Connecting Solutions for Occupant Safety Systems.

- Curtain airbag
- Side airbag
- Knee airbag
- Head-side curtain airbag
- Pedestrian protection airbag
Global provider of connecting solutions.  
Automotive expertise.

With over 70 years of worldwide experience, we design, we test and we deliver high quality connections daily at Oetiker that are simpler, smarter and stronger than ever before. We help our customers to drive innovation in motion.

Oetiker is a global provider of connecting solutions for vehicles and industrial applications. At Oetiker, we contribute to an endless array of real-world customer needs with innovative, reliable connections.

Oetiker is helping vehicle manufacturers and suppliers all over the globe to build the best connected occupant safety, powertrain, and drivetrain systems, as well as many other mission-critical key applications.

The international group of Oetiker production facilities manufacture at eleven locations on three continents. Always in close proximity to our customers. Always in accordance with unified quality standards far above norm.
Clamps for Occupant Safety Systems.

Space efficiency, injury prevention and reliable components. Safe and easy assembly.

OCCUPANT SAFETY CURTAIN AIRBAG, SIDE AIRBAG, KNEE AIRBAG, HEAD-SIDE CURTAIN AIRBAG, PEDESTRIAN PROTECTION AIRBAG

WINGGUARD® STRAP CLAMP 270

1-EAR CLAMP WITH STUD 103

STEPLESS® EAR CLAMPS 123 & 193

MULTI CRIMP RING 150

Optimum customer solution

360° solution approach

Assembly Solutions
- Mechatronic power tool systems
- Pneumatic pincers
- Manual pincers
- Swaging devices
- Test equipment

Connecting Solutions
- Clamps
- Rings
- Straps
- Quick Connectors

Global Customer Services
- Technical analysis & consulting
- Application engineering
- Testing & validation
- Commissioning & training
- Maintenance & service
**WingGuard® Strap Clamp**

**Technical Data**

**Material**
- Band: High strength steel, HX 380 LAD + ZA 255
- Housing: Stainless steel, material no. 1.4301/UNS S30400

**Corrosion resistance**
- according to DIN EN ISO 9227
- 270 ≥ 144 h

**Size range**
- 20 – 50 mm

**Benefits**

**Fixation of curtain airbag inflator**
- Fabric retention
- Inflator fixation

**Safe and easy assembly**
- Extended diameter range to fit various dimensions
- Clamp conforms to irregular shapes: easily assembling over brackets or airbag material

**Reliable components**
- High radial loads for secure connections
- Expansion-resistant to withstand extensive pressure during inflation

**Quick and easy installation using the Oetiker FAST 3000**
- Quick and easy assembly
- Process monitored installation

**Space efficient**
- Low profile design for optimal clearance

**Superior design**
- Optimum protection of airbag material
- Worker-friendly
- Low stress on application during installation

**Technical Data**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Material</td>
<td>Band: High strength steel, HX 380 LAD + ZA 255</td>
</tr>
<tr>
<td></td>
<td>Housing: Stainless steel, material no. 1.4301/UNS S30400</td>
</tr>
<tr>
<td>Corrosion resistance</td>
<td>270 ≥ 144 h</td>
</tr>
<tr>
<td>Size range width x thickness</td>
<td>20 – 50 mm 7.0 x 0.8 mm</td>
</tr>
</tbody>
</table>
StepLess® Ear Clamps

123 & 193

Benefits

- Fixation of curtain airbag inflator and bracket
- Fabric retention
- Inflator fixation
- Leakproof and powerful compression
- 360° StepLess® sealing
- High clamping forces

Available materials

123 High strength low alloy material = cost effective material
193 Stainless steel = high corrosion resistance and higher radial loads

Quick and reliable assembly using Oetiker electronically controlled pneumatic pincers
- Highly efficient, verified installation
- Process reliable assembly

Technical Data

Material

123 High strength steel, material no. 1.0934
Coating: zinc-plated, galfan optional
193 Stainless steel, material no. 1.4301/UNS S30400

Corrosion resistance according to DIN EN ISO 9227
123 Zinc-plated steel band ≥ 96 h
123 Galvanized steel band ≥ 144 h
193 ≥ 1000 h

Standard Series

<table>
<thead>
<tr>
<th>Size range</th>
<th>width x thickness ear width</th>
</tr>
</thead>
<tbody>
<tr>
<td>18.0 – 120.5 mm</td>
<td>7 x 0.6 mm 10.7 mm</td>
</tr>
<tr>
<td>30.0 – 120.5 mm</td>
<td>7 x 0.6 mm 13.0 mm</td>
</tr>
</tbody>
</table>

Multi Crimp Ring

150

Benefits

- Fixation of curtain airbag on gas guide
- Fabric retention
- Sealing
- Ultimate space-saving
- Low installed height
- Optimum sealing, no leakage
- Perfectly distributed clamping forces
- Highest radial loads
- Quick and easy assembly using Oetiker swaging tool
- Efficiently and reliably installed

Technical Data

Material

150 Stainless steel, material no. 1.4307/UNS S30403

Corrosion resistance according to DIN EN ISO 9227
150 ≥ 800 h

Size range

5.0 – 50.0 mm

* Stainless steel available only
** Stainless steel material size range starts at 30.0 mm
1-Ear Clamp with stud 103

Benefits
- Flexible inflator fixation and mounting of side airbag on seat
  - Eliminates need for custom brackets
- Flexible design
  - Various clamp diameters
  - Various stud diameters and lengths
  - Optional ear positions for clearance
- Quick and reliable assembly using Oetiker electronically controlled pneumatic pincers
  - Highly efficient, verified installation
  - Process reliable assembly

Technical Data
- Material: 103 Galvanized steel band
- Corrosion resistance according to DIN EN ISO 9227: 103 ≥ 72 h

Size range width x thickness stud size
- 20.6 – 50.0 mm 10.0 x 1.0 mm M5 and M6
- 20.6 – 50.0 mm 14.0 x 1.0 mm M5 and M6

Assembly Tools

Oetiker FAST 3000
- Assembles
  - WingGuard® Strap Clamp 270
- Benefits
  - Process monitored installation
  - Regional support
  - Clear user interface
  - Easy programming
  - Direct force control
  - Assembly line integration

ELK 02
- Assembles
  - 1-Ear Clamp with stud 103
  - StepLess® Ear Clamps 123 & 193
- Benefits
  - Highly efficient, verified installation
  - Process reliable
  - Prevention of multiple closures
  - Regional support

CAL 01
- Assembles
  - Multi Crimp Ring 150
- Benefits
  - Optimum component access
  - Guaranteed 360° compression

Swaging Tool
- Electronic Calibration Device
  - Provides an interface for data exchange with any Oetiker electronically controlled installation tool
  - AC or DC operation
  - Convenient carrying case
  - Used to calibrate pincers
Global footprint with local fingerprints. Over 1400 employees, 10 production facilities and 20 sales offices around the world – all dedicated to providing successful connections for customers. Everywhere.