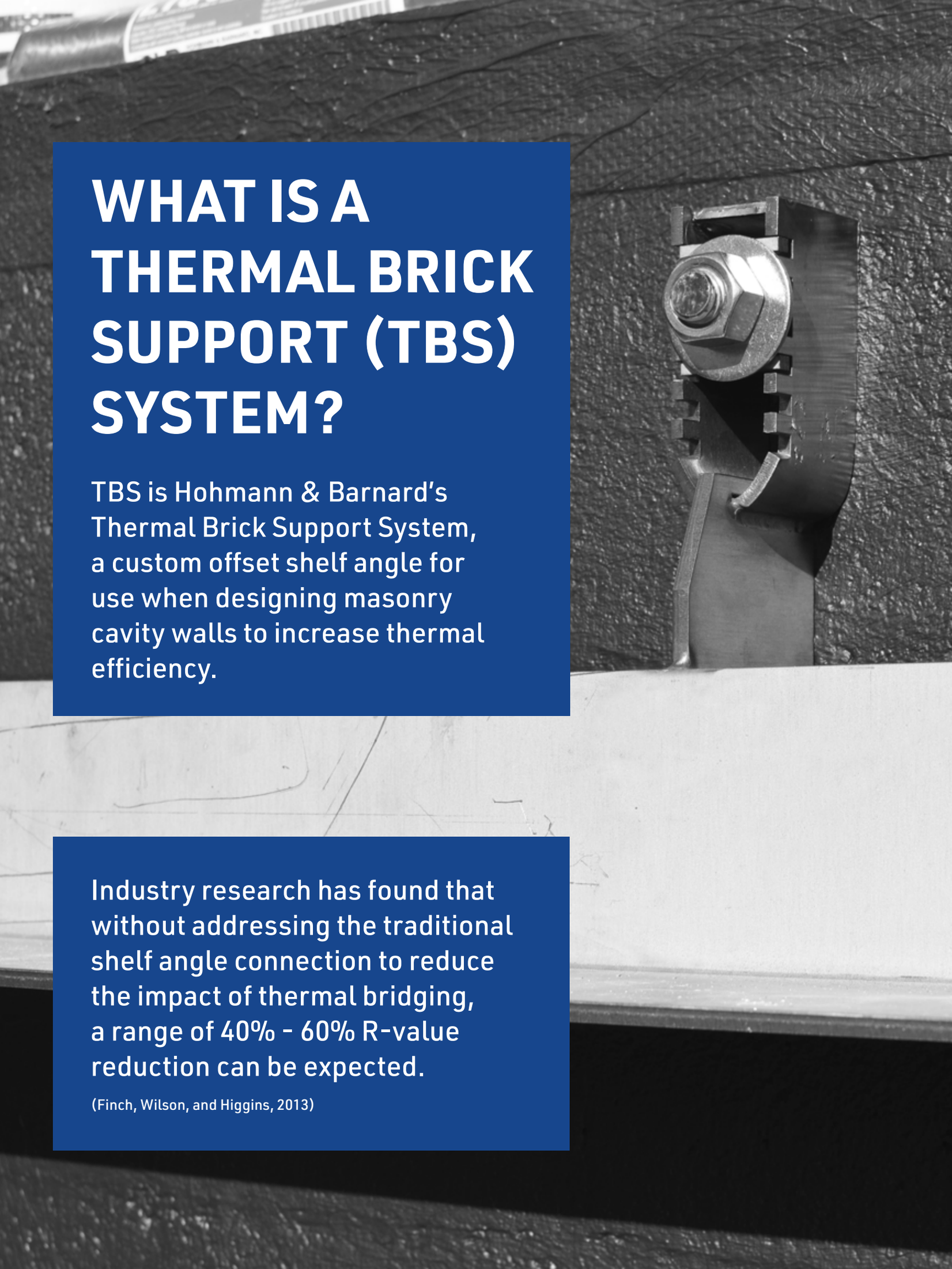
HOHMANN & BARNARD, INC.

