



## AA406K Swivel Anchor Installation Instructions



### **Things to know:**

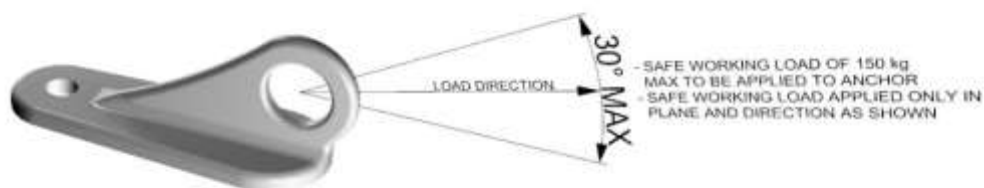
AA406K is designed for installation in concrete and steel. It has been specifically developed for applications in rope access (abseiling) but it can be also used to support a fall arrest load of 15 kN provided a suitable personal shock absorber is used. The swivelling action dramatically improves the loading properties and prevents the cross loading of karabiners.

Minimum distance to the edge of the slab or between any 2 eyebolts must be at least 200mm unless certified by a structural engineer!

### **Fixing options:**

- Through bolt M12 (HOLE 14 DIA)
- Chemical HILTI HVU M12 (HOLE 14 DIA)
- HSL 3-B M12 (HOLE 18 DIA)

**Loading:** shear as per the diagram

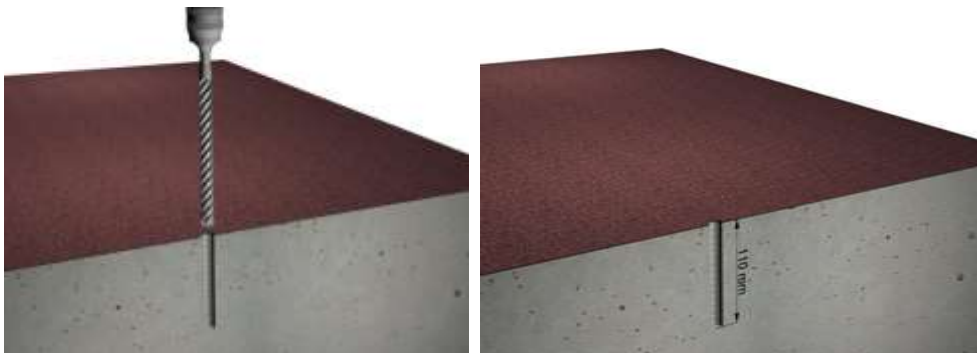


**Tools needed for installation:**

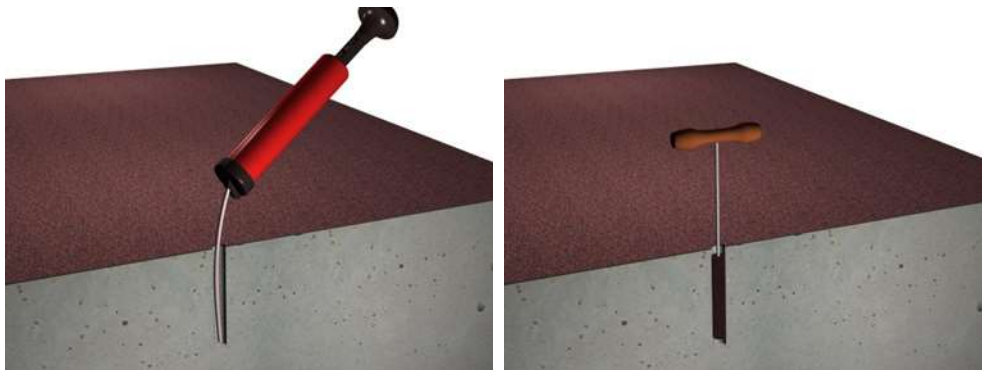
Rebar detector, Rotary hammer drill, masonry drill bit 14, air pump, cleaning brush, setting tool for rods

**Installation steps – M12 chemset in concrete:**

1. Use Hilti rebar detector or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the position for hole to be drilled.
3. Drill an M14 x 110mm hole. Ensure the hole is 90° with the drilled surface

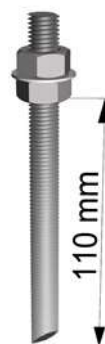


4. Clean the hole 3 times with compressed air and cleaning brush.



5. Insert one Hilti HVU M12 chemical pack in the hole.

6. Using rotary hammer with appropriate setting tool (hex socket), install a stainless steel M12 rod. Ensure the rods have their tips cut off on 45° angle or use Hilti rods suitable for the application.



7. Allow sufficient drying time as per Hilti HVU instructions. Once dry, remove the hex nuts.



8. Install a stainless steel base plate (BP2 80mm), AA406 anchor, M12 washer and clamp down with M12 nylock nut. Tighten the locknut fully and then slack off until the anchor can swivel freely. Ensure minimum of 3 threads are showing.



NOTE: When installing through water proofing membrane, a full gasket of quality polyurethane sealant is recommended between the base plate and the membrane.

### **Installation steps – M12 Hilti HSL-3B in concrete:**

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the position for hole to be drilled.
3. Drill one M18 x 125mm hole. Ensure the hole is 90° with the drilled surface.
4. Clean the hole 3 times with compressed air and cleaning brush.
5. Install Hilti HSL-3B as and use a spanner to apply correct torque as per Hilti HSL-3B instructions.
6. Remove the M12 bolt inside the HSL-3B and use it to install a base plate (BP2 80mm), M12 washer and AA406 anchor.
7. Tighten fully and then slack off to ensure the anchor swivels freely.

### **Installation steps – M12 through bolt**

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the position for hole to be drilled.
3. Drill one M14 through hole. Ensure the hole is 90° with the drilled surface
4. Insert M12 stainless steel rod cut to size. Add one backing plate (BP1 120mm or BP2 80mm) to each side of the rod.
5. Install one M12 washer and one lock nut to the back side and AA406 anchor, M12 washer and one M12 lock nut to the front side. Tighten fully using 2 spanners and then slack off just enough to ensure the anchor can swivel freely. Ensure minimum of 8 threads are showing on each side.

### **Proof load and certification:**

All chemical and friction anchorages must be proof loaded before their initial use and subsequently on regular basis to satisfy the requirements set out in AS/NZS 1891.4:2009 and AS/NZS 4488.2:1997

- Proof load rod to 7.5 kN for fall arrest applications
- Proof load rod to 6 kN for applications in rope access
- Always proof load the rods, NOT the brackets!

Through bolts must be visually inspected – do not proof load!

### **Note:**

The structure must be assessed by a structural engineer unless it is clear to a suitably qualified person that it is capable of withstanding the forces imposed on it during arresting of a fall and during work positioning.

### **DISCLAIMER**

All product specifications and technical descriptions, recommendations and other information provided in this document are given as general guidance and advice, and are to be considered in conjunction with Safety Roof Anchors installation instructions and any other data available and applicable to each particular standard product or system. Use of such data is however the user's sole responsibility taking into account the intended application and actual conditions existing on the specific worksite. Consequent selection of the right product for any particular use remains the user's ultimate responsibility.

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