



## CONCRETE-TO-CONCRETE CONNECTIONS

# Structural Thermal Breaks for Slab Edges.

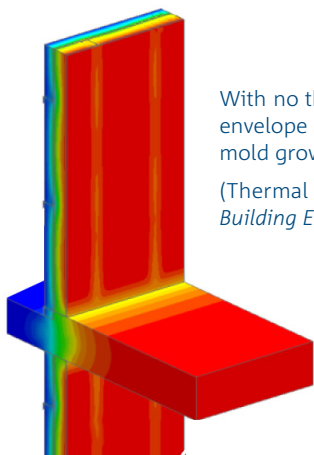
While concrete slabs have been utilized in construction for well over a hundred years, the challenges they present when combined with a modern building envelope have only recently been considered. Left uninsulated, exposed and interior concrete slab edges create an easy pathway for heat transfer, lowering a building envelope's thermal performance and inviting in moisture issues.

With a slab edge temperature considerably lower than that of the heated interior environment, the dew point is reached and condensation forms. Excess moisture can degrade surrounding materials, resulting in costly repairs that will reoccur if the root cause is not addressed.

Moisture also creates an ideal environment for mold growth within wall cavities and on finished interior surfaces, resulting in unhealthy air quality that can cause occupant health problems – a liability and potential legal risk for building owners.

Thermally insulating your building's slab edges with Isokorb® structural thermal breaks can prevent these issues, while reducing heat loss by up to 60%. It is also the most effective way to ensure continuous insulation of the building envelope to meet state or provincial codes, and green certification requirements.

- Prevent condensation and mold formation
- Reduce heat loss at slab edges by up to 60%
- Improve the effective R-value of your building envelope
- 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 slab edge connections, causing moisture damage that can promote mold growth, higher utility bills, and less comfortable interior environments.

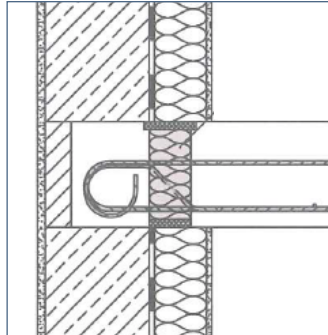
*(Thermal model detail from 2019 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide)*



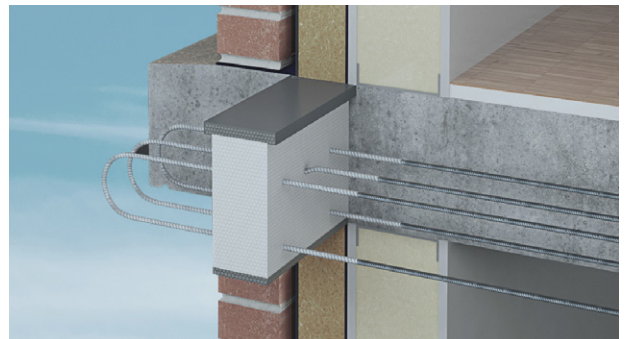
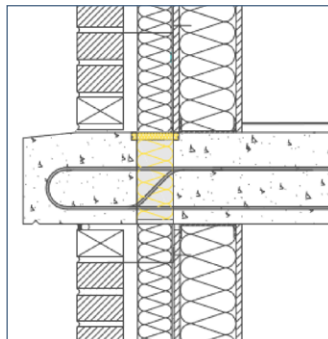
# Insulate exposed slab edges and interior insulated walls with Isokorb® Structural Thermal Breaks.



Isokorb® concrete-to-concrete connections for interior insulated walls



Isokorb® concrete-to-concrete connections for exposed slab edges



The images below show a thermal modeling analysis of a concrete slab with and without a thermal break at an exposed slab edge penetration. When no thermal break is used (left) heat is lost through the slab to the exterior. With an Isokorb® thermal break installed (right) the heat transfer is stopped, its effect is visible as an abrupt change in temperature in the slab at the exterior wall.

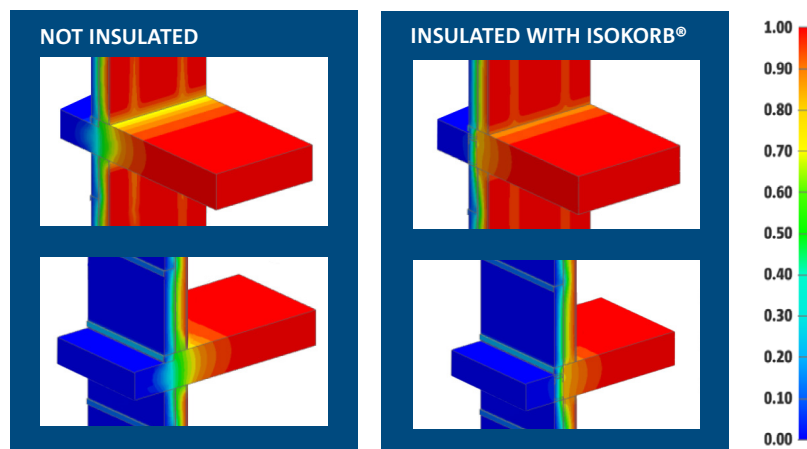
According to the Morrison Hershfield's *Thermal Break Technology for Various Construction Types* report, slab edges insulated with Isokorb® have been found to increase the effective R value of the wall assembly and reduce heat loss by up to 60%, when compared to an uninsulated slab.



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- Final drawings stamped and signed by a PE licensed in the project's jurisdiction.
- Over 16 million Isokorb installations worldwide in 38 countries.