



# The PROFILE

Schluter®-Systems newsletter providing you with information on new products, and the latest news from the tile world!



## New Canadian headquarters

State-of-the-art facility uses a thermal hybrid system and a multitude of sensible and sustainable technologies to maximize energy efficiency.

Located in Ste-Anne-de-Bellevue, Québec (west of Montreal), in a natural setting facing the Ecomuseum and near McGill University's Faculty of Agriculture, our new facility was built to accommodate the growing needs of our Canadian headquarters. The 60,000 sq. ft. facility consists of 3-storays 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.

A multitude of environmentally conscious, and energy efficient elements such as; a geothermal heating and cooling system, radiant flooring, solar fresh air and hot water heating systems, and a

rainwater retention chamber, were incorporated to ensure long-term profitability. As a result, our building will consume approximately 70% less energy than a comparable conventional building.

Individually, the systems incorporated throughout our new Canadian headquarters are impressive, but what is truly unique is the way in which they interact with each other.

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## LEED® certification

LEED® (Leadership in Energy and Environmental Design) is a green building rating system based on a set of standards for the environmentally sustainable design, construction and operation of buildings. Though we had not made a conscious effort to achieve certification, as the design of the building progressed, we realized that it was consistent with LEED® standards, and therefore decided to apply for certification.

Thanks to the energy efficiency achieved, and the various commonsense green practices implemented, we expect the new facility will obtain LEED® Gold certification.

## The importance of tile

With over 65,000 square feet of interior and exterior tiled surfaces, our Canadian headquarters is an excellent example of how ceramic tile applications are consistent with green building practices. In fact, using tile as a delivery system improves the return on investment, and enables sophisticated systems to function at their most efficient level.

Ceramic tile produces no VOC emissions, does not harbor dust, and is easy to clean, thus contributing to improved indoor air quality. Efficiency of the heating and cooling system is dependent upon the low thermal resistance of tile coverings in combination with the modular screed assembly.

## Geothermal technology for energy efficiency

One hundred percent of the building's energy is generated by the nineteen geothermal wells dug in the ground. This system transfers energy to and from the earth and the building via the water in the hydronic system. Thus, the earth is used as a heat source during winter and a heat sink during summer. This process is more efficient than conventional heating methods because the temperature of the earth is warmer than the outside air during the winter months and cooler than the outside air throughout the summer.

A similar principle was applied where a 200-ft long, 3-ft diameter earth heat exchanger or "Canadian tunnel" was excavated behind the facility for the purposes of air exchange. Air temperature in the Canadian tunnel remains consistently warmer than the outside air during winter and cooler than the outside air during summer, thus reducing the amount of work required of the heating and cooling systems to maintain comfortable indoor temperatures.

## Thermal hybrid system for optimum heating/cooling performance

Schluter®-BEKOTEC in-floor hydronic radiant heating system reacts very quickly to changes in temperature, and consumes much less energy than traditional systems. Since the screed mass to be heated is relatively small, the floor heating can be well regulated and operated at a low temperature range.

The concrete slab coupled with the radiant floor system in the warehouse area is used as thermal storage to reduce the peak demand in heating and cooling. This hybrid approach allows us to further optimize the size and control of the energy systems.

## Exterior elements to regulate temperatures

Solar rooftop panels heat the water used throughout our building, while a solar air heating panel heats up the fresh air supplied during the winter. Our white roof reflects the sun's rays, reducing the heat absorbed by our building, thereby keeping the temperature low during the summer.



## Lighting to allow for the most ergonomic and energy-efficient work environment

Our building is equipped with a combination of direct and indirect lighting. Indirect lighting decreases glare on computer screens, and creates a soft environment conducive to concentrated work. Automated lighting throughout the building is programmed to activate only as needed, and all exterior lights are on timers.

Exterior LED lights provide soft lighting that is not directed towards the sky. We use these lights to conserve energy, and as a courtesy to our neighbors.

