



HORIZONTAL PANEL

Brick Lay Pattern

TECHNICAL BULLETIN

Volume. 1

APRIL 2011

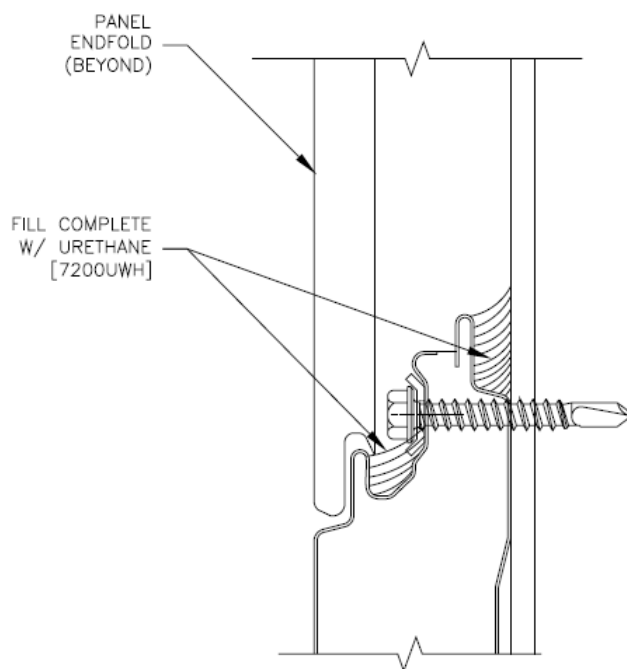
Metl-Span recommendations for the installation of CF Architectural wall panels in a horizontal brick pattern layout

Introduction: This technical bulletin is for modified installation procedures with Metl-Span insulated metal wall panels installed in a horizontal oriented brick pattern. The panels are secured to framing members that are typically spaced according to the panel module and project's design requirements.

Recommendations: Metl-Span recommends the following procedures to install CF Architectural wall panels as described above.

1. **Establish a true horizontal and vertical alignment of the wall support framing.** The framing members must be continuously plumb vertically and remain in-plane horizontally throughout the installation. Failure to maintain vertical and horizontal alignment will disproportionately stress the installed panels possibly causing excessive oil-canning or even buckling failure of the exterior panel face. The specified framing alignment tolerances are typically 1/8" max. outward and 0" inward from the nominal wall support plane. (Refer to Metl-Span's published framing alignment tolerances and Architectural flat panel special considerations in the "CF & CFI Insulated Metal Wall Panel Installation Guide").
2. **Verify wall framing alignment across at least 1 ½ panels.** Given the running bond pattern and the installation sequencing of panels, it is important that the wall support plane be checked not only at the panel ends, but also at the intermediate supports which correlate with the ends of the panels in the adjacent panel rows.
3. **Shims are often necessary to make final alignments to the finished surfaces.** Horseshoe shaped plastic shims are most common. Wedges, on the other hand, are not acceptable. Using a wedge to gently nudge the panel to its proper plane is fine; however the attachment point should bear upon fixed depth shims.
4. **Installing the panel.** Given the distribution of stresses that the panel experiences, it is important to understand that the panel weight is to be supported by the attachment fasteners, not by bearing on the panel below which induces compression stress in the panel below. The panel is fabricated to be installed according to its width module, while allowing at least 1/16" expansion/contraction movement in the joints between adjacent panels.
5. **Clip placement.** It is important to assure the clips properly imbed within the clip track or "clip shelf", that is part of the exterior male joint of the panel. Failure to control orientation of the clip can compromise the alignment of panels and add stress to the exterior face of the panel.
6. **Do not over tighten fasteners.** The panel clip attachment fasteners must be driven until the panel face is secure against the framing member, but must not be overdriven to cause excessive crushing of the foam core and distortion of the metal panel edge. Distorting the panel edge will cause difficult panel joint assembly and may cause visible rippling of the panel's exterior face and excessive joint gaps. *Caution:* It is important to ensure fastener heads do not interfere with end-folds of the panels in the adjacent panel rows.

7. **Limit the use of urethane waterproofing sealant to vertical joints only.** The panels are designed to compensate for thermal load across its entire face. Stresses resulting from the solar gain on the exterior are distributed from the fixed points at the top edge of the panel. This natural distribution is hindered by virtue of the adhesive properties of the urethane.
 - a. The interior and exterior horizontal (side) joint sealant should be a non-curing butyl sealant.
 - b. There should be no sealants applied to intermediate support members. The practice is not only unnecessary for waterproofing, it restricts the stress distribution of the panel under solar loads.
 - c. The quantity of urethane sealant at the panel ends at the vertical joints should be limited to creating a waterproof juncture of the panel to the structure and to creating a waterproof bond between the panel edges and the framing member flashing between the panels. Excess applications of urethane sealant may also restrict stress distribution of the panel under solar loads.
8. When using the gasket system, reference the detail below for sealing behind the panel's tongues.





METL-SPAN

1720 LAKEPOINTE DRIVE, SUITE 101

LEWISVILLE, TX 75057

877.585.9969

INFO@METLSPAN.COM

www.metlspan.com

© 2019 Metl-Span, part of the Cornerstone Building Brands family. All Rights Reserved.

