#### LENNOX

## VRF







ANY BUILDING. EVERY TIME.

THE TECHNOLOGY AND EXPERTISE OF LENNOX® VRF.





#### LENNOX® VRF FITS WHERE YOU WORK.

Lennox VRF is a flexible, versatile solution that is ideal for a wide range of structures and industries.

#### LODGING

Allows guests to sleep peacefully by enjoying the lower sound levels and better temperature control made possible by Lennox® VRF.

#### HEALTHCARE

Non-ducted indoor units help prevent cross contamination, while ducted units with industry-leading static pressure meet HEPA filtration needs.

#### OFFICE

Lets every office and common area enjoy its own individual temperature control for better comfort and zoning.

#### RETAIL

Eliminates temperature swings, yet still reacts to the changing heating and cooling demands throughout a typical sales day.

#### EDUCATION

Creates a more effective learning environment by providing low sound levels, better temperature control and energy efficiency that saves budget dollars.

#### MULTI-FAMILY STRUCTURES

Provides a high-efficiency, low-maintenance comfort solution that appeals to residents, while service-friendly equipment makes life simple for management

#### DINING

Gives diners and kitchen staff greater comfort through part-load operation, even with the diverse loading conditions a restaurant experiences during a typical day.

## CONNECTING TECHNOLOGY WITH EXPERTISE.

When you select Lennox VRF, you're making a very smart choice.

Because you're not only getting the benefits of VRF, you're also getting the benefits of the entire company behind it.

#### HISTORY

Lennox VRF is supported by more than a century of heating and cooling experience. Lennox knows indoor comfort, inside and out.

#### QUALITY

Lennox VRF has been extensively tested and proven to make sure it meets the exacting standards Lennox sets for reliability.

#### **EXPERTISE**

When you select Lennox VRF, you're choosing technology backed by expertise. Lennox HVAC professionals understand the challenges faced by engineers and contractors in designing and specifying a heating and cooling system, which is why you'll find so many resources available to help you.

Lennox VRF & Mini-Splits App
Full of helpful tools for contractors, including a refrigerant charge
calculator, error code database and even instructional how-to videos
created by HVAC experts.

The Lennox VRF Website LennoxVRF.com contains a wealth of helpful resources to help commercial dealers on every job. The site includes sections on product information, technical documents and specifications, as well as engineering handbooks and a sign-up area for VRF training from Lennox.

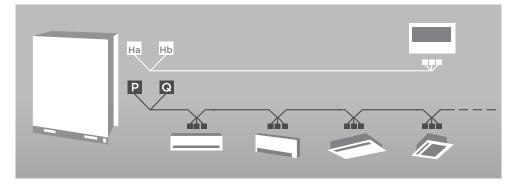




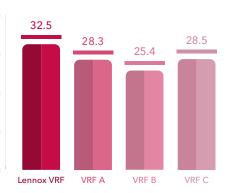


#### LENNOX® VRF AT A GLANCE

#### DAISY-CHAINED COMMUNICATIONS



#### THE MOST EFFICIENT HEAT RECOVERY SYSTEM



♦ 6-Ton Heat Recovery Non-Ducted

## ENHANCED VAPOR INJECTION COMPRESSOR

Lennox® VRF utilizes inverter-driven enhanced vapor injection compressor technology, which provides maximum capacity and efficiency, even in extreme hot or cold climates. A 2 Hz frequency step allows the system to operate at the required capacity with greater precision, for fine-tuned comfort and greater energy savings.

#### 2 EFFICIENT FAN BLADE DESIGN

A specially engineered fan blade design optimizes airflow while reducing noise.

Lennox VRF also utilizes dissimilar fan blades to eliminate in-phase "pulsing" and minimize sound levels.

#### 3 DOUBLE-HINGED ELECTRICAL BOX

Allows quick and easy access to piping and valves for faster service and troubleshooting.

