# ACiQ™ HVH8

## Product Specifications

# HIGH EFFICIENCY UP TO 19 SEER VARIABLE–SPEED HEAT PUMP WITH OBSERVER® COMMUNICATING CONTROL SYSTEM

### 2 THRU 5 TONS SPLIT SYSTEM

### 208–230 Volt, 1–phase, 60 Hz

TSTAT0201CW
(Sold Separately)

smartsense TECHNOLOGY

### REFRIGERATION CIRCUIT

- Variable speed compressor operates at 5 stages with capacity range as wide as 25 – 100%
- Electronic expansion valve (EXV) for precise heating control
- High pressure switch
- Suction pressure transducer
- Pressure equalizer valve for easy starting
- Compressor discharge temperature sensor
- Coil temperature sensor
- Copper tube/aluminum fin coil
- Internal crankcase heater standard
- Suction line accumulator factory installed

### PERFORMANCE

- Up to 13.0 EER and 11 HSPF
- Integrated inverter control enables 5–stage operation with complete Observer communicating system including Observer control
  - Observer Wall Control with version 5.0 or newer software required
  - Also capable of 2–stage operation with 2–stage thermostat
- Self–configuring installation with Observer Communicating Wall Control
- Compact ECM fan motor driven by integrated inverter control
- Outdoor temperature sensor factory installed
- High–performance compressor sound shield standard
- Isolation compressor grommets
- Enhanced dehumidification

### EASY TO INSTALL AND SERVICE

- Text based diagnostics with Observer Communicating Wall Control
- Only 2 control wires required from communicating indoor unit to condenser
- External high and low refrigerant service ports
- Factory charged with R–410A refrigerant
- Adjustments for min and max staging with Observer Wall Control

### BUILT TO LAST

- High gloss, baked–on powder coat finish over galvanized steel
- Post–painted (black) coil fins
- Coated inlet grille with 3/8" (10mm) spacing for extra protection (hail guard)
- Corner posts for extra strength and style

### WARRANTY*

- 10 year No Hassle Replacement™ limited warranty
- 5 year parts limited warranty (including compressor and coil)
  - With timely registration, an additional 5 year parts limited warranty (including compressor and coil)

* For residential applications only. See Warranty certificate for complete details and restrictions, including warranty coverage for other applications.

ENERGY STAR PARTNER

This product has been designed and manufactured to meet ENERGY STAR criteria for energy efficiency when matched with appropriate coil components. However, proper refrigerant charge and proper air flow are critical to achieve rated capacity and efficiency. Installation of this product should follow the manufacturer's refrigerant charging and air flow instructions. Failure to confirm proper charge and airflow may reduce energy efficiency and shorten equipment life.

Qualifying models only

c UL us LISTED

AHRI CERTIFIED™ www.ahridirectory.org

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org .

| Model Number | Size (tons) | Nominal Btu/hr | Min. Circuit Ampacity | Max. Fuse or Breaker | Operating Dimensions height x length/width(sq.) in. (mm) | Operating/Ship Weight lbs. (kg) |
|---|---|---|---|---|---|---|
| HVH824GKA | 2 | 24,000 | 13.5 | 20 | 31–13/16 x 23–1/8 (807 x 587) | 132/154(60/70) |
| HVH825GKA‡ | 2 | 24,000 | 23.6 | 40 | 38–1/2 x 23–1/8 (980 x 587) | 156/181 (71/82) |
| HVH836GKA | 3 | 36,000 | 24.4 | 40 | | 156/181 (71/82) |
| HVH837GKA ‡ | 3 | 36,000 | 26.0 | 40 | 38–15/16 x 31–3/16 (989 x 792) | 207/244 (94/111) |
| HVH848GKA | 4 | 48,000 | 31.4 | 50 | | 207/244 (94/111) |
| HVH860GKA | 5 | 60,000 | 40.8 | 60 | 42–5/16 x 31–3/16 (1075 x 792) | 233/272 (106/123) |

‡ = Meets Energy Star criteria when matched with appropriate coil

## OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE (single phase)

| Digit Position: | 1 | 2 | 3 | 4 | 5, 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Example Part Number: | **H** | **V** | **H** | **8** | **24** | **G** | **K** | **A** | **1** | **0** | **0** |

H = Mainline **BRANDING**

V = Variable Speed **KEY CHARACTERISTIC**

A = Air Conditioner
H = Heat Pump **TYPE**

6 = 16 SEER
7 = 17 SEER
8 = 18 SEER
9 = 19 SEER **NOMINAL EFFICIENCY**

24 = 24,000 BTUH = 2 tons
25 = 24,000 BTUH = 2 tons
36 = 36,000 BTUH = 3 tons
37 = 36,000 BTUH = 3 tons
48 = 48,000 BTUH = 4 tons
60 = 60,000 BTUH = 5 tons **NOMINAL CAPACITY**

G = Coil Guard Grille **FEATURES**

K = 208/230–1–60 **VOLTAGE**

Sales Code

Engineering Revision

Extra Digit

Extra Digit

## ACCESSORIES PART NUMBER IDENTIFICATION GUIDE

| Digit Position: | 1 | 2 | 3 | 4 | 5 | 6, 7 | 8, 9 | 10, 11 |
|---|---|---|---|---|---|---|---|---|
| Example Part Number: | **N** | **A** | **S** | **A** | **0** | **0 1** | **01** | **C H** |

N = Non–Branded

A = Accessory **PRODUCT GROUP**

S = Split System (AC & HP) **KIT USAGE**

A = Original
B = 2nd Generation **MAJOR SERIES**

0 = Generic or Not Applicable
2 = R–22
4 = R–410A **REFRIGERANT**

Product Identifier Number

Package Quantity

Type of Kit (Example: CH = Crankcase Heater)

# REFRIGERANT PIPING LENGTH LIMITATIONS

## Maximum Line Lengths:

The maximum allowable total equivalent length for heat pumps can vary depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

**Maximum Line Lengths for Heat Pump Applications**

| | MAXIMUM ACTUAL LENGTH ft (m) | MAXIMUM EQUIVALENT LENGTH† ft (m) | MAXIMUM VERTICAL SEPARATION ft (m) |
|---|---|---|---|
| Units on equal level | 100 (30.5) | 100 (30.5) | N/A |
| Outdoor unit ABOVE indoor unit | 100 (30.5) | 100 (30.5) | 100 (30.5) |
| Outdoor unit BELOW indoor unit | See Table *'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'* | | |

† **Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.**

**Maximum Total Equivalent Length† – Outdoor Unit BELOW Indoor Unit**

| Size | Liquid Line Diameter w/ TXV | HP with R–410A Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit; | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 0–20 (0 – 6.1) | 21–30 (6.4 – 9.1) | 31–40 (9.4 – 12.2) | 41–50 (12.5 – 15.2) | 51–60 (15.5 – 18.3) | 61–70 (18.6 – 21.3) | 71–80 (21.6 – 24.4) |
| 2–Ton | 3/8 | 100* | 100* | 100* | 100* | 100* | 100* | 100* |
| 3–Ton | 3/8 | 100* | 100* | 100* | 100* | 100* | 100* | 100* |
| 4–Ton | 3/8 | 100* | 100* | 100* | 100* | 100 | 100 | –– |
| 5–Ton | 3/8 | 100* | 100* | 100* | 100* | 100 | 100 | –– |

*** Maximum actual length not to exceed 100 ft (30.5 m)**

† **Total equivalent length accounts for losses due to elbows or fitting.**

**–– = outside acceptable range**

# LONG LINE APPLICATIONS

Unit is approved for up to 100 ft (30.5 m) equivalent length and vertical separations shown above with no additional accessories.

Longer line set applications are not permitted.

# COOLING CAPACITY LOSS TABLE

| Nominal Size (Btuh) | Line OD (in.) | HVH8 Cooling Capacity Loss (%) Total Equivalent Line Length (ft) | | | | |
|---|---|---|---|---|---|---|
| | | 25 | 50 | 75 | 80 | 100 |
| 24 | 5/8 | 0.5 | 1.2 | 1.8 | 1.9 | 2.4 |
| | **3/4** | **0.1** | **0.4** | **0.6** | **0.7** | **0.8** |
| 25 | 5/8 | 0.5 | 1.2 | 1.8 | 1.9 | 2.4 |
| | 3/4 | 0.1 | 0.4 | 0.6 | 0.7 | 0.8 |
| | **7/8** | 0.0 | 0.1 | 0.3 | 0.3 | 0.4 |
| 36 37 | 5/8 | 1.1 | 2.4 | 3.7 | 4.0 | 5.0 |
| | 3/4 | 0.3 | 0.8 | 1.3 | 1.4 | 1.8 |
| | **7/8** | 0.0 | 0.3 | 0.5 | 0.6 | 0.8 |
| 48 | 3/4 | 0.7 | 1.6 | 2.4 | 2.6 | 3.2 |
| | 7/8 | 0.3 | 0.7 | 1.1 | 1.2 | 1.6 |
| | **1 1/8** | 0.0 | 0.1 | 0.2 | 0.3 | 0.4 |
| 60 | 3/4 | 1.0 | 2.3 | 3.5 | 3.8 | 4.8 |
| | 7/8 | 0.4 | 1.0 | 1.7 | 1.8 | 2.3 |
| | **1 1/8** | 0.0 | 0.1 | 0.3 | 0.4 | 0.5 |

Rating Line Size in **BOLD**

# EQUIPMENT SIZING GUIDELINES

If primary load is cooling, size the same as any other air conditioning system. If primary load is heating, use the chart below for maximum size for heating.

**MAXIMUM RECOMMENDED EQUIPMENT SIZE – HEATING**

| COOLING LOAD (tons) | MAXIMUM RECOMMENDED EQUIPMENT SIZE FOR HEATING* |
|---|---|
| 1 | 25 |
| 1.5 | 25 |
| 2 | 37 |
| 2.5 | 37 |
| 3 | 48 |
| 3.5 | 60 |
| 4 | 60 |
| 5 | 60 |

* Make sure duct work is capable of delivering required airflow . Make sure combination rating exists for desired indoor and outdoor combination.

## MIN/MAX AIRFLOW TABLES

The indoor airflow delivered by this system varies significantly based on outdoor temperature, indoor unit combination, and system demand. The airflows on these tables are for duct design considerations.

Duct systems capable of these ranges will ensure the system will deliver full capacity at all outdoor temperatures.

Minimum and maximum compressor stage can be adjusted from these numbers in the Observer® Control Heat Pump Setup screen.

| Cooling — Comfort Mode | | | Minimum Cooling (Dehum or Zoning) |
|---|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow | |
| 2−Ton | 739 | 300 | 300 |
| 3−Ton | 990 | 300 | 300 |
| 4−Ton | 1389 | 542 | 457 |
| 5−Ton | 1600 | 700 | 600 |

| Cooling — Efficiency Mode | | |
|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow |
| 2−Ton | 825 | 585 |
| 3−Ton | 1050 | 600 |
| 4−Ton | 1400 | 875 |
| 5−Ton | 1800 | 975 |

| Heating — Comfort Mode | | |
|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow |
| 2−Ton | 819 | 300 |
| 3−Ton | 1014 | 226 |
| 4−Ton | 1550 | 429 |
| 5−Ton | 1600 | 500 |

| Heating — Efficiency Mode | | |
|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow |
| 2−Ton | 825 | 585 |
| 3−Ton | 1200 | 700 |
| 4−Ton | 1600 | 1000 |
| 5−Ton | 1600 | 900 |

| Cooling Max Mode | | |
|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow |
| 2−Ton (24) | 850 | 585 |
| 2−Ton (25) (550 cfm/ delivered ton)* | 1350 | 510 |
| 3−Ton | 1200 | 600 |
| 4−Ton | 1600 | 875 |
| 4−Ton−49 | 1450 | 875 |
| 5−Ton | 2000 | 975 |

| Heating Max Mode | | |
|---|---|---|
| Size | Max Stage 5 Airflow | Max Stage 1 Airflow |
| 2−Ton (24) | 850 | 585 |
| 2−Ton (25) (550 cfm/ delivered ton)* | 850 | 585 |
| 3−Ton | 1200 | 700 |
| 4−Ton | 1600 | 1000 |
| 5−Ton | 2000 | 900 |

* Serial number beginning with 0115E and newer

**LEGEND:**:

**Max Capacity Airflow** − Stage 5 airflow varies depending on conditions. This is the highest airflow the system will attempt to deliver in this particular mode. Ductwork for non−zoned systems should be sized for this airflow to ensure the system can deliver full capacity when needed. Improper duct design may result in excessive airflow noise and/or cutback occurrences at max airflow conditions.

**Highest Min. Capacity Airflow** − Stage 1 airflow also varies depending on conditions. In zoned systems, each zone must be capable of delivering this airflow for the system to deliver full capacity into the zone. Otherwise, airflow may be diverted to other zones or cutback may occur.

**Min Cooling (Dehum or Zoning)** − Lowest airflow the system will deliver. May operate down to this airflow in dehumidification mode or in zoning applications where duct-work restrictions have caused the blower to cut−back.

## PHYSICAL DATA

| UNIT SIZE SERIES | 24 | 25 | 36 | 37 | 48 | 60 |
|---|---|---|---|---|---|---|
| **Compressor Type** | Variable Speed Rotary | | | | | |
| **REFRIGERANT** | R−410A | | | | | |
| Control | TXV (R−410A Hard Shutoff) | | | | | |
| Charge lb (kg) | 5.40 (2.45) | 6.38 (2.89) | 6.38 (2.89) | 7.5 (3.40) | 8.30 (3.76) | 8.60 (3.90) |
| Outdoor Htg Exp. Device | EXV | | | | | |
| **COND FAN** | Forward Swept Propeller Type, Direct Drive | | | | | |
| Air Discharge | Vertical | | | | | |
| Air Qty (CFM) | 2080 | 2500 | 2500 | 3800 | 4500 | 4500 |
| Motor HP | 1/5 | 1/3 | 1/3 | 1/3 | 1/3 | 1/3 |
| Motor RPM | 825 | 1050 | 1050 | 750 | 850 | 900 |
| **COND COIL** | | | | | | |
| Face Area (Sq ft) | 11.12 | 13.90 | 13.90 | 21.50 | 21.50 | 23.65 |
| Fins per In. | 20 | 20 | 20 | 20 | 20 | 20 |
| Rows | 1 | 1 | 1 | 1 | 1 | 1 |
| Circuits | 5 | 6 | 6 | 8 | 8 | 8 |
| **VALVE CONNECT. (In. ID)** | | | | | | |
| Vapor | 5/8 | 3/4 | 3/4 | 7/8 | 7/8 | 7/8 |
| Liquid | 3/8 | | | | | |
| **REFRIGERANT TUBES (In. OD)** | | | | | | |
| Rated Vapor* | 3/4 | 7/8 | 7/8 | 1−1/8 | 1−1/8 | 1−1/8 |
| Max Liquid Line | 3/8 | | | | | |

***** Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

**Note**: See unit Installation Instruction for proper installation.

## ELECTRICAL DATA

| UNIT SIZE− VOLTAGE, SERIES | V/PH | OPER VOLTS* | | COMPR | | FAN | MCA | MAX FUSE ** or CKT BRK AMPS |
|---|---|---|---|---|---|---|---|---|
| | | MAX | MIN | LRA | RLA | FLA | | |
| **24** | 208/230 −1−60 | 253 | 197 | N/A | 10.32 | 0.58 | 13.50 | 20 |
| **25** | | | | N/A | 17.70 | 1.20 | 23.60 | 40 |
| **36** | | | | N/A | 18.30 | 1.20 | 24.40 | 40 |
| **37** | | | | N/A | 19.60 | 1.20 | 26.00 | 40 |
| **48** | | | | N/A | 23.90 | 1.20 | 31.40 | 50 |
| **60** | | | | N/A | 31.30 | 1.40 | 40.80 | 60 |

* Permissible limits of the voltage range at which the unit will operate satisfactorily

** Time−Delay fuse.

**FLA** − Full Load Amps

**LRA** − Locked Rotor Amps

**MCA −** Minimum Circuit Amps

**RLA** − Rated Load Amps

**NOTE**: Control circuit is 24−V on all units and requires external power source. Copper wire must be used from service disconnect to unit.
All motors/compressors contain internal overload protection.
Complies with 2010 requirements of ASHRAE Standards 90.1

## CHARGING SUBCOOLING (TXV−TYPE EXPANSION DEVICE)

| UNIT SIZE−VOLTAGE, SERIES | |
|---|---|
| **24** | **Subcooling recommendation displayed in the subcooling chart shown on the charging label must be followed** |
| **25** | |
| **36** | |
| **37** | |
| **48** | |
| **60** | |

# SOUND POWER LEVEL (dBA)

| Unit Size– Voltage, Series | Typical Octave Band Spectrum (without tone adjustment) | Min Speed Cooling | Max Speed Cooling | Max Speed Heating |
|---|---|---|---|---|
| 24 | Freq (Hz) | 1500 RPM | 4700 RPM | 5400 RPM |
| | 125 | 40.5 | 44.0 | 45.5 |
| | 250 | 45.5 | 49.5 | 53.5 |
| | 500 | 41.5 | 53.0 | 56.0 |
| | 1000 | 44.0 | 52.5 | 54.0 |
| | 2000 | 39.0 | 50.5 | 53.0 |
| | 4000 | 34.5 | 53.0 | 56.5 |
| | 8000 | 31.0 | 45.0 | 45.5 |
| | Sound Rating (dBA) | 56 | 67 | 68 |
| 25 | Freq (Hz) | 1200 RPM | 3300 RPM | 4800 RPM |
| | 125 | 43.0 | 52.0 | 52.5 |
| | 250 | 47.0 | 59.5 | 59.0 |
| | 500 | 51.0 | 64.5 | 61.5 |
| | 1000 | 49.5 | 63.0 | 62.0 |
| | 2000 | 42.5 | 60.0 | 60.0 |
| | 4000 | 35.5 | 59.5 | 64.0 |
| | 8000 | 46.0 | 50.5 | 54.5 |
| | Sound Rating (dBA) | 56 | 69 | 71 |
| 36 | Freq (Hz) | 1200 RPM | 4800 RPM | 5400 RPM |
| | 125 | 43.0 | 53.0 | 51.5 |
| | 250 | 47.0 | 59.5 | 61.5 |
| | 500 | 51.0 | 62.5 | 62.5 |
| | 1000 | 49.5 | 63.5 | 63.5 |
| | 2000 | 42.5 | 63.0 | 61.5 |
| | 4000 | 35.5 | 63.5 | 62.0 |
| | 8000 | 46.0 | 54.0 | 54.5 |
| | Sound Rating (dBA) | 56 | 72 | 71 |
| 37 | Freq (Hz) | 1200 RPM | 3000 RPM | 4800 RPM |
| | 125 | 49.5 | 55.5 | 62.0 |
| | 250 | 52.5 | 60.0 | 63.0 |
| | 500 | 54.0 | 63.0 | 64.5 |
| | 1000 | 53.5 | 61.0 | 63.5 |
| | 2000 | 50.5 | 60.5 | 62.0 |
| | 4000 | 43.0 | 58.0 | 64.5 |
| | 8000 | 41.5 | 50.0 | 55.0 |
| | Sound Rating (dBA) | 60 | 69 | 72 |
| 48 | Freq (Hz) | 1500 RPM | 4320 RPM | 5400 RPM |
| | 125 | 49.5 | 59.0 | 52.5 |
| | 250 | 54.5 | 64.0 | 60.0 |
| | 500 | 54.0 | 66.0 | 63.5 |
| | 1000 | 54.5 | 64.5 | 64.0 |
| | 2000 | 52.0 | 63.5 | 63.0 |
| | 4000 | 54.5 | 63.5 | 65.5 |
| | 8000 | 46.5 | 53.0 | 59.0 |
| | Sound Rating (dBA) | 64 | 72 | 74 |
| 60 | Freq (Hz) | 1200 RPM | 4140 RPM | 5400 RPM |
| | 125 | 39 | 49.5 | 46 |
| | 250 | 48 | 59.5 | 59 |
| | 500 | 46.5 | 62 | 60 |
| | 1000 | 45.5 | 60 | 57 |
| | 2000 | 39.5 | 58.5 | 56.5 |
| | 4000 | 36.5 | 55 | 56.5 |
| | 8000 | 35.5 | 48 | 54.5 |
| | Sound Rating (dBA) | 57 | 72 | 71 |

**NOTE**: Tested in compliance with AHRI 270–2008 but not listed with AHRI.

# RPM–CAPACITY–SOUND (dBA)*

| STAGE # | COMP RPM | CAPACITY % | SOUND (dBA) |
|---|---|---|---|
| **HVH824** | | | |
| **COOLING** | | | |
| 1 | 1500 | 35% | 56 |
| 2 | 2566 | 56% | 60 |
| 3 | 3150 | 69% | 65 |
| 4 | 3950 | 87% | 66 |
| 5 | 4700 | 100% | 67 |
| **HEATING** | | | |
| 1 | 1500 | 29% | 56 |
| 2 | 2800 | 53% | 59 |
| 3 | 3150 | 59% | 62 |
| 4 | 4700 | 88% | 65 |
| 5 | 5400 | 100% | 68 |
| **HVH825** | | | |
| **COOLING** | | | |
| 1 | 1200 | 38% | 56 |
| 2 | 1900 | 58% | 60 |
| 3 | 2400 | 73% | 62 |
| 4 | 2600 | 79% | 66 |
| 5 | 3300 | 100% | 69 |
| **HEATING** | | | |
| 1 | 1200 | 25% | 56 |
| 2 | 2400 | 50% | 60 |
| 3 | 3300 | 69% | 62 |
| 4 | 4200 | 88% | 68 |
| 5 | 4800 | 100% | 71 |
| **HVH836** | | | |
| **COOLING** | | | |
| 1 | 1200 | 25% | 56 |
| 2 | 2400 | 50% | 61 |
| 3 | 3300 | 69% | 65 |
| 4 | 4200 | 88% | 69 |
| 5 | 4800 | 100% | 72 |
| **HEATING** | | | |
| 1 | 1200 | 22% | 56 |
| 2 | 2600 | 48% | 60 |
| 3 | 3400 | 63% | 63 |
| 4 | 4800 | 89% | 69 |
| 5 | 5400 | 100% | 71 |
| **HVH837** | | | |
| **COOLING** | | | |
| 1 | 1200 | 25% | 60 |
| 2 | 1800 | 60% | 61 |
| 3 | 2200 | 73% | 67 |
| 4 | 2600 | 87% | 67 |
| 5 | 3000 | 100% | 69 |
| **HEATING** | | | |
| 1 | 1200 | 25% | 60 |
| 2 | 2400 | 50% | 67 |
| 3 | 2700 | 56% | 68 |
| 4 | 3000 | 63% | 69 |
| 5 | 4800 | 100% | 72 |
| **HVH848** | | | |
| **COOLING** | | | |
| 1 | 1500 | 35% | 64 |
| 2 | 2460 | 57% | 67 |
| 3 | 2800 | 65% | 68 |
| 4 | 3650 | 84% | 70 |
| 5 | 4320 | 100% | 72 |
| **HEATING** | | | |
| 1 | 1500 | 28% | 64 |
| 2 | 2800 | 52% | 67 |
| 3 | 3300 | 61% | 68 |
| 4 | 4320 | 80% | 71 |
| 5 | 5400 | 100% | 74 |
| **HVH860** | | | |
| **COOLING** | | | |
| 1 | 1200 | 32% | 57 |
| 2 | 2180 | 55% | 61 |
| 3 | 2850 | 70% | 65 |
| 4 | 3700 | 90% | 68 |
| 5 | 4140 | 100% | 72 |
| **HEATING** | | | |
| 1 | 1200 | 25% | 57 |
| 2 | 2600 | 50% | 51 |
| 3 | 3200 | 61% | 65 |
| 4 | 4140 | 88% | 69 |
| 5 | 5400 | 100% | 71 |

*Estimated sound for stages 2, 3, and 4

*For 2–stage operation: Cooling Low = Stage 2, Heating low = Stage 3; both cooling and heating High = Stage 5

# DIMENSIONS – ENGLISH

| UNIT | SERIES | ELECTRICAL CHARACTERISTICS | | | | A | B | C | D | E | F | G | K | L | M | N | P | OPERATING WEIGHT (lbs) | SHIPPING WEIGHT (lbs) | SHIPPING DIMENSIONS (L x W x H) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *VH824GKA | 1 | X | O | O | O | 23 1/8" | 31 13/16" | 3 3/4" | 3/4" | 4 7/16" | 18 1/16" | 7 13/16" | 2 13/16" | 1/2" | 11 1/4" | 11 1/4" | 14 1/2" | 132 | 154 | 25 1/4" X 25 1/4" X 35 5/8" |
| *VH825GKA | 1 | X | O | O | O | 23 1/8" | 38 1/2" | 3 3/4" | 3/4" | 4 7/16" | 18 1/16" | 7 13/16" | 2 13/16" | 1/2" | 10 3/4" | 10 3/4" | 18 1/4" | 156 | 181 | 25 1/4" X 25 1/4" X 43 3/8" |
| *VH836GKA | 1 | X | O | O | O | 23 1/8" | 38 1/2" | 3 3/4" | 3/4" | 4 7/16" | 18 1/16" | 7 13/16" | 2 13/16" | 1/2" | 10 3/4" | 10 3/4" | 18 1/4" | 156 | 181 | 25 1/4" X 25 1/4" X 43 3/8" |
| *VH837GKA | 1 | X | O | O | O | 31 3/16" | 38 15/16" | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8" | 2 15/16" | 5/8" | 14 1/2" | 14 5/8" | 18 3/4" | 207 | 244 | 33 3/8" X 33 3/8" X 46 1/8" |
| *VH848GKA | 1 | X | O | O | O | 31 3/16" | 38 15/16" | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8" | 2 15/16" | 5/8" | 14 1/2" | 14 5/8" | 18 3/4" | 207 | 244 | 33 3/8" X 33 3/8" X 46 1/8" |
| *VH860GKA | 1 | X | O | O | O | 31 3/16" | 42 5/16" | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8" | 2 15/16" | 5/8" | 16 1/2" | 15" | 20" | 233 | 272 | 33 3/8" X 33 3/8" X 49 9/16" |

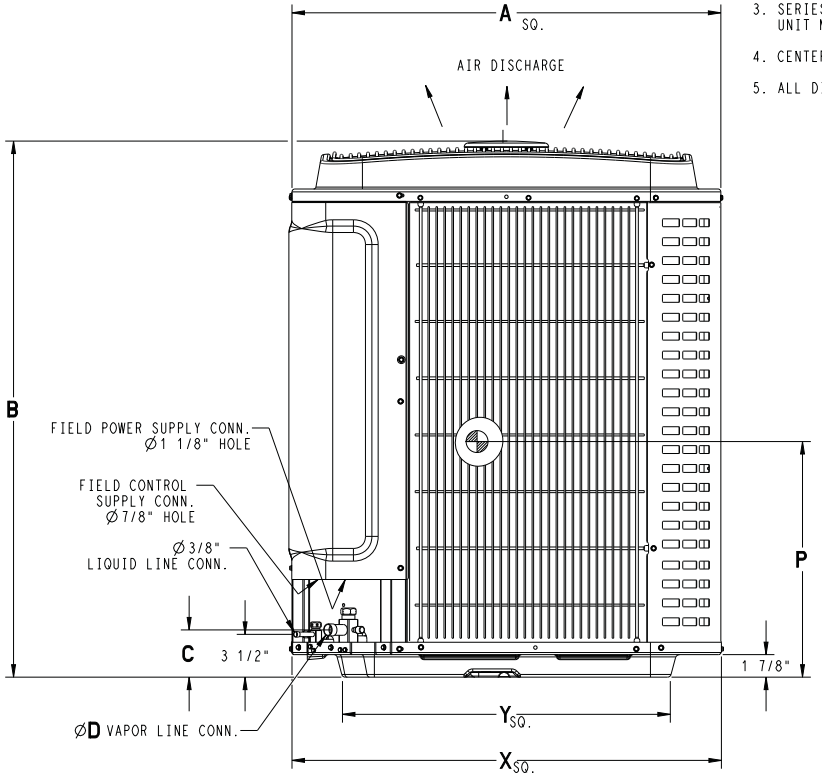
| 208/230-1-60 | 230-1-60 | 208/230-3-60 | 460-3-60 |
|---|---|---|---|

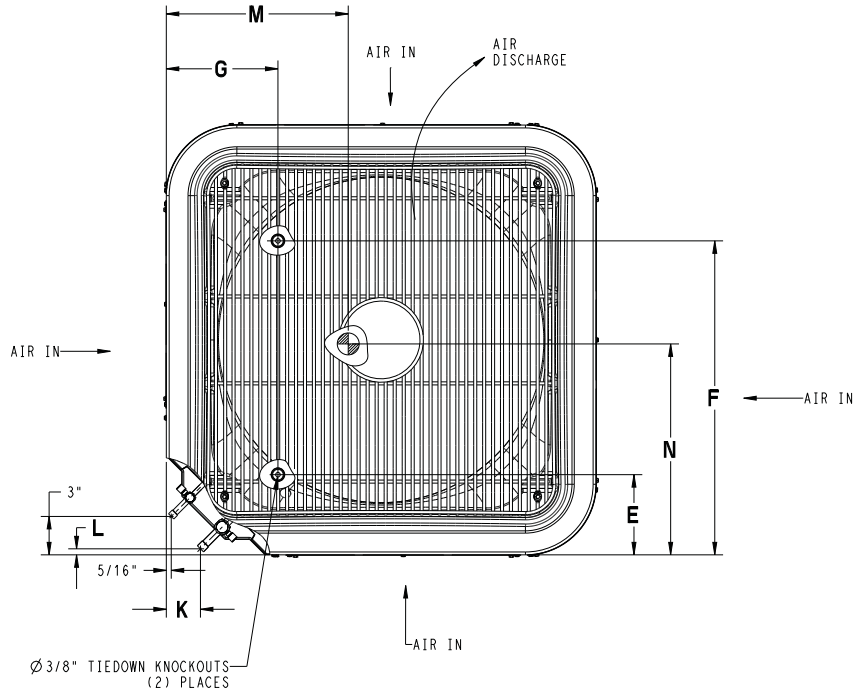
X = YES
O = NO

NOTES:

1. ALLOW 30" CLEARANCE TO SERVICE SIDE OF UNIT, 48" ABOVE UNIT, 6" ON ONE SIDE, 12" ON REMAINING SIDE, AND 24" BETWEEN UNITS FOR PROPER AIRFLOW.
2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 55°F, MAX. 115°F.
3. SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.
4. CENTER OF GRAVITY ⊕.
5. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

| UNIT SIZE | "X" MIN GROUND MOUNTING PAD APPLICATION DIMENSIONS | "Y" MIN ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS |
|---|---|---|
| 24,25,36 | 23 1/8" | 17 3/4" |
| - | 25 3/4" | 20 7/16" |
| 37,48,60 | 31 3/16" | 23" |
| - | 35" | 26 3/4" |




Representative drawing only, some models may vary in appearance.

