

Liquor Retailer Showcases New Zealand's First Major Fabric HVAC Duct Project



State-of-the-art HVAC design by Cowley Refrigeration cuts installation costs and offers an aesthetic alternative to metal duct.

Wellington, New Zealand—Specifying fabric duct in the country's newest and most state-of-the-art liquor store prototype raised a few eyebrows, but Cowley Refrigeration wanted to be the first mechanical contractor with a major fabric duct project in New Zealand.

The very visible tan-colored fabric duct complements the new 7300-square-foot, Hawkes Bay-

based Duffy & Finn liquor store's sleek design, which includes wooden wine racks, polished metal shelves, warm earth tone colors and hardwood floors.

The design serves as a new stand-alone prototype for Duffy & Finn, which is owner Foodstuffs (NZ) Ltd's strategy to battle other supermarket chains entering New Zealand's competitive 1.1 billion take-home liquor market. Foodstuffs, which operates many retail brands including PAK'nSAVE warehouse food stores, New World supermarkets, and Four Square convenience stores, sees the design as an opportunity to separate Duffy & Finn from existing retail liquor stores.

"This was a great opportunity for fabric duct because conventional spiral metal duct with the ribs and

“Fabric ductwork is a cutting edge design that’s happening all over the world.”



Cowley's Palmerston North branch specified premium Verona fabric with Comfort Flow air distribution by DuctSox, Dubuque, Iowa, the world's leading manufacturer of fabric duct. Cowley emailed the blueprints and project design and airflow velocity requirements to DuctSox's factory and airflow velocities and got the totally engineered air distribution back in two days.

While the aesthetic benefits of fabric were important in the selection, the performance is superior to conventional metal ductwork as well. Each duct's linear diffuser provides an even air distribution without the drafts or hot/cold spots associated with metal duct/registers. The even air distribution makes fabric duct perfect for retail, athletic, office and other commercial applications.

Big Cost Savings in HVAC Labor

More than 160 linear feet of 660-mm-diameter duct was installed in only two days with one worker versus the two-week period and four-man crew estimated for metal duct installation. The majority of the two-day installation involved running the fabric duct's wire suspension system. The actual hanging of the duct took only a few hours. Thus, the project was not only fast-tracked, but it saved Duffy & Finn approximately 50 percent in labor costs. Fabric material costs are similar to metal costs, according to Purdy. Cowley Refrigeration saved labor and transportation fees by ordering the DuctSox shipped directly to the site via United Parcel Service (UPS).

Supplying the duct is a Temperzone, Auckland, 11,441-cfm split system heat pump installed at the same height of the fabric duct in the mezzanine mechanical room, which save the client additional HVAC installation labor and materials. The unit can vary outdoor air according to demand with a roof-installed motorized damper.

Cowley Refrigeration also designed and installed the store's walk-in cool room that uses environmentally-friendly R-507 refrigerant to cool products on display. "Fabric ductwork is a cutting edge design that's happening all over the world," said Purdy. "As more clients see it, they want it. Today's materials, engineering, colors, airflow, aesthetics and other aspects are totally different than the crinkly fabric duct product we knew 20 years ago that was ideal only in refrigerated food processing plants."

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