

Variable area flow metre C6/C5-250



- Magnetic movement transmission
- Indirect reading
- Scales
 - in water: 2.5 to 63000 L/h
 - in air: 0.08 to 1000 Nm³/h
- Threaded or flange connections
- Options:
 - LCD digital display for flow rate and totalization
 - Hart protocol, 4-20 mA output
 - 1 or 2 adjustable alarm contacts
 - ATEX certification,
EEx ia IIC T6 / EEx d IIB T4

DESCRIPTION

These flow-metres are designed for gases. Viscosity variations have less effect on results thanks to a specific profile of the diver. The transmission of the diver position to the display is magnetically operated. The small distances between the connections allow an easy location in a small volume. A dumper option is available for low nominal pressures where pulses on pressure could affect the accuracy. As options there are a transmitter 4-20 mA two wires model and alarm contacts. For ATEX area, two versions are certified, intrinsically safe **EEx ia** and explosion proof **EEx d**.

PRINCIPLE

For a correct operation, the flow must be **vertical and upward**. The gas passes through a diaphragm pushing a conical. The diver position is at the equilibrium point between the kinetic energy due to the speed of the fluid and the diver weight, profile and diaphragm geometry.

- Each balance point corresponds to a flow rate value.
- Flow rate transmission is done with a magnetic transmission.

BAMO MESURES

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DEB

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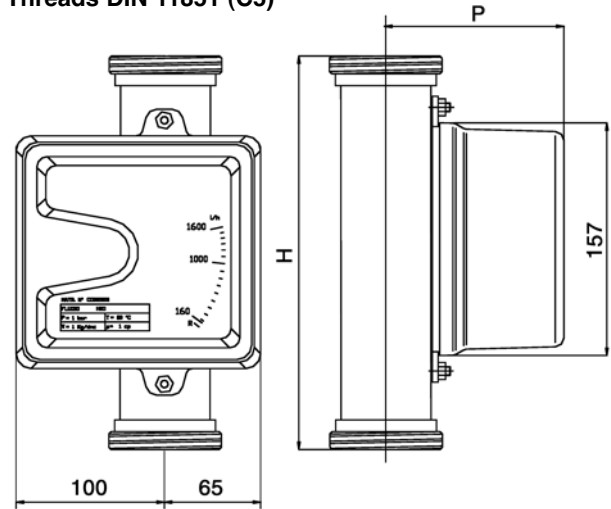
SCALES FOR WATER

| Type - DN | (L/h) 20°C | Codes | ΔP /mbar |
|-------------|----------------|-----------|----------|
| 26 - DN 15 | de 2,5 à 25 | 742 115 | 55 |
| | 4 40 | 742 116 | 57 |
| | 6,3 63 | 742 117 | 57 |
| | 10 100 | 742 118 | 40 |
| | 16 160 | 742 119 | 40 |
| | 25 250 | 742 120 | 40 |
| | 40 400 | 742 121 | 36 |
| | 63 630 | 742 122 | 36 |
| | 100 1 000 | 742 123 | 42 |
| 28 - DN 25 | 100 1 000 | 742 125 | 45 |
| | 160 1 600 | 742 126 | 45 |
| | 250 2 500 | 742 127 | 50 |
| | 400 4 000 | 742 128 | 50 |
| | 600 6 000 | 742 - - - | 98 |
| 31 - DN 50 | 250 2 500 | 742 148 | 50 |
| | 400 4 000 | 742 149 | 50 |
| | 630 6 300 | 742 150 | 50 |
| | 1 000 10 000 | 742 151 | 45 |
| | 1 600 16 000 | 742 152 | 45 |
| 33 - DN 80 | 2 500 25 000** | 742 153 | 52 |
| | 2 500 25 000 | 742 179 | 48 |
| | 4 000 40 000 | 742 180 | 48 |
| 34 - DN 100 | 6 300 63 000 | 742 181 | 85 |
| | 4 000 40 000 | 742 189 | 48 |
| | 6 300 63 000 | 742 190 | 75 |
| | 10 000 100 000 | 742 191 | 85 |

** C6 only

DIMENSIONS

Threads DIN 11851 (C5)



| Type | DIN 11851 | H /mm | P /mm | kg |
|------|-----------|-------|-------|-----|
| 2600 | 1" | 265 | 103 | 2,7 |
| 2800 | 1 1/2" | 265 | 110 | 3,3 |
| 3100 | 2 1/2" | 265 | 128 | 5,7 |
| 3300 | 4" | 274 | 141 | 8,2 |