SD5334–4 REV B

* = C, H, T

# DIMENSIONS – SI

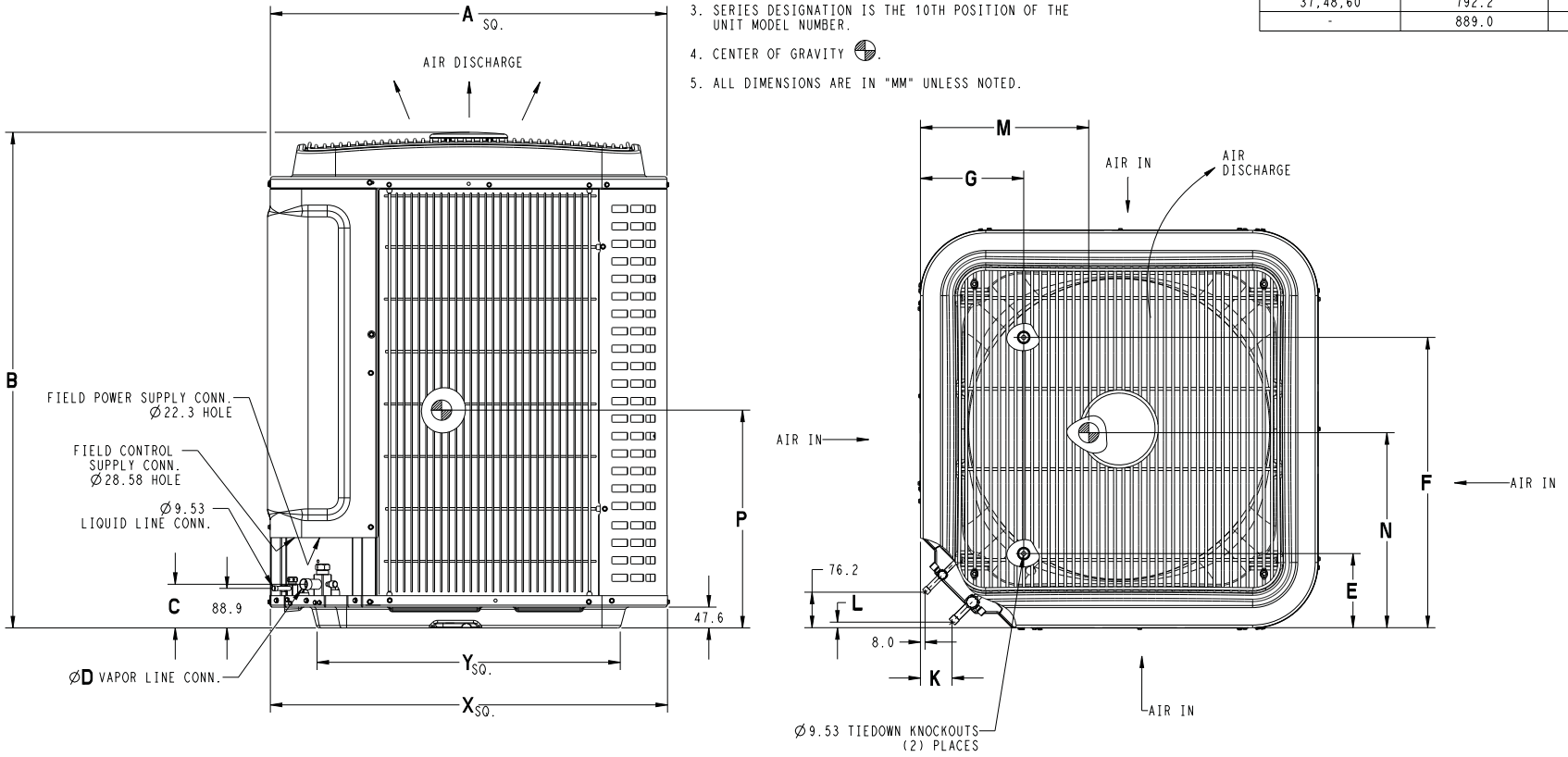
| UNIT | SERIES | ELECTRICAL CHARACTERISTICS | | | | A | B | C | D | E | F | G | K | L | M | N | P | OPERATING WEIGHT (Kgs) | SHIPPING WEIGHT (Kgs) | SHIPPING DIMENSIONS (L x W x H) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 208/230-1-60 | 230-1-60 | 208/230-3-60 | 460-3-60 | | | | | | | | | | | | | | | |
| *VH824GKA | 1 | X | O | O | O | 587.3 | 807.3 | 96.1 | 19.1 | 112.7 | 458.8 | 198.4 | 71.4 | 12.7 | 285.8 | 285.8 | 368.3 | 60 | 70 | 641.5 X 641.5 X 905.2 |
| *VH825GKA | 1 | X | O | O | O | 587.3 | 980.1 | 96.1 | 19.1 | 112.7 | 458.8 | 198.4 | 71.4 | 12.7 | 273.1 | 273.1 | 463.6 | 71 | 82 | 641.5 X 641.5 X 1102.2 |
| *VH836GKA | 1 | X | O | O | O | 587.3 | 980.1 | 96.1 | 19.1 | 112.7 | 458.8 | 198.4 | 71.4 | 12.7 | 273.1 | 273.1 | 463.6 | 71 | 82 | 641.5 X 641.5 X 1102.2 |
| *VH837GKA | 1 | X | O | O | O | 792.2 | 988.5 | 98.4 | 22.2 | 166.7 | 627.1 | 231.8 | 74.6 | 15.9 | 368.3 | 371.5 | 476.3 | 94 | 111 | 846.6 X 846.6 X 1172.2 |
| *VH848GKA | 1 | X | O | O | O | 792.2 | 988.5 | 98.4 | 22.2 | 166.7 | 627.1 | 231.8 | 74.6 | 15.9 | 368.3 | 371.5 | 476.3 | 94 | 111 | 846.6 X 846.6 X 1172.2 |
| *VH860GKA | 1 | X | O | O | O | 792.2 | 1074.9 | 98.4 | 22.2 | 166.7 | 627.1 | 231.8 | 74.6 | 15.9 | 419.1 | 381.0 | 508.0 | 106 | 123 | 846.6 X 846.6 X 1258.6 |

X = YES
O = NO

NOTES:

1. ALLOW 762.0 CLEARANCE TO SERVICE SIDE OF UNIT, 1219.2 ABOVE UNIT, 152.4 ON ONE SIDE, 304.8 ON REMAINING SIDE, AND 609.6 BETWEEN UNITS FOR PROPER AIRFLOW.
2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 13°C, MAX. 46°C.
3. SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.
4. CENTER OF GRAVITY ⊕.
5. ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

| UNIT SIZE | "X" MIN GROUND MOUNTING PAD APPLICATION DIMENSIONS | "Y" MIN ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS |
|---|---|---|
| 24,25,36 | 587.4 | 451.3 |
| - | 654.0 | 518.5 |
| 37,48,60 | 792.2 | 583.2 |
| - | 889.0 | 679.7 |

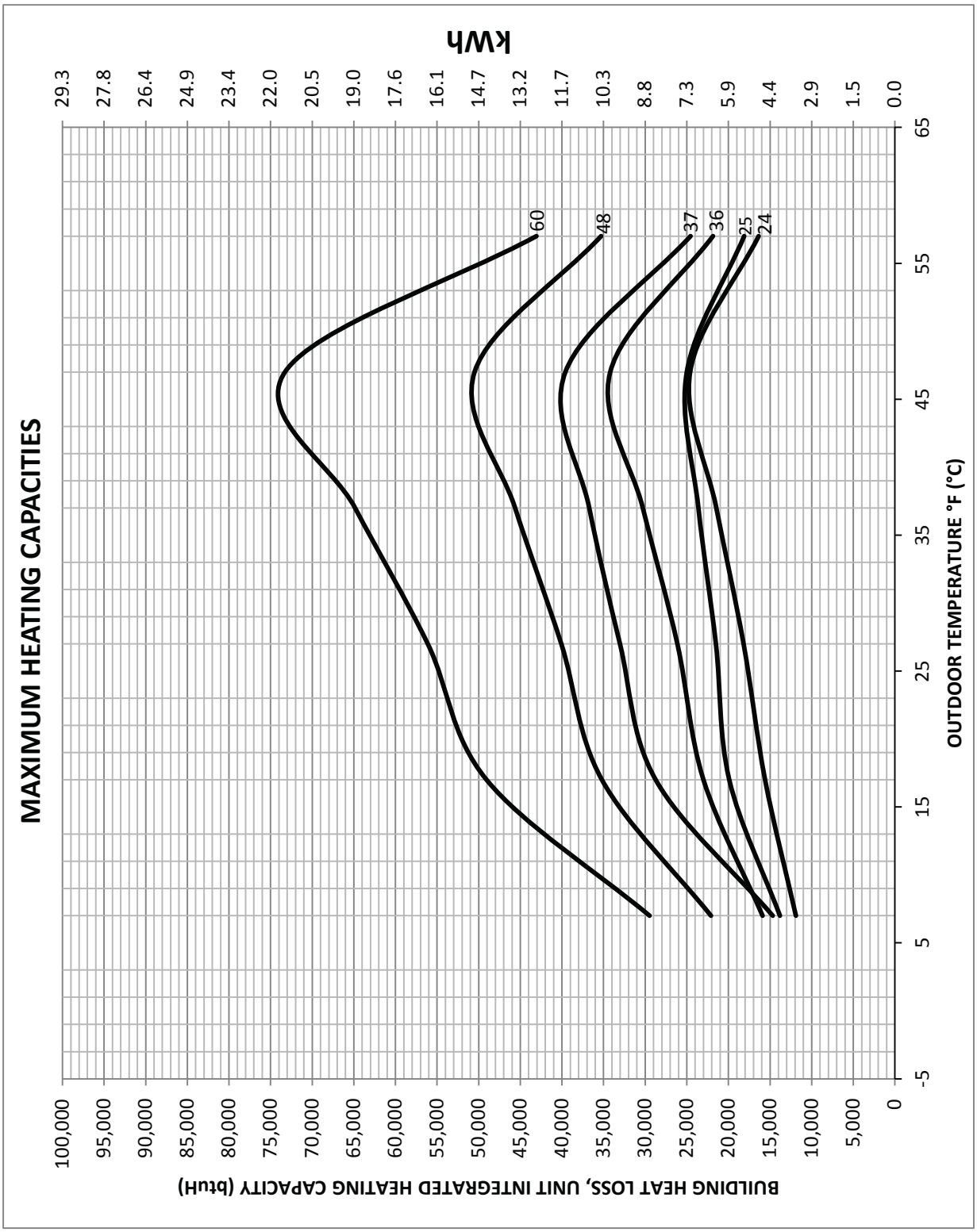



Representative drawing only, some models may vary in appearance.

SD5334–4 REV B

* = C, H, T

## HVH8 BALANCE POINT WORKSHEET



# TESTED AHRI COMBINATION RATINGS*

NOTE: Ratings contained in this document are subject to change at any time.
For AHRI ratings certificates, please refer to the AHRI directory. **www.ahridirectory.org**
Additional ratings and system combinations can be accessed via the ACiQ database at:
http://www.icpeqp.com/AHRIratings/ratings.aspx?Brand=ACiQ
Or scan this QR code:

| Outdoor Model | Indoor Model | Furnace Model | Stages | Cooling | | | | Heating | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | High Temp | | Low Temp | |
| | | | | Cooling Cap. | SEER | EER | ID CFM | HSPF | Capacity 47°F (8°C) | COP | Capacity 17°F (−8°C) | COP |
| HVH824GKA101 | FCM4X24***L + WALLCON | | 5 | 24,000 | 17.5 | 11.0 | 825 | 10.5 | 24,400 | 3.61 | 15,800 | 2.60 |
| HVH824GKA101 | FVM4X24***L | | 2 | 23,200 | 15.0 | 10.5 | 700 | 9.0 | 23,800 | 3.42 | 15,600 | 2.52 |
| HVH825GKA101 | FCM4X48***L + WALLCON | | 5 | 24,000 | 18.0 | 12.5 | 825 | 10.0 | 26,800 | 3.56 | 19,900 | 2.58 |
| HVH825GKA101 | FVM4X36***L | | 2 | 23,200 | 16.5 | 12.0 | 700 | 8.2 | 30,200 | 3.04 | 19,900 | 2.38 |
| HVH836GKA101 | FCM4X48***L + WALLCON | | 5 | 34,200 | 17.5 | 10.5 | 1050 | 10.5 | 34,200 | 3.56 | 23,000 | 2.58 |
| HVH836GKA101 | FVM4X48***L | | 2 | 34,600 | 15.5 | 10.0 | 1050 | 9.0 | 34,000 | 3.58 | 22,400 | 2.58 |
| HVH837GKA101 | FCM4X60***L + WALLCON | | 5 | 33,600 | 19.0 | 13.0 | 1050 | 11.0 | 40,000 | 3.50 | 30,400 | 2.66 |
| HVH848GKA101 | FCM4X48***L + WALLCON | | 5 | 46,000 | 18.0 | 11.0 | 1400 | 11.0 | 50,500 | 3.44 | 35,200 | 2.66 |
| HVH860GKA101 | FCM4X60***L + WALLCON | | 5 | 57,000 | 17.0 | 10.0 | 1600 | 10.0 | 60,000 | 3.10 | 44,500 | 2.48 |
| HVH860GKA101 | FVM4X60***L | | 2 | 57,000 | 15.0 | 10.0 | 1750 | 9.0 | 60,000 | 3.05 | 44,000 | 2.45 |

Ratings **with** "+ WALLCON" are **communicating** systems with Observer® Wall Control and 5−stages of operation.
Ratings **without** "+ WALLCON" are **non−communicating** systems with 2−stage operation.

* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:
**Cooling Standard:** 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.
**High−Temp Heating Standard:** 70°F (21°C) db indoor entering air temperature and 47°F (8°C) db 43°F (6°C) wb air entering outdoor unit.
**Low−Temp Heating Standard:** 70°F (21°C) db indoor entering air temperature and 17°F (−8°C) db 15°F (−9°C) wb air entering outdoor unit.
**COP** — Coefficient of Performance
**EER** — Energy Efficiency Ratio
**HSPF** — Heating Seasonal Performance Factor
**SEER** — Seasonal Energy Efficiency Ratio
**WALLCON**— Wall Control

**NOTE**: Ratings contained in this document are subject to change at any time.

# HVH824

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR | HVH824 / FCM4X24*L Efficiency Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** |
| | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 825 | 23.99 | 9.99 | 3.08 | 825 | 25.38 | 10.48 | 2.68 | 825 | 26.51 | 10.88 | 2.31 | 825 | 27.76 | 11.32 | 1.97 | 825 | 28.92 | 11.74 | 1.65 | 825 | 30.00 | 12.14 | 1.37 |
| | 67(19.4) | | 21.78 | 14.06 | 3.03 | | 23.03 | 14.51 | 2.64 | | 24.07 | 14.89 | 2.29 | | 25.19 | 15.30 | 1.95 | | 26.23 | 15.68 | 1.65 | | 27.21 | 16.06 | 1.38 |
| | 63(17.2) | | 20.14 | 17.25 | 2.99 | | 21.29 | 17.68 | 2.61 | | 22.25 | 18.03 | 2.26 | | 23.28 | 18.42 | 1.94 | | 24.25 | 18.78 | 1.65 | | 25.14 | 19.13 | 1.38 |
| | 57(13.9) | | 19.20 | 19.20 | 2.96 | | 20.07 | 20.07 | 2.59 | | 20.78 | 20.78 | 2.25 | | 21.53 | 21.53 | 1.93 | | 22.23 | 22.23 | 1.65 | | 22.88 | 22.88 | 1.39 |
| 80 (26.7) | 72(22.2) | 825 | 23.92 | 14.05 | 3.08 | 825 | 25.31 | 14.51 | 2.68 | 825 | 26.44 | 14.88 | 2.31 | 825 | 27.69 | 15.29 | 1.97 | 825 | 28.85 | 15.69 | 1.65 | 825 | 29.93 | 16.06 | 1.36 |
| | 67(19.4) | | 21.71 | 18.07 | 3.03 | | 22.96 | 18.50 | 2.64 | | 24.00 | 18.85 | 2.29 | | 25.12 | 19.23 | 1.95 | | 26.16 | 19.59 | 1.65 | | 27.14 | 19.94 | 1.38 |
| | 63(17.2) | | 20.49 | 20.49 | 3.00 | | 21.42 | 21.42 | 2.62 | | 22.32 | 21.83 | 2.27 | | 23.31 | 22.27 | 1.94 | | 24.26 | 22.63 | 1.65 | | 25.15 | 22.94 | 1.38 |
| | 57(13.9) | | 20.46 | 20.46 | 3.00 | | 21.38 | 21.38 | 2.62 | | 22.11 | 22.11 | 2.26 | | 22.90 | 22.90 | 1.94 | | 23.62 | 23.62 | 1.65 | | 24.28 | 24.28 | 1.39 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 650 | 14.71 | 6.31 | 1.53 | 650 | 16.06 | 6.81 | 1.40 | 650 | 17.24 | 7.25 | 1.24 | 650 | 18.61 | 7.76 | 1.10 | 650 | 20.01 | 8.28 | 0.95 | 650 | 21.40 | 8.82 | 0.80 |
| | 67(19.4) | | 13.26 | 9.12 | 1.52 | | 14.47 | 9.68 | 1.40 | | 15.56 | 10.19 | 1.25 | | 16.82 | 10.77 | 1.11 | | 18.08 | 11.35 | 0.97 | | 19.33 | 11.95 | 0.83 |
| | 63(17.2) | | 12.21 | 11.32 | 1.52 | | 13.33 | 11.93 | 1.40 | | 14.34 | 12.51 | 1.25 | | 15.50 | 13.13 | 1.12 | | 16.65 | 13.77 | 0.98 | | 17.80 | 14.40 | 0.85 |
| | 57(13.9) | | 11.92 | 11.92 | 1.51 | | 12.87 | 12.87 | 1.40 | | 13.73 | 13.73 | 1.25 | | 14.68 | 14.68 | 1.12 | | 15.62 | 15.62 | 0.99 | | 16.56 | 16.56 | 0.87 |
| 80 (26.7) | 72(22.2) | 650 | 14.65 | 9.16 | 1.53 | 650 | 16.00 | 9.72 | 1.40 | 650 | 17.18 | 10.22 | 1.24 | 650 | 18.55 | 10.80 | 1.10 | 650 | 19.95 | 11.38 | 0.95 | 650 | 21.35 | 11.99 | 0.79 |
| | 67(19.4) | | 13.23 | 11.93 | 1.52 | | 14.43 | 12.55 | 1.40 | | 15.52 | 13.13 | 1.25 | | 16.77 | 13.77 | 1.11 | | 18.02 | 14.42 | 0.97 | | 19.28 | 15.07 | 0.83 |
| | 63(17.2) | | 12.80 | 12.80 | 1.52 | | 13.80 | 13.80 | 1.40 | | 14.71 | 14.71 | 1.25 | | 15.72 | 15.72 | 1.11 | | 16.74 | 16.71 | 0.98 | | 17.88 | 17.42 | 0.85 |
| | 57(13.9) | | 12.78 | 12.78 | 1.52 | | 13.78 | 13.78 | 1.40 | | 14.68 | 14.68 | 1.25 | | 15.69 | 15.69 | 1.12 | | 16.69 | 16.69 | 0.98 | | 17.68 | 17.68 | 0.85 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 650 | 10.98 | 4.91 | 1.02 | 650 | 12.29 | 5.41 | 1.00 | 585 | 7.32 | 3.62 | 0.42 | 585 | 8.41 | 4.06 | 0.40 | 585 | 9.55 | 4.54 | 0.36 | 585 | 10.67 | 5.00 | 0.30 |
| | 67(19.4) | | 9.86 | 7.42 | 1.02 | | 11.05 | 8.01 | 1.00 | | 6.54 | 5.94 | 0.43 | | 7.50 | 6.56 | 0.42 | | 8.51 | 7.19 | 0.38 | | 9.56 | 7.86 | 0.33 |
| | 63(17.2) | | 9.15 | 9.15 | 1.02 | | 10.29 | 9.90 | 1.00 | | 6.40 | 6.40 | 0.43 | | 7.27 | 7.27 | 0.42 | | 8.18 | 8.18 | 0.39 | | 9.11 | 9.11 | 0.35 |
| | 57(13.9) | | 9.13 | 9.13 | 1.02 | | 10.15 | 10.15 | 1.00 | | 6.40 | 6.40 | 0.43 | | 7.27 | 7.27 | 0.42 | | 8.17 | 8.17 | 0.39 | | 9.10 | 9.10 | 0.35 |
| 80 (26.7) | 72(22.2) | 650 | 10.93 | 7.45 | 1.02 | 650 | 12.27 | 8.08 | 1.00 | 585 | 7.28 | 5.99 | 0.42 | 585 | 8.36 | 6.61 | 0.40 | 585 | 9.50 | 7.26 | 0.36 | 585 | 10.68 | 7.95 | 0.30 |
| | 67(19.4) | | 9.88 | 9.86 | 1.02 | | 11.12 | 10.63 | 1.00 | | 6.97 | 6.97 | 0.43 | | 7.91 | 7.91 | 0.41 | | 8.89 | 8.89 | 0.37 | | 9.91 | 9.91 | 0.32 |
| | 63(17.2) | | 9.86 | 9.86 | 1.02 | | 10.95 | 10.95 | 1.00 | | 6.96 | 6.96 | 0.43 | | 7.90 | 7.90 | 0.41 | | 8.88 | 8.88 | 0.37 | | 9.90 | 9.90 | 0.32 |
| | 57(13.9) | | 9.85 | 9.85 | 1.02 | | 10.94 | 10.94 | 1.00 | | 6.95 | 6.95 | 0.43 | | 7.89 | 7.89 | 0.41 | | 8.87 | 8.87 | 0.37 | | 9.88 | 9.88 | 0.32 |

## DETAILED COOLING CAPACITIES#– COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH824 / FCM4X24***L Comfort + Dehumidify Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW |
| | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 642 | 24.61 | 9.99 | 2.60 | 608 | 25.43 | 10.26 | 2.22 | 634 | 26.73 | 10.77 | 1.90 | 663 | 27.99 | 11.27 | 1.60 | 708 | 29.29 | 11.79 | 1.33 | | | | |
| | 67(19.4) | | 22.32 | 13.17 | 2.56 | | 23.05 | 13.27 | 2.20 | | 24.23 | 13.87 | 1.89 | | 25.36 | 14.48 | 1.60 | | 26.57 | 15.19 | 1.34 | | | | |
| | 63(17.2) | | 20.62 | 15.67 | 2.53 | | 21.29 | 15.62 | 2.18 | | 22.39 | 16.30 | 1.87 | | 23.44 | 17.00 | 1.60 | | 24.55 | 17.84 | 1.34 | | | | |
| | 57(13.9) | | 18.73 | 18.73 | 2.50 | | 19.03 | 18.99 | 2.15 | | 20.00 | 19.77 | 1.86 | | 20.94 | 20.63 | 1.59 | | 21.98 | 21.66 | 1.35 | | | | |
| 80 (26.7) | 72(22.2) | 642 | 24.55 | 13.18 | 2.60 | 608 | 25.37 | 13.28 | 2.23 | 634 | 26.67 | 13.88 | 1.90 | 663 | 27.93 | 14.49 | 1.60 | 708 | 29.23 | 15.20 | 1.33 | | | | |
| | 67(19.4) | | 22.26 | 16.33 | 2.56 | | 23.00 | 16.25 | 2.20 | | 24.17 | 16.95 | 1.89 | | 25.31 | 17.67 | 1.60 | | 26.51 | 18.55 | 1.34 | | | | |
| | 63(17.2) | | 20.61 | 18.80 | 2.54 | | 21.27 | 18.58 | 2.18 | | 22.35 | 19.35 | 1.87 | | 23.41 | 20.17 | 1.60 | | 24.53 | 21.19 | 1.35 | | | | |
| | 57(13.9) | | 19.90 | 19.90 | 2.52 | | 20.17 | 20.17 | 2.16 | | 21.12 | 21.12 | 1.86 | | 22.06 | 22.06 | 1.59 | | 23.16 | 23.16 | 1.35 | | | | |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 437 | 15.21 | 6.19 | 1.37 | 415 | 16.13 | 6.52 | 1.21 | 437 | 17.53 | 7.08 | 1.07 | 456 | 18.92 | 7.64 | 0.93 | 484 | 20.37 | 8.22 | 0.78 | | | | |
| | 67(19.4) | | 13.70 | 8.14 | 1.37 | | 14.54 | 8.44 | 1.21 | | 15.81 | 9.12 | 1.08 | | 17.07 | 9.81 | 0.95 | | 18.41 | 10.60 | 0.81 | | | | |
| | 63(17.2) | | 12.58 | 9.66 | 1.36 | | 13.37 | 9.90 | 1.21 | | 14.52 | 10.71 | 1.08 | | 15.68 | 11.49 | 0.96 | | 16.92 | 12.42 | 0.83 | | | | |
| | 57(13.9) | | 11.42 | 11.42 | 1.35 | | 11.92 | 11.92 | 1.20 | | 12.92 | 12.92 | 1.09 | | 13.91 | 13.91 | 0.98 | | 15.03 | 15.03 | 0.86 | | | | |
| 80 (26.7) | 72(22.2) | 437 | 15.17 | 8.18 | 1.37 | 415 | 16.09 | 8.46 | 1.21 | 437 | 17.47 | 9.16 | 1.07 | 456 | 18.87 | 9.88 | 0.93 | 484 | 20.36 | 10.65 | 0.78 | | | | |
| | 67(19.4) | | 13.66 | 10.10 | 1.37 | | 14.51 | 10.33 | 1.21 | | 15.77 | 11.18 | 1.08 | | 17.03 | 12.00 | 0.95 | | 18.37 | 12.96 | 0.81 | | | | |
| | 63(17.2) | | 12.58 | 11.62 | 1.36 | | 13.35 | 11.80 | 1.21 | | 14.51 | 12.75 | 1.08 | | 15.66 | 13.67 | 0.96 | | 16.91 | 14.77 | 0.83 | | | | |
| | 57(13.9) | | 12.18 | 12.18 | 1.36 | | 12.69 | 12.69 | 1.21 | | 13.76 | 13.76 | 1.09 | | 14.81 | 14.81 | 0.97 | | 15.99 | 15.99 | 0.84 | | | | |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72(22.2) | 362 | 11.44 | 4.66 | 0.97 | 222 | 6.60 | 2.69 | 0.40 | 234 | 7.58 | 3.09 | 0.38 | 229 | 8.49 | 3.44 | 0.35 | 245 | 9.61 | 3.90 | 0.30 | | | | |
| | 67(19.4) | | 10.26 | 6.13 | 0.97 | | 5.88 | 3.57 | 0.41 | | 6.74 | 4.08 | 0.40 | | 7.54 | 4.46 | 0.38 | | 8.50 | 5.05 | 0.33 | | | | |
| | 63(17.2) | | 9.39 | 7.28 | 0.97 | | 5.34 | 4.26 | 0.41 | | 6.12 | 4.85 | 0.41 | | 6.85 | 5.27 | 0.39 | | 7.75 | 5.98 | 0.36 | | | | |
| | 57(13.9) | | 8.56 | 8.56 | 0.97 | | 4.90 | 4.90 | 0.42 | | 5.60 | 5.60 | 0.42 | | 6.18 | 6.18 | 0.41 | | 7.00 | 7.00 | 0.38 | | | | |
| 80 (26.7) | 72(22.2) | 362 | 11.42 | 6.18 | 0.97 | 222 | 6.57 | 3.61 | 0.40 | 234 | 7.55 | 4.13 | 0.38 | 229 | 8.46 | 4.53 | 0.35 | 245 | 9.58 | 5.13 | 0.30 | | | | |
| | 67(19.4) | | 10.24 | 7.63 | 0.97 | | 5.86 | 4.48 | 0.41 | | 6.72 | 5.11 | 0.40 | | 7.52 | 5.54 | 0.38 | | 8.53 | 6.25 | 0.33 | | | | |
| | 63(17.2) | | 9.40 | 8.79 | 0.97 | | 5.34 | 5.17 | 0.41 | | 6.12 | 5.89 | 0.41 | | 6.85 | 6.35 | 0.39 | | 7.75 | 7.20 | 0.36 | | | | |
| | 57(13.9) | | 9.15 | 9.15 | 0.97 | | 5.26 | 5.26 | 0.42 | | 6.02 | 6.02 | 0.41 | | 6.63 | 6.63 | 0.40 | | 7.51 | 7.51 | 0.37 | | | | |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 43

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH824

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X24***L | 1.00 | 1.00 | |
| FCM4X36***L | 1.01 | 1.01 | |
| EA*4X36L14A* | 1.00 | 1.05 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.05 | *9MA*0601714A** |
| EA*4X36L17A* | 1.00 | 1.05 | *9MA*0801714A** |
| EA*4X36L17A* | 1.01 | 1.01 | *8MV*0701412** |
| EA*4X36L17A* | 1.01 | 1.01 | *8MV*0901716** |
| EA*4X36L21A* | 1.00 | 1.05 | *9MA*0601714A** |
| EA*4X36L21A* | 1.00 | 1.05 | *9MA*0801714A** |
| EA*4X36L21A* | 1.00 | 1.05 | *9MA*0602120A** |
| EA*4X36L21A* | 1.01 | 1.01 | *9MA*0802120A** |
| EA*4X36L21A* | 1.01 | 1.01 | *9MA*1002122A** |
| EA*4X42L21A* | 1.01 | 1.06 | *9MA*0601714A** |
| EA*4X42L21A* | 1.01 | 1.06 | *9MA*0801714A** |
| EA*4X42L21A* | 1.01 | 1.06 | *9MA*0602120A** |
| EA*4X42L21A* | 1.02 | 1.02 | *8MV*0901716** |
| EA*4X42L24A* | 1.01 | 1.06 | *9MA*0602120A** |
| EA*4X48L17A* | 1.02 | 1.07 | *9MA*0601714A** |
| EA*4X48L17A* | 1.03 | 1.03 | *9MA*0801714A** |
| EA*4X48L17A* | 1.03 | 1.03 | *8MV*0701412** |
| EA*4X48L17A* | 1.03 | 1.03 | *8MV*0901716** |
| EA*4X48L21A* | 1.02 | 1.07 | *9MA*0601714A** |
| EA*4X48L21A* | 1.02 | 1.02 | *9MA*0801714A** |
| EA*4X48L21A* | 1.03 | 1.03 | *8MV*0901716** |
| EN(A,D,W)4X36L17** | 1.00 | 1.05 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.00 | 1.05 | *9MA*0801714A** |
| EN(A,D)4X36L21** | 1.00 | 1.05 | *9MA*0601714A** |
| EN(A,D)4X36L21** | 1.00 | 1.05 | *9MA*0801714A** |
| END4X42L17** | 1.01 | 1.06 | *9MA*0601714A** |
| END4X42L17** | 1.02 | 1.07 | *9MA*0801714A** |
| END4X42L17** | 1.02 | 1.02 | *8MV*0701412** |
| END4X42L17** | 1.02 | 1.02 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 1.01 | 1.06 | *9MA*0601714A** |
| EN(A,D,W)4X42L21** | 1.01 | 1.06 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 1.02 | 1.02 | *8MV*0901716** |
| EN(A,D,W)4X48L21** | 1.02 | 1.07 | *9MA*0601714A** |
| EN(A,D,W)4X48L21** | 1.02 | 1.02 | *9MA*0801714A** |
| EN(A,D,W)4X48L21** | 1.03 | 1.03 | *8MV*0901716** |
| EHD4X36AAL | 1.02 | 1.07 | *9MA*0601714A** |
| EHD4X36AAL | 1.02 | 1.07 | *9MA*0801714A** |
| EHD4X36AAL | 1.02 | 1.07 | *8MV*0701412** |
| EHD4X36AAL | 1.03 | 1.07 | *8MV*0901716** |
| EHD4X42AAL | 1.02 | 1.07 | *9MA*0601714A** |
| EHD4X42AAL | 1.03 | 1.07 | *9MA*0801714A** |
| EHD4X42AAL | 1.03 | 1.07 | *8MV*0701412** |
| EHD4X42AAL | 1.03 | 1.03 | *8MV*0901716** |
| EHD4X48AAL | 1.03 | 1.07 | *9MA*0601714A** |
| EHD4X48AAL | 1.03 | 1.07 | *9MA*0801714A** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X24***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X24***L | 0.98 | 0.84 | 0.97 | 0.96 | |
| EA*4X24L14A* | 0.96 | 0.91 | 0.96 | 1.07 | *9MX*0401410A** |
| EA*4X24L17A* | 0.95 | 0.85 | 0.97 | 1.06 | *9MX*0401712A** |
| EA*4X24L17A* | 0.97 | 0.88 | 1.00 | 1.12 | OMV098J12* |
| EA*4X24L17A* | 0.97 | 0.88 | 1.00 | 1.09 | OLV098A12* |
| EA*4X24L17A* | 0.97 | 0.84 | 1.00 | 1.04 | OMV112K14A |
| EA*4X30L14A* | 0.97 | 0.92 | 0.96 | 1.07 | *9MX*0401410A** |
| EA*4X30L17A* | 0.96 | 0.86 | 0.97 | 1.06 | *9MX*0401712A** |
| EA*4X30L17A* | 0.98 | 0.88 | 1.00 | 1.11 | OMV098J12* |
| EA*4X30L17A* | 0.98 | 0.84 | 1.00 | 1.08 | OLV098A12* |
| EA*4X30L17A* | 0.99 | 0.85 | 1.00 | 1.03 | OMV112K14A |
| EA*4X36L14A* | 0.97 | 0.92 | 0.97 | 1.07 | *9MX*0401410A** |
| EA*4X36L17A* | 0.97 | 0.83 | 0.97 | 1.05 | *9MX*0401712A** |
| EN(A,D)4X30L14** | 0.97 | 0.92 | 0.96 | 1.07 | *9MX*0401410A** |
| EN(A,D)4X30L17** | 0.96 | 0.86 | 0.96 | 1.05 | *9MX*0401712A** |
| EN(A,D)4X30L17** | 0.98 | 0.88 | 1.00 | 1.11 | OMV098J12* |
| EN(A,D)4X30L17** | 0.98 | 0.88 | 1.00 | 1.08 | OLV098A12* |
| EN(A,D)4X30L17** | 0.99 | 0.85 | 1.00 | 1.03 | OMV112K14A |
| EN(A,D,W)4X36L17** | 0.96 | 0.86 | 0.96 | 1.05 | *9MX*0401712A** |
| END4X42L17** | 0.97 | 0.83 | 0.97 | 1.05 | *9MX*0401712A** |
| EHD4X24AAL | 0.97 | 0.92 | 0.96 | 1.07 | *9MX*0401410A** |
| EHD4X24AAL | 0.95 | 0.85 | 0.97 | 1.06 | *9MX*0401712A** |
| EHD4X30AAL | 0.97 | 0.92 | 0.97 | 1.07 | *9MX*0401410A** |
| EHD4X30AAL | 0.96 | 0.86 | 0.97 | 1.05 | *9MX*0401712A** |
| EHD4X36AAL | 0.99 | 0.94 | 0.97 | 1.06 | *9MX*0401410A** |
| EHD4X36AAL | 0.97 | 0.88 | 0.97 | 1.04 | *9MX*0401712A** |
| EA*4X36L17A* | 0.97 | 0.88 | 0.99 | 1.13 | *9MV*0601412A** |
| EA*4X36L17A* | 0.98 | 0.84 | 0.99 | 1.05 | *9MV*0601714A** |
| EA*4X36L17A* | 0.98 | 0.84 | 0.99 | 1.04 | *9MV*0801716A** |
| EA*4X36L17A* | 0.97 | 0.83 | 0.97 | 1.05 | *9MX*0401712A** |
| EA*4X36L21A* | 0.97 | 0.88 | 0.99 | 1.12 | *9MV*0401712A** |
| EA*4X36L21A* | 0.98 | 0.84 | 0.99 | 1.05 | *9MV*0601714A** |
| EA*4X36L21A* | 0.98 | 0.84 | 1.00 | 1.04 | *9MV*0801716A** |

# HVH824

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH824 / FCM4X24***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 450 | 12.00 | 11.03 | 1.37 | 825 | 15.76 | 14.37 | 1.69 | 825 | 18.37 | 16.31 | 1.74 |
| 70 (21.1) | | 11.90 | 10.93 | 1.45 | | 15.60 | 14.22 | 1.77 | | 18.18 | 16.15 | 1.83 |
| 75 (23.3) | | 11.70 | 10.75 | 1.50 | | 15.44 | 14.07 | 1.86 | | 17.99 | 15.98 | 1.92 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 300 | 8.37 | 7.69 | 0.89 | 500 | 10.11 | 9.21 | 0.88 | 650 | 11.81 | 10.49 | 0.90 |
| 70 (21.1) | | 8.22 | 7.56 | 0.94 | | 9.93 | 9.05 | 0.93 | | 11.61 | 10.31 | 0.96 |
| 75 (23.3) | | 8.07 | 7.42 | 0.98 | | 9.75 | 8.89 | 0.99 | | 11.41 | 10.13 | 1.01 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 300 | 8.37 | 7.69 | 0.89 | 500 | 10.10 | 9.21 | 0.88 | 650 | 10.55 | 9.37 | 0.81 |
| 70 (21.1) | | 8.22 | 7.56 | 0.94 | | 9.93 | 9.05 | 0.93 | | 10.36 | 9.20 | 0.84 |
| 75 (23.3) | | 8.07 | 7.42 | 0.98 | | 9.75 | 8.89 | 0.99 | | 10.17 | 9.03 | 0.89 |

| INDOOR AIR | HVH824 / FCM4X24***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 825 | 21.73 | 19.77 | 1.82 | 825 | 24.94 | 24.94 | 1.89 | 650 | 16.71 | 16.71 | 1.01 |
| 70 (21.1) | | 21.46 | 19.52 | 1.92 | | 24.60 | 24.60 | 1.99 | | 16.37 | 16.37 | 1.08 |
| 75 (23.3) | | 21.18 | 19.27 | 2.02 | | 24.26 | 24.26 | 2.10 | | 16.03 | 16.03 | 1.16 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 650 | 13.45 | 12.24 | 0.95 | 650 | 15.09 | 15.09 | 0.99 | 650 | 16.71 | 16.71 | 1.01 |
| 70 (21.1) | | 13.21 | 12.02 | 1.01 | | 14.83 | 14.83 | 1.06 | | 16.38 | 16.38 | 1.09 |
| 75 (23.3) | | 12.98 | 11.81 | 1.07 | | 14.56 | 14.56 | 1.13 | | 16.07 | 16.07 | 1.16 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 650 | 11.91 | 10.84 | 0.81 | 585 | 7.42 | 7.42 | 0.37 | 585 | 7.98 | 7.98 | 0.37 |
| 70 (21.1) | | 11.62 | 10.58 | 0.87 | | 7.20 | 7.20 | 0.42 | | 7.74 | 7.74 | 0.42 |
| 75 (23.3) | | 11.38 | 10.35 | 0.93 | | 6.99 | 6.99 | 0.46 | | 7.52 | 7.52 | 0.47 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# HVH824

