



# HVA9

## Quiet Comfort® Deluxe 19 with SmartSense™ Technology Product Specifications

### HIGH EFFICIENCY UP TO 19 SEER VARIABLE-SPEED AIR CONDITIONER WITH ION® COMMUNICATING SYSTEM

2 THRU 5 TONS SPLIT SYSTEM — 208–230 Volt, 1-phase, 60 Hz

#### REFRIGERATION CIRCUIT

- Variable speed compressor operates at 5 stages with capacity range from as wide as 25 – 100%
- High pressure switch
- Suction pressure transducer
- Pressure equalizer valve for easy starting
- Compressor discharge temperature sensor
- Coil temperature sensor
- Copper tube/aluminum fin coil

#### PERFORMANCE

- Up to 13.0 EER
- Integrated inverter control enables 5-stage operation with complete Ion® Communicating System
- Ion® System Control with version 5.0 or newer software required for 5 stage operation
- Also capable of 2-stage operation with 2-stage thermostat
- Self-configuring installation with Ion® System 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

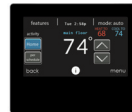
- Text based diagnostics with Ion® Communicating System Control
- Only 2 control wires required from communicating indoor unit to condenser
- External high and low refrigerant service ports
- Factory charged with R-410A refrigerant
- Adjustments for min and max staging with Ion® System Control

#### 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

#### LIMITED 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.



SYST0101CW  
(Sold Separately)



**smartsense**  
TECHNOLOGY



Qualifying models only

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.



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](http://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)
HVA924GKA	2	24,000	13.5	20	31–13/16 x 23–1/8 (807 x 587)	128/150(58/68)
HVA925GKA ‡	2	24,000	23.6	40	38–1/2 x 23–1/8 (980 x 587)	152/177 (69/80)
HVA936GKA	3	36,000	24.2	40		152/177 (69/80)
HVA937GKA ‡	3	36,000	26.0	40	38–15/16 x 31–3/16 (989 x 792)	205/242 (93/110)
HVA948GKA	4	48,000	27.3	40		205/242 (93/110)
HVA949GKA ‡	4	48,000	26.0	40	43–11/16 x 35 (1111 x 889)	249/285 (113/129)
HVA960GKA	5	60,000	40.0	60	42–5/16 x 31–3/16 (1075 x 792)	229/268(104/121)

‡ = Meets Energy Star criteria when matched with appropriate coil

<b>OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE (single phase)</b>											
Digit Position:	1	2	3	4	5, 6	7	8	9	10	11	12
Example Part Number:	<b>H</b>	<b>V</b>	<b>A</b>	<b>9</b>	<b>24</b>	<b>G</b>	<b>K</b>	<b>A</b>	<b>1</b>	<b>0</b>	<b>0</b>
H = Heil Mainline <b>BRANDING</b>											
V = Variable Speed <b>KEY CHARACTERISTIC</b>											
A = Air Conditioner H = Heat Pump <b>TYPE</b>											
6 = 16 SEER 7 = 17 SEER 8 = 18 SEER 9 = 19 SEER <b>NOMINAL EFFICIENCY</b>											
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 <b>NOMINAL CAPACITY</b>											
G = Coil Guard Grille <b>FEATURES</b>											
K = 208/230-1-60 <b>VOLTAGE</b>											
Sales Code											
Engineering Revision											
Extra Digit											
Extra Digit											

<b>ACCESSORIES PART NUMBER IDENTIFICATION GUIDE</b>									
Digit Position:	1	2	3	4	5	6, 7	8, 9	10, 11	
Example Part Number:	<b>N</b>	<b>A</b>	<b>S</b>	<b>A</b>	<b>0</b>	<b>01</b>	<b>01</b>	<b>CH</b>	
N = Non-Branded									
A = Accessory <b>PRODUCT GROUP</b>									
S = Split System (AC & HP) <b>KIT USAGE</b>									
A = Original B = 2nd Generation <b>MAJOR SERIES</b>									
0 = Generic or Not Applicable 2 = R-22 4 = R-410A <b>REFRIGERANT</b>									
Product Identifier Number									
Package Quantity									
Type of Kit (Example: CH = Crankcase Heater)									

**PHYSICAL DATA**

UNIT SIZE SERIES	24	25	36	37	48	49	60
Compressor Type	Variable Speed Rotary						
REFRIGERANT	R-410A						
Control	TXV (R-410A Hard Shutoff)						
Charge lb (kg)	4.80 (2.18)	5.5 (2.50)	6.0 (2.72)	7.5 (3.40)	7.5 (3.40)	9.6 (4.35)	8.30 (3.76)
COND FAN	Forward Swept Propeller Type, Direct Drive						
Air Discharge	Vertical						
Air Qty (CFM)	2500	2500	2500	4500	4500	4800	4500
Motor HP	1/5	1/3	1/3	1/3	1/3	1/3	1/3
Motor RPM	825	1050	1050	850	850	850	900
COND COIL							
Face Area (Sq ft)	11.12	13.90	13.90	21.50	21.50	27.53	23.65
Fins per In.	20	20	20	20	20	25	20
Rows	1	1	1	1	1	1	1
Circuits	5	6	6	8	8	8	8
VALVE CONNECT. (In. ID)							
Vapor	5/8	3/4	3/4	7/8	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	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.

**REFRIGERANT PIPING LENGTH LIMITATIONS**

**Maximum Line Lengths:**

The maximum allowable total equivalent length for air conditioners 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 Air Conditioner 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	AC 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.)	HVA9 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
	<b>3/4</b>	<b>0.1</b>	<b>0.4</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>
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
	<b>7/8</b>	0.0	0.1	0.3	0.3	0.4
36	5/8	1.1	2.4	3.7	4.0	5.0
	3/4	0.3	0.8	1.3	1.4	1.8
37	<b>7/8</b>	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
49	<b>1 1/8</b>	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
	<b>1 1/8</b>	0.0	0.1	0.3	0.4	0.5

Rating Line Size in **BOLD**

**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 airflows can be adjusted from these numbers in the Ion® System Control 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

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

**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 ductwork restrictions have caused the blower to cut–back.

**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	10.3	0.58	13.5	20
25				N/A	17.7	1.20	23.6	40
36				N/A	18.4	1.20	24.2	40
37				N/A	19.6	1.20	26.0	40
48				N/A	20.9	1.20	27.3	40
49				N/A	19.6	1.40	26.0	40
60				N/A	30.9	1.40	40.0	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)**

<b>UNIT SIZE-VOLTAGE, SERIES</b>	Subcooling recommendation displayed in Charging Mode the subcooling chart shown on the charging label must be followed
24	
25	
36	
37	
48	
49	
60	

**RPM-CAPACITY-SOUND (dBA)\***

HVA924			
1	1500	35%	56
2	2566	56%	60
3	3150	69%	65
4	3950	87%	66
5	4700	100%	67
HVA925			
1	1200	36%	56
2	1900	58%	61
3	2400	73%	63
4	2600	79%	67
5	3300	100%	69
HVA936			
1	1200	25%	57
2	2400	50%	61
3	3300	69%	65
4	4200	88%	69
5	4800	100%	71
HVA937			
1	1200	40%	57
2	1800	60%	63
3	2200	73%	67
4	2600	87%	67
5	3000	100%	68
HVA948			
1	1500	35%	63
2	2460	57%	65
3	2800	65%	67
4	3650	84%	70
5	4320	100%	72
HVA949			
1	1200	38%	58
2	1840	59%	62
3	2300	74%	66
4	2700	87%	68
5	3120	100%	74
HVA960			
1	1200	32%	58
2	2180	55%	61
3	2850	70%	64
4	3700	90%	70
5	4140	100%	72

\*Estimated sound for stages 2, 3, and 4  
 For 2-stage operation: Low = Stage 2, High = Stage 5

### SOUND POWER LEVEL (dBA)

Unit Size—Voltage, Series	Typical Octave Band Spectrum (without tone adjustment)	Min Speed Cooling	Max Speed Cooling
24	Freq (Hz)	1500 RPM	4700 RPM
	125	40.5	44.0
	250	45.5	49.5
	500	41.5	53.0
	1000	44.0	52.5
	2000	39.0	50.5
	4000	34.5	53.0
	8000	31.0	45.0
	Sound Rating (dBA)	56	67
25	Freq (Hz)	1200 RPM	3300 RPM
	125	40.4	45.4
	250	44.4	57.9
	500	46.3	61.3
	1000	45.0	58.0
	2000	37.2	54.7
	4000	31.0	52.0
	8000	28.4	41.9
	Sound Rating (dBA)	56	69
36	Freq (Hz)	1200 RPM	4800 RPM
	125	40.4	43.9
	250	44.4	53.9
	500	46.3	61.8
	1000	45.0	59.0
	2000	37.2	56.7
	4000	31.0	60.0
	8000	28.4	45.4
	Sound Rating (dBA)	57	71
37	Freq (Hz)	1200	3000
	125	45.0	54.5
	250	48.5	59.0
	500	50.5	63.0
	1000	50.0	60.5
	2000	44.0	59.5
	4000	37.5	57.5
	8000	44.5	52.0
	Sound Rating (dBA)	57	68
48	Freq (Hz)	1500 RPM	4320 RPM
	125	40.9	42.4
	250	46.4	54.4
	500	47.3	60.3
	1000	56.5	63.5
	2000	39.2	56.7
	4000	35.0	56.0
	8000	31.9	44.9
	Sound Rating (dBA)	63	72
49	Freq (Hz)	1200	3120
	125	44.5	52.0
	250	48.5	63.0
	500	50.5	63.5
	1000	51.5	67.5
	2000	47.5	61.5
	4000	43.5	58.5
	8000	47.5	54.5
	Sound Rating (dBA)	58	74
60	Freq (Hz)	1200 RPM	4140 RPM
	125	39.0	49.5
	250	48.0	59.5
	500	46.5	62.0
	1000	45.5	60.0
	2000	39.5	58.5
	4000	36.5	55.0
	8000	35.5	48.0
	Sound Rating (dBA)	58	72

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

DIMENSIONS – ENGLISH

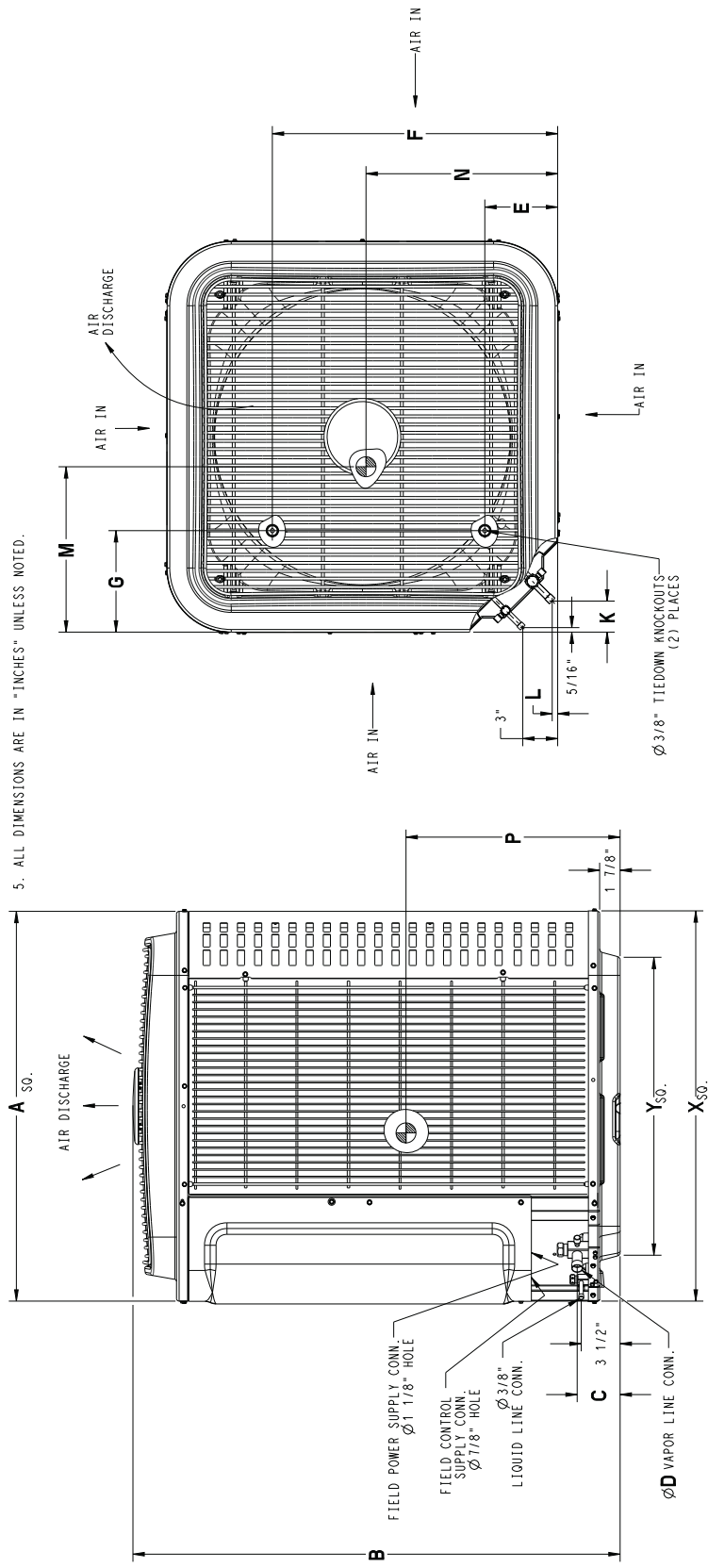
UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (lbs)	SHIPPING WEIGHT (lbs)	SHIPPING DIMENSIONS (L x W x H)
*VA9246KA	1	X 0 0	23 1/8"	31 13/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/4"	11 1/4"	14 1/2"	128	160	25 1/4" X 25 1/4" X 35 5/8"
*VA9256KA	1	X 0 0	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"	152	177	25 1/4" X 25 1/4" X 43 3/8"
*VA9366KA	1	X 0 0	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"	152	177	25 1/4" X 25 1/4" X 43 3/8"
*VA9376KA	1	X 0 0	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"	205	242	33 3/8" X 33 3/8" X 46 1/8"
*VA9486KA	1	X 0 0	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"	205	242	33 3/8" X 33 3/8" X 46 1/8"
*VA9496KA	1	X 0 0	35"	43 11/16"	3 7/8"	7/8"	6 9/16"	28 7/16"	9 1/8"	2 15/16"	5/8"	16 1/4"	16 1/4"	21 1/4"	249	285	36 1/8" X 36 1/8" X 50 3/16"
*VA9606KA	1	X 0 0	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"	229	268	33 3/8" X 33 3/8" X 49 9/16"

208/230-160	230-160	208/230-360	460-360
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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"
37, 48, 60	25 3/4"	20 7/16"
49	31 3/16"	23"
	35"	26 3/4"

- NOTES:
- 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.
  - MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 55°F, MAX. 115°F.
  - SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.
  - CENTER OF GRAVITY
  - ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

X = YES  
O = NO



Representative drawing only, some models may vary in appearance.

