### Probe model

<table>
<thead>
<tr>
<th>Probe model</th>
<th>FGABI1.3-150</th>
<th>FGABI1.3-260</th>
<th>FGABI1.3-400</th>
<th>EGABI1.3-150</th>
<th>EGABI1.3-260</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part no.¹</td>
<td>604-175</td>
<td>604-339</td>
<td>604-468</td>
<td>601-932</td>
<td>601-961</td>
</tr>
</tbody>
</table>

### Applications

- Measurement of electrically non-conductive and non-ferrous metal coatings on steel or iron base material (NC/Fe and NF/Fe). Suited for measurements in bore holes, pipes or grooves. To achieve a very small measurement uncertainty, externally triggered measurement acquisition should be used when measuring small inside diameters.
- Smallest permissible inside diameter: 11.5 mm (0.45 ").

### Examples

- **Steel or iron base materials (Fe)**
  - Paint, varnish or plastic coatings on steel or iron (NC/Fe)
  - Copper, brass, zinc, tin and chrome coatings on steel or iron (NF/Fe)

### Probe design

- Single tip inside probe with spring-loaded measuring system

### Applications

- NC/Fe or NF/Fe

* The values for measurement range, trueness, repeatability precision and measurement deviations are valid for electrically non-conductive coating materials on steel or iron (NC/Fe). The values may differ for measurements on non-ferrous coating materials (NF).

### Measurement range*

| Steel or iron base materials (Fe) | 0 … 1000 μm / 0 … 39.37 mils |

### Trueness*

<table>
<thead>
<tr>
<th>Steel or iron base materials (Fe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>based on factory calibration standards of the Helmut Fischer GmbH</td>
</tr>
<tr>
<td>0 … 50 μm: ≤ 0.5 μm</td>
</tr>
<tr>
<td>50 … 1000 μm: ≤ 1 % of nominal value</td>
</tr>
<tr>
<td>1.97 … 39.37 mils: ≤ 1 % of nominal value</td>
</tr>
</tbody>
</table>

### Repeatability precision*

<table>
<thead>
<tr>
<th>Steel or iron base materials (Fe)</th>
</tr>
</thead>
<tbody>
<tr>
<td>based on factory calibration standards of the Helmut Fischer GmbH</td>
</tr>
<tr>
<td>5 single readings per standard</td>
</tr>
<tr>
<td>0 … 50 μm: ≤ 0.15 μm</td>
</tr>
<tr>
<td>50 … 1000 μm: ≤ 0.3 % of reading</td>
</tr>
<tr>
<td>1.97 … 39.37 mils: ≤ 0.006 mils</td>
</tr>
</tbody>
</table>

### Influences*

- The following values are valid for a coating thickness with a nominal value of 75 μm / 2.95 mils.

### Curvature (R), measurement deviation from the nominal value with reference to master calibration on flat surface

- Measurement deviation ≥ 10 % for R ≤ 17.5 mm / R ≤ 0.69 
  - Probe needs a minimum of R = 5.75 mm (support stand necessary) / R = 0.23 "

### Edges distance (X), specification from probe pole centre, measurement deviation from the nominal value

- Measurement deviation ≥ 10 % for R ≤ 4 mm / R ≤ 0.16 
  - Probe needs a minimum of R = 1 mm (support stand necessary) / R = 0.04 "

- No specification
Influences*

Steel or iron base materials (Fe)

The following values are valid for a coating thickness with a nominal value of 75 μm / 2.95 mils.

Base material thickness (D), measurement deviation from the nominal value

<table>
<thead>
<tr>
<th>Measurement spot</th>
<th>Measurement deviation ≥ 10 % for D ≤ 0.2 mm / D ≤ 7.87 mils</th>
</tr>
</thead>
</table>

Admissible ambient temperature at operation

-10 °C … +40 °C / +14 °F … +104 °F

Admissible specimen temperature

max. +40 °C / max. +104 °F

Probe tip material

PVD-coated steel

Probe tip replaceable

Yes, by an authorized Fischer service centre

Probe tip radius

0.75 mm / 29.53 mils

Measuring method

Magnetic induction method according to ISO 2178, ASTM D7091

Scope of supply

Probe, metal plate NF/FE for instrument check, calibration foil set 602-444

Option

Adapter for support stand: 601-691

FGABI1.3 probes work with all DUALSCOPE® and DELTASCOPE® hand-held instruments of the series FMP as well as the bench top instruments FISCHERSCOPE® MMS® PC and FISCHERSCOPE® MMS® PC2 with F-Module PERMASCOPE® (12-pin connecting socket)

EGABI1.3 probes work with all DUALSCOPE® and DELTASCOPE® hand-held instruments of the series MP10 to MP40 as well as the bench top instruments FISCHERSCOPE® MMS®, FISCHERSCOPE® MMS® PC and FISCHERSCOPE® MMS® PC2 with E-Module PERMASCOPE® (8-pin connecting socket)

Dimensions

Cable length: 1.5 m / 59.06 "; other cable lengths on request!

Probe model

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</tr>
</thead>
<tbody>
<tr>
<td>L (other lengths on request)</td>
<td>150 mm / 5.91 &quot;</td>
<td>260 mm / 10.24 &quot;</td>
<td>400 mm / 15.75 &quot;</td>
<td>150 mm / 5.91 &quot;</td>
</tr>
</tbody>
</table>

1 FGABI1.3 and EGABI1.3 probes with special cable lengths have own part no. and probe model names. This data sheet is also valid for these probes.

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