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH825 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 450 | 12.00 | 11.03 | 1.37 | 825 | 15.76 | 14.37 | 1.69 | 825 | 18.37 | 16.31 | 1.74 |
| **70 (21.1)** | | 11.90 | 10.93 | 1.45 | | 15.60 | 14.22 | 1.77 | | 18.18 | 16.15 | 1.83 |
| **75 (23.3)** | | 11.70 | 10.75 | 1.50 | | 15.44 | 14.07 | 1.86 | | 17.99 | 15.98 | 1.92 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 300 | 8.37 | 7.69 | 0.89 | 500 | 10.11 | 9.21 | 0.88 | 650 | 11.81 | 10.49 | 0.90 |
| **70 (21.1)** | | 8.22 | 7.56 | 0.94 | 500 | 9.93 | 9.05 | 0.93 | 650 | 11.61 | 10.31 | 0.96 |
| **75 (23.3)** | | 8.07 | 7.42 | 0.98 | | 9.75 | 8.89 | 0.99 | | 11.41 | 10.13 | 1.01 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 300 | 8.37 | 7.69 | 0.89 | 500 | 10.10 | 9.21 | 0.88 | 650 | 10.55 | 9.37 | 0.81 |
| **70 (21.1)** | | 8.22 | 7.56 | 0.94 | | 9.93 | 9.05 | 0.93 | | 10.36 | 9.20 | 0.84 |
| **75 (23.3)** | | 8.07 | 7.42 | 0.98 | | 9.75 | 8.89 | 0.99 | | 10.17 | 9.03 | 0.89 |

| INDOOR AIR | HVH825 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| | | | | | | | | | | | | |
| **65 (18.3)** | 825 | 21.73 | 19.77 | 1.82 | 825 | 24.94 | 24.94 | 1.89 | 650 | 16.71 | 16.71 | 1.01 |
| **70 (21.1)** | | 21.46 | 19.52 | 1.92 | | 24.60 | 24.60 | 1.99 | | 16.37 | 16.37 | 1.08 |
| **75 (23.3)** | | 21.18 | 19.27 | 2.02 | | 24.26 | 24.26 | 2.10 | | 16.03 | 16.03 | 1.16 |
| | | | | | | | | | | | | |
| **65 (18.3)** | 650 | 13.45 | 12.24 | 0.95 | 650 | 15.09 | 15.09 | 0.99 | 650 | 16.71 | 16.71 | 1.01 |
| **70 (21.1)** | | 13.21 | 12.02 | 1.01 | | 14.83 | 14.83 | 1.06 | | 16.38 | 16.38 | 1.09 |
| **75 (23.3)** | | 12.98 | 11.81 | 1.07 | | 14.56 | 14.56 | 1.13 | | 16.07 | 16.07 | 1.16 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 650 | 11.91 | 10.84 | 0.81 | 585 | 7.42 | 7.42 | 0.37 | 585 | 7.98 | 7.98 | 0.37 |
| **70 (21.1)** | | 11.62 | 10.58 | 0.87 | | 7.20 | 7.20 | 0.42 | | 7.74 | 7.74 | 0.42 |
| **75 (23.3)** | | 11.38 | 10.35 | 0.93 | | 6.99 | 6.99 | 0.46 | | 7.52 | 7.52 | 0.47 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH824

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X24***L | 1.00 | 1.00 | |
| FCM4X36***L | 0.99 | 0.99 | |
| EA*4X36L14A* | 1.00 | 1.01 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.01 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.00 | *8MV*0901716** |
| EA*4X36L17A* | 1.01 | 1.03 | *9MA*0601714A** |
| EA*4X36L17A* | 1.00 | 1.01 | *9MA*0801714A** |
| EA*4X36L21A* | 1.01 | 1.03 | *9MA*0601714A** |
| EA*4X36L21A* | 1.00 | 1.01 | *9MA*0602120A** |
| EA*4X36L21A* | 1.00 | 1.01 | *9MA*0801714A** |
| EA*4X36L21A* | 1.00 | 1.00 | *9MA*0802120A** |
| EA*4X36L21A* | 1.00 | 1.00 | *9MA*1002122A** |
| EA*4X42L21A* | 0.99 | 0.98 | *8MV*0901716** |
| EA*4X42L21A* | 1.00 | 1.01 | *9MA*0601714A** |
| EA*4X42L21A* | 1.00 | 1.01 | *9MA*0602120A** |
| EA*4X42L21A* | 1.00 | 1.01 | *9MA*0801714A** |
| EA*4X42L24A* | 1.00 | 1.01 | *9MA*0602120A** |
| EA*4X48L17A* | 0.96 | 0.95 | *8MV*0701412** |
| EA*4X48L17A* | 0.96 | 0.94 | *8MV*0901716** |
| EA*4X48L17A* | 0.97 | 0.97 | *9MA*0601714A** |
| EA*4X48L17A* | 0.97 | 0.97 | *9MA*0801714A** |
| EA*4X48L21A* | 0.97 | 0.95 | *8MV*0901716** |
| EA*4X48L21A* | 0.98 | 0.98 | *9MA*0601714A** |
| EA*4X48L21A* | 0.98 | 0.98 | *9MA*0801714A** |
| EHD4X36AAL | 0.99 | 0.98 | *8MV*0701412** |
| EHD4X36AAL | 0.99 | 0.98 | *8MV*0901716** |
| EHD4X36AAL | 1.00 | 1.01 | *9MA*0601714A** |
| EHD4X36AAL | 1.00 | 1.00 | *9MA*0801714A** |
| EHD4X42AAL | 0.99 | 0.98 | *8MV*0701412** |
| EHD4X42AAL | 0.98 | 0.96 | *8MV*0901716** |
| EHD4X42AAL | 0.99 | 0.99 | *9MA*0601714A** |
| EHD4X42AAL | 0.99 | 0.99 | *9MA*0801714A** |
| EHD4X48AAL | 0.99 | 0.99 | *9MA*0601714A** |
| EHD4X48AAL | 0.98 | 0.97 | *9MA*0801714A** |
| EN(A,D)4X36L21** | 0.94 | 0.97 | *9MA*0601714A** |
| EN(A,D)4X36L21** | 1.01 | 1.03 | *9MA*0801714A** |
| EN(A,D,W)4X36L17** | 1.01 | 1.04 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.01 | 1.03 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 1.00 | 0.99 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 1.01 | 1.02 | *9MA*0601714A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.01 | *9MA*0801714A** |
| EN(A,D,W)4X48L21** | 0.98 | 0.96 | *8MV*0901716** |
| EN(A,D,W)4X48L21** | 0.99 | 0.99 | *9MA*0601714A** |
| EN(A,D,W)4X48L21** | 0.99 | 0.98 | *9MA*0801714A** |
| END4X42L17** | 0.99 | 0.98 | *8MV*0701412** |
| END4X42L17** | 0.99 | 0.97 | *8MV*0901716** |
| END4X42L17** | 1.00 | 1.01 | *9MA*0601714A** |
| END4X42L17** | 1.00 | 1.00 | *9MA*0801714A** |

| 2-STAGE (Hi-Stage 5, Lo-Stage 2) | | | | | |
|---|---|---|---|---|---|
| HEATING INDOOR MODEL | HIGH SPEED CAP. | POW-ER | LOW SPEED CAP. | POW-ER | FURNACE MODEL |
| FVM4X24***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X36***L | 0.96 | 1.03 | 0.98 | 1.02 | |
| EA*4X24L14A* | 1.02 | 1.09 | 1.01 | 1.11 | *9MX*0401410A** |
| EA*4X24L17A* | 1.00 | 1.10 | 1.01 | 1.09 | *9MX*0401712A** |
| EA*4X24L17A* | 1.02 | 1.04 | 1.03 | 1.06 | OMV098J12* |
| EA*4X24L17A* | 1.02 | 1.03 | 1.02 | 1.04 | OLV098A12* |
| EA*4X24L17A* | 1.02 | 1.02 | 1.01 | 1.02 | OMV112K14A |
| EA*4X30L14A* | 1.00 | 1.07 | 1.00 | 1.09 | *9MX*0401410A** |
| EA*4X30L17A* | 0.98 | 1.08 | 0.99 | 1.07 | *9MX*0401712A** |
| EA*4X30L17A* | 1.00 | 1.02 | 1.01 | 1.03 | OMV098J12* |
| EA*4X30L17A* | 1.00 | 1.02 | 1.01 | 1.02 | OLV098A12* |
| EA*4X30L17A* | 1.00 | 1.01 | 1.01 | 1.00 | OMV112K14A |
| EA*4X36L14A* | 1.00 | 1.07 | 0.99 | 1.08 | *9MX*0401410A** |
| EA*4X36L17A* | 0.98 | 1.08 | 0.99 | 1.06 | *9MX*0401712A** |
| EN(A,D)4X30L14** | 1.00 | 1.08 | 0.99 | 1.08 | *9MX*0401410A** |
| EN(A,D)4X30L17** | 0.98 | 1.09 | 0.99 | 1.07 | *9MX*0401712A** |
| EN(A,D)4X30L17** | 1.00 | 1.02 | 1.01 | 1.03 | OMV098J12* |
| EN(A,D)4X30L17** | 1.00 | 1.02 | 1.01 | 1.02 | OLV098A12* |
| EN(A,D)4X30L17** | 1.00 | 1.01 | 1.01 | 1.00 | OMV112K14A |
| EN(A,D,W)4X36L17** | 0.98 | 1.09 | 0.99 | 1.07 | *9MX*0401712A** |
| END4X42L17** | 0.98 | 1.07 | 0.99 | 1.06 | *9MX*0401712A** |
| EHD4X24AAL | 1.02 | 1.07 | 1.00 | 1.10 | *9MX*0401410A** |
| EHD4X24AAL | 1.00 | 1.10 | 1.00 | 1.10 | *9MX*0401712A** |
| EHD4X30AAL | 1.01 | 1.05 | 1.00 | 1.08 | *9MX*0401410A** |
| EHD4X30AAL | 0.99 | 1.08 | 1.00 | 1.08 | *9MX*0401712A** |
| EHD4X36AAL | 1.00 | 1.04 | 0.99 | 1.07 | *9MX*0401410A** |
| EHD4X36AAL | 0.98 | 1.06 | 0.99 | 1.06 | *9MX*0401712A** |

# HVH825

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR | HVH825 / FCM4X48***L Efficiency Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **825** | 23.61 | 9.88 | 2.53 | **825** | 25.24 | 10.47 | 2.23 | **825** | 26.64 | 10.98 | 1.92 | **825** | 28.18 | 11.54 | 1.66 | **825** | 29.67 | 12.09 | 1.41 | **825** | 31.12 | 12.64 | 1.18 |
| | 67 (19.4) | | 21.33 | 13.74 | 2.50 | | 22.80 | 14.32 | 2.22 | | 24.06 | 14.87 | 1.92 | | 25.46 | 15.46 | 1.67 | | 26.82 | 16.05 | 1.43 | | 28.12 | 16.59 | 1.21 |
| | 63 (17.2) | | 19.66 | 16.76 | 2.48 | | 21.01 | 17.35 | 2.21 | | 22.17 | 17.92 | 1.92 | | 23.46 | 18.51 | 1.67 | | 24.71 | 19.11 | 1.44 | | 25.92 | 19.72 | 1.23 |
| | 57 (13.9) | | 18.72 | 18.72 | 2.47 | | 19.79 | 19.79 | 2.20 | | 20.71 | 20.71 | 1.91 | | 21.71 | 21.71 | 1.67 | | 22.67 | 22.67 | 1.45 | | 23.60 | 23.60 | 1.24 |
| **80 (26.7)** | 72 (22.2) | **825** | 23.53 | 13.78 | 2.53 | **825** | 25.17 | 14.37 | 2.23 | **825** | 26.56 | 14.92 | 1.92 | **825** | 28.10 | 15.50 | 1.66 | **825** | 29.60 | 16.09 | 1.41 | **825** | 31.02 | 16.63 | 1.18 |
| | 67 (19.4) | | 21.28 | 17.58 | 2.50 | | 22.75 | 18.19 | 2.22 | | 24.00 | 18.75 | 1.92 | | 25.40 | 19.35 | 1.67 | | 26.74 | 19.96 | 1.43 | | 28.05 | 20.56 | 1.21 |
| | 63 (17.2) | | 20.03 | 20.03 | 2.49 | | 21.17 | 21.09 | 2.21 | | 22.29 | 21.72 | 1.92 | | 23.54 | 22.34 | 1.67 | | 24.78 | 22.95 | 1.44 | | 25.96 | 23.61 | 1.23 |
| | 57 (13.9) | | 19.99 | 19.99 | 2.49 | | 21.10 | 21.10 | 2.21 | | 22.06 | 22.06 | 1.91 | | 23.08 | 23.08 | 1.67 | | 24.09 | 24.09 | 1.44 | | 25.06 | 25.06 | 1.23 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **650** | 15.43 | 6.56 | 1.50 | **650** | 16.55 | 6.96 | 1.36 | **650** | 17.40 | 7.27 | 1.13 | **650** | 18.52 | 7.59 | 0.97 | **650** | 19.58 | 8.06 | 0.82 | **650** | 20.65 | 8.45 | 0.67 |
| | 67 (19.4) | | 13.88 | 9.30 | 1.50 | | 14.90 | 9.71 | 1.36 | | 15.70 | 10.04 | 1.14 | | 16.69 | 10.46 | 0.99 | | 17.67 | 10.87 | 0.85 | | 18.63 | 11.27 | 0.71 |
| | 63 (17.2) | | 12.80 | 11.44 | 1.50 | | 13.73 | 11.87 | 1.37 | | 14.47 | 12.22 | 1.14 | | 15.39 | 12.65 | 1.00 | | 16.27 | 13.10 | 0.87 | | 17.17 | 13.48 | 0.73 |
| | 57 (13.9) | | 12.38 | 12.38 | 1.50 | | 13.13 | 13.13 | 1.37 | | 13.73 | 13.73 | 1.14 | | 14.44 | 14.44 | 1.01 | | 15.14 | 15.14 | 0.88 | | 15.81 | 15.81 | 0.76 |
| **80 (26.7)** | 72 (22.2) | **650** | 15.37 | 9.34 | 1.50 | **650** | 16.49 | 9.75 | 1.36 | **650** | 17.33 | 10.09 | 1.13 | **650** | 18.42 | 10.48 | 0.97 | **650** | 19.51 | 10.89 | 0.82 | **650** | 20.58 | 11.27 | 0.67 |
| | 67 (19.4) | | 13.87 | 12.03 | 1.50 | | 14.88 | 12.46 | 1.36 | | 15.67 | 12.80 | 1.14 | | 16.66 | 13.25 | 0.99 | | 17.62 | 13.69 | 0.85 | | 18.59 | 14.08 | 0.71 |
| | 63 (17.2) | | 13.28 | 13.28 | 1.50 | | 14.07 | 14.07 | 1.37 | | 14.69 | 14.69 | 1.14 | | 15.58 | 15.21 | 1.00 | | 16.44 | 15.74 | 0.87 | | 17.23 | 16.25 | 0.73 |
| | 57 (13.9) | | 13.26 | 13.26 | 1.50 | | 14.04 | 14.04 | 1.37 | | 14.66 | 14.66 | 1.14 | | 15.42 | 15.42 | 1.00 | | 16.14 | 16.14 | 0.87 | | 16.85 | 16.85 | 0.74 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **650** | 11.91 | 5.24 | 1.08 | **650** | 12.82 | 5.56 | 1.00 | **585** | 10.38 | 4.52 | 0.57 | **585** | 11.19 | 4.70 | 0.49 | **585** | 11.92 | 5.07 | 0.40 | **585** | 12.67 | 5.34 | 0.30 |
| | 67 (19.4) | | 10.68 | 7.75 | 1.09 | | 11.52 | 8.07 | 1.01 | | 9.32 | 6.60 | 0.59 | | 10.00 | 6.88 | 0.52 | | 10.68 | 7.16 | 0.44 | | 11.35 | 7.44 | 0.35 |
| | 63 (17.2) | | 9.85 | 9.65 | 1.09 | | 10.61 | 10.02 | 1.02 | | 8.58 | 8.20 | 0.60 | | 9.20 | 8.49 | 0.54 | | 9.81 | 8.79 | 0.47 | | 10.41 | 9.08 | 0.38 |
| | 57 (13.9) | | 9.79 | 9.79 | 1.09 | | 10.43 | 10.43 | 1.02 | | 8.47 | 8.47 | 0.60 | | 8.98 | 8.98 | 0.54 | | 9.48 | 9.48 | 0.48 | | 9.96 | 9.96 | 0.40 |
| **80 (26.7)** | 72 (22.2) | **650** | 11.85 | 7.79 | 1.08 | **650** | 12.79 | 8.13 | 1.00 | **585** | 10.33 | 6.64 | 0.57 | **585** | 11.10 | 6.91 | 0.49 | **585** | 11.86 | 7.20 | 0.40 | **585** | 12.62 | 7.48 | 0.30 |
| | 67 (19.4) | | 10.87 | 9.78 | 1.09 | | 11.51 | 10.58 | 1.01 | | 9.33 | 8.66 | 0.58 | | 10.00 | 8.96 | 0.52 | | 10.67 | 9.26 | 0.44 | | 11.33 | 9.56 | 0.35 |
| | 63 (17.2) | | 10.56 | 10.56 | 1.09 | | 11.24 | 11.24 | 1.02 | | 9.12 | 9.12 | 0.59 | | 9.67 | 9.67 | 0.52 | | 10.20 | 10.20 | 0.45 | | 10.72 | 10.72 | 0.37 |
| | 57 (13.9) | | 10.54 | 10.54 | 1.09 | | 11.22 | 11.22 | 1.02 | | 9.11 | 9.11 | 0.59 | | 9.65 | 9.65 | 0.52 | | 10.18 | 10.18 | 0.45 | | 10.69 | 10.69 | 0.37 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

# HVH825

## DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH825 / FCM4X48***L Comfort + Dehumidify Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW |
| | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **608** | 24.05 | 9.74 | 2.20 | **608** | 25.31 | 10.23 | 1.90 | **634** | 26.93 | 10.87 | 1.64 | **663** | 28.53 | 11.51 | 1.40 | **708** | 30.24 | 12.20 | 1.18 |
| | 67 (19.4) | | 21.69 | 12.60 | 2.19 | | 22.84 | 13.11 | 1.89 | | 24.30 | 13.88 | 1.65 | | 25.76 | 14.68 | 1.42 | | 27.35 | 15.63 | 1.20 |
| | 63 (17.2) | | 19.98 | 14.84 | 2.17 | | 21.05 | 15.36 | 1.88 | | 22.40 | 16.25 | 1.65 | | 23.76 | 17.17 | 1.43 | | 25.20 | 18.29 | 1.22 |
| | 57 (13.9) | | 17.96 | 17.96 | 2.15 | | 18.83 | 18.68 | 1.87 | | 20.01 | 19.72 | 1.64 | | 21.32 | 20.70 | 1.43 | | 22.50 | 22.16 | 1.24 |
| **80 (26.7)** | 72 (22.2) | **608** | 23.98 | 12.65 | 2.20 | **608** | 25.25 | 13.15 | 1.90 | **634** | 26.85 | 13.94 | 1.64 | **663** | 28.46 | 14.73 | 1.40 | **708** | 30.15 | 15.64 | 1.18 |
| | 67 (19.4) | | 21.63 | 15.47 | 2.19 | | 22.79 | 15.99 | 1.89 | | 24.25 | 16.90 | 1.65 | | 25.71 | 17.85 | 1.42 | | 27.28 | 19.03 | 1.20 |
| | 63 (17.2) | | 19.98 | 17.70 | 2.17 | | 21.04 | 18.23 | 1.88 | | 22.39 | 19.25 | 1.65 | | 23.75 | 20.31 | 1.43 | | 25.21 | 21.65 | 1.22 |
| | 57 (13.9) | | 19.08 | 19.08 | 2.16 | | 19.91 | 19.91 | 1.88 | | 21.11 | 21.11 | 1.65 | | 22.34 | 22.34 | 1.43 | | 23.76 | 23.76 | 1.23 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **437** | 15.55 | 6.31 | 1.34 | **437** | 16.33 | 6.61 | 1.11 | **452** | 17.39 | 7.04 | 0.97 | **475** | 18.54 | 7.49 | 0.82 | **510** | 19.78 | 8.00 | 0.67 |
| | 67 (19.4) | | 13.99 | 8.14 | 1.35 | | 14.70 | 8.46 | 1.12 | | 15.68 | 8.96 | 0.98 | | 16.71 | 9.53 | 0.84 | | 17.84 | 10.19 | 0.71 |
| | 63 (17.2) | | 12.85 | 9.59 | 1.35 | | 13.52 | 9.91 | 1.12 | | 14.42 | 10.48 | 0.99 | | 15.37 | 11.12 | 0.86 | | 16.42 | 11.92 | 0.73 |
| | 57 (13.9) | | 11.51 | 11.51 | 1.35 | | 12.02 | 12.02 | 1.12 | | 12.80 | 12.70 | 1.00 | | 13.64 | 13.47 | 0.88 | | 14.57 | 14.45 | 0.77 |
| **80 (26.7)** | 72 (22.2) | **437** | 15.51 | 8.19 | 1.34 | **437** | 16.26 | 8.49 | 1.11 | **452** | 17.34 | 9.02 | 0.97 | **475** | 18.49 | 9.57 | 0.82 | **510** | 19.72 | 10.27 | 0.67 |
| | 67 (19.4) | | 13.96 | 10.01 | 1.35 | | 14.66 | 10.33 | 1.12 | | 15.64 | 10.92 | 0.98 | | 16.67 | 11.58 | 0.84 | | 17.81 | 12.41 | 0.71 |
| | 63 (17.2) | | 12.84 | 11.44 | 1.35 | | 13.51 | 11.79 | 1.12 | | 14.41 | 12.41 | 0.99 | | 15.36 | 13.18 | 0.86 | | 16.40 | 14.13 | 0.73 |
| | 57 (13.9) | | 12.26 | 12.26 | 1.35 | | 12.79 | 12.79 | 1.12 | | 13.57 | 13.57 | 1.00 | | 14.43 | 14.43 | 0.87 | | 15.44 | 15.44 | 0.75 |
| **STAGE 1 – FCM4X48***L ONLY** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **342** | 11.60 | 4.69 | 1.00 | **250** | 8.92 | 3.59 | 0.58 | **250** | 9.47 | 3.82 | 0.52 | **250** | 10.00 | 4.04 | 0.45 | **250** | 10.52 | 4.25 | 0.32 |
| | 67 (19.4) | | 10.38 | 6.01 | 1.01 | | 7.98 | 4.45 | 0.60 | | 8.46 | 4.67 | 0.54 | | 8.93 | 4.88 | 0.48 | | 9.39 | 5.10 | 0.41 |
| | 63 (17.2) | | 9.51 | 7.00 | 1.01 | | 7.29 | 5.10 | 0.61 | | 7.72 | 5.33 | 0.56 | | 8.15 | 5.55 | 0.50 | | 8.56 | 5.76 | 0.44 |
| | 57 (13.9) | | 10.39 | 5.98 | 1.01 | | 6.36 | 6.09 | 0.62 | | 6.74 | 6.31 | 0.58 | | 7.10 | 6.52 | 0.54 | | 7.47 | 6.73 | 0.48 |
| **80 (26.7)** | 72 (22.2) | **342** | 11.57 | 6.04 | 1.00 | **250** | 8.90 | 4.49 | 0.58 | **250** | 9.45 | 4.72 | 0.52 | **250** | 9.98 | 4.95 | 0.45 | **250** | 10.49 | 5.17 | 0.37 |
| | 67 (19.4) | | 10.36 | 7.32 | 1.01 | | 7.96 | 5.34 | 0.60 | | 8.44 | 5.57 | 0.54 | | 8.91 | 5.79 | 0.48 | | 9.37 | 6.01 | 0.41 |
| | 63 (17.2) | | 9.50 | 8.34 | 1.01 | | 7.28 | 5.99 | 0.61 | | 7.71 | 6.23 | 0.56 | | 8.14 | 6.45 | 0.51 | | 8.54 | 6.67 | 0.44 |
| | 57 (13.9) | | 8.99 | 8.99 | 1.02 | | 6.65 | 6.65 | 0.61 | | 6.96 | 6.96 | 0.58 | | 7.27 | 7.27 | 0.53 | | 7.56 | 7.56 | 0.48 |
| **STAGE 1 – ALL OTHER INDOOR COMBINATIONS** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **342** | 11.60 | 4.69 | 1.00 | **222** | 8.64 | 3.49 | 0.58 | **234** | 9.30 | 3.76 | 0.52 | **229** | 9.74 | 3.95 | 0.45 | **245** | 10.45 | 4.23 | 0.32 |
| | 67 (19.4) | | 10.38 | 6.01 | 1.01 | | 7.72 | 4.24 | 0.59 | | 8.31 | 4.55 | 0.54 | | 8.69 | 4.72 | 0.48 | | 9.32 | 5.06 | 0.41 |
| | 63 (17.2) | | 9.51 | 7.00 | 1.01 | | 7.04 | 4.82 | 0.60 | | 7.58 | 5.17 | 0.56 | | 7.93 | 5.31 | 0.51 | | 8.50 | 5.70 | 0.45 |
| | 57 (13.9) | | 8.42 | 8.42 | 1.02 | | 6.16 | 5.65 | 0.61 | | 6.61 | 6.07 | 0.58 | | 6.92 | 6.18 | 0.54 | | 7.42 | 6.65 | 0.49 |
| **80 (26.7)** | 72 (22.2) | **342** | 11.57 | 6.03 | 1.00 | **222** | 8.62 | 4.29 | 0.58 | **234** | 9.28 | 4.61 | 0.52 | **229** | 9.72 | 4.78 | 0.45 | **245** | 10.43 | 5.13 | 0.37 |
| | 67 (19.4) | | 10.36 | 7.32 | 1.01 | | 7.70 | 5.03 | 0.59 | | 8.29 | 5.39 | 0.54 | | 8.68 | 5.55 | 0.48 | | 9.31 | 5.95 | 0.41 |
| | 63 (17.2) | | 9.50 | 8.34 | 1.01 | | 7.03 | 5.61 | 0.60 | | 7.57 | 6.01 | 0.56 | | 7.92 | 6.14 | 0.51 | | 8.49 | 6.59 | 0.45 |
| | 57 (13.9) | | 8.99 | 8.99 | 1.02 | | 6.30 | 6.30 | 0.61 | | 6.76 | 6.76 | 0.57 | | 6.98 | 6.98 | 0.53 | | 7.49 | 7.49 | 0.48 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 43

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH825

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X48***L | 1.00 | 1.00 | |
| FCM4X24***L | 1.01 | 1.10 | |
| EA*4X36L14A* | 1.01 | 1.05 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.09 | *9MA*0601714A** |
| EA*4X36L17A* | 1.01 | 1.05 | *9MA*0801714A** |
| EA*4X36L17A* | 1.01 | 1.05 | *8MV*0901716** |
| EA*4X36L21A* | 1.01 | 1.10 | *9MA*0602120A** |
| EN(A,D,W)4X36L17** | 1.00 | 1.09 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.00 | 1.09 | *9MA*0801714A** |
| EN(A,D,W)4X36L17** | 1.01 | 1.05 | *8MV*0901716** |
| EN(A,D)4X36L21** | 1.00 | 1.09 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 1.01 | 1.05 | *9MA*0802120A** |
| END4X42L17** | 1.02 | 1.11 | *9MA*0601714A** |
| END4X42L17** | 1.02 | 1.06 | *9MA*0801714A** |
| END4X42L17** | 1.03 | 1.07 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 1.01 | 1.05 | *9MA*0602120A** |
| EHD4X36AAL | 1.02 | 1.16 | *9MA*0601714A** |
| EHD4X36AAL | 1.02 | 1.11 | *9MA*0801714A** |
| EHD4X36AAL | 1.02 | 1.11 | *9MA*0602120A** |
| EHD4X36AAL | 1.03 | 1.11 | *8MV*0701412** |
| EHD4X36AAL | 1.03 | 1.11 | *8MV*0901716** |
| EHD4X42AAL | 1.03 | 1.11 | *9MA*0601714A** |
| EHD4X42AAL | 1.03 | 1.11 | *9MA*0801714A** |
| EHD4X42AAL | 1.03 | 1.11 | *9MA*0602120A** |
| EHD4X42AAL | 1.03 | 1.11 | *8MV*0701412** |
| EHD4X42AAL | 1.03 | 1.12 | *8MV*0901716** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X36***L | 0.94 | 0.98 | 0.97 | 1.00 | |
| FVM4X24***L | 0.94 | 0.98 | 0.98 | 1.02 | |
| EA*4X24L14A* | 0.93 | 1.06 | 0.96 | 1.14 | *9MX*0401410A** |
| EA*4X24L17A* | 0.93 | 1.01 | 0.96 | 1.12 | *9MX*0401712A** |
| EA*4X24L17A* | 0.98 | 1.07 | 1.01 | 1.12 | OMV098J12* |
| EA*4X24L17A* | 0.98 | 1.07 | 1.02 | 1.19 | OLV098A12* |
| EA*4X24L17A* | 0.98 | 1.07 | 1.02 | 1.14 | OMV112K14A |
| EA*4X30L14A* | 0.95 | 1.08 | 0.96 | 1.13 | *9MX*0401410A** |
| EA*4X30L17A* | 0.94 | 1.03 | 0.96 | 1.11 | *9MX*0401712A** |
| EA*4X30L17A* | 0.99 | 1.08 | 1.00 | 1.14 | OMV098J12* |
| EA*4X30L17A* | 0.99 | 1.08 | 1.02 | 1.17 | OLV098A12* |
| EA*4X30L17A* | 1.00 | 1.04 | 1.02 | 1.13 | OMV112K14A |
| EA*4X36L14A* | 0.95 | 1.08 | 0.96 | 1.13 | *9MX*0401410A** |
| EA*4X36L17A* | 0.94 | 1.03 | 0.97 | 1.11 | *9MX*0401712A** |
| EN(A,D)4X24L17** | 0.98 | 1.11 | 1.00 | 1.16 | OMV098J12* |
| EN(A,D)4X24L17** | 0.98 | 1.11 | 1.02 | 1.22 | OLV098A12* |
| EN(A,D)4X24L17** | 0.98 | 1.07 | 1.02 | 1.16 | OMV112K14A |
| EN(A,D)4X30L14** | 0.94 | 1.07 | 0.96 | 1.13 | *9MX*0401410A** |
| EN(A,D)4X30L17** | 0.93 | 1.02 | 0.96 | 1.12 | *9MX*0401712A** |
| EN(A,D)4X30L17** | 0.99 | 1.08 | 1.00 | 1.14 | OMV098J12* |
| EN(A,D)4X30L17** | 0.99 | 1.08 | 1.02 | 1.18 | OLV098A12* |
| EN(A,D)4X30L17** | 1.00 | 1.04 | 1.02 | 1.13 | OMV112K14A |
| EN(A,D,W)4X36L17** | 0.93 | 1.02 | 0.96 | 1.12 | *9MX*0401712A** |
| END4X42L17** | 0.95 | 1.03 | 0.98 | 1.11 | *9MX*0401712A** |
| EHD4X24AAL | 0.94 | 1.12 | 0.96 | 1.14 | *9MX*0401410A** |
| EHD4X24AAL | 0.93 | 1.06 | 0.96 | 1.12 | *9MX*0401712A** |
| EHD4X30AAL | 0.95 | 1.08 | 0.97 | 1.12 | *9MX*0401410A** |
| EHD4X30AAL | 0.94 | 1.03 | 0.98 | 1.11 | *9MX*0401712A** |
| EHD4X36AAL | 0.97 | 1.10 | 0.98 | 1.12 | *9MX*0401410A** |
| EHD4X36AAL | 0.96 | 1.04 | 0.98 | 1.10 | *9MX*0401712A** |

