Reusable Low Profile Clamps
268

Reliable Connections

Recommended for Thermal Management Systems

Benefits

- Reusable
- Space-saving
- Reliable assembly
- Maintenance-friendly

Thermal Management

Reusability: can be repeatedly opened and re-installed

Low assembled height: simplified implementation under the hood, reduced risk of damage to neighboring parts

Minimum band width: optimized packaging in tight spaces

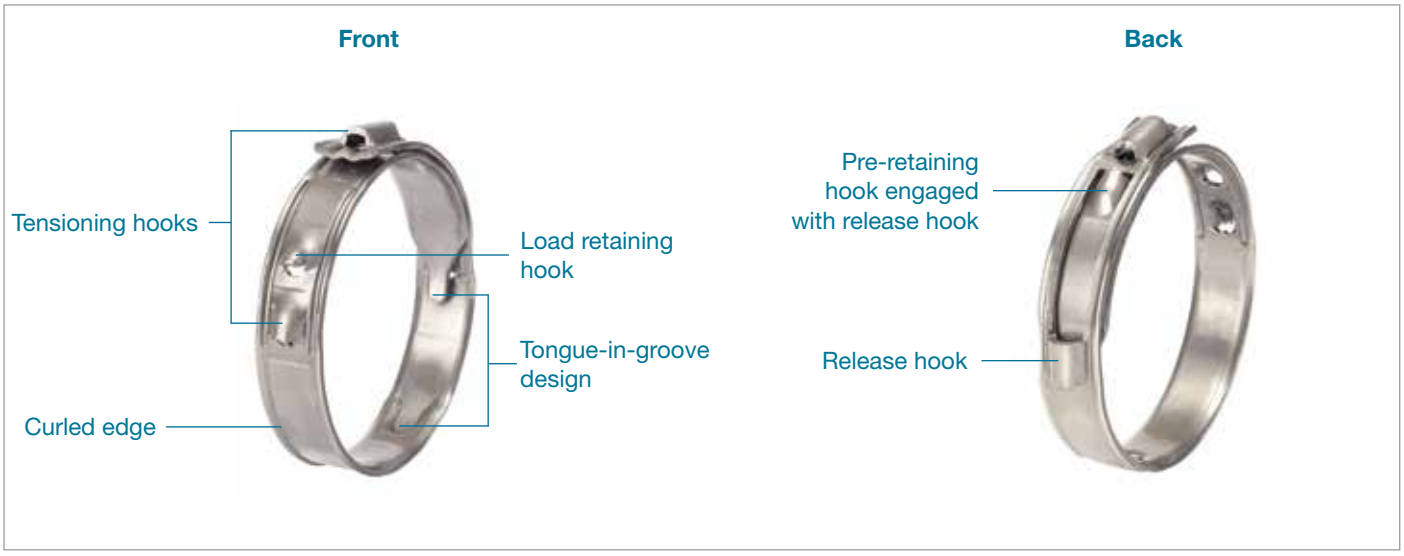
Novel tensioning hook design: fast and reliable high-volume assembly with monitored tools, simple service with common water pump pliers

360° StepLess®: uniform 360° sealing

Large closure travel: easy axial positioning over the bead

Curled edges: reduced risk of damage to parts being clamped and improved ergonomics during assembly

StepLess®



TECHNICAL DATA OVERVIEW

Material:

Stainless Steel, Material no. 1.4301/UNS S30400

Corrosion resistance:

Corrosion resistance according to DIN EN ISO 9227 ≥ 1000 h

Size range:

Size range (Closed diameter)	Width x thickness	Diameter reduction (Delivery – Closed diameter)
22.5 - 31.0 mm	9.0 x 1.0 mm	3.8 mm
31.1 - 41.0 mm	9.0 x 1.0 mm	6.2 mm

Additional sizing details

Specific diameters can only be supplied when an appropriate minimum quantity is ordered.

Tensioning and Release hooks

These hooks allow for repeated closing and opening of the clamp. The hooks are designed to offer maximum grip for high volume serial assembly with special Oetiker tools, as well as for service purposes with commonly available pliers.

Pre-retaining hook

Securely holds the open clamp geometry together during transportation.

Curled edges

Reduces the necessary force to close the clamp and reduces the risk of damage to parts being clamped.

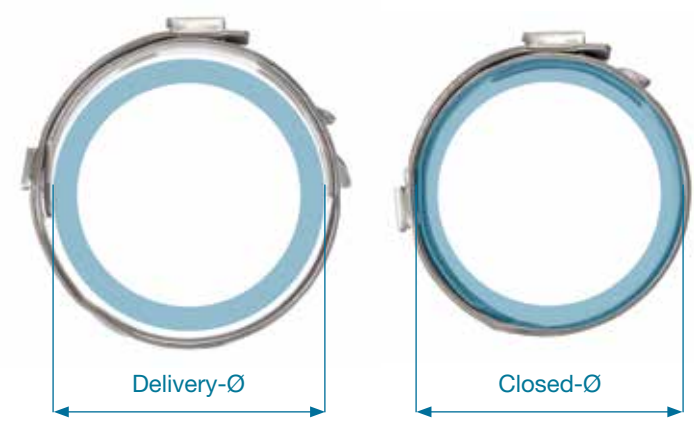
Reusability

Oetiker Reusable Low Profile Clamps 268 can be opened and re-installed a maximum of 5 times, e.g. in the automotive industry for maintenance and service work.

