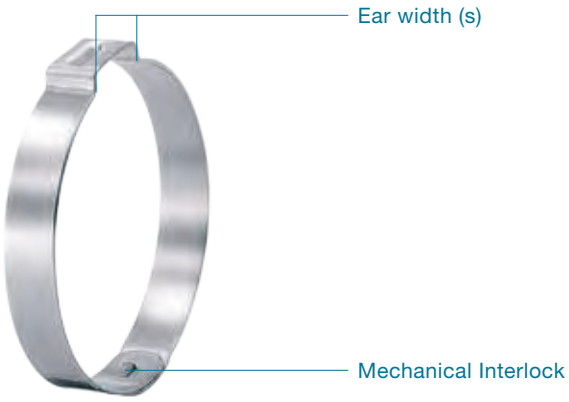

Clamp ear: fast and simple assembly, visible deformation provides evidence of proper closure
Dimple: increases clamping force
Burr-free strip edges: reduced risk of damage to parts being clamped

1-Ear Clamps with mechanical interlock 105 & 155

Material
105 Galvanized or zinc-plated steel band
155 Stainless Steel, Material no. 1.4301/UNS S30400

Corrosion resistance according to DIN EN ISO 9227
105 Zinc-plated steel band ≥ 96 h
105 Galvanized steel band ≥ 144 h
155 ≥ 1000 h

Series

Size range	width x thickness
10.5 – 116.0 mm	7.0 x 0.6/0.8 mm

Some sizes are only available if an appropriate minimum quantity is ordered.

105 only available on request.

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 proportional to the open “ear” width. The theoretical maximum reduction in diameter is given by the formula:

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

To ensure perfect sealing, clamp ears must be correctly closed during assembly.

Clamp diameter
The following applies as a guideline: To determine the correct clamp diameter, push the hose onto the attaching material, (e.g. the nipple), and then measure the outer diameter of the hose. Select a clamp whose average value of the diameter range is slightly greater than the hose’s outer diameter.

Mechanical interlock
The mechanical interlock is a mechanical connection which keeps the clamp securely closed. By using a mechanical interlock instead of spot-welding, corrosion around the closure elements is reduced.

Assembly recommendations

The clamp ear should be closed with a constant tool jaw force, this practice is referred to as “force priority closure”. This assembly method ensures that a uniform and repeatable stress is applied to the application with a constant tensile force on the mechanical interlock.

Employing this methodology when closing 105 & 155 series clamps will compensate for any component tolerance variations, and ensure that the clamp applies a constant radial force to the application. Fluctuations in component tolerances are absorbed by variations in the “ear” gap (the space between the lower radii after assembly).

Closing force

It is important to realize that there is in a very close relationship between the desired compression of the material being clamped and the closing force selected. The table below gives maximum closing forces in relation to the size of the part being clamped.

Important

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

Assembly data

Size (mm)	Closing force max. (N)	Assembly tools force-monitored[1]:		
		Manual	Pneumatic	Cordless
10.5 – 17.0	1200	HMK 01/S01	HO 2000 ME	CP 10
18.5 – 116.0	2000	HMK 01/S01	HO 2000 ME	CP 10

For an alternative option, see our manual pincers on page 130

[1] Further information on page 108

Important note

These figures are intended as a guide, they may vary depending on the type and tolerances of parts being clamped. To ensure optimum clamp selection, we recommend making functional tests with several assemblies.