



N4H6

Product Specifications

EFFICIENT UP TO 17.5 SEER / 13.5 EER / 9.5 HSPF HEAT PUMP ENVIRONMENTALLY BALANCED R-410A REFRIGERANT 2 THRU 5 TONS SPLIT SYSTEM 208/230 Volt 1-phase

REFRIGERATION CIRCUIT

- 2-stage scroll compressors on all models
- Suction line accumulator factory installed
- Bi-flow filter-drier included for field installation
- Integrated solid state control with Time-Temperature Defrost
- Low pressure switch
- Copper tube / aluminum fin coil

EASY TO INSTALL AND SERVICE

- Easy Access service valves on all models
- External high and low refrigerant service ports
- Only two screws to access control panel
- Factory charged with R-410A refrigerant

BUILT TO LAST

- Baked-on powder coat finish over galvanized steel
- Post-painted (black) coil fins
- Coated, weather-resistant cabinet screws
- Coated inlet grille with 3/8 (10mm) grille spacing for extra protection

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.



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



Model Number	Size (tons)	Nominal Btu/hr	Min. Circuit Ampacity	Max. Fuse or Breaker	Operating Dimensions length x width x height inches (mm)	Operating/Ship Weight lbs. (kg)
N4H624GKP	2	24,000	16.2	25	35 x 35 x 38-7/8 (889 x 889 x 988)	233 / 277 (106 / 126)
N4H636GKP	3	36,000	23.7	40	35 x 35 x 38-7/8 (889 x 889 x 988)	245 / 289 (111 / 131)
N4H648GKP	4	48,000	29.8	50	35 x 35 x 38-7/8 (889 x 889 x 988)	271 / 315 (123 / 143)
N4H660GKP	5	60,000	37.5	60	35 x 35 x 45-11/16 (889 x 889 x 1161)	294 / 340 (133 / 154)

OUTDOOR UNIT MODEL NUMBER IDENTIFICATION GUIDE (single phase)											
Digit Position:	1	2	3	4	5, 6	7	8	9	10	11	12
Example Part Number:	N	4	H	6	24	G	K	P	1	0	0
H = ICP Commercial Mainline N = ICP Commercial Entry BRANDING											
4 = R-410A REFRIGERANT											
H = Heat Pump TYPE											
6 = 16 SEER NOMINAL EFFICIENCY											
24 = 24,000 BTUH = 2 tons 36 = 36,000 BTUH = 3 tons 48 = 48,000 BTUH = 4 tons 60 = 60,000 BTUH = 5 tons NOMINAL CAPACITY											
G = Coil Guard Grille, 3/8 (10mm) spacing FEATURES											
K = 208/230-1-60 VOLTAGE											
Sales Code (P = no HPS)											
Engineering Revision											
Extra Digit											
Extra Digit											

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

PHYSICAL DATA

UNIT SIZE	24	36	48	60
Compressor Type	Scroll			
REFRIGERANT	R-410A			
Control	TXV (R-410A Hard Shutoff)			
Charge lb (kg)	13.07 (5.93)	13.70 (6.21)	13.73 (6.23)	14.78 (6.70)
COND FAN	Forward Swept or Propeller Type, Direct Drive			
Air Discharge	Vertical			
Motor HP	1/12	1/12	1/4	1/4
Motor RPM	800	800	825	825
Air Qty. (CFM)	3200	3200	4350	5000
COND COIL				
Face Area (sq ft)	25.2	25.2	25.2	30.18
Fins per inch	20	20	20	20
Rows per inch	2	2	2	2
Circuits	8	8	8	10
VALVE CONNECT. (In. ID)				
Vapor	5/8	5/8	3/4	3/4
Liquid	3/8	3/8	3/8	3/8
REFRIGERANT TUBES** (In. OD)				
Rated Vapor	5/8	3/4	7/8	1-1/8
Max Liquid Line	3/8	3/8	3/8	3/8

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

Note: See unit Installation Instruction for proper installation.

ELECTRICAL DATA

UNIT SIZE	V/PH-Hz	OPERATING VOLTS*		COMPRESSOR		FAN	MCA	MAX FUSE** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
24	208/230/1-60	253	197	58.3	12.5	0.60	16.2	25
36				83.0	18.5	0.60	23.7	40
48				104.0	22.8	1.30	29.8	50
60				152.9	28.8	1.50	37.5	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 2007 requirements of ASHRAE Standards 90.1

A-WEIGHTED SOUND POWER

Unit Size	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
24	73 - High Stage	51.5	55.0	63.5	69.0	62.0	58.5	56.0
	70 - Low Stage	51.5	55.5	63.0	66.0	62.0	59.0	54.0
36	74 - High Stage	54.5	57.5	65.0	70.5	62.5	60.0	57.0
	71 - Low Stage	54.0	57.5	63.5	66.0	61.0	60.5	55.0
48	75 - High Stage	53.5	59.5	66.0	70.5	64.0	61.5	55.0
	71 - Low Stage	54.0	59.5	66.0	66.0	63.0	61.5	55.5
60	74 - High Stage	51.5	58.0	66.0	68.0	64.5	63.0	61.5
	73 - Low Stage	53.0	58.5	66.5	68.0	64.5	63.0	58.5

NOTE: Tested in accordance with AHRI Standard 270-2008. (Not listed with AHRI).

A-WEIGHTED SOUND POWER WITH SOUND HOOD

Unit Size	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA, without tone adjustment)						
		125	250	500	1000	2000	4000	8000
24	71 - High Stage	50.0	55.0	63.0	68.0	61.5	57.5	52.0
	70 - Low Stage	50.5	56.0	63.0	66.0	61.5	58.0	51.5
36	72 - High Stage	54.5	57.0	64.5	69.0	61.5	58.5	53.0
	70 - Low Stage	55.5	56.5	63.0	65.0	60.5	59.0	52.0
48	74 - High Stage	54.0	59.5	66.0	70.0	63.0	59.0	51.5
	70 - Low Stage	53.5	59.0	65.5	65.0	62.5	60.5	54.0
60	73 - High Stage	52.0	58.5	66.0	68.0	64.0	60.5	56.5
	72 - Low Stage	54.0	58.0	66.0	67.5	64.0	61.0	55.0

NOTE: Tested in accordance with AHRI Standard 270-2008. (Not listed with AHRI).

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE	REQUIRED SUBCOOLING °F (°C)
24	10 (5.6)
36	13 (7.2)
48	12 (6.7)
60	11 (6.1)

VAPOR LINE SIZING AND COOLING CAPACITY LOSS

Acceptable vapor line diameters provide adequate oil return to the compressor while avoiding excessive capacity loss. The suction line diameters shown in the chart below are acceptable for HP systems with R-410A refrigerant:

Unit Nominal Size (Btuh)	Maximum Liquid Line Diameters (In. OD)	Vapor Line Diameters (In.) OD	Cooling Capacity Loss (%) Total Equivalent Line Length ft. (m)								
			Standard Application		Long Line Application Requires Accessories						
			26-50 (7.9-15.2)	51-80 (15.5-24.4)	81-100 (24.7-30.5)	101-125 (30.8-38.1)	126-150 (38.4-45.7)	151-175 (46.0-50.3)	176-200 (53.6-60.0)	201-225 (61.3-68.6)	226-250 (68.9-76.2)
24,000 2-Stage HP with R-410A	3/8	5/8	0	1	1	2	3	3	4	4	5
		3/4	0	1	1	1	1	1	1	1	1
36,000 2-Stage HP with R-410A	3/8	5/8	1	2	4	5	6	7	9	10	11
		3/4	0	0	1	1	2	2	3	3	4
		7/8	0	0	—	—	—	—	—	—	—
48,000 2-Stage HP with R-410A	3/8	3/4	1	2	2	3	4	5	6	7	7
		7/8	0	1	1	2	2	2	3	3	4
		1-1/8	0	0	—	—	—	—	—	—	—
60,000 2-Stage HP with R-410A	3/8	3/4	1	2	4	5	6	8	9	10	11
		7/8	0	1	2	2	3	4	4	5	5
		1-1/8	0	0	—	—	—	—	—	—	—

Standard Length = 80 ft. (24.4 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.

— Applications in this area are not recommended due to insufficient oil return.

REFRIGERANT PIPING LENGTH LIMITATIONS

Maximum Line Lengths:

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

Maximum Line Lengths for Heat Pump Applications

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	200 (61)	250 (76.2)	N/A
Outdoor unit ABOVE indoor unit	200 (61)	250 (76.2)	200 (61)
Outdoor unit BELOW indoor unit	See Table 'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'		

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

Maximum Total Equivalent Length† – Outdoor Unit BELOW Indoor Unit

Size	Liquid Line Diameter w/ TXV	HP with R-410A Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit;						
		0-20 (0 - 6.1)	21-30 (6.4 - 9.1)	31-40 (9.4 - 12.2)	41-50 (12.5 - 15.2)	51-60 (15.5 - 18.3)	61-70 (18.6 - 21.3)	71-80 (21.6 - 24.4)
24,000 2-Stage HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
36,000 2-Stage HP with R-410A	3/8	250*	250*	250*	250*	250*	250*	250*
48,000 2-Stage HP with R-410A	3/8	250*	250*	250*	250*	230	160	--
60,000 2-Stage HP with R-410A	3/8	250*	225*	190	150	110	--	--

* Maximum actual length not to exceed 200 ft (61 m)

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

-- = outside acceptable range

LONG LINE APPLICATIONS

An application is considered Long Line when the refrigerant level in the system requires the use of accessories to maintain acceptable refrigerant management for systems reliability. Defining a system as long line depends on the liquid line diameter, actual length of the tubing, and vertical separation between the indoor and outdoor units.

