

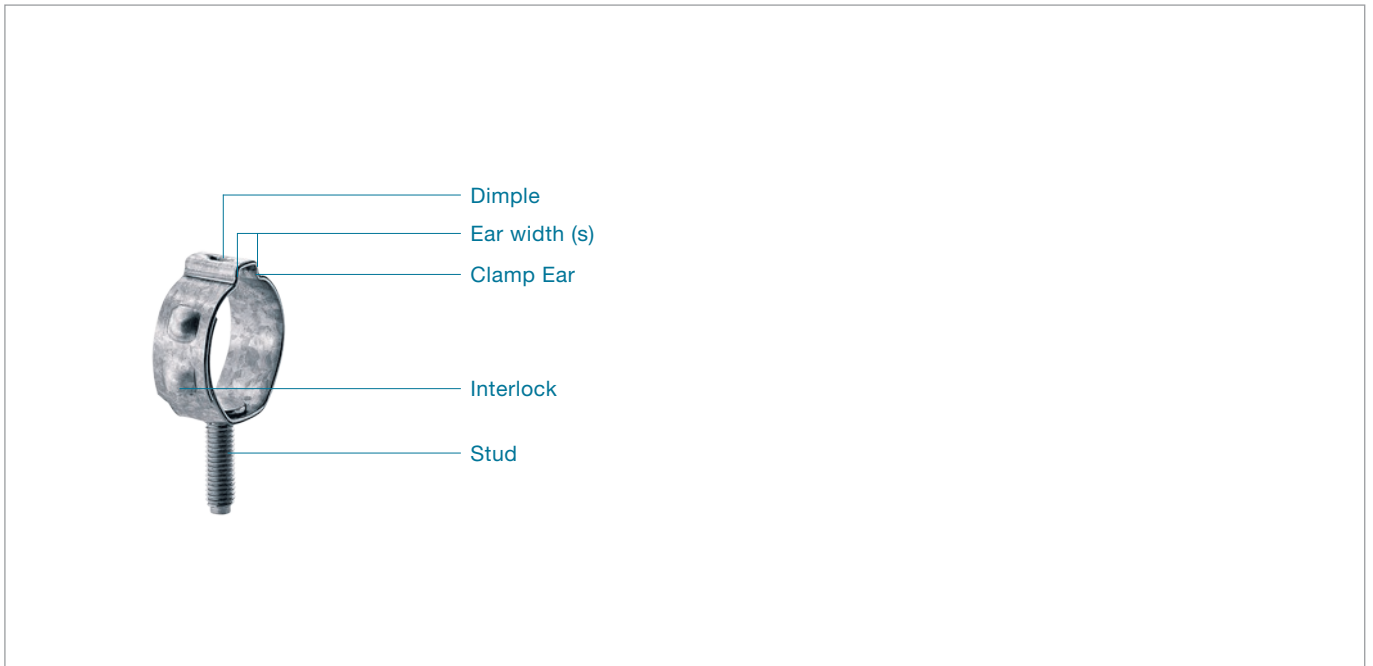
# Technical Data Sheet

## 1-Ear Clamps with stud for Occupant Safety Systems 103

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Connecting Technology



**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 degree 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

# 1-Ear Clamp with stud 103

For Occupant Safety Systems

**Material**

103 Galvanized steel band

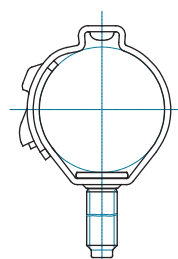
**Corrosion resistance according to DIN EN ISO 9227**

103 ≥ 72 h

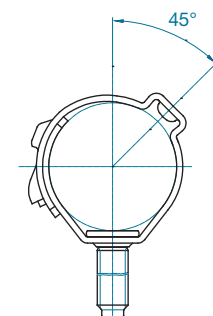
Size range	width x thickness	stud size
20.6 – 50.0 mm	10.0 x 1.0 mm	M5 and M6
20.6 – 50.0 mm	14.0 x 1.0 mm	M5 and M6

**Ear Positioning Options\***

1-Ear clamp with stud,  
180° ear



1-Ear clamp with stud,  
45° ear



\* For detailed ordering information please contact your local Oetiker branch

The data in this catalog are based on many years experience. They are intended for reference, not as design specifications.

**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**

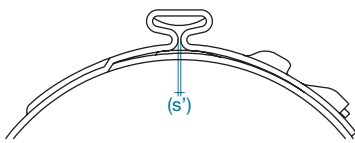
Stringent controls are maintained at the Oetiker strip process, conditioning the slit material and forming a machined or rolled edge radius. This process reduces the potential for damage caused by sharp or square edges, when the clamp compresses adjacent material.

**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:

$$\text{Max. diameter reduction} = \frac{\text{Ear width (s)}}{\pi}$$



**Note:** 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.

**Order information**

For detailed order information, please contact your local Oetiker branch.

