

'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

Heating -22° to 86° F

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.)

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

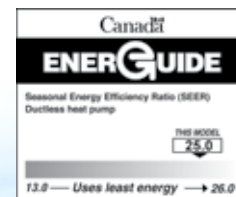
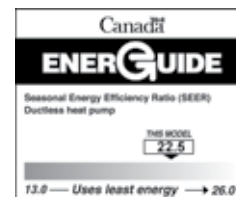
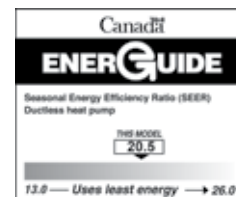
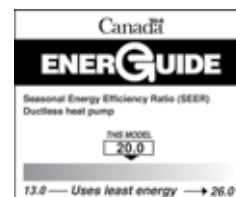
FEATURES	VMH09SU-1 *	VMH12SU-1*	VMH18SU-1*	VMH24SU-1*
			VMH18SU-1A*3	
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
Cooling Capacity (BTUH)	9,000	12,000	17,000	24,000
SEER	25.00	22.50	20.00	20.00
EER	14.50	12.50	12.50	12.50
HSPF	11.20	12.00	10.30	10.30
Cooling Amps	2.7	4.2	5.95	8.4
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 Length¹	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

³ A-VMH18SU-1A for use with B-VMH18SU-1A and all other indoor units excluding non-1A high wall units



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	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 THNN 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.)

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
			B-VMH18SU-1A*	
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
DIMENSIONS				
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"

*B-VMH18SU-1A for use with multi-head applications.

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



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
DIMENSIONS				
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.

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.

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.

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.