

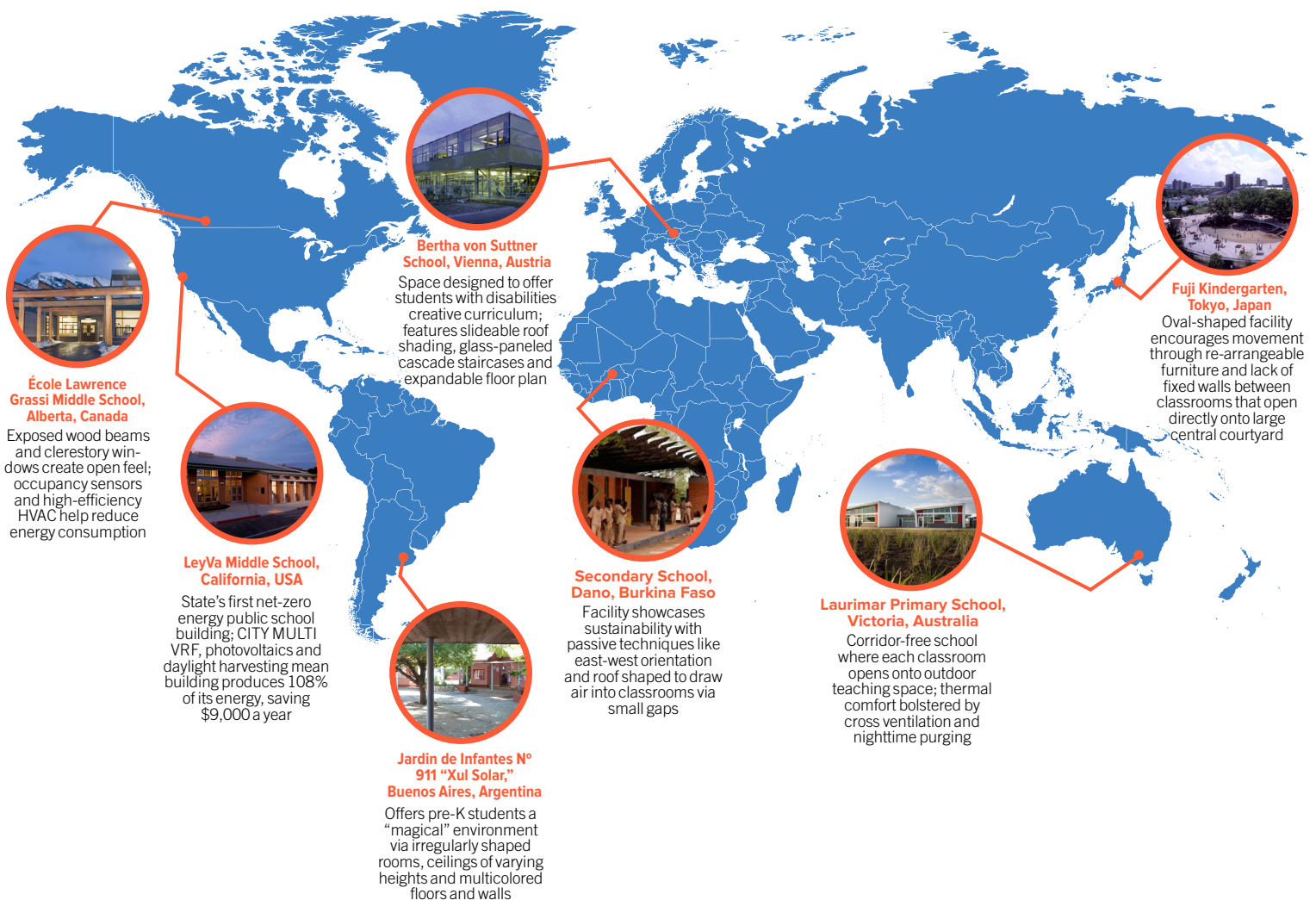
## ARCHITECTS | DESIGNING COMFORT SOLUTIONS

### Mitsubishi Electric *Architect* E-Newsletter

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Mitsubishi Electric's *Architect* E-Newsletter is a quarterly digital publication that brings you the latest developments and perspectives on designing HVAC systems within commercial buildings. This issue focuses on K-12 educational facilities. Explore trends, HVAC solutions and advancements below.