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\* = C, H, T

8 DIMENSIONS – SI

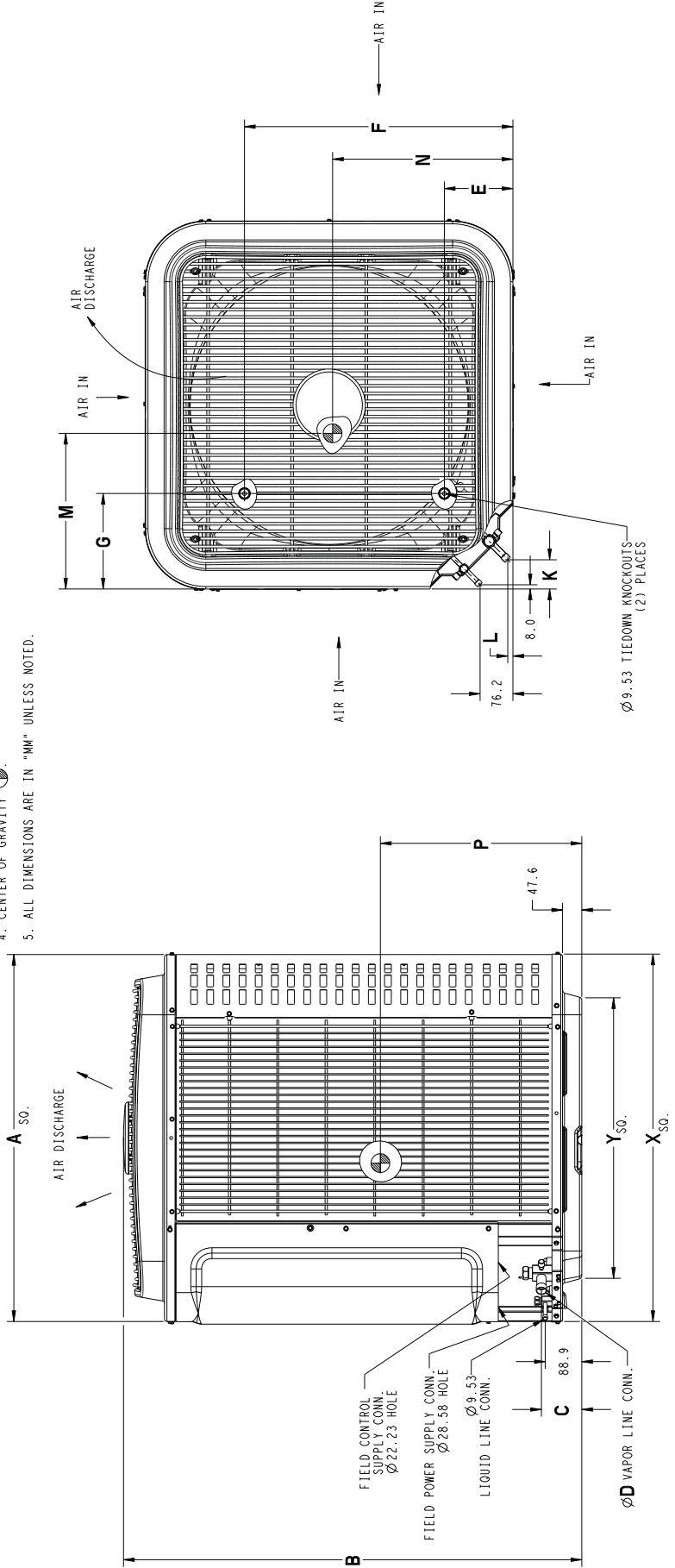
UNIT	SERIES	ELECTRICAL CHARACTERISTICS	A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (Kgs)	SHIPPING WEIGHT (Kgs)	SHIPPING DIMENSIONS (L x W x H)
*VA924GKA	1	X 0 0 0	587.3	807.3	96.1	19.1	112.7	458.8	198.4	71.4	12.7	285.8	285.8	368.3	58	68	641.5 X 641.5 X 905.2
*VA925GKA	1	X 0 0 0	587.3	980.1	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	69	80	641.5 X 641.5 X 1102.2
*VA936GKA	1	X 0 0 0	587.3	980.1	96.1	19.1	112.7	458.8	198.4	71.4	12.7	273.1	273.1	463.6	69	80	641.5 X 641.5 X 1102.2
*VA937GKA	1	X 0 0 0	792.2	988.5	98.4	22.2	166.7	627.1	231.8	74.6	15.9	368.3	371.5	476.3	93	110	846.6 X 846.6 X 1172.2
*VA948GKA	1	X 0 0 0	792.2	988.5	98.4	22.2	166.7	627.1	231.8	74.6	15.9	368.3	371.5	476.3	93	110	846.6 X 846.6 X 1172.2
*VA949GKA	1	X 0 0 0	889.0	1111.0	98.4	22.2	166.7	722.3	231.8	74.6	15.9	412.8	412.8	539.8	113	124	917.7 X 917.7 X 1274.9
*VA960GKA	1	X 0 0 0	792.2	1074.9	98.4	22.2	166.7	627.1	231.8	74.6	15.9	419.1	381.0	508.0	104	121	846.6 X 846.6 X 1258.6

UNIT SIZE	X* MN GROUND MOUNTING PAD APPLICATION DIMENSIONS	Y* MN ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS
24,25,36	587.4	451.3
-	654.0	518.5
37,48,60	792.2	583.2
49	889.0	679.7

- NOTES:
- 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.
  - MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 13°C, MAX. 46°C.
  - SERIES DESIGNATION IS THE 10TH POSITION OF THE UNIT MODEL NUMBER.
  - CENTER OF GRAVITY
  - ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.

X = YES  
O = NO

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



Representative drawing only, some models may vary in appearance.

SD5637-4 REV C

\* = C, H, T



### 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](http://www.ahridirectory.org)

Additional ratings and system combinations can be accessed via the Heil database at:

<http://www.icpeep.com/AHRIratings/ratings.aspx?Brand=Heil>

Or scan this QR code:



Model Number	Coil Model Number	Furnace Model Number	Stages	Cooling Capacity High	SEER	EER	ID CFM
HVA924GKA101	FCM4X24***L + WALLCON		5	24,000	18.0	11.0	825
HVA924GKA101	FVM4X24***L		2	23,800	16.0	11.0	700
HVA925GKA101	FCM4X48***L + WALLCON		5	24,000	19.0	12.5	825
HVA925GKA101	FVM4X36***L		2	22,600	19.0	12.2	700
HVA936GKA101	FCM4X48***L + WALLCON		5	35,000	18.0	10.5	1050
HVA936GKA101	FVM4X48***L		2	35,000	16.0	10.5	1050
HVA937GKA101	FCM4X60***L + WALLCON		5	33,600	19.0	13.0	1050
HVA948GKA101	FCM4X60***L + WALLCON		5	46,500	19.0	11.0	1400
HVA948GKA101	FVM4X60***L		2	46,000	15.5	11.0	1400
HVA949GKA101	FCM4X60***L + WALLCON		5	45,500	19	12.5	1400
HVA960GKA101	FCM4X60***L + WALLCON		5	57,000	17.0	10.0	1600
HVA960GKA101	FVM4X60***L		2	57,500	15.0	10.0	1750

Ratings with “+ WALLCON” are communicating systems with Ion® System 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.

EER — Energy Efficiency Ratio

SEER — Seasonal Energy Efficiency Ratio

WALLCON — Wall Control

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

HVA924

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE

EDB °F (°C)	EVA/P AIR	HVA924 / FCMA24***L Efficiency Mode Condenser Entering Air Temperature °F (°C)										HVA924 / FCMA24***L Comfort + Dehumidify 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 Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**						
75 (23.9)	72(22.2)	23.43	9.90	2.85	25.03	10.49	2.52	11.02	2.20	26.46	11.02	2.20	28.00	11.60	1.91	1.91	20.99	8.78	1.12	1.12	20.99	8.78	1.12	1.12	22.08	9.18	0.94				
	67(19.4)	21.30	13.70	2.81	22.76	14.32	2.49	21.07	2.18	24.07	14.89	2.18	25.46	15.50	1.90	1.90	18.99	11.92	1.14	1.14	18.99	11.92	1.14	1.14	19.97	12.34	0.81				
	63(17.2)	19.74	16.69	2.78	21.07	17.34	2.47	20.78	2.17	22.29	17.94	2.17	23.58	18.57	1.89	1.89	16.62	13.94	1.15	1.15	16.62	13.94	1.15	1.15	17.52	14.38	0.89				
80 (26.7)	72(22.2)	23.36	13.70	2.85	24.96	14.32	2.52	24.96	2.20	26.39	14.88	2.20	27.93	15.49	1.91	1.91	20.92	11.94	1.01	1.01	20.92	11.94	1.01	1.01	22.01	12.37	0.77				
	67(19.4)	21.24	17.45	2.81	22.69	18.11	2.49	22.69	2.18	24.00	18.72	2.18	25.39	19.36	1.90	1.90	18.93	15.05	0.97	0.97	18.93	15.05	0.97	0.97	19.91	15.50	0.81				
	63(17.2)	19.96	19.96	2.78	21.18	20.93	2.47	21.18	2.17	22.35	21.63	2.17	23.61	22.34	1.89	1.89	16.77	16.77	1.15	1.15	16.77	16.77	1.15	1.15	17.61	17.39	0.83				
75 (23.9)	72(22.2)	16.60	7.18	1.72	17.75	7.59	1.53	17.75	1.31	18.75	8.37	1.31	19.88	8.37	1.12	1.12	10.45	5.01	0.37	0.37	10.45	5.01	0.37	0.37	11.04	5.22	0.29				
	67(19.4)	15.01	10.22	1.72	16.06	10.66	1.53	16.06	1.32	16.99	11.06	1.32	18.00	11.49	1.14	1.14	8.85	7.61	0.48	0.48	8.85	7.61	0.48	0.48	9.89	8.07	0.33				
	63(17.2)	13.88	12.59	1.71	14.82	13.06	1.54	14.82	1.32	15.70	13.48	1.32	16.62	13.94	1.15	1.15	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	9.43	9.43	0.34				
80 (26.7)	72(22.2)	16.54	10.24	1.72	17.69	10.68	1.53	17.69	1.31	18.68	11.07	1.31	19.81	11.51	1.12	1.12	10.39	7.88	0.37	0.37	10.39	7.88	0.37	0.37	10.98	8.13	0.29				
	67(19.4)	14.98	13.23	1.72	16.01	13.70	1.53	16.01	1.32	16.94	14.13	1.32	17.95	14.59	1.14	1.14	9.26	9.26	0.47	0.47	9.26	9.26	0.47	0.47	10.19	10.19	0.31				
	63(17.2)	14.42	14.42	1.72	15.24	15.24	1.53	15.24	1.32	15.99	15.99	1.32	16.77	16.77	1.15	1.15	9.25	9.25	0.47	0.47	9.25	9.25	0.47	0.47	10.18	10.18	0.31				
75 (23.9)	72(22.2)	14.01	6.30	1.38	15.00	6.65	1.24	15.00	0.54	9.25	4.60	0.54	9.85	4.81	0.46	0.46	10.45	5.01	0.37	0.37	10.45	5.01	0.37	0.37	11.04	5.22	0.29				
	67(19.4)	12.64	9.35	1.39	13.52	9.73	1.25	13.52	0.55	8.32	7.38	0.55	8.85	7.61	0.48	0.48	9.37	7.84	0.40	0.40	9.37	7.84	0.40	0.40	9.89	8.07	0.33				
	63(17.2)	11.71	11.62	1.39	12.49	12.06	1.26	12.49	0.55	8.11	8.11	0.55	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	9.43	9.43	0.34				
80 (26.7)	72(22.2)	13.95	9.39	1.38	14.94	9.76	1.24	14.94	0.54	9.20	7.43	0.54	9.80	7.66	0.45	0.45	10.39	7.88	0.37	0.37	10.39	7.88	0.37	0.37	10.98	8.13	0.29				
	67(19.4)	12.66	12.32	1.39	13.52	12.75	1.25	13.52	0.54	8.77	8.77	0.54	9.26	9.26	0.47	0.47	9.26	9.26	0.47	0.47	9.26	9.26	0.47	0.47	10.19	10.19	0.31				
	63(17.2)	12.55	12.55	1.39	13.28	13.28	1.26	13.28	0.54	8.77	8.77	0.54	9.25	9.25	0.47	0.47	9.25	9.25	0.47	0.47	9.25	9.25	0.47	0.47	10.18	10.18	0.31				

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.

