

AA406 SWIVEL ANCHOR

INSTALLATION INSTRUCTIONS

Things To Know:

AA406 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. It is recommended to install the AA406 as a kit (AA406K).

Anchor Rating:

The AA406 swivel anchor has been independently tested in accordance with AS/NZS 5532:2025 and verified as a 15 kN rated rope access/ fall arrest anchorage device.

Fixing Options:

- Through bolt M12 (HOLE 14 DIA)
- Chemical HILTI HVU M12 or equivalent (HOLE 14 DIA)

Concrete Specifications:

Min. concrete strength: 25 Mpa

Min. slab thickness: 150 mm

Min. distance to edge: 200 mm

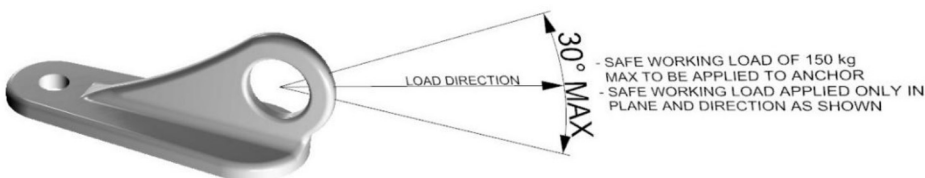
Min. distance to another anchor: 200mm

Note:

Edge distances less than the stated minimum may be permitted where verified by anchor manufacturer design (e.g. Hilti). Verification must be based on project-specific parameters including concrete strength, embedment depth, anchor size, and edge condition, with documented capacity calculations.

Loading:

shear as per the diagram

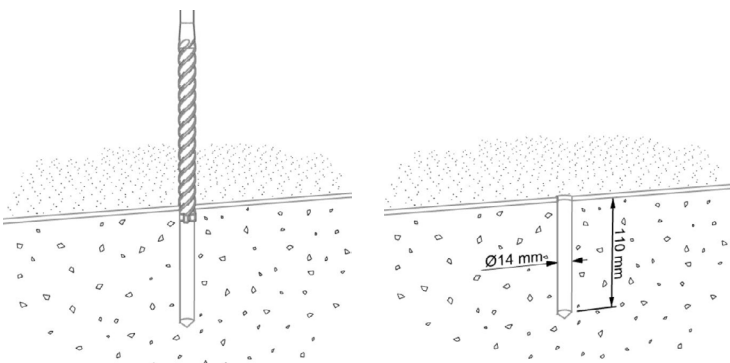


Tools Needed For Installation:

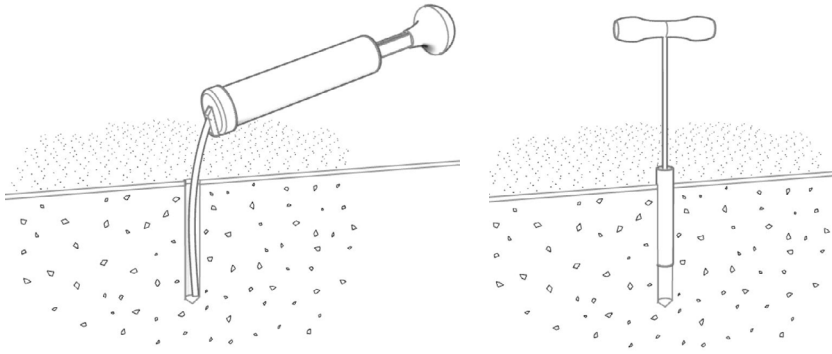
Rebar detector, Rotary hammer drill, masonry drill bit 14, air pump, cleaning brush, setting tool for rods

Installation Steps – M12 chemset in concrete:

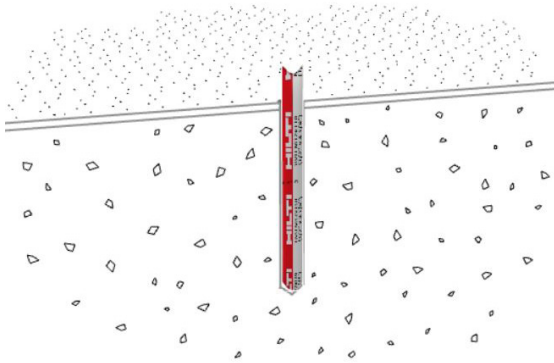
1. Use Hilti rebar detector or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the position for hole to be drilled.
3. Drill an M14 x 110mm hole. Ensure the hole is 90° with the drilled surface.



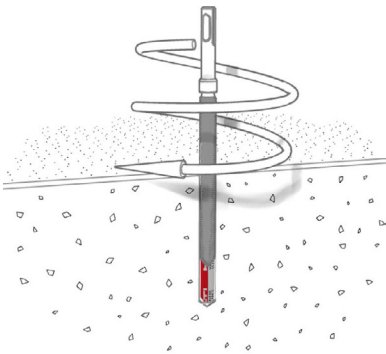
4. Clean the hole 3 times with compressed air and cleaning brush.



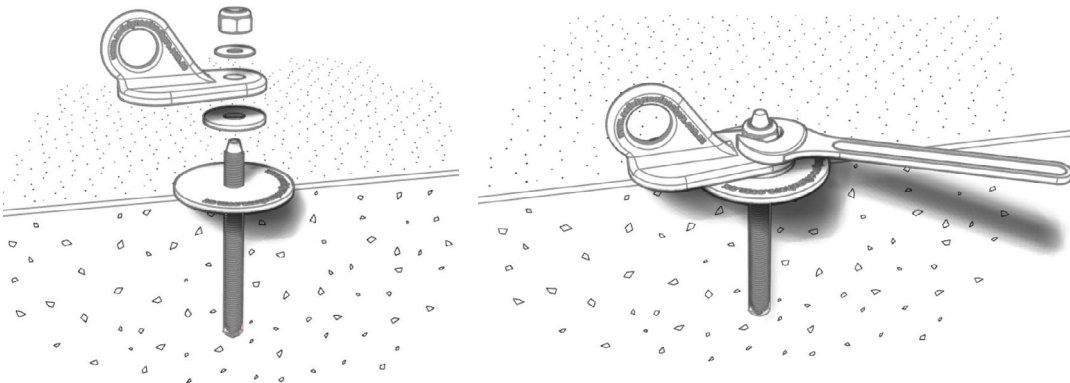
5. Insert one Hilti HVU M12 chemical pack in the hole.



6. Using rotary hammer with appropriate setting tool (hex socket), install a stainless steel M12 rod. Ensure the rods have a harp tip. We recommend using SRA rods (AR-P) or Hilti rods with appropriate setting tool.



7. Allow sufficient drying time as per Hilti HVU instructions. Once dry, install the AA406K.
8. Install a stainless-steel base plate (BP2 80mm), nylon washer, 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:

A gasket of quality polyurethane sealant is recommended between the base plate host structure.

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 1891.4:20025 and ISO 22846 (2020).

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

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:

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