Schluter Systems: Canadian Headquarters

THE PROJECT:
Schluter Systems: Canadian Headquarters

ARCHITECT:
NEUF Architects

BUILT BY:
Broccolini Construction

CERTIFICATIONS:
LEED Gold

DATE:
2009

LOCATION:
Sainte-Anne-de-Bellevue, QC

OBJECTIVE

Built to accommodate the growing needs of our Canadian headquarters, the 66,000 sq. ft. facility consists of three storeys of office space, a large training center, a multimedia studio, and a sampling department.

Our goal for this project was to respect the environment established by our neighbors and prove that corporations and nature can co-exist harmoniously by pushing the design limits in building construction. To accomplish this, we joined forces with a multidisciplinary team of architects, engineers, and consultants specialized in green building technologies.

CHALLENGE

Mindful of our environmental impact, we made every effort to limit the use of energy and water utilities and implement measures that ensure the long-term profitability of our facility. We also designed an ergonomic work environment, ensuring each workstation benefits from natural light and outdoor views. Additionally, we installed specialized movable wall systems in closed offices and conference rooms. These systems are held in place by a suction railing system, allowing for easy relocation without damaging the hydronic floors or the building's structure.

The construction of our facility was done on a controlled site that ensured the most environmentally sound methods were used. For example, tires were washed before leaving the site, and all the water used was kept on site, filtered, and then reused. Virtually everything used in the construction of our facility was recycled and remains recyclable.

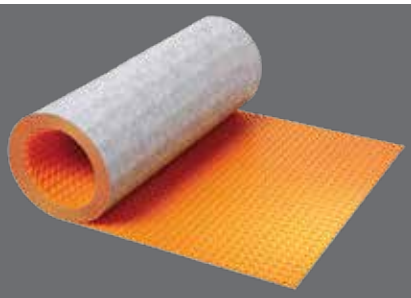
During construction, the ductwork was sealed to prevent dust from accumulating inside the system and circulating around the building. This guaranteed optimal air quality from day one of the building's opening.

One of the most important considerations we took was to make certain that everything from the sealants to the tiles used were contaminant-free, contained no VOCs, and were inspected for off-gassing prior to use.

PRODUCTS USED:

