



## R-410A Ducted Horizontal Heat Pump

### ENVIRONMENTALLY SOUND R-410A REFRIGERANT

1½ THRU 5 TONS, 208/230 Volt, 1-Phase  
 3 THRU 5 TONS, 208/230 Volt, 3-Phase  
 3 THRU 5 TONS, 460 Volt, 3-Phase

#### Energy Efficiency

- 13 – 14.5 SEER/10.5 – 12.0 EER/7.7 – 8.5 HSPF

#### Sound

- Levels as low as 71 dBA

#### Design Features

- Matched with ducted indoor units
- Ideal for multi-family use
- Small footprint
- Weather-resistant cabinet
  - All steel cabinet construction
  - Baked on powder paint
  - Mesh coil guard

#### Reliability, Quality and Toughness

- Scroll compressor
- Factory-supplied filter drier
- High pressure switch
- Low pressure switch
- Accumulator
- Line lengths up to 200' (see Long Line Application Guideline for required accessories)
- 65' lift (see Long Line Application Guideline for required accessories)
- Low ambient operation (down to -20°F/-28.9°C) with low ambient accessories.
- Installation as close as 6" from wall

#### Limited Warranty

##### Residential

- 5 year parts limited warranty
- 5 year coil limited warranty
- 10 year compressor limited warranty



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.



Rated in accordance with ARI Standard 210/240. Certification applies only when used with proper components as listed with ARI.

Model Number	Voltage	Size (tons)	Nominal Btu/hr	Operating Weight lbs (kg)
HC4H318AKA	208/230	1½	18,000	167 (75.8)
HC4H324AKA		2	24,000	176 (79.8)
HC4H330AKA		2½	30,000	187 (84.8)
HC4H336AKA		3	36,000	232 (105)
HC4H348AKA		4	48,000	278 (126)
HC4H360AKA		5	60,000	306 (139)
3-Phase				
HC4H336AHA	208/230	3	36,000	232 (105)
HC4H336ALA	460			
HC4H348AHA	208/230	4	48,000	278 (126)
HC4H348ALA	460			
HC4H360AHA	208/230	5	60,000	306 (139)
HC4H360ALA	460			

# PHYSICAL DATA

UNIT HC4H3	18	24	30	36	48	60
<b>NOMINAL CAPACITY Tons (kg)</b>	1.5 (1360.8)	2.0 (1814.4)	2.5 (2268.0)	3.0 (2721.6)	4.0 (3628.8)	5.0 (4536.0)
<b>OPERATING WEIGHT lb (kg)</b>	167 (75.75)	176 (79.83)	187 (84.82)	232 (105.23)	278 (126.10)	306 (138.80)
<b>REFRIGERANT TYPE</b>	R-410A					
<b>METERING DEVICE</b>	TXV					
<b>CHARGE (lb)* (kg)</b>	6.3 (2.86)	6.5 (2.95)	10.0 (4.54)	10.0 (4.54)	12.0 (5.44)	12.0 (5.44)
<b>COMPRESSOR</b>	Scroll					
Type	Scroll					
Oil Charge (POE –oz)	25.0	25.0	25.0	25.0	42.0	42.0
Crankcase Heater (watts)	—	—	40	40	40	40
<b>OUTDOOR FAN</b>						
Rpm/Cfm	840/1720	840/1720	850/3900	850/3900	850/3900	850/3900
Diameter (in.)	18	18	24	24	24	24
No. Blades	3	3	3	3	3	3
Motor (hp)	1/8	1/8	1/4	1/4	1/4	1/4
<b>OUTDOOR COIL</b>						
Face Area (sq ft)	5.8	7.3	12.1	12.1	14.1	14.1
No. Rows	3	3	2	3	3	3
FPI	20	20	20	20	20	20
<b>HIGH PRESSURE SWITCH</b>						
Cut–In (psig)	420 ± 25	420 ± 25	420 ± 25	420 ± 25	420 ± 25	420 ± 25
Cutout (psig)	650 ± 10	650 ± 10	650 ± 10	650 ± 10	650 ± 10	650 ± 10
<b>LOW PRESSURE SWITCH</b>						
Low Cut–in (psig)	45 ± 25	45 ± 25	45 ± 25	45 ± 25	45 ± 25	45 ± 25
Low Cutout (psig)	20 ± 5	20 ± 5	20 ± 5	20 ± 5	20 ± 5	20 ± 5
<b>REFRIGERANT LINES</b>						
Connection Type	Sweat					
Liquid Line (in.) OD	3/8	3/8	3/8	3/8	3/8	3/8
Vapor Line (in.) OD	5/8	5/8	3/4	3/4	7/8	7/8†
Max Length (ft)	200	200	200	200	200	200
Max Lift (ft)**	65	65	65	65	65	65
Max Drop (ft)	150	150	150	150	150	150
<b>CONTROLS</b>						
Fusible Plug (F)	210					
Control Voltage‡	24 vac					
System Voltage	208/230 v	208/230 v	208/230 v	208/230 v	208/230 v, Single and 3 Phase, 460 v, 3 Phase	
<b>FINISH</b>	Gray					

\* Unit shipped with full factory charge. See ARI (Air Conditioning and Refrigeration Institute) capacity table for proper charge and piston for each fan coil type.

\*\* See Long Line Application Guideline for required accessories

‡ 24 v and a minimum of 40 va is provided in the fan coil unit.

† Valve connection size is 7/8 inch. Recommended line size is 1–1/8 inches.

FPI – Fins Per Inch

POE – Polyol Ester

## VAPOR LINE SIZING AND COOLING CAPACITY LOSS R-410A 1-STAGE HEAT PUMP APPLICATIONS

**LONG LINE APPLICATION:** An application is considered "Long line" when the total equivalent tubing length exceeds 80 ft. (24.38 m) or when there is more than 20 ft. (6.09 m) vertical separation between indoor and outdoor units. These applications require additional accessories and system modifications for reliable system operation. The maximum allowable total equivalent length is 250 ft. (76.2 m). The maximum vertical separation is 200 ft. (60.96 m) when outdoor

unit is above indoor unit, and 80 ft. (24.38 m) when the outdoor unit is below the indoor unit. Refer to Accessory Usage Guideline below for required accessories. See Longline Application Guideline for required piping and system modifications. Also, refer to the table below for the acceptable vapor tube diameters based on the total length to minimize the cooling capacity loss.

Unit Nominal Size (Btuh)	Acceptable Vapor Line Diameters (In. OD)	Cooling Capacity Loss (%) Total Equivalent Line Length ft. (m)										
		Standard Application				Long Line Application Requires Accessories						
		25 (7.62)	50 (15.24)	80 (24.38)	80+ (24.38+)	100 (30.48)	125 (38.10)	150 (45.72)	175 (53.34)	200 (60.96)	225 (68.58)	250 (76.2)
18,000 1–Stage R-410A HP	1/2	1	2	3	3	4	6	7	8	9	10	12
	5/8	0	0	1	1	1	1	2	2	3	3	3
24,000 1–Stage R-410A HP	5/8	0	1	1	1	2	3	3	4	4	5	6
	3/4	0	0	0	0	0	1	1	1	1	1	2
30,000 1–Stage R-410A HP	5/8	1	2	3	3	3	4	5	6	7	8	9
	3/4	0	0	1	1	1	1	2	2	2	3	3
	7/8	0	0	0	0	0	1	1	1	1	1	1
36,000 1–Stage R-410A HP	5/8	1	2	4	4	5	6	7	9	10	11	13
	3/4	0	0	1	1	1	2	2	3	3	4	4
	7/8	0	0	0	0	0	1	1	1	1	2	2
48,000 1–Stage R-410A HP	3/4	0	1	2	2	3	4	5	5	6	7	8
	7/8	0	0	1	1	1	2	2	2	3	3	4
60,000 1–Stage R-410A HP	3/4	1	2	4	4	5	6	7	9	10	11	12
	7/8	0	1	2	2	2	3	4	4	5	5	6
	1–1/8	0	0	0	0	1	1	1	1	1	1	2

Standard Length = 80 ft. (24.38 m) or less total equivalent length

Applications in this area are long line. Accessories are required as shown recommended on Long Line Application Guidelines. Applications in this area may have height restrictions that limit allowable total equivalent length, when outdoor unit is below indoor unit. See Long Line Application Guidelines.