THERMAL BRICK SUPPORT SYSTEM



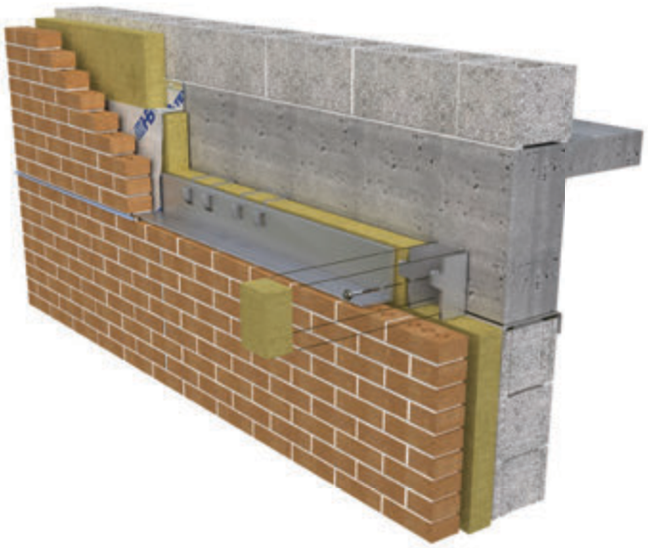
WHAT IS A THERMAL BRICK SUPPORT (TBS) SYSTEM?

TBS is Hohmann & Barnard's Thermal Brick Support System, a custom offset shelf angle for use when designing masonry cavity walls to increase thermal efficiency.

Industry research has found that without addressing the traditional shelf angle connection to reduce the impact of thermal bridging, a range of 40% - 60% R-value reduction can be expected.

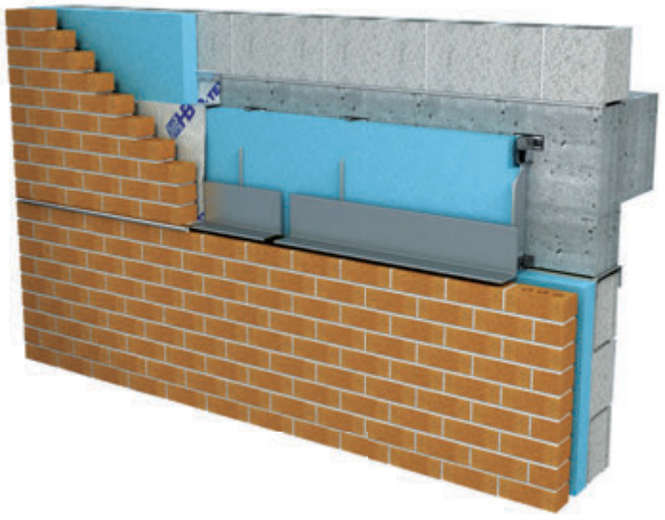
(Finch, Wilson, and Higgins, 2013)

TBS - TYPE B (BRACKET STYLE)

