

## THE CORRECT AND SAFEST BOLTS/ANCHORS FOR PRECAST

**Over the years, there has been many different variants of bolts and fixings pertaining to be the safest and best for safely bracing precast panels.**

Recently and unfortunately, we've noticed that inappropriate and unreliable bolts and fixings have made their way back into the industry for use in ways that they are not capable of safely being used.

Despite claims by some suppliers that some of these bolts (including screw bolts...) are safe to use in applications such as bracing precast panels and elements, they are not.

So, with this in mind, we offer the following advice and recommendations – all approved and consistent with best practice procedures and with the overwhelming support of our entrusted OHS Regulator – WorkSafe Victoria.

- Chemical anchors relying solely on chemical adhesion **MUST NOT BE USED** for bracing inserts (unless each insert is individually proof tested to the working load limit);<sup>1</sup>

- Deformation –controlled anchors, including self-drilling anchors and drop-in (setting) impact anchors, **MUST NOT BE USED**<sup>2</sup>.
- Ensure anchors are
  - High performance load (torque) controlled;
  - Installed according to the manufacturer's specifications for hole diameter and depth;
  - Tightened to the manufacture's recommended tightening torque;<sup>3</sup>
- **Screw bolts must never be used for brace footings** because they are only suitable for static loads. Critical design loads (such as Precast panels and their braces) are classified as "dynamic" by their very nature in terms of wind loads and potential accidental impact. The Australian Standard AS3850.1 – 'Prefabricated Concrete Elements', requires dynamic load testing for all anchors used for brace anchoring – screw bolts are neither tested nor approved for dynamic loads – they are only approved for static loads<sup>4</sup>.

<sup>1</sup> Industry Standard Precast and Tilt-up Concrete for Buildings WorkSafe Victoria p.28

<sup>2</sup> IBID

<sup>3</sup> Guidance Note WorkSafe Victoria – Brace footings for concrete panels – selecting the correct anchors June 2009 PDF

<sup>4</sup> Hillside Engineering : Screwbolts in concrete

**FOR FURTHER ADVICE AND INFORMATION, CONTACT YOUR ORGANIZER OR THE CFMEU ON 93413444**

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