**Important**

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

**Assembly data**

Material dimensions (mm)	Size (mm)	Stud	Closing force max. (N)		Recommended pneumatic pincer <sup>1</sup>	Recommended pincer heads	
			DX51D <sup>2</sup>	HX380LAD <sup>2</sup>		EL	ME
10 x 1.0	20.6 – 50.0	M6	3450	4600	HO 5000 EL/ME	13900772	13900773
10 x 1.0	20.6 – 50.0	M5	3850	5000	HO 5000 EL/ME	13900772	13900773
14 x 1.0	20.6 – 50.0	M6	6000	7000	HO 7000 EL/ME	13900772	13900773
14 x 1.0	20.6 – 50.0	M5	6400	7400	HO 7000 EL/ME	13900772	13900773

<sup>1</sup> Further information on page 86

<sup>2</sup> Base steel material

# The Oetiker Group: [www.oetiker.com](http://www.oetiker.com)

## Headquarters Switzerland

Hans Oetiker AG  
Maschinen- und Apparatefabrik  
Oberdorfstrasse 21  
CH-8810 Horgen (Zürich)  
T +41 44 728 55 55  
info@ch.oetiker.com

## Austria

Hans Oetiker  
Maschinen- und Apparatebau  
Ges.m.b.H.  
Eduard-Klinger-Strasse 19  
A-3423 St. Andrä-Wördern  
T +43 2242 33 994-0  
info@at.oetiker.com

## Brazil

Oetiker do Brasil Imp. e Com. Ltda.  
Av. Hugo Fumagali, nr. 586 - Sala B  
07220-080 Cid. Industrial Satélite  
Guarulhos (SP)  
T +55 11 2303 7486  
info@br.oetiker.com

## Canada

Oetiker Limited  
203 Dufferin Street South  
P. O. Box 5500  
Alliston, Ontario L9R 1W7  
T +1 705 435 4394  
info@ca.oetiker.com

## P. R. China

Oetiker Industries (Tianjin) Ltd.  
No. 9, Tongda Road  
Beichen District  
Tianjin 300405  
T +86 22 2697 1183  
info@cn.oetiker.com

## Czech Republic

Hans Oetiker spol. s r. o.  
Videňská 116  
CZ-37833 Nová Bystrice  
T +420 384 386513  
info@cz.oetiker.com

## France

Oetiker Sarl  
Parc d'activités du Bel Air  
1, rue Charles Cordier  
77164 Ferrières-en-Brie  
T +33 1 79 74 10 90  
info@fr.oetiker.com

## Germany

Hans Oetiker  
Metallwaren- & Apparatefabrik GmbH  
Üsenbergerstrasse 13  
D-79346 Edingen a. K.  
T +49 76 42 6 84-0  
info@de.oetiker.com

## Kurt Allert GmbH & Co. KG

Postfach 1160  
Austrasse 36  
D-78727 Oberndorf a. N.  
T +49 74 23 87 70-0  
info@allert.oetiker.com

## Hong Kong

Oetiker Far East Limited  
701 Kwong Kin Trade Center  
5 Kin Fat Street  
Tuen Mun, N.T.  
T +852 2459 8211  
info@hk.oetiker.com

## Hungary

Oetiker Hungaria KFT  
Vasvári P. U. 11  
H-9800 Vasvár  
T +36 94 370 630  
info@hu.oetiker.com

## India

Oetiker India Pvt Ltd  
N-14, Additional Patalganga  
Industrial Area  
Village Chavane, Khalapur  
Rasayani-410207  
District – Raigad, Maharashtra, India  
T +91 77200 15261 to 64  
info@in.oetiker.com

## Japan

Oetiker Japan Co. Ltd.  
Kaneko Bldg. A  
5-3-5 Nakamachi-dai, Tsuzuki-ku  
Yokohama 224-0041, Kanagawa  
T +81 45 949 3151  
info@jp.oetiker.com

## Mexico

Oetiker Servicios S de RL de CV  
Ave. José María Pino Suárez 853 Nte.  
Col. Centro, CP 64000  
Monterrey, Nuevo León  
T +52 81 8390 0237  
info@mx.oetiker.com

## Netherlands

Oetiker Benelux B. V.  
Hertzstraat 38  
NL-6716 BT Ede  
T +31 318 63 71 71  
info@nl.oetiker.com

## Spain

Oetiker España, S.A.  
Pol. Ind. Las Salinas  
C/Puente, 18  
E-11500 El Puerto  
de Santa María (Cádiz)  
T +34 956 86 04 40  
info@es.oetiker.com

## South Korea

Oetiker Far East Limited  
Korea Liaison Office  
Postal Zip Code 135-880  
1401 LG Twintel 1-Cha 157-8  
Samseong 1-dong  
Gangnam-gu, Seoul  
T +82 2 2191 6100  
info@kr.oetiker.com

## United Kingdom

Oetiker UK Limited  
Foundry Close  
GB-Horsham, Sussex RH13 5TX  
T +44 1403 26 04 78  
info@uk.oetiker.com

## USA

Oetiker, Inc.  
6317 Euclid Street  
Marlette, Michigan 48453-0217  
T +1 989 635 3621  
800 959 0398 (toll-free)  
info@us.oetiker.com

[www.oetiker.com](http://www.oetiker.com)

