Hand Installation Pincers (HIP)
HIP 2000 | 512, HIP 2000 | 513

Recommended for the installation of Genuine Oetiker StepLess® Low Profile Clamps 168

<table>
<thead>
<tr>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Quick and easy closing &amp; opening</td>
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<td>- Wide bi-material ergonomic soft grips</td>
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<td>- Ergonomic handle designs</td>
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<td>- Superior tool durability</td>
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**Benefits**
- Quick and easy closing & opening
- Wide bi-material ergonomic soft grips
- Ergonomic handle designs
- Superior tool durability

**Compound action tools**: provide high closing forces + require less hand strength for a safe and simple closure + superior quality design + one tool covers a wide range of 168 low profile clamps

**Wide bi-material grips**: distribute hand pressure + lessen risk of repetitive motion injury

**Conventional straight handles**: line up easily with the clamp and application configuration

**Curved handles**: more ergonomic + fit the palm better + advantageous for smaller hands

www.oetiker.com
**Hand Installation Pincers for StepLess® Low Profile Clamp 168**

**Compound Action Pincer - Straight Handles**

<table>
<thead>
<tr>
<th>Model No.</th>
<th>HIP 2000</th>
<th>512</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No.</td>
<td>14100512</td>
<td></td>
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</tbody>
</table>

**Dimensions:**
- Length: 218.7 mm
- Width: 58.0 mm
- Height: 22.6 mm
- Weight: 271.0 g
- Jaw width: 2.0 mm
- Opening gap*: 20.9 mm
- Reference jaw force: 2000 N

**Compound Action Pincer - Curved Handles**

<table>
<thead>
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<th>HIP 2000</th>
<th>513</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item No.</td>
<td>14100513</td>
<td></td>
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</tbody>
</table>

**Dimensions:**
- Length: 220.0 mm
- Width: 87.0 mm
- Height: 22.6 mm
- Weight: 286.0 g
- Jaw width: 2.0 mm
- Opening gap*: 20.9 mm
- Reference jaw force: 2000 N

**StepLess® Low Profile Clamp 168**

<table>
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<th>Feature</th>
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<tr>
<td>Tensioning hook and tunnel</td>
</tr>
<tr>
<td>Tongue-in-groove StepLess® design</td>
</tr>
<tr>
<td>Load retaining hooks</td>
</tr>
</tbody>
</table>

**TECHNICAL DATA OVERVIEW**

**ASSEMBLY**

Using the hand tool locate the jaw tips in the tensioning hook and tunnel.

Closing the tool draws the tensioning hook and tunnel together, reducing the inside diameter of the clamp. To maintain this reduced diameter, the openings are depressed over the load retaining hooks and the applied load exerted by the tool is released, so that the hooks engage in the appropriate openings.

* For 168 type 3 clamps, use tool #14100115
DESCRIPTION

These Oetiker Hand Installation Pincers (HIP) have been designed especially for automotive service and repair, for closing Oetiker low profile clamps quickly and easily.

They are designed to produce the highest possible radial loads and uniformity around the circumference of the application, for the best hand installed clamp sealing performance.

Wide bi-material grips distribute hand pressure and lessen the risk of repetitive motion injury. Conventional straight handles line up easily with the clamp and application configuration. Curved handles are more ergonomic, fit the palm better and are advantageous for smaller hands.

Compound action pincers are specially designed for professional use where higher volumes of clamps are closed. The higher mechanical advantage allows the installer to apply lower hand forces, providing comfort and reduced fatigue and risk of strain injury.

CLOSING FORCE COMPARISON CHART

As the clamp is closed, the mechanical advantage of the compound action tools quickly increases.

**Benefit to user:** less applied force needed to close clamps. Closing is easier and quicker.