For Heat Pump systems, the chart below shows when an application is considered Long Line. Beyond these lengths, long line accessories are required:

HP WITH R-410A REFRIGERANT LONG LINE DESCRIPTION ft (m) Beyond these lengths, long line accessories are required

Liquid Line Size	Units On Same Level	Outdoor Below Indoor	Outdoor Above Indoor
3/8	80 (24.4)	20 (6.1) vertical or 80 (24.4) total	80 (24.4)

Note: See Long Line Guideline for details

COMBINATION RATINGS

Size	Coil Model Number	Furnace Model Number	Cooling Capacity	Cooling				Heating				
				EER	SEER	ID CFM		High Temp		HSPF	Low Temp	
						High	Low	Capacity 47°F (8°C)	COP		Capacity 17°F (-8°C)	COP
24	FVM4X24***L		24,000	13.0	17.0	700	560	25,000	3.897	9.0	15,300	2.74
36	FVM4X60***L		36,400	13.0	17.0	1050	840	35,400	4.061	9.5	22,600	3.00
48	FVM4X48***L		47,000	12.5	16.0	1400	1120	46,500	3.674	9.0	29,200	2.72
60	FVM4X60***L		56,500	12.5	16.0	1750	1400	57,000	3.715	9.0	36,000	2.76

* AHRI = Air Conditioning, Heating & Refrigeration Institute

* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:

Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.

High-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 47°F (8°C) db 43°F (6°C) wb air entering outdoor unit.

Low-Temp Heating Standard: 70°F (21°C) db indoor entering air temperature and 17°F (-8°C) db 15°F (-9°C) wb air entering outdoor unit.

COP — Coefficient of Performance

EER — Energy Efficiency Ratio

HSPF — Heating Seasonal Performance Factor

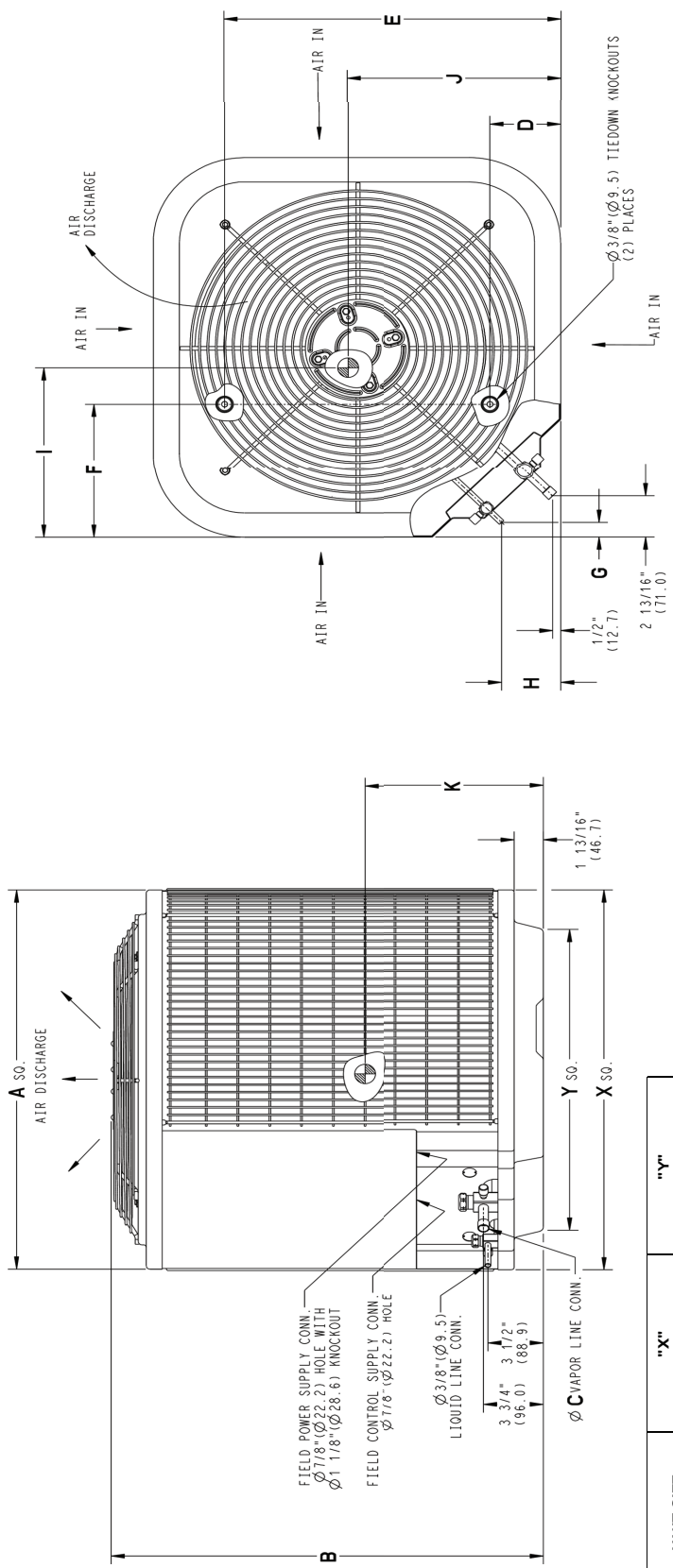
SEER — Seasonal Energy Efficiency Ratio

DIMENSIONS

UNIT	SERIES	ELECTRICAL CHARACTERISTICS		A		B		C		D		E		F		G		H		I		J		K		OPERATING WEIGHT		SHIPPING WEIGHT		SHIPPING LENGTH / WIDTH (Sq.)		SHIPPING HEIGHT								
		INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	Lbs	Kgs	INCH	MM	INCH	MM							
N4H24GKP101	1	N	35	889.0	38	7/8	987.8	3/4	19.1	6	9/16	166.1	28	7/16	722.8	9	1/8	28.2	3	13/16	97.4	36	1/8	917.6	39	1/4	997.0	42	3/4	1085.9	233	105.7	125.6	37	1/8	943.1	43	3/8	1102.2	
N4H36GKP101	1	Y	N	35	889.0	38	7/8	987.8	7/8	22.2	6	9/16	166.1	28	7/16	722.8	9	1/8	28.2	3	13/16	97.4	36	1/8	917.6	39	1/4	997.0	42	3/4	1085.9	245	111.1	131.1	37	1/8	943.1	43	3/8	1102.2
N4H48GKP101	1	Y	N	35	889.0	38	7/8	987.8	7/8	22.2	6	9/16	166.1	28	7/16	722.8	9	1/8	28.2	3	13/16	97.4	36	1/8	917.6	39	1/4	997.0	42	3/4	1085.9	271	122.9	142.9	37	1/8	943.1	43	3/8	1102.2
N4H60GKP101	1	Y	N	35	889.0	45	11/16	1160.5	7/8	22.2	6	9/16	166.1	28	7/16	722.8	9	1/8	28.2	3	13/16	97.4	36	1/8	917.6	39	1/4	997.0	49	9/16	1288.9	294	133.4	154.2	37	1/8	943.1	50	3/16	1274.9

Y=YES	575-3-60
N=NO	460-3-60
	208/230-3-60
	208-230-1-60

NOTES:
1. CENTER OF GRAVITY



UNIT SIZE	"X" MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS	"Y" MINIMUM ROOF TOP MOUNTING PAD APPLICATION DIMENSIONS
-	23 1/8	587.3
-	25 3/4	654.0
-	31 3/16	792.5
24,36,48,60	35	889.0

NOTE: ALL DIMENSIONS IN INCH (MM)
U.S. ECCN: Not Subject to Regulation (N.S.R.)

