AA408 TENSILE DOUBLE BOLT ANCHOR
INSTALLATION INSTRUCTIONS

Things To Know:
AA408 is designed for installation in concrete and steel. It has been specifically developed for tensile loading applications. It is suitable as a re-belay/ aid climbing anchor, tensile rope access anchor or fall arrest anchor. It should be used in place of collared eye bolts in all applications where they are loaded under an angle greater than 20° with the surface they are installed in.

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

Anchor Rating:
The AA408 dual-fix anchor system 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:
Use only approved M12 mechanical or chemical anchors meeting the required performance criteria.
- Minimum embedment 100mm for wedge anchors
- Suitable for cracked and non-cracked concrete
- Minimum tensile resistance ≥ 18kN
- Minimum embedment 110mm for chemical anchors

Examples Include:
- 2 x Chemical HILTI HVU M12 or injectable equivalent such as HILTI RE-500 (HOLE 14 DIA)
- 2x SRA wedge anchor M12x125mm (HOLE 12 DIA)
- 2 x HSL 3 GR M12 (HOLE 18 DIA) or 2 HSL 3 GR M10 (HOLE 15 DIA)
- 2x Hilti HST3-R M12x125mm (HOLE 12 DIA)
- 2 x Through bolt M12 (HOLE 14 DIA)

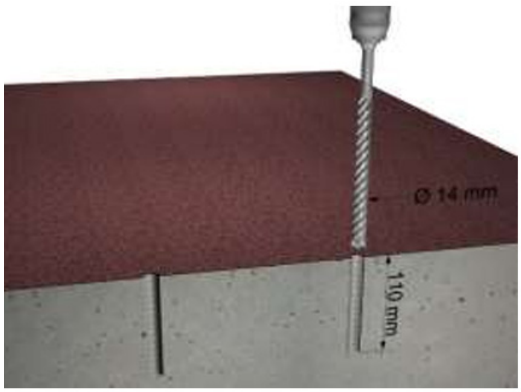
Concrete Specifications:
Min. concrete strength: 27.5 – 30 Mpa
Min slab thickness: 150 mm

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

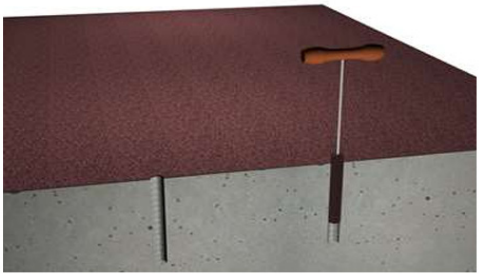
Tools Needed For Installation:
Rebar detector, Rotary hammer drill, Masonry drill bit 12, 14, 18 or 15 (HSL M10) air pump, cleaning brush and torque wrench.

Installation Steps – M12 HILTI HVU chemset in concrete:

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the positions for holes to be drilled.
3. Drill two M14x110mm holes. When you start drilling the second hole, double check your holes line up with the anchor holes. Ensure the holes are parallel and 90° with the drilled surface.



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



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

6. Using rotary hammer with appropriate setting tool, install 2 stainless steel M12 rods through the holes in the base of AA408 anchor. The rods must have their tips cut on 45° angle to allow for correct mixing of chemical.

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

8. Install one M12 washer and one M12 nylock nut on each rod ensuring minimum of 3 threads are showing when nuts are fully tightened.

Note: *The 3 threads are important for a secure attachment of a separate M12 eye nut which is needed to complete the proof load of individual rods/fixings upon installation.*

Note a: *When installing through water proofing membrane, a full gasket of a membrane compatible sealant is recommended between and around the anchor base plate and the membrane.*

Installation Steps – M12x 125mm SRA wedge anchor fixings in concrete:

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the positions for holes to be drilled.
3. Assemble both SRA wedge anchors onto the anchor body and check they line up with the marked holes.
4. Drill two M12 x 100mm holes. When you start drilling the second hole, double check the holes still line up with the SRA wedge anchors in your assembly. Ensure the holes are parallel and 90° with the drilled surface.
5. Clean the holes with compressed air and cleaning brush.
6. Offer the whole assembly to the drilled holes and use an SDS attachment setting tool or tap both wedge anchors repeatedly with hammer until the washers are seated.
7. Use a torque wrench to apply correct torque as per SRA wedge anchor instructions.
8. Once a prescribed torque is achieved in both fixings, the installation is complete. Original hex nuts and washers will suffice or may be upgraded to M12 nylock nuts. As an alternative, a heavy-duty thread locker (Loctite Red 271) or s/s spring washers can be used with the original nuts. Ensure minimum of 3 threads are showing when nuts are fully tightened.