SELECTION

The nominal diameter of the clamp is identical with its closed diameter.

To calculate the open diameter (delivery diameter) of the clamp, the diameter reduction is added to the selected nominal diameter.



The surface pressure generated depends on the selection criteria, especially the diameter and materials of the parts being clamped.

Sealing performance is derived mainly from the restoring force of the compressed elastic material.

For optimum performance, a clamp diameter should be selected based on the theoretical lower tolerance limits of the components. Then, when the larger dimensional assembly is encountered, the compression rate will increase accordingly. The application configuration, the physical properties of the materials being sealed and the required retention, are all critical factors when determining the overall functionality of the connection.

Oetiker supports customers' clamp selection. Please provide us with appropriate sample parts and comprehensive information about the application.

ASSEMBLY

The Reusable Low Profile Clamps 268 can be assembled using manual pliers (e.g. water pump pliers). Alternatively, pneumatic pincers can be used for high-volume installation.

To close a clamp, the pincer jaws must be applied to both tensioning hooks. By operating the pneumatic tool or closing the manual plier, the simultaneous movement of the two tensioning hooks reduces the diameter until the closed diameter is achieved. The geometry of the Reusable Low Profile Clamps 268 is such that, on reaching this position, the internal contour of the tensioning hook on the overlapping end of the clamp engages automatically in the load retaining hook.

Complete process monitoring, including 100% documentation, is available using the Electronically Controlled Pneumatic Pincer Oetiker ELK 02.

DISASSEMBLY

The release hooks are the features used to open the clamp. They are pressed together with a plier until the lock opens.

Supplied position

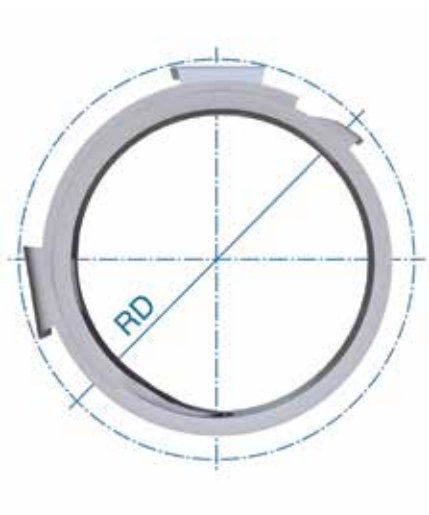
The pre-retaining hook is engaged with one of the release hooks in the supplied condition.

Closed position

The release hooks are almost in contact.
The load retaining hook is engaged with the internal contour of the tensioning hook on the overlapping end of the clamp.

Rotation diameter

The rotation diameter (RD) of an assembled clamp can be critical design information for applications with close proximity to adjacent components.
RD = closed diameter + 11.5 mm



Note on ordering

In contrast to ear clamps, Reusable Low Profile Clamps 268 are identified with the nominal closed diameter.
Example Ref. No.: 022.5-910R

ASSEMBLY TOOLS

Pneumatic: Electronically controlled	
HO 7000 ELT* w/o pincer head	Item No. 13900341
HO 7000 EL* w/o pincer head	Item No. 13900235
Pincer head HO-09.5-36.0 EL	Item No. 13901174
Pneumatic:	
HO 5000 ME** w/o pincer head	Item No. 13900229
HO 7000 ME*** w/o pincer head	Item No. 13900230
Pincer head HO-09.5-27.0 ME	Item No. 13901173
Pincer head HO-09.5-36.0 ME	Item No. 13901135
Replacement-jaw kit	Item No. 13901136
Calibration set	Item No. 13901338

* ELK 02 Control unit needed in addition - see Oetiker Product Guide.
** for Ø 22.5 – 31.0 mm at 8 bar input pressure
*** for all sizes at 6 bar input pressure

For service purposes, commonly available manual pliers, e.g. water pump pliers, can be used to open and close the clamp.

INSTALLATION

Material dimension	Size range	Maximum closing force
9 x 1.0 mm	22.5 - 31.0 mm	3500 N
9 x 1.0 mm	31.1 - 41.0 mm	4500 N

Important note

Recommended max. closing force has been determined on a coolant hose application. The closing force is intended as a guide, which may vary depending on the type and tolerances of parts being clamped. To ensure optimum clamp selection, we recommend conducting functional tests with several assemblies.