

'VMH' UltraV Single/Multi Zone Ductless Mini-Splits



Our new UltraV Series will heat or cool when outdoor temperatures reach -22° F. Multi-zone units run at 100% capacity at 5° F. Single zones maintain 100% capacity at 0° F!

This makes these units well suited to installations requiring year 'round conditioning, both residential and light commercial.

Operating range:

| | | |
|---------|----------------|---------------|
| Cooling | -22° to 122° F | -30°C to 50°C |
| Heating | -22° to 86° F | -30°C to 30°C |

Advanced inverter technology means the room will reach the preset temperature quickly and that the temperature will be constant without the fluctuations that occur in other systems due to on-off cycling. Energy usage is kept to a minimum as units run at low frequency most of the time. However, when required the unit ramps up automatically to reach and maintain the comfort level.

Warranty—7 years on compressor, 2 years on parts
(Some limitations apply; see printed warranty for details.)
CornerStone Extended Warranties Available

Features

- **Multiple Modes**—Cooling, dehumidification only, and heating
 - Sleep mode • 24-hour timer
 - Turbo mode • Auto mode
- **Auto Swing**—Continually adjusts air flow direction for a gentle, breeze-like effect
- **Remote Control**—Makes it easy to program and operate the unit
- **Enhanced Filtration**—Gold fin filter delivers improved indoor air quality
- **Defrost Control**—Longer defrost cycle effectively removes any frost accumulation on the coil as needed
- **"Follow" Feature**—Remote senses temperature where occupant is, automatically adjusts to maintain setpoint
- **Rotary Compressor**—Designed for wide operating range and minimal vibration

Comfort-Aire





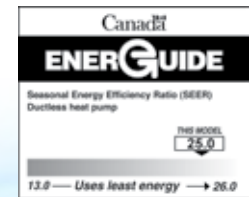
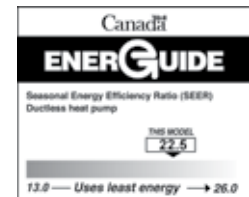
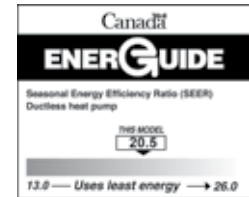
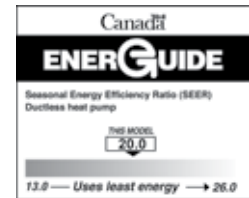
Note: See page 5 for Indoor Unit specifications