# HVH825

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH825 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 450 | 13.73 | 12.61 | 1.94 | 825 | 20.11 | 18.34 | 2.16 | 825 | 22.21 | 19.73 | 2.08 |
| **70 (21.1)** | | 13.57 | 12.47 | 2.01 | | 19.90 | 18.14 | 2.26 | | 21.97 | 19.52 | 2.17 |
| **75 (23.3)** | | 13.48 | 12.39 | 2.08 | | 19.71 | 17.97 | 2.36 | | 21.73 | 19.30 | 2.27 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 340 | 9.32 | 8.57 | 1.42 | 500 | 11.26 | 10.27 | 1.36 | 650 | 13.17 | 11.70 | 1.22 |
| **70 (21.1)** | | 9.21 | 8.46 | 1.48 | | 11.11 | 10.13 | 1.42 | | 12.99 | 11.54 | 1.29 |
| **75 (23.3)** | | 9.10 | 8.36 | 1.54 | | 10.96 | 10.00 | 1.48 | | 12.82 | 11.39 | 1.35 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 340 | 9.32 | 8.56 | 1.42 | 500 | 11.23 | 10.24 | 1.35 | 650 | 8.59 | 7.63 | 0.80 |
| **70 (21.1)** | | 9.19 | 8.45 | 1.48 | | 11.07 | 10.10 | 1.41 | | 8.45 | 7.50 | 0.83 |
| **75 (23.3)** | | 9.07 | 8.34 | 1.53 | | 10.87 | 9.91 | 1.47 | | 8.30 | 7.37 | 0.88 |

| INDOOR AIR | HVH825 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 825 | 25.00 | 22.75 | 2.11 | 825 | 27.16 | 27.16 | 2.11 | 650 | 19.19 | 19.19 | 1.28 |
| **70 (21.1)** | | 24.69 | 22.46 | 2.21 | | 26.80 | 26.80 | 2.21 | | 19.22 | 19.22 | 1.36 |
| **75 (23.3)** | | 24.36 | 22.17 | 2.31 | | 26.41 | 26.41 | 2.31 | | 18.44 | 18.44 | 1.42 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 650 | 15.11 | 13.75 | 1.25 | 650 | 17.04 | 17.04 | 1.25 | 650 | 19.10 | 19.10 | 1.27 |
| **70 (21.1)** | | 14.89 | 13.55 | 1.32 | | 16.77 | 16.77 | 1.32 | | 18.78 | 18.78 | 1.35 |
| **75 (23.3)** | | 14.67 | 13.35 | 1.39 | | 16.51 | 16.51 | 1.40 | | 18.44 | 18.44 | 1.42 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 650 | 10.20 | 9.28 | 0.80 | 585 | 7.58 | 7.58 | 0.44 | 585 | 9.05 | 9.05 | 0.42 |
| **70 (21.1)** | | 9.99 | 9.09 | 0.85 | | 7.40 | 7.40 | 0.48 | | 8.83 | 8.83 | 0.47 |
| **75 (23.3)** | | 9.81 | 8.93 | 0.90 | | 7.22 | 7.22 | 0.52 | | 8.62 | 8.62 | 0.52 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# HVH825

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH825 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 450 | 13.73 | 12.61 | 1.94 | 825 | 20.11 | 18.34 | 2.16 | 825 | 22.21 | 19.73 | 2.08 |
| 70 (21.1) | | 13.57 | 12.47 | 2.01 | | 19.90 | 18.14 | 2.26 | | 21.97 | 19.52 | 2.17 |
| 75 (23.3) | | 13.48 | 12.39 | 2.08 | | 19.71 | 17.97 | 2.36 | | 21.73 | 19.30 | 2.27 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 340 | 9.32 | 8.57 | 1.42 | 500 | 11.26 | 10.27 | 1.36 | 650 | 13.17 | 11.70 | 1.22 |
| 70 (21.1) | | 9.21 | 8.46 | 1.48 | | 11.11 | 10.13 | 1.42 | | 12.99 | 11.54 | 1.29 |
| 75 (23.3) | | 9.10 | 8.36 | 1.54 | | 10.96 | 10.00 | 1.48 | | 12.82 | 11.39 | 1.35 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 340 | 9.32 | 8.56 | 1.42 | 500 | 11.23 | 10.24 | 1.35 | 650 | 8.59 | 7.63 | 0.80 |
| 70 (21.1) | | 9.19 | 8.45 | 1.48 | | 11.07 | 10.10 | 1.41 | | 8.45 | 7.50 | 0.83 |
| 75 (23.3) | | 9.07 | 8.34 | 1.53 | | 10.87 | 9.91 | 1.47 | | 8.30 | 7.37 | 0.88 |

| INDOOR AIR | HVH825 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 825 | 25.00 | 22.75 | 2.11 | 825 | 27.16 | 27.16 | 2.11 | 650 | 19.19 | 19.19 | 1.28 |
| 70 (21.1) | | 24.69 | 22.46 | 2.21 | | 26.80 | 26.80 | 2.21 | | 19.22 | 19.22 | 1.36 |
| 75 (23.3) | | 24.36 | 22.17 | 2.31 | | 26.41 | 26.41 | 2.31 | | 18.44 | 18.44 | 1.42 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 650 | 15.11 | 13.75 | 1.25 | 650 | 17.04 | 17.04 | 1.25 | 650 | 19.10 | 19.10 | 1.27 |
| 70 (21.1) | | 14.89 | 13.55 | 1.32 | | 16.77 | 16.77 | 1.32 | | 18.78 | 18.78 | 1.35 |
| 75 (23.3) | | 14.67 | 13.35 | 1.39 | | 16.51 | 16.51 | 1.40 | | 18.44 | 18.44 | 1.42 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 650 | 10.20 | 9.28 | 0.80 | 585 | 7.58 | 7.58 | 0.44 | 585 | 9.05 | 9.05 | 0.42 |
| 70 (21.1) | | 9.99 | 9.09 | 0.85 | | 7.40 | 7.40 | 0.48 | | 8.83 | 8.83 | 0.47 |
| 75 (23.3) | | 9.81 | 8.93 | 0.90 | | 7.22 | 7.22 | 0.52 | | 8.62 | 8.62 | 0.52 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH825

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X48***L | 1.00 | 1.00 | |
| FCM4X24***L | 1.08 | 1.10 | |
| EA*4X36L14A* | 1.07 | 1.11 | *8MV*0701412** |
| EA*4X36L17A* | 1.07 | 1.11 | *9MA*0601714A** |
| EA*4X36L17A* | 1.07 | 1.11 | *9MA*0801714A** |
| EA*4X36L17A* | 1.07 | 1.09 | *8MV*0901716** |
| EA*4X36L21A* | 1.07 | 1.11 | *9MA*0602120A** |
| EN(A,D,W)4X36L17** | 1.08 | 1.13 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.08 | 1.12 | *9MA*0801714A** |
| EN(A,D,W)4X36L17** | 1.07 | 1.10 | *8MV*0901716** |
| EN(A,D)4X36L21** | 1.08 | 1.12 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 1.08 | 1.11 | *9MA*0802120A** |
| END4X42L17** | 1.07 | 1.09 | *9MA*0601714A** |
| END4X42L17** | 1.07 | 1.08 | *9MA*0801714A** |
| END4X42L17** | 1.06 | 1.06 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 1.07 | 1.10 | *9MA*0602120A** |
| EHD4X36AAL | 1.07 | 1.09 | *9MA*0601714A** |
| EHD4X36AAL | 1.07 | 1.08 | *9MA*0801714A** |
| EHD4X36AAL | 1.07 | 1.08 | *9MA*0602120A** |
| EHD4X36AAL | 1.06 | 1.07 | *8MV*0701412** |
| EHD4X36AAL | 1.06 | 1.06 | *8MV*0901716** |
| EHD4X42AAL | 1.06 | 1.07 | *9MA*0601714A** |
| EHD4X42AAL | 1.06 | 1.07 | *9MA*0801714A** |
| EHD4X42AAL | 1.06 | 1.07 | *9MA*0602120A** |
| EHD4X42AAL | 1.05 | 1.05 | *8MV*0701412** |
| EHD4X42AAL | 1.05 | 1.05 | *8MV*0901716** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X36***L | 1.01 | 1.09 | 1.01 | 1.00 | |
| FVM4X24***L | 1.03 | 1.09 | 1.01 | 1.05 | |
| EA*4X24L14A* | 1.07 | 1.16 | 1.05 | 1.14 | *9MX*0401410A** |
| EA*4X24L17A* | 1.05 | 1.17 | 1.05 | 1.13 | *9MX*0401712A** |
| EA*4X24L17A* | 1.09 | 1.15 | 1.08 | 1.12 | OMV098J12* |
| EA*4X24L17A* | 1.09 | 1.15 | 1.09 | 1.11 | OLV098A12* |
| EA*4X24L17A* | 1.09 | 1.13 | 1.08 | 1.10 | OMV112K14A |
| EA*4X30L14A* | 1.05 | 1.14 | 1.02 | 1.11 | *9MX*0401410A** |
| EA*4X30L17A* | 1.03 | 1.14 | 1.02 | 1.09 | *9MX*0401712A** |
| EA*4X30L17A* | 1.07 | 1.12 | 1.06 | 1.10 | OMV098J12* |
| EA*4X30L17A* | 1.07 | 1.12 | 1.07 | 1.07 | OLV098A12* |
| EA*4X30L17A* | 1.07 | 1.10 | 1.06 | 1.06 | OMV112K14A |
| EA*4X36L14A* | 1.04 | 1.12 | 1.02 | 1.09 | *9MX*0401410A** |
| EA*4X36L17A* | 1.03 | 1.14 | 1.02 | 1.08 | *9MX*0401712A** |
| EN(A,D)4X24L17** | 1.09 | 1.13 | 1.09 | 1.12 | OMV098J12* |
| EN(A,D)4X24L17** | 1.09 | 1.13 | 1.09 | 1.09 | OLV098A12* |
| EN(A,D)4X24L17** | 1.09 | 1.12 | 1.09 | 1.08 | OMV112K14A |
| EN(A,D)4X30L14** | 1.05 | 1.14 | 1.02 | 1.11 | *9MX*0401410A** |
| EN(A,D)4X30L17** | 1.03 | 1.16 | 1.02 | 1.09 | *9MX*0401712A** |
| EN(A,D)4X30L17** | 1.07 | 1.12 | 1.06 | 1.09 | OMV098J12* |
| EN(A,D)4X30L17** | 1.07 | 1.12 | 1.07 | 1.06 | OLV098A12* |
| EN(A,D)4X30L17** | 1.07 | 1.10 | 1.06 | 1.05 | OMV112K14A |
| EN(A,D,W)4X36L17** | 1.03 | 1.16 | 1.02 | 1.09 | *9MX*0401712A** |
| END4X42L17** | 1.03 | 1.12 | 1.02 | 1.07 | *9MX*0401712A** |
| EHD4X24AAL | 1.06 | 1.13 | 1.04 | 1.13 | *9MX*0401410A** |
| EHD4X24AAL | 1.05 | 1.16 | 1.04 | 1.13 | *9MX*0401712A** |
| EHD4X30AAL | 1.05 | 1.10 | 1.04 | 1.11 | *9MX*0401410A** |
| EHD4X30AAL | 1.04 | 1.13 | 1.04 | 1.10 | *9MX*0401712A** |
| EHD4X36AAL | 1.04 | 1.09 | 1.02 | 1.08 | *9MX*0401410A** |
| EHD4X36AAL | 1.03 | 1.11 | 1.02 | 1.07 | *9MX*0401712A** |

# HVH836

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR | HVH836 / FCM4X48***L Efficiency Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** |
| | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1050** | 33.66 | 13.76 | 3.92 | **1050** | 35.83 | 14.56 | 3.62 | **1050** | 37.64 | 15.24 | 3.33 | **1050** | 39.71 | 16.02 | 3.03 | **1050** | 41.70 | 16.78 | 2.74 | **1050** | 43.66 | 17.54 | 2.45 |
| | 67 (19.4) | | 30.67 | 18.58 | 3.83 | | 32.63 | 19.41 | 3.55 | | 34.28 | 20.14 | 3.26 | | 36.14 | 20.93 | 2.98 | | 37.96 | 21.76 | 2.70 | | 39.71 | 22.50 | 2.42 |
| | 63 (17.2) | | 28.43 | 22.37 | 3.76 | | 30.25 | 23.22 | 3.49 | | 31.80 | 23.97 | 3.20 | | 33.50 | 24.78 | 2.93 | | 35.17 | 25.58 | 2.67 | | 36.77 | 26.36 | 2.41 |
| | 57 (13.9) | | 26.29 | 26.29 | 3.70 | | 27.67 | 27.67 | 3.42 | | 28.85 | 28.85 | 3.14 | | 30.12 | 30.12 | 2.88 | | 31.51 | 31.06 | 2.63 | | 32.87 | 31.93 | 2.38 |
| **80 (26.7)** | 72 (22.2) | **1050** | 33.58 | 18.53 | 3.92 | **1050** | 35.75 | 19.37 | 3.62 | **1050** | 37.55 | 20.09 | 3.33 | **1050** | 39.61 | 20.91 | 3.03 | **1050** | 41.61 | 21.68 | 2.74 | **1050** | 43.56 | 22.44 | 2.45 |
| | 67 (19.4) | | 30.58 | 23.31 | 3.83 | | 32.54 | 24.17 | 3.55 | | 34.20 | 24.92 | 3.26 | | 36.06 | 25.73 | 2.98 | | 37.87 | 26.55 | 2.70 | | 39.64 | 27.35 | 2.42 |
| | 63 (17.2) | | 28.45 | 27.05 | 3.77 | | 30.25 | 27.93 | 3.49 | | 31.78 | 28.71 | 3.20 | | 33.48 | 29.54 | 2.93 | | 35.15 | 30.40 | 2.67 | | 36.73 | 31.18 | 2.41 |
| | 57 (13.9) | | 27.92 | 27.92 | 3.75 | | 29.37 | 29.37 | 3.47 | | 30.60 | 30.60 | 3.18 | | 31.93 | 31.93 | 2.91 | | 33.21 | 33.21 | 2.65 | | 34.45 | 34.45 | 2.39 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **900** | 21.50 | 9.09 | 2.51 | **900** | 22.99 | 9.62 | 2.19 | **900** | 24.00 | 9.99 | 1.85 | **900** | 25.46 | 10.52 | 1.58 | **900** | 26.89 | 11.04 | 1.32 | **900** | 28.22 | 11.54 | 1.09 |
| | 67 (19.4) | | 19.38 | 12.78 | 2.49 | | 20.72 | 13.34 | 2.18 | | 21.71 | 13.77 | 1.84 | | 23.03 | 14.33 | 1.57 | | 24.32 | 14.88 | 1.33 | | 25.58 | 15.44 | 1.11 |
| | 63 (17.2) | | 17.85 | 15.69 | 2.47 | | 19.07 | 16.26 | 2.18 | | 20.03 | 16.73 | 1.83 | | 21.24 | 17.32 | 1.57 | | 22.42 | 17.89 | 1.34 | | 23.59 | 18.46 | 1.12 |
| | 57 (13.9) | | 17.16 | 17.16 | 2.47 | | 18.15 | 18.15 | 2.17 | | 18.94 | 18.94 | 1.82 | | 19.90 | 19.90 | 1.57 | | 20.84 | 20.84 | 1.34 | | 21.76 | 21.76 | 1.13 |
| **80 (26.7)** | 72 (22.2) | **900** | 21.43 | 12.83 | 2.51 | **900** | 22.91 | 13.39 | 2.19 | **900** | 23.93 | 13.80 | 1.85 | **900** | 25.39 | 14.36 | 1.58 | **900** | 26.81 | 14.92 | 1.32 | **900** | 28.20 | 15.48 | 1.09 |
| | 67 (19.4) | | 19.34 | 16.49 | 2.49 | | 20.67 | 17.07 | 2.18 | | 21.66 | 17.54 | 1.84 | | 22.97 | 18.13 | 1.57 | | 24.25 | 18.71 | 1.33 | | 25.52 | 19.29 | 1.11 |
| | 63 (17.2) | | 18.40 | 18.40 | 2.48 | | 19.44 | 19.44 | 2.18 | | 20.23 | 20.23 | 1.83 | | 21.35 | 21.04 | 1.57 | | 22.50 | 21.67 | 1.34 | | 23.66 | 22.27 | 1.12 |
| | 57 (13.9) | | 18.36 | 18.36 | 2.48 | | 19.40 | 19.40 | 2.18 | | 20.20 | 20.20 | 1.83 | | 21.20 | 21.20 | 1.57 | | 22.18 | 22.18 | 1.34 | | 23.13 | 23.13 | 1.12 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **800** | 14.47 | 6.38 | 1.82 | **800** | 15.58 | 6.77 | 1.53 | **600** | 10.69 | 4.69 | 0.66 | **600** | 11.51 | 4.98 | 0.49 | **600** | 12.34 | 5.28 | 0.34 | **600** | 13.17 | 5.58 | 0.22 |
| | 67 (19.4) | | 13.00 | 9.42 | 1.82 | | 14.02 | 9.86 | 1.54 | | 9.54 | 6.85 | 0.69 | | 10.28 | 7.17 | 0.52 | | 11.02 | 7.49 | 0.37 | | 11.76 | 7.81 | 0.25 |
| | 63 (17.2) | | 12.02 | 11.77 | 1.82 | | 12.97 | 12.18 | 1.55 | | 8.78 | 8.53 | 0.70 | | 9.43 | 8.87 | 0.54 | | 10.10 | 9.21 | 0.39 | | 10.77 | 9.55 | 0.27 |
| | 57 (13.9) | | 11.94 | 11.94 | 1.82 | | 12.73 | 12.73 | 1.55 | | 8.69 | 8.69 | 0.71 | | 9.25 | 9.25 | 0.54 | | 9.81 | 9.81 | 0.40 | | 10.36 | 10.36 | 0.28 |
| **80 (26.7)** | 72 (22.2) | **800** | 14.41 | 9.47 | 1.82 | **800** | 15.54 | 9.92 | 1.52 | **600** | 10.64 | 6.90 | 0.71 | **600** | 11.46 | 7.22 | 0.54 | **600** | 12.29 | 7.55 | 0.40 | **600** | 13.12 | 7.88 | 0.28 |
| | 67 (19.4) | | 13.03 | 12.45 | 1.82 | | 14.03 | 12.93 | 1.54 | | 9.56 | 9.02 | 0.71 | | 10.28 | 9.37 | 0.54 | | 11.01 | 9.72 | 0.40 | | 11.75 | 10.07 | 0.28 |
| | 63 (17.2) | | 12.86 | 12.86 | 1.82 | | 13.70 | 13.70 | 1.54 | | 9.40 | 9.40 | 0.69 | | 9.99 | 9.99 | 0.52 | | 10.58 | 10.58 | 0.38 | | 11.17 | 11.17 | 0.26 |
| | 57 (13.9) | | 12.84 | 12.84 | 1.82 | | 13.67 | 13.67 | 1.54 | | 9.38 | 9.38 | 0.69 | | 9.97 | 9.97 | 0.52 | | 10.56 | 10.56 | 0.38 | | 11.15 | 11.15 | 0.26 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 43

# HVH836

## DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH836 / FCM4X48***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **812** | 34.41 | 13.87 | 3.52 | **812** | 36.07 | 14.52 | 3.23 | **848** | 38.26 | 15.40 | 2.95 | **887** | 40.48 | 16.29 | 2.67 | **948** | 42.89 | 17.25 | 2.40 |
| | 67 (19.4) | | 31.28 | 17.66 | 3.45 | | 32.82 | 18.35 | 3.16 | | 34.81 | 19.41 | 2.89 | | 36.83 | 20.49 | 2.63 | | 39.01 | 21.75 | 2.38 |
| | 63 (17.2) | | 28.96 | 20.61 | 3.39 | | 30.39 | 21.30 | 3.10 | | 32.22 | 22.51 | 2.85 | | 34.07 | 23.75 | 2.60 | | 30.74 | 18.23 | 4.07 |
| | 57 (13.9) | | 25.84 | 24.91 | 3.30 | | 27.09 | 25.64 | 3.03 | | 28.72 | 27.04 | 2.79 | | 30.37 | 28.48 | 2.56 | | 28.52 | 21.76 | 3.99 |
| **80 (26.7)** | 72 (22.2) | **812** | 34.33 | 17.65 | 3.52 | **812** | 35.98 | 18.32 | 3.23 | **848** | 38.18 | 19.39 | 2.95 | **887** | 40.34 | 20.45 | 2.67 | **948** | 26.01 | 26.01 | 3.90 |
| | 67 (19.4) | | 31.22 | 21.37 | 3.45 | | 32.75 | 22.08 | 3.16 | | 34.75 | 23.33 | 2.89 | | 36.76 | 24.61 | 2.63 | | 33.65 | 18.17 | 4.17 |
| | 63 (17.2) | | 28.92 | 24.31 | 3.39 | | 30.34 | 25.03 | 3.10 | | 32.18 | 26.41 | 2.85 | | 34.02 | 27.82 | 2.60 | | 30.66 | 22.60 | 4.07 |
| | 57 (13.9) | | 26.99 | 26.99 | 3.34 | | 28.06 | 28.06 | 3.05 | | 29.68 | 29.68 | 2.81 | | 31.34 | 31.34 | 2.57 | | 28.51 | 26.12 | 3.99 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **566** | 21.33 | 8.62 | 2.14 | **566** | 22.26 | 8.99 | 1.80 | **600** | 23.79 | 9.60 | 1.53 | **626** | 25.26 | 10.19 | 1.29 | **664** | 26.82 | 10.82 | 1.07 |
| | 67 (19.4) | | 19.21 | 10.97 | 2.13 | | 20.08 | 11.37 | 1.78 | | 21.48 | 12.15 | 1.53 | | 22.80 | 12.86 | 1.30 | | 24.22 | 13.70 | 1.08 |
| | 63 (17.2) | | 17.68 | 12.82 | 2.12 | | 18.52 | 13.25 | 1.77 | | 19.80 | 14.15 | 1.53 | | 21.03 | 14.96 | 1.30 | | 22.34 | 15.92 | 1.09 |
| | 57 (13.9) | | 15.76 | 15.54 | 2.10 | | 16.50 | 16.02 | 1.75 | | 17.65 | 17.11 | 1.52 | | 18.74 | 18.07 | 1.31 | | 19.91 | 19.23 | 1.11 |
| **80 (26.7)** | 72 (22.2) | **566** | 21.30 | 11.04 | 2.14 | **566** | 22.20 | 11.42 | 1.80 | **600** | 23.73 | 12.20 | 1.53 | **626** | 25.20 | 12.92 | 1.29 | **664** | 26.77 | 13.74 | 1.07 |
| | 67 (19.4) | | 19.17 | 13.36 | 2.13 | | 20.04 | 13.77 | 1.78 | | 21.43 | 14.71 | 1.53 | | 22.75 | 15.55 | 1.30 | | 24.18 | 16.55 | 1.08 |
| | 63 (17.2) | | 17.67 | 15.20 | 2.12 | | 18.51 | 15.64 | 1.77 | | 19.79 | 16.70 | 1.53 | | 21.01 | 17.64 | 1.30 | | 22.33 | 18.78 | 1.09 |
| | 57 (13.9) | | 16.63 | 16.63 | 2.11 | | 17.30 | 17.30 | 1.76 | | 18.49 | 18.49 | 1.52 | | 19.59 | 19.59 | 1.30 | | 20.84 | 20.84 | 1.10 |
| **STAGE 1 – FCM4X48***L ONLY** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **417** | 14.17 | 5.74 | 1.50 | **250** | 9.11 | 3.68 | 0.68 | **250** | 9.70 | 3.92 | 0.52 | **250** | 10.29 | 4.16 | 0.38 | **267** | 11.09 | 4.48 | 0.26 |
| | 67 (19.4) | | 12.71 | 7.33 | 1.51 | | 8.12 | 4.54 | 0.70 | | 8.64 | 4.78 | 0.54 | | 9.16 | 5.03 | 0.40 | | 9.89 | 5.42 | 0.28 |
| | 63 (17.2) | | 11.65 | 8.59 | 1.51 | | 7.40 | 5.21 | 0.71 | | 7.88 | 5.46 | 0.56 | | 8.35 | 5.71 | 0.42 | | 9.01 | 6.16 | 0.30 |
| | 57 (13.9) | | 10.35 | 10.35 | 1.51 | | 6.44 | 6.21 | 0.72 | | 6.86 | 6.46 | 0.57 | | 7.27 | 6.71 | 0.44 | | 7.86 | 7.24 | 0.32 |
| **80 (26.7)** | 72 (22.2) | **417** | 14.11 | 7.38 | 1.50 | **250** | 9.09 | 4.60 | 0.68 | **250** | 9.68 | 4.85 | 0.52 | **250** | 10.26 | 5.10 | 0.38 | **267** | 11.06 | 5.50 | 0.26 |
| | 67 (19.4) | | 12.68 | 8.97 | 1.51 | | 8.10 | 5.46 | 0.70 | | 8.62 | 5.71 | 0.54 | | 9.14 | 5.97 | 0.40 | | 9.86 | 6.44 | 0.28 |
| | 63 (17.2) | | 11.65 | 10.21 | 1.51 | | 7.38 | 6.13 | 0.71 | | 7.86 | 6.39 | 0.56 | | 8.34 | 6.65 | 0.42 | | 9.00 | 7.18 | 0.30 |
| | 57 (13.9) | | 11.03 | 11.03 | 1.51 | | 6.76 | 6.76 | 0.72 | | 7.12 | 7.12 | 0.57 | | 7.46 | 7.46 | 0.44 | | 8.06 | 8.06 | 0.32 |
| **STAGE 1 – ALL OTHER INDOOR COMBINATIONS** | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **417** | 14.17 | 5.74 | 1.50 | **236** | 8.96 | 3.62 | 0.69 | **232** | 9.48 | 3.83 | 0.52 | **246** | 10.23 | 4.13 | 0.38 | **267** | 11.09 | 4.48 | 0.26 |
| | 67 (19.4) | | 14.17 | 5.74 | 1.50 | | 7.98 | 4.42 | 0.71 | | 8.44 | 4.62 | 0.55 | | 9.11 | 4.99 | 0.41 | | 9.88 | 5.42 | 0.28 |
| | 63 (17.2) | | 14.17 | 5.74 | 1.50 | | 7.27 | 5.05 | 0.72 | | 7.69 | 5.25 | 0.56 | | 8.30 | 5.65 | 0.42 | | 9.01 | 6.16 | 0.30 |
| | 57 (13.9) | | 14.17 | 5.74 | 1.50 | | 6.32 | 5.98 | 0.73 | | 6.69 | 6.17 | 0.58 | | 7.23 | 6.64 | 0.44 | | 7.85 | 7.24 | 0.33 |
| **80 (26.7)** | 72 (22.2) | **417** | 14.17 | 5.74 | 1.50 | **236** | 8.94 | 4.49 | 0.69 | **232** | 9.43 | 4.69 | 0.52 | **246** | 10.20 | 5.06 | 0.38 | **267** | 11.06 | 5.50 | 0.26 |
| | 67 (19.4) | | 14.17 | 5.74 | 1.50 | | 7.96 | 5.29 | 0.71 | | 8.42 | 5.49 | 0.55 | | 9.09 | 5.91 | 0.41 | | 9.86 | 6.43 | 0.28 |
| | 63 (17.2) | | 14.17 | 5.74 | 1.50 | | 7.26 | 5.92 | 0.72 | | 7.67 | 6.11 | 0.56 | | 8.29 | 6.58 | 0.42 | | 8.99 | 7.17 | 0.30 |
| | 57 (13.9) | | 14.17 | 5.74 | 1.50 | | 6.58 | 6.58 | 0.72 | | 6.86 | 6.86 | 0.57 | | 7.40 | 7.40 | 0.44 | | 8.06 | 8.06 | 0.32 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 43

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH836

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| EA*4X36L14A* | 0.95 | 1.05 | *8MV*0701412** |
| EA*4X36L17A* | 0.95 | 1.11 | *9MA*0601714A** |
| EA*4X36L17A* | 0.95 | 1.05 | *9MA*0801714A** |
| EA*4X36L17A* | 0.96 | 1.06 | *8MV*0901716** |
| EA*4X36L21A* | 0.95 | 1.05 | *9MA*0602120A** |
| EA*4X36L21A* | 0.96 | 1.06 | *9MA*0802120A** |
| EA*4X36L21A* | 0.96 | 1.06 | *9MA*1002122A** |
| EA*4X36L21A* | 0.96 | 1.06 | *8MV*1102120** |
| EA*4X42L21A* | 0.96 | 1.06 | *9MA*0602120A** |
| EA*4X42L21A* | 0.96 | 1.07 | *9MA*0802120A** |
| EA*4X42L21A* | 0.96 | 1.07 | *9MA*1002122A** |
| EA*4X42L21A* | 0.96 | 1.07 | *8MV*1102120** |
| EA*4X42L24A* | 0.96 | 1.07 | *9MA*1202422A** |
| EA*4X42L24A* | 0.96 | 1.07 | *8MV*1352422** |
| EA*4X48L17A* | 0.97 | 1.07 | *9MA*0601714A** |
| EA*4X48L17A* | 0.98 | 1.08 | *9MA*0801714A** |
| EA*4X48L17A* | 0.98 | 1.03 | *8MV*0901716** |
| EA*4X48L21A* | 0.97 | 1.07 | *9MA*0602120A** |
| EA*4X48L21A* | 0.98 | 1.08 | *9MA*0802120A** |
| EA*4X48L21A* | 0.98 | 1.03 | *9MA*1002122A** |
| EA*4X48L21A* | 0.98 | 1.03 | *8MV*1102120** |
| EA*4X48L24A* | 0.98 | 1.03 | *9MA*1202422A** |
| EA*4X48L24A* | 0.98 | 1.03 | *8MV*1352422** |
| EN(A,D,W)4X36L17** | 0.95 | 1.11 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 0.95 | 1.11 | *9MA*0801714A** |
| EN(A,D,W)4X36L17** | 0.95 | 1.05 | *8MV*0901716** |
| EN(A,D,W)4X36L17** | 0.96 | 1.06 | *8MV*0701412** |
| EN(A,D)4X36L21** | 0.95 | 1.11 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 0.95 | 1.05 | *9MA*0802120A** |
| EN(A,D)4X36L21** | 0.95 | 1.05 | *9MA*1002122A** |
| EN(A,D)4X36L21** | 0.95 | 1.05 | *8MV*1102120** |
| END4X42L17** | 0.96 | 1.07 | *9MA*0601714A** |
| END4X42L17** | 0.96 | 1.07 | *9MA*0801714A** |
| END4X42L17** | 0.97 | 1.07 | *8MV*0901716** |
| END4X42L17** | 0.98 | 1.08 | *8MV*0701412** |
| EN(A,D,W)4X42L21** | 0.96 | 1.06 | *9MA*0602120A** |

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| EN(A,D,W)4X42L21** | 0.96 | 1.07 | *9MA*0802120A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.07 | *9MA*1002122A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.07 | *8MV*1102120** |
| EN(A,D,W)4X48L21** | 0.98 | 1.08 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.08 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.03 | *9MA*1002122A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.03 | *8MV*1102120** |
| EN(A,D)4X48L24** | 0.98 | 1.08 | *9MA*1202422A** |
| EN(A,D)4X48L24** | 0.98 | 1.03 | *8MV*1352422** |
| EHD4X36AAL | 0.96 | 1.13 | *9MA*0601714A** |
| EHD4X36AAL | 0.97 | 1.13 | *9MA*0801714A** |
| EHD4X36AAL | 0.97 | 1.13 | *9MA*0602120A** |
| EHD4X36AAL | 0.98 | 1.08 | *9MA*0802120A** |
| EHD4X36AAL | 0.98 | 1.08 | *9MA*1002122A** |
| EHD4X36AAL | 0.98 | 1.14 | *9MA*1202422A** |
| EHD4X36AAL | 0.97 | 1.07 | *8MV*0701412** |
| EHD4X36AAL | 0.98 | 1.08 | *8MV*0901716** |
| EHD4X36AAL | 0.98 | 1.08 | *8MV*1102120** |
| EHD4X36AAL | 0.98 | 1.08 | *8MV*1352422** |
| EHD4X42AAL | 0.97 | 1.13 | *9MA*0601714A** |
| EHD4X42AAL | 0.98 | 1.08 | *9MA*0801714A** |
| EHD4X42AAL | 0.98 | 1.08 | *9MA*0602120A** |
| EHD4X42AAL | 0.98 | 1.09 | *9MA*0802120A** |
| EHD4X42AAL | 0.98 | 1.09 | *9MA*1002122A** |
| EHD4X42AAL | 0.98 | 1.09 | *9MA*1202422A** |
| EHD4X42AAL | 0.98 | 1.08 | *8MV*0701412** |
| EHD4X42AAL | 0.98 | 1.09 | *8MV*0901716** |
| EHD4X42AAL | 0.98 | 1.09 | *8MV*1102120** |
| EHD4X42AAL | 0.98 | 1.09 | *8MV*1352422** |
| EHD4X48AAL | 0.98 | 1.14 | *9MA*0601714A** |
| EHD4X48AAL | 0.98 | 1.14 | *9MA*0801714A** |
| EHD4X48AAL | 0.98 | 1.09 | *9MA*0602120A** |
| EHD4X48AAL | 0.98 | 1.09 | *9MA*0802120A** |
| EHD4X48AAL | 0.98 | 1.09 | *9MA*1002122A** |
| EHD4X48AAL | 0.98 | 1.09 | *9MA*1202422A** |
| EHD4X48AAL | 0.98 | 1.09 | *8MV*0701412** |
| EHD4X48AAL | 0.98 | 1.09 | *8MV*0901716** |
| EHD4X48AAL | 0.99 | 1.09 | *8MV*1102120** |
| EHD4X48AAL | 0.99 | 1.09 | *8MV*1352422** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X36***L | 0.97 | 0.97 | 1.09 | 1.13 | |
| FVM4X24***L | 0.95 | 1.00 | 1.08 | 1.18 | |
| EA*4X36L14A* | 0.94 | 1.10 | 1.05 | 1.23 | *9MX*0601412A** |
| EA*4X36L17A* | 0.95 | 1.00 | 1.06 | 1.16 | *9MX*0601714A** |
| EA*4X36L17A* | 0.95 | 1.00 | 1.08 | 1.25 | OLV098A12* |
| EA*4X36L17A* | 0.95 | 1.00 | 1.09 | 1.20 | OMV112K14A |
| EA*4X36L21A* | 0.96 | 1.01 | 1.09 | 1.24 | OLV112A16A |
| EA*4X42L21A* | 0.97 | 1.02 | 1.09 | 1.23 | OLV112A16A |
| EA*4X42L24A* | 0.97 | 0.97 | 1.09 | 1.14 | OMV154L20A |
| EA*4X48L17A* | 0.98 | 1.03 | 1.08 | 1.14 | *9MX*0601714A** |
| EN(A,D)4X24L17** | 0.92 | 1.02 | 1.07 | 1.26 | OMV112K14A |
| EN(A,D,W)4X36L17** | 0.95 | 1.00 | 1.06 | 1.17 | *9MX*0601714A** |
| EN(A,D,W)4X36L17** | 0.94 | 1.05 | 1.07 | 1.26 | OLV098A12* |
| EN(A,D,W)4X36L17** | 0.95 | 1.00 | 1.08 | 1.20 | OMV112K14A |
| EN(A,D)4X36L21** | 0.95 | 1.00 | 1.08 | 1.25 | OLV112A16A |
| END4X42L17** | 0.96 | 1.07 | 1.08 | 1.36 | *9MX*0401712A** |
| END4X42L17** | 0.97 | 1.02 | 1.07 | 1.15 | *9MX*0601714A** |
| END4X42L17** | 0.97 | 1.02 | 1.09 | 1.28 | OMV098J12* |
| END4X42L17** | 0.97 | 1.02 | 1.09 | 1.24 | OLV098A12* |
| END4X42L17** | 0.97 | 1.02 | 1.09 | 1.17 | OMV112K14A |
| EN(A,D,W)4X42L21** | 0.97 | 1.02 | 1.09 | 1.23 | OLV112A16A |
| EHD4X36AAL | 0.97 | 1.14 | 1.08 | 1.36 | *9MX*0401712A** |
| EHD4X36AAL | 0.96 | 1.13 | 1.07 | 1.22 | *9MX*0601412A** |
| EHD4X36AAL | 0.97 | 1.02 | 1.07 | 1.15 | *9MX*0601714A** |
| EHD4X42AAL | 0.97 | 1.14 | 1.07 | 1.21 | *9MX*0601412A** |
| EHD4X42AAL | 0.98 | 1.03 | 1.08 | 1.15 | *9MX*0601714A** |
| EHD4X48AAL | 0.97 | 1.14 | 1.08 | 1.21 | *9MX*0601412A** |
| EHD4X48AAL | 0.98 | 1.03 | 1.08 | 1.14 | *9MX*0601714A** |