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB °F (°C)	EVA/P AIR	HVA924 / FCMA24***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)										HVA924 / FCMA24***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 Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sensit	Total Sys. KW**						
75 (23.9)	72(22.2)	24.23	9.92	2.44	25.33	10.31	2.12	26.93	10.95	1.84	1.84	28.54	11.60	1.58	1.58	20.92	11.94	1.01	1.01	20.92	11.94	1.01	1.01	22.01	12.37	0.77					
	67(19.4)	22.01	12.96	2.42	23.01	13.22	2.10	24.45	14.00	1.83	1.83	25.91	14.82	1.58	1.58	18.99	11.92	1.14	1.14	18.99	11.92	1.14	1.14	19.97	12.34	0.81					
	63(17.2)	20.38	15.34	2.39	21.31	15.50	2.08	22.64	16.40	1.82	1.82	24.00	17.33	1.57	1.57	16.62	13.94	1.15	1.15	16.62	13.94	1.15	1.15	17.52	14.38	0.89					
80 (26.7)	72(22.2)	24.17	12.95	2.44	25.27	13.22	2.12	26.87	14.00	1.84	1.84	28.48	14.82	1.58	1.58	20.92	11.94	1.01	1.01	20.92	11.94	1.01	1.01	22.01	12.37	0.77					
	67(19.4)	21.96	15.96	2.42	22.96	16.09	2.10	24.40	17.02	1.83	1.83	25.86	17.99	1.58	1.58	18.93	15.05	0.97	0.97	18.93	15.05	0.97	0.97	19.91	15.50	0.81					
	63(17.2)	20.36	18.31	2.39	21.28	18.35	2.08	22.61	19.39	1.82	1.82	23.97	20.49	1.57	1.57	16.77	16.77	1.15	1.15	16.77	16.77	1.15	1.15	17.61	17.39	0.83					
75 (23.9)	72(22.2)	16.80	6.88	1.49	17.53	7.13	1.28	18.69	7.60	1.10	1.10	19.82	8.06	0.92	0.92	10.45	5.01	0.37	0.37	10.45	5.01	0.37	0.37	11.04	5.22	0.29					
	67(19.4)	15.18	8.96	1.50	15.85	9.13	1.28	16.89	9.72	1.11	1.11	17.91	10.28	0.95	0.95	8.85	7.61	0.48	0.48	8.85	7.61	0.48	0.48	9.89	8.07	0.33					
	63(17.2)	13.98	10.59	1.50	14.60	10.69	1.28	15.56	11.37	1.13	1.13	16.49	12.01	0.97	0.97	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	9.43	9.43	0.34					
80 (26.7)	72(22.2)	16.75	8.99	1.49	17.48	9.16	1.28	18.64	9.75	1.14	1.14	19.77	10.32	0.92	0.92	10.39	7.88	0.37	0.37	10.39	7.88	0.37	0.37	10.98	8.13	0.29					
	67(19.4)	15.14	11.05	1.50	15.81	11.13	1.28	16.85	11.84	1.11	1.11	17.87	12.51	0.95	0.95	8.85	7.61	0.48	0.48	8.85	7.61	0.48	0.48	9.89	8.07	0.33					
	63(17.2)	13.97	12.66	1.50	14.59	12.68	1.28	15.54	13.48	1.13	1.13	16.47	14.23	0.97	0.97	16.77	16.77	1.15	1.15	16.77	16.77	1.15	1.15	17.61	17.39	0.83					
75 (23.9)	72(22.2)	13.91	5.70	1.21	8.34	3.43	0.52	8.89	3.65	0.44	0.44	9.31	3.80	0.37	0.37	10.45	5.01	0.37	0.37	10.45	5.01	0.37	0.37	11.04	5.22	0.29					
	67(19.4)	12.50	7.42	1.22	7.48	4.49	0.53	7.97	4.78	0.46	0.46	8.34	4.91	0.40	0.40	8.85	7.61	0.48	0.48	8.85	7.61	0.48	0.48	9.89	8.07	0.33					
	63(17.2)	11.48	8.77	1.22	6.85	5.34	0.53	7.30	5.79	0.41	0.41	7.63	5.79	0.41	0.41	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	9.43	9.43	0.34					
80 (26.7)	72(22.2)	13.87	7.46	1.21	8.31	4.55	0.52	8.86	4.82	0.46	0.46	9.28	4.96	0.37	0.37	10.39	7.88	0.37	0.37	10.39	7.88	0.37	0.37	10.98	8.13	0.29					
	67(19.4)	12.47	9.17	1.22	7.45	5.59	0.53	7.94	5.94	0.44	0.44	8.31	6.06	0.40	0.40	8.85	7.61	0.48	0.48	8.85	7.61	0.48	0.48	9.89	8.07	0.33					
	63(17.2)	11.48	10.51	1.22	6.86	6.43	0.54	7.10	7.10	0.48	0.48	7.62	6.93	0.41	0.41	8.56	8.56	0.48	0.48	8.56	8.56	0.48	0.48	9.43	9.43	0.34					

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 28



**HVA925**  
**DETAILED COOLING CAPACITIES# – EFFICIENCY MODE CONTINUED**

EDB °F (°C)	EVAPE AIR °F (°C)	HVA925 / FCMA48***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 SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens †	Total Sys. KW**	Total Sys. KW**
<b>75</b> (23.9)	72 (22.2)	23.68	9.99	2.51	2.21	25.12	10.51	2.21	1.90	27.77	11.50	1.62	1.62	29.08	11.99	1.34	1.34	30.34	12.47	1.07	1.07	30.34	12.47	1.07	1.07
	67 (19.4)	21.55	13.82	2.50	2.21	22.88	14.39	2.21	1.92	25.35	15.48	1.65	1.65	26.55	16.01	1.39	1.39	27.72	16.54	1.13	1.13	27.72	16.54	1.13	1.13
	63 (17.2)	19.97	16.81	2.49	2.22	21.22	17.43	2.22	1.93	23.54	18.59	1.67	1.67	24.67	19.16	1.42	1.42	25.77	19.72	1.17	1.17	25.77	19.72	1.17	1.17
	57 (13.9)	18.96	18.96	2.48	2.21	19.97	19.97	2.21	1.94	21.84	21.84	1.69	1.69	22.75	22.75	1.45	1.45	23.62	23.62	1.21	1.21	23.62	23.62	1.21	1.21
	72 (22.2)	23.52	13.77	2.50	2.20	24.94	14.33	2.20	1.90	27.59	15.38	1.61	1.61	28.89	15.91	1.34	1.34	30.15	16.42	1.07	1.07	30.15	16.42	1.07	1.07
<b>80</b> (26.7)	67 (19.4)	21.46	17.56	2.50	2.21	22.78	18.18	2.21	1.92	25.24	19.33	1.65	1.65	26.45	19.90	1.39	1.39	27.61	20.46	1.13	1.13	27.61	20.46	1.13	1.13
	63 (17.2)	20.19	20.19	2.49	2.22	21.30	21.10	2.22	1.93	23.57	22.40	1.67	1.67	24.68	23.02	1.42	1.42	25.77	23.62	1.17	1.17	25.77	23.62	1.17	1.17
	57 (13.9)	20.15	20.15	2.49	2.22	21.20	21.20	2.22	1.93	23.15	23.15	1.67	1.67	24.09	24.09	1.43	1.43	25.00	25.00	1.19	1.19	25.00	25.00	1.19	1.19
	72 (22.2)	15.55	6.67	1.25	1.17	16.54	7.02	1.17	1.03	17.29	7.30	1.03	1.03	18.23	7.64	0.91	0.91	20.05	8.32	0.61	0.61	20.05	8.32	0.61	0.61
	67 (19.4)	14.11	9.43	1.25	1.18	15.02	9.82	1.18	1.05	15.76	10.15	1.05	1.05	16.63	10.52	0.95	0.95	18.29	11.25	0.67	0.67	18.29	11.25	0.67	0.67
<b>75</b> (23.9)	63 (17.2)	13.09	11.60	1.25	1.19	13.94	12.02	1.19	1.06	14.67	12.38	1.06	1.06	15.47	12.78	0.97	0.97	17.02	13.56	0.71	0.71	17.02	13.56	0.71	0.71
	57 (13.9)	12.65	12.65	1.25	1.20	13.36	13.36	1.20	1.07	13.97	13.97	1.07	1.07	14.62	14.62	0.98	0.98	15.89	15.89	0.75	0.75	15.89	15.89	0.75	0.75
	72 (22.2)	15.43	9.41	1.24	1.17	16.40	9.79	1.17	1.03	17.14	10.08	1.03	1.03	18.08	10.45	0.91	0.91	19.94	11.19	0.61	0.61	19.94	11.19	0.61	0.61
	67 (19.4)	14.07	12.14	1.25	1.18	14.97	12.56	1.18	1.05	15.70	12.91	1.05	1.05	16.56	13.31	0.94	0.94	18.21	14.09	0.67	0.67	18.21	14.09	0.67	0.67
	63 (17.2)	13.49	13.49	1.25	1.19	14.23	14.23	1.19	1.06	14.84	14.84	1.06	1.06	15.54	15.49	0.96	0.96	17.05	16.38	0.71	0.71	17.05	16.38	0.71	0.71
<b>80</b> (26.7)	57 (13.9)	13.47	13.47	1.25	1.19	14.20	14.20	1.19	1.06	14.81	14.81	1.06	1.06	15.50	15.50	0.96	0.96	16.81	16.81	0.72	0.72	16.81	16.81	0.72	0.72
	72 (22.2)	12.12	5.39	0.73	0.75	12.92	5.68	0.75	0.46	10.55	4.66	0.46	0.44	11.18	4.89	0.44	0.44	12.52	5.37	0.28	0.28	12.52	5.37	0.28	0.28
	67 (19.4)	10.98	7.95	0.74	0.77	11.73	8.27	0.77	0.47	9.58	6.85	0.47	0.47	10.16	7.10	0.47	0.47	11.36	7.61	0.34	0.34	11.36	7.61	0.34	0.34
	63 (17.2)	10.22	9.94	0.74	0.77	10.91	10.29	0.77	0.49	8.93	8.56	0.49	0.49	9.46	8.83	0.49	0.49	10.55	9.37	0.38	0.38	10.55	9.37	0.38	0.38
	57 (13.9)	10.14	10.14	0.74	0.78	10.74	10.74	0.78	0.49	8.82	8.82	0.49	0.50	9.29	9.29	0.50	0.50	10.21	10.21	0.40	0.40	10.21	10.21	0.40	0.40
<b>80</b> (26.7)	72 (22.2)	11.99	7.94	0.73	0.75	12.79	8.25	0.75	0.46	10.41	6.81	0.46	0.44	11.06	7.06	0.44	0.44	12.41	7.59	0.28	0.28	12.41	7.59	0.28	0.28
	67 (19.4)	10.97	10.45	0.74	0.76	11.70	10.80	0.76	0.47	9.55	8.98	0.47	0.47	10.13	9.25	0.47	0.47	11.32	9.81	0.34	0.34	11.32	9.81	0.34	0.34
	63 (17.2)	10.83	10.83	0.74	0.77	11.46	11.46	0.77	0.48	9.40	9.40	0.48	0.48	9.89	9.89	0.48	0.48	10.87	10.87	0.36	0.36	10.87	10.87	0.36	0.36
	57 (13.9)	10.82	10.82	0.74	0.77	11.44	11.44	0.77	0.48	9.39	9.39	0.48	0.48	9.87	9.87	0.48	0.48	10.85	10.85	0.36	0.36	10.85	10.85	0.36	0.36
	72 (22.2)	12.92	5.68	0.75	0.77	12.92	5.68	0.77	0.46	10.55	4.66	0.46	0.44	11.18	4.89	0.44	0.44	12.52	5.37	0.28	0.28	12.52	5.37	0.28	0.28

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 28

HVA925 / FCM4X48\*\*\*L Comfort + Dehumidify Mode  
**DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE CONTINUED**

