

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

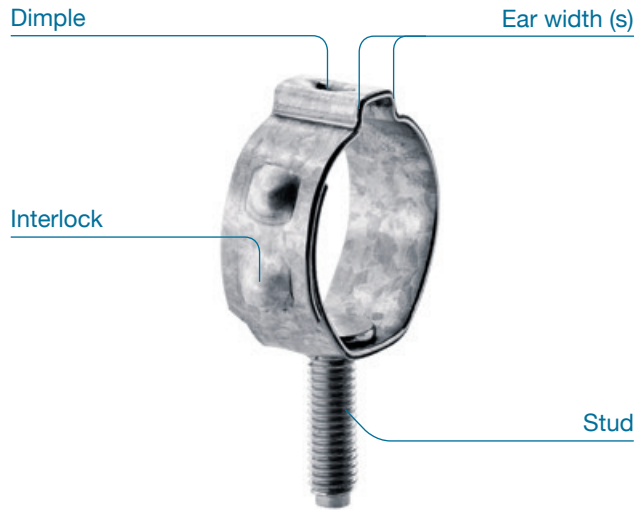
Flexible: easily adjustable clamp positioning

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

FEATURES



1-Ear Clamp with stud 103

TECHNICAL DATA OVERVIEW

Material

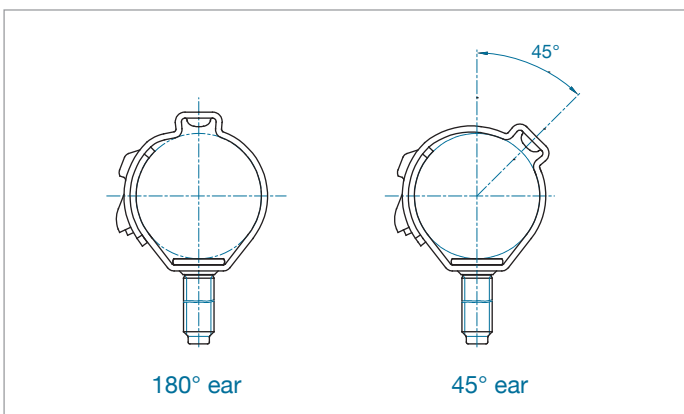
103 103 Galvanized steel band

Corrosion resistance according to DIN EN ISO 9227

103 ≥ 72 h

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

Ear positioning options



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)

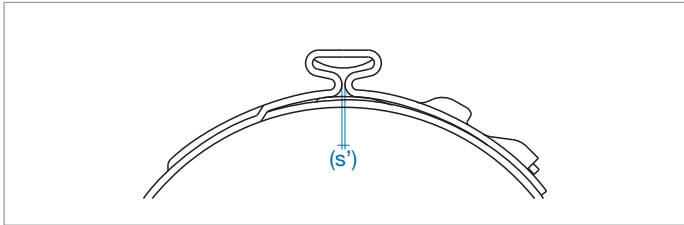
Using tools designed or endorsed by Oetiker, the clamp is closed by drawing together the lower radii of the “ear”. The maximum diameter reduction is proportionate to the open “ear” width (s).

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

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

TECHNICAL DATA OVERVIEW

Clamp ear (closing element)



! 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.

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

ASSEMBLY DATA

Material dimensions (mm)	Size (mm)	Stud	Closing force max. (N)		Cordless
			DX51D*	HX380LAD*	
10 × 1.0	20.6 – 50.0	M6	3450	4600	CP 20
10 × 1.0	20.6 – 50.0	M5	3850	5000	CP 20
14 × 1.0	20.6 – 50.0	M6	6000	7000	CP 20
14 × 1.0	20.6 – 50.0	M5	6400	7400	CP 20

* Base steel material

Recommended pneumatic pincer	Recommended pincer heads	
	EL	ME
HO 5000 EL/ME	13900772	13900773
HO 5000 EL/ME	13900772	13900773
HO 7000 EL/ME	13900772	13900773
HO 7000 EL/ME	13900772	13900773