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Installation Instructions

Notching and Cutting Tool
Product Program 0811

1 Intended Use

The tool is designed as an attachment for Klauke ES 32-L cable shears and is adapted for this tool. The safety instructions, including the documents for the Klauke device, apply to the notching and cutting tool for SingleFlexLine 0811 conductor rails. The tool, installed on the Klauke ES 32-L cable shears base unit, is used for trimming conductor rail without insulation and for notching the recess for the bayonet connector.

The tool is designed for cutting non-assembled and/or partially assembled conductor rails. All work on conductor rails must be carried out with the power supply disconnected. The tool is not considered to be insulated. The tool must not be used for cutting other conductor rails, cables, or other materials.

The tool is designed for professional use in the field of industrial assembly and may only be operated by a qualified specialist who is suitable for electrical installation work and has no health or other limitations.

Non-commercial use and use by persons who are unsuitable, professionally or in terms of health, are not permitted. The device must be stored and used such that it is not accessible to children, for example.

**WARNING!**

Danger of crushing!

The notching and cutting tool is only suitable for commercial use and may only be operated by specialist personnel.

→ Use personal protective equipment (protective gloves and safety eyewear)

2 Structure and Function

![3D representation of the notching and cutting tool](image)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Klauke base unit</td>
</tr>
<tr>
<td>2</td>
<td>Rechargeable battery</td>
</tr>
<tr>
<td>3</td>
<td>Notching and cutting head</td>
</tr>
<tr>
<td>4</td>
<td>Opening for notching</td>
</tr>
<tr>
<td>5</td>
<td>Opening for complete cutting</td>
</tr>
<tr>
<td>6</td>
<td>Cutting punch</td>
</tr>
<tr>
<td>7</td>
<td>Depth stop (rotatable)</td>
</tr>
</tbody>
</table>

Fig. 1: Notching and cutting tool (3D representation)
The notching tool is factory installed in place of the two cable shears of the Klauke ES 32-L cable shears. The tool has one opening for trimming the length and another for notching the rail. The electrohydraulic cutting action is triggered by pressing the switch on the handle. The piston then pushes the cutting punch upwards, cutting or notching the rail. Once it reaches the top position, the cutting punch moves to the lower position (rest position).

![NOTE!]
Especially with stainless steel rails, the ends can be slightly widened. In this case, bend the end of the rail back to a diameter of 12.6 ± 0.1 mm using suitable flat nose pliers.

![NOTE!]
Lubricate lightly the cutting punch with spray oil (e.g. WD 40) to increase its durability.

### 3 Cutting Process/Trimming the Rail

The lower opening (5) is used for trimming the rail (see Fig. 1):

→ Insert the rail into the opening. The cutting punch must be in the beyond position (rest position) at this point. On insertion, the rail opening must be point to the cutting top of the cutting punch.

→ Position the rail for cutting.

![NOTE!]
The cutting blade is set back by 15 mm. This means that, if the rail is inserted up to a cutting mark, so that the mark coincides with the outer edge of the opening, the cut is made 15 mm from the mark. The cutting width is 9 mm.

→ Press the switch and perform the cut. Keep the switch pressed until the cutting punch has returned to the rest position.

![Fig. 2: Cutting mark (1) and cutting position (2)]

→ After cutting: Check diameter and if it is necessary bend it to correct diameter 12.6 ± 0.1 mm.
The insulation is shortened by the same length. This can be done by means of a fine-toothed hacksaw.

A sharp edge causes increased wear of the carbon brushes.

Deburr carefully the cut edge of the rail.

### 4 Notching

The bayonet connector requires a notch to be cut in the rail. Use the upper opening (4) for notching (see Fig. 1):

- Select the notching position on the adjustable stop.
- Insert the rail up to the stop.
- Operate the switch and make the notch. Keep the switch pressed until the cutting punch has returned to the rest position.
- After notching: Check diameter and if it is necessary bend it to correct diameter $12.6 \pm 0.1$ mm.
- When mounting the connector, make sure that it covers the conductor rail completely. The connector must have the same distance to the conductor rail on both sides (see Fig. 3 and Fig. 4).