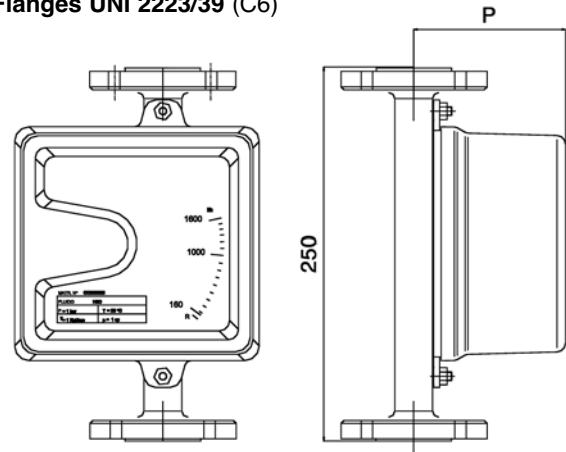
SCALES FOR AIR

| Type - DN | (Nm³/h) 20°C (P=1013 mbar) | Codes | ΔP /mbar |
|------------|----------------------------|-------|----------|
| 26 - DN 15 | de 0,08 à 0,8 | * | 55 |
| | 0,12 1,2 | * | 57 |
| | 0,2 2 | * | 57 |
| | 0,3 3 | * | 40 |
| | 0,5 5 | * | 40 |
| | 0,75 7,5 | * | 40 |
| | 1,2 12 | * | 36 |
| | 2 20 | * | 36 |
| | 3 30 | * | 45 |
| 28 - DN 25 | 5 50 | * | 45 |
| | 7,5 75 | * | 50 |
| | 12 120 | * | 50 |
| 31 - DN 50 | 7,5 75 | * | 50 |
| | 12 120 | * | 50 |
| | 20 200 | * | 50 |
| | 30 300 | * | 45 |
| 33 - DN 80 | 50 (Flot. PVDF) 500 | * | 45 |
| | 57,5 (Flot. PVDF) 575 | * | 48 |
| | 100 (Flot. PVDF) 1 000 | * | 48 |
| | | | 85 |

* Upon request

(1) Necessary parameters for quotation:
 Absolute pressure in bar
 Temperature in °C
 Specific weight in kg/m³

Flanges UNI 2223/39 (C6)



| Type | DN | P /mm | kg |
|------|-----|-------|------|
| 2600 | 15 | 103 | 3,8 |
| 2800 | 25 | 110 | 4,9 |
| 3100 | 50 | 128 | 9,9 |
| 3300 | 80 | 141 | 13,5 |
| 3400 | 100 | 157 | 16,5 |

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TECHNICAL FEATURES

Indicator with or without alarm contacts (standard)

| | |
|--------------------------|--|
| Scale range: | 1 to 10 |
| Analogical scale length: | 80 mm |
| Accuracy: | +/- 1.5% full scale (standard) |
| Repeatability: | 0.5% full scale |
| Maximal pressure: | 40 bar (higher pressures on request) |
| Temperature limits: | -10 ... +150°C without alarm contacts -10 ... +100°C with alarm contacts -30 ... +300°C high temperature version (with and without alarm contacts) |
| Process connections: | Flanges PN 16 UNI 2223/29 (standard); threads BSP, NPT, Triclamp |
| Wetted parts: | Stainless steel 316 L, PTFE – on request: Titanium, Hastelloy C |
| Display housing: | Cast aluminium, epoxy painted RAL 7001 |
| Protection: | IP 67 |
| OPTIONS: | Inductive contacts (adjustable all along the scale) with 8 V CC power supply |

Indicator with transmitter

| | |
|-----------------------------|--|
| Scale range: | 1 to 10 |
| Analogical scale length: | 80 mm |
| Accuracy: | +/- 1% full scale (standard) |
| Repeatability: | 0.5% full scale |
| Programmable display: | LCD, 8 digits (flow rate, %, totalization) |
| Response time: | < 0.5 s (only the electronic) |
| Analogical output: | 4-20 mA, 2 wires |
| Hart protocol transmission: | optional |
| Main power: | 24 V DC +/-10% |
| Alarm contacts: | optional, 1 or 2 adjustable contacts |
| Maximal pressure: | 40 bar |
| Temperature limits: | -10 ... +90°C without alarm contacts -10 ... +90°C with alarm contacts -30 ... +300°C high temperature version (with and without alarm contacts) |
| Process connections: | Flanges PN 16 UNI 2223/29 (standard); threads BSP, NPT, Triclamp |
| Wetted parts: | Stainless steel 316 L, PTFE – on request: Titanium, Hastelloy C |
| Display housing: | Cast aluminium, epoxy painted RAL 7001 |
| Protection: | IP 67 |
| OPTIONS: | ATEX Certification EEx ia IIC T6 (Intrinsically safe) ATEX Certification EEx d IIB T4 (Explosion proof) |

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