Non-Rotating Test Probes

Non-Rotating Test Probes are always used for the precisely-positioned contact-creation of a connector barrel. This is normally the case in the testing of flat connectors, as used for example in fuse holders. Contacting then takes place with rectangular so-called spade-shaped tip styles.

Two construction principles are mainly used in order to fix the test probe in position. The purpose of these principles is to create a compulsory guide for the plunger in the test probe barrel. In the simple design, the plunger is guided in the barrel by means of a bolt-groove system. The test probe must be inserted into the receptacle in exactly the right position. If maintenance is needed, the newly-placed test probe must be repositioned.

It is easier to carry out the procedure with a plunger whose end is flattened and has a guide slot at the end of the receptacle. With this principle, the receptacle is placed in position only once. For every new assembly, the test probe is then always returned to the same position via the guide slot of the receptacle.
Series 2053

- Anti-turn feature ensures forced guidance between plunger and barrel
- Knurled section on the barrel guarantees secure fit of the test probe

### Mechanical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>7.54 mm / 100 mil</td>
</tr>
<tr>
<td>Full Travel</td>
<td>5.00 mm</td>
</tr>
<tr>
<td>Working Travel</td>
<td>4.00 mm</td>
</tr>
<tr>
<td>Pre-Loaded Spring Force</td>
<td>0.45/0.60/1.00 N</td>
</tr>
<tr>
<td>Spring Force at Working Travel</td>
<td>1.50/3.00/5.00 N</td>
</tr>
</tbody>
</table>

### Electrical Data

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Current Rating</td>
<td>5.0...8.0 A</td>
</tr>
<tr>
<td>Typical Continuity Resistance</td>
<td>≤ 30 mQmm</td>
</tr>
</tbody>
</table>

### Materials

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel</td>
<td>Brass, gold plated</td>
</tr>
<tr>
<td>Spring</td>
<td>Spring Steel, gold plated</td>
</tr>
<tr>
<td>Plunger</td>
<td>Steel</td>
</tr>
<tr>
<td>Receptacle</td>
<td>Brass, gold plated</td>
</tr>
</tbody>
</table>

### Recommended Diameter of Drill

<table>
<thead>
<tr>
<th>Drill Type</th>
<th>Diameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 2361.1 (Troltax)</td>
<td>1.98...2.00 mm</td>
</tr>
<tr>
<td>HGW 2372 (Glass filled Material)</td>
<td>1.98...2.00 mm</td>
</tr>
</tbody>
</table>

### Tip Style - Diameter - Plating

<table>
<thead>
<tr>
<th>Tip</th>
<th>Diameter</th>
<th>Plating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y1</td>
<td>2.00 x 0.58</td>
<td>Au</td>
</tr>
<tr>
<td>Y21</td>
<td>2.00 x 0.50</td>
<td>Au</td>
</tr>
<tr>
<td>Y1F</td>
<td>1.50 x 0.50</td>
<td>2.00 Au</td>
</tr>
<tr>
<td>Y1F</td>
<td>1.50 x 0.58</td>
<td>2.00 Au</td>
</tr>
<tr>
<td>Y1F</td>
<td>1.50 x 0.58</td>
<td>2.80 Au</td>
</tr>
</tbody>
</table>

### How to Order

2053 - Y1 - 1.5 N - Au - 2.0x0.58

1. Series 2  
2. Tip Style  
3. Spring Force  
4. Tip Plating  
5. Tip Diameter  
6. Tip Thickness
Series 1053

- Anti-turn feature ensures forced guidance between plunger and barrel
- Knurled section on the barrel guarantees secure fit of the test probe

### Mechanical Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>5.00 mm / 197 mil</td>
</tr>
<tr>
<td>Full Travel</td>
<td>5.00 mm</td>
</tr>
<tr>
<td>Working Travel</td>
<td>4.00 mm</td>
</tr>
<tr>
<td>Pre-Loaded Spring Force</td>
<td>0.50/ 0.80/ 1.25 N</td>
</tr>
<tr>
<td>Spring Force at Working Travel</td>
<td>1.50/ 3.00/ 5.00 N</td>
</tr>
</tbody>
</table>

### Electrical Data

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Current Rating</td>
<td>8.0 A</td>
</tr>
<tr>
<td>Typical Continuity Resistance</td>
<td>≤ 30 mΩ</td>
</tr>
</tbody>
</table>

### Materials

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel</td>
<td>Brass, gold plated</td>
</tr>
<tr>
<td>Spring</td>
<td>Spring Steel, Stainless Steel, gold plated</td>
</tr>
<tr>
<td>Plunger</td>
<td>CuBe</td>
</tr>
<tr>
<td>Receptacle</td>
<td>Brass, gold plated</td>
</tr>
</tbody>
</table>

### Recommended Diameter of Drill

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 2361.1 (Troltac)</td>
<td>3.00 mm</td>
</tr>
<tr>
<td>HGW 2372 (Glass filled Material)</td>
<td>3.00 mm</td>
</tr>
</tbody>
</table>

### Tip Style · Diameter · Plating

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>Diameter</th>
<th>Plating</th>
</tr>
</thead>
<tbody>
<tr>
<td>CY</td>
<td>6.00 x 3.00C Au</td>
<td>5.00 x 1.00C Au</td>
</tr>
<tr>
<td>Y10</td>
<td>5.00 x 1.00C Ni</td>
<td>4.00 x 0.50C Ni</td>
</tr>
<tr>
<td>Y11</td>
<td>5.00 x 1.00C Au</td>
<td>4.00 x 0.65C Ni</td>
</tr>
<tr>
<td>Y15</td>
<td>5.00 x 1.00C Au</td>
<td>4.50 x 1.00C Au</td>
</tr>
<tr>
<td>Y14</td>
<td>3.00 x 0.80C Ni</td>
<td>2.25 x 0.65C Ni</td>
</tr>
<tr>
<td>Y16</td>
<td>3.00 x 0.80C Ni</td>
<td>3.80 x 0.40C Ni</td>
</tr>
</tbody>
</table>