![Fig. 3: Connector is mounted correctly](image1)

![Fig. 4: Connector is mounted incorrectly](image2)

![Fig. 5: Adjustable stop](image3)
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Adjustment for an isolating gap</td>
</tr>
<tr>
<td>2 + 3</td>
<td>Adjustment for use of the rail connector 0811 as expansion joint. It must be 2 cuts carry out (with adjustment 2 and then adjustment 3). Make sure that the rail is in contact with the same point X (see Fig. 6) for both cuts in order to avoid a stepped notching.</td>
</tr>
<tr>
<td>3</td>
<td>Adjustment for coupling 2 conductor rails by means of a connector 0811</td>
</tr>
<tr>
<td>4</td>
<td>Adjustment for individually adjustable notching position</td>
</tr>
</tbody>
</table>

Fig. 6: Inserting the rail
5 Maintenance

→ Protect the tool from moisture.
→ **Lightly** lubricate the notching and cutting head on a regular basis.
→ Lubricate the joints with a non-resinous oil.
→ If the adjustable stop does not detent, the spring plunger must be tighten.

For further information on maintenance and care, please see
5.1 Cutting Punch

The cutting punch is made of a hardened tool steel. The following work steps must be carried out for installation and removal:

- Move the punch to the rest position.
- Disconnect the battery from the unit.
- Remove the circlips on the piston and the bearing pin using circlip pliers.
- Remove both bolts and the cutting punch.
- Check the cutting punch. Regrind the cutting geometry or replace the cutting punch.
- Clean the cutting head with a soft cloth.
- Lubricate lightly the cutting head with oil during inserting it.
- Insert both bolts and secure with circlips.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Cutting head</td>
</tr>
<tr>
<td>2</td>
<td>Bolt on the piston</td>
</tr>
<tr>
<td>3</td>
<td>Bearing bolt</td>
</tr>
<tr>
<td>4</td>
<td>Cutting punch</td>
</tr>
</tbody>
</table>

Fig. 7: Cutting head
5.2 Cutting Punch and Counter Plate

The cutting punch and counter plate are made of a hardened tool steel. The following work steps must be carried out for installation and removal:

→ Move the punch to the rest position.
→ Disconnect the battery from the unit.
→ Remove the circlips on the piston at the housing and the bearing pin using circlip pliers.
→ Remove both bolts and the cutting punch.
→ Remove nuts.
→ Remove side plate.
→ Pull the counter plate off the dowel pins.
→ Check cutting punch and counter plate. Regrind or replace the cutting geometries.
→ Clean the cutting head with a soft cloth.
→ Assemble cutting head in reverse order. Lubricate lightly the cutting head with oil during inserting it.

Fig. 8: Cutting punch (4) and counter plate (5)

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Cutting head</td>
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<tr>
<td>2</td>
<td>Bolt at piston</td>
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<tr>
<td>3</td>
<td>Bearing bolt</td>
</tr>
<tr>
<td>4</td>
<td>Cutting punch</td>
</tr>
<tr>
<td>5</td>
<td>Counter plate</td>
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</tbody>
</table>
6 Spare Parts

<table>
<thead>
<tr>
<th>Description</th>
<th>Material No.</th>
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<tbody>
<tr>
<td>Cutting punch set</td>
<td>08-W100-0609</td>
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</table>

Fig. 9: Cutting punch and counter plate

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cutting punch</td>
</tr>
<tr>
<td>2</td>
<td>Counter plate</td>
</tr>
<tr>
<td>3, 4, 5, 6, 7, 8, 9, 10, 11, 12</td>
<td>Mounting elements</td>
</tr>
</tbody>
</table>