**ACCESSORIES**

Part Number	Description	Model - HC4H3											
		Size											
		18AK	24AK	30AK	36AK	36AH	36AL	48AK	48AH	48AL	60AK	60AH	60AL
AMF002OTA	OUTDOOR TSTAT KIT	X	X	X	X	X	X	X	X	X	X	X	X
NASA001TD	TIME DELAY KIT	X	X	X	X	X	X	X	X	X	X	X	X
EBAC05TXVX	TXV KIT*	X	X	X	-	-	-	-	-	-	-	-	-
EBAC06TXVX	TXV KIT*	-	-	-	X	X	X	-	-	-	-	-	-
EBAC07TXVX	TXV KIT*	-	-	-	-	-	-	X	X	X	-	-	-
EBAC08TXVX	TXV KIT*	-	-	-	-	-	-	-	-	-	X	X	X
NASA402LA	LOW AMBIENT KIT	X	X	X	X	X	X	X	X	X	X	X	X
NASA001FS	FRZ THERM KIT	X	X	X	X	X	X	X	X	X	X	X	X
NASA001WS	WINTER ST KIT	-	-	-	-	-	-	-	-	-	-	-	-
NASA001CH	CRANKCASE HEATER KIT	-	-	-	-	-	-	X	X	-	X	X	-
NASA002CH	CRANKCASE HEATER KIT	-	-	-	-	-	-	-	-	X	-	-	X
NASA003CH	CRANKCASE HEATER KIT	X	X	X	X	X	-	-	-	-	-	-	-
NASA004CH	CRANKCASE HEATER KIT	-	-	-	-	-	X	-	-	-	-	-	-
NASA001SJ	SOUND JACKET KIT	-	-	-	-	-	-	X	X	X	X	X	X
NASA002SJ	SOUND JACKET KIT	X	X	X	X	X	X	-	-	-	-	-	-
NASA001LS	SOL VALVE KIT	X	X	X	X	X	X	X	X	X	X	X	X
NASA001SC	PTC KIT	X	X	X	X	-	-	X	-	-	X	-	-
NASA003SC	HARD START KIT	X	X	X	X	-	-	X	-	-	X	-	-
NASA001AC	CYCLE PROTECTOR KIT	X	X	X	X	X	X	X	X	X	X	X	X
NASA00101WB	WIND BAFFLE KIT	X	-	-	-	-	-	-	-	-	-	-	-
NASA00201WB	WIND BAFFLE KIT	-	X	-	-	-	-	-	-	-	-	-	-
NASA00301WB	WIND BAFFLE KIT	-	-	X	X	X	X	-	-	-	-	-	-
NASA00401WB	WIND BAFFLE KIT	-	-	-	-	-	-	X	X	X	X	X	X
NASA00101WM	WALL MOUNT KIT	X	X	-	-	-	-	-	-	-	-	-	-
NASA00201WM	WALL MOUNT KIT	-	-	X	X	X	X	X	X	X	X	X	X

\*ONLY converts Fan Coils equipped with factory installed R-22 TXV.

# ACCESSORY USAGE GUIDELINE

ACCESSORY	REQUIRED FOR LOW–AMBIENT COOLING APPLICATIONS (Below 55°F/12.8°C)	REQUIRED FOR LONG LINE APPLICATIONS* (Over 80 ft./24.38 m)	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles/3.22 km)
Accumulator	No	No	No
Ball Bearing Fan Motor	Yes†	No	No
Compressor Start Assist Capacitor and Relay	Yes†	Yes	No
Crankcase Heater	Yes†	Yes	No
Evaporator Freeze Thermostat	Yes†	No	No
Isolation Relay	Yes†	No	No
Liquid Line Solenoid Valve	No	See Long Line Application Guideline	No
Low–ambient Pressure Switch	Yes†	No	No
Support Feet	Recommended	No	Recommended

\* For tubing line sets between 80 and 200 ft. (24.38 and 60.96 m) and/or 20 ft. (6.09 m) vertical differential, refer to Residential Split–System Longline Application Guideline.

† Required for Low–Ambient Controller (full modulation feature).

## Accessory Description and Usage (Listed Alphabetically)

### 1. Ball–Bearing Fan Motor

A fan motor with ball bearings which permits speed reduction while maintaining bearing lubrication.

Usage Guideline:

Required on all units when Low Ambient pressure switch is used.

### 2. Compressor Start Assist – Capacitor and Relay

Start capacitor and relay gives a "hard" boost to compressor motor at each start up.

Usage Guideline:

Required for reciprocating compressors in the following applications:

- Long line
- Low ambient cooling
- Hard shut off expansion valve on indoor coil
- Liquid line solenoid on indoor coil
- Required for single–phase scroll compressors in the following applications:
  - Long line
  - Low ambient cooling
- Suggested for all compressors in areas with a history of low voltage problems.

### 3. Compressor Start Assist — PTC Type

Solid state electrical device which gives a "soft" boost to the compressor at each start–up.

Usage Guideline:

Suggested in installations with marginal power supply.

### 4. Crankcase Heater

An electric resistance heater which mounts to the base of the compressor to keep the lubricant warm during off cycles. Improves compressor lubrication on restart and minimizes the chance of liquid slugging.

Usage Guideline:

- Required in low ambient cooling applications.
- Required in long line applications.
- Suggested in all commercial applications.

### 5. Cycle Protector

The cycle protector is designed to prevent compressor short cycling. This control provides an approximate 5–minute delay after power to the compressor has been interrupted for any reason, including power outage, protector control trip, thermostat jiggling, or normal cycling.

### 6. Evaporator Freeze Thermostat

An SPST temperature–actuated switch that stops unit operation when evaporator reaches freeze–up conditions.

Usage Guideline:

Required when low ambient kit has been added.

### 7. Isolation Relay

An SPDT relay which switches the low–ambient controller out of the outdoor fan motor circuit when the heat pump switches to heating mode.

Usage Guideline:

Required in all heat pumps where low ambient kit has been added.

### 8. Liquid–Line Solenoid Valve (LLS)

An electrically operated shutoff valve which stops and starts refrigerant liquid flow in response to compressor operation. It is to be installed at the outdoor unit to control refrigerant off cycle migration in the heating mode.

Usage Guideline:

An LLS is required in all long line heat pump applications to control refrigerant off cycle migration in the heating mode. See Long Line Guideline.

### 9. Low–Ambient Pressure Switch Kit

A long life pressure switch which is mounted to outdoor unit service valve. It is designed to cycle the outdoor fan motor in order to maintain head pressure within normal operating limits (approximately 100 psig/689.5 KpA to 225 psig/1551.3 KpA). The control will maintain working head pressure at low–ambient temperatures down to 0°F when properly installed.

Usage Guideline:

A Low–Ambient Pressure Switch or Low–Ambient Controller must be used when cooling operation is used at outdoor temperatures below 55°F (12.8°C).

### 10. Low–Ambient Controller

A fan–speed control device activated by a temperature sensor, designed to control condenser fan motor speed in response to the saturated, condensing temperature during operation in cooling mode only. For outdoor temperatures down to –20°F (–28.9°C), it maintains condensing temperature at 100°F ±10°F (37.8°C ± –12°C).

Usage Guideline:

A Low Ambient Controller or Low–Ambient Pressure Switch must be used when cooling operation is used at outdoor temperatures below 55°F (12.8°C). Suggested for all commercial applications.