SD5461-4 REV. A

DETAILED COOLING CAPACITIES#

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
CFM	EWB °F (°C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
		Capacity MBtuh	Total Sys KW**	Total Sys KW**	Capacity MBtuh	Total Sys KW**	Total Sys KW**	Capacity MBtuh	Total Sys KW**	Total Sys KW**	Capacity MBtuh	Total Sys KW**	Total Sys KW**	Capacity MBtuh	Total Sys KW**	Total Sys KW**	Capacity MBtuh	Total Sys KW**	Total Sys KW**
		Total	Sens†	Total	Total	Sens†	Total	Total	Sens†	Total	Total	Sens†	Total	Total	Sens†	Total	Total	Sens†	Total
24 Size Outdoor Section With FVM4X24***L Indoor Section - HI																			
600	57 (13.9)	22.47	22.47	1.42	21.26	21.26	1.60	20.00	20.00	1.81	18.69	18.69	2.06	17.34	17.34	2.35	15.96	15.96	2.72
	62 (16.7)	24.04	20.32	1.43	19.39	18.43	1.82	20.99	18.43	1.82	19.39	17.45	2.06	17.77	16.44	2.36	16.14	15.39	2.72
	63 (17.2)††	24.52	16.88	1.43	22.99	16.03	1.61	21.40	15.16	1.82	19.77	14.27	2.06	18.10	13.37	2.36	16.39	12.47	2.72
	67 (19.4)	26.60	17.58	1.44	24.94	16.71	1.62	23.23	15.82	1.83	21.47	14.92	2.07	19.68	14.02	2.37	17.86	13.10	2.73
	72 (22.2)	29.45	14.67	1.46	27.62	13.88	1.64	25.73	13.07	1.84	23.80	12.26	2.09	21.84	11.45	2.38	19.84	10.63	2.74
	77 (13.9)	23.20	23.20	1.43	21.94	21.94	1.61	20.62	20.62	1.82	19.26	19.26	2.07	17.86	17.86	2.36	16.42	16.42	2.73
	62 (16.7)	24.52	21.24	1.44	22.98	20.27	1.62	21.39	19.27	1.82	19.75	18.25	2.07	18.11	17.18	2.37	16.46	16.46	2.73
	63 (17.2)††	25.01	17.53	1.44	23.43	16.66	1.62	21.79	15.76	1.83	20.11	14.85	2.07	18.40	13.93	2.37	16.65	13.00	2.73
	67 (19.4)	27.11	18.28	1.45	25.41	17.38	1.63	23.64	16.47	1.84	21.83	15.54	2.08	20.00	14.61	2.38	18.13	13.67	2.74
	72 (22.2)	30.01	15.16	1.47	28.12	14.35	1.65	26.17	13.52	1.85	24.19	12.70	2.10	22.17	11.86	2.39	20.13	11.01	2.74
700	57 (13.9)	23.88	23.88	1.44	22.56	22.56	1.62	21.20	21.20	1.83	19.78	19.78	2.08	18.33	18.33	2.37	16.84	16.84	2.74
	62 (16.7)	24.95	22.13	1.45	23.38	21.12	1.63	21.74	20.08	1.84	20.08	19.01	2.08	18.42	18.27	2.37	16.87	16.87	2.74
	63 (17.2)††	25.44	18.16	1.45	23.82	17.27	1.63	22.14	16.35	1.84	20.41	15.41	2.08	18.65	14.47	2.38	16.87	13.52	2.74
	67 (19.4)	27.57	18.95	1.46	25.81	18.03	1.64	24.00	17.09	1.85	22.15	16.14	2.09	20.27	15.19	2.39	18.36	14.23	2.74
	72 (22.2)	30.50	15.64	1.48	28.55	14.80	1.65	26.55	13.96	1.86	24.52	13.11	2.10	22.46	12.24	2.40	20.38	11.37	2.75
	57 (13.9)	25.06	25.06	1.46	23.66	23.66	1.64	22.20	22.20	1.85	20.69	20.69	2.09	19.15	19.15	2.39	17.57	17.57	2.75
	62 (16.7)	25.69	23.81	1.46	24.06	22.72	1.64	22.38	21.57	1.85	20.73	20.73	2.10	19.18	19.18	2.39	17.60	17.60	2.75
	63 (17.2)††	26.15	19.37	1.47	24.45	18.44	1.65	22.69	17.47	1.85	20.90	16.49	2.10	19.08	15.51	2.39	17.23	14.51	2.75
	67 (19.4)	28.31	20.24	1.48	26.48	19.28	1.66	24.59	18.30	1.86	22.66	17.31	2.11	20.71	16.31	2.40	18.74	15.30	2.76
	72 (22.2)	31.29	16.52	1.49	29.26	15.64	1.67	27.18	14.75	1.87	25.08	13.85	2.12	22.84	12.95	2.41	20.79	12.04	2.77
24 size Outdoor Section With FVM4X24***L Indoor Section - LO																			
480	57 (13.9)	17.40	17.40	1.02	16.19	16.19	1.19	14.92	14.92	1.39	13.64	13.64	1.62	12.37	12.37	1.89	11.13	11.13	2.20
	62 (16.7)	18.34	16.19	1.02	16.89	15.05	1.19	15.38	13.92	1.39	13.87	12.77	1.62	12.43	12.34	1.89	11.15	11.15	2.20
	63 (17.2)††	18.71	13.35	1.01	17.22	12.36	1.18	15.67	11.36	1.38	14.11	10.38	1.62	12.58	9.42	1.89	11.11	8.51	2.20
	67 (19.4)	20.36	13.94	1.00	18.74	12.92	1.17	17.07	11.90	1.37	15.40	10.90	1.60	13.77	9.91	1.88	12.20	8.98	2.19
	72 (22.2)	22.60	11.57	0.98	20.80	10.66	1.15	18.96	9.76	1.35	17.13	8.89	1.59	15.35	8.03	1.86	13.64	7.21	2.19
	57 (13.9)	17.97	17.97	1.02	16.71	16.71	1.19	15.39	15.39	1.39	14.05	14.05	1.62	12.74	12.74	1.89	11.45	11.45	2.20
	62 (16.7)	18.72	16.93	1.02	17.22	15.75	1.19	15.68	14.56	1.39	14.15	13.34	1.62	12.76	12.76	1.89	11.47	11.47	2.20
	63 (17.2)††	19.08	13.89	1.01	17.54	12.86	1.19	15.95	11.83	1.39	14.35	10.82	1.62	12.79	9.83	1.89	11.28	8.88	2.20
	67 (19.4)	20.75	14.52	1.00	19.07	13.46	1.17	17.36	12.41	1.37	15.65	11.37	1.61	13.98	10.37	1.88	12.37	9.39	2.20
	72 (22.2)	23.02	11.97	0.98	21.16	11.04	1.15	19.27	10.11	1.35	17.40	9.21	1.59	15.58	8.32	1.87	13.83	7.48	2.19
560	57 (13.9)	18.49	18.49	1.02	17.17	17.17	1.19	15.81	15.81	1.39	14.43	14.43	1.62	13.07	13.07	1.89	11.74	11.74	2.21
	62 (16.7)	19.05	17.65	1.02	17.51	16.42	1.19	15.96	15.15	1.39	14.46	14.46	1.62	13.09	13.09	1.89	11.76	11.76	2.21
	63 (17.2)††	19.40	14.41	1.02	17.81	13.35	1.19	16.19	12.29	1.39	14.55	11.24	1.62	12.96	10.23	1.89	11.43	9.24	2.21
	67 (19.4)	21.08	15.07	1.00	19.37	13.99	1.17	17.61	12.90	1.37	15.87	11.83	1.61	14.16	10.80	1.88	12.52	9.80	2.20
	72 (22.2)	23.38	12.35	0.98	21.47	11.41	1.15	19.54	10.45	1.35	17.63	9.50	1.59	15.78	8.60	1.87	14.00	7.73	2.20
	57 (13.9)	19.40	19.40	1.03	18.00	18.00	1.20	16.55	16.55	1.40	15.08	15.08	1.63	13.64	13.64	1.90	12.24	12.24	2.22
	62 (16.7)	19.63	18.98	1.03	18.07	17.96	1.20	16.57	16.57	1.40	15.11	15.11	1.63	13.67	13.67	1.90	12.26	12.26	2.22
	63 (17.2)††	19.92	15.40	1.03	18.26	14.29	1.20	16.58	13.16	1.40	14.89	12.06	1.63	13.25	10.97	1.91	11.67	9.93	2.22
	67 (19.4)	21.63	16.14	1.01	19.84	14.99	1.18	18.02	13.84	1.38	16.21	12.71	1.62	14.45	11.61	1.90	12.77	10.55	2.22
	72 (22.2)	23.96	13.07	0.99	21.98	12.06	1.16	19.98	11.05	1.36	18.01	10.06	1.60	16.09	9.12	1.88	14.25	8.22	2.21

See notes at end of section.

DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
CFM	EWB °F (°C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
		Capacity MBtu/h Total	Sensit	Total System KW**	Capacity MBtu/h Total	Sensit	Total System KW**	Capacity MBtu/h Total	Sensit	Total System KW**	Capacity MBtu/h Total	Sensit	Total System KW**	Capacity MBtu/h Total	Sensit	Total System KW**	Capacity MBtu/h Total	Sensit	Total System KW**
36 Size Outdoor Section With FVM4X60***L Indoor Section - HI																			
900	57 (13.9)	33.59	32.13	2.10	32.13	29.55	2.36	30.80	30.60	2.67	28.98	28.98	3.03	27.24	27.24	3.44	25.94	25.34	3.90
	62 (16.7)	35.79	29.55	2.13	33.92	29.55	2.38	31.98	28.55	2.68	29.95	27.51	3.04	27.78	26.41	3.44	25.47	25.23	3.91
	63 (17.2)†	36.56	24.34	2.13	34.65	24.34	2.39	32.68	23.39	2.69	30.59	22.40	3.04	28.37	21.35	3.44	25.95	20.24	3.91
	67 (19.4)	39.56	26.24	2.16	37.50	25.30	2.41	35.38	24.34	2.71	33.12	23.34	3.06	30.72	22.28	3.47	28.13	21.16	3.93
	72 (22.2)	43.66	21.83	2.21	41.43	20.94	2.45	39.09	20.03	2.74	36.62	19.09	3.09	34.00	18.05	3.50	31.17	16.98	3.96
975	57 (13.9)	34.66	33.12	2.12	33.12	30.93	2.38	31.53	31.53	2.69	29.83	29.83	3.04	28.02	28.02	3.45	26.04	26.04	3.92
	62 (16.7)	36.45	30.93	2.14	34.52	30.93	2.39	32.54	28.83	2.69	30.44	28.83	3.05	28.25	27.68	3.45	26.08	26.08	3.92
	63 (17.2)†	37.23	26.25	2.15	35.26	25.31	2.40	33.22	24.33	2.70	31.07	23.32	3.05	28.78	22.25	3.46	26.30	21.12	3.92
	67 (19.4)	40.24	27.28	2.18	38.13	26.33	2.43	35.92	25.34	2.72	33.61	24.32	3.07	31.14	23.24	3.48	28.48	22.10	3.95
	72 (22.2)	44.40	22.51	2.22	42.08	21.60	2.46	39.68	20.67	2.76	37.15	19.70	3.10	34.44	18.66	3.51	31.56	17.58	3.98
1050	57 (13.9)	35.64	32.28	2.14	34.03	32.28	2.41	33.03	31.22	2.71	30.91	30.11	3.06	28.77	28.77	3.47	26.66	26.66	3.94
	62 (16.7)	37.04	33.31	2.16	35.06	32.28	2.41	33.03	31.22	2.71	30.91	30.11	3.06	28.77	28.77	3.47	26.70	26.70	3.94
	63 (17.2)†	37.80	27.21	2.16	35.78	26.24	2.41	33.69	25.26	2.74	31.48	24.22	3.07	29.13	23.13	3.47	26.60	21.97	3.94
	67 (19.4)	40.84	28.30	2.20	38.66	27.32	2.44	36.40	26.32	2.74	34.03	25.28	3.09	31.49	24.18	3.49	28.79	23.03	3.96
	72 (22.2)	45.03	23.16	2.24	42.65	22.24	2.48	40.20	21.29	2.77	37.60	20.30	3.12	34.83	19.26	3.52	31.88	18.16	3.99
1200	57 (13.9)	37.35	35.63	2.18	36.63	35.63	2.43	33.86	33.86	2.74	31.97	31.97	3.09	29.94	29.94	3.50	27.74	27.74	3.97
	62 (16.7)	39.04	35.95	2.19	38.01	34.85	2.44	33.95	33.86	2.74	32.02	32.02	3.09	29.98	29.98	3.50	27.78	27.78	3.97
	63 (17.2)†	39.75	29.06	2.19	38.63	28.06	2.44	34.43	27.03	2.74	32.13	25.96	3.09	29.69	24.84	3.50	27.07	23.64	3.96
	67 (19.4)	41.80	30.27	2.23	39.53	29.26	2.47	37.17	28.23	2.76	34.71	27.15	3.11	32.08	26.02	3.52	29.28	24.82	3.99
	72 (22.2)	46.06	24.41	2.27	43.58	23.47	2.51	41.01	22.49	2.80	38.32	21.48	3.15	35.44	20.41	3.55	32.39	19.28	4.02
36 Size Outdoor Section With FVM4X60***L Indoor Section - LO																			
720	57 (13.9)	25.97	24.13	1.44	24.13	22.32	1.73	22.32	22.32	2.06	20.47	20.47	2.46	18.58	18.58	2.93	16.64	16.64	3.49
	62 (16.7)	27.04	24.32	1.44	24.89	22.65	1.72	22.77	21.00	2.06	20.65	19.36	2.46	18.62	18.62	2.93	16.67	16.67	3.49
	63 (17.2)†	27.62	19.90	1.43	25.41	18.43	1.72	23.23	17.00	2.05	21.04	15.58	2.46	18.80	14.16	2.93	16.53	12.76	3.49
	67 (19.4)	30.03	20.80	1.41	27.65	19.26	1.70	25.29	17.79	2.04	22.92	16.32	2.44	20.50	14.87	2.91	18.05	13.43	3.47
	72 (22.2)	33.45	17.17	1.38	30.80	15.82	1.67	28.18	14.50	2.01	25.56	13.21	2.41	22.91	11.93	2.88	20.21	10.66	3.44
780	57 (13.9)	26.78	26.78	1.44	24.87	24.87	1.72	22.98	22.98	2.06	21.07	21.07	2.46	19.11	19.11	2.93	17.10	17.10	3.49
	62 (16.7)	27.53	25.51	1.44	25.33	23.77	1.72	23.18	22.04	2.06	21.11	21.11	2.46	19.14	19.14	2.93	17.13	17.13	3.49
	63 (17.2)†	28.09	20.73	1.43	25.83	19.21	1.72	23.59	17.73	2.06	21.34	16.26	2.46	19.06	14.80	2.94	16.73	13.35	3.50
	67 (19.4)	30.55	21.66	1.41	28.10	20.10	1.70	25.67	18.57	2.04	23.25	17.06	2.44	20.78	15.56	2.91	18.28	14.07	3.47
	72 (22.2)	34.02	17.75	1.39	31.29	16.36	1.68	28.60	15.01	2.02	25.92	13.69	2.42	23.21	12.37	2.89	20.45	11.08	3.44
840	57 (13.9)	27.53	27.53	1.44	25.56	25.56	1.72	23.60	23.60	2.06	21.61	21.61	2.46	19.59	19.59	2.93	17.51	17.51	3.49
	62 (16.7)	27.98	26.67	1.44	25.76	24.84	1.72	23.64	23.64	2.06	21.65	21.65	2.46	19.63	19.63	2.93	17.54	17.54	3.49
	63 (17.2)†	28.51	21.54	1.43	26.20	19.98	1.72	23.91	18.45	2.06	21.61	16.93	2.46	19.29	15.43	2.94	16.92	13.93	3.50
	67 (19.4)	31.00	22.53	1.41	28.48	20.92	1.70	26.01	19.34	2.04	23.53	17.78	2.44	21.02	16.24	2.92	18.47	14.70	3.47
	72 (22.2)	34.49	18.31	1.39	31.71	16.89	1.68	29.96	15.51	2.02	26.22	14.15	2.42	23.45	12.81	2.89	20.65	11.48	3.44
960	57 (13.9)	28.86	28.86	1.44	26.76	26.76	1.73	24.68	24.68	2.06	22.57	22.57	2.46	20.43	20.43	2.94	18.24	18.24	3.49
	62 (16.7)	28.91	28.91	1.44	26.80	26.80	1.73	24.72	24.72	2.06	22.61	22.61	2.46	20.47	20.47	2.94	18.27	18.27	3.49
	63 (17.2)†	29.20	23.11	1.44	26.80	21.46	1.73	24.44	24.44	2.07	22.06	18.24	2.47	19.67	16.65	2.95	17.25	15.06	3.51
	67 (19.4)	31.73	24.22	1.42	29.12	22.52	1.71	26.56	20.85	2.05	23.99	19.19	2.45	21.42	17.56	2.92	18.80	15.93	3.48
	72 (22.2)	35.28	19.40	1.39	32.39	17.92	1.68	29.55	16.47	2.02	26.71	15.05	2.42	23.87	13.65	2.90	20.98	12.26	3.45

See notes at end of section.

DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																			
		75 (23.9)			85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)				
		CFM	EWB °F (°C)	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Capacity MBtuHt	Total System KW**	Sens†	Total	Sens†	Total
60 Size Outdoor Section With FVMX60***L Indoor Section — HI																					
	57 (13.9)	51.61	49.90	3.56	48.10	48.10	4.37	46.09	46.09	4.87	43.74	43.74	5.44	40.97	40.97						
	62 (16.7)	54.77	49.03	3.59	50.12	45.69	4.39	47.51	43.92	4.88	44.55	42.00	5.45	41.19	39.81						
1500	63 (17.2)††	55.96	40.39	3.60	51.15	37.26	4.40	48.45	35.61	4.89	45.37	33.84	5.46	41.83	31.92						
	67 (19.4)	60.55	40.35	3.61	55.18	38.71	4.44	52.18	37.01	4.93	48.79	35.19	5.50	44.94	33.24						
	72 (22.2)	68.95	34.72	3.71	63.83	33.13	4.07	60.89	31.53	4.49	57.28	29.87	4.99	53.46	28.12						
	57 (13.9)	53.11	51.30	3.98	49.40	49.40	4.41	47.27	47.27	4.91	44.79	44.79	5.49	41.89	41.89						
	62 (16.7)	53.69	49.45	4.00	50.86	47.70	4.43	48.17	45.86	4.92	45.16	43.80	5.49	41.95	41.95						
1625	63 (17.2)††	56.95	41.87	4.01	51.85	38.66	4.44	49.04	36.96	4.93	45.87	35.16	5.50	42.23	33.19						
	67 (19.4)	61.48	43.55	3.69	58.74	41.88	4.05	55.90	40.20	4.48	52.79	38.46	4.97	49.30	34.61						
	72 (22.2)	67.83	35.71	3.75	64.70	34.08	4.11	61.44	32.45	4.54	57.91	30.76	5.03	53.98	28.97						
	57 (13.9)	54.46	54.46	3.66	52.57	52.57	4.03	50.56	48.32	4.46	48.32	45.73	5.53	42.70	42.70						
1750	62 (16.7)	56.48	53.25	3.68	54.04	51.45	4.04	51.52	49.63	4.47	48.77	47.65	4.96	45.80	42.76						
	63 (17.2)††	57.62	43.31	3.69	55.08	41.67	4.05	52.43	40.01	4.48	49.55	38.28	4.97	46.28	34.43						
	67 (19.4)	62.27	45.08	3.73	59.45	43.37	4.10	56.50	41.65	4.52	53.30	39.87	5.01	49.72	37.98						
	72 (22.2)	68.68	36.66	3.80	65.44	35.01	4.16	62.06	33.34	4.58	58.44	31.62	5.07	54.40	29.80						
	57 (13.9)	56.83	56.83	3.75	54.75	54.75	4.12	52.55	52.55	4.55	50.11	50.11	5.05	47.32	47.32						
	62 (16.7)	57.84	57.84	3.76	55.30	55.14	4.12	52.69	52.60	4.55	50.18	50.18	5.05	47.37	47.37						
2000	63 (17.2)††	58.85	46.05	3.77	56.15	44.33	4.13	53.37	42.61	4.56	50.34	40.81	5.05	46.95	38.88						
	67 (19.4)	63.55	48.03	3.81	60.55	46.24	4.18	57.45	44.45	4.60	54.09	42.59	5.09	50.35	40.62						
	72 (22.2)	70.02	38.47	3.88	66.60	36.76	4.24	63.06	35.04	4.66	59.25	33.26	5.15	55.05	31.39						
60 Size Outdoor Section With FVMX60***L Indoor Section — LO																					
	57 (13.9)	41.27	41.27	2.45	36.79	36.79	2.83	32.29	32.29	3.27	27.87	27.87	3.78	23.62	23.62						
	62 (16.7)	42.97	39.35	2.43	37.92	32.82	2.82	32.87	32.82	3.27	28.01	27.79	3.78	23.66	23.66						
1200	63 (17.2)††	43.88	32.14	2.43	38.70	29.32	2.82	33.52	26.49	3.26	28.48	23.70	3.77	23.68	21.00						
	67 (19.4)	47.49	33.46	2.40	41.89	30.56	2.79	36.33	27.67	3.24	30.32	24.82	3.75	25.76	22.04						
	72 (22.2)	52.45	27.41	2.36	46.29	24.87	2.75	40.20	22.34	3.20	34.27	19.86	3.71	28.63	17.46						
	57 (13.9)	42.46	42.46	2.45	37.83	37.83	2.84	33.17	33.17	3.28	28.61	28.61	3.79	24.22	24.22						
	62 (16.7)	43.67	41.17	2.45	38.51	37.77	2.84	33.41	34.32	3.28	28.66	28.66	3.79	24.26	24.26						
1300	63 (17.2)††	44.54	33.40	2.44	39.25	30.50	2.83	33.97	27.58	3.28	28.84	24.71	3.79	23.96	21.92						
	67 (19.4)	48.17	34.81	2.41	42.46	31.82	2.80	36.79	28.84	3.25	31.28	25.89	3.76	26.04	23.03						
	72 (22.2)	53.17	28.25	2.37	46.90	25.66	2.76	40.68	23.07	3.21	34.65	20.53	3.72	28.91	18.07						
	57 (13.9)	43.54	43.54	2.46	38.76	38.76	2.85	33.97	33.97	3.29	29.28	29.28	3.80	24.76	24.76						
	62 (16.7)	44.29	42.90	2.46	39.07	39.35	2.85	34.02	34.02	3.29	29.32	29.32	3.80	24.80	24.80						
1400	63 (17.2)††	45.11	34.63	2.45	39.72	31.64	2.84	34.35	28.64	3.29	29.15	25.69	3.80	24.19	20.52						
	67 (19.4)	48.75	36.12	2.42	42.95	33.05	2.81	37.18	29.97	3.26	31.59	26.94	3.77	26.28	24.00						
	72 (22.2)	53.79	29.08	2.38	47.41	26.42	2.77	41.08	23.77	3.22	34.97	21.18	3.74	29.15	18.67						
	57 (13.9)	45.41	45.41	2.48	40.37	40.37	2.87	35.34	35.34	3.31	30.42	30.42	3.82	25.69	25.69						
	62 (16.7)	45.49	45.49	2.48	40.43	40.43	2.87	35.39	35.39	3.31	30.46	30.46	3.82	25.72	25.72						
1600	63 (17.2)††	48.03	37.00	2.48	40.48	33.85	2.87	34.98	30.69	3.32	29.64	27.56	3.83	24.58	24.51						
	67 (19.4)	49.70	38.66	2.45	43.72	35.42	2.84	37.82	32.17	3.29	32.09	28.97	3.80	26.67	25.85						
	72 (22.2)	54.77	30.65	2.41	48.21	27.89	2.80	41.73	25.13	3.25	35.47	22.44	3.76	29.52	19.83						

See notes at end of section.

HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																									
EDB °F (°C)	CFM	-3 (-19.4)			7 (-13.9)			17 (-8.3)			27 (-2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)				
		Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*	Capacity MBtuh	Total Sys. KWt	In- teg*		
65 (18.3)	600	9.13	1.36	11.08	12.06	1.47	15.38	14.02	1.60	18.36	16.30	1.73	21.55	19.61	1.88	24.98	24.98	2.06	28.66	28.66	2.27	32.46	32.46	2.53	36.27	36.27	2.81
	650	9.21	1.36	11.18	12.17	1.46	15.50	14.13	1.58	18.52	16.45	1.71	21.78	19.82	1.86	25.25	25.25	2.03	28.99	28.99	2.23	32.87	32.87	2.47	36.69	36.69	2.81
	700	9.29	1.35	11.29	12.28	1.45	15.61	14.23	1.57	18.67	16.58	1.69	21.97	19.99	1.83	25.50	25.50	2.00	29.29	29.29	2.19	33.22	33.22	2.43	37.11	37.11	2.81
70 (21.1)	600	8.73	1.35	10.67	11.46	1.44	15.79	14.40	1.55	18.92	16.80	1.67	22.30	20.29	1.80	25.92	25.92	1.95	29.78	29.78	2.14	33.75	33.75	2.36	37.53	37.53	2.81
	650	8.81	1.43	10.78	11.61	1.54	15.85	14.46	1.66	19.08	16.91	1.79	22.41	20.38	1.91	26.03	26.03	2.01	30.00	30.00	2.17	34.12	34.12	2.57	37.95	37.95	2.81
	700	8.89	1.42	10.89	11.73	1.53	15.94	14.55	1.64	19.21	17.00	1.82	22.52	20.47	1.94	26.14	26.14	2.02	30.11	30.11	2.18	34.23	34.23	2.58	38.06	38.06	2.81
75 (23.9)	600	9.04	1.42	11.06	12.04	1.51	15.48	14.11	1.62	18.54	16.46	1.74	21.85	19.88	1.88	25.40	25.40	2.04	29.21	29.21	2.22	33.15	33.15	2.46	36.96	36.96	2.81
	650	8.26	1.50	11.14	12.13	1.61	14.66	13.37	1.75	17.59	15.62	1.89	20.68	18.81	2.05	24.01	24.01	2.24	27.59	27.59	2.46	31.35	31.35	2.75	35.20	35.20	2.81
	700	8.34	1.49	11.25	12.24	1.60	14.81	13.50	1.73	17.75	15.76	1.86	20.89	19.01	2.02	24.27	24.27	2.20	27.90	27.90	2.41	31.71	31.71	2.68	35.52	35.52	2.81
24 Size Outdoor Section With FVM4X24***L Indoor Section - LO	600	8.43	1.49	11.37	12.36	1.59	14.93	13.61	1.72	17.90	15.89	1.85	21.07	19.18	1.99	24.50	24.50	2.17	28.19	28.19	2.37	32.03	32.03	2.63	35.28	35.28	2.81
	650	8.59	1.49	11.57	12.56	1.58	15.14	13.80	1.70	18.14	16.11	1.82	21.39	19.47	1.96	24.89	24.89	2.12	28.66	28.66	2.31	32.55	32.55	2.56	35.70	35.70	2.81
	700	8.67	1.48	11.67	12.66	1.57	15.35	14.01	1.68	18.35	16.32	1.79	21.70	19.76	1.94	25.18	25.18	2.08	29.07	29.07	2.28	33.02	33.02	2.59	36.12	36.12	2.81
24 Size Outdoor Section With FVM4X24***L Indoor Section - LO	480	4.29	1.03	7.46	8.85	1.14	10.33	9.42	1.23	13.01	11.56	1.31	15.75	14.33	1.39	17.90	17.90	1.47	20.02	20.02	1.55	22.13	22.13	1.66	24.46	24.46	1.77
	520	4.33	1.03	7.54	8.93	1.13	10.48	9.55	1.22	13.24	11.76	1.29	15.95	14.52	1.37	18.14	18.14	1.44	20.30	20.30	1.51	22.46	22.46	1.61	24.79	24.79	1.77
	560	4.38	1.03	7.66	9.04	1.13	10.61	9.67	1.21	13.47	11.96	1.28	16.13	14.68	1.35	18.36	18.36	1.41	20.57	20.57	1.48	22.77	22.77	1.57	25.26	25.26	1.77
70 (21.1)	640	4.48	1.04	7.82	9.18	1.13	10.81	9.86	1.20	14.03	12.46	1.27	16.42	14.94	1.32	18.73	18.73	1.38	21.02	21.02	1.44	23.29	23.29	1.51	25.78	25.78	1.77
	480	4.36	1.11	6.96	6.40	1.20	9.80	8.94	1.29	12.46	11.07	1.37	15.34	13.96	1.46	17.45	17.45	1.54	19.56	19.56	1.63	21.66	21.66	1.74	24.15	24.15	1.94
	520	4.41	1.11	7.07	6.50	1.20	9.96	9.08	1.28	12.66	11.25	1.36	15.53	14.13	1.44	17.69	17.69	1.51	19.84	19.84	1.59	21.98	21.98	1.69	24.44	24.44	1.94
75 (23.9)	640	4.59	1.12	7.35	6.75	1.19	10.10	9.21	1.27	12.84	11.41	1.35	15.69	14.28	1.42	17.90	17.90	1.48	20.09	20.09	1.56	22.27	22.27	1.65	24.76	24.76	1.94
	480	4.10	1.18	6.39	5.87	1.26	9.23	8.41	1.35	11.89	10.56	1.44	14.87	13.53	1.53	17.02	17.02	1.61	19.10	19.10	1.71	21.20	21.20	1.83	23.59	23.59	2.03
	520	4.17	1.18	6.49	5.96	1.26	9.39	8.56	1.35	12.09	10.73	1.42	15.08	13.72	1.51	17.24	17.24	1.58	19.37	19.37	1.67	21.50	21.50	1.78	23.88	23.88	2.03
24 Size Outdoor Section With FVM4X24***L Indoor Section - LO	640	4.24	1.18	6.59	6.06	1.26	9.53	8.69	1.34	12.26	10.89	1.41	15.27	13.89	1.49	17.44	17.44	1.56	19.61	19.61	1.64	21.78	21.78	1.74	24.17	24.17	1.94
	640	4.37	1.19	6.78	6.23	1.26	9.76	8.90	1.33	12.60	11.19	1.40	15.56	14.16	1.47	17.80	17.80	1.52	20.03	20.03	1.59	22.26	22.26	1.68	24.50	24.50	1.94
	700	4.45	1.19	6.88	6.33	1.26	9.99	9.13	1.33	12.94	11.53	1.40	15.85	14.43	1.47	18.01	18.01	1.54	20.36	20.36	1.61	22.57	22.57	1.70	24.83	24.83	1.94