# HVH836

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH836 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 450 | 16.00 | 14.70 | 2.35 | 1200 | 23.19 | 21.15 | 2.51 | 1200 | 26.38 | 23.43 | 2.48 |
| 70 (21.1) | | 15.90 | 14.61 | 2.44 | | 23.00 | 20.97 | 2.61 | | 26.13 | 23.21 | 2.60 |
| 75 (23.3) | | 15.75 | 14.48 | 2.53 | | 22.80 | 20.79 | 2.72 | | 25.87 | 22.98 | 2.71 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 360 | 10.11 | 9.29 | 1.52 | 500 | 12.21 | 11.13 | 1.49 | 900 | 14.64 | 13.01 | 1.31 |
| 70 (21.1) | | 9.99 | 9.18 | 1.58 | | 12.06 | 10.99 | 1.56 | | 14.47 | 12.85 | 1.38 |
| 75 (23.3) | | 9.87 | 9.07 | 1.64 | | 11.91 | 10.86 | 1.63 | | 14.29 | 12.69 | 1.45 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 360 | 10.10 | 9.28 | 1.51 | 500 | 12.21 | 11.14 | 1.49 | 900 | 10.13 | 9.00 | 0.92 |
| 70 (21.1) | | 9.98 | 9.17 | 1.57 | | 12.06 | 11.00 | 1.56 | | 9.98 | 8.86 | 0.96 |
| 75 (23.3) | | 9.85 | 9.06 | 1.64 | | 11.92 | 10.86 | 1.63 | | 9.83 | 8.73 | 1.01 |

| INDOOR AIR | HVH836 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 1200 | 30.62 | 27.87 | 2.60 | 1200 | 34.60 | 34.60 | 2.69 | 900 | 22.12 | 22.12 | 1.39 |
| 70 (21.1) | | 30.29 | 27.56 | 2.72 | | 34.20 | 34.20 | 2.82 | | 21.86 | 21.86 | 1.48 |
| 75 (23.3) | | 29.94 | 27.24 | 2.84 | | 33.79 | 33.79 | 2.94 | | 21.51 | 21.51 | 1.57 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 900 | 17.02 | 15.49 | 1.35 | 900 | 19.45 | 19.45 | 1.35 | 900 | 22.19 | 22.19 | 1.38 |
| 70 (21.1) | | 16.79 | 15.28 | 1.42 | | 19.17 | 19.17 | 1.44 | | 21.81 | 21.81 | 1.47 |
| 75 (23.3) | | 16.57 | 15.08 | 1.50 | | 18.89 | 18.89 | 1.52 | | 21.45 | 21.45 | 1.56 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 900 | 11.92 | 10.84 | 0.92 | 700 | 7.88 | 7.88 | 0.44 | 700 | 9.16 | 9.16 | 0.42 |
| 70 (21.1) | | 11.73 | 10.68 | 0.98 | | 7.70 | 7.70 | 0.49 | | 8.95 | 8.95 | 0.47 |
| 75 (23.3) | | 11.55 | 10.51 | 1.04 | | 7.52 | 7.52 | 0.53 | | 8.74 | 8.74 | 0.52 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# HVH836

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH836 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 434 | 16.04 | 14.74 | 2.38 | 595 | 22.29 | 20.33 | 2.79 | 735 | 25.50 | 22.65 | 2.67 |
| **70 (21.1)** | | 15.86 | 14.57 | 2.46 | | 22.09 | 20.14 | 2.90 | | 25.24 | 22.42 | 2.79 |
| **75 (23.3)** | | 15.74 | 14.46 | 2.56 | | 21.88 | 19.95 | 3.01 | | 24.99 | 22.20 | 2.90 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 277 | 9.92 | 9.11 | 1.64 | 325 | 11.82 | 10.78 | 1.69 | 425 | 13.89 | 12.34 | 1.55 |
| **70 (21.1)** | | 9.80 | 9.01 | 1.70 | | 11.68 | 10.65 | 1.76 | | 13.71 | 12.18 | 1.62 |
| **75 (23.3)** | | 9.69 | 8.90 | 1.76 | | 11.53 | 10.52 | 1.83 | | 13.54 | 12.02 | 1.69 |
| **STAGE 1 – FCM4X48***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 277 | 9.90 | 9.10 | 1.63 | 277 | 11.61 | 10.59 | 1.79 | 341 | 9.37 | 8.32 | 1.09 |
| **70 (21.1)** | | 9.78 | 8.99 | 1.69 | | 11.46 | 10.45 | 1.85 | | 9.22 | 8.19 | 1.14 |
| **75 (23.3)** | | 9.66 | 8.88 | 1.75 | | 11.32 | 10.32 | 1.92 | | 9.06 | 8.05 | 1.20 |
| **STAGE 1 – ALL OTHER INDOOR COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 277 | 9.90 | 9.10 | 1.63 | 277 | 11.61 | 10.59 | 1.79 | 341 | 9.37 | 8.32 | 1.09 |
| **70 (21.1)** | | 9.78 | 8.99 | 1.69 | | 11.46 | 10.45 | 1.85 | | 9.22 | 8.19 | 1.14 |
| **75 (23.3)** | | 9.66 | 8.88 | 1.75 | | 11.32 | 10.32 | 1.92 | | 9.06 | 8.05 | 1.20 |

| INDOOR AIR | HVH836 / FCM4X48***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 874 | 29.79 | 27.11 | 2.72 | 1014 | 34.01 | 34.01 | 2.75 | 736 | 21.71 | 21.71 | 1.46 |
| **70 (21.1)** | | 29.45 | 26.80 | 2.84 | | 33.62 | 33.62 | 2.88 | | 21.29 | 21.29 | 1.55 |
| **75 (23.3)** | | 29.09 | 26.48 | 2.96 | | 33.20 | 33.20 | 3.01 | | 20.98 | 20.98 | 1.64 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 526 | 16.28 | 14.82 | 1.53 | 626 | 18.77 | 18.77 | 1.49 | 737 | 21.39 | 21.39 | 1.46 |
| **70 (21.1)** | | 16.06 | 14.61 | 1.61 | | 18.51 | 18.51 | 1.57 | | 21.31 | 21.31 | 1.55 |
| **75 (23.3)** | | 15.84 | 14.41 | 1.69 | | 18.23 | 18.23 | 1.65 | | 20.96 | 20.96 | 1.64 |
| **STAGE 1 – FCM4X48***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 406 | 11.08 | 10.08 | 1.09 | 250 | 6.91 | 6.91 | 0.64 | 250 | 7.92 | 7.92 | 0.67 |
| **70 (21.1)** | | 10.89 | 9.91 | 1.15 | | 6.75 | 6.75 | 0.68 | | 7.73 | 7.73 | 0.71 |
| **75 (23.3)** | | 10.70 | 9.74 | 1.21 | | 6.58 | 6.58 | 0.72 | | 7.55 | 7.55 | 0.76 |
| **STAGE 1 – ALL OTHER INDOOR COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 406 | 11.09 | 10.09 | 1.09 | 199 | 6.61 | 6.61 | 0.72 | 217 | 7.68 | 7.68 | 0.73 |
| **70 (21.1)** | | 10.89 | 9.91 | 1.15 | | 6.46 | 6.46 | 0.76 | | 7.50 | 7.50 | 0.77 |
| **75 (23.3)** | | 10.70 | 9.74 | 1.21 | | 6.31 | 6.31 | 0.80 | | 7.31 | 7.31 | 0.82 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH836

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| EA*4X36L14A* | 1.05 | 1.12 | *8MV*0701412** |
| EA*4X36L17A* | 1.04 | 1.08 | *8MV*0901716** |
| EA*4X36L17A* | 1.05 | 1.14 | *9MA*0601714A** |
| EA*4X36L17A* | 1.05 | 1.12 | *9MA*0801714A** |
| EA*4X36L21A* | 1.04 | 1.08 | *8MV*1102120** |
| EA*4X36L21A* | 1.04 | 1.10 | *9MA*0602120A** |
| EA*4X36L21A* | 1.04 | 1.08 | *9MA*0802120A** |
| EA*4X36L21A* | 1.04 | 1.08 | *9MA*1002122A** |
| EA*4X42L21A* | 1.02 | 1.05 | *8MV*1102120** |
| EA*4X42L21A* | 1.04 | 1.09 | *9MA*0602120A** |
| EA*4X42L21A* | 1.04 | 1.07 | *9MA*0802120A** |
| EA*4X42L21A* | 1.04 | 1.07 | *9MA*1002122A** |
| EA*4X42L24A* | 1.02 | 1.05 | *8MV*1352422** |
| EA*4X42L24A* | 1.04 | 1.07 | *9MA*1202422A** |
| EA*4X48L17A* | 1.00 | 1.01 | *8MV*0901716** |
| EA*4X48L17A* | 1.02 | 1.07 | *9MA*0601714A** |
| EA*4X48L17A* | 1.02 | 1.05 | *9MA*0801714A** |
| EA*4X48L21A* | 1.01 | 1.02 | *8MV*1102120** |
| EA*4X48L21A* | 1.02 | 1.05 | *9MA*0602120A** |
| EA*4X48L21A* | 1.02 | 1.03 | *9MA*0802120A** |
| EA*4X48L21A* | 1.01 | 1.02 | *9MA*1002122A** |
| EA*4X48L24A* | 1.01 | 1.01 | *8MV*1352422** |
| EA*4X48L24A* | 1.02 | 1.03 | *9MA*1202422A** |
| EHD4X36AAL | 1.04 | 1.07 | *8MV*0701412** |
| EHD4X36AAL | 1.02 | 1.04 | *8MV*0901716** |
| EHD4X36AAL | 1.02 | 1.04 | *8MV*1102120** |
| EHD4X36AAL | 1.02 | 1.03 | *8MV*1352422** |
| EHD4X36AAL | 1.04 | 1.09 | *9MA*0601714A** |
| EHD4X36AAL | 1.04 | 1.07 | *9MA*0602120A** |
| EHD4X36AAL | 1.04 | 1.08 | *9MA*0801714A** |
| EHD4X36AAL | 1.02 | 1.05 | *9MA*0802120A** |
| EHD4X36AAL | 1.02 | 1.04 | *9MA*1002122A** |

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| EHD4X36AAL | 1.02 | 1.05 | *9MA*1202422A** |
| EHD4X42AAL | 1.02 | 1.05 | *8MV*0701412** |
| EHD4X42AAL | 1.02 | 1.03 | *8MV*0901716** |
| EHD4X42AAL | 1.02 | 1.03 | *8MV*1102120** |
| EHD4X42AAL | 1.02 | 1.02 | *8MV*1352422** |
| EHD4X42AAL | 1.04 | 1.08 | *9MA*0601714A** |
| EHD4X42AAL | 1.02 | 1.05 | *9MA*0602120A** |
| EHD4X42AAL | 1.02 | 1.05 | *9MA*0801714A** |
| EHD4X42AAL | 1.02 | 1.04 | *9MA*0802120A** |
| EHD4X42AAL | 1.02 | 1.03 | *9MA*1002122A** |
| EHD4X42AAL | 1.02 | 1.04 | *9MA*1202422A** |
| EHD4X48AAL | 1.02 | 1.04 | *8MV*0701412** |
| EHD4X48AAL | 1.02 | 1.02 | *8MV*0901716** |
| EHD4X48AAL | 1.02 | 1.02 | *8MV*1102120** |
| EHD4X48AAL | 1.02 | 1.01 | *8MV*1352422** |
| EHD4X48AAL | 1.04 | 1.08 | *9MA*0601714A** |
| EHD4X48AAL | 1.02 | 1.05 | *9MA*0602120A** |
| EHD4X48AAL | 1.02 | 1.05 | *9MA*0801714A** |
| EHD4X48AAL | 1.02 | 1.03 | *9MA*0802120A** |
| EHD4X48AAL | 1.02 | 1.02 | *9MA*1002122A** |
| EHD4X48AAL | 1.02 | 1.03 | *9MA*1202422A** |
| EN(A,D)4X36L21** | 1.05 | 1.10 | *8MV*1102120** |
| EN(A,D)4X36L21** | 1.05 | 1.13 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 1.05 | 1.11 | *9MA*0802120A** |
| EN(A,D)4X36L21** | 1.05 | 1.11 | *9MA*1002122A** |
| EN(A,D)4X48L24** | 1.02 | 1.02 | *8MV*1352422** |
| EN(A,D)4X48L24** | 1.02 | 1.03 | *9MA*1202422A** |
| EN(A,D,W)4X36L17** | 1.02 | 1.10 | *8MV*0701412** |
| EN(A,D,W)4X36L17** | 1.05 | 1.11 | *8MV*0901716** |
| EN(A,D,W)4X36L17** | 1.05 | 1.15 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.05 | 1.14 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 1.04 | 1.07 | *8MV*1102120** |
| EN(A,D,W)4X42L21** | 1.05 | 1.10 | *9MA*0602120A** |
| EN(A,D,W)4X42L21** | 1.04 | 1.08 | *9MA*0802120A** |
| EN(A,D,W)4X42L21** | 1.02 | 1.07 | *9MA*1002122A** |
| EN(A,D,W)4X48L21** | 1.02 | 1.02 | *8MV*1102120** |
| EN(A,D,W)4X48L21** | 1.02 | 1.05 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 1.02 | 1.03 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 1.02 | 1.03 | *9MA*1002122A** |
| END4X42L17** | 1.02 | 1.07 | *8MV*0701412** |
| END4X42L17** | 1.02 | 1.05 | *8MV*0901716** |
| END4X42L17** | 1.05 | 1.11 | *9MA*0601714A** |
| END4X42L17** | 1.04 | 1.08 | *9MA*0801714A** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X36***L | 1.01 | 1.06 | 1.01 | 1.05 | |
| FVM4X24***L | 1.04 | 1.08 | 1.04 | 1.08 | |
| EA*4X36L14A* | 1.05 | 1.16 | 1.03 | 1.13 | *9MX*0601412A** |
| EA*4X36L17A* | 1.04 | 1.11 | 1.02 | 1.10 | *9MX*0601714A** |
| EA*4X36L17A* | 1.04 | 1.12 | 1.04 | 1.10 | OLV098A12* |
| EA*4X36L17A* | 1.03 | 1.10 | 1.03 | 1.07 | OMV112K14A |
| EA*4X36L21A* | 1.04 | 1.10 | 1.04 | 1.08 | OLV112A16A |
| EA*4X42L21A* | 1.03 | 1.08 | 1.04 | 1.07 | OLV112A16A |
| EA*4X42L24A* | 1.02 | 1.06 | 1.03 | 1.05 | OMV154L20A |
| EA*4X48L17A* | 1.01 | 1.04 | 1.00 | 1.05 | *9MX*0601714A** |
| EN(A,D)4X24L17** | 1.05 | 1.12 | 1.05 | 1.12 | OMV112K14A |
| EN(A,D,W)4X36L17** | 1.04 | 1.12 | 1.03 | 1.12 | *9MX*0601714A** |
| EN(A,D,W)4X36L17** | 1.04 | 1.13 | 1.04 | 1.11 | OLV098A12* |
| EN(A,D,W)4X36L17** | 1.04 | 1.11 | 1.03 | 1.09 | OMV112K14A |
| EN(A,D)4X36L21** | 1.04 | 1.11 | 1.04 | 1.10 | OLV112A16A |
| END4X42L17** | 1.05 | 1.13 | 1.05 | 1.12 | *9MX*0401712A** |
| END4X42L17** | 1.03 | 1.08 | 1.02 | 1.08 | *9MX*0601714A** |
| END4X42L17** | 1.04 | 1.08 | 1.04 | 1.08 | OMV098J12* |
| END4X42L17** | 1.04 | 1.09 | 1.04 | 1.08 | OLV098A12* |
| END4X42L17** | 1.03 | 1.07 | 1.03 | 1.05 | OMV112K14A |
| EN(A,D,W)4X42L21** | 1.04 | 1.08 | 1.04 | 1.08 | OLV112A16A |
| EHD4X36AAL | 1.05 | 1.12 | 1.05 | 1.12 | *9MX*0401712A** |
| EHD4X36AAL | 1.05 | 1.12 | 1.03 | 1.11 | *9MX*0601412A** |
| EHD4X36AAL | 1.03 | 1.07 | 1.02 | 1.08 | *9MX*0601714A** |
| EHD4X42AAL | 1.05 | 1.11 | 1.03 | 1.10 | *9MX*0601412A** |
| EHD4X42AAL | 1.03 | 1.06 | 1.02 | 1.07 | *9MX*0601714A** |
| EHD4X48AAL | 1.04 | 1.10 | 1.03 | 1.09 | *9MX*0601412A** |
| EHD4X48AAL | 1.03 | 1.05 | 1.02 | 1.06 | *9MX*0601714A** |

# HVH837

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR | HVH837 / FCM4X48***L Efficiency Mode<br>Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1050** | 33.34 | 13.68 | 3.38 | **1050** | 35.38 | 14.43 | 2.99 | **1050** | 37.11 | 15.07 | 2.60 | **1050** | 39.00 | 15.77 | 2.25 | **1050** | 40.82 | 16.46 | 1.93 | **1050** | 42.56 | 17.12 | 1.64 |
| | 67 (19.4) | | 30.28 | 18.76 | 3.34 | | 32.11 | 19.52 | 2.97 | | 33.70 | 20.19 | 2.58 | | 35.41 | 20.92 | 2.26 | | 37.04 | 21.61 | 1.95 | | 38.64 | 22.30 | 1.66 |
| | 63 (17.2) | | 28.02 | 22.76 | 3.31 | | 29.71 | 23.52 | 2.95 | | 31.19 | 24.21 | 2.57 | | 32.77 | 24.95 | 2.25 | | 34.29 | 25.67 | 1.95 | | 35.77 | 26.37 | 1.67 |
| | 57 (13.9) | | 26.22 | 26.22 | 3.28 | | 27.53 | 27.53 | 2.93 | | 28.66 | 28.66 | 2.56 | | 29.86 | 29.86 | 2.25 | | 31.00 | 31.00 | 1.96 | | 32.09 | 32.09 | 1.69 |
| **80 (26.7)** | 72 (22.2) | **1050** | 33.22 | 18.74 | 3.38 | **1050** | 35.26 | 19.50 | 2.99 | **1050** | 36.99 | 20.17 | 2.60 | **1050** | 38.88 | 20.89 | 2.25 | **1050** | 40.70 | 21.60 | 1.93 | **1050** | 42.44 | 22.28 | 1.64 |
| | 67 (19.4) | | 30.18 | 23.76 | 3.34 | | 32.01 | 24.54 | 2.97 | | 33.60 | 25.23 | 2.58 | | 35.31 | 25.97 | 2.26 | | 36.94 | 26.69 | 1.95 | | 38.54 | 27.40 | 1.66 |
| | 63 (17.2) | | 28.06 | 27.66 | 3.31 | | 29.73 | 28.49 | 2.95 | | 31.18 | 29.21 | 2.57 | | 32.75 | 29.98 | 2.25 | | 34.26 | 30.72 | 1.95 | | 35.73 | 31.44 | 1.67 |
| | 57 (13.9) | | 27.88 | 27.88 | 3.31 | | 29.25 | 29.25 | 2.95 | | 30.44 | 30.44 | 2.57 | | 31.68 | 31.68 | 2.25 | | 32.88 | 32.88 | 1.96 | | 34.02 | 34.02 | 1.68 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **900** | 22.97 | 9.60 | 3.06 | **900** | 24.68 | 10.23 | 2.52 | **900** | 26.27 | 10.83 | 1.97 | **900** | 27.96 | 11.46 | 1.55 | **900** | 29.61 | 12.08 | 1.19 | **900** | 31.25 | 12.70 | 0.88 |
| | 67 (19.4) | | 20.76 | 13.46 | 3.06 | | 22.31 | 14.15 | 2.53 | | 23.77 | 14.82 | 1.99 | | 25.28 | 15.50 | 1.58 | | 26.77 | 16.18 | 1.23 | | 28.24 | 16.87 | 0.92 |
| | 63 (17.2) | | 19.15 | 16.49 | 3.06 | | 20.58 | 17.23 | 2.54 | | 21.93 | 17.94 | 2.00 | | 23.33 | 18.68 | 1.60 | | 24.69 | 19.40 | 1.25 | | 26.04 | 20.13 | 0.95 |
| | 57 (13.9) | | 18.30 | 18.30 | 3.06 | | 19.47 | 19.47 | 2.54 | | 20.57 | 20.57 | 2.01 | | 21.69 | 21.69 | 1.61 | | 22.78 | 22.78 | 1.27 | | 23.85 | 23.85 | 0.98 |
| **80 (26.7)** | 72 (22.2) | **900** | 22.86 | 13.49 | 3.06 | **900** | 24.58 | 14.18 | 2.52 | **900** | 26.17 | 14.84 | 1.97 | **900** | 27.85 | 15.54 | 1.55 | **900** | 29.51 | 16.22 | 1.19 | **900** | 31.14 | 16.90 | 0.88 |
| | 67 (19.4) | | 20.69 | 17.29 | 3.06 | | 22.23 | 18.04 | 2.53 | | 23.70 | 18.78 | 1.99 | | 25.20 | 19.52 | 1.58 | | 26.69 | 20.27 | 1.23 | | 28.16 | 21.01 | 0.92 |
| | 63 (17.2) | | 19.55 | 19.55 | 3.06 | | 20.79 | 20.79 | 2.54 | | 22.01 | 21.83 | 2.00 | | 23.37 | 22.66 | 1.60 | | 24.72 | 23.46 | 1.25 | | 26.05 | 24.25 | 0.95 |
| | 57 (13.9) | | 19.52 | 19.52 | 3.06 | | 20.75 | 20.75 | 2.54 | | 21.91 | 21.91 | 2.00 | | 23.09 | 23.09 | 1.60 | | 24.24 | 24.24 | 1.26 | | 25.37 | 25.37 | 0.96 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **800** | 17.86 | 7.53 | 2.92 | **800** | 19.41 | 8.11 | 2.31 | **600** | 14.82 | 6.15 | 1.11 | **600** | 16.14 | 6.65 | 0.76 | **600** | 17.47 | 7.17 | 0.48 | **600** | 18.85 | 7.63 | 0.26 |
| | 67 (19.4) | | 16.10 | 10.65 | 2.94 | | 17.51 | 11.32 | 2.34 | | 13.41 | 8.44 | 1.15 | | 14.59 | 9.03 | 0.80 | | 15.79 | 9.63 | 0.52 | | 17.00 | 10.24 | 0.30 |
| | 63 (17.2) | | 14.87 | 13.08 | 2.95 | | 16.15 | 13.82 | 2.36 | | 12.38 | 10.26 | 1.18 | | 13.46 | 10.91 | 0.83 | | 14.56 | 11.57 | 0.55 | | 15.67 | 12.24 | 0.33 |
| | 57 (13.9) | | 14.32 | 14.32 | 2.95 | | 15.40 | 15.40 | 2.37 | | 11.67 | 11.67 | 1.20 | | 12.58 | 12.58 | 0.85 | | 13.49 | 13.49 | 0.57 | | 14.41 | 14.41 | 0.35 |
| **80 (26.7)** | 72 (22.2) | **800** | 17.78 | 10.67 | 2.92 | **800** | 19.33 | 11.35 | 2.31 | **600** | 14.76 | 8.44 | 1.11 | **600** | 16.08 | 9.04 | 0.76 | **600** | 17.41 | 9.64 | 0.48 | **600** | 18.76 | 10.26 | 0.26 |
| | 67 (19.4) | | 16.07 | 13.74 | 2.94 | | 17.46 | 14.50 | 2.34 | | 13.37 | 10.73 | 1.15 | | 14.55 | 11.41 | 0.80 | | 15.74 | 12.09 | 0.52 | | 16.94 | 12.78 | 0.30 |
| | 63 (17.2) | | 15.31 | 15.31 | 2.94 | | 16.47 | 16.47 | 2.35 | | 12.45 | 12.45 | 1.17 | | 13.49 | 13.26 | 0.82 | | 14.58 | 14.02 | 0.54 | | 15.67 | 14.78 | 0.33 |
| | 57 (13.9) | | 15.28 | 15.28 | 2.94 | | 16.44 | 16.44 | 2.35 | | 12.43 | 12.43 | 1.18 | | 13.39 | 13.39 | 0.83 | | 14.36 | 14.36 | 0.55 | | 15.33 | 15.33 | 0.33 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 43

# HVH837

## DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH837 / FCM4X60***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW |
| | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 812 | 34.02 | 13.71 | 2.91 | 812 | 35.60 | 14.33 | 2.52 | 848 | 37.64 | 15.13 | 2.19 | 888 | 39.66 | 15.93 | 1.89 | 948 | 41.83 | 16.79 | 1.61 |
| | 67 (19.4) | | 30.97 | 17.74 | 2.85 | | 32.42 | 18.38 | 2.47 | | 34.27 | 19.38 | 2.17 | | 36.10 | 20.40 | 1.88 | | 37.30 | 21.11 | 1.73 |
| | 63 (17.2) | | 28.74 | 20.92 | 2.80 | | 30.10 | 21.57 | 2.43 | | 31.81 | 22.72 | 2.14 | | 32.83 | 23.41 | 2.00 | | 34.63 | 24.80 | 1.72 |
| | 57 (13.9) | | 25.73 | 25.56 | 2.73 | | 26.93 | 26.26 | 2.37 | | 27.87 | 27.05 | 2.26 | | 29.38 | 28.45 | 1.98 | | 31.01 | 30.18 | 1.72 |
| 80 (26.7) | 72 (22.2) | 812 | 34.41 | 17.92 | 2.77 | 812 | 35.26 | 18.16 | 2.58 | 848 | 37.27 | 19.15 | 2.25 | 888 | 39.27 | 20.16 | 1.94 | 948 | 41.41 | 21.33 | 1.65 |
| | 67 (19.4) | | 30.67 | 21.50 | 2.92 | | 32.12 | 22.15 | 2.53 | | 33.95 | 23.33 | 2.22 | | 35.78 | 24.54 | 1.92 | | 37.75 | 26.02 | 1.65 |
| | 63 (17.2) | | 28.49 | 24.67 | 2.87 | | 29.84 | 25.33 | 2.49 | | 31.53 | 26.66 | 2.19 | | 33.25 | 28.05 | 1.90 | | 35.08 | 29.75 | 1.64 |
| | 57 (13.9) | | 27.02 | 27.02 | 2.82 | | 28.04 | 28.04 | 2.45 | | 29.59 | 29.59 | 2.16 | | 31.17 | 31.17 | 1.88 | | 32.28 | 32.28 | 1.75 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 566 | 22.84 | 9.21 | 2.45 | 566 | 24.22 | 9.76 | 1.91 | 600 | 26.00 | 10.47 | 1.51 | 625 | 27.69 | 11.14 | 1.16 | 665 | 29.54 | 11.89 | 0.87 |
| | 67 (19.4) | | 20.96 | 11.85 | 2.26 | | 22.23 | 12.44 | 1.76 | | 23.85 | 13.36 | 1.39 | | 25.39 | 14.20 | 1.07 | | 24.68 | 13.84 | 1.44 |
| | 63 (17.2) | | 19.62 | 14.03 | 2.06 | | 20.81 | 14.66 | 1.60 | | 22.32 | 15.74 | 1.25 | | 21.65 | 15.23 | 1.74 | | 23.11 | 16.32 | 1.38 |
| | 57 (13.9) | | 17.72 | 17.24 | 1.86 | | 18.79 | 17.93 | 1.43 | | 18.37 | 17.54 | 2.03 | | 19.57 | 18.63 | 1.65 | | 20.88 | 19.98 | 1.32 |
| 80 (26.7) | 72 (22.2) | 566 | 24.22 | 12.44 | 1.66 | 566 | 23.40 | 11.90 | 2.24 | 600 | 25.13 | 12.78 | 1.80 | 625 | 26.78 | 13.60 | 1.41 | 665 | 28.58 | 14.55 | 1.07 |
| | 67 (19.4) | | 20.25 | 13.91 | 2.65 | | 21.49 | 14.53 | 2.09 | | 23.07 | 15.61 | 1.68 | | 24.57 | 16.59 | 1.32 | | 26.21 | 17.77 | 1.01 |
| | 63 (17.2) | | 18.96 | 16.11 | 2.46 | | 20.15 | 16.72 | 1.93 | | 21.61 | 17.97 | 1.55 | | 23.01 | 19.07 | 1.22 | | 24.55 | 20.43 | 0.93 |
| | 57 (13.9) | | 18.02 | 18.02 | 2.26 | | 18.96 | 18.96 | 1.77 | | 20.34 | 20.34 | 1.42 | | 21.63 | 21.63 | 1.11 | | 21.07 | 21.07 | 1.53 |
| **STAGE 1 – FCM4X60 ONLY** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 500 | 17.97 | 7.25 | 2.27 | 500 | 14.42 | 5.88 | 1.11 | 500 | 15.67 | 6.37 | 0.76 | 500 | 16.94 | 6.86 | 0.48 | 500 | 18.21 | 7.36 | 0.27 |
| | 67 (19.4) | | 15.37 | 8.76 | 2.23 | | 13.55 | 8.09 | 0.95 | | 14.69 | 8.66 | 0.64 | | 15.85 | 9.23 | 0.39 | | 15.11 | 8.71 | 0.70 |
| | 63 (17.2) | | 14.72 | 10.65 | 1.87 | | 12.96 | 10.01 | 0.78 | | 14.03 | 10.64 | 0.50 | | 13.42 | 10.01 | 0.94 | | 14.30 | 10.52 | 0.68 |
| | 57 (13.9) | | 13.65 | 13.33 | 1.50 | | 12.28 | 12.28 | 0.60 | | 11.69 | 11.69 | 1.18 | | 12.40 | 12.40 | 0.90 | | 12.11 | 12.11 | 0.72 |
| 80 (26.7) | 72 (22.2) | 500 | 18.97 | 9.81 | 1.10 | 500 | 14.74 | 8.00 | 1.27 | 500 | 15.86 | 8.48 | 0.93 | 500 | 15.67 | 8.28 | 0.72 | 500 | 16.90 | 8.84 | 0.45 |
| | 67 (19.4) | | 15.73 | 10.94 | 2.56 | | 13.71 | 10.22 | 1.18 | | 13.59 | 9.93 | 0.96 | | 14.70 | 10.56 | 0.65 | | 15.82 | 11.20 | 0.41 |
| | 63 (17.2) | | 14.92 | 12.81 | 2.31 | | 12.02 | 11.19 | 1.17 | | 13.04 | 11.88 | 0.82 | | 14.08 | 12.56 | 0.55 | | 15.13 | 13.26 | 0.33 |
| | 57 (13.9) | | 13.31 | 13.31 | 2.25 | | 12.15 | 12.15 | 0.98 | | 13.05 | 13.05 | 0.67 | | 13.95 | 13.95 | 0.42 | | 13.19 | 13.19 | 0.79 |
| **STAGE 1 – OTHER COILS** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 417 | 17.21 | 6.93 | 2.27 | 236 | 11.89 | 4.85 | 1.16 | 232 | 12.71 | 5.21 | 0.82 | 246 | 13.90 | 5.70 | 0.54 | 267 | 15.29 | 6.25 | 0.32 |
| | 67 (19.4) | | 14.73 | 8.14 | 2.23 | | 11.15 | 5.91 | 0.99 | | 11.87 | 6.32 | 0.68 | | 12.96 | 6.90 | 0.43 | | 12.64 | 6.74 | 0.80 |
| | 63 (17.2) | | 14.10 | 9.74 | 1.87 | | 10.62 | 6.89 | 0.80 | | 11.31 | 7.28 | 0.52 | | 10.96 | 7.06 | 1.03 | | 11.97 | 7.72 | 0.76 |
| | 57 (13.9) | | 12.97 | 12.07 | 1.50 | | 9.73 | 8.24 | 0.61 | | 9.18 | 7.68 | 1.24 | | 9.95 | 8.34 | 0.96 | | 10.04 | 8.43 | 0.79 |
| 80 (26.7) | 72 (22.2) | 417 | 18.18 | 9.13 | 1.10 | 236 | 12.17 | 5.90 | 1.33 | 232 | 12.87 | 6.23 | 1.01 | 246 | 12.88 | 6.23 | 0.81 | 267 | 14.20 | 6.88 | 0.53 |
| | 67 (19.4) | | 15.07 | 9.98 | 2.56 | | 11.27 | 6.98 | 1.22 | | 11.00 | 6.75 | 1.02 | | 12.04 | 7.40 | 0.72 | | 13.26 | 8.18 | 0.47 |
| | 63 (17.2) | | 14.28 | 11.55 | 2.30 | | 9.83 | 7.28 | 1.22 | | 10.51 | 7.69 | 0.87 | | 11.50 | 8.42 | 0.60 | | 12.66 | 9.30 | 0.37 |
| | 57 (13.9) | | 12.37 | 12.37 | 2.25 | | 9.04 | 8.60 | 1.02 | | 9.64 | 9.01 | 0.72 | | 10.53 | 9.87 | 0.47 | | 10.28 | 9.71 | 0.91 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 43

