Our range of KEIL assembly aids offers measuring devices such as depth control guides and feeler gauges for controlling the drill hole geometry as well as screw drivers, torque wrenches, tool sets and further carefully selected work and machine accessories.
### Product information

**Checking the undercut hole**

- With this measuring device all significant dimensions of the drill hole are inspected, the insertion depth is set and the life time of the façade drill bit is monitored. Every KEIL undercut anchor has its own depth control guide with feeler gauge.

<table>
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<tr>
<th>h_1 = insertion depth [mm]</th>
<th>D1 = drill hole Ø [mm]</th>
<th>h_2 = [mm]</th>
<th>article no.</th>
</tr>
</thead>
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<td>7.0</td>
<td>0.5</td>
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<td>7.0</td>
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<td>8.0*</td>
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<td>20.0</td>
<td>9.0</td>
<td>1.5</td>
<td>585 102 200</td>
</tr>
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</table>

#### Usage

- Inspection of the undercut hole.
- Monitoring of the life time of the façade drill bits.

#### Possible applications

- Depth control guide fitting for the insertion depth of the undercut anchor.

#### Accessories

- Washer for depth control guide (p. 59)

#### Design

Depth control guide with feeler gauge

#### Note

- For measuring undercut holes in uneven panel back sides we recommend using the 3 mm washer in combination with a 3 mm longer depth control guide.
- * depth control guide for square anchor

#### Instructions for use

- Use according to inspection instruction and according to approval and depth control guide information. (p. 57)
DEPTH CONTROL GUIDE

Inspection of the undercut hole

For inspecting all significant dimensions of the drill hole, setting the insertion depth and monitoring the life time of the façade drill bits. Every KEIL undercut anchor has its own depth control guide with feeler gauge.

Place base of depth control guide in undercut drill hole.

Inspection 1: insert bolt to stop.

Inspection 2: push in feeler gauge between panel and depth control guide base. If the bolt now cannot be pushed in to the base, the drill hole is in order.

Not properly executed drillings

Depth control guide cannot be inserted without feeler gauge.

Error:
Drill hole too deep or lack of undercut.

Depth control guide can be pushed to stop although feeler gauge has been inserted.

Error:
Drill hole not deep enough.

Depth control guide geometry

*optional tester for max. cylindrical drill hole diameter (alternatively internal cylindrical gauge)

Control of depth control guide (simple and fast control by user)

- Monitoring of the undercut diameter via fitted hole in the sensor.
- Insert base of depth control guide into the fitted hole in the sensor.
- Push in bolt to stop.
- If the depth control guide can now be pulled out of the drill hole, it will need to be replaced.

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WASHER FOR DEPTH CONTROL GUIDE

article no.
585 100 001

Usage
- In connection with depth control guide (h_s + 3 mm)

Possible applications
- For façade panels with textured back sides

Design
Stainless steel washer for depth control guide
- Thickness 3 mm, Ø 40 mm

Product information
- For textured back sides of façade panels (e.g. made of ceramics). The washer generates a reference surface for setting the insertion depth h_s.
- As the washer is 3 mm thick, a bigger depth control guide with a 3 mm longer insertion depth needs to be employed.
- The measuring process for the inspection of the undercut hole will proceed as described for the depth control guide, placing the feeler gauge between washer and depth control guide.

Example:
For an insertion depth of h_{SP} = 7 mm within the panel using the 3 mm washer, a depth control guide with an insertion depth h_s = 10 mm needs to be employed.
ASSEMBLY AIDS

Torque wrench 1–6 Nm

![Torque wrench 1–6 Nm](image)

- **Application**
  - For the assembly with controlled torque value.
  - According to approval 2.5–4 Nm
- **Design**
  - With adjusting scale
  - SW 8
  - With hex wrench socket

**Article no.** 585 300 121

Torque screwdriver 3.0 Nm

![Torque screwdriver 3.0 Nm](image)

- **Application**
  - For the assembly with controlled torque value
- **Design**
  - With replacement bit 6.3 (1/4" bit holder)
  - Power grip with non-slip surface
  - Preset torque value 3.0 Nm

**Article no.** 585 300 122

Cordless screw driver with controlled torque value

![Cordless screw driver with controlled torque value](image)

**Product information**

- The General Building Approval and the European Technical Assessment (Approval) amongst other things regulate the tightening torque of the screws for the assembly of the KEIL undercut anchors. Their demands are as follows: "The assembly of the anchor must be carried out with only one screwdriver, which has to be set to a tightening torque of 2.5 Nm ≤ T_{inst} ≤ 4.0 Nm".
- This assembly with controlled torque value is possible with appropriately equipped cordless screwdrivers. Those should have verifiable machine and process capability.
- Suppliers for screwdrivers of this sort, also with preset torque value, can be provided upon request.

Explanations on the torque value

Basically, the KEIL undercut anchor is an anchor with a "displacement-controlled assembly". For the segments to fit snugly into the undercut, they have to be "folded out" with the aid of a screw or a threaded pin. The high assembly safety of the KEIL system is demonstrated by the fact that this is only possible with correctly undercut drillings. A restriction of the tightening torque value will ensure that mistakes are recognized even for incorrect drillings or too short undercut anchors and that the assembly will be safe at all times.
Product information

- The screw-in tool limits the screw-in depth of a threaded pin into an undercut anchor.
- The threaded pin is inserted into the tool and screwed into the undercut anchor up to the stop.
- The integrated hinge in the screw-in tool ensures that the threaded pin remains in position in the undercut anchor when the tool is unscrewed from the pin.
- This ensures that the threaded pin is mounted flush with the tip of the undercut anchor. The correct screw-in depth has to be monitored.
- The individual protrusion has to be determined for every combination of undercut anchor and threaded pin length.
- For further information please refer to the assembly instructions.

Note

- Please specify the insertion depth of the undercut anchor and the length of the threaded pin with your order.
- The protrusion is to be determined individually according to the lengths of the undercut anchor and the threaded pin.
- Please observe KEIL assembly instructions for anchors.

Design

- Assembly aid for undercut anchor BH with threaded pin.
- 1/4” bit drive DIN 3126 - E 6.3

Accessories

- Tool set (p. 61)