EDB °F (°C)	EVAP AIR EWB °F (°C)	HVA925 / FCM4X48***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																			
		105 (40.5)					95 (35)					75 (23.9)					65 (18.3)				
		ID SCFM	Capacity Total	MBH Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBH Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBH Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBH Sensit	Total Sys. KW	Total Sys. KW
75 (23.9)	72 (22.2)	19.25	8.01	10.26	1.88	25.24	10.84	12.06	1.61	26.68	10.84	11.43	12.06	1.34	28.11	11.43	12.06	1.07	29.64	12.06	1.07
	67 (19.4)	17.48	10.88	13.18	1.89	22.98	13.92	14.68	1.63	24.31	13.92	14.68	1.38	25.64	14.68	15.57	1.13	27.06	15.57	1.13	
	63 (17.2)	16.21	13.13	15.45	1.90	21.29	16.31	16.66	1.65	22.54	16.31	17.21	16.66	1.41	23.79	17.21	18.30	1.17	25.13	18.30	1.17
	57 (13.9)	15.18	15.18	18.78	1.90	19.10	18.83	19.82	1.66	20.23	18.83	20.92	1.44	21.37	20.92	22.29	1.21	22.62	22.29	1.21	
	72 (22.2)	19.12	10.84	13.12	1.88	25.12	13.85	14.60	1.60	26.55	13.85	14.60	1.33	27.98	14.60	15.47	1.07	29.49	15.47	1.07	
80 (26.7)	67 (19.4)	17.42	13.69	16.02	1.89	22.91	16.91	17.83	1.63	24.24	16.91	17.83	1.38	25.56	17.83	18.96	1.13	26.97	18.96	1.13	
	63 (17.2)	16.26	15.91	18.28	1.90	21.26	18.28	19.05	1.65	22.51	18.28	20.35	1.41	23.76	20.35	21.68	1.17	25.10	21.68	1.17	
	57 (13.9)	16.12	16.12	20.08	1.90	20.08	20.08	21.23	1.66	21.23	21.23	22.41	1.42	22.41	22.41	23.77	1.19	23.77	23.77	1.19	
	72 (22.2)	15.62	6.37	6.64	1.03	16.33	7.02	7.42	0.91	17.27	7.02	7.42	0.78	18.26	7.42	7.87	0.62	19.32	7.87	0.62	
	67 (19.4)	14.19	8.25	8.57	1.04	14.88	9.03	9.56	0.94	15.74	9.03	9.56	0.82	16.66	9.56	10.18	0.68	17.64	10.18	0.68	
75 (23.9)	63 (17.2)	13.12	9.74	10.07	1.05	13.79	10.61	11.23	0.96	14.60	10.61	11.23	0.85	15.46	11.23	12.00	0.71	16.38	12.00	0.71	
	57 (13.9)	11.80	11.80	12.27	1.06	12.35	12.91	13.68	0.97	13.08	12.91	13.68	0.88	13.87	13.68	14.65	0.76	14.74	14.65	0.76	
	72 (22.2)	15.55	8.23	8.52	1.02	16.25	8.98	9.50	0.91	17.19	8.98	9.50	0.78	18.17	9.50	10.12	0.62	19.23	10.12	0.62	
	67 (19.4)	14.14	10.11	10.44	1.04	14.83	10.99	11.63	0.94	15.69	10.99	11.63	0.82	16.60	11.63	12.43	0.67	17.57	12.43	0.67	
	57 (13.9)	13.11	11.59	11.94	1.05	13.77	11.94	12.56	0.96	14.58	11.94	13.30	0.85	15.44	13.30	14.24	0.71	16.36	14.24	0.71	
75 (23.9)	72 (22.2)	6.36	2.59	3.75	0.47	9.26	3.95	4.15	0.43	9.75	3.95	4.15	0.43	10.23	4.15	4.35	0.36	10.72	4.35	0.36	
	67 (19.4)	10.72	6.18	4.68	0.48	8.39	4.89	5.09	0.47	8.84	4.89	5.09	0.47	9.27	5.09	5.30	0.40	9.70	5.30	0.40	
	63 (17.2)	9.90	7.24	5.40	0.49	7.74	5.61	5.83	0.49	8.15	5.61	5.83	0.49	8.56	5.83	6.04	0.44	8.96	6.04	0.44	
	57 (13.9)	8.82	8.81	6.46	0.49	6.85	6.68	6.90	0.52	7.22	6.68	6.90	0.52	7.59	6.90	7.12	0.48	7.95	7.12	0.48	
	72 (22.2)	11.79	6.17	4.68	0.47	9.23	4.88	5.09	0.43	9.72	4.88	5.09	0.43	10.20	5.09	5.30	0.36	10.68	5.30	0.36	
80 (26.7)	67 (19.4)	10.69	7.53	5.60	0.48	8.37	5.82	6.03	0.47	8.81	5.82	6.03	0.47	9.25	6.03	6.24	0.40	9.68	6.24	0.40	
	63 (17.2)	9.88	8.60	6.32	0.49	7.72	6.54	6.76	0.49	8.14	6.54	6.76	0.49	8.54	6.76	6.98	0.44	8.95	6.98	0.44	
	57 (13.9)	9.35	9.35	7.09	0.49	7.09	7.40	7.70	0.51	7.40	7.40	7.70	0.51	7.70	7.70	8.00	0.48	8.00	8.00	0.48	
	72 (22.2)	3.18	1.29	3.64	0.47	8.99	3.89	4.06	0.44	9.59	3.89	4.06	0.44	9.99	4.06	4.33	0.36	10.66	4.33	0.36	
	67 (19.4)	10.72	6.18	4.46	0.48	8.13	4.76	4.92	0.48	8.68	4.76	4.92	0.48	9.04	4.92	5.25	0.41	9.65	5.25	0.41	
75 (23.9)	63 (17.2)	9.90	7.24	5.09	0.49	7.49	5.44	5.58	0.50	8.00	5.44	5.58	0.50	8.34	5.58	5.98	0.44	8.91	5.98	0.44	
	57 (13.9)	8.82	8.81	6.02	0.49	6.63	6.43	6.56	0.52	7.09	6.43	6.56	0.52	7.39	6.56	7.04	0.48	7.90	7.04	0.48	
	72 (22.2)	11.79	6.17	4.47	0.47	8.96	4.76	4.92	0.44	9.55	4.76	4.92	0.44	9.96	4.92	5.26	0.36	10.62	5.26	0.36	
	67 (19.4)	10.69	7.53	5.28	0.48	8.11	5.63	5.78	0.48	8.66	5.63	5.78	0.48	9.02	5.78	6.18	0.41	9.63	6.18	0.41	
	57 (13.9)	9.88	8.60	5.91	0.49	7.48	6.31	6.44	0.50	7.99	6.31	6.44	0.50	8.33	6.44	6.91	0.44	8.89	6.91	0.44	
80 (26.7)	72 (22.2)	9.35	9.35	6.73	0.49	6.73	7.19	7.40	0.52	7.19	7.19	7.40	0.52	7.40	7.40	7.93	0.48	7.93	7.93	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 28



**HVA936**  
**DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED**

EDB °F (°C)	EVA <sup>R</sup> AIR	HVA936 / FCM4x8*** 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	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW**
<b>STAGE 5</b>																									
<b>75</b> (23.9)	72 (22.2)	34.24	14.18	4.44	36.41	14.99	3.89	3.89	15.70	16.47	2.87	2.87	40.30	16.47	2.87	2.87	42.28	17.24	2.41	2.41	44.18	17.98	1.98	1.98	
	67 (19.4)	31.38	19.07	4.38	33.35	19.95	3.85	3.85	20.75	21.60	2.87	2.87	36.99	21.60	2.87	2.87	38.79	22.42	2.43	2.43	40.52	23.22	2.02	2.02	
	63 (17.2)	29.21	22.90	4.33	31.07	23.84	3.81	3.81	24.70	25.59	2.86	2.86	34.48	25.59	2.86	2.86	36.17	26.47	2.44	2.44	37.79	27.32	2.04	2.04	
	57 (13.9)	27.05	27.05	4.27	28.50	28.50	3.77	3.77	29.85	29.85	2.84	2.84	31.20	31.20	2.84	2.84	32.65	32.25	2.44	2.44	34.08	33.21	2.06	2.06	
	72 (22.2)	34.04	18.92	4.44	36.21	19.79	3.88	3.88	20.56	20.56	3.35	3.35	40.10	21.39	2.86	2.86	42.08	22.22	2.41	2.41	43.98	23.01	1.98	1.98	
<b>80</b> (26.7)	67 (19.4)	31.25	23.78	4.38	33.23	24.72	3.84	3.84	25.57	26.47	2.86	2.86	36.86	26.47	2.86	2.86	38.66	27.35	2.42	2.42	40.39	28.21	2.02	2.02	
	63 (17.2)	29.21	27.55	4.33	31.05	28.56	3.81	3.81	29.48	30.44	2.86	2.86	34.43	30.44	2.86	2.86	36.11	31.38	2.43	2.43	37.72	32.28	2.04	2.04	
	57 (13.9)	28.61	28.61	4.32	30.14	30.14	3.80	3.80	31.53	31.53	2.85	2.85	32.95	32.95	2.85	2.85	34.31	34.31	2.44	2.44	35.64	35.64	2.05	2.05	
	72 (22.2)	21.81	9.32	1.96	23.25	9.85	1.83	1.83	10.24	10.75	1.50	1.50	25.66	10.75	1.50	1.50	27.01	11.26	1.31	1.31	28.33	11.75	1.10	1.10	
	67 (19.4)	19.85	13.12	1.96	21.18	13.71	1.84	1.84	14.19	14.77	1.52	1.52	23.48	14.77	1.52	1.52	24.72	15.33	1.35	1.35	25.94	15.89	1.15	1.15	
<b>75</b> (23.9)	63 (17.2)	18.41	16.08	1.95	19.66	16.73	1.85	1.85	17.29	17.91	1.54	1.54	21.87	17.91	1.54	1.54	23.02	18.53	1.37	1.37	24.16	19.14	1.19	1.19	
	57 (13.9)	17.71	17.71	1.95	18.75	18.75	1.85	1.85	19.63	19.63	1.68	1.68	20.61	20.61	1.54	1.54	21.57	21.57	1.39	1.39	22.50	22.50	1.22	1.22	
	72 (22.2)	21.64	13.06	1.95	23.07	13.65	1.83	1.83	14.08	14.65	1.49	1.49	25.46	14.65	1.49	1.49	26.81	15.21	1.31	1.31	28.13	15.76	1.10	1.10	
	67 (19.4)	19.77	16.83	1.95	21.09	17.48	1.84	1.84	18.01	18.64	1.52	1.52	23.37	18.64	1.52	1.52	24.60	19.26	1.35	1.35	25.82	19.87	1.15	1.15	
	63 (17.2)	18.86	18.86	1.95	19.95	19.95	1.84	1.84	20.82	20.82	1.68	1.68	21.94	21.67	1.53	1.53	23.07	22.38	1.37	1.37	24.19	23.06	1.19	1.19	
<b>80</b> (26.7)	57 (13.9)	18.83	18.83	1.95	19.91	19.91	1.84	1.84	20.79	20.79	1.68	1.68	21.82	21.82	1.53	1.53	22.82	22.82	1.37	1.37	23.80	23.80	1.20	1.20	
	72 (22.2)	14.74	6.58	0.98	15.80	6.96	1.00	1.00	4.81	5.09	0.48	0.48	11.57	5.09	0.46	0.46	12.38	5.38	0.39	0.39	13.21	5.69	0.27	0.27	
	67 (19.4)	13.36	9.71	0.98	14.34	10.16	1.02	1.02	7.10	7.42	0.49	0.49	10.52	7.42	0.49	0.49	11.24	7.76	0.44	0.44	11.99	8.11	0.34	0.34	
	63 (17.2)	12.47	12.13	0.98	13.37	12.85	1.03	1.03	8.88	9.25	0.51	0.51	9.81	9.25	0.51	0.51	10.45	9.62	0.47	0.47	11.13	10.00	0.38	0.38	
	57 (13.9)	12.37	12.37	0.98	13.18	13.18	1.03	1.03	9.09	9.09	0.51	0.51	9.66	9.66	0.52	0.52	10.22	10.22	0.48	0.48	10.81	10.81	0.40	0.40	
<b>75</b> (23.9)	72 (22.2)	14.58	9.69	0.97	15.63	10.12	1.00	1.00	7.06	7.39	0.46	0.46	11.46	7.39	0.46	0.46	12.27	7.73	0.39	0.39	13.08	8.07	0.27	0.27	
	67 (19.4)	13.36	12.75	0.98	14.32	13.27	1.02	1.02	9.32	9.70	0.49	0.49	10.49	9.70	0.49	0.49	11.21	10.08	0.44	0.44	11.95	10.47	0.34	0.34	
	63 (17.2)	13.20	13.20	0.98	14.04	14.04	1.02	1.02	9.68	9.68	0.49	0.49	10.28	10.28	0.49	0.49	10.89	10.89	0.45	0.45	11.52	11.52	0.36	0.36	
	57 (13.9)	13.18	13.18	0.98	14.02	14.02	1.02	1.02	9.67	9.67	0.49	0.49	10.26	10.26	0.49	0.49	10.87	10.87	0.45	0.45	11.50	11.50	0.36	0.36	
	72 (22.2)	14.74	6.58	0.98	15.80	6.96	1.00	1.00	4.81	5.09	0.48	0.48	11.57	5.09	0.46	0.46	12.38	5.38	0.39	0.39	13.21	5.69	0.27	0.27	

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 28

HVA936 / FCM4X48\*\*\*L Comfort + Dehumidify Mode CONTINUED  
**DETAILED COOLING CAPACITIES# – COMFORT + DEHUMIDIFY MODE CONTINUED**

