

InverterFlex® SERIES

InverterFlex® Systems condition up to five rooms

Floor & Ceiling Console



Outdoor Unit
Rated up to 22 SEER



Ducted Unit



Ceiling Cassette



High Wall Mount



Floor & Wall Console



Wireless remote
included with
each indoor unit



Multi-Zone Heat Pumps 18,000 to 42,000 BTUH

Mix and match indoor units to best
meet comfort requirements

Our InverterFlex® multi-zone units let you condition one up to five rooms with just one outdoor unit (depending on model). The contractor can design a system that best meets the load requirements of each room being conditioned because indoor air handlers can be mixed and matched—all five types of units shown can be used in the same installation.

These 9,000, 12,000, 18,000, 21,000 and 24,000 BTUH indoor units can be mixed, up to the point that their combined capacity reaches the total allowable system capacity—see the chart inside. All units must operate in the same mode except “fan” only can always be selected. True zone control is possible because each air handler operates independently and has its own wireless remote.

InverterFlex® models incorporate all the advantages of twin rotary inverter compressor technology. The compressor speed is variable, depending on the load demand. Most of the time the unit runs at low frequency, saving energy while maintaining comfort, but ramping up to higher frequency when needed. Temperature fluctuations and compressor on/off cycling are eliminated, and indoor air quality is enhanced because air is constantly being pulled through the filter and dehumidified.

InverterFlex® systems are also great for larger spaces such as fellowship halls and commons areas: install multiple units for quiet, efficient, easily controlled comfort.

Features

(Varies according to type of indoor unit)

- **Auto Swing**—Continually adjusts air direction for a gentle, breeze-like effect preferred by most people
- **Multiple Modes**—Cooling, heating, fan only, dehumidification only, plus:
 - Sleep mode
 - 24-hour timer
 - Turbo mode
 - Auto mode
- **Intelligent Pre-Heating**—Enhances comfort by preventing cold air blow
- **Auto Operation**—Automatically selects the mode required to maintain a constant temperature/humidity level
- **“Follow” Function**—Senses temperature at the remote and adjusts air flow for comfort and efficiency at its location
- **Superior Filtration**—Air filters are designed to help enhance indoor air quality
- **Auto Defrost**—Defrosts only when necessary to save energy, limit downtime
- **Self-Clean Mode**—Dries out indoor unit when not in use to prevent mold growth
- **Low Ambient Operation**

Comfort-Care®



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.

For instance, a 36,000 BTUH tri-zone might consist of one A-VFH 36QB-I, one B-VFH09FA-I, one B-VFH18CA-I and one VFH09MB-I.

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 22 SEER and 10.2 EER
- Delivers extra heating capacity even at low ambient temperatures

OUTDOOR UNITS					
FEATURES	A-VFH18DB-1	A-VFH24TB-1	A-VFH30QB-1	A-VFH36QB-1	A-VFH42PB-1
Power Supply	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60	208/230-1-60
System Cooling Cap. (BTUH)	18,000	24,000	28,500	34,000	38,999
Min./Max. Cooling Cap. (BTUH)‡	7,000/21,000	7,500/33,000	8,188/33,437	8,871/35,826	8,871/40,944
SEER/EER	22.00/12.50	21.0/12.5	21.00/12.50	21.00/12.48	21.00/10.40
HSPF	10.50	10.50	10.50	10.50	10.20
High Heating (BTUH) @ 47°F	18,800	29,500	32,000	41,000	45,000
Low Heating (BTUH) @ 17°F	15,600	19,860	22,500	28,660	30,000
Min./Max. Heating Cap. (BTUH)‡	8,530/22,600	7,500/35,000	8,188/32,414	8,871/44,356	8,871/46,062
Sound Pressure (dBA)	56	59	59	61	61
OUTDOOR UNIT DIMENSIONS					
Width (inches)	37 ⁵ / ₈	38 ¹⁵ / ₁₆	38 ¹ / ₂	42 ¹³ / ₁₆	42 ¹³ / ₁₆
Height (inches)	27 ⁵ / ₈	31 ¹ / ₈	31 ¹ / ₈	43 ⁷ / ₁₆	43 ⁷ / ₁₆
Depth (inches)	15 ⁵ / ₈	16 ¹³ / ₁₆	16 ⁵ / ₁₆	17 ⁵ / ₁₆	17 ⁵ / ₁₆
Net Wt/Shipping Wt (lbs.)	115/125	153.2/164.2	145.5/154.3	198.4/216	198.4/216
ELECTRICAL DATA OUTDOOR UNIT*					
Main Power Connection	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit	Outdoor Unit
Min. Circuit Ampacity	20A	25A	25A	25A	25A
Max. Fuse/HACR Circuit Breaker	25A	30A	30A	35A	40A
LINE SET LENGTHS**					
Maximum Line Set Length ¹	33 feet	66 feet	82 feet	82 feet	82 feet
Max. Total Length All Zones	66 feet	197 feet	230 feet	246 feet	246 feet
Maximum Elevation (outdoor) ²	33feet	33 feet	49 feet	49 feet	49 feet