Schluter®-BEKOTEC

Schluter®-DITRA



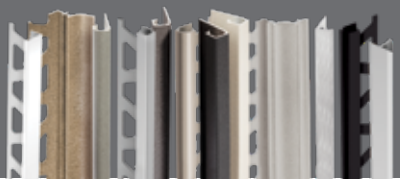
Schluter®-KERDI-DRAIN

Schluter®-KERDI

Schluter®-DITRA-DRAIN
drainage membrane

Schluter®-KERDI-BOARD

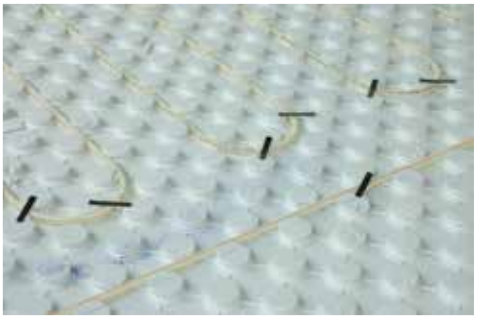
Schluter®-Profiles



Schluter®-KERDI-LINE & KERDI-LINE VARIO

Schluter®-TROBA-LEVEL

SOLUTION

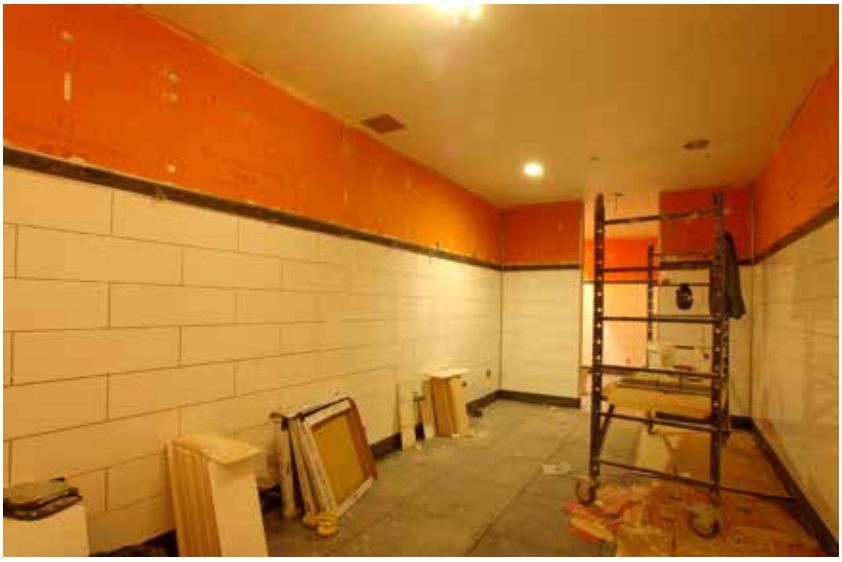


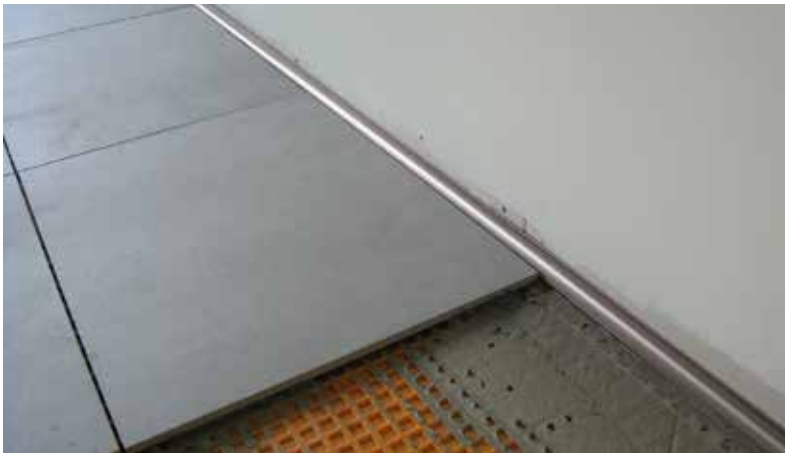
Schluter®-BEKOTEC: The in-floor hydronic radiant heating system reacts very quickly to changes in temperature and consumes much less energy than traditional systems. Tile's low thermal resistance combined with BEKOTEC enhances heating and cooling efficiency. Since the screed mass to be heated is relatively small, the floor heating can be well regulated and operated at a low temperature range. As the pipes are positioned close to the floor's surface, the reaction time is eight times faster than a traditional hydronic system. We used this system throughout the facility—under the tile in office spaces, as well as beneath the concrete slabs in the warehouse.

Schluter®-DITRA: The use of DITRA creates a more uniform delivery of heating and cooling from the in-floor hydronic system and reduces the "striping" effect. Additionally, using DITRA allowed us to reposition the movement joint profiles within the tile assembly, ensuring a design-forward layout on the floor while continuing to accommodate expansion and contraction of the tile covering. This also enabled us to install the profiles to full tiles rather than having to insert them into cut tiles. During construction, we prioritized tiling the hallways connecting the warehouse to the atrium, where heavy equipment such as pallet jacks and forklifts transported materials daily. This area handled constant traffic and is testament to the durability of our tile installation.

Schluter®-KERDI-BOARD was used to build many parts of the building; sinks and countertops, partition walls, and the reception desk, among other things. We also installed KERDI-BOARD on every tiled wall.

In all our bathrooms, we used **KERDI-BOARD** to build the countertops in conjunction with either **KERDI-DRAIN**, **KERDI-LINE**, or **KERDI-LINE-VARIO** in the sinks. We ensured comprehensive waterproofing by applying KERDI membrane, bands, and corners to the sink areas. The bathroom floors were similarly waterproofed using DITRA in conjunction with KERDI-DRAIN and **KERDI-BAND**.





The building facade consists of 450 panels, each weighing 80 pounds. Every panel is constructed using **Schluter®-DITRA-DRAIN** drainage membrane for external applications and granite tiles. We utilized various types of thin-set mortar for the installation, seizing the opportunity to test different mortars and observe their performance in the environment. Each panel was assembled indoors and numbered for tracking, allowing us to identify which thin-set was used for each one.

Lastly, we used our **TROBA-LEVEL** pedestal system for our roof top terrace. The elevated assembly provides easy access to the substrate, as well as drainage and ventilation. Due to the open joints between the tiles and pavers, surface water can freely drain on to the substrate and into the drainage system beneath.

Throughout the project, we utilized a range of our specialized profiles including **DILEX** profiles for managing movement and perimeter joints, **DESIGNLINE** for enhancing design elements, and **RENO-RAMP** and **ECK-K** in our high-traffic warehouse areas. We ensured our own products played a pivotal role in every aspect of the build.

RESULT

The construction of our Canadian headquarters was an engaging R&D initiative that surpassed our expectations. It serves as a prime example of how traditional building practices evolve over time. Initially not aiming for certification, as the building's design unfolded, we recognized its alignment with LEED® standards and opted to pursue certification.

With over 75,000 sq. ft. of tiled surfaces inside and out, our Canadian headquarters highlights ceramic tile's alignment with green building practices. It produces no VOC emissions, minimizes dust retention, and facilitates easy cleaning, promoting better indoor air quality. Utilizing tile as a key component in the building's heating and cooling delivery system improves the return on investment and optimizes system efficiency. Additionally, a multitude of other environmentally conscious and energy efficient elements such as a white roofing membrane, solar heated fresh air and water, a green wall, and a rainwater retention chamber were incorporated to ensure long-term sustainability and profitability. As a result, our building consumes approximately 70% less energy than a comparable conventionally-constructed building.