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) but it can be also used to support a 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 a threaded rod without welding.

Fixing options:

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

Loading: Sheer, not exceeding 20° with the surface it is installed into if installed as a chemset in concrete.

Tools needed for installation:

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

Installation steps – M12 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 the tip cut off on 45° angle or use 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.

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

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 (BP2 or BP3) to each side of the rod.

5. Install one M12waher 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. 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/NZS 1891.4:2009 and AS/NZS 4488.2:1997

- Proof load the eye to 7.5 kN for fall arrest applications
- Proof load the eye to 6 kN for applications in rope access
- 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.