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



Ambient Operating Temperature Range:
 0° - 118.5° F (cooling);
 -4° - 75° F (18K & 24K heating)
 -4° - 86° F (30K, 36K, 42K 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.

Recommended Indoor/Outdoor Connecting Cable (SJOW)— 14 AWG / 4 conductor 600V THHN unshielded stranded bare copper, not to exceed 98 feet between indoor and outdoor units.

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

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-VFH09UA-1	B-VFH12UA-1	B-VFH18UA-1	B-VFH24UA-1
Cooling Capacity BTUH	8,500	11,900	17,000	22,800
Heating Capacity BTUH	9,500	13,100	18,700	27,400
Air Flow Range (CFM)	383/324/265	383/324/265	559/412/294	736/530/412
Fan Speeds	5	5	5	5
Dehumidification (Pts/Hr)	1.69	2.96	3.80	5.28
Sound Level Range (dBA)	36 to 50	36 to 50	40 to 55	44 to 58
Temperature Setting	On Remote: 61°F - 86°F			
DIMENSIONS				
Width (inches)	48	48	48	48
Height (inches)	27 ⁵ / ₁₆	27 ⁵ / ₁₆	27 ⁵ / ₁₆	27 ⁵ / ₁₆
Depth (inches)	8 ⁷ / ₈	8 ⁷ / ₈	8 ⁷ / ₈	8 ⁷ / ₈
Net Wt/Shipping Wt (lbs)	88.2/110.2	88.2/110.2	88.2/110.2	99.2/119.1
Liquid-Suction (flare)**	1/4" - 3/8"	1/4" - 3/8"	1/4" - 1/2"	3/8" - 5/8"

Features

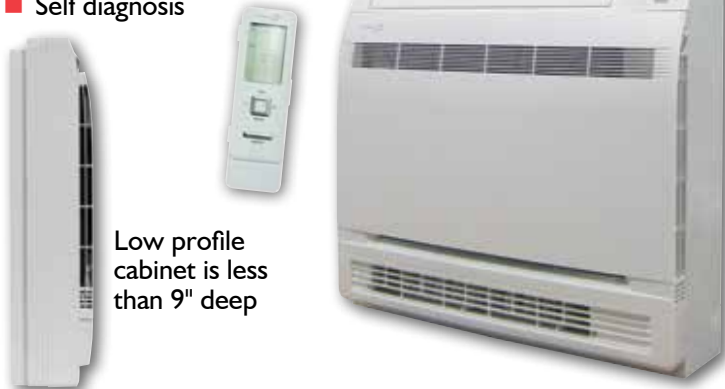
- 'Follow' feature on remote
- Multiple modes: auto, turbo, sleep, fan only, dehumidify only, 24 Hour timer
- Intelligent pre-heat
- Self-diagnosis



Low profile cabinet

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 diagnosis



Low profile cabinet is less than 9" deep

FLOOR MOUNT INDOOR UNITS

FEATURES	B-VFH09FA-1	B-VFH12FA-1	B-VFH18FA-1
Cooling Capacity BTUH	9,000	12,000	18,000
Heating Capacity BTUH	9,500	13,000	19,800
Air Flow Range (CFM)	383 - 188	441 - 206	494 - 241
Fan Speeds	75	5	5
Dehumidification (Pts/Hr)	1.69	2.96	3.80
Sound Level Range (dBA)	25 to 40	27 to 43	33 to 48
Temperature Setting	On Remote or Wired Wall Thermostat: 61°F to 86°F		
AIR DIRECTION			
Vertical Modulating	Yes	Yes	Yes
DIMENSIONS			
Width (inches)	27 ⁹ / ₁₆	27 ⁹ / ₁₆	27 ⁹ / ₁₆
Height (inches)	23 ⁵ / ₈	23 ⁵ / ₈	23 ⁵ / ₈
Depth (inches)	8 ⁷ / ₁₆	8 ⁷ / ₁₆	8 ⁷ / ₁₆
Net Wt/Shipping Wt (lbs)	24.25/30.9	24.25/30.9	24.25/30.9
Liquid-Suction (flare)**	1/4" - 3/8"	1/4" - 3/8"	1/4" - 1/2"