## Accessory Description and Usage (Listed Alphabetically) – CONTINUED

### 11. Outdoor Air Temperature Sensor

Designed for use with Thermostats listed in this publication. This device enables the thermostat to display the outdoor temperature. This device also is required to enable special thermostat features such as auxiliary heat lock out.

Usage Guideline:

Suggested for all thermostats listed in this publication.

### 12. Outdoor Thermostat

An SPDT temperature-actuated switch which turns on supplemental electric heaters when outdoor air temperature drops below a user-selected set point.

Usage Guideline:

Electric supplemental heat applications in non-variable speed indoor units when electric heat staging is desired.

Usage Guideline:

Some local codes may require limiting the heating head pressure in the vapor line in some applications.

### 13. Secondary Outdoor Thermostat

An SPDT temperature-actuated switch which turns on third-stage of supplemental electric heaters when outdoor air temperature drops below the second-stage set point.

Usage Guideline:

Outdoor thermostat applications where electric heater is capable of 3-stage operation.

### 14. Sound Hood

Wraparound sound reducing cover for the compressor. Reduces the sound level up to 2 dBA.

Usage Guideline:

Suggested when unit is installed closer than 15 ft (4.57 m) to quiet areas, bedrooms, etc.

Suggested when unit is installed between two houses less than 10 ft (3.05 m) apart.

### 15. Thermostatic Expansion Valve (TXV) Bi-Flow

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 in all heat pump applications

### 16. Time-Delay Relay

An SPST delay relay which briefly continues operation of indoor blower motor to provide additional cooling after the compressor cycles off.

**Note:** Most indoor unit controls include this feature. For those that do not, use the guideline below.

Usage Guideline:

Accessory required to meet ARI rating, where indoor not equipped.

# ELECTRICAL DATA

HC4H3 UNIT SIZE	V-PH-Hz	VOLTAGE RANGE*		COMPRESSOR		OUTDOOR FAN MOTOR			MIN CKT AMPS	FUSE/HACR BKR AMPS
		Min	Max	RLA	LRA	FLA	NEC Hp	kw Out		
18	208/230-1-60	187	253	9.8	48.0	0.80	0.125	0.09	12.1	20
24	208/230-1-60	187	253	12.8	58.3	0.80	0.125	0.09	16.8	25
30	208/230-1-60	187	253	12.8	64.0	1.45	0.25	0.19	17.5	30
36	208/230-1-60	187	253	14.1	77.0	1.45	0.25	0.19	19.1	30
	208/230-3-60	187	253	9.0	71.0	1.45	0.25	0.19	12.7	20
	460-3-60	414	506	5.6	38.0	0.80	0.25	0.19	7.8	15
48	208/230-1-60	187	253	21.8	117.0	1.45	0.25	0.19	28.7	50
	208/230-3-60	187	253	13.7	83.1	1.45	0.25	0.19	18.6	30
	460-3-60	414	506	6.2	41.0	0.80	0.25	0.19	8.6	15
60	208/230-1-60	187	253	26.4	134.0	1.45	0.25	0.19	34.5	60
	208/230-3-60	187	253	16.0	110.0	1.45	0.25	0.19	21.5	35
	460-3-60	414	506	7.8	52.0	.80	0.25	0.19	10.6	15

## LEGEND:

**FLA** – Full Load Amps

**HACR** – Heating, Air Conditioning, Refrigeration

**LRA** – Locked Rotor Amps

**NEC** – National Electrical Code

**RLA** – Rated Load Amps (compressor)

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

**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.

## SOUND POWER

Unit Size	Standard Rating (dB)	Standard Rating (dB) with Sound Jacket	Typical Octave Band Spectrum (dB, without tone adjustment)						
			125	250	500	1000	2000	4000	8000
18	71		56.0	57.0	61.0	64.0	59.5	56.0	45.5
		69	55.0	56.5	60.5	63.0	59.5	56.0	45.0
24	72		53.5	58.0	65.0	65.5	60.5	57.5	46.5
		70	54.0	58.0	62.5	65.5	60.0	57.5	45.5
30	74		57.5	61.5	67.0	67.5	66.5	63.5	57.0
		74	59.0	61.5	66.0	67.0	66.0	63.0	56.5
36	74		58.5	62.5	64.5	65.0	63.5	62.5	52.5
		74	58.0	62.5	64.5	64.5	63.5	62.5	52.0
48	74		59.0	62.0	65.5	67.0	63.5	60.5	52.5
		73	58.5	61.5	64.0	66.0	63.0	60.5	52.0
60	74		65.5	63.0	66.5	65.0	63.5	63.0	57.0
		73	65.5	62.0	65.0	65.0	63.5	62.0	54.5

## CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE	REQUIRED SUBCOOLING °F (°C)	OUTDOOR HEATING PISTON #
18	12 (6.7)	EA52PJ040
24		EA52PJ049
30		EA52PJ055
36		EA52PJ063
48		EA52PJ073
60		EA52PJ080



## COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS

### Indoor Models

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H318AKA	‡FEM4X18****	†	TDR&TXV	18,000	0.72	11.00	13.00		18,000	3.60	10,100	2.32	7.8
	ED*4X24B**	*8MPV050	TDR&TXV	17,800	0.72	11.00	13.50		18,000	3.88	10,200	2.52	8.0
	ED*4X24B**	MV08B15**B*	TDR&TXV	17,800	0.72	11.00	13.50		18,000	3.82	10,000	2.54	8.0
	ED*4X24F**	*9MPV050	TDR&TXV	17,800	0.72	11.00	13.50		18,000	3.92	10,200	2.54	8.0
	ED*4X24F**	*9MPV075	TDR&TXV	17,800	0.72	11.00	13.50		18,000	3.92	10,200	2.54	8.0
	EHD4X24A**	*8MPV050	TDR&TXV	17,800	0.72	11.00	13.50		18,000	4.12	10,200	2.74	8.0
	EHD4X24A**	*9MPV050	TDR&TXV	17,800	0.72	11.00	13.00		18,000	4.14	10,300	2.74	8.0
	EHD4X24A**	*9MPV075	TDR&TXV	17,800	0.72	11.00	13.00		18,000	4.12	10,300	2.72	8.0
	EHD4X24A**	*9MVX040	TDR&TXV	17,800	0.72	11.00	13.00		18,000	3.80	10,400	2.38	8.0
	EHD4X24A**	*9MVX060	TDR&TXV	17,800	0.72	11.00	13.00		18,000	3.80	10,300	2.38	8.0
	EHD4X24A**	MV08B15**B*	TDR&TXV	17,800	0.72	11.00	13.50		18,000	4.06	10,000	2.76	8.0
	FEM4X24****	†	TDR&TXV	17,800	0.72	11.00	13.50		18,000	3.84	10,100	2.56	8.0
	FVM4X24****	†	TDR&TXV	17,800	0.72	11.00	13.50		17,800	4.16	10,000	2.82	8.0
HC4H324AKA	‡FS(M,U)4X24****	†	TDR&TXV	23,000	0.74	10.50	13.00		23,400	3.68	14,600	2.42	8.0
	ED*4X24B**	†	TXV	23,000	0.74	11.00		13.00	23,400	3.74	14,600	2.38	8.0
	ED*4X24B**	*8MPV050	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.88	14,400	2.44	8.2
	ED*4X24B**	MV08B15**B*	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.92	14,100	2.50	8.2
	ED*4X24F**	†	TXV	23,000	0.74	11.00		13.00	23,400	3.74	14,600	2.38	8.0
	ED*4X24F**	*8MPV075	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.98	14,200	2.50	8.2
	ED*4X24F**	*9MPV050	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.86	14,200	2.46	8.2
	ED*4X24F**	*9MPV075	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.88	14,300	2.46	8.2
	ED*4X24F**	*9MVX040	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.90	14,200	2.56	8.2
	ED*4X24F**	*9MVX060	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.96	14,300	2.58	8.2
	ED*4X24F**	MV12F19**B*	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.94	14,000	2.52	8.2
	ED*4X30B**	†	TXV	23,400	0.74	11.00		13.00	23,600	3.82	14,400	2.60	8.2
	ED*4X30B**	*8MPV050	TDR&TXV	23,400	0.74	11.50	14.00		23,600	4.00	14,100	2.72	8.5
	ED*4X30B**	MV08B15**B*	TDR&TXV	23,400	0.74	12.00	14.50		23,400	4.04	13,800	2.78	8.5
	ED*4X30F**	†	TXV	23,400	0.74	11.00		13.00	23,600	3.82	14,400	2.60	8.0
	ED*4X30F**	*8MPV075	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.14	14,000	2.78	8.5
	ED*4X30F**	*9MPV050	TDR&TXV	23,400	0.74	11.50	14.00		23,600	4.00	14,000	2.72	8.5
ED*4X30F**	*9MPV075	TDR&TXV	23,400	0.74	11.50	14.00		23,600	4.02	14,000	2.74	8.5	

