High-precision gage head for in-process measurements of uninterrupted and interrupted outer diameters

**Movoline DM205**

**Universal range of use**
- Workpiece diameter 1 – 60 mm
- For uninterrupted and interrupted surfaces
- Compact design and high-precision measurement
- For in-process and post-process measurements

**Options**
- Movoline DMprotect205 crash protection system

**Connection technology**
- CAN bus with digital transmission of measured values
- Only one connecting cable for all functions
High-precision gage head for in-process measurements of uninterrupted and interrupted outer diameters. Movoline DM205

Range of use
With their compact design, high measuring precision and easy handling, the DM205 gage heads are used for a wide range of in-process and post-process applications for workpieces with uninterrupted or interrupted surfaces.

Electronic features
One single CAN bus cable is used for operation and connection to the control electronics. Measurement data is transmitted digitally and therefore fail-safe and independent of the cable length. Thanks to the modern field bus technology, the number of connecting cables is considerably reduced when using multiple gage heads with one control electronics.

Mechanical features
The whole measuring system is integrated in one housing which assures high mechanical and thermal stability and facilitates assembly and maintenance tasks.

Movoline DMprotect205
The optional crash protection system (predetermined breaking point for gage arm) protects the gage head, gage arms and the workpiece from damaging in case of collision, hence preventing downtimes.

Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workpiece diameter</td>
<td>Ø 1 – 60 mm*</td>
</tr>
<tr>
<td>Measuring range</td>
<td>± 500 μm**</td>
</tr>
<tr>
<td>Sensitivty error</td>
<td>&lt; 1 %</td>
</tr>
<tr>
<td>Repeatability error 6σ under</td>
<td>&lt; 0.1 μm</td>
</tr>
<tr>
<td>standard conditions</td>
<td></td>
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<tr>
<td>Thermal drift for steel 11 x 10-6</td>
<td>&lt; 0.1 μm / °K</td>
</tr>
<tr>
<td>Gaging force over the entire</td>
<td>1.3 N / ± 10%</td>
</tr>
<tr>
<td>range of ± 500 μm</td>
<td></td>
</tr>
<tr>
<td>Mechanical stop</td>
<td>Fixed in position -500 μm</td>
</tr>
<tr>
<td>Ingress protection IEC 60529</td>
<td>IP65 and IP67</td>
</tr>
<tr>
<td>Transmission mode of measured</td>
<td>CAN Bus</td>
</tr>
<tr>
<td>values</td>
<td></td>
</tr>
</tbody>
</table>

Models

- With gage arm lifting
- With gage arm lifting and vibration damping

Options

- Movoline DMprotect205
  Effective protection in case of collision; reduces downtimes of the machine; protects gage head, gage arms and workpiece from damaging
- Fast adjustment
  Fast adjustment to different diameters via mechanical guidance

* extensible with special accessories
** limited measuring range for inner diameters

Movoline DMprotect205