Coriolis Mass Flow Meter MULTICOR®-S

- Continuous mass flow measurement according to the Coriolis principle
- Highly accurate measuring principle
- Quick measurement value acquisition, with excellent control capability
- Rugged design
- Cost effective and easily integration
- Dust-tight housing

Application
Designed as an enclosed measuring system for the acquisition of flow rates and totalized amounts, the MULTICOR® Coriolis Mass Flow Meter is suited for throughput and consumption measurement:
- throughput and consumption measurement
- totalizing
- batching
of materials with good to slightly sluggish flow properties.

Equipped with controllable prefeeder (e.g. star feeder, flow gate or screw), the measuring system can also be used as feed system.
The MULTICOR® series offers solutions for many applications:
- MULTICOR®-S
  - Gravity feed into processes

Equipment
A MULTICOR®-S Coriolis Mass Flow Meter consists of:
- dust-tight stainless steel housing
- measuring wheel with guide vanes
- weighing module
- cable junction box
- AC three-phase geared motor.
All contact parts are of stainless steel.
The inlet connection for attachment to user’s infeed line is equipped with DIN flange or Jacob´s pipe connection.
The outlet cone is equipped with a flexible sleeve for connection to user´s feed line.
The weighing module arranged outside of material casing thus enabling the system to be used even at material temperatures of up to 130° Celsius.

Functions
The MULTICOR® Mass Flow Meter use the Coriolis force measurement principle to determine the mass flow. Within the device, the material flow to be measured hits a measuring wheel, rotation at constant speed.
The material is accelerated to the measuring wheel circumferential speed by the guide vanes.
This acceleration produces a torque directly corresponding to the flow rate. The torque is measured by a measuring module and converted into an electrical signal.
The measurement is independent of mechanical material properties, e.g. grain size, flow behaviour, moisture and temperature.
The material friction on the measuring wheel and flow speed variations in the measuring system do not affect the measuring signal.
Dimensions [mm]
Coriolis Mass Flow Meter MULTICOR®-S40

h = 1185: disassembly weighing section incl. drive unit without disassembly housing is possible

Disassembly outlet cone

Electrical connection point
Section inspection cover

Coriolis Mass Flow Meter MULTICOR®-S80

h = 1420: disassembly weighing section incl. drive unit without disassembly housing is possible

Disassembly outlet cone

Electrical connection point
Section inspection cover
Coriolis Mass Flow Meter MULTICOR®-S160

Space requirement: disassembly security device

Connection point
Central earth line

Rotation direction
Measuring wheel

Connection ring for flexible connection

Provide sufficient clearance for dismounting of outlet cone

F = 2.5 kN

Coriolis Mass Flow Meter MULTICOR®-S260

Space requirement: disassembly security device

Connection point
Central earth line

Rotation direction
Measuring wheel

Connection ring for flexible connection

Provide sufficient clearance for dismounting of outlet cone

F = 2.5 kN
Coriolis Mass Flow Meters MULTICOR®

<table>
<thead>
<tr>
<th>Series</th>
<th>S40</th>
<th>S80</th>
<th>S160</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate</td>
<td>min. 0.5 t/h–max. 20 t/h (40 m³/h)</td>
<td>min. 2 t/h–max. 60 t/h (80 m³/h)</td>
<td>min. 6 t/h–max. 150 t/h (160 m³/h)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>from 0.5 % (depending on system configuration)</td>
<td>from 0.5 % (depending on system configuration)</td>
<td>from 0.5 % (depending on system configuration)</td>
</tr>
<tr>
<td>Setting range</td>
<td>1 : 10</td>
<td>1 : 10</td>
<td>1 : 10</td>
</tr>
<tr>
<td>Operating pressure</td>
<td>- 10 mbar to +30 mbar</td>
<td>- 10 mbar to +30 mbar</td>
<td>- 10 mbar to +30 mbar</td>
</tr>
<tr>
<td>Pressure variations</td>
<td>± 5 mbar</td>
<td>± 5 mbar</td>
<td>± 5 mbar</td>
</tr>
<tr>
<td>Inlet size</td>
<td>Ø140 mm (DIN 2501 DN 125)</td>
<td>Ø200 mm (DIN 24154)</td>
<td>Ø249 mm (Anschlussbördele JAKOB-Rohr, Nennweite 250)</td>
</tr>
<tr>
<td>Outlet connecting dimensions</td>
<td>Ø356 mm</td>
<td>Ø508 mm</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>180 kg</td>
<td>230 kg</td>
<td>250 kg</td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-25° bis +40° C (+50°C)</td>
<td>-25° bis +40° C (+50°C)</td>
<td>-25° bis +40° C (+50°C)</td>
</tr>
<tr>
<td>Material temperature</td>
<td>max. 130° C</td>
<td>max. 130° C</td>
<td>max. 130° C</td>
</tr>
<tr>
<td>Material density</td>
<td>min. density 0,3 t/m³</td>
<td>min. density 0,3 t/m³</td>
<td>min. density 0,3 t/m³</td>
</tr>
<tr>
<td>Grain size</td>
<td>max. 5 mm (single grain up to max. Ø30 mm)</td>
<td>max. 8 mm (single grain up to max. Ø30 mm)</td>
<td></td>
</tr>
<tr>
<td>Moisture</td>
<td>max. 1%</td>
<td>max. 1%</td>
<td>max. 1%</td>
</tr>
<tr>
<td>Flow properties</td>
<td>free flowing to slightly sluggish, also flushing, non-sticky, pulverized to granular</td>
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</tr>
<tr>
<td>Contact parts</td>
<td>housing, measuring wheel WS 1.4404 / AISI 316 LN</td>
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Special type for PE/PP Powder Feeds

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<th>Series</th>
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<tbody>
<tr>
<td>Flow rate</td>
<td>min. 2 t/h–max. 60 t/h (70 m³/h)</td>
<td>min. 4 t/h–max. 100 t/h (260 m³/h)</td>
</tr>
<tr>
<td>Grain size</td>
<td>max. 5 mm (single grain up to max. Ø45 mm)</td>
<td>max. 8 mm (single grain up to max. Ø50 mm)</td>
</tr>
<tr>
<td>Contact parts</td>
<td>housing, measuring wheel WS 1.4404 / AISI 316 LN</td>
<td>Option: measuring wheel Polyurethan</td>
</tr>
</tbody>
</table>

Accuracy
The stated accuracy relates to the actual flow rate in the 10 – 100% range provided that:
- System is installed and calibrated in accordance with our installation and calibration instructions.

Thanks to the Coriolis measuring principle, accuracy is not affected by varying material properties (flow behaviour, moisture, temperature, grain size).

Additional Requirements
Should you have any special requirements, e.g.:
- bigger flow rate range
- use in the hazardous area
- direct infeed into pneumatic feed lines
- use as feed system, please let us know.

Ordering Data
For us to be able to process your order smoothly and quickly, please let us have the following data in addition to ordering numbers:

Material Data
Bulk density ................. [t/m³]
Material .................

Promotion Strength Range
from ................. [t/h]
to ................. [t/h]

Options
Wear lining for MULTICOR®-S
Prefeeder for MULTICOR®-S
Noise protection
Measuring rotor with non-adhesive coating
Measuring wheel in special type for PE/PP powder feeds

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