

Building Innovative Solutions

"We are sincerely proud of our new administrative facility. The integration of cutting-edge technology allowed us to design a building in the harsh northeast climate that not only contains exclusively tiled surfaces, but also utilizes an alternative energy source that does not require fossil fuels, or produce any harmful emissions. I extend an open invitation to anyone who would like to tour our facility and learn more about the potential that this environmentally-friendly technology represents for both commercial and residential construction."

-Reinhard Plank, President
Schlüter Systems LP

In 2001, it was determined that the US subsidiary required physical expansion in the form of a new administrative facility. Of course, it isn't surprising that the new office building was designed to include exclusively tiled floors. Nor is it surprising that the new building incorporated Schlüter®-Systems installation technology as a means to promote the concept that tile can be installed on virtually any surface.

The surprising fact is that the building, in all of its state-of-the-art and decorative splendor, is also the embodiment of functional and energy efficiency.

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Structural Design

The initial intention was to build a structure that was consistent with the local building design. However, as other international Schlüter®-Systems subsidiaries would also soon require new facilities to accommodate expansion, a uniform worldwide appearance was implemented.

The design of the new building was based on the success that Schlüter®-Systems' main office in Germany had experienced with multi-story buildings that included a common core area for utilities. The resulting structure represents a model for the other subsidiaries. The new Plattsburgh, New York office is a three-story building that is designed to receive mirror images of itself on either side for future expansion.

Conveniently, the building's interior core area is



reserved for utilities, including computer servers, communications hardware and mechanical elements related to the heating and cooling system. The building contains the most state-of-the-art computer and communications technology available, with accommodations for future enhancements. This design allowed the use of the entire outside wall/windowed area for office space.

Interior design - office furnishings

The ample office space represents the ideal combination of design efficiency and flexibility. The objective was to create the most ergonomic, uniform and streamlined working environment possible.

The interior walls, which consist of a metal-finish laminate, also incorporate sound insulation. Every interior wall is moveable, allowing inevitable floor plan changes to occur overnight without disturbing or creating any inconvenience to the employees. These office walls also serve as storage units, eliminating the need for additional



furniture, such as file cabinets.

The indirect lights provide a glare-free environment, and motion detectors are used wherever possible to maximize energy-efficiency.

Corporate Identity

Both inside and out, it is obvious that this is a Schlüter®-Systems facility. The majority of the profiles incorporated in the building's design are stainless steel, including Schlüter®-TREP-E, -DILEX-EHK, -RONDEC, -DESIGNLINE and -DECO to create a hygienic, stylish and highly durable finished surface.

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In addition to the visible Schlüter®-Systems profiles, corporate identity is inconspicuously scattered throughout the design. The trapezoid pattern is found everywhere; in the glass canopy over the entrance and the roofline, the lights in the bathroom mirrors, and of course, the etched windows. Even the landscaping includes orange trapezoid-shaped flowerbeds!

Tile Installers from all over North America

In an effort to showcase the possible tile consumption that such a facility can represent, interior tile applications include all of the floors, complete with tile baseboards, kitchenette and bathroom countertops, two stairways, the elevator, the windowsills and of course, all of the bathroom surfaces.



▲ Left: Geothermal Drill Right: Geothermal water tubes

In all, the building contains over 17,000 square feet of interior and exterior tiled surfaces. To complete these installations, a revolving team of highly skilled installation experts from all over North America took turns completing the variety of tile applications found throughout the building. These installers included a number of our valued customers as well as our own employees.

This "dream team" of experts also installed 17,000 square feet of BEKOTEC, and DITRA, along with approximately 8000 linear feet of edge protection, cove

base, countertop and stair nosing profiles, not to mention the required DILEX movement joints, KERDI and KERDI-BAND waterproofing membranes to result in a highly functional, durable and elegant combination of tile and metal finishes.

Alternative energy

Consistent with the innovative approach that Schlüter®-Systems applies to any endeavor, the new building also provided an opportunity to incorporate an alternative and efficient energy source. Schlüter®-Systems teamed up with Geothermix Inc, a Montreal based company, integrating geothermal technology combining state of the art equipment and a scientific approach unique to Geothermix's geothermal system design into commercial and industrial project development as a

result, the new building utilizes geothermal energy for heating and cooling.