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH837

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X60***L | 1.00 | 1.00 | |
| FCM4X36***L | 0.96 | 1.04 | |
| FCM4X48***L | 0.99 | 0.99 | |
| EA*4X36L14A* | 0.95 | 1.08 | *8MV*0701412** |
| EA*4X36L17A* | 0.95 | 1.12 | *9MA*0601714A** |
| EA*4X36L17A* | 0.95 | 1.08 | *9MA*0801714A** |
| EA*4X36L17A* | 0.95 | 1.08 | *8MV*0701412** |
| EA*4X36L17A* | 0.96 | 1.02 | *8MV*0901716** |
| EA*4X36L21A* | 0.95 | 1.12 | *9MA*0601714A** |
| EA*4X36L21A* | 0.95 | 1.08 | *9MA*0801714A** |
| EA*4X36L21A* | 0.95 | 1.08 | *9MA*0602120A** |
| EA*4X36L21A* | 0.96 | 1.04 | *9MA*0802120A** |
| EA*4X36L21A* | 0.96 | 1.04 | *9MA*1002122A** |
| EA*4X36L21A* | 0.96 | 1.02 | *8MV*0901716** |
| EA*4X36L21A* | 0.96 | 1.04 | *8MV*1102120** |
| EA*4X42L21A* | 0.95 | 1.13 | *9MA*0601714A** |
| EA*4X42L21A* | 0.96 | 1.08 | *9MA*0801714A** |
| EA*4X42L21A* | 0.96 | 1.08 | *9MA*0602120A** |
| EA*4X42L21A* | 0.96 | 1.04 | *9MA*0802120A** |
| EA*4X42L21A* | 0.96 | 1.04 | *9MA*1002122A** |
| EA*4X42L21A* | 0.96 | 1.03 | *8MV*0901716** |
| EA*4X42L21A* | 0.96 | 1.04 | *8MV*1102120** |
| EA*4X42L24A* | 0.96 | 1.08 | *9MA*0602120A** |
| EA*4X42L24A* | 0.96 | 1.04 | *9MA*0802120A** |
| EA*4X42L24A* | 0.96 | 1.04 | *9MA*1002122A** |
| EA*4X42L24A* | 0.96 | 1.04 | *9MA*1202422A** |
| EA*4X42L24A* | 0.96 | 1.04 | *8MV*1102120** |
| EA*4X42L24A* | 0.96 | 1.00 | *8MV*1352422** |
| EA*4X48L17A* | 0.97 | 1.15 | *9MA*0601714A** |
| EA*4X48L17A* | 0.98 | 1.06 | *9MA*0801714A** |
| EA*4X48L17A* | 0.98 | 1.04 | *8MV*0701412** |
| EA*4X48L17A* | 0.98 | 1.02 | *8MV*0901716** |
| EA*4X48L21A* | 0.96 | 1.14 | *9MA*0601714A** |
| EA*4X48L21A* | 0.97 | 1.05 | *9MA*0801714A** |
| EA*4X48L21A* | 0.97 | 1.05 | *9MA*0602120A** |
| EA*4X48L21A* | 0.98 | 1.06 | *9MA*0802120A** |
| EA*4X48L21A* | 0.98 | 1.02 | *9MA*1002122A** |
| EA*4X48L21A* | 0.98 | 1.02 | *8MV*0901716** |
| EA*4X48L21A* | 0.98 | 1.02 | *8MV*1102120** |
| EA*4X48L24A* | 0.97 | 1.05 | *9MA*0602120A** |
| EA*4X48L24A* | 0.98 | 1.06 | *9MA*0802120A** |
| EA*4X48L24A* | 0.98 | 1.02 | *9MA*1002122A** |
| EA*4X48L24A* | 0.98 | 1.06 | *9MA*1202422A** |
| EA*4X48L24A* | 0.98 | 1.02 | *8MV*1102120** |
| EA*4X48L24A* | 0.98 | 1.02 | *8MV*1352422** |
| EA*4X60L21A* | 0.98 | 1.06 | *9MA*0601714A** |
| EA*4X60L21A* | 0.98 | 1.05 | *9MA*0801714A** |
| EA*4X60L21A* | 0.98 | 1.06 | *9MA*0602120A** |
| EA*4X60L21A* | 0.99 | 1.03 | *9MA*0802120A** |
| EA*4X60L21A* | 0.99 | 1.03 | *9MA*1002122A** |
| EA*4X60L21A* | 0.99 | 1.03 | *8MV*0901716** |
| EA*4X60L21A* | 0.99 | 1.03 | *8MV*1102120** |
| EA*4X60L24A* | 0.98 | 1.06 | *9MA*0602120A** |
| EA*4X60L24A* | 0.99 | 1.03 | *9MA*0802120A** |
| EA*4X60L24A* | 0.99 | 1.03 | *9MA*1002122A** |
| EA*4X60L24A* | 0.99 | 1.03 | *9MA*1202422A** |
| EA*4X60L24A* | 0.99 | 1.03 | *8MV*1102120** |
| EA*4X60L24A* | 0.99 | 1.03 | *8MV*1352422** |
| EN(A,D,W)4X36L17** | 0.94 | 1.11 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 0.95 | 1.12 | *9MA*0801714A** |
| EN(A,D,W)4X36L17** | 0.95 | 1.03 | *8MV*0901716** |
| EN(A,D)4X36L21** | 0.95 | 1.12 | *9MA*0601714A** |
| EN(A,D)4X36L21** | 0.95 | 1.12 | *9MA*0801714A** |
| EN(A,D)4X36L21** | 0.95 | 1.07 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 0.95 | 1.08 | *9MA*0802120A** |
| EN(A,D)4X36L21** | 0.95 | 1.08 | *9MA*1002122A** |
| EN(A,D)4X36L21** | 0.95 | 1.03 | *8MV*0901716** |
| EN(A,D)4X36L21** | 0.95 | 1.03 | *8MV*1102120** |
| END4X42L17** | 0.96 | 1.13 | *9MA*0601714A** |
| END4X42L17** | 0.96 | 1.09 | *9MA*0801714A** |
| END4X42L17** | 0.97 | 1.05 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 0.95 | 1.13 | *9MA*0601714A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.08 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.08 | *9MA*0602120A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.04 | *9MA*0802120A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.03 | *9MA*1002122A** |
| EN(A,D,W)4X42L21** | 0.96 | 1.04 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 0.96 | 1.04 | *8MV*1102120** |
| EN(A,D,W)4X48L21** | 0.97 | 1.10 | *9MA*0601714A** |
| EN(A,D,W)4X48L21** | 0.97 | 1.05 | *9MA*0801714A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.06 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *8MV*0901716** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *8MV*1102120** |
| EN(A,D)4X48L24** | 0.98 | 1.06 | *9MA*0602120A** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *9MA*0802120A** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *9MA*1002122A** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *9MA*1202422A** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *8MV*1102120** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 0.99 | 1.07 | *9MA*0602120A** |
| EN(A,D,W)4X60L24** | 0.99 | 1.03 | *9MA*0802120A** |
| EN(A,D,W)4X60L24** | 0.99 | 1.03 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 0.99 | 1.03 | *9MA*1202422A** |
| EN(A,D,W)4X60L24** | 0.99 | 1.03 | *8MV*1102120** |
| EN(A,D,W)4X60L24** | 0.99 | 1.03 | *8MV*1352422** |
| EHD4X36AAL | 0.96 | 1.14 | *9MA*0601714A** |
| EHD4X36AAL | 0.97 | 1.10 | *9MA*0801714A** |
| EHD4X36AAL | 0.97 | 1.10 | *9MA*0602120A** |
| EHD4X36AAL | 0.98 | 1.06 | *9MA*0802120A** |
| EHD4X36AAL | 0.98 | 1.06 | *9MA*1002122A** |
| EHD4X36AAL | 0.98 | 1.06 | *9MA*1202422A** |
| EHD4X36AAL | 0.98 | 1.06 | *8MV*0901716** |
| EHD4X36AAL | 0.98 | 1.06 | *8MV*1102120** |
| EHD4X36AAL | 0.98 | 1.04 | *8MV*1352422** |
| EHD4X42AAL | 0.97 | 1.15 | *9MA*0601714A** |
| EHD4X42AAL | 0.98 | 1.10 | *9MA*0801714A** |
| EHD4X42AAL | 0.98 | 1.06 | *9MA*0602120A** |
| EHD4X42AAL | 0.98 | 1.06 | *9MA*0802120A** |
| EHD4X42AAL | 0.98 | 1.05 | *9MA*1002122A** |
| EHD4X42AAL | 0.98 | 1.06 | *9MA*1202422A** |
| EHD4X42AAL | 0.98 | 1.06 | *8MV*0901716** |
| EHD4X42AAL | 0.98 | 1.06 | *8MV*1102120** |
| EHD4X42AAL | 0.98 | 1.02 | *8MV*1352422** |
| EHD4X48AAL | 0.98 | 1.15 | *9MA*0601714A** |
| EHD4X48AAL | 0.98 | 1.06 | *9MA*0801714A** |
| EHD4X48AAL | 0.98 | 1.06 | *9MA*0602120A** |
| EHD4X48AAL | 0.98 | 1.06 | *9MA*0802120A** |
| EHD4X48AAL | 0.98 | 1.06 | *9MA*1002122A** |
| EHD4X48AAL | 0.98 | 1.06 | *9MA*1202422A** |
| EHD4X48AAL | 0.98 | 1.06 | *8MV*0901716** |
| EHD4X48AAL | 0.98 | 1.06 | *8MV*1102120** |
| EHD4X48AAL | 0.98 | 1.06 | *8MV*1352422** |
| EHD4X60AAL | 0.98 | 1.06 | *9MA*1202422A** |
| EHD4X48AAL | 0.98 | 1.06 | *8MV*0901716** |
| EHD4X48AAL | 0.99 | 1.07 | *8MV*1102120** |
| EHD4X48AAL | 0.99 | 1.03 | *8MV*1352422** |
| EHD4X60AAL | 0.98 | 1.11 | *9MA*0601714A** |
| EHD4X60AAL | 0.99 | 1.07 | *9MA*0801714A** |
| EHD4X60AAL | 0.99 | 1.07 | *9MA*0602120A** |
| EHD4X60AAL | 0.99 | 1.03 | *9MA*0802120A** |
| EHD4X60AAL | 0.99 | 1.03 | *9MA*1002122A** |
| EHD4X60AAL | 0.99 | 1.03 | *9MA*1202422A** |
| EHD4X60AAL | 0.99 | 1.03 | *8MV*0901716** |
| EHD4X60AAL | 0.99 | 1.03 | *8MV*1102120** |
| EHD4X60AAL | 0.99 | 1.03 | *8MV*1352422** |

**2–STAGE (Hi–Stage 5, Lo–Stage 2)**

| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
|---|---|---|---|---|---|
| FCM4X60***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| EA*4X36L14A* | 0.93 | 1.16 | 0.96 | 1.13 | *9MX*0601412A** |
| EA*4X36L17A* | 0.94 | 1.22 | 0.98 | 1.26 | *9MX*0401712A** |
| EA*4X36L17A* | 0.95 | 1.07 | 0.97 | 1.06 | *9MX*0601714A** |
| EA*4X36L17A* | 0.95 | 1.12 | 0.98 | 1.19 | OMV098J12* |
| EA*4X36L17A* | 0.94 | 1.06 | 0.98 | 1.15 | OLV098A12* |
| EA*4X36L17A* | 0.95 | 1.08 | 0.98 | 1.08 | OMV112K14A |
| EA*4X36L21A* | 0.95 | 1.08 | 0.99 | 1.12 | OLV112A16A |
| EA*4X42L21A* | 0.96 | 1.09 | 1.00 | 1.12 | OLV112A16A |
| EA*4X42L24A* | 0.96 | 1.03 | 1.00 | 1.05 | OMV154L20A |
| EA*4X48L17A* | 0.98 | 1.10 | 0.99 | 1.05 | *9MX*0601714A** |
| EA*4X48L17A* | 0.98 | 1.10 | 0.99 | 1.05 | *9MX*0601714A** |
| EHD4X36AAL | 0.96 | 1.19 | 0.97 | 1.10 | *9MX*0401712A** |
| EHD4X36AAL | 0.96 | 1.19 | 0.98 | 1.12 | *9MX*0601412A** |
| EHD4X36AAL | 0.97 | 1.10 | 0.98 | 1.07 | *9MX*0601714A** |
| EHD4X36AAL | 0.96 | 1.19 | 0.98 | 1.12 | *9MX*0601412A** |
| EHD4X36AAL | 0.97 | 1.10 | 0.98 | 1.07 | *9MX*0601714A** |
| EHD4X48AAL | 0.97 | 1.20 | 0.98 | 1.11 | *9MX*0601412A** |
| EHD4X48AAL | 0.98 | 1.10 | 0.99 | 1.05 | *9MX*0601714A** |
| EN(A,D)4X36L21** | 0.95 | 1.08 | 0.99 | 1.15 | OLV112A16A |
| EN(A,D,W)4X36L17** | 0.95 | 12.30 | 0.00 | 0.00 | *9MX*0601714A** |
| EN(A,D,W)4X36L17** | 0.94 | 1.11 | 0.98 | 1.21 | OMV098J12* |
| EN(A,D,W)4X36L17** | 0.95 | 1.07 | 0.98 | 1.09 | OMV112K14A |
| EN(A,D,W)4X42L21** | 0.96 | 1.09 | 1.00 | 1.14 | OLV112A16A |
| END4X42L17** | 0.96 | 1.09 | 0.98 | 1.06 | *9MX*0601714A** |
| END4X42L17** | 0.96 | 1.08 | 1.00 | 1.19 | OMV098J12* |
| END4X42L17** | 0.96 | 1.08 | 1.00 | 1.15 | OLV098A12* |
| END4X42L17** | 0.96 | 1.09 | 1.00 | 1.08 | OMV112K14A |

# HVH837

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH837 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | INTEG‡ | | | Total | Integ‡ | |
| **STAGE 5 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 15.01 | 13.79 | 1.95 | 1200 | 30.72 | 28.01 | 3.22 | 1200 | 34.01 | 30.20 | 3.21 |
| **70 (21.1)** | | 14.67 | 13.48 | 2.00 | | 30.40 | 27.72 | 3.35 | | 33.69 | 29.92 | 3.35 |
| **75 (23.3)** | | 14.23 | 13.08 | 2.04 | | 30.00 | 27.36 | 3.47 | | 33.30 | 29.58 | 3.48 |
| **STAGE 5 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 450 | 14.91 | 13.70 | 1.98 | 1200 | 30.72 | 28.01 | 3.22 | 1200 | 34.01 | 30.20 | 3.21 |
| **70 (21.1)** | | 14.50 | 13.33 | 2.02 | | 30.40 | 27.72 | 3.35 | | 33.69 | 29.92 | 3.35 |
| **75 (23.3)** | | 14.00 | 12.87 | 2.05 | | 30.00 | 27.36 | 3.47 | | 33.30 | 29.58 | 3.48 |
| **STAGE 3 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 12.11 | 11.13 | 1.72 | 500 | 14.47 | 13.20 | 1.82 | 900 | 17.03 | 15.12 | 1.63 |
| **70 (21.1)** | | 11.88 | 10.92 | 1.78 | | 14.26 | 13.00 | 1.89 | | 16.82 | 14.94 | 1.71 |
| **75 (23.3)** | | 11.58 | 10.64 | 1.83 | | 14.02 | 12.78 | 1.96 | | 16.60 | 14.74 | 1.80 |
| **STAGE 3 – OTHER COULS** | | | | | | | | | | | | |
| **65 (18.3)** | 360 | 11.82 | 10.86 | 1.82 | 500 | 14.47 | 13.20 | 1.82 | 900 | 17.03 | 15.12 | 1.63 |
| **70 (21.1)** | | 11.45 | 10.52 | 1.85 | | 14.26 | 13.00 | 1.89 | | 16.82 | 14.94 | 1.71 |
| **75 (23.3)** | | 11.00 | 10.11 | 1.86 | | 14.02 | 12.78 | 1.96 | | 16.60 | 14.74 | 1.80 |
| **STAGE 1 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 12.11 | 11.13 | 1.72 | 500 | 14.47 | 13.19 | 1.82 | 900 | 13.77 | 12.23 | 1.51 |
| **70 (21.1)** | | 11.88 | 10.91 | 1.78 | | 14.25 | 12.99 | 1.89 | | 13.60 | 12.08 | 1.55 |
| **75 (23.3)** | | 11.58 | 10.64 | 1.83 | | 14.01 | 12.78 | 1.96 | | 13.41 | 11.91 | 1.63 |
| **STAGE 1 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 360 | 11.83 | 10.87 | 1.83 | 500 | 14.47 | 13.19 | 1.82 | 900 | 13.77 | 12.23 | 1.51 |
| **70 (21.1)** | | 11.45 | 10.52 | 1.85 | | 14.25 | 12.99 | 1.89 | | 13.60 | 12.08 | 1.55 |
| **75 (23.3)** | | 11.00 | 10.11 | 1.86 | | 14.01 | 12.78 | 1.96 | | 13.41 | 11.91 | 1.63 |

| INDOOR AIR | HVH837 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 1200 | 37.61 | 34.23 | 3.24 | 1200 | 40.49 | 40.49 | 3.21 | 900 | 25.27 | 25.27 | 1.66 |
| **70 (21.1)** | | 37.20 | 33.85 | 3.38 | | 40.00 | 40.00 | 3.35 | | 24.90 | 24.90 | 1.75 |
| **75 (23.3)** | | 36.77 | 33.46 | 3.52 | | 39.49 | 39.49 | 3.48 | | 24.49 | 24.49 | 1.85 |
| **STAGE 5 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 1200 | 37.61 | 34.23 | 3.24 | 1200 | 40.49 | 40.49 | 3.21 | 900 | 25.27 | 25.27 | 1.66 |
| **70 (21.1)** | | 37.20 | 33.85 | 3.38 | | 40.00 | 40.00 | 3.35 | | 24.90 | 24.90 | 1.75 |
| **75 (23.3)** | | 36.77 | 33.46 | 3.52 | | 39.49 | 39.49 | 3.48 | | 24.49 | 24.49 | 1.85 |
| **STAGE 3 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 900 | 19.68 | 17.91 | 1.65 | 900 | 22.48 | 22.48 | 1.66 | 900 | 25.26 | 25.26 | 1.66 |
| **70 (21.1)** | | 19.42 | 17.67 | 1.74 | | 22.17 | 22.17 | 1.75 | | 24.82 | 24.82 | 1.75 |
| **75 (23.3)** | | 19.15 | 17.43 | 1.83 | | 21.84 | 21.84 | 1.84 | | 24.43 | 24.43 | 1.85 |
| **STAGE 3 – OTHER COULS** | | | | | | | | | | | | |
| **65 (18.3)** | 900 | 19.68 | 17.91 | 1.65 | 900 | 22.48 | 22.48 | 1.66 | 900 | 25.26 | 25.26 | 1.66 |
| **70 (21.1)** | | 19.42 | 17.67 | 1.74 | | 22.17 | 22.17 | 1.75 | | 24.82 | 24.82 | 1.75 |
| **75 (23.3)** | | 19.15 | 17.43 | 1.83 | | 21.84 | 21.84 | 1.84 | | 24.43 | 24.43 | 1.85 |
| **STAGE 1 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 900 | 16.65 | 15.15 | 1.51 | 700 | 11.61 | 11.61 | 0.70 | 700 | 14.22 | 14.22 | 0.68 |
| **70 (21.1)** | | 16.42 | 14.94 | 1.60 | | 11.40 | 11.40 | 0.76 | | 13.94 | 13.94 | 0.74 |
| **75 (23.3)** | | 16.18 | 14.73 | 1.68 | | 11.19 | 11.19 | 0.82 | | 13.65 | 13.65 | 0.81 |
| **STAGE 1 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 900 | 16.65 | 15.15 | 1.51 | 700 | 11.61 | 11.61 | 0.70 | 700 | 14.22 | 14.22 | 0.68 |
| **70 (21.1)** | | 16.42 | 14.94 | 1.60 | | 11.40 | 11.40 | 0.76 | | 13.94 | 13.94 | 0.74 |
| **75 (23.3)** | | 16.18 | 14.73 | 1.68 | | 11.19 | 11.19 | 0.82 | | 13.65 | 13.65 | 0.81 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# HVH837

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH837 / FCM4X60***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 15.03 | 13.81 | 1.95 | 595 | 29.43 | 26.83 | 3.54 | 735 | 33.56 | 29.80 | 3.54 |
| **70 (21.1)** | | 14.68 | 13.49 | 2.00 | | 28.74 | 26.20 | 3.60 | | 33.03 | 29.34 | 3.65 |
| **75 (23.3)** | | 14.23 | 13.08 | 2.04 | | 27.40 | 24.98 | 3.54 | | 32.53 | 28.89 | 3.75 |
| **STAGE 5 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 434 | 14.85 | 13.64 | 1.99 | 595 | 29.43 | 26.83 | 3.54 | 735 | 33.56 | 29.80 | 3.54 |
| **70 (21.1)** | | 14.41 | 13.25 | 2.03 | | 28.74 | 26.20 | 3.60 | | 33.03 | 29.34 | 3.65 |
| **75 (23.3)** | | 13.90 | 12.78 | 2.05 | | 27.40 | 24.98 | 3.54 | | 32.53 | 28.89 | 3.75 |
| **STAGE 3 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 12.11 | 11.13 | 1.72 | 500 | 14.47 | 13.20 | 1.82 | 500 | 16.81 | 14.93 | 1.86 |
| **70 (21.1)** | | 11.88 | 10.91 | 1.78 | | 14.26 | 13.00 | 1.89 | | 16.58 | 14.73 | 1.94 |
| **75 (23.3)** | | 11.58 | 10.64 | 1.83 | | 14.01 | 12.78 | 1.96 | | 16.33 | 14.51 | 2.02 |
| **STAGE 3 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 277 | 11.00 | 10.11 | 1.82 | 325 | 14.13 | 12.88 | 2.05 | 425 | 16.74 | 14.87 | 1.97 |
| **70 (21.1)** | | 10.46 | 9.61 | 1.81 | | 13.78 | 12.56 | 2.09 | | 16.49 | 14.65 | 2.05 |
| **75 (23.3)** | | 10.14 | 9.32 | 1.84 | | 13.37 | 12.19 | 2.12 | | 16.22 | 14.40 | 2.12 |
| **STAGE 1 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 12.11 | 11.13 | 1.72 | 500 | 14.47 | 13.19 | 1.82 | 500 | 13.59 | 12.07 | 1.76 |
| **70 (21.1)** | | 11.88 | 10.91 | 1.78 | | 14.26 | 13.00 | 1.89 | | 13.40 | 11.90 | 1.74 |
| **75 (23.3)** | | 11.58 | 10.64 | 1.83 | | 14.01 | 12.78 | 1.96 | | 13.19 | 11.72 | 1.81 |
| **STAGE 1 – ALL OTHER INDOOR COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 277 | 11.00 | 10.11 | 1.82 | 277 | 13.71 | 12.50 | 2.11 | 341 | 13.42 | 11.92 | 1.92 |
| **70 (21.1)** | | 10.47 | 9.62 | 1.81 | | 13.27 | 12.09 | 2.12 | | 13.19 | 11.72 | 1.98 |
| **75 (23.3)** | | 10.14 | 9.32 | 1.84 | | 12.79 | 11.66 | 2.13 | | 12.95 | 11.50 | 2.04 |

| INDOOR AIR | HVH837 / FCM4X60***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 875 | 37.18 | 33.84 | 3.48 | 1014 | 40.10 | 40.10 | 3.34 | 737 | 24.96 | 24.96 | 1.77 |
| **70 (21.1)** | | 36.72 | 33.41 | 3.61 | | 39.59 | 39.59 | 3.47 | | 24.55 | 24.55 | 1.86 |
| **75 (23.3)** | | 36.23 | 32.97 | 3.73 | | 39.05 | 39.05 | 3.60 | | 24.14 | 24.14 | 1.95 |
| **STAGE 5 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 875 | 37.18 | 33.84 | 3.48 | 1014 | 40.10 | 40.10 | 3.34 | 737 | 24.96 | 24.96 | 1.77 |
| **70 (21.1)** | | 36.72 | 33.41 | 3.61 | | 39.59 | 39.59 | 3.47 | | 24.55 | 24.55 | 1.86 |
| **75 (23.3)** | | 36.23 | 32.97 | 3.73 | | 39.05 | 39.05 | 3.60 | | 24.14 | 24.14 | 1.95 |
| **STAGE 3 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 526 | 19.31 | 17.58 | 1.91 | 626 | 22.06 | 22.06 | 1.84 | 737 | 24.96 | 24.96 | 1.77 |
| **70 (21.1)** | | 19.04 | 17.32 | 1.99 | | 21.73 | 21.73 | 1.93 | | 24.38 | 24.38 | 1.85 |
| **75 (23.3)** | | 18.75 | 17.07 | 2.08 | | 21.39 | 21.39 | 2.02 | | 24.12 | 24.12 | 1.95 |
| **STAGE 3 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 526 | 19.31 | 17.58 | 1.91 | 626 | 22.06 | 22.06 | 1.84 | 737 | 24.96 | 24.96 | 1.77 |
| **70 (21.1)** | | 19.04 | 17.32 | 1.99 | | 21.73 | 21.73 | 1.93 | | 24.55 | 24.55 | 1.86 |
| **75 (23.3)** | | 18.75 | 17.07 | 2.08 | | 21.39 | 21.39 | 2.02 | | 24.14 | 24.14 | 1.95 |
| **STAGE 1 – FCM4X60***L ONLY** | | | | | | | | | | | | |
| **65 (18.3)** | 500 | 16.30 | 14.84 | 1.76 | 500 | 11.40 | 11.40 | 0.77 | 500 | 13.86 | 13.86 | 0.77 |
| **70 (21.1)** | | 16.06 | 14.62 | 1.84 | | 11.19 | 11.19 | 0.83 | | 13.45 | 13.45 | 0.83 |
| **75 (23.3)** | | 15.81 | 14.39 | 1.92 | | 10.97 | 10.97 | 0.89 | | 13.18 | 13.18 | 0.89 |
| **STAGE 1 – OTHER COILS** | | | | | | | | | | | | |
| **65 (18.3)** | 405 | 16.15 | 14.70 | 1.92 | 199 | 10.53 | 10.53 | 1.24 | 217 | 12.45 | 12.45 | 1.23 |
| **70 (21.1)** | | 15.90 | 14.47 | 1.99 | | 10.31 | 10.31 | 1.28 | | 12.27 | 12.27 | 1.28 |
| **75 (23.3)** | | 15.64 | 14.24 | 2.07 | | 10.08 | 10.08 | 1.33 | | 11.98 | 11.98 | 1.33 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH837

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X36***L | 1.00 | 1.09 | |
| FCM4X48***L | 1.00 | 1.02 | |
| FCM4X60***L | 1.00 | 1.00 | |
| EA*4X36L14A* | 1.00 | 1.11 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.10 | *8MV*0701412** |
| EA*4X36L17A* | 1.00 | 1.09 | *8MV*0901716** |
| EA*4X36L17A* | 1.00 | 1.11 | *9MA*0601714A** |
| EA*4X36L17A* | 1.00 | 1.11 | *9MA*0801714A** |
| EA*4X36L21A* | 1.00 | 1.08 | *8MV*0901716** |
| EA*4X36L21A* | 1.00 | 1.08 | *8MV*1102120** |
| EA*4X36L21A* | 1.00 | 1.11 | *9MA*0601714A** |
| EA*4X36L21A* | 1.00 | 1.09 | *9MA*0602120A** |
| EA*4X36L21A* | 1.00 | 1.10 | *9MA*0801714A** |
| EA*4X36L21A* | 1.00 | 1.09 | *9MA*0802120A** |
| EA*4X36L21A* | 1.00 | 1.08 | *9MA*1002122A** |
| EA*4X42L21A* | 1.00 | 1.06 | *8MV*0901716** |
| EA*4X42L21A* | 1.00 | 1.06 | *8MV*1102120** |
| EA*4X42L21A* | 1.00 | 1.09 | *9MA*0601714A** |
| EA*4X42L21A* | 1.00 | 1.08 | *9MA*0602120A** |
| EA*4X42L21A* | 1.00 | 1.08 | *9MA*0801714A** |
| EA*4X42L21A* | 1.00 | 1.07 | *9MA*0802120A** |
| EA*4X42L21A* | 1.00 | 1.06 | *9MA*1002122A** |
| EA*4X42L24A* | 1.00 | 1.06 | *8MV*1102120** |
| EA*4X42L24A* | 1.00 | 1.05 | *8MV*1352422** |
| EA*4X42L24A* | 1.00 | 1.07 | *9MA*0602120A** |
| EA*4X42L24A* | 1.00 | 1.07 | *9MA*0802120A** |
| EA*4X42L24A* | 1.00 | 1.06 | *9MA*1002122A** |
| EA*4X42L24A* | 1.00 | 1.07 | *9MA*1202422A** |
| EA*4X48L17A* | 1.00 | 1.04 | *8MV*0701412** |
| EA*4X48L17A* | 1.00 | 1.02 | *8MV*0901716** |
| EA*4X48L17A* | 1.00 | 1.05 | *9MA*0601714A** |
| EA*4X48L17A* | 1.00 | 1.04 | *9MA*0801714A** |
| EA*4X48L21A* | 1.00 | 1.03 | *8MV*0901716** |
| EA*4X48L21A* | 1.00 | 1.03 | *8MV*1102120** |
| EA*4X48L21A* | 1.00 | 1.06 | *9MA*0601714A** |
| EA*4X48L21A* | 1.00 | 1.05 | *9MA*0602120A** |
| EA*4X48L21A* | 1.00 | 1.05 | *9MA*0801714A** |
| EA*4X48L21A* | 1.00 | 1.04 | *9MA*0802120A** |
| EA*4X48L21A* | 1.00 | 1.03 | *9MA*1002122A** |
| EA*4X48L24A* | 1.00 | 1.03 | *8MV*1102120** |
| EA*4X48L24A* | 1.00 | 1.02 | *8MV*1352422** |
| EA*4X48L24A* | 1.00 | 1.05 | *9MA*0602120A** |
| EA*4X48L24A* | 1.00 | 1.04 | *9MA*0802120A** |
| EA*4X48L24A* | 1.00 | 1.03 | *9MA*1002122A** |
| EA*4X48L24A* | 1.00 | 1.03 | *9MA*1202422A** |
| EA*4X60L21A* | 1.00 | 1.03 | *8MV*0901716** |
| EA*4X60L21A* | 1.00 | 1.03 | *8MV*1102120** |
| EA*4X60L21A* | 1.00 | 1.06 | *9MA*0601714A** |
| EA*4X60L21A* | 1.00 | 1.05 | *9MA*0602120A** |
| EA*4X60L21A* | 1.00 | 1.05 | *9MA*0801714A** |
| EA*4X60L21A* | 1.00 | 1.04 | *9MA*0802120A** |
| EA*4X60L21A* | 1.00 | 1.03 | *9MA*1002122A** |
| EA*4X60L24A* | 1.00 | 1.03 | *8MV*1102120** |
| EA*4X60L24A* | 1.00 | 1.02 | *8MV*1352422** |
| EA*4X60L24A* | 1.00 | 1.05 | *9MA*0602120A** |
| EA*4X60L24A* | 1.00 | 1.04 | *9MA*0802120A** |
| EA*4X60L24A* | 1.00 | 1.03 | *9MA*1002122A** |
| EA*4X60L24A* | 1.00 | 1.03 | *9MA*1202422A** |
| EHD4X36AAL | 1.00 | 1.04 | *8MV*0901716** |
| EHD4X36AAL | 1.00 | 1.04 | *8MV*1102120** |
| EHD4X36AAL | 1.00 | 1.03 | *8MV*1352422** |
| EHD4X36AAL | 1.00 | 1.07 | *9MA*0601714A** |
| EHD4X36AAL | 1.00 | 1.05 | *9MA*0602120A** |
| EHD4X36AAL | 1.00 | 1.05 | *9MA*0801714A** |
| EHD4X36AAL | 1.00 | 1.04 | *9MA*0802120A** |
| EHD4X36AAL | 1.00 | 1.04 | *9MA*1002122A** |
| EHD4X36AAL | 1.00 | 1.04 | *9MA*1202422A** |
| EHD4X42AAL | 1.00 | 1.02 | *8MV*0901716** |
| EHD4X42AAL | 1.00 | 1.02 | *8MV*1102120** |
| EHD4X42AAL | 1.00 | 1.02 | *8MV*1352422** |
| EHD4X42AAL | 1.00 | 1.05 | *9MA*0601714A** |
| EHD4X42AAL | 1.00 | 1.04 | *9MA*0602120A** |
| EHD4X42AAL | 1.00 | 1.04 | *9MA*0801714A** |
| EHD4X42AAL | 1.00 | 1.02 | *9MA*0802120A** |
| EHD4X42AAL | 1.00 | 1.02 | *9MA*1002122A** |
| EHD4X42AAL | 1.00 | 1.02 | *9MA*1202422A** |
| EHD4X48AAL | 1.00 | 1.01 | *8MV*0901716** |
| EHD4X48AAL | 1.00 | 1.01 | *8MV*1102120** |
| EHD4X48AAL | 1.00 | 1.01 | *8MV*1352422** |
| EHD4X48AAL | 1.00 | 1.05 | *9MA*0601714A** |
| EHD4X48AAL | 1.00 | 1.03 | *9MA*0602120A** |
| EHD4X48AAL | 1.00 | 1.04 | *9MA*0801714A** |
| EHD4X48AAL | 1.00 | 1.02 | *9MA*0802120A** |
| EHD4X48AAL | 1.00 | 1.01 | *9MA*1002122A** |
| EHD4X48AAL | 1.00 | 1.02 | *9MA*1202422A** |
| EHD4X60AAL | 1.00 | 1.01 | *8MV*0901716** |
| EHD4X60AAL | 1.00 | 1.01 | *8MV*1102120** |
| EHD4X60AAL | 1.00 | 1.01 | *8MV*1352422** |
| EHD4X60AAL | 1.00 | 1.04 | *9MA*0601714A** |
| EHD4X60AAL | 1.00 | 1.03 | *9MA*0602120A** |
| EHD4X60AAL | 1.00 | 1.04 | *9MA*0801714A** |
| EHD4X60AAL | 1.00 | 1.02 | *9MA*0802120A** |
| EHD4X60AAL | 1.00 | 1.01 | *9MA*1002122A** |
| EHD4X60AAL | 1.00 | 1.02 | *9MA*1202422A** |
| EN(A,D)4X36L21** | 1.00 | 1.09 | *8MV*0901716** |
| EN(A,D)4X36L21** | 1.00 | 1.09 | *8MV*1102120** |
| EN(A,D)4X36L21** | 1.00 | 1.12 | *9MA*0601714A** |
| EN(A,D)4X36L21** | 1.00 | 1.11 | *9MA*0602120A** |
| EN(A,D)4X36L21** | 1.00 | 1.11 | *9MA*0801714A** |
| EN(A,D)4X36L21** | 1.00 | 1.09 | *9MA*0802120A** |
| EN(A,D)4X36L21** | 1.00 | 1.09 | *9MA*1002122A** |
| EN(A,D)4X48L24** | 1.00 | 1.02 | *8MV*1102120** |
| EN(A,D)4X48L24** | 1.00 | 1.02 | *8MV*1352422** |
| EN(A,D)4X48L24** | 1.00 | 1.04 | *9MA*0602120A** |
| EN(A,D)4X48L24** | 1.00 | 1.02 | *9MA*0802120A** |
| EN(A,D)4X48L24** | 1.00 | 1.02 | *9MA*1002122A** |
| EN(A,D)4X48L24** | 1.00 | 1.02 | *9MA*1202422A** |
| EN(A,D,W)4X36L17** | 1.00 | 1.09 | *8MV*0901716** |
| EN(A,D,W)4X36L17** | 1.00 | 1.13 | *9MA*0601714A** |
| EN(A,D,W)4X36L17** | 1.00 | 1.11 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.06 | *8MV*0901716** |
| EN(A,D,W)4X42L21** | 1.00 | 1.06 | *8MV*1102120** |
| EN(A,D,W)4X42L21** | 1.00 | 1.09 | *9MA*0601714A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.08 | *9MA*0602120A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.08 | *9MA*0801714A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.07 | *9MA*0802120A** |
| EN(A,D,W)4X42L21** | 1.00 | 1.06 | *9MA*1002122A** |
| EN(A,D,W)4X48L21** | 1.00 | 1.02 | *8MV*0901716** |
| EN(A,D,W)4X48L21** | 1.00 | 1.02 | *8MV*1102120** |
| EN(A,D,W)4X48L21** | 1.00 | 1.05 | *9MA*0601714A** |
| EN(A,D,W)4X48L21** | 1.00 | 1.04 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 1.00 | 1.04 | *9MA*0801714A** |
| EN(A,D,W)4X48L21** | 1.00 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 1.00 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 1.00 | 1.02 | *8MV*1102120** |
| EN(A,D,W)4X60L24** | 1.00 | 1.02 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 1.00 | 1.04 | *9MA*0602120A** |
| EN(A,D,W)4X60L24** | 1.00 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X60L24** | 1.00 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 1.00 | 1.02 | *9MA*1202422A** |
| END4X42L17** | 1.00 | 1.04 | *8MV*0901716** |
| END4X42L17** | 1.00 | 1.07 | *9MA*0601714A** |
| END4X42L17** | 1.00 | 1.06 | *9MA*0801714A** |

