



Converting A Single-Family Home Into A Triplex With Zuba Central For Cold Climates

MOLSON TRIPLEX

Case Study 

Molson Triplex Case Study

The Challenge

Cities across Canada are striving to increase housing supply as populations increase and demand soars. A major gap in most urban markets is the “missing middle,” which strikes a balance between densely packed high-rises and single-family homes. Creating energy-efficient homes that fulfill this niche is key to building sustainable cities for the future.

Located in a prime area within the red-hot Toronto real estate market, this High Park home is a model for how this can be accomplished. Homeowner Adam Molson purchased a single-family semi in the High Park neighbourhood in 2016. The property hadn't been renovated in 40 years, and his goal was to transform it into a triplex with one unit for living in with his family and the other two for renting out as income suites.

Molson wanted to create condo-like units that were energy efficient and offered modern conveniences like independent suite climate control. In addition to being more comfortable for each family, electrically powered HVAC units for each suite would make it easy to separate utility costs with only a hydro meter for each unit.

“Our heat pump has performed flawlessly. Our bills have been reasonable, and the best thing is we don't notice it's on; we're just comfortable.”

— Adam Molson, Homeowner



The Solution



Energy efficiency was a top priority for Molson, who wanted to ensure that heating the triplex would be cost effective and comfortable. Based on recommendations from engineer Stuart Fix from ReNü Engineering Inc. and architect Tom Knezic from Solares Architecture, Molson selected the Mitsubishi Electric Zuba centrally ducted and multi-split Cold Climate systems.

Both Solares and Renu had used the Mitsubishi Electric heat pumps in previous projects and were extremely satisfied with the performance and long-term cost savings.

“It’s a win-win for everyone — the installation and operating costs are lower than natural gas when you factor for everything, and it’s better for the environment. Plus, the occupants can be more comfortable,” explains Solares, who is a big believer in powering homes with clean energy.

“After trying most of the brands, we found sticking to premium products offers the most benefits. Mitsubishi is at the top of that list.”

— Stuart Renu,
Engineer of Record
for HVAC

Meanwhile, Renu appreciates the support Mitsubishi Electric offers at every stage. He cites local customer service, the provision of detailed performance data upon request and technical assistance as key benefits of working with Mitsubishi Electric over other competitors.

Renu also likes that the brand's Cold Climate models perform well even in freezing Canadian winters and don't require a supplementary heat source.



The Results

The renovations at this home were completed in February 2020, with Molson's family moving in in 2019 and the second tenant arriving in March 2020. Everyone has been very pleased with the home's heating.

"We've had two full winters with no issue getting heat even in the dead of winter, with the heat pump operating at full capacity at -27°C and beyond," says Molson. "The tenants don't even talk about the heating, which is great as a landlord."

Molson was also able to work with the architect to fit all of the ductwork within the joist spaces, ensuring modern and architecturally pleasing interior spaces without wall units.

"The resulting spaces are free of obtrusive bulkheads, look very clean and we are really happy with them," he says.

Summary

Homeowner:
Adam Molson

Distributor:
Mits Airconditioning Inc.

Engineering Firm:
ReNü Engineering

Architectural Firm:
Solares Architecture

Location:
Toronto, ON

Industry:
Residential

Size:
4,400 square feet

Challenges:
Renovating an existing single-family home into an enlarged triplex.

Selection Criteria:

- Energy-efficient heat source
- Excellent cold-climate performance
- Independent controls for each unit

Design/Engineering Solution:
Mitsubishi Electric Outdoor unit models:

- 2 x 2.5-ton cold climate condensers (rental suites)
- 1 x 3.5-ton multi-split cold climate condenser (owner's unit)

Mitsubishi Electric Indoor unit models:

- 2 x 2-ton multi-position air handlers (rental suites)
- 1 x 2-ton multi-position air handler (owner's unit)
- 1 x 1.5-ton multi-position air handler (owner's unit)

Controls:

- 3 x Mitsubishi programmable thermostats

Results:
Highest energy efficiency, thermal comfort and independent metering for each unit.

Mitsubishi Electric Canada

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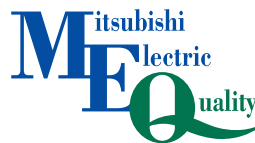
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