



Popular anchor



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CONCRETE SCREW-TYPE ANCHORS ARE INCREASINGLY USED AS A QUICK, SIMPLE AND EFFECTIVE METHOD FOR FIXING BOTTOM PLATES TO CONCRETE SLABS.

INITIALLY DESIGNED as removable fasteners for fixing plant and machinery to concrete walls and floors, concrete screw-type anchors are a popular option for fixing timber bottom plates to concrete foundations in residential and commercial construction.

Can work well

Screw-type concrete anchors offer some advantages:

- They are quick and easy to install – a hole is drilled in the concrete floor in the correct location, the timber framing lined up above and the screw-type anchor is installed using either a power driver or manual socket or wrench.
- They can be removed easily if necessary –

with no wedge, sleeve or adhesive holding them in place, they simply screw out.

- They put less stress on the concrete – as the screw-type concrete anchors do not have an expanding wedge or sleeve, they apply less expansion force than wedge or sleeve-type anchors.

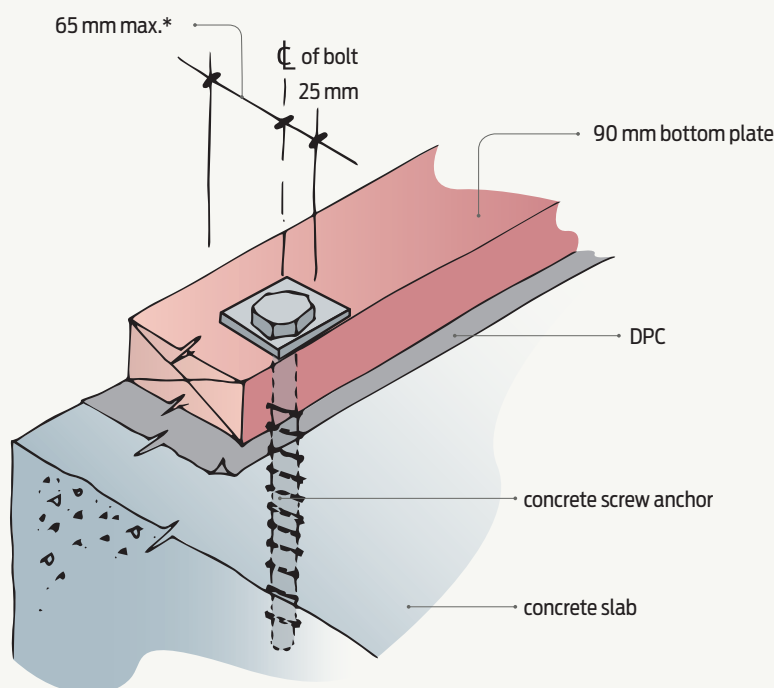
But need to check a few things

However, there are some items to consider when using any type of post-installed anchor in concrete foundations:

- Does the fastener have the correct capacity strength to meet the requirements of NZS 3604:2011 *Timber-framed buildings* clauses 7.5.12.3 and 7.5.12.4?

- If the fastener is to be used as a hold-down at the end of a bracing panel, can it achieve the required characteristic tensile strength for this task?
- Can suitable cover to the fastener be achieved, especially in NZS 3604:2011 exposure zone D and where concrete and concrete masonry header block foundations are used? It may be necessary to specify stainless steel anchors in these locations. Figures 1 and 2 demonstrate how maximum covers can be achieved in two common situations.
- Is the drill bit the correct diameter – if worn, the bolt can be hard to install and may damage the concrete. ◀

Note ▶ Two BRANZ Appraisals cover a range of concrete hold-down fasteners, see www.branz.co.nz.



* 65 mm is the distance from the edge of the slab to the centre of the fastener. It is not the amount of cover.

Note: 6 mm bottom plate offset to foundation is required where a direct-fixed cladding is used.

Figure 1 Formed concrete foundation.

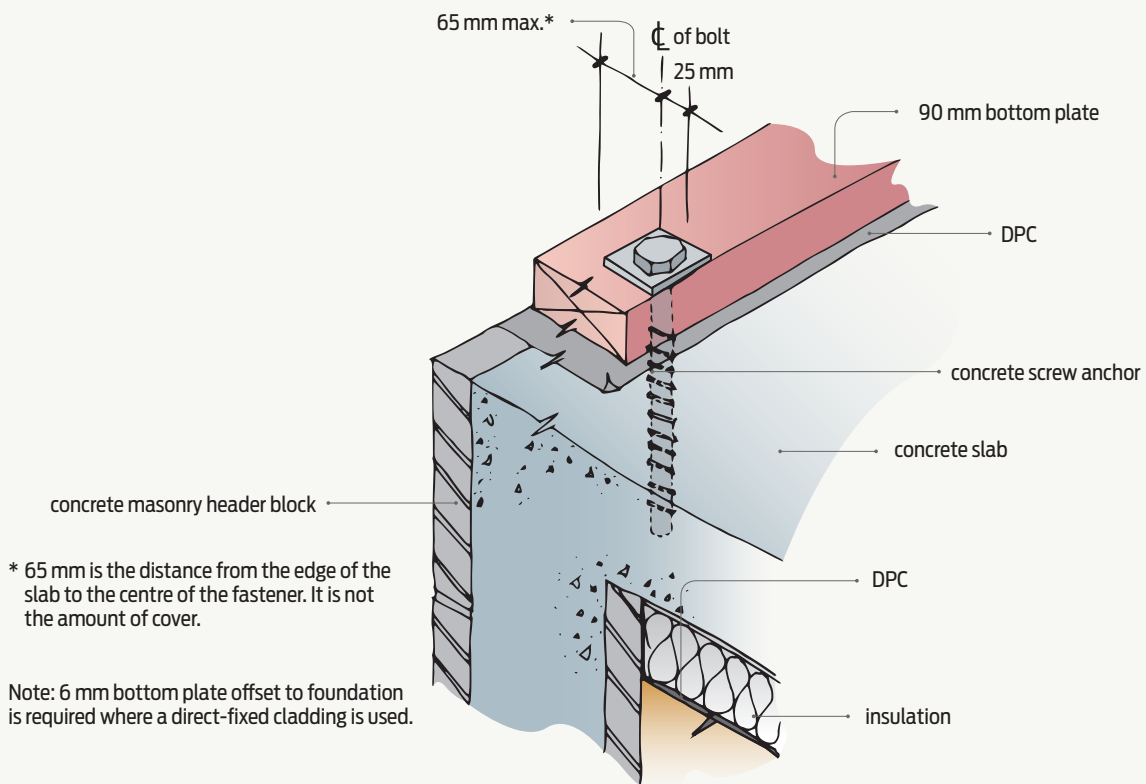


Figure 2 Concrete masonry header block foundation.