EDB °F (°C)	EVAP AIR WB/GP °F (°C)	HVA936 / FCM4X48***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																			
		105 (40.5)					95 (35)					75 (23.9)					65 (18.3)				
		ID SCFM	Capacity Total	MBtuh Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBtuh Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBtuh Sensit	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity Total	MBtuh Sensit	Total Sys. KW	Total Sys. KW
75 (23.9)	72 (22.2)	35.03	14.21	3.80	3.28	38.97	15.79	2.81	2.81	2.81	41.14	16.67	2.38	2.38	2.38	43.43	17.61	1.97	1.97	1.97	
	67 (19.4)	32.03	18.10	3.76	3.26	35.70	19.98	2.81	2.81	2.81	37.69	21.10	2.39	2.39	2.39	39.83	22.39	2.00	2.00	2.00	
	63 (17.2)	29.78	21.12	3.72	3.23	33.23	23.22	2.80	2.80	2.80	35.10	24.53	2.40	2.40	2.40	37.11	26.09	2.02	2.02	2.02	
	57 (13.9)	26.68	25.51	3.66	3.19	29.78	27.92	2.78	2.78	2.78	31.49	29.50	2.40	2.40	2.40	33.35	31.47	2.04	2.04	2.04	
	72 (22.2)	34.90	17.98	3.79	3.28	38.82	19.81	2.81	2.81	2.81	40.98	20.92	2.37	2.37	2.37	43.26	22.19	1.97	1.97	1.97	
80 (26.7)	67 (19.4)	31.95	21.83	3.75	3.25	35.61	23.95	2.81	2.81	2.81	37.60	25.30	2.39	2.39	2.39	39.72	26.91	2.00	2.00	2.00	
	63 (17.2)	29.73	24.84	3.72	3.23	33.16	27.18	2.80	2.80	2.80	35.04	28.72	2.39	2.39	2.39	37.04	30.61	2.02	2.02	2.02	
	57 (13.9)	27.71	27.71	3.68	3.20	30.66	30.66	2.78	2.78	2.78	32.41	32.41	2.40	2.40	2.40	34.42	34.42	2.04	2.04	2.04	
	72 (22.2)	21.74	8.83	1.80	1.63	24.20	9.82	1.47	1.47	1.47	25.61	10.39	1.30	1.30	1.30	27.10	11.00	1.09	1.09	1.09	
	67 (19.4)	19.76	11.28	1.80	1.64	22.09	12.54	1.49	1.49	1.49	23.39	13.27	1.33	1.33	1.33	24.77	14.10	1.14	1.14	1.14	
75 (23.9)	63 (17.2)	18.28	13.20	1.80	1.63	20.51	14.65	1.50	1.50	1.50	21.73	15.51	1.35	1.35	1.35	23.02	16.51	1.18	1.18	1.18	
	57 (13.9)	16.37	16.02	1.79	1.63	18.42	17.76	1.51	1.51	1.51	19.53	18.80	1.37	1.37	1.37	20.72	20.04	1.21	1.21	1.21	
	72 (22.2)	21.65	11.25	1.80	1.63	24.08	12.45	1.47	1.47	1.47	25.49	13.17	1.29	1.29	1.29	26.96	13.99	1.09	1.09	1.09	
	67 (19.4)	19.70	13.69	1.80	1.63	22.03	15.15	1.49	1.49	1.49	23.32	16.03	1.33	1.33	1.33	24.69	17.07	1.14	1.14	1.14	
	63 (17.2)	18.26	15.60	1.80	1.63	20.48	17.26	1.50	1.50	1.50	21.70	18.27	1.35	1.35	1.35	22.99	19.47	1.17	1.17	1.17	
80 (26.7)	72 (22.2)	17.18	17.18	1.80	1.63	19.20	19.20	1.50	1.50	1.50	20.34	20.34	1.36	1.36	1.36	21.61	21.61	1.20	1.20	1.20	
	67 (19.4)	14.50	5.90	0.99	0.49	10.07	4.08	0.49	0.49	0.49	10.66	4.32	0.45	0.45	0.45	11.47	4.65	0.35	0.35	0.35	
	63 (17.2)	13.17	7.58	1.00	0.50	9.13	5.04	0.52	0.52	0.52	9.66	5.30	0.49	0.49	0.49	10.39	5.71	0.41	0.41	0.41	
	57 (13.9)	12.18	8.91	1.00	0.51	8.42	5.80	0.53	0.53	0.53	8.92	6.07	0.51	0.51	0.51	9.60	6.55	0.45	0.45	0.45	
	72 (22.2)	10.89	10.84	1.01	0.52	7.02	6.61	0.55	0.55	0.55	7.91	7.19	0.54	0.54	0.54	8.52	7.77	0.49	0.49	0.49	
75 (23.9)	67 (19.4)	14.44	7.57	0.99	0.49	10.03	5.04	0.49	0.49	0.49	10.62	5.30	0.45	0.45	0.45	11.43	5.71	0.35	0.35	0.35	
	63 (17.2)	13.13	9.25	1.00	0.50	9.10	6.01	0.52	0.52	0.52	9.64	6.28	0.49	0.49	0.49	10.36	6.78	0.41	0.41	0.41	
	57 (13.9)	12.16	10.56	1.00	0.51	8.41	6.76	0.53	0.53	0.53	8.91	7.05	0.51	0.51	0.51	9.58	7.61	0.45	0.45	0.45	
	72 (22.2)	11.52	11.52	1.01	0.52	7.26	7.26	0.54	0.54	0.54	8.03	8.03	0.54	0.54	0.54	8.66	8.66	0.48	0.48	0.48	
	67 (19.4)	14.50	5.90	0.99	0.49	9.88	4.01	0.50	0.50	0.50	10.62	4.30	0.45	0.45	0.45	11.47	4.65	0.35	0.35	0.35	
80 (26.7)	63 (17.2)	13.17	7.58	1.00	0.50	8.94	4.90	0.52	0.52	0.52	9.62	5.27	0.49	0.49	0.49	10.39	5.71	0.41	0.41	0.41	
	57 (13.9)	12.18	8.91	1.00	0.51	8.25	5.59	0.53	0.53	0.53	8.88	6.02	0.51	0.51	0.51	9.60	6.55	0.45	0.45	0.45	
	72 (22.2)	10.89	10.84	1.01	0.52	7.30	6.60	0.55	0.55	0.55	7.87	7.12	0.54	0.54	0.54	8.52	7.77	0.49	0.49	0.49	
	67 (19.4)	14.44	7.57	0.99	0.49	9.84	4.90	0.50	0.50	0.50	10.58	5.27	0.45	0.45	0.45	11.43	5.71	0.35	0.35	0.35	
	63 (17.2)	13.13	9.25	1.00	0.50	8.92	5.79	0.52	0.52	0.52	9.60	6.23	0.49	0.49	0.49	10.36	6.78	0.41	0.41	0.41	
75 (23.9)	57 (13.9)	12.16	10.56	1.00	0.51	8.23	6.48	0.53	0.53	0.53	8.87	6.98	0.51	0.51	0.51	9.58	7.61	0.45	0.45	0.45	
	72 (22.2)	11.52	11.52	1.01	0.52	7.08	7.08	0.55	0.55	0.55	7.97	7.97	0.54	0.54	0.54	8.66	8.66	0.48	0.48	0.48	
	67 (19.4)	14.50	5.90	0.99	0.49	9.88	4.01	0.50	0.50	0.50	10.62	4.30	0.45	0.45	0.45	11.47	4.65	0.35	0.35	0.35	
	63 (17.2)	13.17	7.58	1.00	0.50	8.94	4.90	0.52	0.52	0.52	9.62	5.27	0.49	0.49	0.49	10.39	5.71	0.41	0.41	0.41	
	57 (13.9)	12.18	8.91	1.00	0.51	8.25	5.59	0.53	0.53	0.53	8.88	6.02	0.51	0.51	0.51	9.60	6.55	0.45	0.45	0.45	

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 28





**HVA937**  
**DETAILED COOLING CAPACITIES# – EFFICIENCY MODE CONTINUED**

EDB F (°C)	EVA P AIR	HVA937 / FCMA460***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**	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**	ID SCFM	Capacity MBtuh	Total Sys. KW**	Total Sys. KW**
75 (23.9)	72 (22.2)	1050	32.70	13.63	3.49	34.98	14.48	3.05	3.05	37.03	15.26	2.59	2.59	39.26	16.11	2.21	2.21	41.44	16.95	1.86	1.86	43.61	17.78	1.54	1.54
	67 (19.4)		31.53	19.22	3.08	31.81	19.44	3.03	3.03	33.70	20.30	2.58	2.58	35.71	21.22	2.21	2.21	37.69	22.14	1.87	1.87	39.65	23.05	1.56	1.56
	63 (17.2)		27.56	22.33	3.44	29.46	23.92	3.02	3.02	31.25	24.26	2.58	2.58	33.12	25.24	2.21	2.21	34.94	26.21	1.88	1.88	36.75	27.17	1.58	1.58
	57 (13.9)		25.78	25.78	3.41	27.31	27.31	3.00	3.00	28.73	28.73	2.56	2.56	30.19	30.19	2.21	2.21	31.62	31.62	1.89	1.89	33.01	33.01	1.61	1.61
	72 (22.2)		32.58	18.47	3.49	34.86	19.41	3.05	3.05	36.91	20.26	2.59	2.59	39.14	21.19	2.21	2.21	41.32	22.11	1.86	1.86	43.48	23.02	1.54	1.54
80 (26.7)	67 (19.4)	1050	31.43	24.01	3.08	31.71	24.30	3.03	3.03	33.60	25.24	2.58	2.58	35.61	26.24	2.21	2.21	37.59	27.23	1.87	1.87	39.55	28.22	1.56	1.56
	63 (17.2)		27.61	27.02	3.44	29.49	28.13	3.02	3.02	31.23	29.15	2.58	2.58	33.10	30.22	2.21	2.21	34.91	31.27	1.88	1.88	36.70	32.31	1.58	1.58
	57 (13.9)		27.36	27.36	3.44	28.98	28.98	3.01	3.01	30.45	30.45	2.57	2.57	32.00	32.00	2.21	2.21	33.49	33.49	1.89	1.89	34.96	34.96	1.59	1.59
	72 (22.2)		22.96	9.72	2.41	24.70	10.37	2.11	2.11	26.36	10.99	1.76	1.76	28.08	11.65	1.50	1.50	29.77	12.29	1.25	1.25	31.45	12.93	1.03	1.03
	67 (19.4)		20.81	13.49	2.42	22.39	14.22	2.13	2.13	23.90	14.93	1.79	1.79	25.43	15.65	1.54	1.54	26.95	16.37	1.30	1.30	28.46	17.09	1.08	1.08
75 (23.9)	63 (17.2)	900	19.24	16.44	2.42	20.68	17.23	2.14	2.14	22.09	18.01	1.80	1.80	23.50	18.79	1.56	1.56	24.89	19.57	1.34	1.34	26.28	20.35	1.13	1.13
	57 (13.9)		18.34	18.34	2.42	19.54	19.54	2.15	2.15	20.70	20.70	1.82	1.82	21.85	21.85	1.58	1.58	22.98	22.98	1.37	1.37	24.10	24.10	1.17	1.17
	72 (22.2)		22.86	13.49	2.41	24.60	14.23	2.11	2.11	26.26	14.93	1.76	1.76	27.98	15.67	1.50	1.50	29.67	16.39	1.25	1.25	31.35	17.12	1.03	1.03
	67 (19.4)		20.74	17.22	2.42	22.31	18.03	2.13	2.13	23.83	18.82	1.79	1.79	25.36	19.62	1.54	1.54	26.87	20.42	1.30	1.30	28.38	21.22	1.08	1.08
	57 (17.2)		19.57	19.57	2.42	20.83	20.83	2.14	2.14	22.16	21.83	1.80	1.80	23.54	22.72	1.56	1.56	24.92	23.58	1.33	1.33	26.29	24.45	1.12	1.12
80 (26.7)	72 (22.2)	900	19.53	19.53	2.42	20.79	20.79	2.14	2.14	22.01	22.01	1.80	1.80	23.22	23.22	1.56	1.56	24.42	24.42	1.34	1.34	25.59	25.59	1.14	1.14
	67 (19.4)		18.16	7.73	1.96	19.62	8.28	1.73	1.73	21.04	8.28	0.87	0.87	22.61	8.55	0.87	0.87	24.28	7.14	0.57	0.57	26.39	7.57	0.43	0.43
	63 (17.2)		16.42	10.82	1.98	17.74	11.45	1.76	1.76	19.62	11.45	0.91	0.91	21.66	11.47	0.73	0.73	23.54	9.54	0.62	0.62	25.45	10.04	0.49	0.49
	57 (13.9)		15.19	13.25	1.99	16.40	13.94	1.77	1.77	18.33	13.94	0.93	0.93	20.26	13.94	0.80	0.80	22.17	11.44	0.66	0.66	24.08	11.99	0.53	0.53
	72 (22.2)		14.59	14.59	1.99	15.61	15.61	1.78	1.78	17.47	15.61	0.95	0.95	19.44	15.61	0.82	0.82	21.30	13.40	0.70	0.70	23.13	14.16	0.58	0.58
75 (23.9)	67 (19.4)	800	18.08	10.84	1.96	19.54	11.47	1.73	1.73	21.48	12.47	1.00	1.00	23.47	13.47	0.87	0.87	25.46	14.47	0.70	0.70	27.45	15.47	0.58	0.58
	63 (17.2)		16.38	13.89	1.98	17.69	14.60	1.75	1.75	19.60	14.60	0.91	0.91	21.61	14.60	0.76	0.76	23.62	12.47	0.62	0.62	25.63	13.47	0.49	0.49
	57 (13.9)		15.57	15.57	1.99	16.66	16.66	1.77	1.77	18.67	16.66	0.93	0.93	20.68	16.66	0.79	0.79	22.69	14.48	0.66	0.66	24.70	15.47	0.53	0.53
	72 (22.2)		15.54	15.54	1.99	16.63	16.63	1.77	1.77	18.64	16.63	0.93	0.93	20.65	16.63	0.80	0.80	22.66	14.23	0.67	0.67	24.67	15.04	0.54	0.54
	67 (19.4)		16.38	13.89	1.98	17.69	14.60	1.75	1.75	19.60	14.60	0.91	0.91	21.61	14.60	0.76	0.76	23.62	12.47	0.62	0.62	25.63	13.47	0.49	0.49

