



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

# Structural Thermal Breaks for Balconies.

As structural extensions of interior floor slabs, uninsulated balconies create thermal bridges that decrease building envelope performance. In today's air-tight, higher-humidity buildings, this quickly leads to condensation and potential mould growth that can compromise interior air quality and cause health issues for occupants. Failing to address thermal bridging at balcony connections unnecessarily exposes developers to significant remediation costs and personal injury liability.

Schöck Isokorb® structural thermal breaks work to eliminate this problem by insulating the concrete interior floor slab from the concrete or steel exterior balcony extension, while maintaining the structural integrity of the balcony.

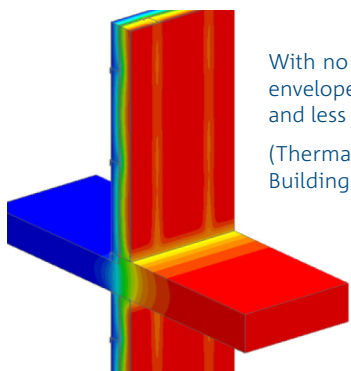
The high-strength assembly cuts heat transfer by up to 90% at the penetration. It also prevents condensation and mould, while increasing occupant comfort. In cold climates, interior floors adjacent to balconies can be up to 19°C/34°F warmer than those built without thermal breaks.

Whether your balconies are cantilevered or column supported, recessed or rounded, concrete or steel, Schöck offers a comprehensive range of structural thermal break products to prevent thermal bridging at your balcony connections.

**Isokorb® concrete-to-concrete connections are ICC-ES approved.**



- Prevent condensation and mould formation
- Improve the effective R-value of your building envelope by up to 50%
- Reduce heat loss at balconies by up to 90%
- Increase warmth of interior floors by up to 19°C/34°F
- 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 balcony connections, causing higher utility bills, less comfortable and less healthy interior environments, and moisture damage.

(Thermal model detail 8.1.12 from 2019 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide)

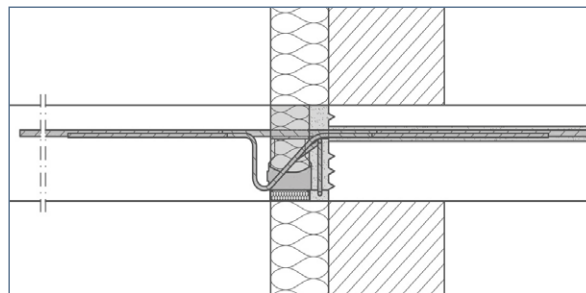


# Insulate your balconies with Isokorb® Structural Thermal Breaks.



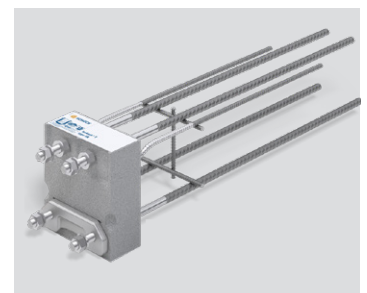
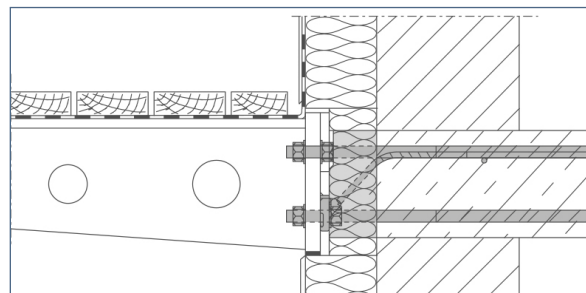
## Concrete-to-concrete balcony connections

Isokorb® thermal breaks for concrete-to-concrete balconies contain engineered stainless steel rebar and compression modules that maximize thermal performance of the assembly, while maintaining structural strength and integrity.

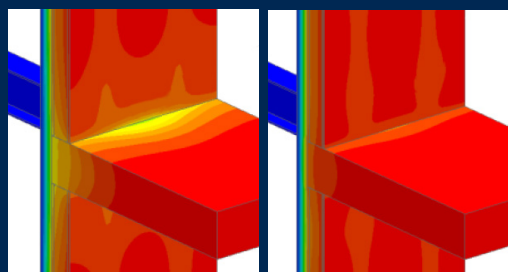


## Concrete-to-steel balcony connections

Isokorb® thermal breaks for concrete-to-steel balcony connections 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 BALCONY



**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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- Our architects and engineers know your world and your challenges.
- 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.