#### 4 HINGED SERVICE PANELS

Lennox VRF outdoor units come with hinged service panels with sturdy metal rods to secure them open. This allows easy and safe access to internal components for servicing.

#### 5 BUILT-IN LCD SERVICE CONSOLE

Start-up, commission, and service your Lennox VRF system all from the outdoor unit's 4 line by 20 character, easy-to-use display menu, without the need for additional software, gauges, or hardware devices.

#### STANDARD VRF OUTDOOR UNITS



Made to be flexible, Lennox® VRF units adapt to a wide variety of buildings and projects, so you can design with them—not around them.

- Single module outdoor units up to 16 tons, combinable up to 42 tons
- Built-in four-point dry contact boards on indoor units for auxiliary device control
- Mode-selection box piping connections on both sides of the unit
- Mode-selection boxes available in 2- to 12-port options



Lennox® VRF is the smart choice, because you're getting high-performing VRF powered by the intelligence of Lennox.

- · Vapor-injection technology for superior performance
- High-efficiency DC motors in all indoor units
- Industry-leading Simultaneous Cooling and Heating Efficiency (SCHE) for Heat Recovery outdoor units
- Enhanced humidity control options with the touchscreen programmable controller for maximum comfort control



Designed with the contractor in mind, Lennox® VRF units are easy to install, service and maintain.

- Hinged doors with locking closure and rods that hold doors open for easy serviceability
- Built-in service console with 4-line LCD display
- Touchscreen programmable controller auto-detects indoor unit model and capacity, adjusting selectable options based on the unit style
- •Sectional filters standard on ducted indoor units fold upon removal to save space

# STANDARD HEAT PUMP AND HEAT RECOVERY

Smart design features found throughout each outdoor unit are designed to save energy, increase convenience and extend equipment life.

#### FLEXIBLE SYSTEM LAYOUT

Outdoor units can connect with up to 3,280 ft. (1000m) of piping to accommodate even the largest structures and projects.

#### HIGH EFFICIENCY

Industry-best Simultaneous Cooling & Heating Efficiency (SCHE) on heat recovery outdoor units provide optimal energy savings.

#### **COMBINE OUTDOOR UNITS UP TO 42 TONS**



6 to 16 Tons



18 to 32 Tons



Triple Modules
34 to 42 Tons

#### AMBIENT TEMPERATURE OPERATING RANGE

#### **COOLING OPERATION** 5°F 126°F -10°F -15°C 52°C SIMULTANEOUS HEAT/CO 5°F 80°F -15°C 27°C **HEATING OPERATION** 80°F -13°F 27°C -25°C 60°F -15°F 0°F 15°F 30°F 45°F 75°F 90°F 105°F -27°C -18°C -9°C -1°C 7°C 15°C 24°C 32°C 40°C

Lennox VRF works in heating mode down to a temperature of -13°F (-25°C), and cools in temperatures up to 126°F (52°C).

<sup>\*</sup> Extended cooling operation requires accessory low ambient cooling kit

# LENNOX LOW AMBIENT VRF OUTDOOR UNITS

Lennox Low Ambient VRF outdoor units combine superior cold climate perforance and the high efficiency of variable refrigerant flow with the quality and expertise of Lennox.



- · Industry-first hinged service panels
- Industry-first LCD service console
- Industry-first double-hinged electrical panel



- Single module outdoor unit capacities from 6 to 10 tons
- Combination capacities up to 30 tons
- Mode Selection boxes from 2 to 12 ports

# COLD CLIMATE PERFORMANCE

- Guaranteed heating operation down to -22°F
- Up to 85% heating capacity at -13°F
- 100% cooling down to -10°F w/ LAC Kit

#### **COMBINE OUTDOOR UNITS UP TO 30 TONS**





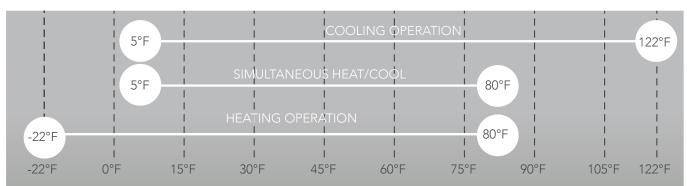
Single Module 6 to 10 Tons

Twin Modules
12 to 20 Tons



Triple Modules
22 to 30 Tons

#### LOW AMBIENT TEMPERATURE OPERATING RANGE



Lennox VRF works in heating mode down to a temperature of -22°F, and cools in temperatures up to 122°F.