See notes at end of section.

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																													
EDB °F (°C)	CFM	-3 (-19.4)		7 (-13.9)		17 (-8.3)		27 (-2.8)		37 (2.8)		47 (8.3)		57 (13.9)		67 (19.4)															
		Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†	Capacity MBtuh	Total Sys. KW†														
36 Size Outdoor Section With FVM4X60***L Indoor Section - HI																															
65 (18.3)	900	13.75	12.65	1.90	17.91	16.46	2.01	22.88	20.87	2.15	26.93	23.92	2.28	31.23	28.42	2.42	35.79	35.79	2.60	40.74	40.74	2.81	46.22	46.22	2.81	46.22	46.22	2.81	46.22	46.22	3.03
	975	13.88	12.77	1.90	18.06	16.60	2.00	23.03	21.00	2.13	27.11	24.08	2.25	31.46	28.63	2.38	36.10	36.10	2.55	41.16	41.16	2.75	46.68	46.68	2.75	46.68	46.68	2.75	46.68	46.68	2.94
	1050	13.99	12.87	1.90	18.20	16.72	1.99	23.16	21.12	2.11	27.27	24.22	2.22	31.66	28.81	2.35	36.37	36.37	2.51	41.52	41.52	2.71	46.97	46.97	2.71	46.97	46.97	2.71	46.97	46.97	2.88
	1200	14.18	13.05	1.89	18.44	16.94	1.98	23.36	21.30	2.09	27.54	24.46	2.19	32.02	29.14	2.31	36.81	36.81	2.46	42.09	42.09	2.61	47.10	47.10	2.61	47.10	47.10	2.61	47.10	47.10	2.79
70 (21.1)	900	13.21	12.15	2.00	17.38	15.97	2.11	21.98	20.04	2.25	26.55	23.58	2.39	30.75	27.99	2.54	35.23	35.23	2.72	40.04	40.04	2.93	45.39	45.39	2.93	45.39	45.39	2.93	45.39	45.39	3.18
	975	13.33	12.26	1.99	17.52	16.10	2.10	22.62	20.63	2.24	26.72	23.73	2.36	30.98	28.19	2.50	35.54	35.54	2.67	40.45	40.45	2.87	45.96	45.96	2.87	45.96	45.96	2.87	45.96	45.96	3.08
	1050	13.44	12.36	1.99	17.66	16.23	2.09	22.76	20.75	2.22	26.87	23.86	2.34	31.18	28.38	2.47	35.80	35.80	2.63	40.80	40.80	2.83	46.28	46.28	2.83	46.28	46.28	2.83	46.28	46.28	3.01
	1200	13.63	12.54	1.99	17.89	16.44	2.08	22.99	20.96	2.20	27.13	24.09	2.30	31.52	28.69	2.42	36.23	36.23	2.57	41.38	41.38	2.73	46.54	46.54	2.73	46.54	46.54	2.73	46.54	46.54	2.92
75 (23.9)	900	12.66	11.65	2.10	16.83	15.47	2.22	21.26	19.38	2.35	26.16	23.24	2.52	30.29	27.56	2.67	34.68	34.68	2.85	39.35	39.35	3.07	44.58	44.58	3.07	44.58	44.58	3.07	44.58	44.58	3.33
	975	12.77	11.75	2.09	16.98	15.60	2.21	21.45	19.56	2.33	26.31	23.37	2.48	30.51	27.76	2.63	34.98	34.98	2.80	39.75	39.75	3.01	45.14	45.14	3.01	45.14	45.14	3.01	45.14	45.14	3.22
	1050	12.88	11.85	2.09	17.11	15.72	2.20	21.63	19.72	2.32	26.46	23.50	2.46	30.70	27.94	2.59	35.24	35.24	2.76	40.09	40.09	2.96	45.55	45.55	2.96	45.55	45.55	2.96	45.55	45.55	3.15
	1200	13.05	12.01	2.09	17.31	15.91	2.19	21.92	19.98	2.30	26.72	23.73	2.42	31.04	28.24	2.55	35.66	35.66	2.70	40.65	40.65	2.88	45.91	45.91	2.88	45.91	45.91	2.88	45.91	45.91	3.05
36 Size Outdoor Section With FVM4X60***L Indoor Section - LO																															
65 (18.3)	720	9.56	8.80	1.68	12.50	11.49	1.68	15.65	14.27	1.69	18.88	16.77	1.70	22.67	20.63	1.75	25.24	25.24	1.79	27.86	27.86	1.83	29.86	29.86	1.83	29.86	29.86	1.83	29.86	29.86	1.90
	780	9.69	8.91	1.68	12.65	11.62	1.67	15.82	14.42	1.67	19.08	16.95	1.69	22.85	20.80	1.73	25.45	25.45	1.75	27.93	27.93	1.79	30.18	30.18	1.79	30.18	30.18	1.79	30.18	30.18	1.84
	840	9.80	9.01	1.68	12.78	11.74	1.67	15.97	14.56	1.66	19.26	17.11	1.67	23.02	20.95	1.70	25.64	25.64	1.72	28.16	28.16	1.75	30.46	30.46	1.75	30.46	30.46	1.75	30.46	30.46	1.80
	960	9.97	9.17	1.68	13.00	11.94	1.66	16.23	14.80	1.65	19.57	17.38	1.65	23.28	21.19	1.67	25.95	25.95	1.67	28.55	28.55	1.69	30.92	30.92	1.69	30.92	30.92	1.69	30.92	30.92	1.72
70 (21.1)	720	8.75	8.05	1.75	11.78	10.83	1.75	14.99	13.67	1.76	18.26	16.22	1.79	21.73	19.77	1.83	24.82	24.82	1.88	27.20	27.20	1.94	29.37	29.37	1.94	29.37	29.37	1.94	29.37	29.37	2.00
	780	8.86	8.15	1.75	11.92	10.96	1.74	15.16	13.82	1.75	18.47	16.41	1.77	22.39	20.38	1.82	25.02	25.02	1.85	27.46	27.46	1.89	29.68	29.68	1.89	29.68	29.68	1.89	29.68	29.68	1.95
	840	8.96	8.25	1.75	12.05	11.07	1.74	15.30	13.95	1.74	18.65	16.56	1.75	22.56	20.53	1.79	25.20	25.20	1.81	27.69	27.69	1.85	29.95	29.95	1.85	29.95	29.95	1.85	29.95	29.95	1.90
	960	9.14	8.41	1.75	12.26	11.27	1.73	15.56	14.18	1.73	18.93	16.81	1.73	22.84	20.79	1.76	25.51	25.51	1.77	28.07	28.07	1.79	30.41	30.41	1.79	30.41	30.41	1.79	30.41	30.41	1.82
75 (23.9)	720	7.89	7.26	1.82	11.03	10.14	1.83	14.31	13.05	1.84	17.64	15.67	1.87	20.94	19.06	1.92	24.42	24.42	1.99	26.74	26.74	2.04	28.85	28.85	2.04	28.85	28.85	2.04	28.85	28.85	2.11
	780	7.99	7.35	1.82	11.17	10.26	1.82	14.47	13.20	1.83	17.84	15.84	1.86	21.19	19.29	1.89	24.62	24.62	1.95	26.99	26.99	1.99	29.17	29.17	1.99	29.17	29.17	1.99	29.17	29.17	2.05
	840	8.09	7.44	1.82	11.29	10.37	1.82	14.62	13.33	1.82	18.01	16.00	1.84	21.44	19.51	1.87	24.79	24.79	1.92	27.22	27.22	1.95	29.44	29.44	1.95	29.44	29.44	1.95	29.44	29.44	2.00
	960	8.25	7.59	1.82	11.44	10.51	1.81	14.82	13.51	1.81	18.25	16.21	1.82	21.76	19.80	1.83	25.07	25.07	1.86	27.59	27.59	1.89	29.89	29.89	1.89	29.89	29.89	1.89	29.89	29.89	1.93

