



Structural Thermal Breaks for Balconies.

Reduce heat loss by up to 90% while preventing mold.



- ▶ Reduce heat loss at balconies by up to 90%
- ▶ Reduce heating energy consumption for the overall building by up to 14%
- ▶ Reduce heating system capacity requirements by up to 14%
- ▶ Increase warmth of interior floor by up to 27°F (15°C)
- ▶ Prevent condensation and mold, avoiding costly remediation and liability

As structural extensions of interior floor slabs, conventional balcony slabs conduct heat from warm building interiors into the cold exterior environment like enormous cooling fins, wasting energy and money. In today's air-tight, higher-humidity buildings, chilled interior slabs can quickly form condensation, causing mold growth that can remain hidden on cold surfaces inside the wall, exposing developers to significant remediation and personal injury liability.

Isokorb® structural thermal breaks from Schöck can eliminate this problem by insulating the concrete interior floor slab from the concrete or steel exterior balcony extension, while providing structural support equivalent to that of conventional balconies.

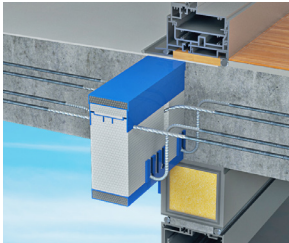
The high-strength assembly cuts heat waste by up to 90% at the penetration, and reduces heating energy consumption for the entire building by up to 14%. Eliminating cold interior slabs also prevents condensation and mold formation, while increasing occupant comfort with interior floors that can be up to 27°F/15°C warmer adjacent to balconies than those built without thermal breaks.

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

Insulate your balconies with Isokorb® Structural Thermal Breaks.

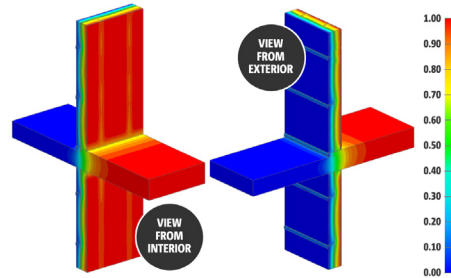


Concrete-to-concrete balcony connections

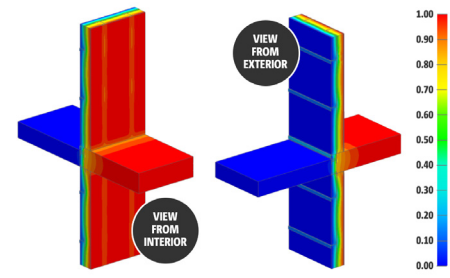


Isokorb® STBs for concrete-to-concrete balcony connections contain engineered components such as stainless steel rebar and compression modules efficiently sized to maximize the thermal performance of the assembly, while providing the strength required to support the balcony.

Uninsulated concrete-to-concrete balcony



Insulated with Isokorb® CM



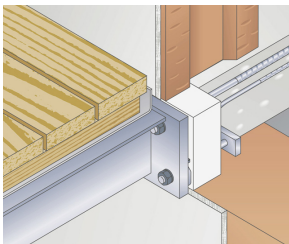
The images above show a thermal modeling analysis¹ of typical concrete balcony details through a steel stud wall assembly with and without an Isokorb thermal break at the balcony penetration. When no thermal break is used (image on left) there is a gradual loss of heat in the slab as it crosses through the

exterior wall. When there is a thermal break (image on right) its effect is visible as an abrupt change in temperature in the slab at the exterior wall. **This assembly comparison resulted in a 64% improvement in heat retention through the slab with the thermal break.**

¹ 2016 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide (details 5.2.7 and 5.2.14)

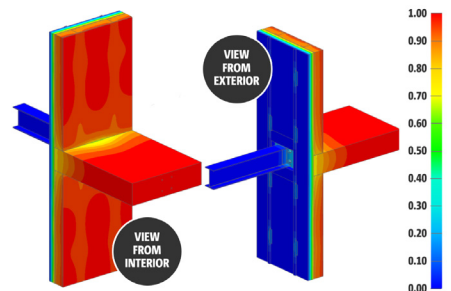


Concrete-to-steel balcony connections

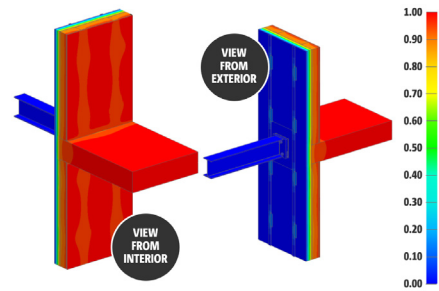


Isokorb® STBs for concrete-to-steel construction contain engineered stainless steel rebar for casting into concrete floor slabs on the interior side, and bolts for fastening to steel balcony structures on the exterior side.

Uninsulated concrete-to-steel penetration



Insulated with Isokorb® KS



The images above show a thermal modeling analysis² of a wall detail with an interior concrete slab connected to an exterior steel balcony support. The comparison assesses the balcony support beam connected with standard uninsulated structural embeds (image on left)

and a balcony support beam connected by the Isokorb concrete-to-steel thermal break (image on right). **This analysis results in a 94% improvement in heat retention in the beam penetration with the thermal break compared to the beam connection with no thermal break.**

² 2016 BC Hydro Power Smart, Building Envelope Thermal Bridging Guide (details 5.7.5 and 5.7.7)

Why work with Schöck North America?

- ▶ **TAILORED SOLUTIONS** Schöck's dedicated engineering team creates solutions specific to your project, every time.
- ▶ **TECHNICAL EXPERTISE** Our RSMs are architects or engineers, so they understand your world and your challenges.
- ▶ **DESIGN AIDS** Schöck provides easy-to-access CAD/BIM files and product specs ready to drop into your design.
- ▶ **PEACE OF MIND** All final drawings signed & sealed by a professional engineer licensed in project's jurisdiction.
- ▶ **PROVEN RELIABILITY** Schöck has completed over 10 million installations worldwide since 1983.

Schöck North America
www.schock-na.com
 Email info@schock-na.com
 Phone 855 572 4625

Schöck USA Inc.
 281 Witherspoon Street
 Suite 110
 Princeton, NJ 08540

Schoeck Canada Inc.
 55 King Street West
 Suite 700
 Kitchener, Ontario N2G 4W1

