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GREEN HOMES NORTH - MINNEAPOLIS, MN

Residential Windows and Doors

Project Profile



REHAU GENE0 Windows Make It Into Couple's First-Date Conversation

Some couples pick out rings for each other when a relationship gets serious. Minneapolis residents Kitty Stratton and Gary Schollmeier picked out windows – energy-efficient GENE0 windows from REHAU to be precise. That's not surprising given the fact the conversation on the couple's first date after meeting online focused on their mutual interest in forward-thinking architectural concepts such as frost-protected shallow foundations and the benefits of straw bale homes.

When the opportunity arose for Schollmeier, a retired machinist, to purchase a newly built home in 2015 through the city's Green Homes North initiative, Kitty knew immediately it should have the German-designed GENE0 windows. "I found out about these windows when I was in grad school two years before," she explains. Stratton earned a master's degree in architecture from the University of Nevada Las Vegas. Her design thesis was on affordable, net-zero home options that could be implemented by 85% of the world's population.

The Green Homes North initiative is subsidized new home construction that is aimed at revitalizing North Minneapolis neighborhoods. Under rules of the program, the homes are constructed to the Minnesota Green Communities Standards for their high-efficiency mechanical systems, Energy Star appliances and lighting and durable exterior construction. Green Homes North sets a high bar; Stratton and Schollmeier set a higher one.

GENE0 – a window system manufactured from high-tech RAU-FIPRO™ material – was her window of choice. With a 3 3/8 in (86 mm) frame depth, multiple chambers and triple-pane insulating glass, GENE0 can aid in achieving building energy targets as stringent as those required by the German Passivhaus standard while providing maximum security.

Net-zero homes, which generate more energy in a year than they use, are riding a wave of popularity in the US. However, they are generally viewed as expensive to build due to the cost of roof-top solar panels, energy-efficient windows and doors and higher-end appliances. Stratton and Schollmeier knew there were plenty of workarounds, however, to put this house in the "affordable" category. "I like finding the perfect thing for the least amount of money," says Stratton, who became the net-zero energy consultant for Schollmeier's home. Free heat from the sun proved to be a great place to start. The home's windows on the east, west and north are triple glazed and have a U-factor of 0.15. The ample windows on the south side are double glazed to maximize the heat gain from the sun (SHGC 0.66).

There is a small gas stove in the living room and a ductless mini-split heat pump that the couple says was only installed to meet Minneapolis code. Electric baseboard heat in the bedrooms also was installed merely to meet requirements and is never turned on.

The results speak for themselves. Schollmeier moved into the 940 ft² (87.3 m²) home shortly before Christmas 2015. The bill for gas usage (heat) in January (remember, this is Minnesota) was \$9. "We pay more for fees on our gas bill than we pay for gas," Schollmeier says. "There were some days in the winter we had to open a window because they brought in too much heat."

Besides the windows' impressive efficiency, Stratton says she loves the European tilt-turn design and their durability. "When you shut them, it's like you create a vacuum."

Early in their relationship, Stratton envisioned Schollmeier building her a straw bale house, which is an architectural technique noted for its energy efficiency and environmental responsibility. Instead, she ended up moving into Schollmeier's home in January where they hope to enjoy many more cozy winters together.



Project: Green Homes North, Minneapolis, Minnesota
Type of Construction: Residential net-zero new construction
Manufacturer: WASCO Windows
Scope of Project: 14 windows
REHAU Systems Used: GENE0 windows and doors

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