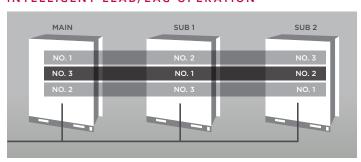
<sup>\*</sup> Extended cooling operation requires accessory low ambient cooling kit



#### OUTDOOR UNITS BY TONNAGE



#### INTELLIGENT LEAD/LAG OPERATION



Systems with multiple condensing units will cycle the lead condensing unit operation upon startup to extend system life. In the event that a fault is detected in the master unit, one of the other condensing units can be configured as the master unit, allowing the system to continue operation.

#### VRF INDOOR UNITS

#### **AUTO RESTART**

Restores operation after power failure.

#### **AUTO ADDRESSING**

Heat pump and mini-VRF systems automatically assign indoor unit addresses upon startup. Heat recovery systems can be addressed quickly and easily using the handheld wireless controller.

#### **AUTO FAN**

Indoor unit DC motors can automatically adjust fan speed for precise and efficient comfort control.

#### **WASHABLE FILTER**

Helps preserve indoor air quality while reducing waste.

#### **BUILT-IN DRY CONTACTS**

4 dry contacts come standard in every indoor unit except the VWMB Wall Mount for 3rd party device support.

#### **PRE-HEAT FUNCTION**

Prevents air from circulating during heating mode until the indoor coil has sufficiently warmed.

#### **REMOTE ON/OFF**

Provides convenience and energy savings.

#### **ERROR STATUS**

Alerts the user if a fault is detected or maintenance is needed.

#### HIGH-EFFICIENCY DC MOTORS

All indoor units feature DC motors standard for maximum energy efficiency



#### **DUCTLESS INDOOR UNITS**



#### VWMB WALL MOUNT

- Flexible Installation
- Auto-Swing Louver
- Quiet Operation



#### V22B COMPACT 360° CASSETTE

- 360° Air Outlet
- Compact Casing
- Integral Condensate Pump



#### V33B 360° CASSETTE

- 360° Air Outlet
- Outside Air Connection
- Integral
   Condensate Pump



# VCFB CEILING AND FLOOR MOUNT

- Flexible Installation
- Vertical and Horizontal Auto Swing
- Compact Installation



#### **VOWA ONE WAY CASSETTE**

- 7,000-24,000 btu/h capacities
- Integral Condensate Pump
- Fresh Air Knockout on 15,000-24,000 btu/h Models





## VSCA/VSEA FLOOR CONSOLE CASED/UNCASED

- 7,000-24,000 btu/h capacities
- Compact Installation
- Optional built-in controller (Cased models only)

#### DUCTED INDOOR UNITS



#### VHIB HIGH-STATIC DUCTED

- High Static Pressure
- Sectional filter for easy access
- Optional Condensate Pump



#### VMDB MEDIUM-STATIC DUCTED

- Compact Installation
- Integral
   Condensate Pump
- Sectional filter for easy access



#### VVCB VERTICAL AIR HANDLING UNIT

- Supports 3rd party 1" filters up to MERV 8
- Multi-Position
- Optional Electric Heat



#### **VOSB OUTSIDE AIR DUCT**

- Discharge air temperature controlled
- Supports 3rd party devices such as pre-heat, dampers, and CO2 sensors

#### MODE SELECTION BOXES

Save energy, reuse heat and maximize comfort with a Mode Selection Box.

The Mode Selection Box is the key to heat recovery operation. By routing either liquid or discharge gas to each indoor unit, the Mode Selection Box allows independent heating and cooling in each unit.