Geothermal technology uses renewable energy to heat or cool a building and its water supply. The general concept of geothermal heating is based on the fact that the earth remains a fairly consistent temperature below the ground (generally 45°-50° F) as compared to extreme fluctuations in air temperatures. Because it uses the earth's temperature, rather than fossil fuels, this system does not produce any harmful emissions.

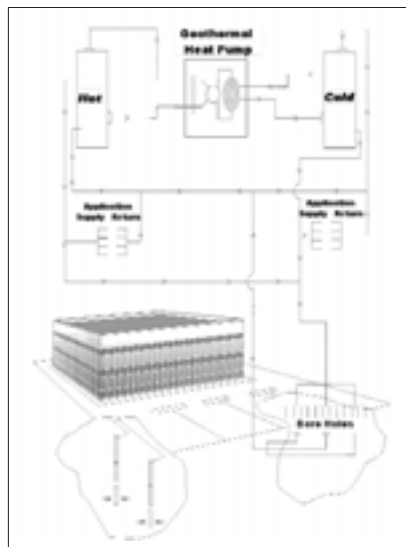
The geothermal heat pump system works by bringing heat from a ground source to a building through tubes connected in a closed loop. The tubes are buried under the earth's surface where the temperature is consistent year round. The heat is transferred through the building's delivery system, in this case; radiant tubes. Likewise, in the summer, heat is removed from the building. As a side benefit, this excess heat also provides free hot water for the lavatory sinks in the summer. Both environmentally responsible and efficient, this alternative system was ideal for many reasons, including the intended use of radiant heated floors.

Radiant Heat Interior

Radiant heat is arguably the most highly efficient heating method in existence. Flooring assemblies with integrated radiant heat provide the most comfort; the most energy efficiency and a healthier environment than can be achieved with forced air systems.



▲ Left: Geothermal Drill Right: Geothermal water tubes



▲ Left: Geothermal Drill Right: Geothermal water tubes

In the harsh northern New York climate, temperatures can fluctuate conservatively from +80° F in the summer to -20° F in the winter. In order to effectively heat and cool this building using geothermal heat efficiently, a complete system that required a low temperature range would have to be incorporated. The Schlüter®-BEKOTEC modular screed system is the only solution that exists to achieve this unique balance.

The BEKOTEC Modular Screed System is comprised of lightweight studded polystyrene panels. The interior floor assemblies in the new building included two layers of foam underneath the BEKOTEC in order to achieve the appropriate heat and sound insulation values. Radiant heating tubes were installed between the studs on top of the panels without clamps or fasteners. Once the tubes were installed, a thermal mass to be heated was applied, filling in the voids between the studs and the radiant tubes to the top of the studs of the BEKOTEC. The thermal mass used for the interior floor assemblies was a gypsum-based screed, which was poured on all three floors in less than one day. Once the screed could

Once the screed could be walked upon, Schluter-DITRA uncoupling membrane was installed, and tile setting began.

With this system, the thermal mass is fairly small, and the tubes are very close to the surface of the tiled covering. Because of this, precise control of the room temperature at lower water temperatures is possible. In fact, the BEKOTEC system only requires that the water in the heating tubes reach 85° F, significantly reducing energy consumption.

Radiant Heat Exterior

The complete systems approach to the design included tiled sidewalks leading to the building. In this climate, however, an exterior tile installation is subjected to an annual freeze-thaw cycle. Therefore, the installation of tiled sidewalks required the integration of a snow melt system.

The exterior installation also incorporated the BEKOTEC Modular Screed System. The exterior application required additional surface preparation in the form of layers of crushed stone. When the stone was rolled and leveled, two layers of insulation were added, and then the BEKOTEC panels were installed. A mortar bed was used as a thermal mass. Schlüter-DITRA uncoupling membrane was installed using dry-set mortar, and Schlüter-KERDI-BAND was used to waterproof the seams of the DITRA. The sidewalk was completed with 12" x 12" porcelain tiles that matched the interior field tiles. Where the sidewalk abutted a curb or flowerbed, Schlüter-RONDEC-STEP or -SCHIENE was installed to provide edge protection. The result is a beautiful and functional walkway that welcomes visitors as they enter the new facility.

The completed building is much more than a striking display of innovative tile installations. Serving as an

accurate representation of the overall philosophies for which Schlüter-Systems stands, it is a model of function, design and energy-efficiency.



▲ Schlüter®-BEKOTEC, exterior application.