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -



**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H324AKA (continued)	ED*4X30F**	*9MVX040	TDR&TXV	23,400	0.74	11.50	14.00		23,600	3.94	14,200	2.58	8.5
	ED*4X30F**	*9MVX060	TDR&TXV	23,400	0.74	11.50	14.00		23,600	4.00	14,300	2.62	8.5
	ED*4X30F**	MV12F19**B*	TDR&TXV	23,400	0.74	12.00	14.50		23,200	4.04	13,800	2.78	8.5
	EHD4X24A**	†	TXV	23,000	0.74	11.00		13.00	23,400	3.94	14,500	2.66	8.0
	EHD4X24A**	*8MPV050	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.04	14,200	2.74	8.2
	EHD4X24A**	*8MPV075	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.08	14,100	2.78	8.2
	EHD4X24A**	*8MPV100	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.18	14,000	2.82	8.2
	EHD4X24A**	*8MPV125	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.18	14,000	2.82	8.2
	EHD4X24A**	*9MPV050	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.98	14,100	2.74	8.2
	EHD4X24A**	*9MPV075	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.98	14,100	2.74	8.2
	EHD4X24A**	*9MPV100	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.10	14,100	2.78	8.2
	EHD4X24A**	*9MPV125	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.14	14,100	2.80	8.2
	EHD4X24A**	*9MVX040	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.90	14,200	2.56	8.2
	EHD4X24A**	*9MVX060	TDR&TXV	23,000	0.74	11.50	14.00		23,400	3.96	14,300	2.56	8.2
	EHD4X24A**	*9MVX080	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.10	14,400	2.62	8.2
	EHD4X24A**	*9MVX100	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.04	14,200	2.62	8.2
	EHD4X24A**	MV08B15**B*	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.12	13,900	2.82	8.2
	EHD4X24A**	MV12F19**B*	TDR&TXV	23,000	0.74	11.50	14.00		23,400	4.12	13,900	2.82	8.2
	EHD4X30A**	†	TXV	23,400	0.74	11.00		13.00	23,600	3.88	14,300	2.70	8.2
	EHD4X30A**	*8MPV050	TDR&TXV	23,400	0.74	11.50	14.00		23,600	4.06	14,100	2.80	8.5
	EHD4X30A**	*8MPV075	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.14	13,900	2.84	8.5
	EHD4X30A**	*8MPV100	TDR&TXV	23,400	0.74	12.00	14.50		23,400	4.24	13,900	2.90	8.5
	EHD4X30A**	*8MPV125	TDR&TXV	23,400	0.74	12.00	14.50		23,400	4.26	13,900	2.90	8.5
	EHD4X30A**	*9MPV050	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.00	13,900	2.80	8.5
	EHD4X30A**	*9MPV075	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.02	14,000	2.80	8.5
	EHD4X30A**	*9MPV100	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.14	14,000	2.84	8.5
EHD4X30A**	*9MPV125	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.18	13,900	2.86	8.5	
EHD4X30A**	*9MVX040	TDR&TXV	23,400	0.74	11.50	14.00		23,400	3.92	14,200	2.58	8.5	
EHD4X30A**	*9MVX060	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.00	14,300	2.60	8.5	
EHD4X30A**	*9MVX080	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.14	14,400	2.66	8.5	
EHD4X30A**	*9MVX100	TDR&TXV	23,400	0.74	11.50	14.00		23,400	4.10	14,300	2.66	8.5	

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

## COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)

### Indoor Models

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H324AKA (continued)	EHD4X30A**	MV08B15**B*	TDR&TXV	23,400	0.74	12.00	14.50		23,200	4.08	13,800	2.86	8.5
	EHD4X30A**	MV12F19**B*	TDR&TXV	23,400	0.74	12.00	14.50		23,200	4.10	13,700	2.86	8.5
	EMA4X24D**	†	TXV	23,000	0.74	11.00		13.00	23,400	3.86	14,500	2.54	8.0
	FEM4X24****	†	TDR&TXV	23,000	0.74	11.50	14.00		23,000	3.88	14,200	2.52	8.2
	FEM4X30****	†	TDR&TXV	23,400	0.74	12.00	14.50		23,600	4.08	14,000	2.74	8.5
	FS(M,U)4X30****	†	TDR&TXV	23,400	0.74	11.00	13.00		23,600	3.84	14,400	2.60	8.0
	FSA4X30**A*	†	TDR&TXV	23,400	0.74	10.50	13.00		23,600	3.72	14,600	2.48	8.0
	FVM4X24****	†	TDR&TXV	23,400	0.74	12.00	14.50		23,400	4.14	13,900	2.90	8.5
	FVM4X36****	†	TDR&TXV	23,600	0.74	12.00	14.50		23,400	4.12	13,800	2.90	8.5
HC4H330AKA	‡FS(M,U)4X30****	†	TDR&TXV	27,600	0.72	11.00	13.00		28,400	3.76	17,400	2.32	7.8
	ED*4X30B**	†	TXV	27,600	0.72	11.00		13.00	28,400	3.74	17,300	2.32	8.0
	ED*4X30B**	*8MPV050	TDR&TXV	27,600	0.72	11.00	13.00		28,400	3.78	17,100	2.34	8.2
	ED*4X30B**	MV08B15**B*	TDR&TXV	27,600	0.72	11.50	14.00		28,200	3.90	16,700	2.40	8.2
	ED*4X30F**	†	TXV	27,600	0.72	11.00		13.00	28,400	3.74	17,300	2.32	8.0
	ED*4X30F**	*8MPV075	TDR&TXV	27,600	0.72	11.50	14.00		28,400	3.88	16,900	2.38	8.2
	ED*4X30F**	*9MPV050	TDR&TXV	27,600	0.72	11.00	13.50		28,400	3.80	17,000	2.36	8.2
	ED*4X30F**	*9MPV075	TDR&TXV	27,600	0.72	11.00	13.50		28,400	3.82	17,000	2.36	8.2
	ED*4X30F**	*9MVX040	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.82	16,900	2.38	8.2
	ED*4X30F**	*9MVX060	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.88	17,000	2.40	8.2
	ED*4X30F**	MV12F19**B*	TDR&TXV	27,600	0.72	11.50	14.00		28,200	3.92	16,600	2.42	8.2
	ED*4X36B**	†	TXV	27,800	0.72	11.00		13.00	28,400	3.88	17,000	2.40	8.0
	ED*4X36B**	*8MPV050	TDR&TXV	27,800	0.72	11.00	13.50		28,200	3.92	16,900	2.42	8.5
	ED*4X36B**	MV08B15**B*	TDR&TXV	27,800	0.72	11.50	14.00		28,000	4.04	16,500	2.48	8.5
	ED*4X36F**	†	TXV	27,800	0.72	11.00		13.00	28,400	3.88	17,000	2.40	8.0
	ED*4X36F**	*8MPV075	TDR&TXV	27,800	0.72	11.50	14.00		28,000	4.02	16,600	2.46	8.5
	ED*4X36F**	*9MPV050	TDR&TXV	27,800	0.72	11.00	13.50		28,200	3.94	16,700	2.42	8.5
	ED*4X36F**	*9MPV075	TDR&TXV	27,800	0.72	11.00	13.50		28,000	3.96	16,700	2.44	8.5
	ED*4X36F**	*9MVX040	TDR&TXV	27,800	0.72	11.00	13.50		28,400	3.86	17,000	2.40	8.5
	ED*4X36F**	*9MVX060	TDR&TXV	27,800	0.72	11.00	13.50		28,400	3.92	17,000	2.42	8.5
	ED*4X36F**	MV12F19**B*	TDR&TXV	27,800	0.72	12.00	14.50		27,800	4.06	16,400	2.48	8.5
	ED*4X36J**	†	TXV	27,800	0.72	11.00		13.00	28,400	3.88	17,000	2.40	8.0
	ED*4X36J**	*8MPV100	TDR&TXV	27,800	0.72	12.00	14.50		27,800	4.12	16,500	2.48	8.5