Note: *The 3 threads are important for a secure attachment of a separate M12 eye nut which is needed to complete the proof load of individual rods/fixings upon installation*

Installation Steps – M12x125mm Hilti HST3-R:

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the positions for holes to be drilled.
3. Assemble both M12x125mm HST3-Rs onto the anchor body and check they line up with the marked holes.
4. Drill two M12 x 100mm holes. When you start drilling the second hole, double check the holes line up with the M12x125mm HST3-Rs in your assembly. Ensure the holes are parallel and 90° with the drilled surface.
5. Clean the holes with compressed air and cleaning brush.
6. Offer the whole assembly to the drilled holes and use an SDS attachment setting tool or tap both wedge anchors repeatedly with hammer until the washers are seated.
7. Use a torque wrench to apply correct torque as per Hilti M12x125mm HST3-R instructions.
8. Once a prescribed torque is achieved in both fixings, the installation is complete. Original hex nuts and washers will suffice or may be upgraded to M12 nylock nuts. As an alternative, a heavy-duty thread locker (Loctite Red 271) or s/s spring washers can be used with the original nuts. Ensure minimum of 3 threads are showing when nuts are fully tightened.

Note: *The 3 threads are important for a secure attachment of a separate M12 eye nut which is needed to complete the proof load of individual rods/fixings upon installation.*

Installation Steps – M12 Hilti HSL 3 GR:

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the positions for holes to be drilled.
3. Assemble both HSL's onto the anchor body and check they line up with the marked holes.
4. Drill two M18 x 125mm holes. When you start drilling the second hole, double check the holes line up with the HSL's in your assembly. Ensure the holes are parallel and 90° with the drilled surface.
5. Clean the holes with compressed air and cleaning brush.
6. Offer the whole assembly to the drilled holes and tap both HSL's repeatedly with hammer until fully in.
7. Use a spanner to apply correct torque as per Hilti HSL-3B instructions.
8. Once a prescribed torque is achieved in both fixings, the installation is complete. In the overhead applications, the original hex nuts and washers will suffice or may be upgraded to M12 nylock nuts. As an alternative, a heavy-duty thread locker (Loctite Red 271) or s/s spring washers can be used with the original nuts. Ensure minimum of 5 threads are showing when nuts are fully tightened.

Note: *The 3 threads are important for a secure attachment of a separate M12 eye nut which is needed to complete the proof load of individual rods/fixings upon installation.*

Installation Steps – M12 through bolt:

1. Use Hilti Reo Scan or similar device to avoid drilling the steel reinforcement in concrete.
2. Mark the positions for holes to be drilled.
3. Drill two M14 holes. When you start drilling the second hole, double check your holes line up with the anchor holes. Ensure the holes are parallel and 90° with the drilled surface.
4. Insert two M12 stainless steel rods cut to size. Add two backing plates (BP2 or BP3) to each rod on the back side and M12 washer to each rod on the front side.
5. Install four M12 lock nuts; one for each end of the rod and tighten to 40 Nm using two spanners. Ensure minimum of 3 threads are showing when nuts are fully tightened.

Proof load and certification:

All chemical and friction anchorages must be proof loaded before their initial use and subsequently on regular basis unless detailed records of fixings method are available to satisfy the requirements set out in AS/NZS 1891.4:2025 and ISO 22846:2020

- Upon installation proof load each rod (fixing) individually to 7.5 kN
- Do not proof load the bracket. Proof loading each rod individually is the best practice!

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 can withstand the forces imposed on it during arresting of a fall and during work positioning.*

Disclaimer:

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