

# QUAD-LOCK<sup>®</sup> BUILDING SYSTEMS

## TECHNICAL BULLETIN

To ensure successful Quad-Lock projects, it is critical that Builders follow recommended practices. Please read the following bulletin carefully – these tips **will** make a difference!



### FORMWORK PREPARATION

All concrete forms are subject to **TREMENDOUS PRESSURE** during concrete placement. This means that even seemingly 'small' mistakes can cause form deflection and/or failures that are hard to fix. Be conservative and follow recommended practices.

Particularly on your first Quad-Lock pour, **allow extra time** to complete the details and double-check your "PSS&L" ('Plumb, Straight, Square, and Level'). Good preparation will always result in a higher quality job and save time in the long run.

- **Attachment of Metal Track:** Attach the track properly to contain the concrete pressure exerted at the bottom. **Use pins 1½" [38mm] or longer every 2-2½' [60-75cm] (5-6 pins per 10' track).** Attach track within 48 hours of the footing pour so the pins won't bend on concrete that's too hard. A powder actuated gun (with Hilti pins) or drilled in Zamac pins work well since they have a built-in washer. If the track is closer than 3" [75mm] to the edge of the footing or slab, attach it using a hammer drill and Zamacs so the edge of the footing does not break off. If the track is hanging over the edge of the concrete, install support underneath the track and place metal banding or strapping underneath both sides of track, then nail the track through the strapping into the support. Place a bead of spray foam in the track while installing the panels to reduce compression on the panel bottoms during the pour.



- **Placement of Ties:** Pay close attention to the placement of the ties as missing or misplaced ties or tie flanges can cause form failure. **ALWAYS DOUBLE-CHECK TIE POSITIONS BEFORE CONCRETE PLACEMENT!** Missing or misplaced ties are typically the result of not keeping the thicker, 1' [30cm] grooves on the panels aligned and directly across from each other. If you've missed a tie completely and the wall is already built, place a 2'x2' [60x60cm] or larger piece of plywood over the missing tie on both sides of the wall, screw it into the surrounding ties, and then place a metal rod through both plywood pieces where the tie is missing. Secure the rod with washers and nuts on both sides of the wall so it will act as a tie. (This method also works to fix form failures during a pour.) If a tie is misplaced by a maximum of 2" [50mm], there is no need to follow this procedure **UNLESS** the misplaced tie is at a vertical seam or other critical element (e.g. window, corner, T-wall). At all vertical seams between panels you must place a full tie to straddle the seam or a split tie on both sides of the seam.



## FORMWORK PREPARATION Cont'd

- Corner Assembly:** Missing or misplaced corner brackets, tie flanges or full ties can cause form failure, especially in corners. Refer to the installation instructions on the tie boxes for details. To secure the outside corner brackets, insert cut flanges in the very corner and then every 4" [10cm]. Cut tie flanges long enough so they will stick out into the cavity. This will allow you to double-check placement of flanges before concrete placement. If you discover that a flange is missing **after the forms are erected**, screw 3-4' [100-120cm] long pieces of 2x4 lumber along the horizontal seams to the ties on both sides of the corner. Then screw the ends of the 2x4s together at the corner to secure everything into place. Remember to start the outside of every corner with full length panels on odd courses and with half length panels on even courses. Keep factory ends of the outside panels in the corner. When cutting the panels to fit on the inside, always cut the end that goes into the corner ensuring that the deeper 1' grooves stay vertically aligned and directly across from each other. **Do not log-cabin panels.**



- Wall Bracing:** Walls will only be as straight and plumb as you brace them to be. **Properly brace your walls every 6'** [1.8m] (more for radii etc.). Braces should be placed about 3' [1m] from the corner. Adjust the braces for plumb **before, during and after** the pour. Many builders 'cheat the wall' toward the braces by a ½" or so. This is because the braces are easier to push than to pull once the concrete is poured.



- Window & Door Bracing:** Window & door bucks need to be **braced adequately** to prevent bowing, deflection, or collapse during concrete placement. Secure lateral braces inside the bucks' corners to keep them square. Brace door bucks laterally to the ground. Place **cross-bracing inside all bucks every 2' [60cm] both vertically and horizontally.** For internal bucks use Wind-Locks every 6" [15cm] both vertically and horizontally.



*For more information, contact your Quad-Lock Sales Representative or the Technical Services Department.*