DUCTED INDOOR UNITS

FEATURES	B-VFH09DA-1	B-VFH12DA-1	B-VFH18DA-1	B-VFH21DA-1	B-VFH24DA-1
Cooling Capacity BTUH	8,500	11,900	15,300	20,400	22,800
Heating Capacity BTUH	9,500	13,100	18,700	22,600	27,400
Air Flow Range (CFM)	265/177/147	324/235/177	412/351/294	588/441/324	588/441/324
Fan Speeds	3	3	3	3	3
Dehumidification (Pts/Hr)	1.69	2.96	3.80	4.23	5.28
Sound Level Range (dBA)	31 to 37	32 to 39	33 to 41	34 to 52	34 to 52
Temperature Setting	On Remote: 61°F - 86°F				
DIMENSIONS					
Width (inches)	27 ⁹ / ₁₆	27 ⁹ / ₁₆	35 ⁷ / ₁₆	43 ⁵ / ₁₆	43 ⁵ / ₁₆
Height (inches)	7 ⁷ / ₈	7 ⁷ / ₈	7 ⁷ / ₈	7 ⁷ / ₈	7 ⁷ / ₈
Depth (inches)	24 ³ / ₁₆	24 ³ / ₁₆	24 ³ / ₁₆	24 ³ / ₁₆	24 ³ / ₁₆
Net Wt/Shipping Wt (lbs)	48.5/59.5	50.7/63.9	59.5/79.4	68.3/90.4	68.3/90.4
Liquid-Suction (flare)**	1/4" - 3/8"	1/4" - 3/8"	1/4" - 1/2"	3/8" - 5/8"	3/8" - 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



Wired thermostat



HIGH WALL MOUNT INDOOR UNITS

FEATURES	B-VFH09MB-1A	B-VFH12MB-1A	B-VFH18MB-1	B-VFH24MB-1
Cooling Capacity BTUH	9,000	12,000	18,000	20,800
Heating Capacity BTUH	9,800	13,000	19,000	21,500
Air Flow Range (CFM)	224 - 430	224 - 453	282 - 588	459-736
Fan Speeds	7	7	7	7
Dehumidification (Pts/Hr)	1.69	2.96	3.80	5.28
Sound Level Range (dBA)	21 to 42	22 to 43	33 to 51	37-50
Temperature Setting	On Remote: 61°F to 86°F			

AIR DIRECTION

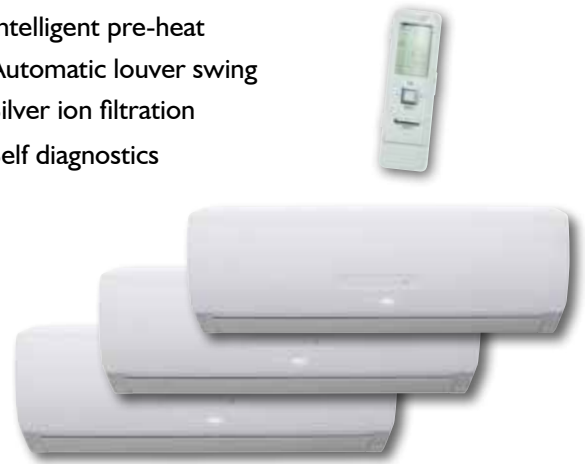
Horiz./Vert. Modulating	Yes	Yes	Yes	Yes

DIMENSIONS

Width (inches)	34 ¹ / ₁₆	34 ¹ / ₁₆	40 ¹ / ₁₆	46 ³ / ₈
Height (inches)	11 ¹ / ₂	11 ¹ / ₂	12 ⁹ / ₁₆	12 ⁷ / ₈
Depth (inches)	8 ¹ / ₄	8 ¹ / ₄	9	10 ³ / ₈
Net Wt/Shipping Wt (lbs)	24.25/28.7	24.25/28.7	30.9/41.9	39.7/48.5
Liquid-Suction (flare)**	1/4" - 1/2"	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
- Silver ion filtration
- Self diagnostics