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.  
 † For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H330AKA (continued)	ED*4X36J**	*8MPV125	TDR&TXV	27,800	0.72	12.00	14.50		27,800	4.12	16,500	2.50	8.5
	ED*4X36J**	*9MPV100	TDR&TXV	27,800	0.72	11.50	14.00		27,800	4.08	16,600	2.48	8.5
	ED*4X36J**	*9MVX080	TDR&TXV	27,800	0.72	11.50	14.00		28,400	4.04	17,000	2.48	8.5
	EHD4X30A**	†	TXV	27,600	0.72	11.00		13.00	28,000	3.90	17,000	2.40	8.0
	EHD4X30A**	*8MPV050	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.92	16,900	2.42	8.2
	EHD4X30A**	*8MPV075	TDR&TXV	27,600	0.72	11.50	14.00		28,000	3.98	16,700	2.44	8.2
	EHD4X30A**	*8MPV100	TDR&TXV	27,600	0.72	11.50	14.00		28,000	4.02	16,600	2.46	8.2
	EHD4X30A**	*8MPV125	TDR&TXV	27,600	0.72	11.50	14.00		28,000	4.02	16,600	2.46	8.2
	EHD4X30A**	*9MPV050	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.90	16,800	2.42	8.2
	EHD4X30A**	*9MPV075	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.92	16,800	2.42	8.2
	EHD4X30A**	*9MPV100	TDR&TXV	27,600	0.72	11.50	14.00		28,000	3.98	16,600	2.44	8.2
	EHD4X30A**	*9MPV125	TDR&TXV	27,600	0.72	11.50	14.00		28,000	4.00	16,600	2.46	8.2
	EHD4X30A**	*9MVX040	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.80	16,900	2.36	8.2
	EHD4X30A**	*9MVX060	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.86	17,000	2.40	8.2
	EHD4X30A**	*9MVX080	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.96	16,900	2.44	8.2
	EHD4X30A**	*9MVX100	TDR&TXV	27,600	0.72	11.00	13.50		28,200	3.90	16,700	2.44	8.2
	EHD4X30A**	MV08B15**B*	TDR&TXV	27,600	0.72	11.50	14.00		28,000	4.04	16,500	2.48	8.2
	EHD4X30A**	MV12F19**B*	TDR&TXV	27,600	0.72	11.50	14.00		27,800	4.06	16,400	2.48	8.2
	EHD4X36A**	†	TXV	27,800	0.72	11.00		13.00	27,600	4.30	16,500	2.74	8.2
	EHD4X36A**	*8MPV050	TDR&TXV	27,800	0.72	11.00	13.50		27,600	4.36	16,300	2.78	8.5
	EHD4X36A**	*8MPV075	TDR&TXV	27,800	0.72	11.50	14.00		27,400	4.46	16,100	2.82	8.5
	EHD4X36A**	*8MPV100	TDR&TXV	27,800	0.72	12.00	14.50		27,200	4.52	15,900	2.84	8.5
	EHD4X36A**	*8MPV125	TDR&TXV	27,800	0.72	12.00	14.50		27,200	4.52	15,900	2.86	8.5
	EHD4X36A**	*9MPV050	TDR&TXV	27,800	0.72	11.50	14.00		27,400	4.34	16,200	2.76	8.5
	EHD4X36A**	*9MPV075	TDR&TXV	27,800	0.72	11.50	14.00		27,400	4.36	16,200	2.78	8.5
	EHD4X36A**	*9MPV100	TDR&TXV	27,800	0.72	11.50	14.00		27,200	4.48	16,000	2.82	8.5
	EHD4X36A**	*9MPV125	TDR&TXV	27,800	0.72	12.00	14.50		27,200	4.50	16,000	2.84	8.5
	EHD4X36A**	*9MVX040	TDR&TXV	27,800	0.72	11.50	14.00		28,400	3.96	17,100	2.44	8.5
EHD4X36A**	*9MVX060	TDR&TXV	27,800	0.72	11.50	14.00		28,400	4.04	17,100	2.46	8.5	
EHD4X36A**	*9MVX080	TDR&TXV	27,800	0.72	11.50	14.00		28,400	4.16	17,100	2.52	8.5	
EHD4X36A**	*9MVX100	TDR&TXV	27,800	0.72	11.50	14.00		28,400	4.10	16,900	2.50	8.5	

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H330AKA (continued)	EHD4X36A**	MV08B15**B*	TDR&TXV	27,800	0.72	12.00	14.50		27,200	4.48	15,900	2.82	8.5
	EHD4X36A**	MV12F19**B*	TDR&TXV	27,800	0.72	12.00	14.50		27,200	4.50	15,800	2.84	8.5
	EMA4X36D**	†	TXV	27,800	0.72	11.00		13.00	28,000	3.78	17,200	2.34	8.2
	FEM4X30****	†	TDR&TXV	27,600	0.72	11.50	14.00		28,400	3.90	17,000	2.38	8.2
	FEM4X36****	†	TDR&TXV	27,800	0.72	11.50	14.00		27,200	4.48	16,000	2.96	8.5
	FSA4X30**A*	†	TDR&TXV	27,400	0.72	11.00	13.00		28,400	3.66	17,600	2.28	8.0
	FSA4X36**A*	†	TDR&TXV	27,600	0.72	11.00	13.00		28,200	3.90	16,900	2.42	8.0
	FSM4X36****	†	TDR&TXV	27,800	0.72	11.00	13.00		27,600	4.34	16,300	2.88	8.0
	FSU4X36****	†	TDR&TXV	27,800	0.72	11.00	13.00		28,400	3.92	17,000	2.42	8.0
	FVM4X24****	†	TDR&TXV	27,600	0.72	11.50	14.00		28,000	4.12	16,500	2.50	8.5
	FVM4X36****	†	TDR&TXV	27,800	0.72	12.00	14.50		27,800	4.10	16,400	2.52	8.5
	FVM4X48****	†	TDR&TXV	28,200	0.72	12.00	14.50		26,400	4.88	15,400	3.44	8.5
HC4H336AKA	‡FSU4X36****	†	TDR&TXV	34,000	0.75	11.00	13.00		34,200	3.60	20,200	2.26	7.8
HC4H336AHA	ED*4X36B**	MV08B15**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,000	3.74	19,300	2.38	7.8
HC4H336ALA	ED*4X36F**	*8MPV075	TDR&TXV	33,800	0.75	11.50	14.00		33,600	3.72	19,600	2.36	7.8
	ED*4X36F**	*9MVX060	TDR&TXV	33,800	0.75	11.00	13.50		33,600	3.66	19,700	2.34	7.8
	ED*4X36F**	MV12F19**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,200	3.80	19,200	2.44	8.0
	ED*4X36J**	*8MPV100	TDR&TXV	33,800	0.75	11.50	14.00		33,800	3.86	19,700	2.44	8.0
	ED*4X36J**	*8MPV125	TDR&TXV	33,800	0.75	11.50	14.00		33,600	3.88	19,600	2.44	8.0
	ED*4X36J**	*9MPV100	TDR&TXV	33,800	0.75	11.50	14.00		33,800	3.80	19,700	2.40	8.0
	ED*4X36J**	*9MVX080	TDR&TXV	33,800	0.75	11.50	14.00		33,800	3.82	19,800	2.42	8.0
	ED*4X36J**	MV16J22**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,000	3.84	19,100	2.44	8.0
	ED*4X42F**	†	TXV	34,200	0.75	11.00		13.00	34,000	3.68	20,200	2.30	7.8
	ED*4X42F**	*8MPV075	TDR&TXV	34,200	0.75	11.50	14.00		33,800	3.78	19,700	2.38	8.0
	ED*4X42F**	*9MPV050	TDR&TXV	34,000	0.75	11.00	13.50		33,800	3.64	19,800	2.30	7.7
	ED*4X42F**	*9MPV075	TDR&TXV	34,200	0.75	11.50	14.00		33,800	3.68	19,700	2.34	7.8
	ED*4X42F**	*9MVX040	TDR&TXV	34,000	0.75	11.00	13.50		33,800	3.62	19,800	2.30	7.7
	ED*4X42F**	*9MVX060	TDR&TXV	34,000	0.75	11.50	14.00		33,800	3.72	19,800	2.36	7.8
	ED*4X42F**	MV12F19**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,200	3.86	19,200	2.46	8.0

