1-Ear Clamp with stud
103

Recommended for Occupant Safety Systems

Benefits
- Secure and reliable
- Flexible design
- Safe and easy assembly
- Space efficient

Secure: reliable fixation of airbag inflators within Occupant Safety Systems
Cost effective: allows a versatile alternative to attaching inflators, eliminating the need for custom brackets
Space saving: ear position of 180° or 45° offers easy assembly
Flexible: easily adjustable clamp positioning
Made to measure: various diameters available with M5 or M6 studs for standard size inflators
Strong: high strength low alloy material with high retention properties + good corrosion resistance
Reliable assembly: quick and easy assembly with process monitoring equipment

www.oetiker.com
1-Ear Clamp with stud 103

FEATURES

- Dimple
- Ear width (s)
- Interlock
- Stud

1-Ear Clamp with stud
103

TECHNICAL DATA OVERVIEW

**Material**

| 103  | 103 Galvanized steel band |

**Corrosion resistance according to DIN EN ISO 9227**

| 103  | ≥ 72 h |

**Size range**

<table>
<thead>
<tr>
<th>width x thickness</th>
<th>stud size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.0 × 1.0 mm</td>
<td>M5 and M6</td>
</tr>
<tr>
<td>14.0 × 1.0 mm</td>
<td>M5 and M6</td>
</tr>
</tbody>
</table>

**Ear positioning options**

- 180° ear
- 45° ear

**Material**

The band of Oetiker 1-Ear Clamps with stud are made from Galfan material. The studs are made from zinc-plated material.

**Band edge condition**

Stringent controls are maintained at the Oetiker strip process, conditioning the slit material and forming a machined or rolled edge radius. This process reduces the potential for damage caused by sharp or square edges, when the clamp compresses adjacent material.

**Clamp ear (closing element)**

Using tools designed or endorsed by Oetiker, the clamp is closed by drawing together the lower radii of the “ear”. The maximum diameter reduction is proportionate to the open “ear” width (s).

The theoretical maximum reduction in diameter is given by the formula:

\[
\text{Max. diameter reduction} = \frac{\text{Ear width (s)}}{\pi}
\]
1-Ear Clamp with stud 103

TECHNICAL DATA OVERVIEW

Clamp ear (closing element)

1 Notice: the above sketch shows the appearance of a closed “ear” (s’); it does not necessarily indicate an effective closed assembly.

Mechanical interlock
The interlock is a mechanically jointed design for securing the clamp in the round condition.

Ear design
The integrated dimple in the ear effectively increases the clamping force and provides a spring effect when the diameter of the application contracts or expands due to thermal or mechanical influences.

Stud torque
The stud torque has to be adjusted individually.

Assembly recommendations
The clamp “ear” is deformed with a constant tool jaw force; this practice is referred to as “force priority closure”. The assembly method assures that a uniform and repeatable stress is applied to the application in addition to a consistent tensile force on the clamp interlock. Employing this methodology when closing the 103 series clamp will compensate for any component tolerance variations, assuring that the clamp applies a constant radial force on the application. Fluctuations in component tolerances are absorbed by the changing “ear” gap (s’). Clamp assembly monitoring equipment and process data collection is available by incorporating the “Electronically Controlled Pneumatic Power Tool” Oetiker ELK within the assembly process.

1 Notice: Single tool stroke closure only, do not apply secondary crimping force.

ASSEMBLY DATA

<table>
<thead>
<tr>
<th>Material dimensions (mm)</th>
<th>Size (mm)</th>
<th>Stud</th>
<th>Closing force max. (N)</th>
<th>Cordless</th>
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</thead>
<tbody>
<tr>
<td>10 x 1.0</td>
<td>20.6–50.0</td>
<td>M6</td>
<td>3450</td>
<td>4600</td>
</tr>
<tr>
<td>10 x 1.0</td>
<td>20.6–50.0</td>
<td>M5</td>
<td>3850</td>
<td>5000</td>
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<tr>
<td>14 x 1.0</td>
<td>20.6–50.0</td>
<td>M6</td>
<td>6000</td>
<td>7000</td>
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<tr>
<td>14 x 1.0</td>
<td>20.6–50.0</td>
<td>M5</td>
<td>6400</td>
<td>7400</td>
</tr>
</tbody>
</table>

Recommended pneumatic pincer heads

Recommended pneumatic pincer heads

<table>
<thead>
<tr>
<th>Recommended pneumatic pincer</th>
<th>Recommended pincer heads</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL HO 5000</td>
<td>13900772</td>
</tr>
<tr>
<td>ME HO 5000</td>
<td>13900773</td>
</tr>
<tr>
<td>EL HO 7000</td>
<td>13900772</td>
</tr>
<tr>
<td>ME HO 7000</td>
<td>13900773</td>
</tr>
</tbody>
</table>

* Base steel material