See notes at end of section.

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																								
EDB °F (°C)	CFM	-3 (-19.4)			7 (-13.9)			17 (-8.3)			27 (-2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)			
		Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	Capacity MBtuh Total	Sys KW†	In- teg*	
		48 Size Outdoor Section With FVMAX48***L Indoor Section - HI																								
1200	17.97	16.53	2.66	23.15	21.27	2.84	29.65	27.03	3.08	35.05	31.13	3.29	40.86	37.19	3.54	47.00	47.00	3.82	53.46	53.46	4.15	60.50	60.50	4.46	67	67
1300	18.06	16.61	2.65	23.28	21.39	2.83	29.83	27.19	3.06	35.29	31.35	3.27	41.21	37.50	3.50	47.42	47.42	3.77	54.04	54.04	4.07	60.92	60.92	4.37		
1400	18.16	16.70	2.65	23.41	21.51	2.83	29.97	27.33	3.04	35.51	31.53	3.25	41.51	37.77	3.48	47.81	47.81	3.74	54.58	54.58	4.01	61.21	61.21	4.31		
1600	18.34	16.88	2.66	23.67	21.75	2.83	30.22	27.56	3.03	35.87	31.86	3.22	42.01	38.23	3.45	48.45	48.45	3.69	55.23	55.23	3.92	61.47	61.47	4.22		
1200	17.65	16.24	2.82	22.65	20.81	3.00	29.20	26.63	3.23	34.52	30.66	3.45	40.17	36.56	3.69	46.20	46.20	3.98	52.55	52.55	4.32	59.63	59.63	4.65		
1300	17.75	16.33	2.82	22.80	20.95	2.99	29.41	26.81	3.21	34.77	30.88	3.42	40.52	36.87	3.66	46.62	46.62	3.93	53.06	53.06	4.25	60.01	60.01	4.56		
1400	17.87	16.44	2.82	22.97	21.10	2.99	29.59	26.98	3.20	34.99	31.08	3.40	40.82	37.15	3.63	47.00	47.00	3.90	53.59	53.59	4.18	60.34	60.34	4.49		
1600	18.11	16.66	2.83	23.27	21.38	2.99	29.91	27.27	3.19	35.38	31.42	3.38	41.34	37.62	3.60	47.64	47.64	3.85	54.36	54.36	4.09	60.66	60.66	4.39		
1200	17.13	15.76	2.99	22.03	20.25	3.16	27.68	25.23	3.36	33.94	30.15	3.61	39.48	35.93	3.86	45.41	45.41	4.16	51.70	51.70	4.51	58.75	58.75	4.85		
1300	17.26	15.88	2.99	22.20	20.40	3.15	27.91	25.45	3.34	34.20	30.37	3.58	39.82	36.23	3.82	45.82	45.82	4.11	52.16	52.16	4.44	59.15	59.15	4.75		
1400	17.40	16.01	2.99	22.38	20.57	3.14	28.16	25.67	3.33	34.43	30.58	3.56	40.12	36.51	3.79	46.19	46.19	4.07	52.61	52.61	4.37	59.46	59.46	4.68		
1600	17.67	16.25	3.00	22.71	20.87	3.15	28.66	26.13	3.33	34.84	30.94	3.54	40.64	36.98	3.76	46.82	46.82	4.01	53.46	53.46	4.27	59.84	59.84	4.58		
		48 Size Outdoor Section With FVMAX48***L Indoor Section - LO																								
960	10.75	9.89	2.21	15.52	14.27	2.28	20.06	18.29	2.35	24.42	21.69	2.42	29.36	26.71	2.53	33.07	33.07	2.61	36.89	36.89	2.72	40.84	40.84	2.87		
1040	10.91	10.03	2.22	15.72	14.45	2.28	20.30	18.50	2.34	24.72	21.96	2.40	29.61	26.94	2.49	33.39	33.39	2.57	37.30	37.30	2.67	41.32	41.32	2.80		
1120	11.03	10.15	2.22	15.89	14.60	2.28	20.50	18.69	2.33	24.98	22.18	2.39	29.85	27.16	2.47	33.67	33.67	2.53	37.64	37.64	2.62	41.76	41.76	2.73		
1280	11.26	10.36	2.23	16.19	14.88	2.28	20.85	19.01	2.32	25.43	22.58	2.36	30.22	27.50	2.43	34.15	34.15	2.48	38.21	38.21	2.55	42.41	42.41	2.62		
960	9.82	9.03	2.31	14.61	13.43	2.39	19.16	17.47	2.46	23.53	20.89	2.54	28.66	26.08	2.66	32.39	32.39	2.75	36.17	36.17	2.87	40.06	40.06	3.02		
1040	9.96	9.16	2.31	14.79	13.59	2.38	19.39	17.68	2.45	23.82	21.16	2.52	28.96	26.35	2.62	32.72	32.72	2.71	36.57	36.57	2.81	40.53	40.53	2.95		
1120	10.08	9.28	2.32	14.97	13.75	2.38	19.61	17.88	2.44	24.08	21.39	2.50	29.21	26.58	2.60	33.00	33.00	2.67	36.91	36.91	2.76	40.95	40.95	2.89		
1280	10.31	9.48	2.33	15.26	14.02	2.39	19.97	18.21	2.43	24.53	21.78	2.48	29.61	26.95	2.56	33.48	33.48	2.61	37.49	37.49	2.69	41.68	41.68	2.77		
960	9.86	9.07	2.43	13.59	12.49	2.49	18.18	16.58	2.57	22.58	20.06	2.66	27.03	24.60	2.76	31.72	31.72	2.89	35.43	35.43	3.01	39.28	39.28	3.17		
1040	9.99	9.19	2.44	13.77	12.66	2.49	18.41	16.78	2.56	22.88	20.32	2.64	27.47	25.00	2.73	32.04	32.04	2.85	35.82	35.82	2.96	39.74	39.74	3.10		
1120	9.77	8.99	2.44	13.94	12.81	2.49	18.63	16.99	2.56	23.13	20.55	2.62	27.91	25.40	2.71	32.32	32.32	2.81	36.17	36.17	2.91	40.16	40.16	3.04		
1280	9.98	9.18	2.45	14.24	13.08	2.50	18.99	17.32	2.55	23.58	20.94	2.60	28.92	26.32	2.69	32.79	32.79	2.76	36.74	36.74	2.84	40.87	40.87	2.94		

See notes at end of section.