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.  
 † For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H336AKA	ED*4X42J**	†	TXV	34,200	0.75	11.00		13.00	34,000	3.68	20,200	2.30	7.8
HC4H336AHA	ED*4X42J**	*8MPV100	TDR&TXV	34,200	0.75	12.00	14.50		34,000	3.92	19,700	2.46	8.2
HC4H336ALA	ED*4X42J**	*8MPV125	TDR&TXV	34,200	0.75	12.00	14.50		33,800	3.92	19,600	2.46	8.2
(continued)	ED*4X42J**	*9MPV100	TDR&TXV	34,200	0.75	11.50	14.00		34,000	3.86	19,800	2.42	8.0
	ED*4X42J**	*9MVX080	TDR&TXV	34,200	0.75	11.50	14.00		34,000	3.88	19,800	2.42	8.0
	ED*4X42J**	MV16J22**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,200	3.88	19,200	2.46	8.0
	ED*4X42L**	†	TXV	34,200	0.75	11.00		13.00	34,400	3.68	20,200	2.30	7.8
	ED*4X42L**	*9MPV125	TDR&TXV	34,200	0.75	12.00	14.50		33,800	3.90	19,700	2.46	8.2
	ED*4X42L**	*9MVX100	TDR&TXV	34,200	0.75	12.00	14.50		33,800	3.86	19,600	2.44	8.0
	ED*4X42L**	MV20L24**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,200	3.88	19,200	2.46	8.0
	EHD4X36A**	†	TXV	33,800	0.75	11.00		13.00	34,000	3.76	20,400	2.34	7.8
	EHD4X36A**	*8MPV050	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.68	19,900	2.32	7.8
	EHD4X36A**	*8MPV075	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.86	19,800	2.42	8.0
	EHD4X36A**	*8MPV100	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.96	19,800	2.46	8.2
	EHD4X36A**	*8MPV125	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.98	19,700	2.48	8.2
	EHD4X36A**	*9MPV050	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.72	19,900	2.34	7.8
	EHD4X36A**	*9MPV075	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.76	19,800	2.36	7.8
	EHD4X36A**	*9MPV100	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.90	19,800	2.44	8.2
	EHD4X36A**	*9MPV125	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.94	19,700	2.46	8.2
	EHD4X36A**	*9MVX040	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.70	19,900	2.32	7.8
	EHD4X36A**	*9MVX060	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.80	19,900	2.38	7.8
	EHD4X36A**	*9MVX080	TDR&TXV	33,800	0.75	11.50	14.00		34,000	3.94	19,900	2.44	7.8
	EHD4X36A**	*9MVX100	TDR&TXV	33,800	0.75	11.50	14.00		33,800	3.90	19,700	2.44	8.0
	EHD4X36A**	MV08B15**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,600	3.90	19,400	2.46	8.2
	EHD4X36A**	MV12F19**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,400	3.94	19,300	2.48	8.2
	EHD4X36A**	MV16J22**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,400	3.96	19,300	2.48	8.2
	EHD4X36A**	MV20L24**B*	TDR&TXV	33,800	0.75	11.50	14.00		33,400	3.96	19,300	2.48	8.2
	EHD4X42A**	†	TXV	34,200	0.75	11.00		13.00	34,400	3.80	20,400	2.36	8.0

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H336AKA HC4H336AHA HC4H336ALA (continued)	EHD4X42A**	*8MPV050	TDR&TXV	34,200	0.75	11.50	14.00		34,000	3.72	19,900	2.34	7.8
	EHD4X42A**	*8MPV075	TDR&TXV	34,200	0.75	12.00	14.50		34,000	3.92	19,800	2.44	8.2
	EHD4X42A**	*8MPV100	TDR&TXV	34,200	0.75	12.00	14.50		34,200	4.04	19,900	2.48	8.2
	EHD4X42A**	*8MPV125	TDR&TXV	34,200	0.75	12.00	14.50		34,000	4.04	19,800	2.50	8.2
	EHD4X42A**	*9MPV050	TDR&TXV	34,200	0.75	11.50	14.00		34,200	3.76	20,000	2.34	7.8
	EHD4X42A**	*9MPV075	TDR&TXV	34,200	0.75	11.50	14.00		34,000	3.80	19,900	2.38	8.0
	EHD4X42A**	*9MPV100	TDR&TXV	34,200	0.75	12.00	14.50		34,200	3.98	19,900	2.46	8.2
	EHD4X42A**	*9MPV125	TDR&TXV	34,200	0.75	12.00	14.50		34,200	4.00	19,800	2.48	8.2
	EHD4X42A**	*9MVX040	TDR&TXV	34,200	0.75	11.50	14.00		34,200	3.74	20,000	2.34	7.8
	EHD4X42A**	*9MVX060	TDR&TXV	34,200	0.75	11.50	14.00		34,200	3.86	19,900	2.40	8.0
	EHD4X42A**	*9MVX080	TDR&TXV	34,200	0.75	11.50	14.00		34,200	4.00	20,000	2.46	8.2
	EHD4X42A**	*9MVX100	TDR&TXV	34,200	0.75	12.00	14.50		34,000	3.96	19,700	2.46	8.2
	EHD4X42A**	MV08B15**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,600	3.96	19,400	2.48	8.2
	EHD4X42A**	MV12F19**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,600	4.00	19,300	2.50	8.2
	EHD4X42A**	MV16J22**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,600	4.00	19,300	2.50	8.2
	EHD4X42A**	MV20L24**B*	TDR&TXV	34,200	0.75	12.00	14.50		33,600	4.00	19,300	2.50	8.2
	EMA4X36D**	†	TXV	33,800	0.75	11.00		13.00	34,000	3.62	20,200	2.28	7.7
	FEM4X36****	†	TDR&TXV	34,000	0.75	11.50	14.00		34,000	3.90	19,900	2.44	8.2
	FEM4X42****	†	TDR&TXV	34,600	0.75	11.50	14.00		34,200	3.88	19,900	2.42	8.0
	FS(M,U)4X42****	†	TDR&TXV	34,200	0.75	11.00	13.00		34,400	3.70	20,400	2.30	7.8
FSM4X36****	†	TDR&TXV	34,000	0.75	11.00	13.00		34,000	3.72	20,400	2.32	7.8	
FVM4X24****	†	TDR&TXV	33,800	0.75	11.50	14.00		33,400	3.72	19,400	2.36	7.8	
FVM4X36****	†	TDR&TXV	34,200	0.75	12.00	14.50		33,000	3.78	19,200	2.42	8.0	
FVM4X48****	†	TDR&TXV	35,000	0.75	12.00	14.50		33,600	4.02	19,400	2.52	8.2	
FVM4X60****	†	TDR&TXV	35,400	0.75	12.00	14.50		33,600	4.12	19,400	2.56	8.2	
HC4H348AKA	‡FS(M,U)4X48****	†	TDR&TXV	48,000	0.73	11.00	13.00		48,000	3.64	28,800	2.38	7.8
HC4H348AHA	ED*4X48F**	†	TXV	47,500	0.73	11.00		13.00	48,000	3.70	28,400	2.46	8.0
HC4H348ALA	ED*4X48J**	†	TXV	47,500	0.73	11.00		13.00	48,000	3.64	28,800	2.34	7.8
	ED*4X48J**	*8MPV100	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.70	28,400	2.38	8.0
	ED*4X48J**	*8MPV125	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.70	28,400	2.40	8.0
	ED*4X48J**	*9MPV100	TDR&TXV	47,500	0.73	11.00	13.50		48,000	3.64	28,600	2.36	7.8
	ED*4X48J**	*9MVX080	TDR&TXV	47,500	0.73	11.00	13.50		47,000	3.66	28,000	2.40	7.8