## THE WORLD'S MOST INSPIRING SCHOOLS

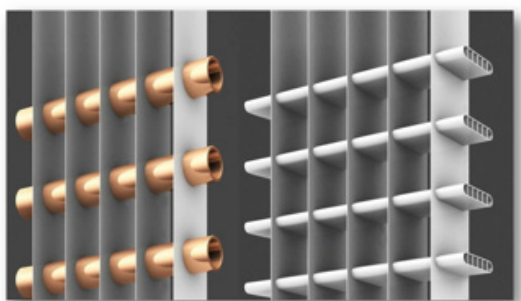


## ARCHITECTS | DESIGNING COMFORT SOLUTIONS

### PRODUCT INNOVATION

## Introducing the Next Generation of Efficiency

Whether designing an elementary school with simple rooms or a high school with laboratory, extracurricular and technology-dependent spaces, architects can turn to Mitsubishi Electric's L-Generation air and water source VRF. L-Generation's smaller footprints and higher efficiencies allow architects to minimize the space taken up by mechanical equipment while delivering comfort solutions with stunning performance.



*Traditional copper tube design (left); Mitsubishi Electric HexiCoil turbulated design (right)*

### Air source

**L-Generation air source units** (6 to 30 tons; single modules up to 14 tons) offer **significant improvements in efficiency ratings** across all categories – up to 20 percent higher EER, 36 percent IEER, 16 percent COP and 54 percent SCHE.

How? **HexiCoil™ technology**, a zinc-aluminum flat tube heat exchanger that maximizes heat transfer capability through its unique fin shape.

Other enhancements include:

- **Superior water shedding capability and corrosion resistance** due to HexiCoil's design and zinc outer coating, prolonging the unit's lifespan.
- **30 percent smaller footprint** than previous models.
- **Improved high-ambient cooling operating range**; guaranteed outdoor operation up to 126 degrees Fahrenheit.
- **Improved vertical separation between indoor units** within the same heat recovery system – a distance of up to 98 feet – expanding design options.

### Water source – Coming Soon!

WY- and **WR2-Series water source systems** offer single modules up to 20 tons. With enhanced system capabilities and variable water-flow interfaces, these units provide increased system efficiency. They also feature an enhanced water-side heat exchanger design leading to improved thermal heat transfer. Additionally, the systems' 0-10V output signal provides the capability to modulate water flow for compliance with specified energy codes. Water source units can tie into new or pre-existing geothermal loops for even greater efficiency.





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### CASE STUDY

## VRF for the Country's First Certified Passive Independent School

The **Hollis Montessori School** (Hollis Montessori), Hollis, New Hampshire, is the first independent school in the country to receive Passive House certification. Certifying a 10,000-square-foot space is no small feat – a truth David Ely, AIA, owner, **Windy Hill Associates**, New Boston, New Hampshire, knows well.

Ely said, “Keeping the energy level down is the core of Passive House.” Extreme energy efficiency helps meet rigorous energy-saving standards. Hollis Montessori had no problem meeting those standards since Ely helped them select a P-Series Hyper-Heating INVERTER™ (H2i®) system from **Mitsubishi Electric**.



Ely favored heat pumps for their impressive performance and “minimal impact on the building. We didn’t want ductwork; it’s ugly and it takes up space.” Heat pumps also meant right-sized equipment and the hefty reduction in installation cost that results from going ductless.

Frank Grossman, president, board of directors, Hollis Montessori, said, “We were hesitant about heat pumps at first – whether they would keep up with the northeast winter. But we were told [they] could handle cold temperatures even on negative days and still produce the right amount of heat. I’ve absolutely found this to be true.”

The result: **the country's first Passive independent school**. This is not just a big accomplishment; it’s an important step toward large-scale passive construction.

Want to read more? Consult the full [case study](#).