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 28

# HVA937 / FCMA460\*\*\*L Comfort + Dehumidify Mode CONTINUED

EDB °F (°C)	HVA937 / FCMA460***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)												75 (23.9)			65 (18.3)		
	105 (40.5)			95 (35)			85 (29.4)			75 (23.9)			65 (18.3)					
	EWB °F (°C)	ID SCFM	Capacity MBtuh Total	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Total Sys. KW		
75 (23.9)	72 (22.2)	812	33.61	2.96	812	35.51	2.51	848	37.87	15.36	2.15	40.27	16.34	1.81	42.86	1.51		
	67 (19.4)	812	30.54	2.94	812	32.28	2.50	848	34.42	19.52	2.15	36.60	20.75	1.83	38.94	1.53		
	63 (17.2)	812	28.29	2.93	812	29.92	2.49	848	31.90	22.77	2.15	33.91	24.19	1.84	36.07	1.55		
	57 (13.9)	812	25.29	2.90	812	26.74	2.47	848	28.50	27.52	2.15	30.29	29.23	1.85	32.24	1.58		
	72 (22.2)	812	33.51	2.96	812	35.42	2.51	848	37.77	19.49	2.15	40.17	20.72	1.81	42.74	1.51		
80 (26.7)	67 (19.4)	812	30.47	2.94	812	32.21	2.50	848	34.35	23.59	2.15	36.52	25.07	1.83	38.86	1.53		
	63 (17.2)	812	28.24	2.93	812	29.87	2.49	848	31.85	26.83	2.15	33.86	28.50	1.84	36.02	1.55		
	57 (13.9)	812	26.63	2.91	812	27.94	2.48	848	29.75	29.75	2.15	31.61	31.61	1.84	33.74	1.57		
	72 (22.2)	566	22.84	2.06	566	24.29	1.72	600	26.09	10.57	1.47	27.82	11.27	1.23	29.72	1.01		
	67 (19.4)	566	20.67	2.07	566	21.98	1.74	600	23.80	13.23	1.50	25.16	14.10	1.28	26.87	1.07		
75 (23.9)	63 (17.2)	566	19.09	2.08	566	20.29	1.75	600	21.79	15.33	1.52	23.23	16.32	1.31	24.80	1.11		
	57 (13.9)	566	17.03	2.08	566	18.10	1.77	600	19.44	18.43	1.55	20.71	19.61	1.34	22.12	1.15		
	72 (22.2)	566	22.78	2.06	566	24.23	1.72	600	26.03	13.26	1.47	27.76	14.13	1.23	29.64	1.01		
	67 (19.4)	566	20.62	2.07	566	21.93	1.74	600	23.55	15.90	1.50	25.10	16.93	1.28	26.81	1.07		
	63 (17.2)	566	19.06	2.08	566	20.27	1.75	600	21.76	17.98	1.52	23.20	19.14	1.31	24.77	1.11		
57 (13.9)	566	17.76	2.08	566	18.73	1.76	600	20.14	20.14	1.54	21.44	21.44	1.33	22.97	1.14			
75 (23.9)	72 (22.2)	500	18.14	1.70	500	14.63	0.87	500	15.69	6.41	0.72	16.75	6.83	0.57	17.81	0.44		
	67 (19.4)	500	16.41	1.72	500	13.27	0.91	500	14.22	8.36	0.76	15.17	8.83	0.63	16.11	0.50		
	63 (17.2)	500	15.16	1.74	500	12.27	0.93	500	13.14	9.90	0.80	14.01	10.41	0.66	14.88	0.54		
	57 (13.9)	500	13.54	1.75	500	11.20	0.96	500	11.91	11.91	0.83	12.61	12.61	0.71	13.31	0.59		
	72 (22.2)	500	18.09	1.70	500	14.58	0.87	500	15.64	8.36	0.72	16.70	8.83	0.57	17.75	0.44		
80 (26.7)	67 (19.4)	500	16.37	1.72	500	13.23	0.91	500	14.18	10.30	0.76	15.12	10.82	0.63	16.07	0.50		
	63 (17.2)	500	15.14	1.74	500	12.26	0.93	500	13.13	11.83	0.80	14.00	12.39	0.66	14.87	0.54		
	57 (13.9)	500	14.21	1.74	500	11.88	0.94	500	12.82	12.82	0.81	13.36	13.36	0.68	14.09	0.57		
	72 (22.2)	417	17.38	1.70	417	12.07	0.92	417	12.74	5.27	0.79	13.77	5.69	0.66	14.98	0.52		
	67 (19.4)	417	15.72	1.72	417	10.91	0.95	417	11.51	6.14	0.83	12.45	6.65	0.70	13.53	0.57		
75 (23.9)	63 (17.2)	417	14.53	1.73	417	10.07	0.97	417	10.63	6.83	0.85	11.49	7.40	0.73	12.49	0.61		
	57 (13.9)	417	12.94	1.74	417	8.96	0.98	417	9.45	7.84	0.87	10.21	8.50	0.76	11.10	0.65		
	72 (22.2)	417	17.34	1.70	417	12.04	0.92	417	12.71	6.17	0.79	13.75	6.68	0.66	14.95	0.52		
	67 (19.4)	417	15.69	1.72	417	10.89	0.95	417	11.49	7.05	0.83	12.43	7.63	0.70	13.51	0.57		
	63 (17.2)	417	14.50	1.73	417	10.05	0.97	417	10.61	7.73	0.85	11.47	8.38	0.73	12.47	0.61		
57 (13.9)	417	13.22	1.74	417	8.95	0.98	417	9.44	8.73	0.87	10.21	9.47	0.76	11.09	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 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 28



**HVA948**  
**DETAILED COOLING CAPACITIES# – EFFICIENCY MODE CONTINUED**

EDB °F (°C)	EVAR AIR °F (°C)	HVA948 / FCMA60***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 SCF M	Capacity MBtuh Total Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Total Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Total Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Total Sens †	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Total Sens †	Total Sys. KW**	Total Sys. KW**				
<b>75</b> (23.9)	72 (22.2)	44.82	18.57	5.52	4.88	47.96	19.76	4.88	4.29	50.99	20.91	4.29	3.74	53.98	22.06	3.74	3.23	56.89	23.19	3.23	59.70	24.29	2.75		
	67 (19.4)	40.99	24.95	5.42	4.80	43.86	26.26	4.80	4.23	46.65	27.54	4.23	3.70	49.36	28.80	3.70	3.21	52.01	30.04	3.21	54.60	31.27	2.75		
	63 (17.2)	38.13	29.97	5.34	4.74	40.79	31.36	4.74	4.18	43.37	32.72	4.18	3.67	45.91	34.07	3.67	3.19	48.37	35.40	3.19	50.78	36.72	2.74		
	57 (13.9)	35.29	35.29	5.26	4.66	37.41	37.41	4.66	4.12	39.46	39.46	4.12	3.62	41.45	41.45	3.62	3.16	43.58	43.09	3.16	45.70	44.59	2.73		
	72 (22.2)	44.80	24.79	5.51	4.88	47.74	26.09	4.88	4.28	50.77	27.36	4.28	3.73	53.76	28.62	3.73	3.22	56.66	29.86	3.22	59.48	31.07	2.75		
<b>80</b> (26.7)	67 (19.4)	40.84	31.14	5.42	4.80	43.71	32.55	4.80	4.23	46.50	33.94	4.23	3.70	49.21	35.31	3.70	3.20	51.86	36.65	3.20	54.45	37.98	2.75		
	63 (17.2)	38.13	36.06	5.34	4.74	40.76	37.59	4.74	4.18	43.33	39.07	4.18	3.67	45.84	40.54	3.67	3.18	48.30	41.98	3.18	50.70	43.40	2.74		
	57 (13.9)	37.36	37.36	5.32	4.72	39.59	39.59	4.72	4.16	41.72	41.72	4.16	3.64	43.81	43.81	3.64	3.17	45.84	45.84	3.17	47.82	47.82	2.73		
	72 (22.2)	29.42	12.62	2.82	2.56	31.60	13.43	2.56	2.26	33.63	14.20	2.26	2.00	35.75	15.00	2.00	1.74	37.82	15.78	1.74	39.85	16.55	1.49		
	67 (19.4)	26.82	17.86	2.80	2.56	28.83	18.79	2.56	2.27	30.73	19.68	2.27	2.02	32.66	20.60	2.02	1.77	34.57	21.50	1.77	36.44	22.40	1.52		
<b>75</b> (23.9)	63 (17.2)	24.93	21.96	2.79	2.55	26.79	22.99	2.55	2.26	28.58	23.99	2.26	2.02	30.39	25.00	2.02	1.78	32.16	26.00	1.78	33.91	26.99	1.55		
	57 (13.9)	24.03	24.03	2.78	2.55	25.61	25.61	2.55	2.26	27.12	27.12	2.26	2.03	28.62	28.62	2.03	1.80	30.11	30.11	1.80	31.55	31.55	1.57		
	72 (22.2)	29.22	17.78	2.81	2.55	31.39	18.70	2.55	2.25	33.41	19.57	2.25	2.00	35.52	20.47	2.00	1.74	37.60	21.37	1.74	39.62	22.25	1.48		
	67 (19.4)	26.71	22.96	2.80	2.56	28.71	24.01	2.56	2.26	30.60	25.01	2.26	2.01	32.52	26.03	2.01	1.77	34.42	27.05	1.77	36.30	28.05	1.52		
	57 (13.9)	25.56	25.56	2.80	2.55	27.23	27.23	2.55	2.26	28.80	28.80	2.26	2.02	30.48	30.24	2.02	1.78	32.21	31.42	1.78	33.93	32.55	1.55		
<b>75</b> (23.9)	72 (22.2)	25.50	10.99	2.21	2.07	27.46	11.73	2.07	0.95	19.62	8.56	0.95	0.84	20.96	9.06	0.84	0.72	22.29	9.57	0.72	23.61	10.07	0.57		
	67 (19.4)	23.22	15.65	2.21	2.08	25.04	16.51	2.08	0.98	17.88	12.38	0.98	0.88	19.11	12.99	0.88	0.76	20.32	13.60	0.76	21.53	14.21	0.62		
	63 (17.2)	21.57	19.30	2.21	2.08	23.24	20.26	2.08	1.00	16.68	15.37	1.00	0.90	17.82	16.07	0.90	0.79	18.95	16.77	0.79	20.07	17.46	0.66		
	57 (13.9)	20.89	20.89	2.20	2.08	22.32	22.32	2.08	1.00	16.33	16.33	1.00	0.91	17.34	17.34	0.91	0.81	18.34	18.34	0.81	19.33	19.33	0.68		
	72 (22.2)	25.31	15.59	2.21	2.06	27.26	16.44	2.06	0.95	19.42	12.31	0.95	0.84	20.76	12.92	0.84	0.71	22.09	13.52	0.71	23.43	14.14	0.57		
<b>80</b> (26.7)	67 (19.4)	23.13	20.20	2.21	2.07	24.93	21.18	2.07	0.98	17.82	16.09	0.98	0.88	19.04	16.80	0.88	0.76	20.25	17.51	0.76	21.44	18.21	0.62		
	63 (17.2)	22.25	22.25	2.21	2.08	23.77	23.77	2.08	0.98	17.35	17.35	0.98	0.89	18.41	18.41	0.89	0.78	19.46	19.46	0.78	20.50	20.50	0.65		
	57 (13.9)	22.21	22.21	2.21	2.08	23.73	23.73	2.08	0.98	17.32	17.32	0.98	0.89	18.39	18.39	0.89	0.78	19.43	19.43	0.78	20.47	20.47	0.65		
	72 (22.2)	29.42	12.62	2.82	2.56	31.60	13.43	2.56	2.26	33.63	14.20	2.26	2.00	35.75	15.00	2.00	1.74	37.82	15.78	1.74	39.85	16.55	1.49		
	67 (19.4)	26.82	17.86	2.80	2.56	28.83	18.79	2.56	2.27	30.73	19.68	2.27	2.02	32.66	20.60	2.02	1.77	34.57	21.50	1.77	36.44	22.40	1.52		

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

See additional notes on page 28

HVA948 / FCMA460\*\*\*L Comfort + Dehumidify Mode  
**HVA948**  
**DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED**