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
- Fits 24" x 24" ceiling tile opening



Wired thermostat

CEILING CASSETTES

FEATURES	B-VFH12CA-1	B-VFH18CA-1	B-VFH24CA-1
Cooling Capacity BTUH	12,000	14,400	22,800
Heating Capacity BTUH	13,000	16,000	27,400
Air Flow Range (CFM)	265-294-353	265-294-353	500-559-694
Fan Speeds	3	3	3
Dehumidification (Pts/Hr)	2.96	3.80	5.28
Sound Level Range (dBA)	42/44/46	42/44/46	35/37/39
Temperature Setting	On Remote or Wired Wall Thermostat: 61°F to 86°F		

AIR DIRECTION

Horiz./Vert. Modulating	No	No	No
Four-Way Modulating	Yes	Yes	Yes

DIMENSIONS

Width (inches)	22 ⁷ / ₁₆	22 ⁷ / ₁₆	33 ¹ / ₁₆
Length (inches)	22 ⁷ / ₁₆	22 ⁷ / ₁₆	33 ¹ / ₁₆
Height (inches)	9 ¹ / ₁₆	9 ¹ / ₁₆	9 ⁷ / ₁₆
Net Wt/Shipping Wt (lbs)	39.6/ 50.7	39.6/ 50.7	61.7/ 77.2
Decorative Cover Panel Panel Dimensions (inches)	Panel Part#: C-VFH1218CA 25 ⁵ / ₈ x 25 ⁵ / ₈ x 2		Panel Part#: C-VFH24CA 33 ¹ / ₁₆ x 33 ¹ / ₁₆ x 2 ³ / ₈
Liquid-Suction (flare)**	1/4" - 3/8"	1/4" - 1/2"	3/8" - 5/8"



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 82' (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

The total capacity for ALL indoor units cannot exceed 150% of the stated condenser capacity. For best performance, the indoor units' total capacity should be 100% or less of the condenser capacity. When a system is sized beyond 100% of the condenser capacity, the

compressor may not provide full capacity for all indoor units: sizing above 100% is generally specified when one or more of the indoor units will not be in use most of the time. Also, the total capacity for ALL indoor units cannot be less than 50% of the condenser's capacity.

Zones	Indoor Units*	Total BTUH
A-VFH18DB 1-2 Units	9K	9,000
	12K	12,000
	18K	18,000
	21K	21,000
	9K + 9K	18,000
	9K + 12K	21,000
A-VFH24TB 1, 2 or 3 Units	12K	12,000
	18K	18,000
	21K	21,000
	24K	24,000
	9K + 9K	18,000
	9K + 12K	21,000
	9K + 18K	27,000
	9K + 21K	30,000
	12k + 12K	24,000
	12K + 18K	30,000
	12K + 21K	33,000
	18K + 18K	36,000
	9K + 9K + 9K	27,000
	9K + 9K + 12K	30,000
9K + 12K + 12K	33,000	
9K + 9K + 18K	36,000	
A-VFH30QB 1, 2, 3 or 4 Units	18K	18,000
	21K	21,000
	24K	24,000
	9K + 9K	18,000
	9K + 12K	21,000
	9K + 18K	27,000
	9K + 21K	30,000
	12k + 12K	24,000
	12K + 18K	30,000
	18K + 18K	36,000
	18K + 21K	39,000
	9K + 9K + 9K	27,000
	9K + 9K + 12K	30,000
	9K + 12K + 12K	33,000
	9K + 9K + 18K	36,000
	9K + 9K + 21K	39,000
	9K + 12K + 18K	39,000
	12K + 12K + 12K	36,000
	12K + 12K + 18K	42,000
	9K + 9K + 9K + 9K	36,000
9K + 9K + 9K + 12K	39,000	
9K + 9K + 12K + 12K	42,000	
A-VFH36QB 1, 2, 3 or 4 Units	18K	18,000
	21K	21,000
	24K	24,000
	9K + 24K	33,000