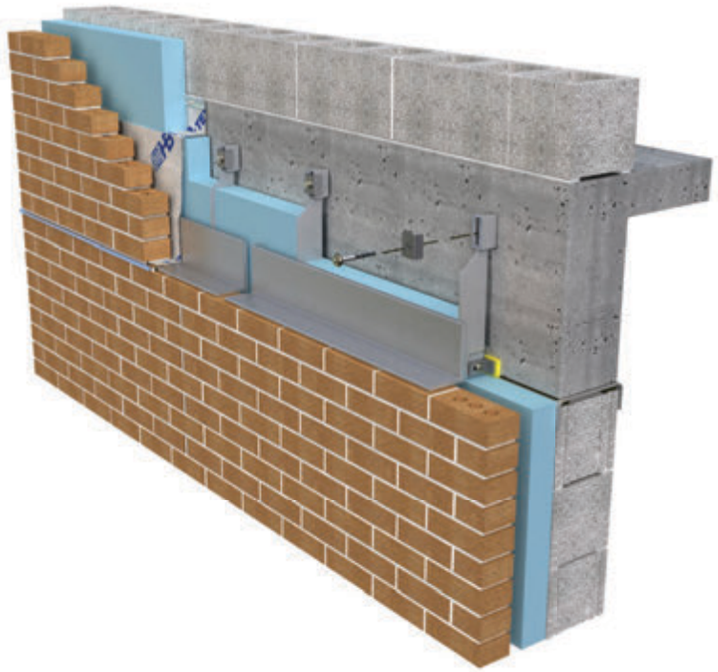


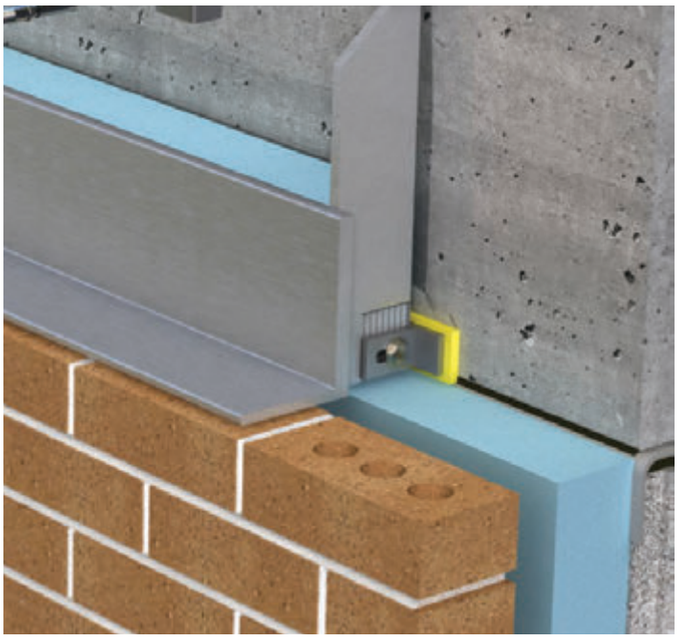
Type B - The B Style of TBS maintains between 65% - 86% of the effective R-value, depending on insulation thickness, thickness of angle, and finish of material.

TBS - TYPE F (FIN STYLE)

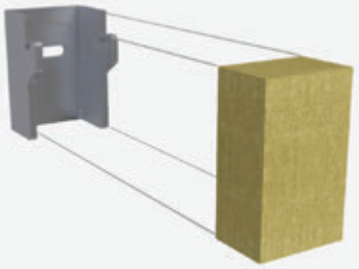


Type F - The F Style of TBS maintains between 81% - 94% of the effective R-value, depending on insulation thickness and finish of material.





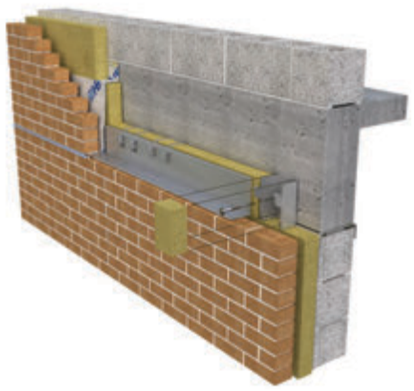
Adding a thermal shim increases the effective R-value an additional 3-5% in either style of TBS.



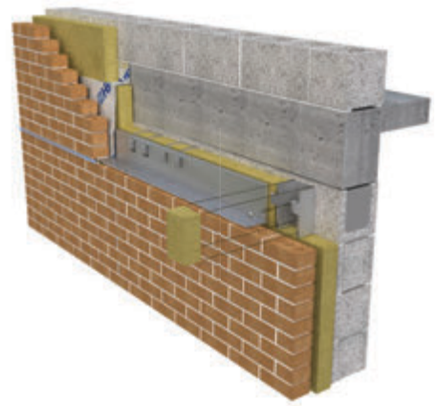
All Type B - Bracket Style TBS Systems come with custom cut Rockwool Mineral Wool Plugs for ease of installation and continuity of insulation at the angle to further increase thermal efficiency.

COMMON TBS STRUCTURAL CONNECTIONS

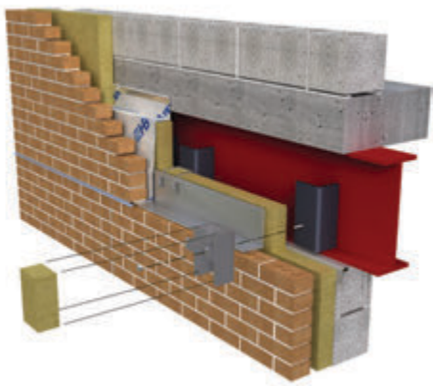
CONCRETE SLAB



CMU BOND BEAM



STRUCTURAL STEEL



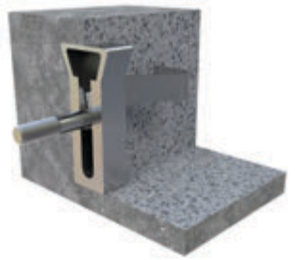
Common TBS structural connections allow for continuous insulation at the relief angle condition.

