

## BLUEPRINT

# STOLLER FAMILY ESTATE WINE TASTING ROOM DUNDEE, OR

### PROJECT INFORMATION

**Building Type:** Retail

**Architectural Engineer:**

Ernest R. Munch  
Urban Planner LLC  
Portland, OR

**General Contractor:**

Gary North  
R & H Construction  
Portland, OR

**HVAC Contractor:**

Scott Leverenz  
Jacobs Heating & Air Conditioning  
Portland, OR



### Challenge:

*Heat and cool a "Net Positive Energy" structure year-round, using self-generated solar power through "grid-tied" solar panels.*

### The Solution:

*Daikin VRVIII-S, low starting power requirements, and easy integration with a fresh air economizer system proved the perfect partner.*

Stoller Winery was established in 1995, in Oregon's Dundee Hills, west of Portland. The property spans 373 acres with approximately 190 "under vine", primarily with Chardonnay and Pinot Noir varieties. Stoller Winery prides itself on efficiency using sustainable farming practices, and is the first LEED Gold certified winery in the United States.

When it came to building a new tasting room, they had high expectations. The new structure, completed in the fall of 2012, is a Net Positive Energy design, utilizing over 4,300 square feet of solar panels to provide 100% of the building's power requirements, and often more. Using the same architect as the original winery, the tasting room was built using a large amount of reclaimed wood from a 2002 forest fire. It utilizes plenty of natural lighting, passive ventilation and Daikin VRVIII-S multi-zone heat pump systems to provide year-round comfort for tastings and other special events. The huge walkout doors/ windows of the tasting room are coordinated with the HVAC system to take advantage of the wonderful Oregon outside air.

The surrounding mountain ranges provide a warmer, buffered microclimate ideal for grapes, but that can make it stuffy for people. Temperatures average in the 80s but can reach 100 degrees in the summer. Using VRVIII-S, the HVAC Contractor, Jacobs Heating and Air Conditioning, was able to maximize comfort under these conditions while maintaining extremely low energy consumption. Daikin's zero Locked Rotor Amp rating and low starting power draw are important considerations with a solar energy system, and a key in the selection of Daikin over other manufacturers' equipment for this project.

The systems integrated easily into a custom fresh air "economizer" mode using mixing boxes and enthalpy controls with the motorized windows for an optimized 1st stage of cooling used during low demand periods, further reducing energy consumption.

The small footprint of the Daikin systems allowed them to be installed in a small "green roof" area, out of sight of visitors.

The low sound levels of Daikin equipment were valued to help maintain the serene environment of this beautiful location. The structure has a number of different zones to suit the type of event and number of people visiting, including a



Mick Desserault  
CFO, Jacobs Heating & Air Conditioning  
3D Platinum Dealer (left)

Mike Haverkate  
Farm Manager, Stoller Family Estate (right)

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commercial kitchen. The structure is divided into 6 zones using 4 VRVIII-S Heat Pump outdoor units. Indoor units include Daikin FXTQ series vertical fan coils for the tasting room and common areas, concealed ducted fan coils in the kitchen to optimize floor space and a wall-mount fan coil in the office due to limited room for ductwork. The modular concept of VRV allowed for 2 systems to be installed in the main tasting room which can be staged based on occupancy and load.

BRC1E71 Navigation Controllers were used for all zones as they provided the capability

for variations in scheduling and simplicity of operation. The ability to have them centrally located for easy monitoring was also a plus. Staff members liked the mode display and easy event scheduling capability of the BRC1E71.

Using Daikin VRVIII-S, Stoller Winery was able to achieve its goal of Net Positive Energy for its new wine tasting room, while providing absolute comfort for visitors in this beautiful Oregon wine country location. And Daikin again proves to be an ideal partner for LEED and Net Zero Energy projects, with unparalleled system performance and energy efficiency.

**FIND OUT MORE ABOUT DAIKIN VRV.**  
Contact your local dealer or manufacturer's representative.

### Additional information

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

#### DAIKIN EQUIPMENT

- Wall Mounted Unit  
– 1 FXAQ07MVJU
- Ceiling Suspended Unit  
– 1 FXHQ12MVJU
- DC Ducted Concealed Unit  
– 1 FXMQ36PVJU  
– 1 FXMQ36PVJU
- Vertical Air Handling Unit  
– 1 FXTQ24PAVJU  
– 1 FXTQ36PAVJU  
– 1 FXTQ48PAVJU
- Outdoor Unit VRV III-S Heat Pump  
– 3 RXYMQ36PVJU  
– 1 RXYMQ48PVJU
- Navigation Remote Controller  
– 6 CTXS07LVJU
- Navigation Controllers  
– 6 BRC1E721
- Wiring Adaptor PCB  
– 2 KRP1B71
- REFNET Joint  
– 5 KHRP26A22T

Actual savings and costs will vary. Cost and savings statements are applicable solely to the installation indicated. For additional information please contact the installing contractor, distributor or factory representatives.



Our continuing commitment to quality products may mean a change in specifications without notice.

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