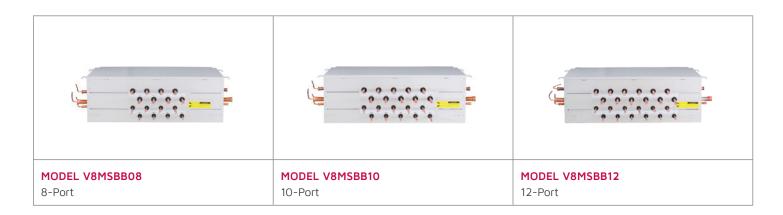
Liquid, suction and hot-gas refrigerant piping are connected to the outdoor unit side of the Mode Selection Box. The proper refrigerant phases are then routed to each individual set of indoor unit refrigerant ports, allowing each indoor unit to operate in heating or cooling mode independently.

Mode Selection Boxes are available in 2- to 12-port options, for connecting up to 41 indoor units to a single box.

## OUTSTANDING EFFICIENCY IN EVERY ROOM

The Mode Selection Box is key to Lennox® VRF heat recovery systems' industry-leading efficiency. The systems boast the highest Simultaneous Cooling & Heating Efficiency (SCHE\*) numbers of any VRF manufacturer, up to 50% higher than competitors with similar equipment.





#### CONTROLS

Lennox® VRF equipment is flexible in its comfort control, and in its applications. With multiple control options and accessories available, it can be customized to create an ideal environment in every room, in any season.



#### LVM CENTRALIZED CONTROL:

A single touchscreen control to monitor and adjust every unit in a Lennox VRF system. Access through mobile and desktop devices to put total control of the entire system at your fingertips, including full time-of-day scheduling, error code and status history, and more.

#### THE LVM FEATURES:

- Centralized monitoring and control for up to 320 systems, or a maximum of 960 outdoor units and 2,560 indoor units.
- Available in 15-inch touchscreen
- Standard with web access
- Energy monitoring to see the exact price by kilowatt-hour (kWh) by indoor unit/zone or group



#### **PROGRAMMABLE** WIRED CONTROLLER

VOSTAT51P



- · Built-in occupancy sesnor with options for setback
- · Built-in humidity sensor with humidity control options for maximum comfort control
- · Auto-detects indoor unit model and capacity
- Daily, 5+2, 5+1+1, 7-day, and customer holiday programming options



VOSTAT54P

SIMPLE WIRED **CONTROLLER** 



#### **WIRELESS REMOTE CONTROLLER**

VOSTAT52P

- · Easy-to-read backlit display for setpoint and room temperature
- · Control up to 16 indoor units from a single controller
- · View sensor readings, EXV position, and system codes

- · Control setpoint, fan speed, mode, and louver swing
- · Configurable for fahrenheit or celsius
- · Easy-to-read backlit LCD display

#### SOLUTIONS FOR CUSTOMIZED COMFORT

Don't just choose a Lennox product—choose a Lennox® Commercial Comfort System.

These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.



#### PACKAGED UNITS

- Energence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider® Rooftop Units
- Accessories



#### VRF

- Outdoor Units
- Indoor Units
- Controls
- Accessories



#### **HEATING**

- Unit Heaters
- Duct Furnaces
- Furnaces



#### **COMMERCIAL CONTROLS**

- Systems Integration Solutions
- Commercial Thermostats



#### **MINI-SPLIT SYSTEMS**

- Heat Pump Mini-Splits
- Low Ambient Heat Pump Mini-Splits
- Indoor Units
- Controls



#### INDOOR AIR QUALITY

- Dedicated Outdoor Air System  $^{\!\scriptscriptstyle{\top}}$
- Humiditrol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps



#### SPLIT SYSTEMS

- Elite® Series Large and Small Split Systems
- T-Class<sup>™</sup> Air Conditioners/Heat Pumps
- Air-Handlers
- Indoor Coils