Zones	Indoor Units*	Total BTUH
A-VFH36QB 1, 2, 3 or 4 Units	9K + 9K	18,000
	9K + 12K	21,000
	9K + 18K	27,000
	12k + 12K	24,000
	12K + 18K	30,000
	12K + 24K	36,000
	18K + 18K	36,000
	18K + 24K	42,000
	24K + 24K	48,000
	9K + 9K + 9K	27,000
	9K + 9K + 12K	30,000
	9K + 9K + 18K	36,000
	9K + 9K + 24K	42,000
	9K + 12K + 12K	33,000
	9K + 12K + 18K	39,000
	9K + 12K + 24K	45,000
	9K + 18K + 18K	45,000
	9K + 18K + 24K	51,000
	12K + 12K + 12K	36,000
	12K + 12K + 18K	42,000
12K + 12K + 24K	48,000	
12K + 18K + 18K	48,000	
18K + 18K + 18K	54,000	
9K + 9K + 9K + 9K	36,000	
9K + 9K + 9K + 12K	39,000	
9K + 9K + 9K + 18K	45,000	
9K + 9K + 9K + 24K	51,000	
9K + 9K + 12K + 12K	42,000	
9K + 9K + 12K + 18K	48,000	
9K + 12K + 12K + 12K	45,000	
9K + 12K + 12K + 18K	51,000	
12K + 12K + 12K + 12K	48,000	
A-VFH42PB 1, 2, 3, 4 or 5 Units	21K	21,000
	24K	24,000
	9K + 12K	21,000
	9K + 18K	27,000
	9K + 21K	30,000
	9K + 24K	33,000
	12K + 12K	24,000
	12K + 18K	30,000
	12K + 21K	33,000
	12K + 24K	36,000
	18K + 18K	36,000
	18K + 24K	42,000
24K + 24K	48,000	
9K + 9K + 9K	27,000	
9K + 9K + 12K	30,000	
9K + 9K + 18K	36,000	

Zones	Indoor Units*	Total BTUH
A-VFH42PB 1, 2, 3, 4 or 5 Units	9K + 9K + 21K	39,000
	9K + 9K + 24K	42,000
	9K + 12K + 12K	33,000
	9K + 12K + 18K	39,000
	9K + 12K + 24K	45,000
	9K + 18K + 18K	45,000
	9K + 18K + 24K	51,000
	9K + 24K + 24K	57,000
	12K + 12K + 12K	36,000
	12K + 12K + 18K	42,000
	12K + 12K + 24K	48,000
	12K + 18K + 18K	48,000
	12K + 18K + 21K	51,000
	12K + 18K + 24K	54,000
	12K + 24K + 24K	60,000
	18K + 18K + 18K	54,000
	18K + 18K + 24K	60,000
	9K + 9K + 9K + 9K	36,000
	9K + 9K + 9K + 12K	39,000
	9K + 9K + 9K + 18K	45,000
	9K + 9K + 9K + 21K	48,000
	9K + 9K + 9K + 24K	51,000
	9K + 9K + 12K + 12K	42,000
	9K + 9K + 12K + 18K	48,000
	9K + 9K + 12K + 24K	54,000
	9K + 9K + 18K + 18K	54,000
	9K + 9K + 18K + 24K	60,000
	9K + 12K + 12K + 12K	45,000
	9K + 12K + 12K + 18K	51,000
	9K + 12K + 12K + 24K	57,000
9K + 12K + 18K + 18K	57,000	
9K + 18K + 18K + 18K	63,000	
12K + 12K + 12K + 12K	48,000	
12K + 12K + 12K + 18K	54,000	
12K + 12K + 12K + 24K	60,000	
12K + 12K + 18K + 18K	60,000	
9K + 9K + 9K + 9K + 9K	45,000	
9K + 9K + 9K + 9K + 12K	48,000	
9K + 9K + 9K + 9K + 18K	54,000	
9K + 9K + 9K + 9K + 24K	60,000	
9K + 9K + 9K + 12K + 12K	51,000	
9K + 9K + 9K + 12K + 18K	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	
9K + 12K + 12K + 12K + 18K	63,000	
12K + 12K + 12K + 12K + 12K	60,000	

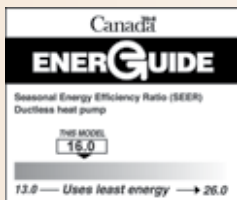
WHAT DO WE MEAN BY ENERGY EFFICIENCY?

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. All Comfort-Aire InverterFlex® systems are rated up to 22.0 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. InverterFlex units are rated at 10.20 HSPF (9.0 for 18K model, 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.



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.