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES *F (°C)																							
EDB °F (°C)	CFM	-3 (-19.4)		7 (-13.9)		17 (-8.3)		27 (-2.8)		37 (2.8)		47 (8.3)		57 (13.9)		67 (19.4)									
		Capacity MBtuh Total	Integ*	Total Sys KWT	Capacity MBtuh Total	Integ*	Total Sys KWT	Capacity MBtuh Total	Integ*	Total Sys KWT	Capacity MBtuh Total	Integ*	Total Sys KWT	Capacity MBtuh Total	Integ*	Total Sys KWT	Capacity MBtuh Total	Integ*	Total Sys KWT						
65 (18.3)	1500	23.79	21.88	3.26	29.29	26.92	3.46	36.45	33.23	3.72	42.81	38.02	3.97	50.01	45.51	4.27	57.93	57.93	4.63	66.85	66.85	4.88	75.37	75.37	5.43
	1625	24.02	22.09	3.27	29.54	27.14	3.46	36.69	33.45	3.71	43.07	38.25	3.95	50.33	45.80	4.24	58.31	58.31	4.58	67.16	67.16	4.91	75.53	75.53	5.33
	1750	24.26	22.32	3.28	29.79	27.38	3.47	36.89	33.63	3.70	43.31	38.47	3.94	50.62	46.07	4.22	58.70	58.70	4.59	67.40	67.40	4.86	75.47	75.47	5.25
	2000	24.72	22.74	3.32	30.26	27.80	3.49	37.26	33.97	3.71	43.75	38.86	3.93	51.14	46.53	4.20	59.34	59.34	4.47	67.57	67.57	4.79	72.61	72.61	5.06
	1500	22.84	21.01	3.40	28.50	26.19	3.61	36.04	32.86	3.88	42.34	37.61	4.15	49.45	45.00	4.46	57.25	57.25	4.83	66.02	66.02	5.19	74.43	74.43	5.65
70 (21.1)	1625	23.07	21.44	3.41	28.74	26.41	3.61	36.27	33.07	3.87	42.61	37.84	4.13	49.77	45.29	4.43	57.63	57.63	4.78	66.38	66.38	5.11	74.67	74.67	5.95
	1750	23.30	21.44	3.42	28.99	26.64	3.62	36.48	33.26	3.87	42.85	38.06	4.11	50.06	45.55	4.40	58.00	58.00	4.74	66.64	66.64	5.06	74.68	74.68	5.47
	2000	23.75	21.85	3.46	29.44	27.06	3.64	36.85	33.60	3.88	43.28	38.44	4.11	50.57	46.02	4.38	58.68	58.68	4.67	66.90	66.90	4.99	72.84	72.84	5.30
75 (23.9)	1500	21.87	20.12	3.54	27.71	25.46	3.76	34.56	31.51	4.03	41.89	37.21	4.34	48.89	44.49	4.66	56.55	56.55	5.03	65.16	65.16	5.40	73.45	73.45	5.88
	1625	22.08	20.32	3.55	27.94	25.67	3.77	34.84	31.76	4.02	42.15	37.43	4.31	49.21	44.78	4.62	56.94	56.94	4.98	65.56	65.56	5.33	73.74	73.74	5.78
	1750	22.32	20.53	3.57	28.18	25.90	3.77	35.20	32.09	4.02	42.39	37.65	4.30	49.50	45.05	4.60	57.30	57.30	4.94	65.85	65.85	5.27	73.83	73.83	5.70
2000	22.75	20.93	3.60	28.63	26.31	3.80	36.40	33.19	4.05	42.82	38.03	4.29	50.01	45.51	4.57	57.99	57.99	4.87	66.19	66.19	5.20	72.85	72.85	5.55	
60 Size Outdoor Section With FVM4X60***L Indoor Section - LO																									
65 (18.3)	1200	13.69	12.59	2.67	19.50	17.92	2.75	25.04	22.83	2.84	30.30	26.91	2.94	35.80	32.58	3.07	39.55	39.55	3.18	42.98	42.98	3.30	46.15	46.15	3.40
	1300	13.81	12.71	2.68	19.67	18.08	2.75	25.29	23.05	2.83	30.62	27.19	2.92	36.10	32.85	3.04	39.97	39.97	3.13	43.47	43.47	3.24	46.62	46.62	3.32
	1400	13.95	12.83	2.69	19.87	18.26	2.75	25.53	23.27	2.83	30.92	27.46	2.90	36.39	33.11	3.01	40.32	40.32	3.09	43.89	43.89	3.19	47.03	47.03	3.26
70 (21.1)	1600	14.22	13.08	2.71	20.21	18.57	2.77	25.94	23.65	2.82	31.45	27.93	2.89	36.86	33.54	2.97	40.89	40.89	3.04	44.64	44.64	3.10	47.64	47.64	3.18
	1200	12.56	11.56	2.79	18.42	16.93	2.87	23.98	21.87	2.97	29.23	25.96	3.07	35.00	31.85	3.22	38.74	38.74	3.33	42.09	42.09	3.46	45.24	45.24	3.57
	1300	12.73	11.72	2.80	18.60	17.09	2.87	24.24	22.10	2.96	29.55	26.25	3.05	35.36	32.17	3.19	39.13	39.13	3.29	42.58	42.58	3.40	45.78	45.78	3.49
75 (23.9)	1400	12.89	11.86	2.81	18.80	17.28	2.88	24.50	22.33	2.96	29.87	26.53	3.04	35.67	32.46	3.16	39.50	39.50	3.25	43.01	43.01	3.35	46.18	46.18	3.43
	1600	13.13	12.08	2.83	19.16	17.61	2.89	24.93	22.73	2.95	30.41	27.01	3.02	36.13	32.88	3.12	40.09	40.09	3.20	43.75	43.75	3.27	46.81	46.81	3.34
	1200	12.10	11.14	2.92	17.17	15.78	3.00	22.80	20.79	3.10	28.07	24.93	3.21	33.24	30.25	3.34	37.87	37.87	3.50	41.18	41.18	3.63	44.31	44.31	3.75
1400 (23.9)	1300	12.28	11.30	2.93	17.37	15.96	3.00	23.05	21.02	3.09	28.41	25.23	3.19	33.69	30.66	3.31	38.28	38.28	3.45	41.66	41.66	3.57	44.86	44.86	3.66
	1400	12.44	11.44	2.94	17.58	16.15	3.00	23.32	21.26	3.09	28.73	25.51	3.18	34.38	31.28	3.30	38.63	38.63	3.41	42.08	42.08	3.52	45.31	45.31	3.60
	1600	11.89	10.94	2.95	17.95	16.50	3.02	23.79	21.69	3.09	29.27	25.99	3.16	35.34	32.16	3.28	39.23	39.23	3.36	42.79	42.79	3.45	45.96	45.96	3.51

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

* Tested Combination

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

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

EDB — Entering Dry Bulb

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.

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 single-phase 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 for single-phase units 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. 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.

6. 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.

7. 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.

8. 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. The control will maintain working head pressure at low-ambient temperatures down to 0°F (-17.8°C) when properly installed.

Usage Guideline:

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

9. Sound Jacket

Wraparound sound reducing cover for the compressor. Reduces the sound level by about 2 dBA.

Usage Guideline:

Suggested when unit is installed closer than 15 ft. (4.577 m) to quiet areas, bedrooms, etc.
Suggested when unit is installed between two houses less than 10 ft. (3.05 m) apart.

10. 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:

Accessory required to meet AHRI rating and system reliability, where indoor not equipped.
Required in all heat pump applications designed with R-410A refrigerant.

11. 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 AHRI rating, where indoor not equipped.

ACCESSORY USAGE GUIDELINE

ACCESSORY	REQUIRED FOR LOW-AMBIENT COOLING APPLICATIONS (Below 55°F / 12.8°C)	REQUIRED FOR LONG LINE APPLICATIONS*	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles/3.22 km)
Accumulator	Standard	Standard	Standard
Compressor Start Assist Capacitor and Relay	Yes**	Yes**	No**
Crankcase Heater	Yes ♦	Yes ♦	No ♦
Evaporator Freeze Thermostat	Yes	No	No
Hard Shutoff TXV	Yes	Yes	No
Isolation Relay	Yes	No	No
Liquid Line Solenoid Valve	No	See Long-Line Application Guideline	No
Low Ambient 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.

** Not required for Three-Phase units

♦ Standard for Three-Phase units only

ACCESSORIES

Part Number	Description	Used On Model Size
NASA001SC	Start Component – PTC Device	ALL*
NASA00201FS	Evaporator Freeze Thermostat	ALL
NASA001LS	Liquid Line Solenoid Valve	ALL
NASA001TD	Time Delay Relay, Indoor Blower	ALL
NASA001AC	Anti-Cycle Timer (5 minute delay)	ALL
NASA401LA	Low Ambient Kit (Pressure Switch)	ALL
NASA405PS	High Pressure Switch Kit	ALL
NASA00101IK	Low Ambient Isolation Relay Kit	ALL
NASA00201SF	Support Feet, 4" (102mm) tall	24
NASA001SF	Support Feet, 4" (102mm) tall	36, 48, 60
NASA003SC	Hard Start Kit (Capacitor & Relay)	ALL*
NASA003CH	Crankcase Heater for Compressor *	24, 36
NASA001CH	Crankcase Heater for Compressor *	48, 60
NASA002SJ	Sound Jacket, Compressor	24
NASA001SJ	Sound Jacket, Compressor	36, 48
NASA003SJ	Sound Jacket, Compressor	60
NAEA40501TX	TXV Kit, R-410A – use on copper and tin fan coils	24
NAEA40601TX	TXV Kit, R-410A – use on copper and tin fan coils	36
NAEA40701TX	TXV Kit, R-410A – use on copper and tin fan coils	48, 60
NAEB40501TX	TXV Kit, R-410A – use on aluminum fan coils	24
NAEB40601TX	TXV Kit, R-410A – use on aluminum fan coils	36
NAEB40701TX	TXV Kit, R-410A – use on aluminum fan coils	48, 60

* Single-Phase units