EDB °F (°C)	EVAR AIR °F (°C)	HVA948 / FCMA460***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)										65 (18.3)											
		105 (40.5)					95 (35)					85 (29.4)					75 (23.9)						
		ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sens†	Total Sys. KW	Total Sys. KW		
75 (23.9)	72 (22.2)	46.42	18.85	4.71	4.17	49.80	20.23	4.17	4.17	53.09	21.57	3.65	3.65	3.19	3.19	56.46	22.96	3.19	3.19	58.44	23.68	2.67	2.67
	67 (19.4)	42.40	24.08	4.63	4.11	45.50	25.89	4.11	4.11	48.51	27.62	3.61	3.61	3.17	3.17	51.61	29.50	3.17	3.17	53.38	29.85	2.67	2.67
	63 (17.2)	39.38	28.15	4.57	4.06	42.27	30.30	4.06	4.06	45.08	32.33	3.58	3.58	3.15	3.15	47.99	34.60	3.15	3.15	49.62	34.64	2.66	2.66
	57 (13.9)	35.31	34.09	4.47	3.98	37.94	36.72	3.98	3.98	40.49	39.19	3.53	3.53	3.12	3.12	43.14	41.99	3.12	3.12	44.52	41.65	2.64	2.64
	72 (22.2)	46.26	23.95	4.71	4.16	49.62	25.75	4.16	4.16	52.90	27.46	3.65	3.65	3.19	3.19	56.25	29.32	3.19	3.19	58.25	29.68	2.67	2.67
80 (26.7)	67 (19.4)	42.29	29.13	4.63	4.10	45.38	31.35	4.10	4.10	48.38	33.45	3.61	3.61	3.17	3.17	51.47	35.79	3.17	3.17	53.26	35.77	2.67	2.67
	63 (17.2)	39.31	33.18	4.57	4.06	42.20	35.74	4.06	4.06	45.01	38.14	3.58	3.58	3.15	3.15	47.91	40.87	3.15	3.15	49.54	40.54	2.66	2.66
	57 (13.9)	36.80	36.80	4.51	4.01	39.58	39.58	4.01	4.01	42.24	42.24	3.55	3.55	3.13	3.13	45.10	45.10	3.13	3.13	45.76	45.76	2.65	2.65
	72 (22.2)	29.62	12.03	2.44	2.16	31.87	12.96	2.16	2.16	34.08	13.86	1.91	1.91	1.66	1.66	36.31	14.77	1.66	1.66	38.96	15.92	1.43	1.43
	67 (19.4)	26.97	15.41	2.44	2.16	29.06	16.68	2.16	2.16	31.09	17.85	1.92	1.92	1.68	1.68	33.14	19.06	1.68	1.68	35.59	20.85	1.46	1.46
75 (23.9)	63 (17.2)	24.98	18.04	2.43	2.15	26.95	19.58	2.15	2.15	28.84	20.96	1.92	1.92	1.70	1.70	30.75	22.40	1.70	1.70	33.06	24.69	1.49	1.49
	57 (13.9)	22.33	21.88	2.41	2.14	24.13	23.80	2.14	2.14	25.84	25.48	1.92	1.92	1.71	1.71	27.58	27.24	1.71	1.71	29.92	29.92	1.51	1.51
	72 (22.2)	29.51	15.35	2.44	2.15	31.74	16.60	2.15	2.15	33.93	17.76	1.91	1.91	1.66	1.66	36.15	18.96	1.66	1.66	38.77	20.72	1.43	1.43
	67 (19.4)	26.90	18.70	2.44	2.15	28.98	20.29	2.15	2.15	31.00	21.72	1.92	1.92	1.68	1.68	33.04	23.21	1.68	1.68	35.47	25.60	1.46	1.46
	57 (13.9)	34.45	25.97	4.20	2.15	26.90	23.17	2.15	2.15	28.79	24.81	1.92	1.92	1.70	1.70	30.70	26.53	1.70	1.70	33.02	29.42	1.49	1.49
75 (23.9)	72 (22.2)	25.60	10.40	1.99	0.93	18.27	7.44	0.93	0.93	19.44	7.91	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.64	9.65	0.95	0.95	17.72	10.17	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	63 (17.2)	21.53	15.58	1.99	0.97	15.45	11.39	0.97	0.97	16.45	11.96	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.90	13.90	0.98	0.98	14.76	14.58	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.44	7.91	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
80 (26.7)	67 (19.4)	23.27	13.31	1.99	0.95	16.64	9.65	0.95	0.95	17.72	10.17	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	63 (17.2)	21.53	15.58	1.99	0.97	15.45	11.39	0.97	0.97	16.45	11.96	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.90	13.90	0.98	0.98	14.76	14.58	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.44	7.91	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.64	9.65	0.95	0.95	17.72	10.17	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
75 (23.9)	63 (17.2)	21.53	15.58	1.99	0.97	15.45	11.39	0.97	0.97	16.45	11.96	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.90	13.90	0.98	0.98	14.76	14.58	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.44	7.91	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.64	9.65	0.95	0.95	17.72	10.17	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	57 (13.9)	19.26	18.92	1.98	0.98	13.90	13.90	0.98	0.98	14.76	14.58	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
80 (26.7)	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.30	7.84	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.36	9.31	0.95	0.95	17.59	10.02	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	63 (17.2)	21.53	15.58	1.99	0.97	15.18	10.89	0.97	0.97	16.33	11.74	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.59	13.23	0.98	0.98	14.63	14.27	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.30	7.84	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
75 (23.9)	67 (19.4)	23.27	13.31	1.99	0.95	16.36	9.31	0.95	0.95	17.59	10.02	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	63 (17.2)	21.53	15.58	1.99	0.97	15.18	10.89	0.97	0.97	16.33	11.74	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.59	13.23	0.98	0.98	14.63	14.27	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.30	7.84	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.36	9.31	0.95	0.95	17.59	10.02	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
80 (26.7)	63 (17.2)	21.53	15.58	1.99	0.97	15.18	10.89	0.97	0.97	16.33	11.74	0.88	0.88	0.77	0.77	17.49	12.62	0.77	0.77	18.68	13.53	0.65	0.65
	57 (13.9)	19.26	18.92	1.98	0.98	13.59	13.23	0.98	0.98	14.63	14.27	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70
	72 (22.2)	25.60	10.40	1.99	0.93	18.26	7.44	0.93	0.93	19.30	7.84	0.83	0.83	0.71	0.71	20.67	8.39	0.71	0.71	22.04	8.96	0.56	0.56
	67 (19.4)	23.27	13.31	1.99	0.95	16.36	9.31	0.95	0.95	17.59	10.02	0.86	0.86	0.75	0.75	18.84	10.76	0.75	0.75	20.11	11.51	0.61	0.61
	57 (13.9)	19.26	18.92	1.98	0.98	13.59	13.23	0.98	0.98	14.63	14.27	0.90	0.90	0.81	0.81	15.69	15.35	0.81	0.81	16.77	16.48	0.70	0.70

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 28

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

HVA948

COOLING INDOOR MODEL	2-STAGE (Hi-Stage 5, Lo-Stage 2)			FURNACE MODEL	
	COOLING INDOOR MODEL	HIGH SPEED CAP.	POWER		LOW SPEED CAP.
FVM4X60**L	FVM4X60**L	1.00	1.00	1.00	1.00
FVM4X48**L	FVM4X48**L	0.99	0.99	0.99	1.03
EA*4X48L17A*	EA*4X48L17A*	0.98	1.05	0.97	1.08
EA*4X48L21A*	EA*4X48L21A*	0.96	1.00	0.98	1.11
EA*4X60L21A*	EA*4X60L21A*	0.99	1.04	0.99	1.10
EA*4X60L24A*	EA*4X60L24A*	0.99	1.04	0.99	1.10
ENH4X48L21**	ENH4X48L21**	0.97	1.01	0.96	1.14
ENH4X48L21**	ENH4X48L21**	0.97	1.01	0.96	1.11
EN(A,D,W)4X48L21**	EN(A,D,W)4X48L21**	0.97	1.01	0.96	1.02
EHD4X48AAL	EHD4X48AAL	0.97	1.06	0.97	1.08
EHD4X48AAL	EHD4X48AAL	0.97	1.01	0.96	1.02
EHD4X48AAL	EHD4X48AAL	0.97	1.01	0.99	1.11
EHD4X60AAL	EHD4X60AAL	0.99	0.99	1.00	1.10

See notes on page 28

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
FCM4X60**L	1.00	1.00	
FCM4X48**L	0.98	0.98	
EA*4X48L17A*	0.97	1.01	*8MV*0901716**
EA*4X48L21A*	0.96	1.05	*9MA*0602120A**
EA*4X48L21A*	0.97	1.01	*9MA*0602120A**
EA*4X48L21A*	0.97	1.01	*9MA*1002122A**
EA*4X48L21A*	0.97	1.01	*8MV*1102120**
EA*4X48L21A*	0.97	1.01	*9MA*1202422A**
EA*4X48L24A*	0.97	0.97	*8MV*1352422**
EA*4X60L21A*	0.98	1.08	*9MA*0602120A**
EA*4X60L21A*	0.99	1.04	*9MA*0802120A**
EA*4X60L21A*	0.99	0.99	*9MA*1002122A**
EA*4X60L24A*	0.99	0.99	*8MV*1102120**
EA*4X60L24A*	0.99	1.04	*9MA*1202422A**
ENH4X48L21**	0.97	1.06	*8MV*1352422**
ENH4X48L21**	0.97	1.06	*9MA*0602120A**
ENH4X48L21**	0.97	1.01	*9MA*1002122A**
ENH4X48L21**	0.97	1.01	*8MV*1102120**
ENH4X60L24**	0.99	1.04	*9MA*1202422A**
ENH4X60L24**	0.99	1.04	*8MV*1352422**
ENH4X61L24**	0.99	1.04	*9MA*1202422A**
ENH4X61L24**	1.00	1.05	*8MV*1352422**
EN(A,D,W)4X48L21**	0.97	1.06	*9MA*0602120A**
EN(A,D,W)4X48L21**	0.97	1.01	*9MA*0802120A**
EN(A,D,W)4X48L21**	0.97	1.01	*9MA*1002122A**
EN(A,D,W)4X48L21**	0.97	1.01	*8MV*1102120**
EN(A,D)4X48L24**	0.97	1.01	*9MA*1202422A**
EN(A,D)4X48L24**	0.98	1.03	*8MV*1352422**
EN(A,D)4X60L24**	0.99	1.04	*9MA*0602120A**
EN(A,D)4X60L24**	0.99	1.03	*9MA*0802120A**
EN(A,D)4X60L24**	0.99	0.99	*9MA*1002122A**
EN(A,D)4X60L24**	0.99	0.99	*9MA*1202422A**
EN(A,D)4X61L24**	1.00	1.05	*9MA*1002122A**
EN(A,D)4X61L24**	1.00	1.00	*8MV*1352422**
EHD4X48AAL	0.97	1.06	*9MA*0602120A**
EHD4X48AAL	0.98	1.03	*9MA*0802120A**
EHD4X48AAL	0.98	1.03	*9MA*1002122A**
EHD4X48AAL	0.98	1.03	*9MA*1202422A**
EHD4X48AAL	0.98	1.03	*8MV*1352422**
EHD4X48AAL	0.98	1.03	*8MV*1102120**
EHD4X60AAL	0.98	0.98	*8MV*0901716**
EHD4X60AAL	0.99	1.04	*8MV*1352422**
EHD4X60AAL	0.99	0.99	*9MA*0602120A**
EHD4X60AAL	0.99	0.99	*9MA*0802120A**
EHD4X60AAL	0.99	0.99	*9MA*1002122A**
EHD4X60AAL	0.99	0.99	*9MA*1202422A**
EHD4X60AAL	1.00	0.99	*8MV*0901716**
EHD4X60AAL	1.00	1.00	*8MV*1102120**
EHD4X60AAL	1.00	1.00	*8MV*1352422**





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

HVA949

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
FCM4X60**L	1.00	1.00	
FCM4X48**L	0.98	0.98	
EA*4X48L21A*	0.95	1.01	*9MA*0602120A**
EA*4X48L21A*	0.99	1.06	*8MV*0902116**
EA*4X48L21A*	0.99	1.03	*8MV*1102122**
EA*4X48L24A*	0.96	0.98	*9MA*0602120A**
EA*4X48L24A*	0.96	0.98	*9MA*1002122A**
EA*4X48L24A*	0.96	0.98	*9MA*1202422A**
EA*4X48L24A*	0.98	1.00	*8MV*1352422B*
EA*4X48L24A*	0.99	1.06	*9MA*1202422A**
EA*4X60L21A*	0.97	1.03	*9MA*0602120A**
EA*4X60L21A*	0.99	1.01	*8MV*0902116**
EA*4X60L21A*	0.99	1.06	*9MV*0602120A**
EA*4X60L21A*	1.01	1.08	*9MV*1002120A**
EA*4X60L21A*	0.99	1.01	*8MV*1102122**
EA*4X60L24A*	0.98	0.98	*9MA*0602120A**
EA*4X60L24A*	0.98	0.98	*9MA*1002122A**
EA*4X60L24A*	0.98	0.98	*9MA*1202422A**
EA*4X60L24A*	1.00	1.02	*8MV*1352422B*
EA*4X60L24A*	0.99	1.01	*9MV*1202422A**
EA*4X61L24A*	1.03	1.03	*8MV*1352422B*
EA*4X61L24A*	1.01	1.01	*9MV*1202422A**
ENH4X48L21**	1.00	1.07	*8MV*0902116**
ENH4X48L21**	0.99	1.06	*8MV*1102122**
ENH4X60L24**	1.00	1.02	*8MV*1352422B*
ENH4X60L24**	0.99	1.03	*9MV*1202422A**
ENH4X61L24**	1.00	1.02	*8MV*1352422B*
ENH4X61L24**	1.01	1.08	*9MV*1202422A**
EN(A,D,W)4X48L21**	0.96	1.02	*9MA*0602120A**
EN(A,D,W)4X48L21**	0.99	1.06	*8MV*0902116**
EN(A,D,W)4X48L21**	0.99	1.03	*8MV*1102122**
EN(A,D,W)4X48L21**	0.99	1.03	*8MV*1352422B*
EN(A,D,W)4X48L21**	0.99	1.03	*8MV*1202422A**
EN(A,D,W)4X60L24**	0.97	0.97	*9MA*0602120A**
EN(A,D,W)4X60L24**	0.98	0.98	*9MA*1002122A**
EN(A,D,W)4X60L24**	0.98	0.98	*9MA*1202422A**
EN(A,D,W)4X60L24**	1.00	1.02	*8MV*1352422B*
EN(A,D,W)4X60L24**	0.99	1.03	*9MV*1202422A**
EN(A,D,W)4X61L24**	0.98	0.98	*9MA*0602120A**
EN(A,D,W)4X61L24**	0.98	0.98	*9MA*1002122A**
EN(A,D,W)4X61L24**	0.98	0.98	*9MA*1202422A**
EN(A,D,W)4X61L24**	1.01	1.04	*8MV*1352422B*
EN(A,D,W)4X61L24**	1.00	1.02	*9MV*1202422A**
ENH4X48AAL	0.99	1.03	*8MV*0902116**
ENH4X48AAL	0.99	1.01	*8MV*1352422B*
ENH4X48AAL	0.99	1.06	*9MV*1002120A**
ENH4X48AAL	0.99	1.03	*8MV*1102122**
ENH4X60AAL	1.00	1.02	*8MV*0902116**
ENH4X60AAL	1.00	1.02	*8MV*1352422B*
ENH4X60AAL	1.00	1.07	*9MV*0801716A**
ENH4X60AAL	1.00	1.07	*9MV*0602120A**
ENH4X60AAL	1.00	1.07	*9MV*1002120A**
ENH4X60AAL	0.99	1.01	*9MV*1202422A**
ENH4X60AAL	1.00	1.02	*8MV*1102122**

COOLING INDOOR MODEL	2-STAGE (Hi-Stage 5, Lo-Stage 2)			FURNACE MODEL
	HIGH SPEED CAP	POWER	LOW SPEED CAP	
FVM4X48**L	1.01	1.01	1.00	
FVM4X60**L	1.01	1.01	1.01	
EHD4X48AAL	1.00	1.02	1.00	*9MX*1002120A**