| FEATURES - Single Zone | VMH09SU-1* | VMH12SU-1* | VMH18SU-1* | VMH24SU-1* |
|---------------------------------------|--|--------------|--------------|--------------|
| Power Supply | 208/230-1-60 | 208/230-1-60 | 208/230-1-60 | 208/230-1-60 |
| Cooling Capacity (BTUH) | 9,000 | 12,000 | 17,000 | 24,000 |
| SEER | 25.00 | 22.50 | 20.00 | 20.00 |
| EER | 14.50 | 12.50 | 12.50 | 12.50 |
| HSPF | 11.20 | 12.00 | 10.30 | 10.30 |
| Cooling Amps | 2.7 | 4.2 | 5.95 | 8.4 |
| Dehumidification (Pts./Hr.) | 2.32 | 2.75 | 3.59 | 5.49 |
| Hi Heating Cap. (BTUH) @ 47°F | 10,900 | 11,800 | 18,000 | 24,000 |
| Lo Heating Cap. (BTUH) @ 0°F | 11,021 | 12,201 | 18,008 | 24,085 |
| Heating Amps | 3.63 | 4.24 | 7.4 | 10.9 |
| AIR DIRECTION | | | | |
| Vertical Adjustment | Remote | Remote | Remote | Remote |
| Horizontal (left/right) | Manual | Manual | Manual | Manual |
| Auto Swing | Remote | Remote | Remote | Remote |
| INDICATOR LAMPS | | | | |
| ON/OFF | Yes | Yes | Yes | Yes |
| 24 Hr. Timer | Yes | Yes | Yes | Yes |
| Defrost | Yes | Yes | Yes | Yes |
| Temperature Setting Range | 62° to 90° F Cooling; 62° to 86° F Heating (on remote) | | | |
| OUTDOOR UNIT DIMENSIONS | | | | |
| Width (inches) | 31 1/2 | 31 1/2 | 33 1/4 | 37 1/4 |
| Height (inches) | 21 13/16 | 21 13/16 | 27 5/8 | 31 7/8 |
| Depth (inches) | 13 1/8 | 13 1/8 | 14 5/16 | 16 9/16 |
| Net Wt/Shipping Wt (lbs.) | 88.2/93.7 | 88.2/93.7 | 107.4/115.1 | 135.6/148.8 |
| ELECTRICAL DATA OUTDOOR UNIT ‡ | | | | |
| Main Power Connection | Outdoor Unit 208/230-1-60 | | | |
| Min. Circuit Ampacity | 9A | 9A | 18A | 20A |
| Max. Fuse/HACR Circuit Breaker | 15A | 15A | 25A | 30A |
| Indoor/Outdoor Connecting Cable Type | 14AWG / 4 conductor 600V THHN unshielded stranded bare copper | | | |
| LINE SETS O.D. (inch) | | | | |
| Liquid Connection (flare) (in.) | 1/4 | 1/4 | 1/4 | 3/8 |
| Suction Connection (flare) (in.) | 3/8 | 1/2 | 1/2 | 5/8 |
| Max. Line Set Length ¹ | 82 feet | 82 feet | 98 feet | 164 feet |
| Max. Elevation (outdoor) ² | 33 feet | 33 feet | 66 feet | 82 feet |

‡ Always follow local, state and national electrical codes

¹ Min. 10 ft. line set recommended

² Oil traps should be installed every 16.5 to 23 feet (5-7m) when the outdoor unit is installed above the indoor unit



UltraV Series

Mix and match indoor units up to the maximum BTUHs allowed for each system—see chart for possible combinations.

Order outdoor and indoor units separately:

“A” indicates outdoor unit and “B” indicates indoor units.



Advantages of Inverter Technology

The inverter on a mini-split is like the cruise control on a vehicle. The inverter-driven compressor automatically adjusts its speed to quickly reach and then maintain the set point. When maximum capacity is not needed, the compressor speed decreases—and with it the power output also decreases, resulting in improved energy efficiency. Once the set point is reached, the system “cruises along,” keeping the temperature constant, but responding if the demand changes.

- Reaches the desired temperature quickly
- Provides precise temperature control and continuous dehumidification (cooling mode)
- Extends component life by eliminating on-off cycling
- Operates at ultra-quiet level
- Saves energy by matching the compressor speed to the demand; rated up to 25 SEER and 14.5 EER
- Delivers extra heating capacity even at low ambient temperatures

| OUTDOOR UNITS | | | |
|---|---|--|---|
| FEATURES - Multi Zone | A-VMH18DU-1 | A-VMH28TU-1 | A-VMH36QU-1 |
| Cooling Capacity | 19000 | 28000 | 36000 |
| SEER | 21.5 | 22 | 21.5 |
| EER | 12.5 | 13 | 13.5 |
| HSPF 4 | 9.8 | 10.4 | 10.5 |
| Heating at 5 F°-15°C° Maximum capacity | 20000 | 28000 | 35800 |
| Air flow (CFM) | 2130 | 2130 | 4500 |
| Fan Speeds (Hi/Med/Lo) | 150/200/250/300/400/500/600/750/900/1000 | 150/200/250/300/400/500/600/750/900/1000 | 150/200/250/300/400/500/600/700/800/870 |
| Sound Level (dBA) H-M-L | 63.4 | 62.3 | 64 |
| OUTDOOR UNIT DIMENSIONS | | | |
| Width (inches) | 37.24 | 37.24 | 37.48 |
| Height (inches) | 31.89 | 31.89 | 52.48 |
| Depth (inches) | 16.14 | 16.14 | 16.34 |
| Net Wt/Shipping Wt (lbs.) | 150/161 | 157/168 | 224/255 |
| ELECTRICAL DATA OUTDOOR UNIT* | | | |
| Main Power Connection | Outdoor Unit 208/230-1-60 | | |
| Min. Circuit Ampacity | 25 | 30 | 35 |
| Max Fuse/HACR. Circuit Breaker | 35 | 45 | 50 |
| Indoor/Outdoor Connecting Cable Type | 14 awg/ 4 conductor 600V THHN unshielded stranded bare copper | | |
| Max. height difference between indoor units | | | |
| Liquid Connection (flare) (in.) | 2 x 1/4" | 3 x 1/4" | 4 x 1/4" |
| Suction Connection (flare) (in.) | 2 x 3/8" | 3 x 3/8" | 3 x 3/8" 1 x 1/2" |
| Max. length for all rooms | 131 | 197 | 262 |
| Max. length for one indoor unit | 82 | 98 | 115 |
| Max. height difference between indoor units | 33 | 33 | 33 |

