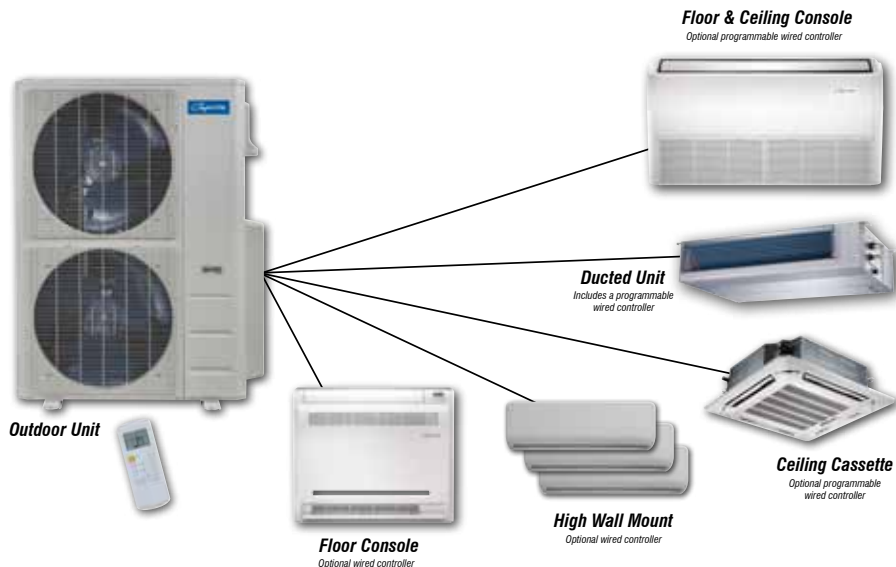


VMH UltraV Series

SINGLE/MULTI ZONE MINI-SPLITS

9,000 to 24,000 BTUH



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 (48K: -13° 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.

FEATURES

Multiple Modes

- Cooling, dehumidification only, and heating
- Sleep mode
- Turbo mode
- 24-hour timer
- 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-Care®

Warranty—7 years on compressor, 5 years on parts
(Some limitations apply; see printed warranty for details.)

www.marsdelivers.com

SINGLE ZONE



Note: See page 5 for Indoor Unit specifications

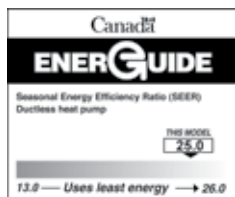
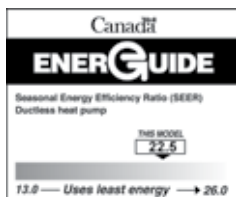
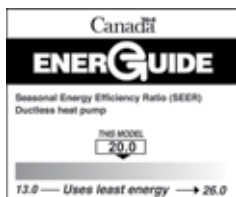
For one to one matches with all indoor "B" units.

FEATURES	A-VMH09SU-1*	A-VMH12SU-1*	A-VMH18SU-1A*	A-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
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



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	A-VMH48PU-1
Cooling Capacity	19000	28000	36000	48000
SEER	21.5	22	21.5	18.5
EER	12.5	13	13.5	11.0
HSPF 4	9.8	10.4	10.5	10.0
Heating at 5 F°-15°C° Maximum capacity	20000	28000	35800	37800
Air flow (CFM)	2130	2130	4500	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	150/200/250/300/ 400/500/600/700/ 800/870
Sound Level (dBA) H-M-L	63.4	62.3	64	64
OUTDOOR UNIT DIMENSIONS				
Width (inches)	37.24	37.24	37.48	37.48
Height (inches)	31.89	31.89	52.48	52.48
Depth (inches)	16.14	16.14	16.34	16.34
Net Wt/Shipping Wt (lbs.)	150/161	157/168	224/255	224/255
ELECTRICAL DATA OUTDOOR UNIT*				
Main Power Connection	Outdoor Unit 208/230-1-60			
Min. Circuit Ampacity	25	30	35	35
Max Fuse/HACR. Circuit Breaker	35	45	50	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"	5 x 1/4"
Suction Connection (flare) (in.)	2 x 3/8"	3 x 3/8"	3 x 3/8" 1 x 1/2"	3 x 3/8" 2 x 1/2"
Max. length for all rooms	131	197	262	262
Max. length for one indoor unit	82	98	115	115
Max. height difference between indoor units	33	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)
 (48K: -13° to 86° F)

- * 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.



MULTI ZONE

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 or Wired Controller:	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 diagnostics



Features

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



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 Controller:	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 Controller:	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

- Multiple modes: auto, turbo, sleep, fan only
- 24 Hour timer
- Intelligent pre-heat
- Wired programmable controller
- Self diagnostics



MULTI ZONE

HIGH WALL MOUNT INDOOR UNITS

FEATURES	B-VMH09SU-1 Smartphone	B-VMH12SU-1 Smartphone	B-VMH18SU-1A Smartphone	B-VMH24SU-1 Smartphone
	B-VMH09SU-1C Programmable wired controller	B-VMH12SU-1C Programmable wired controller		B-VMH24SU-1 Smartphone
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"

Features

- All high wall heads come with a remote
- Optional 7800-207 wired programmable controller for -1C models (must order separate)
- '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
- Smartphone Compatible



B-VMH24CU-1

B-VMH09, 12, 18CU-1

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
- 'Follow' feature on remote for comfort
- 9, 12, 18 fit 24" x 24" ceiling tile opening
- Condensate removal pump
- Optional wired non-programmable controller 7800-206 (must order separate)



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

*Ceiling cassettes require the use of a decorative cover panel.

WIRED PROGRAMMABLE CONTROLLER

7800-207



- VMHxxSU-1C models
- Ducted Indoor Units

WIRED NON-PROGRAMMABLE CONTROLLER

7800-206



- Ceiling Cassettes
- High Wall SD Series
- Ducted Indoor Units

MULTI ZONE

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	

Zones	Indoor Units	Total BTUH
A-VMH48PU-1 2, 3, 4, or 5 Units	9+24	33,000
	12+24	36,000
	18+18	36,000
	18+24	42,000
	24+24	48,000
	9+9+18	36,000
	9+12+12	33,000
	9+12+18	39,000
	9+18+18	45,000
	9+18+24	51,000
	9+24+24	57,000
	12+12+12	36,000
	12+12+18	42,000
	12+18+18	48,000
	12+12+24	48,000
	12+18+24	54,000
	12+24+24	60,000
	9+9+9+9	36,000
	9+9+9+12	39,000
	9+9+9+18	45,000
	9+9+9+24	51,000
	9+9+12+24	63,000
	9+9+12+12	42,000
	9+9+12+18	48,000
	9+9+12+24	54,000
	9+9+18+24	60,000
	9+12+12+12	45,000
	9+12+12+18	51,000
	9+12+12+24	57,000
	12+12+12+12	48,000
	12+12+12+18	54,000
	12+12+12+24	60,000
	12+12+18+18	60,000
	9+9+9+9+9	45,000
	9+9+9+9+12	48,000
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	9+9+9+9+24	60,000
	9+9+9+12+12	51,000
	9+9+9+12+18	57,000
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9+9+12+12+18	60,000	
9+12+12+12+12	57,000	
9K+9K+9K+18K+18K	63,000	
9K+9K+12K+12K+12K	54,000	
9K+9K+12K+12K+18K	60,000	
9K+12K+12K+12K+12K	57,000	

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%.



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.

Comfort-Cire®



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.

"This product complies with all California product labeling laws including, but not limited to, the Safe Drinking Water and Toxic Enforcement Act of 1986, more commonly known as Proposition 65."

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.