

25HNA9

**Infinity™ 19 Series Heat Pump
with Puron® Refrigerant
Size 24
2 Tons Nominal**



Turn to the Experts.™

Product Data



INFINITY™ SYSTEM



Carrier's heat pumps with Puron® refrigerant provide a collection of features unmatched by any other family of equipment. The 25HNA9 has been designed utilizing Carrier's Puron® refrigerant. The environmentally sound refrigerant allows consumers to make a responsible decision in the protection of the earth's ozone layer.

As an Energy Star® Partner, Carrier Corporation has determined that this product meets the Energy Star® guidelines for energy efficiency. Refer to the combination ratings in the Product Data for system combinations that meet Energy Star® guidelines.

INDUSTRY LEADING FEATURES / BENEFITS

Energy Efficiency

- 17.5-19 SEER/13.1-14.1 EER/8.4 - 9.2 HSPF

New Aesthetic Design

- WeatherArmor Ultra™ Cabinet
 - Baked on powder paint
 - Steel louver coil guard
 - Color matched ceramic coated cabinet screws

Extra Quiet Operation

- Silencer™ System II for sound as low as 69 dBA
 - Quiet mount split post compressor grommets
 - Quiet External Silencer muffler
 - Exclusive Silencer Top design
 - Electronic ECM 8 pole PSSC ball bearing outdoor condenser fan motor
 - Forward-swept condenser fan blade
 - Compressor sound hood
 - Laminated steel compressor mounting plate
- Quiet Shift Defrost

Reliability, Quality and Toughness

- Two-Stage scroll compressor
- Field-installed 16 cu. in. filter drier
- Back-seating service valves
- High pressure switch
- Loss of charge switch
- Internal pressure relief valve
- Internal thermal overload
- Long-line accessory connections
- Suction Line Accumulator
- Vapor fog eliminator
- Ideal Defrost

Controls and Diagnostics

- Infinity™ Control (MUST be used, no substitutes)
- Utility Interface Connection
- Up to 18 point diagnostic capability

Applications

- Long-line - up to 250 ft. total equivalent length, see Long Line Guide for more information
- Low ambient (down to 0°F) with complete Infinity™ system

Limited Warranty

- 10-year limited warranty on compressor
- 5-year limited warranty on all parts

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	A	A	A/N	N	N	N	A/N	A/N	A/N	N	N
2	5	H	N	A	9	2	4	A	0	0	3	0
Product Series	Product Family	Tier	Major Series	SEER	Cooling Capacity	Variations	Open	Open	Voltage	Minor Series		
25 = HP	H = RES HP	n = infinity Series	A = Puron	9 = 19 SEER		A = Standard	0 = Not Defined	0 = Not Defined	3 = 208/230-1	0, 1, 2...		



As an Energy Star® Partner, Carrier Corporation has determined that this product meets the ENERGY STAR® guidelines for energy efficiency.

Refer to the combination ratings in Product Data for system combinations that meet Energy Star guidelines.



STANDARD FEATURES

Feature	24-30
Puron Refrigerant	X
Up to 19 SEER	X
Second Generation Infinity System	X
Two Stage Scroll Compressor	X
Weather Armor Ultra™	X
Silencer System II™	X
Field Installed 16 cu. in. Filter Drier	X
Loss of Charge Switch	X
High Pressure Switch	X
Back Seating Service Valves	X
Internal Pressure Relief Valve	X
Internal Thermal Overload	X
Long Line Accessory Connections	X
Long Line capability	X
Low Ambient capability	X
Up to 18 Point Diagnostics	X
Quiet Shift Defrost	X
Vapor Fog Eliminator	X
Ideal Defrost	X

PHYSICAL DATA

UNIT SIZE SERIES	24–30
Operating Weight (lb)	322
Shipping Weight (lb)	359
Compressor Type	Scroll
REFRIGERANT	Puron® (R–410A)
Control	TXV (Puron® Hard Shutoff)
Charge (lb)	15.8
COND FAN	Forward Swept Propeller Type, Direct Drive
Air Discharge	Vertical
Air Qty (CFM)	2400/2700
Motor HP	1/5
Motor RPM	550/606
COND COIL	
Face Area (Sq ft)	24.40
Fins per In.	20
Rows	2
Circuits	10
VALVE CONNECT. (In. ID)	
Vapor	3/4
Liquid	3/8
REFRIGERANT TUBES* (In. OD)	
Vapor (0–80 Ft Tube Length)	3/4
Liquid (0–80 Ft Tube Length)	3/8

* For tubing sets between 80 ft. and 200 ft. horizontal or 20 ft. vertical differential (250 ft. Total Equivalent Length), consult the Long–Line Guideline.