†Actual performance will vary based on the application, including the size(s) and mix of indoor units installed.



Ambient Operating Temperature Range:
-22° - 122° F (cooling)
-22° - 86° F (heating)

* Always follow local, state and national electrical codes. Main power connection is 208-230V.

**See the IOM regarding various adapters and fittings which may be included with outdoor and/or indoor models for making connections.

Required Indoor/Outdoor Connecting Cable (SJOW)— 14 AWG / 4 conductor 600V THHN unshielded stranded bare copper, not to exceed 115 feet between indoor and outdoor units.

¹ For single indoor unit installation; min. 10 ft. line set length required.

² Oil traps should be installed every 16.5 to 23 feet (5-7m) when the outdoor unit is installed above the indoor unit.

NOTE: Maximum line set length varies based on number of indoor units installed. See IOM for details.



Warranty—7 years compressor, 2 years on parts
(Some limitations apply; see printed warranty for details.)
CornerStone Extended Warranties Available

FLOOR/CEILING MOUNT INDOOR UNITS

| FEATURES | B-VMH18UU-1 | B-VMH24UU-1 |
|--------------------------------|-------------|-------------|
| Cooling Capacity BTUH | 18,000 | 24,000 |
| Heating Capacity BTUH | 18,000 | 24,000 |
| Air Flow Range (CFM) | 666/595/525 | 880/770/650 |
| Fan Speeds | 3 | 3 |
| Dehumidification (Pts/Hr) | 6.16 | 7.04 |
| Sound Level Range (dBA) | 47/44/39 | 58.5/55/52 |
| Modulating | YES | YES |
| Temperature Setting On Remote: | 62~86 | 62~86 |
| DIMENSIONS | | |
| Width (inches) | 42.05 | 42.05 |
| Height (inches) | 26.57 | 26.57 |
| Depth (inches) | 9.25 | 9.25 |
| Net Wt/Shipping Wt (lbs) | 55.12/65.48 | 55.12/66.14 |
| Liquid-Suction (flare) | 1/4" x 1/2" | 3/8" x 5/8" |

Features

- 'Follow' feature on remote
- Multiple modes: auto, turbo, sleep, fan only, dehumidify only, 24 Hour timer
- Intelligent pre-heat
- Self-diagnosis



Features

- Auto operation
- Multiple modes: turbo, sleep, fan only, dehumidification only, 24 Hour timer
- 'Follow' feature on remote
- Energy saver function
- Intelligent pre-heat



FLOOR MOUNT INDOOR UNITS

| FEATURES | B-VMH12FU-1 |
|---|-------------|
| Cooling Capacity BTUH | 12,000 |
| Heating Capacity BTUH | 12,000 |
| Air Flow Range (CFM) | 365/318/248 |
| Fan Speeds | 3 |
| Dehumidification (Pts/Hr) | 3.08 |
| Sound Level Range (dBA) | 45/41/35 |
| Temperature Setting On Remote or Wired Wall Thermostat: | 62~86 |
| AIR DIRECTION | |
| Modulating | YES |
| DIMENSIONS | |
| Width (inches) | 27.56 |
| Height (inches) | 23.62 |
| Depth (inches) | 8.27 |
| Net Wt/Shipping Wt (lbs) | 32.41/42.77 |
| Liquid-Suction (flare) | 1/4" X 1/2" |

