

# MagO Goes Outside



By Peter Francis  
Photos courtesy of MagO

**For many designers,** it is challenging to find the right cladding system for commercial and high-end residential projects. The multiple demands for the right appearance, rainscreen technology, robust durability, and affordable cost along with workable delivery times and non-combustible ratings return only a few options with most of these being imported and expensive.

MagO Cladding was developed in 2013 to fill the vacuum left by the removal of Panasonic's Ceraclad from the Canadian market. MagO Cladding, though, is different from Ceraclad and other high density fiber cement cladding systems in a number of ways. First and foremost it is made from 15 mm-thick boards of magnesium oxide cement (MgO). MgO cements prove to be stronger and easier to work with compared with fiber cement products. In addition, there are no silicas or other carcinogens to be concerned about and MgO can easily be worked with carbide tools. In MagO's case, this includes custom carbide router bits that allow the edge profile to be added to cuts made on site.

A case in point is a residential site in Burnaby where contractor Paul Blakely of Infinity Pacific Custom Homes installed 3,500 square feet of MagO Cladding on a custom single family residence.

The MagO Cladding was installed over wood framing with a water barrier membrane, providing a clean, modern appearance in the contemporary home and easy installation and finishing for the contractor.

MagO Cladding is attached by clips. The first panels on this residential project were applied above the belly band starting with base clips, said Peter Francis, MagO Cladding. “Vertical end panels are machined differently to horizontal panels allowing the panels to dry fit with shiplap edges,” he said.

A row of clips is attached to the top (horizontal) or side (vertical) of the panels, which forms the connection for the adjacent panel.

Two-foot wide panels, connected to the building by custom clips, demonstrate ultimate negative wind loads of 40 psf or the ability to withstand 220 km/hr winds.

“Only a screw gun is required for installation while a circular saw and carbide blade easily makes field cuts,” said Francis. “A custom router bit with 1/2-inch shank is provided for adding the machined edge in the field.”

Installation started at the left side and worked counterclockwise around the home.

“Careful measurements are required to balance the size of the last panels and Paul found ways to install panels from right to left,” said Francis. “Spacers needed at the top of runs are made from

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MagO can receive any acrylic stucco pattern for a fraction of the cost of site applied stucco.

offcuts and secured through the face of the panel using trim head screws. No pilot holes are required.”

The panels below the belly band were added last, and corners were captured in custom brake-formed steel sections.

Another interesting factor about MagO Cladding is the large size of the panels: 2 x 10-foot panels have been tested and larger sizes, perhaps up to 4 x 10 feet, would be possible. Two-foot wide panels, connected to the building by clips custom manufactured by Hansen Industries of Richmond, demonstrate ultimate negative wind loads of 40 psf or the ability to withstand 220 km/hr winds.

MagO is made locally in Vancouver from 4 x 8 foot and 4 x 10 foot boards of 15 mm-thick MagO board from Magnum Building Products. These boards are cut to size using carbide cutters on beam saws. The panels then have the edge profile routed in using CNC routers and in this case, diamond tooling. This allows the ability to provide custom sized panels and to make corner and window trim to suit designers’ wishes. It is an easy task to glue boards to make corners and to route shapes and patterns into the edges and faces of boards. In some cases, 20 mm boards can be used for more pronounced reveals and deeper carvings into the face.

Once the boards and trim have been produced on a job-by-job basis with a two to four weeks turnaround, it is time to finish them. MagO has partnered with several local companies, such as Imasco Minerals, and has tested both acrylic top coat and polymer modified base coat for direct application to MagO panels. This allows MagO to receive any acrylic stucco pattern for a fraction of the cost of site applied stucco. Also, using the PMC base coat, stamped concrete techniques can be used to provide even more custom appearances.



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MagO Cladding uses 15 mm magnesium oxide cement boards, making it strong, easy to use, and silica-free. **Get on board with MagO.**

Call us today at 604-838-4544. Visit us online at [www.magobp.com](http://www.magobp.com).

Cloverdale paint has formulated and approved a one-process primer and top coat that has high surface hardness while Sherwin Williams also recommends the Loxon primer that works with a wide selection of top coats. As MagO is one of the smoothest panels available, these paint finishes can provide exceptionally clean, crisp details with high gloss or matte finishes.

For even a greater range of appearances such as metallics, Cadillac Powder Coating can bake on polyester and epoxy resins using proprietary gravity deposition powder coat, suitable for non-conductive substrates.

MagO Cladding is a four-sided shiplap system, which is a fully-faced, sealed, dry fit cladding system that does not require caulking for panel to panel or panel to corner connections. Panel or trim to window or door frames would still require sealing. This means faster installation times that are not hampered by weather concerns, and the ability to replace panels when necessary.

In addition to the engineered MagO Cladding System, MagO 8 mm panels are also finding acceptance with designers and installers alike due to their appearance, ease of working, and cost.

The Pitt Meadows RCMP station was the first use of these. Ratio Architects fit 8 mm panels into Fry Reglet edge trims for the walls, soffit, and buttresses. MagO panels do not require the use of edge trims. Unlike fiber cement panels, MagO edges can be left exposed and fasteners can be countersunk, which provides a clean, smooth appearance. And like the 15 mm panels, they can simply be cut to size using a disposable carbide blade while wearing a paper dust mask.

MagO panels come in 4 x 8 and 10 ft sizes in many thicknesses making them most suitable for most exterior cladding projects. ■



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