG 1100 Food

Accessories

Order No.

Threaded type connection fittings for MAG-FLO MAG 1100 Food

Sanitary pipe fittings for Threaded types

Each of the following accessory order nos. comprises:

- 2 off fittings
- 2 off clamps (to join flow sensor and fitting)
- 2 off EPDM gaskets

DIN 11851

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|---------------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 10 | 10 | 10 | 10 | FDK:083G2156 |
| 15 | 15 | 15 | 15 | FDK:083G2157 |
| 20 | 20 | 20 | 15 | FDK:083G2158 |
| 25 | 25 | 25 | 25 | FDK:083G2159 |
| 32 | 32 | 32 | 25 | FDK:083G2160 |
| 40 | 40 | 40 | 40 | FDK:083G2161 |
| 50 | 50 | 50 | 50 | FDK:083G2162 |
| 65 | 65 | 65 | 65 | FDK:083G2163 |
| 80 | 80 | 80 | 80 | FDK:083G2164 |
| 100 | 100 | 100 | 100 | FDK:083G2165 |

ISO 2853

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|---------------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 25 | 37 | 22.6 | 25 | FDK:083G2149 |
| 38 | 51 | 35.6 | 40 | FDK:083G2151 |
| 51 | 64 | 48.6 | 50 | FDK:083G2152 |
| 63.5 | 78 | 60.3 | 65 | FDK:083G2153 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2154 |
| 101.6 | 118 | 97.6 | 100 | FDK:083G2155 |

SS 3351

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|---------------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 25 | 37 | 22.6 | 25 | FDK:083G2149 |
| 38 | 51 | 35.6 | 40 | FDK:083G2151 |
| 51 | 64 | 48.6 | 50 | FDK:083G2152 |
| 63.5 | 78 | 60.3 | 65 | FDK:083G2153 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2154 |
| 101.6 | 118 | 97.6 | 100 | FDK:083G2155 |

BS 4825-4

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|---------------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 25 | 37 | 22.6 | 25 | FDK:083G2149 |
| 38 | 51 | 35.6 | 40 | FDK:083G2151 |
| 51 | 64 | 48.6 | 50 | FDK:083G2152 |
| 63.5 | 78 | 60.3 | 65 | FDK:083G2153 |
| 76.1 | 91 | 72.9 | 80 | FDK:083G2154 |
| 101.6 | 126 | 97.6 | 100 | FDK:083G2145 |

SMS 1145

| Adapter | | | Sensor | |
|---------|---------------------|---------------------|---------|---------------------|
| DN (mm) | D _o (mm) | D _i (mm) | DN (mm) | |
| 25 | 40 | 22.6 | 25 | FDK:083G2139 |
| 32 | 48 | 29.6 | 25 | FDK:083G2140 |
| 38 | 60 | 35.6 | 40 | FDK:083G2141 |
| 51 | 70 | 48.6 | 50 | FDK:083G2142 |
| 63.5 | 85 | 60.3 | 65 | FDK:083G2143 |
| 76 | 98 | 72 | 65 | FDK:083G2144 |

D_o: outer diameter
D_i: inner diameter

Spare parts for MAGFLO MAG 1100 Food

Order No.

Gaskets

(2 pcs., between flow sensor and adapter)

Rubber: EPDM

- DN 10
- DN 15
- DN 25
- DN 40

FDK:083G2206
FDK:083G2207
FDK:083G2209
FDK:083G2211

- DN 50
- DN 65
- DN 80
- DN 100

FDK:083G2212
FDK:083G2213
FDK:083G2214
FDK:083G2215

Rubber: NBR

- DN 10
- DN 15
- DN 25
- DN 40
- DN 50
- DN 65
- DN 80
- DN 100

FDK:083G2216
FDK:083G2217
FDK:083G2219
FDK:083G2221
FDK:083G2222
FDK:083G2223
FDK:083G2224
FDK:083G2225