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.  
 † For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H348AKA HC4H348AHA HC4H348ALA (continued)	ED*4X48J**	MV16J22**B*	TDR&TXV	47,500	0.73	11.50	14.00		47,500	3.76	28,000	2.44	8.0
	ED*4X48L**	†	TXV	47,500	0.73	11.00		13.00	48,000	3.66	28,800	2.34	7.8
	ED*4X48L**	*9MPV125	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.66	28,400	2.38	7.8
	ED*4X48L**	*9MVX100	TDR&TXV	47,500	0.73	11.50	14.00		47,000	3.66	27,800	2.42	7.8
	ED*4X48L**	MV20L24**B*	TDR&TXV	47,500	0.73	11.50	14.00		47,500	3.76	28,000	2.44	8.0
	ED*4X60J**	†	TXV	47,500	0.73	11.00		13.00	47,000	3.80	28,200	2.48	8.0
	ED*4X60J**	*8MPV100	TDR&TXV	48,000	0.73	11.50	14.00		46,500	3.88	27,800	2.54	8.2
	ED*4X60J**	*8MPV125	TDR&TXV	48,000	0.73	11.50	14.00		46,500	3.90	27,800	2.56	8.2
	ED*4X60J**	*9MPV100	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.82	28,000	2.52	8.2
	ED*4X60J**	*9MVX080	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.76	28,200	2.46	8.0
	ED*4X60J**	MV16J22**B*	TDR&TXV	48,000	0.73	12.00	14.50		46,500	3.92	27,400	2.60	8.2
	ED*4X60L**	†	TXV	48,000	0.73	11.00		13.00	47,000	3.80	28,200	2.48	8.0
	ED*4X60L**	*9MPV125	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.82	27,800	2.52	8.2
	ED*4X60L**	*9MVX100	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.74	28,000	2.44	8.0
	ED*4X60L**	MV20L24**B*	TDR&TXV	48,000	0.73	12.00	14.50		46,500	3.92	27,400	2.60	8.2
	EHD4X48A**	†	TXV	47,500	0.73	11.00		13.00	48,000	3.64	29,000	2.26	7.8
	EHD4X48A**	*8MPV100	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.66	28,800	2.28	7.8
	EHD4X48A**	*8MPV125	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.68	28,600	2.30	7.8
	EHD4X48A**	*9MPV100	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.60	28,800	2.26	7.8
	EHD4X48A**	*9MPV125	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.62	28,800	2.28	7.8
	EHD4X48A**	*9MVX080	TDR&TXV	47,500	0.73	11.50	14.00		47,000	3.70	28,200	2.42	7.8
	EHD4X48A**	*9MVX100	TDR&TXV	47,500	0.73	11.50	14.00		47,000	3.68	27,800	2.42	7.8
	EHD4X48A**	MV16J22**B*	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.72	28,400	2.34	8.0
	EHD4X48A**	MV20L24**B*	TDR&TXV	47,500	0.73	11.50	14.00		48,000	3.72	28,400	2.34	8.0
	EHD4X60A**	†	TXV	48,000	0.73	11.00		13.00	47,500	3.82	28,400	2.48	8.0
	EHD4X60A**	*8MPV100	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.90	28,000	2.54	8.2
	EHD4X60A**	*8MPV125	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.92	27,800	2.56	8.2
	EHD4X60A**	*9MPV100	TDR&TXV	48,000	0.73	11.50	14.00		47,500	3.84	28,200	2.50	8.2
	EHD4X60A**	*9MPV125	TDR&TXV	48,000	0.73	11.50	14.00		47,500	3.86	28,000	2.52	8.2
	EHD4X60A**	*9MVX080	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.80	28,200	2.46	8.2

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.