### How to Order

<table>
<thead>
<tr>
<th></th>
<th>1053 - Y - 1.5 N - Ni - 5.0x 1.0 C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Series</td>
</tr>
<tr>
<td>2</td>
<td>Tip Style</td>
</tr>
<tr>
<td>3</td>
<td>Spring Force</td>
</tr>
<tr>
<td>4</td>
<td>Tip Plating</td>
</tr>
<tr>
<td>5</td>
<td>Tip Diameter</td>
</tr>
<tr>
<td>6</td>
<td>Tip Thickness</td>
</tr>
<tr>
<td>7</td>
<td>Tip Material (only for CuBe)</td>
</tr>
</tbody>
</table>
**Series 1021/GV**

- Anti-turn feature ensured by the square section on the plunger and the slot in the receptacle
- Forced guidance of the test probe ensures that the receptacle must only be aligned once

### Mechanical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>2.54 mm / 100 mil</td>
</tr>
<tr>
<td>Full Travel</td>
<td>5.30 mm</td>
</tr>
<tr>
<td>(Y4: 4.3 mm; Y14: 4.15 mm)</td>
<td></td>
</tr>
<tr>
<td>Working Travel</td>
<td>4.00 mm</td>
</tr>
<tr>
<td>Pre-Loaded Spring Force</td>
<td>0.30 / 1.00 N</td>
</tr>
<tr>
<td>Spring Force at Working Travel</td>
<td>1.50 / 2.00 N</td>
</tr>
</tbody>
</table>

### Electrical Data

- Max. Current Rating: 5.0...8.0 A
- Typical Continuity Resistance: ≤ 0.25 mΩ

### Materials

- **Barrel**: Brass, gold plated
- **Spring**: Spring Steel, gold plated
- **Plunger**: Steel, gold plated
- **Receptacle**: Brass, gold plated

### Recommended Diameter of Drill

- HP 2361.1 (Trocke) 2.00 mm
- HGW 2372 (Glass filled Material) 2.03 mm

### Tip Style · Diameter · Plating

<table>
<thead>
<tr>
<th>Tip Style</th>
<th>Diameter</th>
<th>Plating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y4</td>
<td>1.50 x 0.50 Au</td>
<td>0.75 x 0.50 Au</td>
</tr>
<tr>
<td>Y1</td>
<td>0.97 / 1.00 x 0.63 Au</td>
<td></td>
</tr>
<tr>
<td>Y1F</td>
<td>0.97 / 1.00 x 0.63 Au</td>
<td></td>
</tr>
<tr>
<td>Y5</td>
<td>1.50 x 0.50 x 2.00 Au</td>
<td></td>
</tr>
<tr>
<td>Y14</td>
<td>1.10 x 0.45 Au</td>
<td></td>
</tr>
<tr>
<td>Y14</td>
<td>2.00 x 0.80 Au</td>
<td></td>
</tr>
<tr>
<td>Y14</td>
<td>1.50 x 1.00 Au</td>
<td></td>
</tr>
</tbody>
</table>

### How to Order

Series 1053/G

- Anti-turn feature ensured by the square section on the plunger and the slot in the receptacle
- Forced guidance of the test probe ensures that the receptacle must only be aligned once

**Mechanical Data**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Center</td>
<td>4.00 mm / 160 mil</td>
</tr>
<tr>
<td>Full Travel</td>
<td>5.00 mm</td>
</tr>
<tr>
<td>Working Travel</td>
<td>4.00 mm</td>
</tr>
<tr>
<td>Switching Travel (with switching element)</td>
<td>2.50 mm</td>
</tr>
<tr>
<td>Pre-loaded Spring Force</td>
<td>0.30/0.40/0.50/0.60/0.80/1.00 N</td>
</tr>
<tr>
<td>Spring Force at Working Travel</td>
<td>0.50/1.50/2.00/3.00/4.00/5.00 N</td>
</tr>
</tbody>
</table>

**Electrical Data**

**Receptacle / Plunger**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Current Rating</td>
<td>5.0 A</td>
</tr>
<tr>
<td>Typical Continuity Resistance</td>
<td>≤ 15 mOhm</td>
</tr>
</tbody>
</table>

**Pin / Plunger**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Current Rating</td>
<td>1.0 A</td>
</tr>
<tr>
<td>Typical Continuity Resistance</td>
<td>≤ 50 mOhm</td>
</tr>
</tbody>
</table>

**Materials**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrel</td>
<td>Brass, gold plated</td>
</tr>
<tr>
<td>Spring</td>
<td>Spring Steel, gold plated</td>
</tr>
<tr>
<td>Plunger</td>
<td>Cu/Be</td>
</tr>
<tr>
<td>Receptacle</td>
<td>Brass, gold plated</td>
</tr>
</tbody>
</table>

**Recommended Diameter of Drill**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>HP 2361.1 (Troltax)</td>
<td>3.01 mm</td>
</tr>
<tr>
<td>HGW 2372 (Glass filled Material)</td>
<td>3.03 mm</td>
</tr>
</tbody>
</table>

**How to Order**

<table>
<thead>
<tr>
<th>1053/G</th>
<th>Y4</th>
<th>1.5 N</th>
<th>Au</th>
<th>4.0x 0.65 C</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