DUCTED INDOOR UNITS

| FEATURES | B-VMH09DU-1 | B-VMH12DU-1 | B-VMH18DU-1 | B-VMH24DU-1 |
|---|-------------|-------------|-------------|-------------|
| Cooling Capacity BTUH | 9,000 | 12,000 | 18,000 | 24,000 |
| Heating Capacity BTUH | 9,000 | 12,000 | 18,000 | 24,000 |
| Air Flow Range (CFM) | 353/283/177 | 353/283/177 | 530/450/371 | 776/694/435 |
| Fan Speeds | 3 | 3 | 3 | 3 |
| Dehumidification (Pts/Hr) | 2.82 | 3.08 | 6.16 | 7.04 |
| Sound Level Range (dBA) | 38/25/32 | 38/26/33.5 | 39/37/35 | 44/--/-- |
| ESP in. WG | 0-0.16 | 0-0.16 | 0-0.40 | 0-0.64 |
| Temperature Setting On Remote or Wired Wall Thermostat: | 62~86 | 62~86 | 62~86 | 62~86 |
| DIMENSIONS | | | | |
| Width (inches) | 27.56 | 27.56 | 34.65 | 43 |
| Height (inches) | 7.87 | 7.87 | 8.27 | 10 |
| Depth (inches) | 17.72 | 17.72 | 28.53 | 30 |
| Net Wt/Shipping Wt (lbs) | 37.5/48.3 | 37.5/48.3 | 54/66 | 87/103 |
| Liquid -Suction (flare) | 1/4" x 3/8" | 1/4" x 1/2" | 1/4" x 1/2" | 3/8" x 5/8" |

Features

- 'Follow' feature on remote for comfort
- Multiple modes: auto, turbo, sleep, fan only
- 24 Hour timer
- Intelligent pre-heat
- Wireless remote and wired thermostat
- Self diagnostics
- Includes water pump



HIGH WALL MOUNT INDOOR UNITS

| FEATURES | B-VMH09SU-1 | B-VMH12SU-1 | B-VMH18SU-1 | B-VMH24SU-1 |
|---------------------------|--|-------------|-------------|-------------|
| Cooling Capacity BTUH | 9,000 | 12,000 | 17,000 | 24,000 |
| Heating Capacity BTUH | 10,900 | 11,800 | 18,000 | 24,000 |
| Air Flow Range (CFM) | 418/324/247 | 418/324/247 | 599/411/353 | 794/647/500 |
| Fan Speeds | 3 | 3 | 3 | 3 |
| Dehumidification (Pts/Hr) | 2.32 | 2.75 | 3.59 | 5.49 |
| Sound Level Range (dBA) | 45/36/27 | 46/36/27 | 48/39/29 | 50/45/39 |
| Temperature Setting | 62° to 90° F Cooling; 62° to 86° F Heating (on remote) | | | |

AIR DIRECTION

| Horiz./Vert. Modulating | Yes | Yes | Yes | Yes |
|-------------------------|-----|-----|-----|-----|
| | Yes | Yes | Yes | Yes |

DIMENSIONS

| | B-VMH09SU-1 | B-VMH12SU-1 | B-VMH18SU-1 | B-VMH24SU-1 |
|--------------------------|-------------|-------------|-------------|-------------|
| Width (inches) | 32.87 | 32.87 | 38.98 | 46.69 |
| Height (inches) | 11.02 | 11.02 | 12.40 | 13.39 |
| Depth (inches) | 7.80 | 7.80 | 8.58 | 10.16 |
| Net Wt/Shipping Wt (lbs) | 19.8/25.4 | 19.8/26.7 | 26.9/34.8 | 40.1/50.3 |
| Liquid-Suction (flare)** | 1/4" - 3/8" | 1/4" - 1/2" | 1/4" - 1/2" | 3/8" - 5/8" |