High performance skylights redirect the maximum amount of natural light inside the warehouse and workshops, and all offices and workstations are situated along the windows of the building so our employees benefit from the natural light of day. This significantly reduces the need for artificial light, and the demand for electricity.

## Energy savings

Traditional office buildings in Montreal's West Island that are similar to our facility in size and use typically have total energy consumption costs between \$3.75 and \$4.00 per square foot. Based on current data, our new facility is projected to consume energy at a rate of approximately \$1.10 to \$1.20 per square foot. Thus, integration of the geothermal heat pumps, modular screed, and ceramic tile covering has produced approximately 70% in energy savings over conventional heating systems.

## Constant circulation of fresh air

20 cubic feet per minute (CFM) of fresh air per person enters each area of the building (the minimum requirement is 5 CFM). A CO2 detector automatically makes adjustments to maintain our setting of 650 ppm.

## Living wall

Our Indoor living wall was designed to improve air quality by absorbing carbon dioxide (CO2), adding oxygen (O2) and filtering volatile organic compounds (VOCs) from the air. It also acts as a natural humidifier.

## Rainwater retention chamber to reduce water consumption

A rainwater retention chamber supplies water to the toilets, and our men's washrooms are equipped with waterless urinals, which allow for a huge reduction in overall water usage (approximately 2/3 less than average). In addition, grey water recuperated from the washroom sinks is redirected to the living wall as nourishment for the plants.

## Ecological from start to finish

The construction of our facility was done on a controlled site that ensured the most environmentally sound methods were used. For example, trucks 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 sealants to tiles - used in the construction of our facility were contaminant-free, contained no VOCs, and were inspected for off gassing prior to use.



## Long-term vision

Conscious of our impact on the environment, 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. At the same time, we took into consideration the well being of our employees by designing an ergonomic work environment in which every workstation benefits from natural light, and a view of the outdoors.

The construction of our Canadian headquarters was a hands-on R&D project that produced an end result above and beyond our expectations. It is a perfect example of how conventional building methods continue to evolve over the years, and how tile and stone are key elements in the successful implementation of sustainable systems that maximize energy efficiency, and ensure long-term profitability.

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*It will be our pleasure to offer you a tour of our new facility. Please contact us to schedule a visit.*

## NEW PRODUCT

# Schluter®-KERDI-BOARD

Substrate, building panel, bonded waterproofing.

Whether you specify mosaics or large-format tiles, an absolutely flat, level, plumb, square substrate is essential for creating a perfect tile covering.

KERDI-BOARD covers a broad range of application areas for the installation of ceramic and natural stone tiles, and is suitable for use on any kind of structure.

## Showers and bathtub platforms

Many of the materials traditionally used to build bathtub platforms are moisture-sensitive and require additional prep work prior to setting tile. KERDI-BOARD is waterproof and vapor retardant, making it ideal for use in bonded waterproofing assemblies such as tiled showers and bathtub platforms.

## Partition walls

Constructing partition walls of masonry blocks or stud frames with sheathing is time consuming, and further prep work is often required before tiling can begin. KERDI-BOARD allows you to build stable and self-supporting partition walls that are ready for tile installation.

## Vanities and shelving

Using KERDI-BOARD as a building panel makes it possible to quickly and easily build the vanity structure with the requirements of the tile covering in mind.

## Countertops

KERDI-BOARD's waterproof, and dimensionally stable properties make it ideal for use in countertop applications, and it can be adhered directly to base cabinets.



## Pipe coverings

The innovative, prefabricated angle and U-shaped components of KERDI-BOARD make it especially easy to conceal pipes and duct work. Shipped flat for easy storage, these panels feature an adhesive strip inside the V-groove.

## Rounded and curved designs

KERDI-BOARD-V features vertical grooves that allow the panel to be curved for creative designs of support structures, columns, or any curved design that you plan to tile.

