UNCARVED BLOCK PTY LTD • AUSTRALIA

Climbing Hold Installation & Use Guidelines

General Technical Reference for Bolt-On & Screw-On Polyurethane Climbing Holds

IMPORTANT NOTICE — GUIDELINES ONLY

This document provides general handling and installation guidelines for Uncarved Block climbing holds. It is not site-specific structural engineering advice. Uncarved Block Pty Ltd has no control over the mounting structure, substrate condition, fastener selection, environmental exposure, or installer competence. Verifying wall integrity, selecting appropriate hardware, and ensuring safe installation is solely the responsibility of the installer, facility operator, or end-user.

1. Inherent Risk & Product Nature

- **Inherent Risk Warning:** Climbing and bouldering are inherently dangerous activities carrying a risk of serious personal injury or death. Users assume all risks associated with climbing activities.
- **Consumable Wear Items:** Polyurethane climbing holds are consumable sporting components subject to mechanical wear, impact, chalk build-up, UV degradation, and material fatigue. Holds can spin, chip, or fracture even when correctly installed.
- **Not Personal Protective Equipment (PPE):** Climbing holds are not PPE and must never be used as belay anchors, abseil points, rigging points, slackline anchors, or fall-arrest attachments.

2. Mounting Surface & Australian Substrate Guidelines

- **Surface Flatness:** Mount holds flush against a flat, rigid, clean surface. Mounting across panel seams, sharp edges, or curved/uneven surfaces induces bending stress in the hold and may cause fracture.
- **Home-Wall Substrates (Australia):** For timber-framed home walls, standard Australian structural plywood in **17 mm** (typical domestic construction) or **19 mm** thickness fitted with properly seated T-nuts is recommended. Thin non-structural sheet materials (such as MDF, chipboard, plasterboard, or thin ply) are unsuitable.
- **Commercial Climbing Gyms:** Commercial facility wall construction, panel thickness, and structural framing are governed by applicable commercial climbing structure standards (such as AS 2316.1.1) and project engineering specifications, which take precedence over general guidelines.
- **Masonry, Concrete & Steel:** Mounting directly onto brick, blockwork, concrete, or steel requires specialist masonry/structural anchors selected by a qualified installer. Uncarved Block assumes no responsibility for T-nut pull-out, timber splitting, anchor failure, or wall-panel failure.

3. Fasteners & Hardware Guidelines

- **Bolt-On Holds:** Use metric **M10** or imperial **3/8"-16** socket head cap screws (minimum Grade 8.8 or equivalent) with a flat-bottomed cap head seated cleanly against the hold's embedded washer. Ensure full thread engagement through the T-nut without bottoming out against the rear framing.
- **Screw-On Holds & Anti-Rotation Holes:** Use suitable countersunk timber screws (typically 10-gauge / 5.0 mm) matched to the substrate thickness. Drive screws squarely until snug; over-driving countersunk screws will split polyurethane.
- **Hardware Condition:** Inspect all bolts, washers, and T-nuts prior to installation. Never reuse bent, cross-threaded, or corroded fasteners, and never substitute hex-head bolts where socket head cap screws are required.

4. Tightening Torque Guidelines & Tool Warnings

The values below represent **general maximum tightening guidelines** for Uncarved Block bolt-on holds when installed into sound structural plywood with seated T-nuts. Tighten only until the hold sits firmly and cannot rotate under load.

Hold Size Category	Typical Bolt / Hardware	Guideline Torque Range	Installation Notes
XS – Small (Micros / Crimps)	M10 or 3/8" SHCS	15 – 20 Nm	Hand-tighten carefully; small profiles crack easily if over-torqued.
Medium – Large	M10 or 3/8" SHCS	20 – 35 Nm	Do not exceed substrate T-nut crush limit.
XL – Mega / Macros	M10 or 3/8" SHCS + Set Screw	30 – 40 Nm (Max)	Use secondary anti-rotation screw(s) where provided.

- **Substrate Override:** Standard pronged T-nuts in 17 mm or 19 mm plywood can crush into the timber or spin well below 40 Nm. The wall hardware's mechanical limit always overrides the hold's maximum guideline torque.
- **Do Not Use Impact Drivers:** High-torque impact wrenches and impact drivers routinely deliver 100–180+ Nm, which will crack holds, crush embedded washers, and strip T-nuts. Use a manual hex key or calibrated torque wrench.
- **Anti-Rotation Screws:** Installing a secondary anti-rotation wood screw prevents hold spinning and allows main-bolt torque to be reduced by approximately 5 Nm.

5. Inspection, Cleaning & Maintenance

- **Routine Pre-Use Checks:** Visually and physically inspect holds prior to use and after every route reset for hairline cracks, loose bolts, rotation/spinning, or damaged washers. Immediately remove and discard any damaged or cracked hold.
- **Cleaning:** Clean holds with warm water, mild non-solvent detergent, and soft nylon brushes. Avoid high-pressure water blasting directly at thin edges, harsh chemical solvents, or abrasive wire brushes.
- **Environment & Storage:** Store holds in a cool, dry place out of direct sunlight. Prolonged outdoor UV exposure and extreme heat accelerate polyurethane ageing and embrittlement.

6. Misuse & Excluded Applications

The following actions constitute improper use outside the intended design of Uncarved Block products:

- Over-tightening bolts or installing holds with uncalibrated impact drivers/wrenches.
- Drilling, grinding, cutting, gluing, or modifying holds after manufacture.
- Mounting holds onto uneven, deteriorated, or non-structural surfaces.
- Using holds for rigging, lifting, slacklines, or fall-arrest anchors.
- Continuing to use visibly cracked, chipped, or spinning holds.

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7. Scope & Limitation of Liability (Australia)

Product Scope: Unless expressly stated otherwise on a formal commercial quotation or product specification sheet, holds are supplied for general indoor climbing and home-wall use.

Limitation of Liability: To the maximum extent permitted by law, Uncarved Block Pty Ltd is not liable for any personal injury, death, property damage, or consequential loss arising from improper installation, substrate or T-nut failure, over-torqueing, product modification, lack of maintenance, or third-party negligence. Nothing in these guidelines excludes, restricts, or modifies any non-excludable consumer guarantees, rights, or remedies conferred under the *Australian Consumer Law* (Schedule 2 of the *Competition and Consumer Act 2010* (Cth)).