Features

- 'Follow' feature on remote for comfort (except 24K model)
- Multiple modes: auto, turbo, sleep, fan only (no turbo on 24K model)
- 24 Hour timer
- Intelligent pre-heat
- Automatic louver swing
- Self diagnostics



B-VMH24CU-1

B-VMH09, 12, 18CU-1

CEILING CASSETTES

| FEATURES | B-VMH09CU-1 | B-VMH12CU-1 | B-VMH18CU-1 | B-VMH24CU-1 |
|---|-------------|-------------|-------------|----------------|
| Cooling Capacity BTUH | 9,000 | 12,000 | 18,000 | 24,000 |
| Heating Capacity BTUH | 9,000 | 12,000 | 18,000 | 24,000 |
| Air Flow Range (CFM) | 600/520/460 | 574/490/422 | 956/825/746 | 1400/1250/1000 |
| Fan Speeds | 3 | 3 | 3 | 3 |
| Dehumidification (Pts/Hr) | 2.82 | 3.08 | 6.16 | 7.04 |
| Sound Level Range (dBA) | 41/39/37 | 41/38/35 | 46/43/41 | 51/47/43 |
| Temperature Setting On Remote or Wired Wall Thermostat: | 62~86 | 62~86 | 62~86 | 62~86 |

AIR DIRECTION

| Modulating | YES | YES | YES | YES |
|------------|-----|-----|-----|-----|
| | YES | YES | YES | YES |

DIMENSIONS

| | B-VMH09CU-1 | B-VMH12CU-1 | B-VMH18CU-1 | B-VMH24CU-1 |
|------------------------------|-------------------|-------------------|-------------------|-------------------|
| Width (inches) | 22.44 | 22.44 | 22.44 | 33.07 |
| Height (inches) | 10.24 | 10.24 | 10.24 | 8.07 |
| Depth (inches) | 22.44 | 22.44 | 22.44 | 33.07 |
| Net Wt/Shipping Wt (lbs) | 35.27/41.88 | 35.27/41.88 | 39.68/46.3 | 45.19/52.91 |
| REFRIGERANT LINE CONNECTIONS | 1/4" X 3/8" Flare | 1/4" X 1/2" Flare | 1/4" X 1/2" Flare | 3/8" X 5/8" Flare |
| Decorative Cover Panel | C-VMH91218CU-1 | C-VMH91218CU-1 | C-VMH91218CU-1 | C-VMH24CU-1 |
| Panel Dimensions (inches) | 25.47x25.47x1.97 | 25.47x25.47x1.97 | 25.47x25.47x1.97 | 37.4x37.4x2.17 |
| Net Wt/Shipping Wt (lbs) | 5.51/9.92 | 5.51/9.92 | 5.51/9.92 | 11.02/17.64 |

Features

- Auto operation, 24-hour timer
- Multiple modes: turbo, sleep, fan only, dehumidification only
- Intelligent pre-heat
- Washable air filter
- Automatic louver swing
- Self diagnostics
- Wireless remote and wired wall thermostat
- 'Follow' feature on remote for comfort
- 9, 12, 18 fit 24" x 24" ceiling tile opening
- Condensate removal pump



You can see how one outdoor condenser is used in conjunction with multiple indoor air handlers in a single structure. Air handlers can be installed up to 115' (depending on model) from the condenser, so you can place the condenser in the best location for your landscaping.

A hole approximately 3" in diameter is drilled through the exterior wall to accommodate the lines carrying refrigerant. Also, a communication wire runs between each indoor unit and the condenser, and a drain line from each indoor unit carries condensate away. Power is supplied by the outdoor unit so there are no cords or plugs visible on the interior.

