Even an Indoor Pool and Steam Shower Can't Fog Up These Windows

Problem: Indoor pool and steam shower are fogging up windows and ruining the view

Solution: Windows with Thermique™ heated glass

In the mountains of Durango, Colorado, temperatures remain well below freezing for days or weeks on end. Home builders know that windows create serious condensation problems in these conditions, especially in high humidity areas of the home such as bathrooms and indoor pools.

Gary Truax served as construction manager for the remodeling of a luxury ranch in the Durango area. The homeowner challenged him to find a solution to the steamed-up windows surrounding his indoor pool.

"Those rooms are famous for getting riddled with condensation," said Truax. "Right off the bat, I thought Thermique™ heated glass would be a perfect fit."

Windows with Thermique heated glass function as transparent radiators, providing warmth to the home. In addition, they offer complete condensation control in any indoor environment. Architects are free to design with as much window space as they can imagine without any of the drawbacks associated with cold glass.

The architect's design called for one wall of the indoor pool room to consist almost entirely of glass, with four floor-to-ceiling windows overlooking the mountains. A fifth floor-to-ceiling window is located on an adjacent wall. Thermique is able to manufacture heated glass in sizes up to 72″ by 84″ (42 ft.^{2}) so there was no need to alter the architect's vision in order to incorporate Thermique heated glass.

After hearing about the benefits of warm windows in the pool room, the homeowner requested that they be installed in the master bath as well. This room features a large exterior-facing window inside a steam shower area where condensation was certain to be a problem without Thermique heated glass.

Clear Success

The homeowner reports that he and his wife use the steam shower daily and the indoor pool twice a week. When the Thermique heated glass is turned on, condensation is never a problem. However, if the pool remains uncovered while the windows are turned off, a thick layer of

moisture will cover the glass in the pool room. When this occurs, the homeowner simply turns on the heated glass to clear the windows of condensation before covering the pool again.

In the bathroom, the steam shower is separated from the rest of the room by an unheated glass partition. The homeowner and his wife must regularly squeegee the glass to ensure it does not streak or develop mildew and other mold problems. The heated windows do not require any maintenance to remain clear and dry.

"My wife is able to take showers and see outside to the mountains and enjoy the warmth," said the homeowner. "The window has been completely clear. There hasn't been a drop of water on it."

Simple Installation

Unlike standard windows, Thermique heated glass requires a licensed electrician during installation. However, Truax reports that the installation procedures remain simple and straightforward. "When you have a product like this, it's almost like a day off because it's self-explanatory," he said.

"The information is easy to understand because it's very basic," he continued. "That made it easy. No new skills are required to complete installation. Everything went smoothly from start to finish."

Once the heated windows were in place, construction crews were happy to enjoy them. The pool room became a popular place for lunches and breaks because of the warmth radiating from the glass.

"Everyone appreciated it and the magic of it," said Truax.

Additional Benefits

The architect designed the indoor pool room with windows that reach the floor so swimmers can see outside while they are in the water. "That was a top priority for the homeowner, that you would always be able to see the view," recalled Truax.

But condensation control is not the only benefit. Swimmers coming out of the pool feel no chill from the windows. They are able to dry off in complete comfort.

"I'm still caught by surprise to pass by the windows and feel the warmth. I've been trained by experience to expect to feel cold by a window," said Truax.

Energy efficiency is another benefit. Thermique heated glass is designed to radiate warmth in one direction only, towards the home's interior, so heat energy is not wasted. The exterior pane of a heated window unit is not appreciably warmer than a standard window pane, even when the interior pane is at full heat. This fact often surprises people who have never witnessed Thermique heated glass in action.

"What impressed me was that the cold side stays cold," said the homeowner.

Meanwhile, the warm side of the glass has proven its effectiveness in extreme winter conditions outside the home. Durango has experienced temperatures as low as -20º F (-29º F), and

the heated windows maintained their temperature and comfort. In fact, the radiant heating is so effective that the homeowner has never even used the highest setting.

Adding to the energy efficiency of the windows is the reduced reliance on traditional heating. “Between the heated pool and the warm glass, there’s no need for any other source of heat in the room,” said the homeowner.

Since the home’s HVAC system does not have to heat this room (which is both large enough for an indoor pool and has considerable window space), the homeowner is able to significantly reduce the energy that would be used for traditional heating. In many home designs, reductions in energy use by the HVAC system will exceed the power required to heat the windows, resulting in an overall reduction in utility bills.

Another Satisfied Customer

Both builder and homeowner report complete satisfaction with Thermique heated glass. “It’s great to work on a project where the glass has not done anything but perform as promised,” said Truax. “It takes the whole call-back consideration away from us.”

“Yes, I’m very pleased. The windows perform as well or better than I expected,” said the homeowner. “No problems, none whatsoever—and I’d be the first to complain if something wasn’t working.”

“He’s a person that pays attention to detail, and he’d let us know,” agreed Truax with a smile.

Additional Information

Thermique technology transforms an ordinary pane of glass into an extraordinary heating device. The glass itself radiates heat uniformly and with precise control. Yet, the glass remains perfectly transparent, without any distortion or discoloration.

To accomplish this revolutionary feat, a transparent coating is bonded to the glass during the manufacturing process. The coating generates heat when subjected to an electrical current. The current is supplied by two buss bars located on opposite sides of the glass.

Standard electrical wiring connects the buss bars to a patented Thermique controller. The controller is typically mounted on a wall like a light switch. Glass temperature is easily adjusted by increasing or decreasing the controller’s power setting.

Thermique heated glass and controllers are designed and manufactured exclusively by Thermique Technologies in Chicago, Illinois. All electrical components are UL® approved. The heated window units at the ranch home were manufactured and installed by Colorado Warm Windows of Aspen, Colorado.

About Thermique Technologies

Combining more than 60 years of experience with cutting-edge expertise, Thermique Technologies, LLC, is today’s premier developer of heated glass technology. Thermique heated glass is utilized in heated windows, glass towel warmers, and heated food service cabinets. Headquartered in Chicago, Ill., Thermique Technologies is a wholly owned subsidiary of Engineered Glass Products (EGP). For more information, visit www.thermiquetech.com.