### 2–STAGE (Hi–Stage 5, Lo–Stage 2)

| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
|---|---|---|---|---|---|
| FCM4X60***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| EA*4X36L14A* | 1.01 | 1.18 | 1.06 | 1.23 | *9MX*0601412A** |
| EA*4X36L17A* | 1.01 | 1.17 | 1.07 | 1.21 | *9MX*0401712A** |
| EA*4X36L17A* | 1.00 | 1.14 | 1.06 | 1.21 | *9MX*0601714A** |
| EA*4X36L17A* | 1.11 | 1.28 | 1.07 | 1.19 | OMV098J12* |
| EA*4X36L17A* | 1.11 | 1.29 | 1.07 | 1.18 | OLV098A12* |
| EA*4X36L17A* | 1.10 | 1.26 | 1.06 | 1.17 | OMV112K14A |
| EA*4X36L21A* | 1.11 | 1.26 | 1.06 | 1.15 | OLV112A16A |
| EA*4X42L21A* | 1.10 | 1.22 | 1.06 | 1.14 | OLV112A16A |
| EA*4X42L24A* | 1.10 | 1.22 | 1.05 | 1.12 | OMV154L20A |
| EA*4X48L17A* | 0.97 | 1.02 | 1.03 | 1.11 | *9MX*0601714A** |
| EA*4X48L17A* | 0.97 | 1.02 | 1.03 | 1.11 | *9MX*0601714A** |
| EHD4X36AAL | 1.01 | 1.12 | 1.05 | 1.20 | *9MX*0401712A** |
| EHD4X36AAL | 1.01 | 1.11 | 1.06 | 1.18 | *9MX*0601412A** |
| EHD4X36AAL | 0.99 | 1.07 | 1.05 | 1.16 | *9MX*0601714A** |
| EHD4X36AAL | 1.01 | 1.11 | 1.06 | 1.18 | *9MX*0601412A** |
| EHD4X36AAL | 0.99 | 1.07 | 1.05 | 1.16 | *9MX*0601714A** |
| EN(A,D)4X36L21** | 1.11 | 1.27 | 1.07 | 1.18 | OLV112A16A |
| EN(A,D,W)4X36L17** | | | | | *9MX*0601714A** |
| EN(A,D,W)4X36L17** | 1.11 | 1.29 | 1.07 | 1.20 | OMV098J12* |
| EN(A,D,W)4X36L17** | 1.11 | 1.28 | 1.06 | 1.18 | OMV112K14A |
| EN(A,D,W)4X42L21** | 1.11 | 1.23 | 1.06 | 1.14 | OLV112A16A |
| END4X42L17** | 0.99 | 1.08 | 1.05 | 1.16 | *9MX*0601714A** |
| END4X42L17** | 1.10 | 1.21 | 1.07 | 1.14 | OMV098J12* |
| END4X42L17** | 1.10 | 1.22 | 1.06 | 1.13 | OLV098A12* |
| END4X42L17** | 1.10 | 1.20 | 1.06 | 1.12 | OMV112K14A |

# HVH848

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR EWB °F (°C) | HVH848 / FCM4X48***L Efficiency Mode — Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens ‡ | Total Sys. KW** |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1400** | 44.46 | 17.96 | 5.30 | **1400** | 47.55 | 19.13 | 4.76 | **1400** | 50.59 | 20.28 | 4.26 | **1400** | 53.58 | 21.41 | 3.78 | **1400** | 56.49 | 22.53 | 3.33 | **1400** | 59.36 | 23.64 | 2.90 |
| | 67 (19.4) | | 40.53 | 24.37 | 5.19 | | 43.36 | 25.62 | 4.67 | | 46.12 | 26.85 | 4.18 | | 48.81 | 28.07 | 3.72 | | 51.44 | 29.27 | 3.28 | | 54.03 | 30.47 | 2.88 |
| | 63 (17.2) | | 37.62 | 29.42 | 5.09 | | 40.24 | 30.72 | 4.59 | | 42.79 | 32.02 | 4.12 | | 45.28 | 33.30 | 3.67 | | 47.70 | 34.55 | 3.25 | | 50.09 | 35.81 | 2.86 |
| | 57 (13.9) | | 34.79 | 34.79 | 4.99 | | 36.84 | 36.84 | 4.50 | | 38.82 | 38.82 | 4.04 | | 40.75 | 40.75 | 3.61 | | 42.87 | 42.14 | 3.21 | | 44.94 | 43.50 | 2.83 |
| **80 (26.7)** | 72 (22.2) | **1400** | 44.36 | 24.28 | 5.30 | **1400** | 47.46 | 25.53 | 4.77 | **1400** | 50.50 | 26.76 | 4.26 | **1400** | 53.48 | 27.99 | 3.78 | **1400** | 56.39 | 29.19 | 3.33 | **1400** | 59.24 | 30.40 | 2.90 |
| | 67 (19.4) | | 40.43 | 30.64 | 5.19 | | 43.26 | 31.96 | 4.67 | | 46.02 | 33.28 | 4.18 | | 48.71 | 34.57 | 3.72 | | 51.35 | 35.85 | 3.28 | | 53.94 | 37.15 | 2.88 |
| | 63 (17.2) | | 37.66 | 35.55 | 5.10 | | 40.25 | 36.99 | 4.59 | | 42.77 | 38.38 | 4.12 | | 45.25 | 39.75 | 3.67 | | 47.66 | 41.09 | 3.25 | | 50.04 | 42.41 | 2.86 |
| | 57 (13.9) | | 36.88 | 36.88 | 5.07 | | 39.04 | 39.04 | 4.56 | | 41.10 | 41.10 | 4.09 | | 43.11 | 43.11 | 3.64 | | 45.06 | 45.06 | 3.23 | | 46.95 | 46.95 | 2.84 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1200** | 29.36 | 12.30 | 3.08 | **1200** | 31.57 | 13.11 | 2.74 | **1200** | 33.60 | 13.87 | 2.38 | **1200** | 35.73 | 14.66 | 2.08 | **1200** | 37.85 | 15.46 | 1.79 | **1200** | 39.94 | 16.25 | 1.53 |
| | 67 (19.4) | | 26.65 | 17.55 | 3.05 | | 28.66 | 18.45 | 2.73 | | 30.51 | 19.30 | 2.38 | | 32.44 | 20.17 | 2.09 | | 34.35 | 21.05 | 1.82 | | 36.25 | 21.92 | 1.56 |
| | 63 (17.2) | | 24.64 | 21.63 | 3.04 | | 26.47 | 22.60 | 2.72 | | 28.19 | 23.52 | 2.38 | | 29.95 | 24.47 | 2.10 | | 31.72 | 25.42 | 1.83 | | 33.46 | 26.36 | 1.58 |
| | 57 (13.9) | | 23.69 | 23.69 | 3.03 | | 25.21 | 25.21 | 2.71 | | 26.63 | 26.63 | 2.37 | | 28.09 | 28.09 | 2.10 | | 29.52 | 29.52 | 1.84 | | 30.92 | 30.92 | 1.60 |
| **80 (26.7)** | 72 (22.2) | **1200** | 29.26 | 17.54 | 3.08 | **1200** | 31.47 | 18.44 | 2.74 | **1200** | 33.50 | 19.28 | 2.38 | **1200** | 35.64 | 20.16 | 2.08 | **1200** | 37.75 | 21.04 | 1.79 | **1200** | 39.84 | 21.91 | 1.53 |
| | 67 (19.4) | | 26.58 | 22.70 | 3.06 | | 28.58 | 23.70 | 2.73 | | 30.43 | 24.64 | 2.38 | | 32.35 | 25.61 | 2.09 | | 34.25 | 26.57 | 1.82 | | 36.15 | 27.54 | 1.56 |
| | 63 (17.2) | | 25.33 | 25.33 | 3.04 | | 26.94 | 26.94 | 2.72 | | 28.40 | 28.38 | 2.38 | | 30.14 | 29.65 | 2.10 | | 31.85 | 30.76 | 1.83 | | 33.56 | 31.83 | 1.58 |
| | 57 (13.9) | | 25.29 | 25.29 | 3.04 | | 26.90 | 26.90 | 2.72 | | 28.39 | 28.39 | 2.38 | | 29.92 | 29.92 | 2.10 | | 31.42 | 31.42 | 1.83 | | 32.90 | 32.90 | 1.58 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1100** | 25.37 | 10.73 | 2.67 | **1100** | 27.27 | 11.42 | 2.37 | **875** | 19.54 | 8.42 | 1.06 | **875** | 20.95 | 8.94 | 0.89 | **875** | 22.36 | 9.47 | 0.72 | **875** | 23.78 | 10.00 | 0.56 |
| | 67 (19.4) | | 22.95 | 15.36 | 2.66 | | 24.75 | 16.20 | 2.37 | | 17.66 | 12.16 | 1.09 | | 18.94 | 12.78 | 0.92 | | 20.22 | 13.39 | 0.76 | | 21.49 | 14.00 | 0.61 |
| | 63 (17.2) | | 21.20 | 18.93 | 2.65 | | 22.84 | 19.87 | 2.38 | | 16.38 | 15.07 | 1.11 | | 17.54 | 15.80 | 0.95 | | 18.70 | 16.45 | 0.79 | | 19.87 | 17.13 | 0.65 |
| | 57 (13.9) | | 20.51 | 20.51 | 2.65 | | 21.90 | 21.90 | 2.38 | | 16.01 | 16.01 | 1.11 | | 17.02 | 17.02 | 0.96 | | 18.02 | 18.02 | 0.81 | | 19.01 | 19.01 | 0.67 |
| **80 (26.7)** | 72 (22.2) | **1100** | 25.29 | 15.39 | 2.67 | **1100** | 27.28 | 16.22 | 2.37 | **875** | 19.46 | 12.19 | 1.06 | **875** | 20.87 | 12.80 | 0.89 | **875** | 22.28 | 13.41 | 0.72 | **875** | 23.69 | 14.03 | 0.56 |
| | 67 (19.4) | | 22.91 | 19.93 | 2.66 | | 24.69 | 20.87 | 2.37 | | 17.66 | 15.85 | 1.09 | | 18.93 | 16.56 | 0.92 | | 20.19 | 17.27 | 0.76 | | 21.46 | 17.97 | 0.61 |
| | 63 (17.2) | | 21.96 | 21.96 | 2.66 | | 23.43 | 23.43 | 2.38 | | 17.13 | 17.13 | 1.10 | | 18.21 | 18.21 | 0.93 | | 19.27 | 19.27 | 0.78 | | 20.33 | 20.33 | 0.64 |
| | 57 (13.9) | | 21.92 | 21.92 | 2.66 | | 23.39 | 23.39 | 2.38 | | 17.10 | 17.10 | 1.10 | | 18.18 | 18.18 | 0.93 | | 19.24 | 19.24 | 0.78 | | 20.29 | 20.29 | 0.64 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 43

# HVH848

## DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH848 / FCM4X***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW | ID SCFM | Capacity MBtuh Total | Capacity MBtuh Sens‡ | Total Sys. KW |
| STAGE 5 | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 1110 | 46.15 | 18.51 | 4.57 | 1184 | 49.48 | 19.81 | 4.11 | 1257 | 52.80 | 21.11 | 3.68 | 1330 | 56.10 | 22.38 | 3.28 | 1226 | 58.13 | 23.21 | 2.80 |
| | 67 (19.4) | | 42.05 | 23.76 | 4.47 | | 45.08 | 25.46 | 4.03 | | 48.10 | 27.15 | 3.62 | | 51.08 | 28.84 | 3.24 | | 52.88 | 29.26 | 2.77 |
| | 63 (17.2) | | 39.02 | 27.87 | 4.39 | | 41.83 | 29.88 | 3.97 | | 44.61 | 31.87 | 3.57 | | 47.36 | 33.85 | 3.20 | | 49.01 | 33.96 | 2.76 |
| | 57 (13.9) | | 35.01 | 33.85 | 4.28 | | 37.53 | 36.29 | 3.88 | | 40.02 | 38.72 | 3.51 | | 42.47 | 41.16 | 3.16 | | 43.86 | 40.86 | 2.73 |
| 80 (26.7) | 72 (22.2) | 1110 | 46.07 | 23.69 | 4.57 | 1184 | 49.40 | 25.39 | 4.11 | 1257 | 52.71 | 27.07 | 3.68 | 1330 | 55.99 | 28.76 | 3.28 | 1226 | 58.04 | 29.22 | 2.80 |
| | 67 (19.4) | | 41.97 | 28.88 | 4.47 | | 45.00 | 30.96 | 4.03 | | 48.01 | 33.04 | 3.62 | | 50.99 | 35.10 | 3.24 | | 52.80 | 35.16 | 2.77 |
| | 63 (17.2) | | 38.97 | 32.95 | 4.39 | | 41.78 | 35.35 | 3.97 | | 44.56 | 37.73 | 3.57 | | 47.31 | 40.09 | 3.20 | | 48.95 | 39.83 | 2.76 |
| | 57 (13.9) | | 36.54 | 36.54 | 4.32 | | 39.18 | 39.18 | 3.92 | | 41.80 | 41.80 | 3.53 | | 44.40 | 44.40 | 3.17 | | 45.07 | 45.07 | 2.73 |
| STAGE 3 | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 744 | 29.64 | 11.97 | 2.58 | 801 | 31.86 | 12.87 | 2.24 | 842 | 34.06 | 13.75 | 1.96 | 887 | 36.31 | 14.65 | 1.69 | 1001 | 39.02 | 15.76 | 1.45 |
| | 67 (19.4) | | 26.82 | 15.33 | 2.57 | | 28.87 | 16.54 | 2.24 | | 30.87 | 17.64 | 1.96 | | 32.91 | 18.82 | 1.71 | | 35.37 | 20.54 | 1.48 |
| | 63 (17.2) | | 24.74 | 17.92 | 2.56 | | 26.64 | 19.39 | 2.23 | | 28.46 | 20.78 | 1.97 | | 30.37 | 22.07 | 1.72 | | 32.64 | 24.25 | 1.50 |
| | 57 (13.9) | | 22.07 | 21.73 | 2.54 | | 23.80 | 23.54 | 2.22 | | 25.49 | 25.08 | 1.97 | | 27.16 | 26.77 | 1.74 | | 29.37 | 29.37 | 1.53 |
| 80 (26.7) | 72 (22.2) | 744 | 29.56 | 15.35 | 2.58 | 801 | 31.78 | 16.57 | 2.24 | 842 | 33.99 | 17.69 | 1.96 | 887 | 36.22 | 18.85 | 1.69 | 1001 | 38.92 | 20.56 | 1.45 |
| | 67 (19.4) | | 26.77 | 18.65 | 2.57 | | 28.80 | 20.17 | 2.24 | | 30.80 | 21.51 | 1.96 | | 32.83 | 22.97 | 1.71 | | 35.29 | 25.26 | 1.48 |
| | 63 (17.2) | | 24.72 | 21.24 | 2.56 | | 26.62 | 23.01 | 2.23 | | 28.48 | 24.54 | 1.97 | | 30.35 | 26.20 | 1.72 | | 32.64 | 28.94 | 1.50 |
| | 57 (13.9) | | 23.28 | 23.28 | 2.55 | | 25.15 | 25.15 | 2.23 | | 26.88 | 26.88 | 1.97 | | 28.66 | 28.66 | 1.73 | | 31.18 | 31.18 | 1.52 |
| STAGE 1 | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 662 | 25.50 | 10.32 | 2.25 | 457 | 17.80 | 7.20 | 1.03 | 482 | 19.19 | 7.76 | 0.86 | 508 | 20.61 | 8.34 | 0.70 | 534 | 22.05 | 8.92 | 0.55 |
| | 67 (19.4) | | 23.02 | 13.19 | 2.25 | | 16.09 | 9.17 | 1.06 | | 17.34 | 9.88 | 0.90 | | 18.62 | 10.62 | 0.74 | | 19.92 | 11.37 | 0.60 |
| | 63 (17.2) | | 21.21 | 15.43 | 2.25 | | 14.83 | 10.71 | 1.07 | | 15.98 | 11.55 | 0.92 | | 17.16 | 12.41 | 0.77 | | 18.35 | 13.29 | 0.64 |
| | 57 (13.9) | | 18.95 | 18.71 | 2.24 | | 13.20 | 12.99 | 1.09 | | 14.23 | 14.01 | 0.95 | | 15.29 | 15.05 | 0.81 | | 16.35 | 16.12 | 0.68 |
| 80 (26.7) | 72 (22.2) | 662 | 25.43 | 13.24 | 2.25 | 457 | 17.75 | 9.19 | 1.03 | 482 | 19.14 | 9.91 | 0.86 | 508 | 20.56 | 10.65 | 0.70 | 534 | 21.99 | 11.40 | 0.55 |
| | 67 (19.4) | | 22.97 | 16.07 | 2.25 | | 16.05 | 11.14 | 1.06 | | 17.30 | 12.01 | 0.90 | | 18.57 | 12.91 | 0.74 | | 19.86 | 13.83 | 0.60 |
| | 63 (17.2) | | 21.20 | 18.29 | 2.25 | | 14.82 | 12.68 | 1.07 | | 15.97 | 13.68 | 0.92 | | 17.15 | 14.70 | 0.77 | | 18.34 | 15.74 | 0.63 |
| | 57 (13.9) | | 20.00 | 20.00 | 2.25 | | 13.93 | 13.93 | 1.08 | | 15.01 | 15.01 | 0.94 | | 16.13 | 16.13 | 0.79 | | 17.26 | 17.26 | 0.66 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor; Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 43

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH848

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X48***L | 1.00 | 1.00 | |
| EA*4X48L17A* | 0.98 | 1.08 | *8MV*0901716** |
| EA*4X48L21A* | 0.97 | 1.06 | *9MA*0602120A** |
| EA*4X48L21A* | 0.98 | 1.08 | *9MA*0802120A** |
| EA*4X48L21A* | 0.98 | 1.02 | *9MA*1002122A** |
| EA*4X48L21A* | 0.98 | 1.02 | *8MV*1102120** |
| EA*4X48L24A* | 0.98 | 1.02 | *9MA*1202422A** |
| EA*4X48L24A* | 0.98 | 1.02 | *8MV*1352422** |
| EA*4X60L21A* | 0.99 | 1.09 | *9MA*0602120A** |
| EA*4X60L21A* | 1.00 | 1.05 | *9MA*0802120A** |
| EA*4X60L21A* | 1.00 | 1.05 | *9MA*1002122A** |
| EA*4X60L21A* | 1.00 | 1.05 | *8MV*1102120** |
| EA*4X60L24A* | 1.00 | 1.05 | *9MA*1202422A** |
| EA*4X60L24A* | 1.00 | 1.05 | *8MV*1352422** |
| EN(A,D,W)4X48L21** | 0.97 | 1.06 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X48L21** | 0.98 | 1.02 | *8MV*1102120** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *9MA*1202422A** |
| EN(A,D)4X48L24** | 0.98 | 1.02 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 1.00 | 1.05 | *9MA*1202422A** |
| EN(A,D,W)4X60L24** | 1.00 | 1.00 | *8MV*1352422** |
| EHD4X48AAL | 0.99 | 1.15 | *9MA*0602120A** |
| EHD4X48AAL | 0.99 | 1.15 | *9MA*0802120A** |
| EHD4X48AAL | 0.99 | 1.09 | *9MA*1002122A** |
| EHD4X48AAL | 0.99 | 1.15 | *9MA*1202422A** |
| EHD4X48AAL | 0.99 | 1.15 | *8MV*0901716** |
| EHD4X48AAL | 0.99 | 1.09 | *8MV*1102120** |
| EHD4X48AAL | 0.99 | 1.09 | *8MV*1352422** |
| EHD4X60AAL | 0.99 | 1.15 | *9MA*0602120A** |
| EHD4X60AAL | 1.00 | 1.16 | *9MA*0802120A** |
| EHD4X60AAL | 1.00 | 1.10 | *9MA*1002122A** |
| EHD4X60AAL | 1.00 | 1.10 | *9MA*1202422A** |
| EHD4X60AAL | 1.00 | 1.10 | *8MV*0901716** |
| EHD4X60AAL | 1.00 | 1.10 | *8MV*1102120** |
| EHD4X60AAL | 1.01 | 1.11 | *8MV*1352422** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X60***L | 1.00 | 0.99 | 0.98 | 0.95 | |
| EA*4X48L17A* | 1.05 | 1.08 | 1.01 | 1.05 | *9MX*0801716A** |
| EA*4X48L21A* | 1.05 | 1.08 | 1.02 | 1.04 | *9MX*1002120A** |
| EA*4X48L21A* | 1.06 | 1.10 | 1.02 | 1.07 | OLV112A16A |
| EA*4X48L24A* | 1.05 | 1.06 | 1.01 | 1.02 | OLV154F20A |
| EA*4X48L24A* | 1.04 | 1.06 | 1.01 | 1.03 | OMV154L20A |
| EA*4X60L21A* | 1.03 | 1.05 | 1.00 | 1.01 | *9MX*1002120A** |
| EA*4X60L21A* | 1.04 | 1.07 | 1.01 | 1.04 | OLV112A16A |
| EA*4X60L24A* | 1.03 | 1.03 | 0.99 | 0.99 | OLV154F20A |
| EA*4X60L24A* | 1.03 | 1.04 | 0.99 | 1.00 | OMV154L20A |
| EN(A,D,W)4X48L21** | 1.06 | 1.07 | 1.03 | 1.04 | *9MX*1002120A** |
| EN(A,D)4X48L24** | 1.06 | 1.06 | 1.02 | 1.03 | OLV154F20A |
| EN(A,D)4X48L24** | 1.06 | 1.07 | 1.02 | 1.04 | OMV154L20A |
| EN(A,D,W)4X60L24** | 1.04 | 1.03 | 1.00 | 0.99 | OLV154F20A |
| EN(A,D,W)4X60L24** | 1.04 | 1.05 | 1.01 | 1.01 | OMV154L20A |
| EHD4X48AAL | 1.06 | 1.09 | 1.02 | 1.07 | *9MX*0801716A** |
| EHD4X48AAL | 1.06 | 1.07 | 1.03 | 1.04 | *9MX*1002120A** |
| EHD4X60AAL | 1.05 | 1.07 | 1.01 | 1.04 | *9MX*0801716A** |

# HVH848

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH848 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 700 | 22.65 | 20.82 | 2.72 | 1600 | 35.57 | 32.43 | 3.74 | 1600 | 40.44 | 35.92 | 3.87 |
| 70 (21.1) | | 22.10 | 20.31 | 2.77 | | 35.20 | 32.09 | 3.88 | | 40.08 | 35.59 | 4.02 |
| 75 (23.3) | | 20.89 | 19.19 | 2.73 | | 34.73 | 31.67 | 4.00 | | 39.66 | 35.23 | 4.17 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 600 | 17.23 | 15.83 | 2.08 | 700 | 20.52 | 18.71 | 2.19 | 1275 | 24.10 | 21.40 | 2.18 |
| 70 (21.1) | | 16.82 | 15.46 | 2.13 | | 20.25 | 18.46 | 2.29 | | 23.86 | 21.19 | 2.29 |
| 75 (23.3) | | 16.32 | 15.00 | 2.17 | | 19.94 | 18.18 | 2.37 | | 23.61 | 20.97 | 2.40 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 600 | 17.23 | 15.83 | 2.08 | 700 | 20.51 | 18.70 | 2.19 | 1275 | 20.26 | 17.99 | 1.88 |
| 70 (21.1) | | 16.82 | 15.46 | 2.13 | | 20.24 | 18.45 | 2.28 | | 20.03 | 17.79 | 1.97 |
| 75 (23.3) | | 16.32 | 15.00 | 2.17 | | 19.93 | 18.17 | 2.37 | | 19.81 | 17.60 | 2.07 |

| INDOOR AIR | HVH848 / FCM4X48***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 1600 | 46.06 | 41.92 | 4.02 | 1600 | 51.02 | 51.02 | 4.13 | 1275 | 35.74 | 35.74 | 2.39 |
| 70 (21.1) | | 45.63 | 41.52 | 4.18 | | 50.50 | 50.50 | 4.30 | | 35.29 | 35.29 | 2.51 |
| 75 (23.3) | | 45.16 | 41.10 | 4.34 | | 49.96 | 49.96 | 4.47 | | 34.80 | 34.80 | 2.64 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 1275 | 27.80 | 25.30 | 2.26 | 1275 | 31.75 | 31.75 | 2.33 | 1275 | 35.74 | 35.74 | 2.39 |
| 70 (21.1) | | 27.51 | 25.03 | 2.37 | | 31.38 | 31.38 | 2.45 | | 35.28 | 35.28 | 2.51 |
| 75 (23.3) | | 27.20 | 24.76 | 2.49 | | 31.01 | 31.01 | 2.58 | | 34.80 | 34.80 | 2.64 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 1275 | 23.56 | 21.44 | 1.94 | 1000 | 16.14 | 16.14 | 0.88 | 1000 | 18.69 | 18.69 | 0.87 |
| 70 (21.1) | | 23.29 | 21.19 | 2.04 | | 15.90 | 15.90 | 0.95 | | 18.40 | 18.40 | 0.94 |
| 75 (23.3) | | 23.01 | 20.94 | 2.15 | | 15.65 | 15.65 | 1.02 | | 18.10 | 18.10 | 1.02 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# HVH848

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH860 / FCM4X60***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 600 | 22.44 | 20.62 | 2.78 | 934 | 34.33 | 31.30 | 3.70 | 1139 | 39.97 | 35.50 | 3.80 |
| 70 (21.1) | | 20.06 | 18.43 | 2.60 | | 33.36 | 30.42 | 3.99 | | 40.36 | 35.85 | 4.06 |
| 75 (23.3) | | 20.34 | 18.69 | 2.57 | | 32.54 | 29.67 | 3.83 | | 39.62 | 35.19 | 4.44 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 450 | 16.76 | 15.40 | 2.15 | 633 | 20.49 | 18.68 | 2.24 | 724 | 23.71 | 21.06 | 2.29 |
| 70 (21.1) | | 15.82 | 14.54 | 2.03 | | 20.28 | 18.49 | 2.36 | | 23.55 | 20.92 | 2.43 |
| 75 (23.3) | | 15.13 | 13.91 | 2.12 | | 19.73 | 17.99 | 2.41 | | 23.38 | 20.76 | 2.56 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 450 | 16.80 | 15.44 | 2.16 | 569 | 20.44 | 18.64 | 2.30 | 629 | 19.82 | 17.60 | 1.98 |
| 70 (21.1) | | 16.51 | 15.17 | 2.43 | | 20.20 | 18.42 | 2.41 | | 20.00 | 17.77 | 1.98 |
| 75 (23.3) | | 13.93 | 12.80 | 2.31 | | 18.49 | 16.86 | 2.70 | | 19.83 | 17.61 | 2.09 |

| INDOOR AIR | HVH860 / FCM4X60***L Heating Comfort Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| STAGE 5 | | | | | | | | | | | | |
| 65 (18.3) | 1344 | 45.25 | 41.18 | 4.09 | 1550 | 50.80 | 50.80 | 4.12 | 996 | 35.14 | 35.14 | 2.47 |
| 70 (21.1) | | 45.69 | 41.58 | 4.37 | | 51.38 | 51.38 | 4.42 | | 34.47 | 34.47 | 2.34 |
| 75 (23.3) | | 46.09 | 41.94 | 4.66 | | 51.92 | 51.92 | 4.74 | | 34.72 | 34.72 | 2.52 |
| STAGE 3 | | | | | | | | | | | | |
| 65 (18.3) | 814 | 27.37 | 24.91 | 2.37 | 905 | 31.23 | 31.23 | 2.43 | 996 | 35.14 | 35.14 | 2.47 |
| 70 (21.1) | | 27.16 | 24.72 | 2.51 | | 30.96 | 30.96 | 2.58 | | 34.84 | 34.84 | 2.62 |
| 75 (23.3) | | 26.96 | 24.54 | 2.66 | | 30.69 | 30.69 | 2.73 | | 34.50 | 34.50 | 2.78 |
| STAGE 1 | | | | | | | | | | | | |
| 65 (18.3) | 690 | 23.02 | 20.95 | 2.06 | 350 | 15.27 | 15.27 | 1.19 | 403 | 17.49 | 17.49 | 1.15 |
| 70 (21.1) | | 22.56 | 20.53 | 2.16 | | 14.75 | 14.75 | 1.17 | | 16.87 | 16.87 | 1.22 |
| 75 (23.3) | | 22.78 | 20.73 | 2.16 | | 14.36 | 14.36 | 1.23 | | 16.27 | 16.27 | 1.20 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

See additional notes on page 45

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH848

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X48***L | 1.00 | 1.00 | |
| EA*4X48L17A* | 1.04 | 1.03 | *8MV*0901716** |
| EA*4X48L21A* | 1.04 | 1.03 | *8MV*1102120** |
| EA*4X48L21A* | 1.05 | 1.08 | *9MA*0602120A** |
| EA*4X48L21A* | 1.04 | 1.05 | *9MA*0802120A** |
| EA*4X48L21A* | 1.04 | 1.04 | *9MA*1002122A** |
| EA*4X48L24A* | 1.03 | 1.01 | *8MV*1352422** |
| EA*4X48L24A* | 1.04 | 1.04 | *9MA*1202422A** |
| EA*4X60L21A* | 1.02 | 1.02 | *8MV*1102120** |
| EA*4X60L21A* | 1.03 | 1.07 | *9MA*0602120A** |
| EA*4X60L21A* | 1.02 | 1.03 | *9MA*0802120A** |
| EA*4X60L21A* | 1.01 | 1.01 | *9MA*1002122A** |
| EA*4X60L24A* | 1.01 | 1.00 | *8MV*1352422** |
| EA*4X60L24A* | 1.02 | 1.02 | *9MA*1202422A** |
| EHD4X48AAL | 1.05 | 1.04 | *8MV*0901716** |
| EHD4X48AAL | 1.05 | 1.04 | *8MV*1102120** |
| EHD4X48AAL | 1.05 | 1.03 | *8MV*1352422** |
| EHD4X48AAL | 1.06 | 1.08 | *9MA*0602120A** |
| EHD4X48AAL | 1.05 | 1.05 | *9MA*0802120A** |
| EHD4X48AAL | 1.05 | 1.04 | *9MA*1002122A** |
| EHD4X48AAL | 1.05 | 1.04 | *9MA*1202422A** |
| EHD4X60AAL | 1.03 | 1.01 | *8MV*0901716** |
| EHD4X60AAL | 1.03 | 1.00 | *8MV*1102120** |
| EHD4X60AAL | 1.02 | 0.99 | *8MV*1352422** |
| EHD4X60AAL | 1.04 | 1.05 | *9MA*0602120A** |
| EHD4X60AAL | 1.03 | 1.01 | *9MA*0802120A** |
| EHD4X60AAL | 1.03 | 1.01 | *9MA*1002122A** |
| EHD4X60AAL | 1.03 | 1.01 | *9MA*1202422A** |
| EN(A,D)4X48L24** | 1.04 | 1.03 | *8MV*1352422** |
| EN(A,D)4X48L24** | 1.05 | 1.05 | *9MA*1202422A** |
| EN(A,D,W)4X48L21** | 1.05 | 1.04 | *8MV*1102120** |
| EN(A,D,W)4X48L21** | 1.06 | 1.09 | *9MA*0602120A** |
| EN(A,D,W)4X48L21** | 1.05 | 1.06 | *9MA*0802120A** |
| EN(A,D,W)4X48L21** | 1.05 | 1.04 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 1.03 | 1.01 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 1.03 | 1.03 | *9MA*1202422A** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| HEATING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X48***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| FVM4X60***L | 1.00 | 0.99 | 0.98 | 0.95 | |
| EA*4X48L17A* | 1.05 | 1.08 | 1.01 | 1.05 | *9MX*0801716A** |
| EA*4X48L21A* | 1.05 | 1.08 | 1.02 | 1.04 | *9MX*1002120A** |
| EA*4X48L21A* | 1.06 | 1.10 | 1.02 | 1.07 | OLV112A16A |
| EA*4X48L24A* | 1.05 | 1.06 | 1.01 | 1.02 | OLV154F20A |
| EA*4X48L24A* | 1.04 | 1.06 | 1.01 | 1.03 | OMV154L20A |
| EA*4X60L21A* | 1.03 | 1.05 | 1.00 | 1.01 | *9MX*1002120A** |
| EA*4X60L21A* | 1.04 | 1.07 | 1.01 | 1.04 | OLV112A16A |
| EA*4X60L24A* | 1.03 | 1.03 | 0.99 | 0.99 | OLV154F20A |
| EA*4X60L24A* | 1.03 | 1.04 | 0.99 | 1.00 | OMV154L20A |
| EN(A,D,W)4X48L21** | 1.06 | 1.07 | 1.03 | 1.04 | *9MX*1002120A** |
| EN(A,D)4X48L24** | 1.06 | 1.06 | 1.02 | 1.03 | OLV154F20A |
| EN(A,D)4X48L24** | 1.06 | 1.07 | 1.02 | 1.04 | OMV154L20A |
| EN(A,D,W)4X60L24** | 1.04 | 1.03 | 1.00 | 0.99 | OLV154F20A |
| EN(A,D,W)4X60L24** | 1.04 | 1.05 | 1.01 | 1.01 | OMV154L20A |
| EHD4X48AAL | 1.06 | 1.09 | 1.02 | 1.07 | *9MX*0801716A** |
| EHD4X48AAL | 1.06 | 1.07 | 1.03 | 1.04 | *9MX*1002120A** |
| EHD4X60AAL | 1.05 | 1.07 | 1.01 | 1.04 | *9MX*0801716A** |

