SAMPLE GAS COOLER
MAK 6

ALLGEMEIN
The MAK6 sample gas cooler is designed to lower the sample gas dew-point and to separate water vapour from humid sample streams in gas analysis systems. A typical application is to provide and maintain a conditioned gas sample prior to gas analysis by moisture intolerant analysis equipment.

The MAK6 series are long-standing proven and robust refrigerated coolers with environment-friendly, FCKW-free refrigerant R134a. The MAK8 series was rolled-out in year 1995 and is still available within the scope of our special plant manufactory.

TECHNOLOGIE
MAK6 are pure coolers without conditioning accessory. They are optionally equipped with PVDF-, glass- and/or stainless-steel-heat-exchangers and can cool down nearly every gaseous medium. The coolers are also suitable for high gas flow rates and extreme high inlet temperatures and dew points.

FUNKTIONEN
The operation monitoring with status- and alarm-contact ensures a reliable and safe operation. As an option MAK6 can also be equipped with a digital temperature display.

FEATURES
- Exchangeable heat-exchanger
- 1-4 gas paths (PVDF, glass, stainless-steel)
- 100-500NI/h per gas path
- Constant dew point 3°C
- Proven and reliable technology
- Operation monitoring, alarm-contact
- Optional digital temperature display
## TECHNICAL DATA

### Table: Model Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Type</th>
<th>Number of gas paths</th>
<th>Heat-exchanger type</th>
<th>Heat-exchanger material</th>
<th>Gas flow (^1) NL/h</th>
<th>Dead space ml</th>
<th>Gas inlet temperature max °C</th>
<th>Operation pressure max. bar</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAK 6 Mini</td>
<td>MAK 6-1</td>
<td>1</td>
<td>1 x Mono</td>
<td>PVDF</td>
<td>1 x 100</td>
<td>1 x 137</td>
<td>140</td>
<td>2,5</td>
</tr>
<tr>
<td></td>
<td>MAK 6-2</td>
<td>2</td>
<td>1 x Mono</td>
<td>PVDF</td>
<td>1 x 250</td>
<td>2 x 137</td>
<td>3 x 137</td>
<td>4 x 70</td>
</tr>
<tr>
<td></td>
<td>MAK 6-3</td>
<td>3</td>
<td>2 x Mono</td>
<td>Stainless-Steel 1.4571</td>
<td>2 x 250</td>
<td>2 x 137</td>
<td>3 x 137</td>
<td>4 x 70</td>
</tr>
<tr>
<td></td>
<td>MAK 6-4</td>
<td>4</td>
<td>4 x Mono</td>
<td>Glass</td>
<td>3 x 250</td>
<td>3 x 137</td>
<td>4 x 70</td>
<td>4 x 70</td>
</tr>
</tbody>
</table>

\(^1\) at standard conditions, dew point 65°C inlet temperature, 10-25°C ambient temperature

### Table: Design Data

<table>
<thead>
<tr>
<th>Dimensions mm</th>
<th>MAK 6 Mini</th>
<th>MAK 6-1</th>
<th>MAK 6-2</th>
<th>MAK 6-3</th>
<th>MAK 6-4</th>
</tr>
</thead>
<tbody>
<tr>
<td>247x298x272</td>
<td>290x366x355</td>
<td>290x366x355</td>
<td>290x422x341</td>
<td>290x366x355</td>
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</tr>
<tr>
<td>Weight kg</td>
<td>13,0</td>
<td>19,0</td>
<td>21,0</td>
<td>25,0</td>
<td>21,0</td>
</tr>
<tr>
<td>Housing</td>
<td>wall-mounting / RAL 7035</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas/condensate connection mm</td>
<td>DN 4/6, condensate outlet at bottom D12</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Gas outlet temperature °C</td>
<td>3°C +/-0.5°C</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature °C</td>
<td>+5°C to +45°C</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

### Elektrische Daten

- Mains connection: Cable
- Temperature monitoring: Tendency-display (digital display optional) / potential-free alarm-contact
- Alarms set points: \(< +2.0°C / > +10.0°C\)
- Protection rate / electr. standards: IP 20 EN 60529 / EN 61010
- Power supply: 230V 50/60Hz or 115V 50/60Hz
- Power consumption W: 160-180 280-315 280-315 300-335 280-315

Subject to change without notice / Last update: 07.08.2015