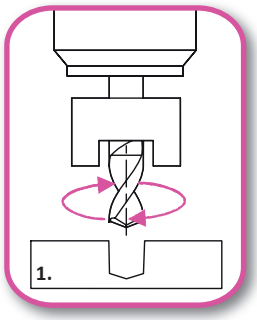
ASSEMBLY INSTRUCTIONS FOR KARL UNDERCUT ANCHOR



Drilling

The façade panels must be drilled with cylindrical holes on the rear side under workshop conditions using a KARL stop drill (1). The selected KARL stop drill must be matched to the planned insertion depth of the anchor in the façade panel in order to obtain the correct drill hole depth.

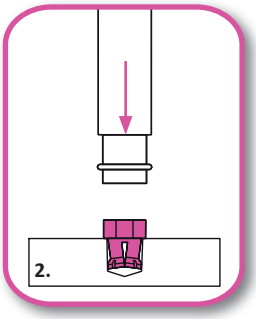
The undercut anchor can only be installed correctly if an exact drill hole is available.

The borehole diameter (7.1mm–7.5mm) can be monitored using a standard calliper gauge or the KEIL test pin.

Variant 1 (type AA/CH): Anchor sleeves and bolts with locking ratchets or stepped threaded bolts with hexagon socket and locking nut for fixed clamping thicknesses, e.g. agraffes

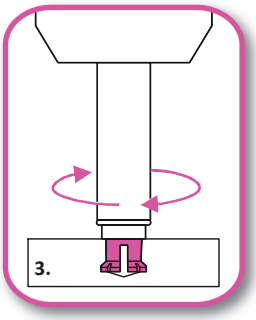
The KARL AA/CH undercut anchor consists of an anchor sleeve and a corresponding hexagon bolt with locking ratchets or a stepped threaded bolt with hexagon socket and a lock nut.

The drill hole, anchor sleeve and thread length of the bolt/threaded bolt must be matched to the desired insertion depth h_s of the KARL undercut anchor and the selected hanger. Only the use of matching parts makes installation quick, easy and safe.



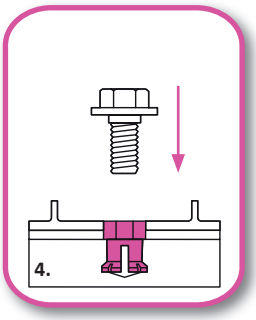
Assembly process:

1. Insert the at the base compressed anchor sleeve into the drillhole.
2. The KARL setting tool (2) is inserted into a suitable cordless screwdriver (≥ 1000 rpm) and placed on the anchor sleeve head (3).
3. For the setting process, the cordless screwdriver must first be operated at full speed before the anchor sleeve is expanded by rotating it with firm downward pressure through the setting tool. The anchor sleeve undercuts the undercut part hole itself. Remove the setting tool from the anchor sleeve.
4. The hanger is now placed over the head of the anchor sleeve.
5. Screw in the bolt or threaded bolt (4), exerting gentle pressure on the hanger (in order to fix the anchor). The locking ratchets of the bolt or the nut will cut into the hanger as a screw lock (5).



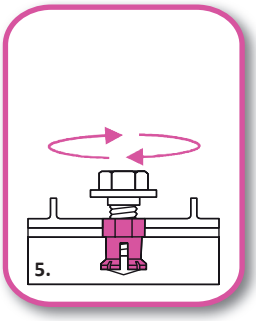
For this type of installation, the hanger and the KARL undercut anchor will form a solid unit.

By screwing in the bolt or threaded bolt in a controlled manner, the anchor sleeve is held at the initial dimension so that it is in full contact with the undercut area of the drill hole in the façade panel. After installation, the anchor sits in the undercut drill hole free of expansion pressure (i.e. the hanger can still be turned with a certain amount of force).



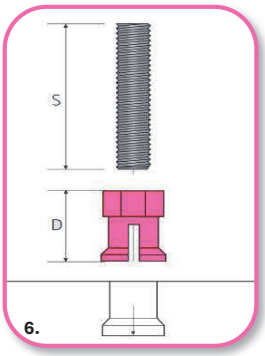
Note: If the matching bolt or threaded bolt is used for a defined clamping thickness, the screw-in depth will always be correct. The assembly is quick, simple and safe. The screwed in part must fit flush with the tip of the anchor sleeve.

Caution: Before any assembly, please check, if the screwed in part fits flush with the tip of the anchor sleeve by way of a test assembly.



Variant 2 (type BH/CA): anchor sleeves and threaded pins for variable clamping thicknesses

The KARL undercut anchor consists of an anchor sleeve with matching threaded pin.

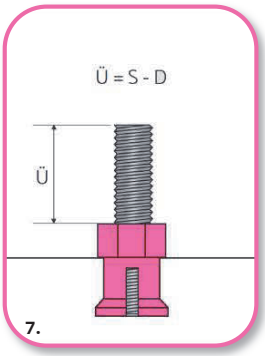


6.

The drill hole, the anchor sleeve and the threaded pin must be matched to the desired insertion depth h_s of the undercut anchor and the hanger of choice. Only the use of matching parts will guarantee a quick, simple and safe assembly.

Assembly process:

1. Insert the at the base compressed anchor sleeve into the drillhole (6).
2. The KARL setting tool is inserted into a suitable cordless screwdriver (≥ 1000 rpm).
3. For the setting process, the cordless screwdriver must first be operated at full speed before the anchor sleeve is expanded by rotating it with firm downward pressure through the setting tool. The anchor sleeve undercuts the undercut part hole itself. Remove the setting tool from the anchor sleeve.
4. Insert the threaded pin into the screw-in-tool.
5. Hold the anchor sleeve with an open-ended wrench and screw in the threaded pin with the screw-in tool up to the stop – undo the screw-in tool.
6. Control measurement Ü (7).
7. Screw on the hanger with the nut.



7.

By screwing in the threaded pin in a controlled manner, the anchor sleeve is held at the initial dimension so that it is in full contact with the undercut area of the drill hole in the façade panel. After installation, the anchor sits in the undercut drill hole free of expansion pressure (i.e. the hanger can still be turned with a certain amount of force).

Note: The use of the matching assembly tool, the KEIL screw-in tool and attention to the assembly process will guarantee the correct screw-in depth. The correct projection Ü will automatically be adhered to.

Caution: Before any assembly, please check, if the screwed in part fits flush with the tip of the anchor sleeve and if the matching tool has been inserted by way of a test assembly.

Safety instructions (general)

Faultless performance can only be guaranteed, if all parts of the KEIL undercut system are being used. The controlled expansion of the anchor sleeve necessitates the exact attunement of the length of the screw to the anchor and the hanger by KEIL.

The drilling of the undercut holes and the assembly should be carried out under workshop conditions. These can also be created on site. The dimensions of the undercut holes must be monitored according to the applicable regulations. Approvals, norms, regulations and relevant provisions applying for the construction and use must be adhered to.

According to the EU construction products regulation declarations of performance for the CE label will be necessary. New ETAs will not contain any information about the use of the approved product any longer. Relevant regulations of use and approvals can be found in our download area under www.keil.pro/en.

Drill hole geometry – view

D1 = diameter of drill hole(≥Ø7,1 mm)
D2 = diameter of undercut (≥Ø 9 mm)
h = panel thickness (ab 8 mm)
h_s = insertion depth of undercut anchor
xA = anchor hex (3 mm)
xZ = thickness of hanger (clamping thickness)