TBS CONNECTION ATTACHMENTS

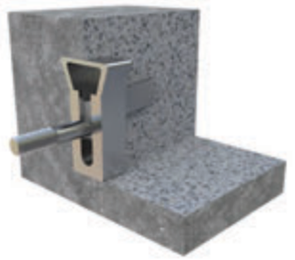
TBS is custom designed to fit specific project conditions. Different attachments are used at the structural connection, depending on the project needs and requirements:

SHARKTOOTH INSERT

LW 340

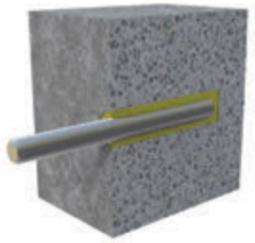


HW 340



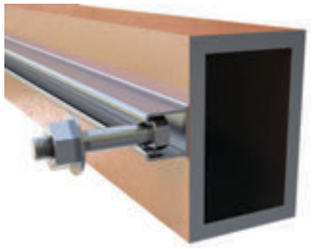
WEDGE ANCHOR

ROD + EPOXY

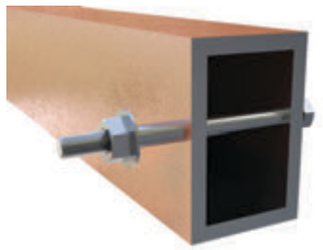


EXPANSION BOLT

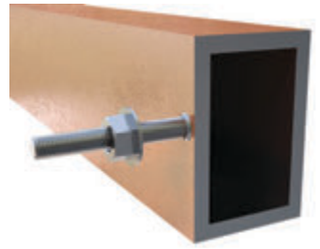
UNISTRUT



THRU BOLT

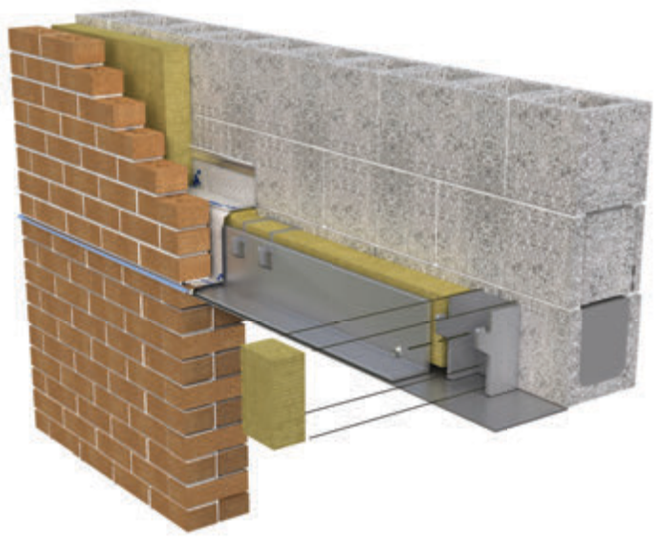


WELDED TO HSS



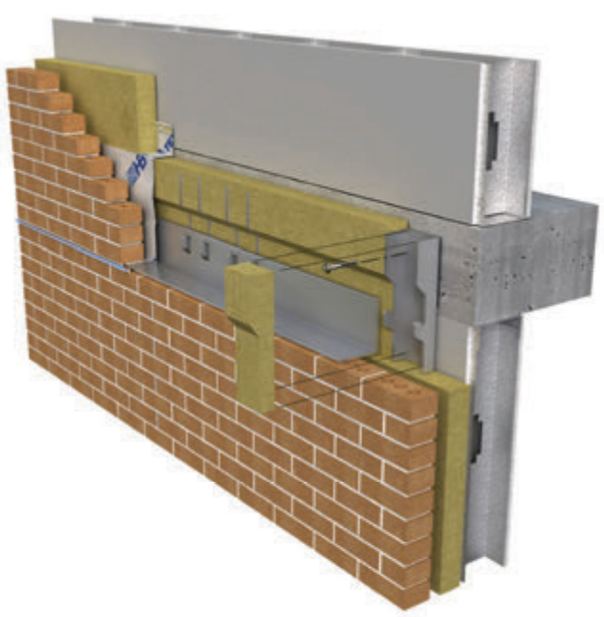
DETAILS FOR DESIGN SOLUTIONS

TBS offers design solutions in addition to thermal efficiency, including but not limited to:

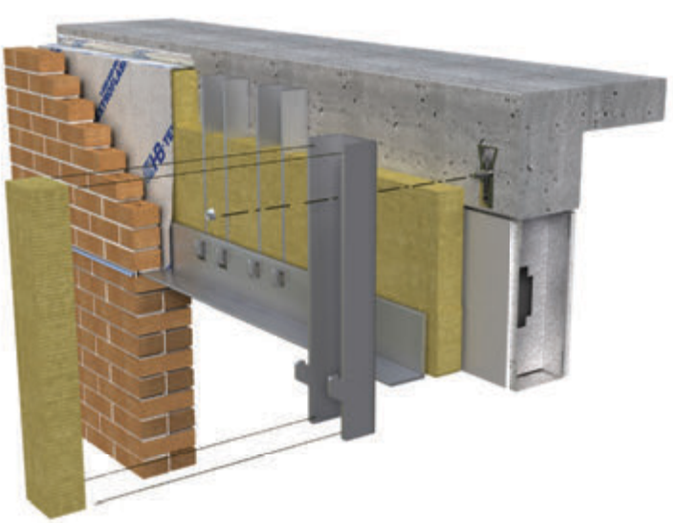


Wide Cavity with Exposed Soffit and/or Storefront Connection

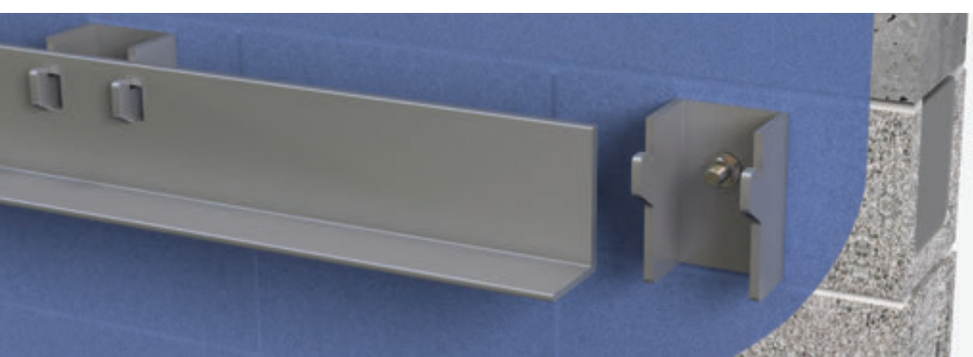
Horizontal Expansion Joint above Slab Edge



Modified Bracket for tight spacing and Flashing Considerations



Drop to Window Head below Slab Edge

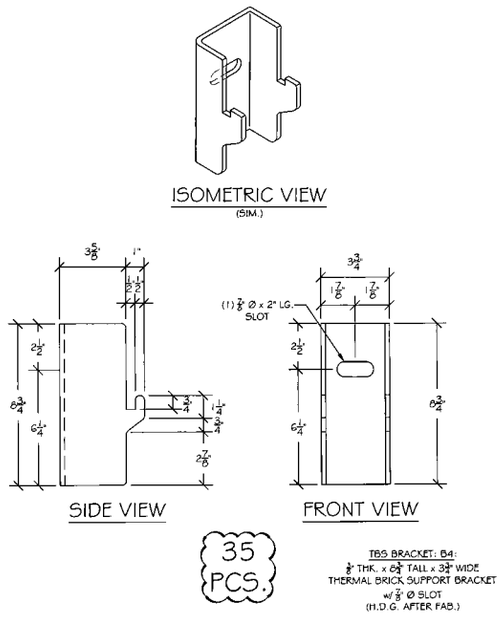


Air barrier can be installed before the angles for true continuity.

DESIGN & DELIVERY PROCESS

Hohmann & Barnard's Architectural Team will assist in design development. Early involvement is important to develop the overall concept, budget, system selection and structure requirements prior to specifying via delegated design.

The Notice to Proceed from the contractor engages H&B's Engineering Team to provide calculations, shop drawings, and layouts for review and approvals prior to drawing part sheets for in-house fabrication and delivery to the project.



FREQUENTLY ASKED QUESTIONS

What is included with the TBS System?

- Embeds
- Brackets
- Angles
- Bolts
- Nuts
- Washers
- Fasteners
- Shims
- Layout Drawings
- Shop Drawings
- Stamped Engineering Calculations

Does TBS work in seismic zones? Yes, TBS has been designed and used in seismic zones.

Can TBS be used with a pour stop? Yes, depending on the thickness of steel used at the face of the concrete.

Can TBS be used with post-tension slabs? Yes, provided that the embeds are utilized, and post-tension tendon layouts are provided to determine proper placement.

What is the minimum slab thickness?

- 5" for epoxy rod connections
- 6" for expansion bolts, power studs, or embed channels
- 7" for embedded channels or inserts

What is the minimum compressive strength needed in CIP Concrete? 4,000 PSI

Does TBS work with metal stud? No, H&B considers metal stud to be light-gauge metal framing.

HOHMANN & BARNARD, INC.

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