## Properties of KERDI-BOARD

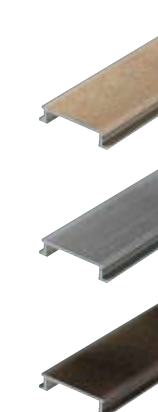
- Even, impact-resistant, and rigid
- Waterproof and vapor retardant
- Dimensionally stable
- Thermally insulating
- Lightweight (contains no cement or fiberglass)
- Dust-free and easy to cut with a utility knife
- Printed gridlines for precise cutting
- Suitable for use on any kind of structure
- Available in a variety of thicknesses (3/16", 3/8", 1/2", 3/4", 1", 1-1/2", and 2")

Visit [www.kerdi-board.com](http://www.kerdi-board.com) for more information.

## NEW FINISH



A new line of profile finishes, Tuscan Inspirations offer the perfect complement to ceramic and stone tile, with warm, soothing earth tones, and unique textures inspired by nature.



- < Tuscan Beige  
Blends with neutral tile to create a subtle finish.
- < Tuscan Pewter  
Ideal for use as an accent in both modern, and rustic designs.
- < Tuscan Bronze  
The perfect complement to oil-rubbed bronze fixtures.

The colors and texture of these unique finishes are achieved through the fusing of solid metal particles, followed by two seal coats for excellent durability.

Whether you prefer a profile that blends with your tile, accents your tile, or matches plumbing fixtures and hardware, you're sure to find a Tuscan Inspirations finish that fits your design.



Coming in 2011...

## Schluter®-KERDI-LINE

An elegant, low-profile alternative to traditional shower drains.

**KERDI-LINE is an elegant, low-profile line drain available in a number of configurations to suit various applications. Designed with the needs of tile installers in mind, KERDI-LINE is versatile and easy to install.**

### Drain frame/grate combination

- Features an adjustable grate frame in the elegant QUADEC design to accommodate a range of tile thicknesses from 1/8" to 1-1/8" nom. (2 frame heights)
- Available in eight grate lengths ranging from 20" to 48" nom.
- Three attractive interchangeable grate designs:
  - » Solid brushed stainless steel with side drainage
  - » Traditional design with square grate openings
  - » Inverted design for tile installation
- Suitable for wheelchair-accessible showers

### Drain flanges

- Integrated bonding flange provides for a secure connection to Schluter®-KERDI and other bonded waterproof membranes
- Two flange designs:
  - » Wall-adjacent placement
  - » Center placement
- 16-gauge stainless steel
- No-hub connection for easy connection to waste line
- Eight sizes to accommodate the respective drain grates

## Remembering

# Jim Carlin

By: Bryant Bouchard

Jim Carlin was a very highly respected individual in the tile industry. To those of us at Schluter®-Systems who had the opportunity to know him, he was also a customer, a colleague, and a friend. Jim lost his battle against cancer earlier this year.

I met Jim for the first time in 1999 at Coverings in Orlando, when he came to our booth to find out who covered Maine. After we spoke, Jim said, "Next time you're in Maine give me a call." Over the years, I would call Jim whenever I would be traveling to Maine, and he would invite me to see his latest project - he was always anxious to show off his latest tile installation.

In 2003, Jim installed some of the tile in our new office building in Plattsburgh. That same year, Jim helped a number of Schluter® employees with their home construction projects. When Tom Meehan wrote his article for Fine Homebuilding in September 2005, Jim was there to help install the DITRA. Tom's article made the cover of that edition, and I believe there's a picture within the article showing Jim installing the DITRA.

Jim was always there to help installers learn more about Schluter® products, tools, and good tile setting practices. He attended our Innovation Workshop classes three times. He also became the Northeast regional director for the National Tile Contractors Association.

As an installer, Jim was better than most, especially when it came to using technology to help his business. Plus, he always had a great attitude. One retailer told me, "When Jim was around, people wanted to see, or hear what he was doing, and to be a part of it." He was infectious!

Even though Jim was my customer he had become one of my best friends. Whenever I go to Maine I think of him. We are all going to miss him.

