

AA401 EYE NUT

INSTALLATION INSTRUCTIONS

Things To Know:

AA401 is designed for installation in concrete and steel. It has been specifically developed for applications in rope access (abseiling) and to support a multi directional fall arrest load of 15 kN provided a suitable personal shock absorber is used. It is recommended to use a permanent locking agent such as Loctite 277 or equivalent when installing on an approved strength threaded rod without welding.

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:

The anchor is designed to accommodate multi-directional loading typical of fall arrest and rope access systems.

Tools Needed For Installation:

Rotary hammer drill, masonry drill bit 14, air pump, cleaning brush

Installation Steps – M12 HVU2 chemset 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 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, install a stainless steel M12 rod. Ensure the rod has a sharp tip – use SRA or Hilti rods suitable for the application.
7. Allow sufficient drying time as per Hilti HVU instructions.
8. Use a fastener locking agent such as Loctite 277 or equivalent to install AA401. Ensure minimum of 3 threads are showing.

Installation Steps – M12 through bolt (refer to product AA400T):

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 (BP2 or BP3) to each side of the rod.
5. Install one M12 washer and one lock nut to the back side and AA401 anchor to the front side. Apply a fastener locking agent such as Loctite 277 or equivalent to the thread and tighten fully using a spanner and a bar when installing in concrete. When installing in cavity walls, do not overtighten and use a spacer tube to avoid collapsing the cavity. Ensure minimum of 3 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 1891.4:2025, and ISO 22846 (2020).

- Proof load the eye to 7.5 kN for rope access and fall arrest applications
- 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 work positioning.

Disclaimer:

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