**HVA960**  
**DETAILED COOLING CAPACITIES# – EFFICIENCY MODE CONTINUED**

EDB °F (°C)	EVAP AIR EWB °F (°C)	HVA960 / FCMA460***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 SCF M	Capacity MBtuh Sens † Total	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens † Total	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens † Total	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens † Total	Total Sys. KW**	Total Sys. KW**	ID SCF M	Capacity MBtuh Sens † Total	Total Sys. KW**	Total Sys. KW**					
<b>75</b> <b>(23.9)</b>	72 (22.2)	55.38	22.79	7.70	59.00	24.17	6.73	62.54	25.53	5.88	65.96	26.86	5.13	69.30	28.16	4.47	72.44	37.26	3.89	75.24	55.06	4.12	1600	66.10	45.08	3.75
	67 (19.4)	50.63	30.18	7.50	53.95	31.68	6.54	57.12	33.14	5.70	60.22	34.57	4.96	63.25	35.99	4.32	66.21	37.38	3.75	69.30	38.16	4.06	1600	61.52	43.58	3.65
	63 (17.2)	47.11	36.00	7.35	50.18	37.58	6.40	53.13	39.12	5.57	55.99	40.62	4.84	58.78	42.11	4.21	61.52	43.58	3.65	64.84	43.11	4.21	1600	58.78	42.11	4.21
	57 (13.9)	43.16	43.16	7.19	45.55	45.55	6.23	47.97	47.63	5.40	50.44	49.37	4.69	52.86	51.01	4.06	55.26	52.62	3.52	55.06	55.06	4.12	1600	55.06	55.06	4.12
	72 (22.2)	55.24	30.04	7.70	58.86	31.53	6.73	62.40	33.00	5.88	65.82	34.44	5.13	69.15	35.85	4.47	72.44	37.26	3.89	75.24	55.06	4.12	1600	66.10	45.08	3.75
<b>80</b> <b>(26.7)</b>	67 (19.4)	50.50	37.37	7.50	53.83	38.98	6.54	57.00	40.53	5.70	60.10	42.07	4.96	63.13	43.59	4.32	66.10	45.08	3.75	69.30	44.07	4.21	1600	61.44	51.25	3.65
	63 (17.2)	47.09	43.10	7.35	50.13	44.81	6.40	53.07	46.46	5.57	55.91	48.08	4.84	58.70	49.67	4.21	61.44	51.25	3.65	64.84	49.67	4.21	1600	58.70	49.67	4.21
	57 (13.9)	45.62	45.62	7.29	48.12	48.12	6.33	50.51	50.51	5.49	52.83	52.83	4.76	55.06	55.06	4.12	57.24	57.24	3.56	55.06	55.06	4.12	1600	57.24	57.24	3.56
	72 (22.2)	35.94	15.07	3.39	38.40	15.98	3.08	40.44	16.73	2.76	42.79	17.61	2.51	45.10	18.48	2.29	47.36	19.34	2.08	45.10	18.48	2.29	1350	45.10	18.48	2.29
	67 (19.4)	32.49	20.54	3.35	34.72	21.48	3.05	36.67	22.32	2.72	38.80	23.24	2.47	40.88	24.15	2.24	42.94	25.05	2.04	40.88	24.15	2.24	1350	40.88	24.15	2.24
<b>80</b> <b>(26.7)</b>	63 (17.2)	29.95	24.83	3.33	32.01	25.81	3.03	33.87	26.70	2.69	35.85	27.65	2.44	37.78	28.59	2.22	39.68	29.52	2.01	37.78	28.59	2.22	1350	37.78	28.59	2.22
	57 (13.9)	28.14	28.14	3.32	29.76	29.76	3.02	31.24	31.24	2.67	32.75	32.75	2.42	34.21	34.21	2.19	35.65	35.65	1.99	34.21	34.21	2.19	1350	34.21	34.21	2.19
	72 (22.2)	35.82	20.59	3.39	38.29	21.54	3.08	40.32	22.34	2.76	42.67	23.26	2.51	44.98	24.17	2.29	47.24	25.07	2.08	44.98	24.17	2.29	1350	44.98	24.17	2.29
	67 (19.4)	32.39	26.01	3.35	34.62	26.99	3.05	36.56	27.87	2.72	38.70	28.83	2.47	40.78	29.77	2.24	42.84	30.72	2.04	40.78	29.77	2.24	1350	40.78	29.77	2.24
	63 (17.2)	30.07	30.04	3.29	32.09	31.18	3.03	33.90	32.16	2.69	35.85	33.17	2.44	37.76	34.16	2.22	39.65	35.14	2.01	37.76	34.16	2.22	1350	37.76	34.16	2.22
<b>75</b> <b>(23.9)</b>	57 (13.9)	30.02	30.02	3.33	31.70	31.70	3.03	33.22	33.22	2.68	34.80	34.80	2.43	36.33	36.33	2.21	37.82	37.82	2.00	36.33	36.33	2.21	1350	36.33	36.33	2.21
	72 (22.2)	26.64	11.34	1.89	28.56	12.02	1.84	20.89	8.78	1.03	22.26	9.26	1.00	23.59	9.73	0.91	24.89	10.21	0.75	22.26	9.73	0.91	975	23.59	9.73	0.91
	67 (19.4)	23.86	15.71	1.89	25.60	16.40	1.84	18.63	11.93	1.02	19.89	12.40	1.00	21.11	12.85	0.92	22.30	13.31	0.77	19.89	12.40	1.00	975	21.11	12.85	0.92
	63 (17.2)	21.85	19.14	1.89	23.45	19.83	1.84	16.95	14.38	1.01	18.11	14.83	1.00	19.24	15.26	0.92	20.34	15.69	0.79	18.11	14.83	1.00	975	19.24	15.26	0.92
	57 (13.9)	20.91	20.91	1.88	22.14	22.14	1.84	15.97	15.97	1.01	16.81	16.81	1.00	17.62	17.62	0.94	18.38	18.38	0.81	17.62	17.62	0.94	975	17.62	17.62	0.94
<b>80</b> <b>(26.7)</b>	72 (22.2)	26.55	15.84	1.89	28.46	16.52	1.84	20.81	12.06	1.03	22.18	12.52	1.00	23.51	12.97	0.91	24.81	13.42	0.75	22.18	12.52	1.00	975	23.51	12.97	0.91
	67 (19.4)	23.79	20.16	1.89	25.52	20.85	1.84	18.58	15.17	1.02	19.83	15.62	1.00	21.05	16.05	0.92	22.24	16.48	0.77	19.83	15.62	1.00	975	21.05	16.05	0.92
	63 (17.2)	22.48	22.48	1.89	23.77	23.77	1.84	17.25	17.25	1.01	18.20	17.98	1.00	19.28	18.43	0.92	20.35	18.85	0.79	18.20	17.98	1.00	975	19.28	18.43	0.92
	57 (13.9)	22.44	22.44	1.89	23.72	23.72	1.84	17.21	17.21	1.01	18.08	18.08	1.00	18.91	18.91	0.93	19.70	19.70	0.80	18.08	18.08	1.00	975	18.91	18.91	0.93
	72 (22.2)	26.64	11.34	1.89	28.56	12.02	1.84	20.89	8.78	1.03	22.26	9.26	1.00	23.59	9.73	0.91	24.89	10.21	0.75	22.26	9.73	0.91	975	23.59	9.73	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 and 115 outdoor.

See additional notes on page 28

HVA960 / FCMA260\*\*\*L Comfort + Dehumidify Mode  
**DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED**

EDB °F (°C)	EVAP AIR EWB °F (°C)	HV960 / FCMA260***L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)														
		105 (40.5)			95 (35)			75 (23.9)			65 (18.3)					
		ID SCFM	Capacity MBtuh Total	Sensit	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sensit	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sensit	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Sensit
75 (23.9)	72 (22.2)	57.74	23.45	6.51	61.60	25.02	5.73	65.43	26.57	5.06	69.11	28.06	4.43	71.73	29.06	3.80
	67 (19.4)	52.75	29.96	6.32	56.26	31.94	5.56	59.74	33.92	4.89	63.08	35.74	4.28	65.39	36.48	3.66
	63 (17.2)	49.06	35.05	6.19	52.31	37.35	5.43	55.53	39.67	4.77	58.62	41.74	4.17	60.75	42.26	3.56
	57 (13.9)	44.14	42.48	6.02	47.05	45.25	5.27	49.93	48.04	4.62	52.69	50.49	4.02	54.52	50.74	3.43
	72 (22.2)	57.61	29.82	6.52	61.47	31.80	5.74	65.28	33.78	5.06	68.97	35.61	4.43	71.59	36.37	3.80
80 (26.7)	67 (19.4)	52.65	36.25	6.32	56.15	38.64	5.56	59.62	41.04	4.89	62.96	43.19	4.28	65.29	43.67	3.66
	63 (17.2)	48.99	41.31	6.19	52.23	44.02	5.43	55.45	46.75	4.77	58.54	49.15	4.17	60.67	49.42	3.56
	57 (13.9)	45.90	45.90	6.08	48.92	48.92	5.33	51.93	51.93	4.67	54.72	54.72	4.07	55.91	55.91	3.46
	72 (22.2)	36.98	15.01	3.25	39.25	15.94	2.79	41.77	16.95	2.44	44.28	17.97	2.13	47.05	19.11	1.87
	67 (19.4)	33.40	19.03	3.22	35.55	20.23	2.75	37.83	21.50	2.39	40.10	22.76	2.09	42.62	24.30	1.84
75 (23.9)	63 (17.2)	30.77	22.16	3.21	32.82	23.59	2.72	34.94	25.04	2.37	37.04	26.50	2.06	39.38	28.36	1.81
	57 (13.9)	27.31	26.75	3.18	29.19	28.48	2.69	31.09	30.22	2.34	32.99	31.96	2.04	35.10	34.26	1.79
	72 (22.2)	36.89	19.10	3.25	39.15	20.27	2.79	41.66	21.53	2.44	44.17	22.80	2.13	46.93	24.34	1.87
	67 (19.4)	33.32	23.06	3.22	35.47	24.51	2.75	37.74	26.01	2.39	40.02	27.53	2.09	42.53	29.47	1.84
	63 (17.2)	30.72	26.18	3.21	32.77	27.85	2.72	34.89	29.54	2.37	36.99	31.25	2.06	39.33	33.50	1.81
80 (26.7)	57 (13.9)	28.74	28.74	3.19	30.65	30.65	2.70	32.58	32.58	2.35	34.53	34.53	2.05	36.85	36.85	1.80
	72 (22.2)	27.11	11.00	2.21	19.91	8.07	1.22	20.99	8.50	1.01	22.49	9.11	0.80	24.02	9.73	0.59
	67 (19.4)	24.28	13.80	2.21	17.69	10.04	1.21	18.67	10.45	1.01	20.04	11.19	0.81	21.43	11.97	0.61
	63 (17.2)	22.21	15.99	2.20	16.05	11.57	1.21	16.97	11.96	1.01	18.23	12.81	0.82	19.53	13.71	0.62
	57 (13.9)	19.51	19.20	2.20	13.98	13.85	1.20	14.76	14.19	1.02	15.88	15.20	0.84	17.03	16.27	0.65
75 (23.9)	72 (22.2)	27.04	13.93	2.21	19.86	10.20	1.22	20.94	10.61	1.01	22.43	11.35	0.80	23.96	12.13	0.59
	67 (19.4)	24.22	16.71	2.21	17.65	12.16	1.21	18.63	12.54	1.01	19.99	13.42	0.81	21.39	14.35	0.61
	63 (17.2)	22.18	18.88	2.20	16.04	13.68	1.21	16.95	14.04	1.01	18.21	15.03	0.82	19.50	16.08	0.62
	57 (13.9)	20.65	20.65	2.20	14.90	14.90	1.20	15.50	15.50	1.02	16.63	16.63	0.83	17.82	17.82	0.64
	72 (22.2)	27.11	11.00	2.21	19.91	8.07	1.22	20.99	8.50	1.01	22.49	9.11	0.80	24.02	9.73	0.59
80 (26.7)	67 (19.4)	24.28	13.80	2.21	17.69	10.04	1.21	18.67	10.45	1.01	20.04	11.19	0.81	21.43	11.97	0.61
	63 (17.2)	22.21	15.99	2.20	16.05	11.57	1.21	16.97	11.96	1.01	18.23	12.81	0.82	19.53	13.71	0.62
	57 (13.9)	19.51	19.20	2.20	13.98	13.85	1.20	14.76	14.19	1.02	15.88	15.20	0.84	17.03	16.27	0.65
	72 (22.2)	27.04	13.93	2.21	19.86	10.20	1.22	20.94	10.61	1.01	22.43	11.35	0.80	23.96	12.13	0.59
	67 (19.4)	24.22	16.71	2.21	17.65	12.16	1.21	18.63	12.54	1.01	19.99	13.42	0.81	21.39	14.35	0.61

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 28



**GUIDE SPECIFICATIONS**

**GENERAL**

**System Description**

Outdoor-mounted, air-cooled, split-system air conditioning 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.

**PRODUCTS**

**Equipment**

- Factory-assembled, single-piece, air-cooled air conditioning 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.

- 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.

**AIR-COOLED, SPLIT-SYSTEM AIR CONDITIONER  
HVA9**

**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.
- Ion® System 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. For reliable operation, unit should be level in all horizontal planes.
4. This unit is qualified for up to 100 ft (30.5 m) equivalent length of line set without additional accessories.
5. 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).
6. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
7. Do not apply capillary tube indoor coils to these units.
8. 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

### WALL CONTROL

SYST0101CW	Ion® System Control	ALL
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### ACCESSORY USAGE GUIDELINES

KIT NUMBER	KIT NAME	Unit Size (Voltage/Series)						
		24	25	36	37	48	49	60
NASA00106SS	Snow Stand Kit							X
NASA001SF	Support Feet, 4" (102mm) tall				X	X	X	X
NASA00201SF		X	X	X				
NAEA40501TX	TXV Kit, R-410A for use with copper or tin piston fan coils	X	X					
NAEA40601TX				X	X			
NAEA40701TX						X	X	X
NAEB40501TX	TXV Kit, R-410A for use with aluminum piston fan coils		X					
NAEB40601TX				X	X			
NAEB40701TX						X	X	
1187979	Vapor Line Muffler	X	X	X	X	X	X	X



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](http://www.ahridirectory.org).



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