# HVH860

## DETAILED COOLING CAPACITIES# – EFFICIENCY MODE

| EDB °F (°C) | EVAP. AIR EWB °F (°C) | HVH860 / FCM4X60***L Efficiency Mode Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 115 (46.1) | | | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | | |
| | | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** | ID SCFM | Capacity MBtuh | | Total Sys. KW** |
| | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | | | Total | Sens ‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1600** | 54.16 | 21.71 | 7.27 | **1600** | 58.13 | 23.22 | 6.50 | **1600** | 62.05 | 24.71 | 5.83 | **1600** | 65.88 | 26.19 | 5.23 | **1600** | 69.70 | 27.67 | 4.69 | **1600** | 73.51 | 29.16 | 4.22 |
| | 67 (19.4) | | 49.48 | 29.16 | 7.08 | | 53.10 | 30.83 | 6.32 | | 56.62 | 32.47 | 5.65 | | 60.10 | 34.10 | 5.06 | | 63.54 | 35.73 | 4.54 | | 66.97 | 37.36 | 4.08 |
| | 63 (17.2) | | 46.01 | 35.04 | 6.94 | | 49.36 | 36.81 | 6.19 | | 52.62 | 38.56 | 5.52 | | 55.84 | 40.30 | 4.93 | | 59.02 | 42.03 | 4.42 | | 62.18 | 43.77 | 3.96 |
| | 57 (13.9) | | 42.15 | 42.15 | 6.80 | | 44.79 | 44.79 | 6.03 | | 47.47 | 47.22 | 5.36 | | 50.24 | 49.26 | 4.78 | | 53.01 | 51.19 | 4.27 | | 55.79 | 53.12 | 3.82 |
| **80 (26.7)** | 72 (22.2) | **1600** | 54.02 | 29.01 | 7.27 | **1600** | 57.99 | 30.66 | 6.51 | **1600** | 61.91 | 32.31 | 5.83 | **1600** | 65.73 | 33.94 | 5.23 | **1600** | 69.54 | 35.58 | 4.69 | **1600** | 73.38 | 37.25 | 4.22 |
| | 67 (19.4) | | 49.35 | 36.40 | 7.08 | | 52.97 | 38.20 | 6.32 | | 56.50 | 39.99 | 5.65 | | 59.97 | 41.75 | 5.06 | | 63.42 | 43.53 | 4.54 | | 66.85 | 45.31 | 4.08 |
| | 63 (17.2) | | 45.98 | 42.19 | 6.95 | | 49.31 | 44.12 | 6.19 | | 52.56 | 46.03 | 5.52 | | 55.76 | 47.91 | 4.94 | | 58.94 | 49.79 | 4.42 | | 62.09 | 51.68 | 3.96 |
| | 57 (13.9) | | 44.59 | 44.59 | 6.89 | | 47.37 | 47.37 | 6.12 | | 50.06 | 50.06 | 5.44 | | 52.70 | 52.70 | 4.85 | | 55.28 | 55.28 | 4.33 | | 57.84 | 57.84 | 3.87 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1350** | 35.59 | 14.62 | 3.53 | **1350** | 38.22 | 15.60 | 3.17 | **1350** | 40.53 | 16.44 | 2.81 | **1350** | 43.15 | 17.42 | 2.52 | **1350** | 45.75 | 18.40 | 2.26 | **1350** | 48.31 | 19.37 | 2.03 |
| | 67 (19.4) | | 32.14 | 20.20 | 3.49 | | 34.58 | 21.25 | 3.13 | | 36.71 | 22.19 | 2.76 | | 39.08 | 23.23 | 2.48 | | 41.41 | 24.27 | 2.22 | | 43.72 | 25.33 | 1.99 |
| | 63 (17.2) | | 29.59 | 24.58 | 3.46 | | 31.84 | 25.69 | 3.11 | | 33.86 | 26.69 | 2.73 | | 36.06 | 27.78 | 2.44 | | 38.24 | 28.87 | 2.19 | | 40.37 | 29.94 | 1.96 |
| | 57 (13.9) | | 27.84 | 27.84 | 3.44 | | 29.62 | 29.62 | 3.09 | | 31.23 | 31.23 | 2.70 | | 32.94 | 32.94 | 2.42 | | 34.60 | 34.60 | 2.16 | | 36.29 | 36.28 | 1.94 |
| **80 (26.7)** | 72 (22.2) | **1350** | 35.48 | 20.25 | 3.53 | **1350** | 38.16 | 21.30 | 3.17 | **1350** | 40.41 | 22.20 | 2.81 | **1350** | 43.03 | 23.25 | 2.52 | **1350** | 45.63 | 24.29 | 2.26 | **1350** | 48.16 | 25.35 | 2.03 |
| | 67 (19.4) | | 32.03 | 25.76 | 3.49 | | 34.46 | 26.87 | 3.13 | | 36.60 | 27.89 | 2.76 | | 38.97 | 28.99 | 2.48 | | 41.31 | 30.09 | 2.22 | | 43.64 | 31.19 | 1.99 |
| | 63 (17.2) | | 29.79 | 29.79 | 3.46 | | 31.90 | 31.19 | 3.11 | | 33.89 | 32.31 | 2.73 | | 36.06 | 33.48 | 2.45 | | 38.22 | 34.66 | 2.19 | | 40.34 | 35.78 | 1.96 |
| | 57 (13.9) | | 29.73 | 29.73 | 3.46 | | 31.58 | 31.58 | 3.11 | | 33.26 | 33.26 | 2.72 | | 35.03 | 35.03 | 2.44 | | 36.78 | 36.78 | 2.18 | | 38.50 | 38.50 | 1.95 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | | | | | |
| **75 (23.9)** | 72 (22.2) | **1200** | 26.64 | 11.15 | 2.26 | **1200** | 28.72 | 11.89 | 2.04 | **975** | 21.20 | 8.81 | 1.13 | **975** | 22.74 | 9.36 | 0.98 | **975** | 24.22 | 9.89 | 0.82 | **975** | 25.66 | 10.41 | 0.64 |
| | 67 (19.4) | | 23.82 | 15.66 | 2.25 | | 25.70 | 16.41 | 2.04 | | 18.84 | 12.09 | 1.11 | | 20.25 | 12.62 | 0.97 | | 21.61 | 13.15 | 0.82 | | 22.93 | 13.66 | 0.65 |
| | 63 (17.2) | | 21.78 | 19.18 | 2.24 | | 23.51 | 19.96 | 2.03 | | 17.10 | 14.65 | 1.10 | | 18.39 | 15.16 | 0.97 | | 19.66 | 15.66 | 0.82 | | 20.87 | 16.17 | 0.66 |
| | 57 (13.9) | | 20.87 | 20.87 | 2.23 | | 22.22 | 22.22 | 2.03 | | 16.17 | 16.17 | 1.10 | | 17.13 | 17.13 | 0.97 | | 18.04 | 18.04 | 0.83 | | 18.90 | 18.90 | 0.68 |
| **80 (26.7)** | 72 (22.2) | **1200** | 26.55 | 15.78 | 2.26 | **1200** | 28.63 | 16.54 | 2.04 | **975** | 21.10 | 12.29 | 1.13 | **975** | 22.65 | 12.79 | 0.98 | **975** | 24.14 | 13.29 | 0.82 | **975** | 25.57 | 13.80 | 0.64 |
| | 67 (19.4) | | 23.75 | 20.23 | 2.25 | | 25.64 | 21.01 | 2.04 | | 18.79 | 15.49 | 1.11 | | 20.19 | 16.00 | 0.97 | | 21.54 | 16.51 | 0.82 | | 22.86 | 17.00 | 0.65 |
| | 63 (17.2) | | 22.48 | 22.48 | 2.24 | | 23.92 | 23.92 | 2.03 | | 17.50 | 17.50 | 1.11 | | 18.50 | 18.45 | 0.97 | | 19.71 | 19.00 | 0.82 | | 20.90 | 19.49 | 0.66 |
| | 57 (13.9) | | 22.45 | 22.45 | 2.24 | | 23.87 | 23.87 | 2.03 | | 17.47 | 17.47 | 1.11 | | 18.45 | 18.45 | 0.97 | | 19.40 | 19.40 | 0.82 | | 20.29 | 20.29 | 0.67 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 43

# HVH860

## DETAILED COOLING CAPACITIES[#]– COMFORT + DEHUMIDIFY MODE

| EDB °F (°C) | EVAP. AIR | HVH860 / FCM4X60***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 105 (40.5) | | | | 95 (35) | | | | 85 (29.4) | | | | 75 (23.9) | | | | 65 (18.3) | | |
| | EWB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW | ID SCFM | Capacity MBtuh | | Total Sys. KW |
| | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | | | Total | Sens‡ | |
| **STAGE 5** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 1367 | 56.98 | 22.75 | 6.30 | 1440 | 61.18 | 24.39 | 5.69 | 1514 | 65.39 | 26.02 | 5.16 | 1566 | 69.54 | 27.67 | 4.65 | 1488 | 72.77 | 28.99 | 4.11 |
| | 67 (19.4) | | 57.22 | 39.64 | 4.45 | | 52.98 | 29.89 | 5.92 | | 56.86 | 32.03 | 5.32 | | 60.74 | 34.16 | 4.81 | | 64.57 | 36.23 | 4.32 |
| | 63 (17.2) | | 50.09 | 48.04 | 4.68 | | 52.36 | 48.62 | 4.14 | | 50.15 | 35.79 | 5.59 | | 53.79 | 38.31 | 5.01 | | 57.43 | 40.86 | 4.52 |
| | 57 (13.9) | | 62.88 | 32.18 | 5.53 | | 66.96 | 34.17 | 4.99 | | 70.04 | 35.24 | 4.44 | | 45.89 | 44.38 | 5.24 | | 49.20 | 47.47 | 4.68 |
| 80 (26.7) | 72 (22.2) | 1367 | 54.69 | 37.56 | 5.71 | 1440 | 58.47 | 40.09 | 5.17 | 1514 | 62.20 | 42.47 | 4.65 | 1566 | 64.99 | 43.29 | 4.12 | 1488 | 61.11 | 31.39 | 5.46 |
| | 67 (19.4) | | 48.26 | 40.83 | 5.99 | | 51.80 | 43.73 | 5.39 | | 55.34 | 46.67 | 4.87 | | 58.85 | 49.38 | 4.37 | | 61.43 | 50.01 | 3.85 |
| | 63 (17.2) | | 48.26 | 40.83 | 5.99 | | 46.16 | 46.16 | 5.69 | | 49.48 | 49.48 | 5.10 | | 52.81 | 52.81 | 4.60 | | 56.00 | 56.00 | 4.11 |
| | 57 (13.9) | | 45.30 | 45.30 | 5.89 | | 48.58 | 48.58 | 5.29 | | 51.87 | 51.87 | 4.77 | | 54.71 | 54.71 | 4.27 | | 57.84 | 57.84 | 3.87 |
| **STAGE 3** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 959 | 36.31 | 14.61 | 3.03 | 1013 | 38.82 | 15.60 | 2.68 | 1066 | 41.60 | 16.70 | 2.41 | 1120 | 44.40 | 17.81 | 2.17 | 1210 | 47.48 | 19.02 | 1.97 |
| | 67 (19.4) | | 32.79 | 18.66 | 3.00 | | 35.12 | 19.95 | 2.63 | | 37.63 | 21.32 | 2.37 | | 40.17 | 22.70 | 2.13 | | 42.96 | 24.35 | 1.93 |
| | 63 (17.2) | | 30.18 | 21.81 | 2.97 | | 32.38 | 23.34 | 2.61 | | 34.71 | 24.92 | 2.34 | | 37.06 | 26.53 | 2.10 | | 39.65 | 28.52 | 1.91 |
| | 57 (13.9) | | 26.75 | 26.42 | 2.95 | | 28.76 | 28.28 | 2.57 | | 30.84 | 30.17 | 2.31 | | 32.95 | 32.10 | 2.07 | | 35.30 | 34.56 | 1.88 |
| 80 (26.7) | 72 (22.2) | 959 | 36.22 | 18.72 | 3.03 | 1013 | 38.73 | 19.96 | 2.68 | 1066 | 41.49 | 21.36 | 2.41 | 1120 | 44.30 | 22.74 | 2.17 | 1210 | 47.35 | 24.41 | 1.97 |
| | 67 (19.4) | | 32.71 | 22.72 | 3.00 | | 35.04 | 24.28 | 2.63 | | 37.54 | 25.92 | 2.37 | | 40.08 | 27.58 | 2.13 | | 42.87 | 29.65 | 1.93 |
| | 63 (17.2) | | 30.13 | 25.85 | 2.97 | | 32.33 | 27.65 | 2.61 | | 34.66 | 29.50 | 2.34 | | 37.01 | 31.38 | 2.10 | | 39.60 | 33.79 | 1.91 |
| | 57 (13.9) | | 28.27 | 28.27 | 2.96 | | 30.32 | 30.32 | 2.59 | | 32.44 | 32.44 | 2.32 | | 34.59 | 34.59 | 2.08 | | 37.14 | 37.14 | 1.89 |
| **STAGE 1** | | | | | | | | | | | | | | | | | | | | | |
| 75 (23.9) | 72 (22.2) | 748 | 26.49 | 10.68 | 1.96 | 600 | 19.30 | 7.79 | 1.08 | 600 | 20.56 | 8.28 | 0.94 | 647 | 22.21 | 8.94 | 0.78 | 700 | 23.90 | 9.62 | 0.61 |
| | 67 (19.4) | | 23.68 | 13.47 | 1.96 | | 17.11 | 9.75 | 1.07 | | 18.24 | 10.22 | 0.93 | | 19.74 | 11.04 | 0.79 | | 21.29 | 11.89 | 0.63 |
| | 63 (17.2) | | 21.61 | 15.64 | 1.95 | | 15.49 | 11.27 | 1.06 | | 16.55 | 11.74 | 0.93 | | 17.93 | 12.67 | 0.79 | | 19.36 | 13.65 | 0.64 |
| | 57 (13.9) | | 18.94 | 18.82 | 1.95 | | 13.48 | 13.48 | 1.05 | | 14.35 | 13.97 | 0.93 | | 15.59 | 15.07 | 0.80 | | 16.85 | 16.25 | 0.66 |
| 80 (26.7) | 72 (22.2) | 748 | 26.42 | 13.61 | 1.96 | 600 | 19.25 | 9.91 | 1.08 | 600 | 20.51 | 10.39 | 0.94 | 647 | 22.16 | 11.21 | 0.78 | 700 | 23.84 | 12.06 | 0.61 |
| | 67 (19.4) | | 23.63 | 16.38 | 1.96 | | 17.06 | 11.86 | 1.07 | | 18.20 | 12.32 | 0.93 | | 19.69 | 13.29 | 0.79 | | 21.24 | 14.31 | 0.63 |
| | 63 (17.2) | | 21.58 | 18.54 | 1.95 | | 15.48 | 13.38 | 1.06 | | 16.52 | 13.83 | 0.93 | | 17.91 | 14.91 | 0.79 | | 19.34 | 16.06 | 0.64 |
| | 57 (13.9) | | 20.17 | 20.17 | 1.95 | | 14.47 | 14.47 | 1.05 | | 15.19 | 15.19 | 0.93 | | 16.42 | 16.42 | 0.80 | | 17.73 | 17.73 | 0.65 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor; Stage 1 – Compressor speed limited to stage two at 105 outdoor.

# DETAILED COOLING CAPACITIES# – EFFICIENCY MODE & COMFORT + DEHUMIDIFY MODE CONTINUED

## HVH860

| COOLING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X60***L | 1.00 | 1.00 | |
| EA*4X60L21A* | 0.96 | 1.07 | *9MA*0602120A** |
| EA*4X60L21A* | 0.97 | 1.02 | *9MA*0802120A** |
| EA*4X60L21A* | 0.97 | 1.02 | *9MA*1002122A** |
| EA*4X60L21A* | 0.97 | 1.02 | *8MV*1102120** |
| EA*4X60L24A* | 0.96 | 1.07 | *9MA*0602120A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*0802120A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*1002122A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*1202422A** |
| EA*4X60L24A* | 0.97 | 1.02 | *8MV*1102120** |
| EA*4X60L24A* | 0.97 | 0.97 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 0.96 | 1.02 | *9MA*0602120A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*1202422A** |
| EN(A,D,W)4X60L24** | 0.97 | 0.97 | *8MV*1102120** |
| EN(A,D,W)4X60L24** | 0.97 | 0.97 | *8MV*1352422** |
| EHD4X60AAL | 0.96 | 1.07 | *9MA*0602120A** |
| EHD4X60AAL | 0.97 | 1.02 | *9MA*0802120A** |
| EHD4X60AAL | 0.98 | 1.03 | *9MA*1002122A** |
| EHD4X60AAL | 0.97 | 1.02 | *9MA*1202422A** |
| EHD4X60AAL | 0.98 | 1.03 | *8MV*1102120** |
| EHD4X60AAL | 0.98 | 1.03 | *8MV*1352422** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| COOLING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X60***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| EN(A,D,W)4X60L24** | 1.00 | 1.11 | 1.00 | 1.09 | OLV154F20A |

**NOTES:**

* Tested combination.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

‡ Sensible capacities are shown for both 80°F (27°C) and 75°F (24°C) entering air at the indoor coil.
For sensible capacities at other than these, deduct 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below reference temperature, or add 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree above reference temperature.

# Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240–2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

** System kw is total of indoor and outdoor unit kilowatts.

**NOTE**: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

**EWB** — Entering Wet Bulb

# HVH860

## HEAT PUMP HEATING PERFORMANCE – EFFICIENCY MODE

| INDOOR AIR | HVH860 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 840 | 29.44 | 27.05 | 3.99 | 1600 | 48.43 | 44.16 | 6.49 | 1600 | 55.69 | 49.46 | 6.61 |
| **70 (21.1)** | | 29.47 | 27.09 | 4.22 | | 49.06 | 44.73 | 7.02 | | 56.12 | 49.84 | 7.10 |
| **75 (23.3)** | | 29.57 | 27.17 | 4.47 | | 49.80 | 45.40 | 7.61 | | 56.61 | 50.28 | 7.63 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 700 | 20.47 | 18.81 | 2.46 | 900 | 24.06 | 21.94 | 2.39 | 1275 | 28.38 | 25.21 | 2.32 |
| **70 (21.1)** | | 20.30 | 18.66 | 2.58 | | 23.86 | 21.75 | 2.51 | | 28.08 | 24.94 | 2.44 |
| **75 (23.3)** | | 20.25 | 18.60 | 2.73 | | 23.67 | 21.58 | 2.64 | | 27.78 | 24.68 | 2.56 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 700 | 20.47 | 18.81 | 2.46 | 900 | 24.06 | 21.93 | 2.39 | 1275 | 21.17 | 18.80 | 1.57 |
| **70 (21.1)** | | 20.31 | 18.66 | 2.58 | | 23.85 | 21.75 | 2.51 | | 20.88 | 18.55 | 1.56 |
| **75 (23.3)** | | 20.27 | 18.62 | 2.73 | | 23.66 | 21.57 | 2.64 | | 20.60 | 18.30 | 1.65 |

| INDOOR AIR | HVH860 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 1600 | 64.63 | 58.81 | 6.84 | 1600 | 73.25 | 73.25 | 7.06 | 1400 | 43.82 | 43.82 | 2.61 |
| **70 (21.1)** | | 64.85 | 59.01 | 7.31 | | 73.27 | 73.27 | 7.50 | | 43.06 | 43.06 | 2.72 |
| **75 (23.3)** | | 65.13 | 59.27 | 7.81 | | 73.33 | 73.33 | 7.98 | | 42.35 | 42.35 | 2.83 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 1275 | 33.13 | 30.14 | 2.42 | 1275 | 38.00 | 38.00 | 2.52 | 1400 | 43.82 | 43.82 | 2.61 |
| **70 (21.1)** | | 32.71 | 29.76 | 2.53 | | 37.45 | 37.45 | 2.63 | | 43.06 | 43.06 | 2.72 |
| **75 (23.3)** | | 32.29 | 29.38 | 2.65 | | 36.91 | 36.91 | 2.75 | | 42.35 | 42.35 | 2.83 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 1275 | 24.69 | 22.46 | 1.57 | 900 | 16.76 | 16.76 | 0.84 | 900 | 19.39 | 19.39 | 0.96 |
| **70 (21.1)** | | 24.31 | 22.12 | 1.66 | | 16.40 | 16.40 | 0.93 | | 18.97 | 18.97 | 1.06 |
| **75 (23.3)** | | 23.94 | 21.78 | 1.76 | | 16.04 | 16.04 | 1.02 | | 18.56 | 18.56 | 1.16 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage twp at 27 and 37 outdoor.

See additional notes on page 45

# HVH860

## HEAT PUMP HEATING PERFORMANCE – COMFORT MODE

| INDOOR AIR | HVH860 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 (–13.9) | | | | 17 (–8.3) | | | | 27 (–2.8) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 840 | 29.44 | 27.05 | 3.99 | 1600 | 48.43 | 44.16 | 6.49 | 1600 | 55.69 | 49.46 | 6.61 |
| **70 (21.1)** | | 29.47 | 27.09 | 4.22 | | 49.06 | 44.73 | 7.02 | | 56.12 | 49.84 | 7.10 |
| **75 (23.3)** | | 29.57 | 27.17 | 4.47 | | 49.80 | 45.40 | 7.61 | | 56.61 | 50.28 | 7.63 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 700 | 20.47 | 18.81 | 2.46 | 900 | 24.06 | 21.94 | 2.39 | 1275 | 28.38 | 25.21 | 2.32 |
| **70 (21.1)** | | 20.30 | 18.66 | 2.58 | | 23.86 | 21.75 | 2.51 | | 28.08 | 24.94 | 2.44 |
| **75 (23.3)** | | 20.25 | 18.60 | 2.73 | | 23.67 | 21.58 | 2.64 | | 27.78 | 24.68 | 2.56 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 700 | 20.47 | 18.81 | 2.46 | 900 | 24.06 | 21.93 | 2.39 | 1275 | 21.17 | 18.80 | 1.57 |
| **70 (21.1)** | | 20.31 | 18.66 | 2.58 | | 23.85 | 21.75 | 2.51 | | 20.88 | 18.55 | 1.56 |
| **75 (23.3)** | | 20.27 | 18.62 | 2.73 | | 23.66 | 21.57 | 2.64 | | 20.60 | 18.30 | 1.65 |

| INDOOR AIR | HVH860 / FCM4X60***L Heating Efficiency Mode Outdoor Coil Entering Air Temperature °F (°C) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 37 (2.8) | | | | 47 (8.3) | | | | 57 (13.9) | | | |
| EDB °F (°C) | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† | ID SCFM | Capacity MBtuh | | Total Sys. KW† |
| | | Total | Integ‡ | | | Total | Integ‡ | | | Total | Integ‡ | |
| **STAGE 5** | | | | | | | | | | | | |
| **65 (18.3)** | 1600 | 64.63 | 58.81 | 6.84 | 1600 | 73.25 | 73.25 | 7.06 | 1400 | 43.82 | 43.82 | 2.61 |
| **70 (21.1)** | | 64.85 | 59.01 | 7.31 | | 73.27 | 73.27 | 7.50 | | 43.06 | 43.06 | 2.72 |
| **75 (23.3)** | | 65.13 | 59.27 | 7.81 | | 73.33 | 73.33 | 7.98 | | 42.35 | 42.35 | 2.83 |
| **STAGE 3** | | | | | | | | | | | | |
| **65 (18.3)** | 1275 | 33.13 | 30.14 | 2.42 | 1275 | 38.00 | 38.00 | 2.52 | 1400 | 43.82 | 43.82 | 2.61 |
| **70 (21.1)** | | 32.71 | 29.76 | 2.53 | | 37.45 | 37.45 | 2.63 | | 43.06 | 43.06 | 2.72 |
| **75 (23.3)** | | 32.29 | 29.38 | 2.65 | | 36.91 | 36.91 | 2.75 | | 42.35 | 42.35 | 2.83 |
| **STAGE 1** | | | | | | | | | | | | |
| **65 (18.3)** | 1275 | 24.69 | 22.46 | 1.57 | 900 | 16.76 | 16.76 | 0.84 | 900 | 19.39 | 19.39 | 0.96 |
| **70 (21.1)** | | 24.31 | 22.12 | 1.66 | | 16.40 | 16.40 | 0.93 | | 18.97 | 18.97 | 1.06 |
| **75 (23.3)** | | 23.94 | 21.78 | 1.76 | | 16.04 | 16.04 | 1.02 | | 18.56 | 18.56 | 1.16 |

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
**Stage 5** – Compressor speed limited to stage four at 7 and stage three at 57 outdoor; **Stage 1** – Compressor speed limited to stage three at 7 and 17 and to stage two at 27 and 37 outdoor.

**NOTES:**

* Tested combination.

† The kW values include the compressor, outdoor fan motor, and indoor blower motor. The kW from supplement heaters should be added to these values to obtain total system kilowatts.

‡The Btuh heating capacity values shown are net integrated values from which the defrost effect has been subtracted. The Btuh heating from supplement heaters should be added to those values to obtain total system capacity.

**NOTE**: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

**EDB** — Entering Dry Bulb

# DETAILED HEATING CAPACITIES# – EFFICIENCY MODE & COMFORT MODE CONTINUED

## HVH860

| HEATING INDOOR MODEL | CAPACITY | POWER | FURNACE MODEL |
|---|---|---|---|
| FCM4X60***L | 1.00 | 1.00 | |
| EA*4X60L21A* | 0.97 | 1.02 | *8MV*1102120** |
| EA*4X60L21A* | 0.96 | 1.07 | *9MA*0602120A** |
| EA*4X60L21A* | 0.97 | 1.02 | *9MA*0802120A** |
| EA*4X60L21A* | 0.97 | 1.02 | *9MA*1002122A** |
| EA*4X60L24A* | 0.97 | 1.02 | *8MV*1102120** |
| EA*4X60L24A* | 0.97 | 0.97 | *8MV*1352422** |
| EA*4X60L24A* | 0.96 | 1.07 | *9MA*0602120A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*0802120A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*1002122A** |
| EA*4X60L24A* | 0.97 | 1.02 | *9MA*1202422A** |
| EHD4X60AAL | 0.98 | 1.03 | *8MV*1102120** |
| EHD4X60AAL | 0.98 | 1.03 | *8MV*1352422** |
| EHD4X60AAL | 0.96 | 1.07 | *9MA*0602120A** |
| EHD4X60AAL | 0.97 | 1.02 | *9MA*0802120A** |
| EHD4X60AAL | 0.98 | 1.03 | *9MA*1002122A** |
| EHD4X60AAL | 0.97 | 1.02 | *9MA*1202422A** |
| EN(A,D,W)4X60L24** | 0.97 | 0.97 | *8MV*1102120** |
| EN(A,D,W)4X60L24** | 0.97 | 0.97 | *8MV*1352422** |
| EN(A,D,W)4X60L24** | 0.96 | 1.02 | *9MA*0602120A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*0802120A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*1002122A** |
| EN(A,D,W)4X60L24** | 0.97 | 1.02 | *9MA*1202422A** |

| 2–STAGE (Hi–Stage 5, Lo–Stage 2) | | | | | |
|---|---|---|---|---|---|
| HEATING INDOOR MODEL | HIGH SPEED CAP. | POWER | LOW SPEED CAP. | POWER | FURNACE MODEL |
| FVM4X60***L | 1.00 | 1.00 | 1.00 | 1.00 | |
| EN(A,D,W)4X60L24** | 1.00 | 1.04 | 1.04 | 1.10 | OLV154F20A |

# GUIDE SPECIFICATIONS
# GENERAL

**AIR−COOLED, SPLIT−SYSTEM HEAT PUMP**
**(C,H,T)VH8**

## System Description

Outdoor−mounted, air−cooled, split−system heat pump unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air−cooled coil, forward−swept blade propeller−type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

## Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI directory.
- Unit construction will comply with latest edition of ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have C−UL approval.
- Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500−hr salt spray test.
- Air−cooled condenser coils are pressure tested and the outdoor units are leak tested.
- Unit constructed in ISO9001 approved facility.

## Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

## Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

# PRODUCTS

## Equipment

- Factory−assembled, single−piece, air−cooled heat pump unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge R−410A refrigerant, and special features required prior to field start−up.

## Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

## Fans

- Condenser fan will be direct−drive propeller type, forward swept blade, discharging air upward.
- Condenser fan motors will be totally enclosed, 1−phase type with class B insulation and permanently lubricated.
- Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

## Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.
- Compressor will be covered with a sound absorbing blanket.

## Condenser Coil

- Condenser coil will be air cooled.
- Coil will be constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

## Refrigeration Components

- Refrigeration circuit components will include liquid−line front−seating shutoff valve with sweat connections, vapor−line front−seating shutoff valve with sweat connections, system charge of R−410A refrigerant, POE compressor oil, accumulator, charge compensator, electronic expansion valve, and reversing valve.
- Unit will be equipped with high−pressure switch, suction pressure transducer, and filter drier for R−410A refrigerant.

## Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F (°C). The power consumption at full load will not exceed _____ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of _____ Btuh or greater at conditions of _____ CFM entering air temperature at the evaporator at _____ °F (°C) wet bulb and _____ °F (°C) dry bulb, and air entering the unit at _____ °F (°C).
- The system will have a SEER of _____ Btuh/watt or greater at DOE conditions.

## Electrical Requirements

- Nominal unit electrical characteristics will be _____ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.
- Compliant with IEC 61000−4−5 Transient Surge Requirement.

## Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.
- Observer® control with appropriate software version is required for full featured operation.

# SYSTEM DESIGN SUMMARY

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01−in. wc.
2. This product is not qualified for low ambient cooling operation.
   Minimum cooling outdoor operating temperatures:
   - Communicating systems: 40°F (4.44°C)
   - Non−communicating systems: 55°F (12.8°C)
3. The maximum outdoor operating ambient in cooling mode is 115°F (46.11°C).
4. Minimum outdoor operating air temperature for heating mode is 10°F (−12.2°C).
5. Maximum outdoor operating air temperature for heating mode is 66°F (18.9°C).
6. For reliable operation, unit should be level in all horizontal planes.
7. This unit is qualified for up to 100 ft (30.5 m) equivalent length of line set without additional accessories.
8. If any refrigerant tubing is buried, provide a 6 in. (152.4 mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (914.4 mm) may be buried without further consideration. Do not bury refrigerant lines longer than 36 in. (914.4 mm).
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
10. Do not apply capillary tube indoor coils to these units.
11. R−410A refrigerant TXV required on indoor coil.

## Accessory Description and Usage

**Support Feet**

Raises unit above base pad. 2 and 3 ton kit contains 5 feet for stable installation with small base. 4 and 5 ton kit contains 4 feet.

Usage Guideline:

Recommended in cold climates where snow can accumulate around unit. Allows improved base pan drainage.

Recommended for rooftop applications.

**Thermostatic Expansion Valve (TXV)**

A modulating flow−control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

Usage Guideline:

Required if indoor unit does not already contain R−410A refrigerant TXV

**Vapor Line Muffler**

An external muffler installed in the vapor line to minimize vibration transmitted through refrigerant lines

Usage Guideline:

Recommended if vapor line is not installed per recommendations in the installation instructions and vibration may be transmitted into the structure.

## WALL CONTROL

| | | |
|---|---|---|
| TSTAT0201CW | Observer® Self Configuring Communicating Wall Control | ALL |

## ACCESSORY USAGE GUIDELINES

| KIT NUMBER | KIT NAME | Unit Size (Voltage/Series) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 24 | 25 | 36 | 37 | 48 | 60 |
| NASA00201SF | Support Feet, 4” (102mm) tall | X | X | X | X | X | X |
| NAEA40501TX | TXV Kit, R−410A 2010 and later Piston Coils | X | X | | | | |
| NAEA40601TX | | | | X | X | | |
| NAEA40701TX | | | | | | X | X |
| NAEB40501TX | TXV Kit, R−410A 2010 and later Piston Coils | | X | | | | |
| NAEB40601TX | | | | X | X | | |
| NAEB40701TX | | | | | | X | |
| 1187979 | Vapor Line Muffler | X | X | X | X | X | X |

X = Accessory