

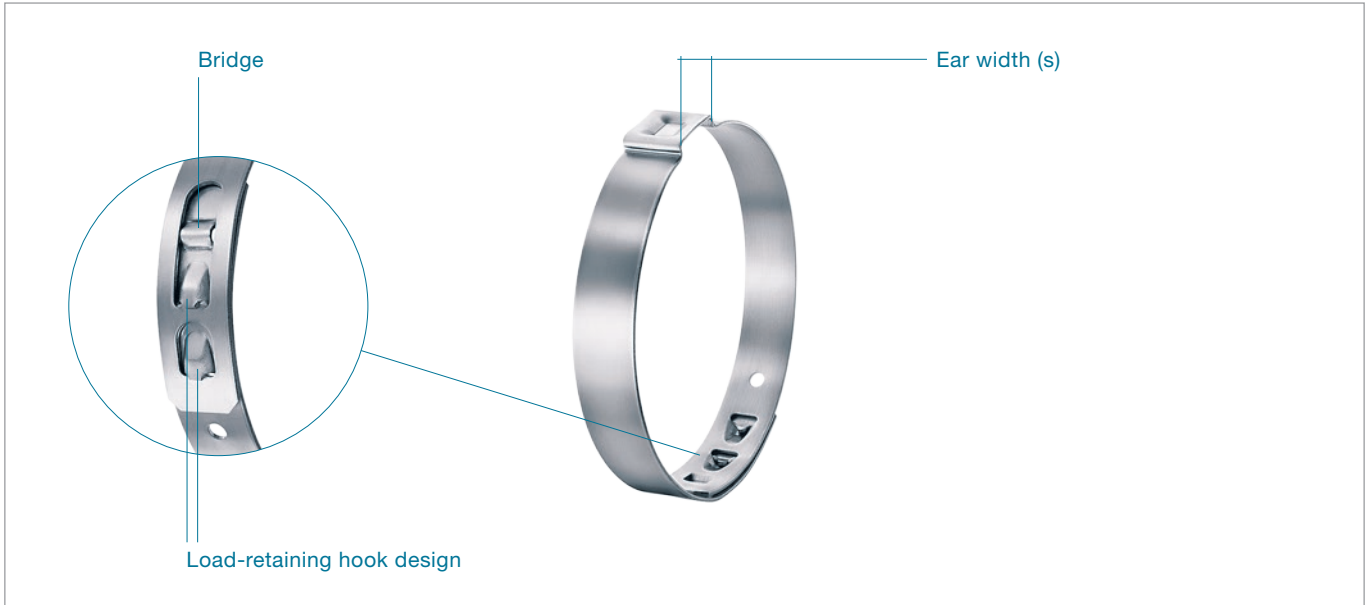
Technical Data Sheet

1-Ear Clamps SV

Product Group 153



Connecting Technology



Radial assembly: open the clamp for axial and radial assembly with freedom of movement

Quick closure: simple, secure mounting, thanks to the form-fitting closure design

Bridge: to correctly mount the clamp

Scale resistant stainless steel: excellent strength and corrosion resistance at high temperatures

Flexible: available closed or prerounded.

1-Ear Clamps SV Product Group 153

Material

PG 153 SV 18 SR™, high oxidation resistance

Alternative materials on request.

Corrosion resistance according to DIN EN ISO 9227

PG 153 SV ≥ 400 h

Size range	width x thickness	ear width
40.0 – 150.0 mm	12.0 x 0.8 mm	13 mm

Sizes

Diameter graduation 0.5 mm

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

Material

Oetiker 1-ear clamps SV are manufactured from stainless steel (18 SR™), offering excellent heat resistance. The selected material is a good combination of toughness and durability, which represent the basic prerequisites for the assembly process of clamps.

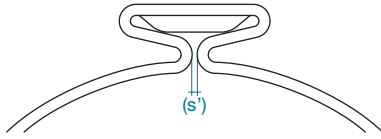
The data in this catalog are based on many years experience. They are intended for reference, not as design specifications.

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:

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



The representation makes no claim to full closure of the clamp ear(s), but only serves as a sketched visualization of a closed clamp.

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. The value of the outer diameter must be slightly above the average value of the diameter range of the clamp to be selected.

The clamp is only then sufficiently closed when the original ear width (s) is reduced by at least 50% and it has been ensured that the correctly defined closing force was used during assembly. Further details regarding the closing force, the functioning of the tolerance compensation, and constantly guaranteed roundness are described in the Section "Assembly Recommendations".

Bridge

In line with the error avoidance principle, the bridge prevents the clamp from being incorrectly mounted.

Installation data

Material dimensions (mm)	Size (mm)	Closing force max. (N)	Installation tools force-monitored ¹ :			
			Manual	Pneumatic	Cordless	Electronically controlled
12 x 0.8	40.0 – 150.0	5000	Clamping tool and Torque wrench	HO ME 5000	CP 02	HO EL 5000

¹ Further information on page 84

Load-retaining hook design

The closure is a mechanical connecting element and serves to hold the clamp geometry together securely. The closure is designed so that the clamp can be opened before the device is closed for the purpose of radial assembly.

Assembly Recommendations

The "clamp ear" should be closed with a recommended and uniform closing force – force priority. This ensures that the tension loading of the strip material remains permissible and consistently traceable, without overloading individual components, parts to be ligated, and clamps. The force priority assembly allows the tolerance compensation to remain functional during every closure and each radial force to remain approximately the same, based on the resulting size(s) of the ear gap, which changes depending on the component tolerances. If the "Oetiker ELC electronically controlled pneumatic pincers" are used, comprehensive process monitoring must be ensured, including 100% documentation.

Closing force

As a matter of principle, the closing force selection is closely related to the desired retaining characteristics of the material to be assembled. In specific applications, it sometimes leads to a generous undercutting of the defined closing forces.

Function

The 1-ear clamp SV is only suitable for applications with the required sealing function

Order information

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

Important

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

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.

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