Indoor Unit Mix 'n' Match Possibilities

| Zones | Indoor Units* | Total BTUH |
|-----------------------------------|---------------|------------|
| A-VMH18DU-1 1,2 units | 12 | 12,000 |
| | 9+9 | 18,000 |
| | 9+12 | 21,000 |
| A-VMH28TU-1 1, 2 or 3 units | 24 | 24,000 |
| | 9+9 | 18,000 |
| | 9+12 | 21,000 |
| | 9+18 | 27,000 |
| | 9+24 | 33,000 |
| | 12+12 | 24,000 |
| | 12+18 | 30,000 |
| | 12+24 | 36,000 |
| | 18+18 | 36,000 |
| | 9+9+9 | 27,000 |
| | 9+9+12 | 29,000 |
| | 9+9+18 | 36,000 |
| | 9+12+12 | 33,000 |
| | 12+12+12 | 36,000 |
| A-VMH36QU-1 1, 2, 3 or 4 Units | 24 | 24,000 |
| | 9+18 | 27,000 |
| | 9+24 | 33,000 |
| | 12+12 | 24,000 |
| | 12+18 | 30,000 |
| | 12+24 | 36,000 |
| | 18+18 | 36,000 |
| | 18 + 24 | 42,000 |
| | 9+9+9 | 27,000 |
| | 9+9+12 | 29,000 |
| | 9+9+18 | 36,000 |
| | 9+12+12 | 33,000 |
| | 9+12+18 | 39,000 |
| | 9+18+18 | 45,000 |
| | 12+12+12 | 36,000 |
| | 12+12+18 | 42,000 |
| | 12+18+18 | 48,000 |
| | 12+12+24 | 48,000 |
| | 9+9+9+9 | 36,000 |
| | 9+9+9+12 | 39,000 |
| | 9+9+9+18 | 45,000 |
| | 9+9+12+12 | 42,000 |
| 9+9+12+18 | 48,000 | |
| 9+12+12+12 | 45,000 | |

When choosing styles, use only one Floor/Ceiling Mount indoor unit per mix,

Formula

1) Total rated indoor section capacity must be at least 66% of the outdoor section rated capacity.

2) Total rated indoor section capacity may not exceed outdoor section capacity by more than 33%.

WHAT DO WE MEAN BY ENERGY EFFICIENCY?

In recent years, heating and cooling manufacturers have made significant advances in the efficiency of systems in terms of energy usage. This is an especially important purchase consideration as fuel prices continue to rise.

Cooling efficiency is measured by a Seasonal Energy Efficiency Ratio (SEER) rating. The higher the number, the more efficient the equipment. Our Comfort-Aire UltraV systems are rated up to 25.0 SEER.

Heating efficiency is shown by a Heating Season Performance Factor (HSPF). This is an estimate calculated by dividing the seasonal heating output by the seasonal power consumption in watts. UltraV units are rated as high as 14.5, which is considered very good.

All heating and cooling equipment comes with an Energy Guide label which shows the estimated energy usage—you can use these labels to compare equipment efficiency. Your dealer can help you determine which system is best for you, taking into account a number of factors including the average number of yearly cooling and heating days in your area of the country, in addition to your individual needs.



Warranty—7 years on compressor, 2 years on parts
(Some limitations apply; see printed warranty for details.)
CornerStone Extended Warranties Available

Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice or incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product prior to beginning any installation preparations.

Third party incentive and rebate programs have precise requirements as to product performance and certification. All products meet applicable regulations in effect on date of manufacture; however, certifications are not necessarily granted for the life of a product. Therefore, it is the responsibility of the applicant to determine whether a specific model qualifies for these incentive/rebate programs.

READY TO BUY? SOME THINGS TO CONSIDER

When you buy Comfort-Aire products, you're purchasing the peace of mind that comes from dealing with a company that has a long track record of success. We have a well-deserved reputation not only for quality products, but also for standing behind these products with excellent warranty and support programs. Also, you'll find our web site is a convenient resource: owners' manuals can be downloaded and your installer can access technical information and service manuals.