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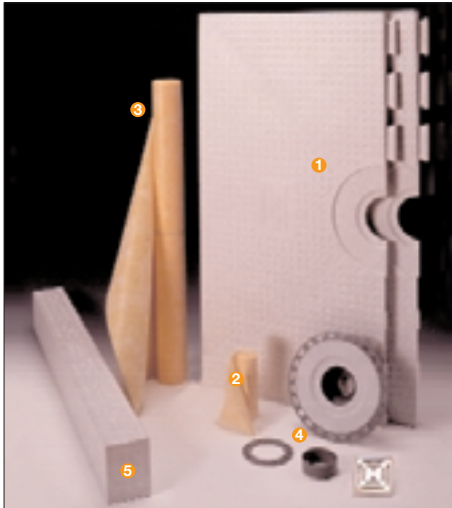
(AIA logo here) Schlüter-Systems provides on-site seminars, included AIA-accredited presentations regarding all of our innovative installation systems, including the BEKOTEC Modular Screed System.

To schedule a seminar at your location, please contact the main office at 800-472-4588 ext. 148, or request information via email at

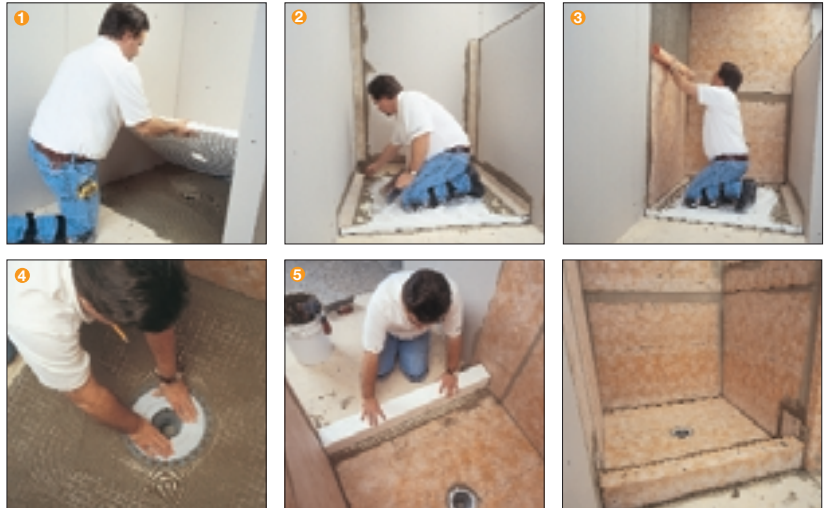
For more information on the goethermal heating please contact Geothermix at (514) 351-3324, or view their website at www.geothermix.com.

Please fax to:
In the US, 1-800-477-9783
In Canada, 1-514-336-2410

Schlüter® Shower System Kit Available



▲ Schlüter®-KERDI Shower Kit



With the introduction of the new Schlüter®-KERDI-ST tray and -SC curb, the installation of a watertight shower is easier than ever. Now, the Schlüter® Shower System is easy to order as well.

The Schlüter® Shower System is an integrated family of components that provides seamless and reliable waterproofing. Everything the installer requires to create a maintenance free, watertight shower assembly is now available in one all-inclusive kit. The new kit includes:

- ① Schlüter-KERDI-ST tray
- ② Schlüter-KERDI-BAND (waterproofing strip)
- ③ Schlüter-KERDI - 100 (waterproofing membrane)
- ④ Schlüter-KERDI-DRAIN
- ⑤ Schlüter-KERDI-SC curb

Also includes a step-by-step installation CD-ROM

The Schlüter® Shower System eliminates the risk of failures due to both vapor and water penetration, is maintenance-free, and dramatically reduces total installation time, ensuring success and making shower installation easier than ever.

New Grate Finishes Provide Design Flexibility



▲ Left: Brushed Brass Middle: Brushed Nickel Right: Brushed Copper/Bronze

One of the most practical elements of the innovative Schlüter-KERDI-DRAIN now provides a variety of design alternatives as well. The fully adjustable square drain grate is currently available in four popular finishes, allowing the installer to match adjacent fixtures and/or color schemes. The original stainless steel grate is now joined by brushed brass, brushed nickel and brushed copper/bronze anodized aluminum finishes. It is now possible to specify the required grate finish as well as either the PVC or ABS bonding flange when ordering the KERDI-DRAIN.

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