



## STEEL-TO-STEEL AND CONCRETE-TO-STEEL CONNECTIONS

# Structural Thermal Breaks for Canopies & Beams.

Uninsulated steel canopies and beams penetrating the insulated building envelope create thermal bridges that can lead to some costly and concerning issues for building owners.

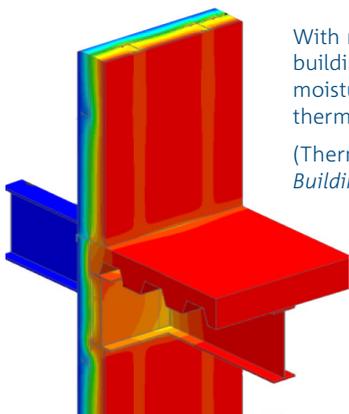
Interior steel and concrete structures that are not properly insulated quickly form condensation that can lead to mould formation within adjacent cavities. Mould spores can become airborne months or years before it becomes visible on interior surfaces, compromising air quality and exposing the developer to remediation and personal injury costs.

Schöck Isokorb® structural thermal breaks eliminate these problems by insulating

steel canopies and beams from interior steel or concrete supporting structures precisely where they penetrate the insulated building envelope, while simultaneously preserving the structural integrity of the steel structure. The high-strength assembly reduces heat loss by up to 74% at the penetration, while preventing condensation and mould on adjacent interior surfaces.

Whether your building is steel or concrete, Schöck offers the most comprehensive range of structural thermal break products to prevent thermal bridging at canopy and steel beam penetrations while allowing freedom of design.

- Prevent condensation and mould formation
- Improve building envelope performance
- Reduce heat loss at canopies by up to 74%
- Most effective way to meet code requirements for continuous insulation



With no thermal break in place, heat and cold can pass through the building envelope at canopy and steel beam connections, causing moisture issues such as condensation and mould, and reducing the thermal performance of the building envelope.

(Thermal model detail from *2019 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide*)

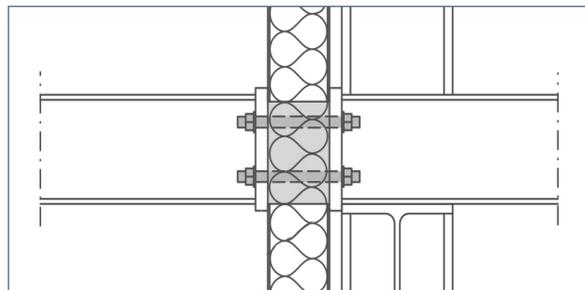


# Insulate your canopies and beams with Isokorb® Structural Thermal Breaks.



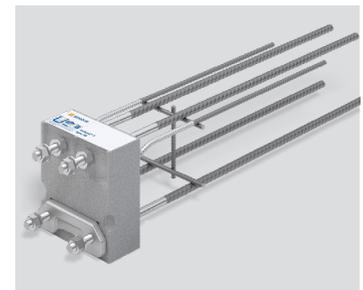
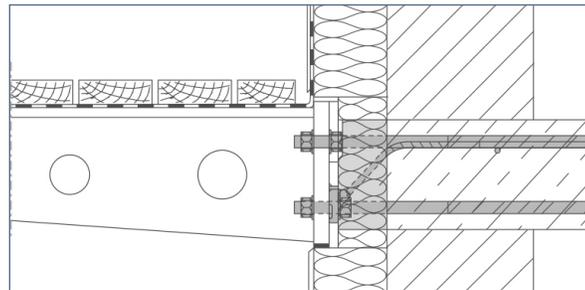
## Steel-to-steel canopy and beam connections

Isokorb® structural thermal breaks for steel-to-steel canopy and beam connections contain stainless steel bolts and HSS profiles that connect the interior and exterior sides of the steel beams, while maintaining the structural strength and integrity of the connection.

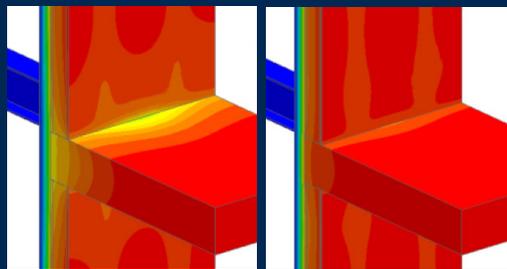


## Concrete-to-steel canopy connections

Isokorb® structural thermal breaks for concrete-to-steel canopies contain engineered stainless steel rebar for casting into interior concrete floor slabs, and bolts for fastening to exterior steel balcony structures.



## THERMAL MODELING ANALYSIS – CONCRETE SLAB TO STEEL CANOPY



**LEFT:** Standard uninsulated structural connection. Exterior temperature “seeps through” (yellow).

**RIGHT:** Connection insulated with Isokorb thermal break – **94% improvement in heat retention** at the beam penetration compared to uninsulated connection.

*SOURCE: 2019 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide*



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- Easy-to-access CAD/BIM files and product specs online, ready to go.
- Final drawings stamped and signed by a PEng licensed in the project’s jurisdiction.
- Over 16 million Isokorb installations worldwide in 38 countries.