- continued on next page -

**COOLING & HEATING PERFORMANCE FOR COMBINATION RATINGS (continued)**  
**Indoor Models**

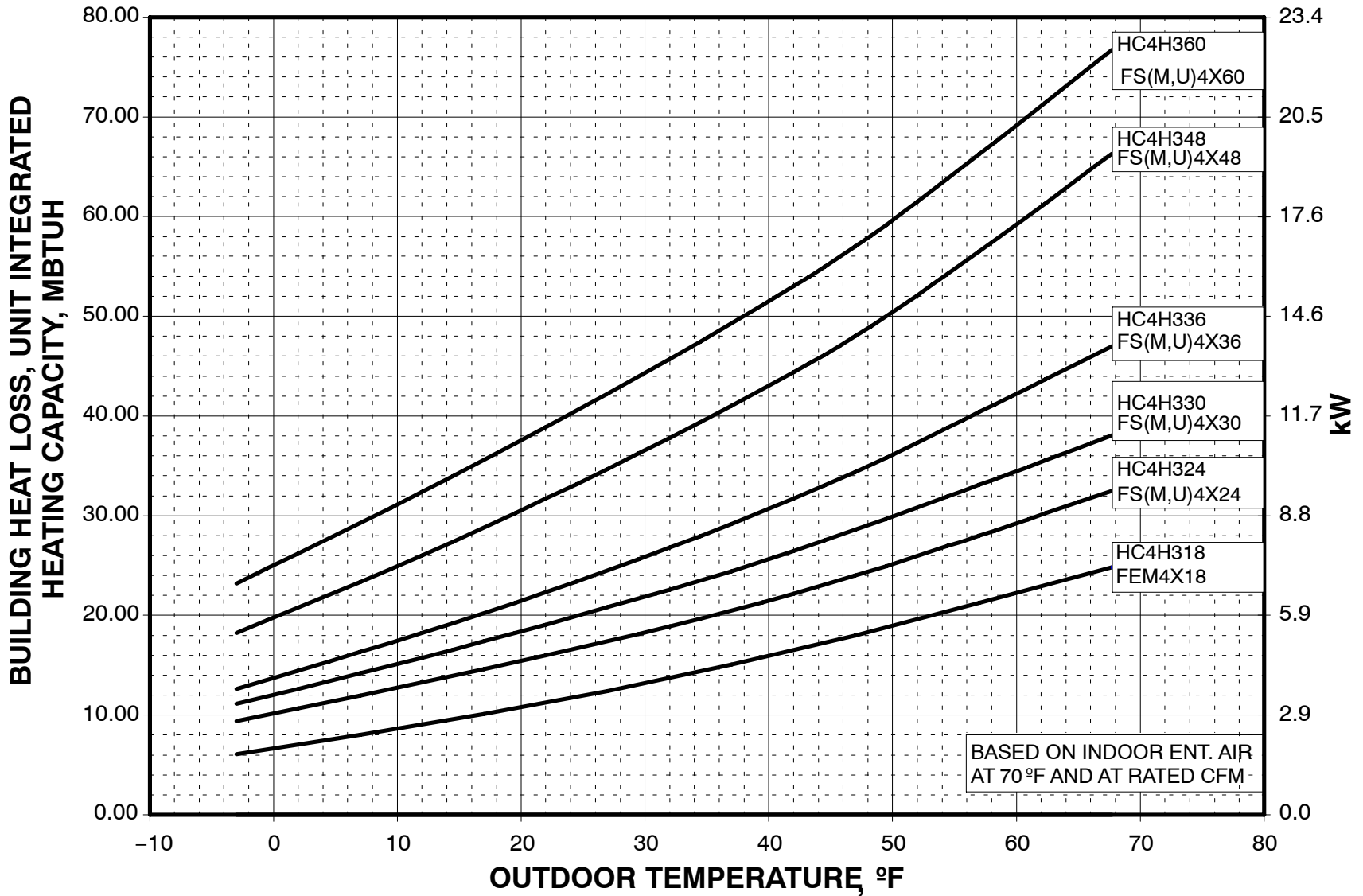
Outdoor Model	Indoor Model (‡ tested combo)	Furnace Model	Factory Installed	Cool 95° F (35° C)			SEER		Heat 47° F (8.3° C)		Heat 17° F (-8.3° C)		HSPF
				BTU/hr	S / T	EER	Factory	With Field TDR	BTU/hr	COP	BTU/hr	COP	
HC4H348AKA	EHD4X60A**	*9MVX100	TDR&TXV	48,000	0.73	11.50	14.00		47,000	3.78	28,000	2.46	8.2
HC4H348AHA	EHD4X60A**	MV16J22**B*	TDR&TXV	48,000	0.73	12.00	14.50		47,000	3.94	27,600	2.58	8.2
HC4H348ALA	EHD4X60A**	MV20L24**B*	TDR&TXV	48,000	0.73	12.00	14.50		47,000	3.94	27,600	2.58	8.2
(continued)	FEM4X48****	†	TDR&TXV	47,500	0.73	11.50	14.00		47,500	3.80	28,200	2.46	8.2
	FEM4X60****	†	TDR&TXV	48,000	0.73	12.00	14.50		47,000	4.04	27,800	2.64	8.2
	FS(M,U)4X60****	†	TDR&TXV	48,000	0.73	11.00	13.00		47,500	3.84	28,400	2.52	8.0
	FVM4X48****	†	TDR&TXV	47,500	0.73	12.00	14.50		47,000	3.78	27,800	2.48	8.2
	FVM4X60****	†	TDR&TXV	48,000	0.73	12.00	14.50		46,500	4.02	27,400	2.68	8.2
HC4H360AKA	‡FS(M,U)4X60****	†	TDR&TXV	55,500	0.74	10.50	13.00		57,000	3.58	35,600	2.50	8.0
HC4H360AHA	ED*4X60J**	†	TXV	55,500	0.74	11.00		13.00	56,500	3.58	35,000	2.52	8.0
HC4H360ALA	ED*4X60J**	*8MPV100	TDR&TXV	55,500	0.74	11.00	13.00		57,000	3.56	35,200	2.50	8.2
	ED*4X60J**	*8MPV125	TDR&TXV	55,500	0.74	11.00	13.00		56,500	3.60	34,800	2.52	8.2
	ED*4X60J**	MV16J22**B*	TDR&TXV	56,000	0.74	11.00	13.50		56,000	3.70	34,400	2.60	8.2
	ED*4X60L**	†	TXV	56,000	0.74	11.00		13.00	57,000	3.62	35,000	2.52	8.0
	ED*4X60L**	*9MVX100	TDR&TXV	55,000	0.74	11.00	13.00		56,000	3.54	34,600	2.50	8.2
	ED*4X60L**	MV20L24**B*	TDR&TXV	56,000	0.74	11.00	13.50		56,000	3.68	34,400	2.60	8.2
	EHD4X60A**	†	TXV	56,000	0.74	11.00		13.00	57,500	3.66	35,200	2.52	8.2
	EHD4X60A**	*8MPV100	TDR&TXV	56,000	0.74	11.00	13.00		57,500	3.60	35,200	2.50	8.2
	EHD4X60A**	*8MPV125	TDR&TXV	56,000	0.74	11.00	13.50		57,000	3.64	35,000	2.54	8.2
	EHD4X60A**	*9MPV125	TDR&TXV	55,500	0.74	11.00	13.00		57,500	3.56	35,400	2.48	8.2
	EHD4X60A**	*9MVX100	TDR&TXV	55,500	0.74	11.00	13.00		56,000	3.58	34,600	2.52	8.2
	EHD4X60A**	MV16J22**B*	TDR&TXV	56,000	0.74	11.50	14.00		56,500	3.74	34,600	2.60	8.2
	EHD4X60A**	MV20L24**B*	TDR&TXV	56,000	0.74	11.50	14.00		56,500	3.74	34,600	2.60	8.2
	FEM4X60****	†	TDR&TXV	57,000	0.74	11.00	13.50		56,500	3.80	34,600	2.64	8.2
	FVM4X60****	†	TDR&TXV	56,500	0.74	11.50	14.00		56,000	3.78	34,400	2.66	8.5

2008 ENERGY STAR compliance for combinations with all three: SEER 14.0 or higher and EER 11.5 or higher and HSPF 8.2 or higher.

† For coils not listed with a matching furnace or blower, coil rating applies with any indoor blower device.



# HC4H3 BALANCE POINT WORKSHEET



# GUIDE SPECIFICATIONS

## GENERAL

### System Description

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

### Quality Assurance

- Unit will be rated in accordance with the latest edition of ARI Standard 210.
- Unit will be certified for capacity and efficiency, and listed in the latest ARI directory.
- Unit construction will comply with latest edition of ANSI/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 will be leak tested and pressure 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, 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, discharging air horizontally.

## AIR-COOLED, SPLIT-SYSTEM HEAT PUMP HC4H3 1-1/2 TO 5 NOMINAL TONS

- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated bearings. 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 a scroll-type, hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.

### 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, and compressor oil.
- Unit will be equipped with high-pressure switch, low pressure switch 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.
- Nominal unit electrical characteristics will be \_\_\_\_\_ v, three 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.

### Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.

<b>OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE</b>											
Digit Position:	1,2	3	4	5	6,7	8	9	10	11	12	13
Example Part Number:	<b>HC</b>	<b>4</b>	<b>H</b>	<b>3</b>	<b>18</b>	<b>A</b>	<b>K</b>	<b>A</b>	<b>1</b>	<b>0</b>	<b>0</b>
Horizontal Condenser	<b>UNIT</b>										
2 = R-22											
4 = R-410A	<b>REFRIGERANT</b>										
A = Air Conditioner											
H = Heat Pump			<b>TYPE</b>								
3 = 13 SEER											
4 = 14 SEER			<b>NOMINAL EFFICIENCY</b>								
18 = 18,000 BTUH = 1½ tons											
24 = 24,000 BTUH = 2 tons											
30 = 30,000 BTUH = 2½ tons											
36 = 36,000 BTUH = 3 tons											
42 = 42,000 BTUH = 3½ tons											
48 = 48,000 BTUH = 4 tons											
60 = 60,000 BTUH = 5 tons				<b>NOMINAL CAPACITY</b>							
A = Standard Grille					<b>FEATURES</b>						
K = 208/230-1-60											
H = 208/230-3-60											
L = 460-3-60							<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	<b>BRANDING</b>								
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)									