Note: See unit Installation Instruction for proper installation.

VAPOR LINE SIZING AND COOLING CAPACITY LOSS PURON 2-STAGE HEAT PUMP APPLICATIONS

LONG LINE APPLICATION: An application is considered "Long line" when the total equivalent tubing length exceeds 80 ft. or when there is more than 20 ft. 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. The maximum vertical separation is 200 ft. when outdoor unit

is above indoor unit, and 80 ft. when the outdoor unit is below the indoor unit. Refer to Accessory Usage Guideline below for required accessories. See Long–Line 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 Liquid Line Diameter (in. O.D.)	Acceptable Vapor Line Diameters (In. O.D.)	Cooling Capacity Loss (%) Total Equivalent Line Length (ft)										
			Standard Applica- tion			Long Line Application Requires Accessories							
			25	50	80	80+	100	125	150	175	200	225	250
24,000 2–Stage Puron HP	3/8	5/8	0	1	1	1	2	3	3	4	4	5	6
		3/4	0	1	1	1	1	1	1	1	1	1	2

Standard Length = 80 ft. 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

KIT NUMBER	KIT NAME	24–30
KHALS0401LLS	SOLENOID VALVE	X
KSASF0101AAA	SUPPORT FEET	X
KSATX0201PUR	TXV	X

x = Accessory S = Standard

* Standard with Infinity Control

INFINITY* CONTROLS	DESCRIPTION
SYSTXCCUID01–A*	Infinity Control Deluxe 7–Day Programmable (Wall–mounted system control.)
SYSTXCCUIZ01–A*	Infinity Control Deluxe Zoning 7–Day Programmable (Wall–mounted control for a multi–zone system.)
SYSTXCC4ZC01	Infinity 4–Zone Damper Control Module (Wall–mounted control for a four–zone system.)
SYSTXCCSMS01	Infinity Smart Sensor (Optional wall control used to monitor temperature and/or fan control in an individual zone.)
SYSTXCCRRS01	Infinity Remote Room Sensor (Monitors temperature in an individual zone.)
SYSTXCCSAM01	Infinity System Access Module (Hardware for wireless access and control via phone or internet.)
SYSTXCCNIM01	Infinity Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators on non–zoning applications.)
SYSTXXBPU01	Decorative Back Plate for Infinity Control (Decorative wall plate.)

* These Infinity series units must use “–A” revision or later to operate properly.

ACCESSORY USAGE GUIDELINE

Accessory	REQUIRED FOR LOW-AMBIENT COOLING APPLICATIONS (0°F to 55°F)	REQUIRED FOR LONG LINE APPLICATIONS* (Over 80 Ft.)	REQUIRED FOR SEA COAST APPLICATIONS (Within 2 miles)
Crankcase Heater	Standard	Standard	Standard
Evaporator Freeze Thermostat	Standard with Infinity Control	No	No
Winter Start Control	Standard with Infinity Control	No	No
Accumulator	Standard	Standard	Standard
Compressor Start Assist Capacitor and Relay	Not Required Self-Equalizing	Not Required Self-Equalizing	Not Required Self-Equalizing
Low Ambient Control	Standard with Infinity Control	No	No
Support Feet	Recommended	No	Recommended
Liquid Line Solenoid Valve	No	Yes	No
Puron Balance Port Hard Shut-Off TXV	Yes†	Yes†	Yes†
Ball Bearing Fan Motor	Standard	Standard	Standard

* For tubing line sets between 80 and 200 ft. and/or 20 ft. vertical differential (250 ft. Total Equivalent Length), refer to Long-Line Application Guideline.

† Required on all indoor units. Standard on all new Puron® fan coils and furnace coils.

Accessory Description and Usage (Listed Alphabetically)

1. 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.

2. Support Feet

Four stick-on plastic feet that raise the unit 4 in. above the mounting pad. This allows sand, dirt, and other debris to be flushed from the unit base, minimizing corrosion.

Usage Guideline:

Suggested in the following applications:

Coastal installations.

Windy areas or where debris is normally circulating.

Rooftop installations.

For improved sound ratings.

3. 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.

ELECTRICAL DATA

UNIT SIZE – SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MIN WIRE SIZE†	MIN WIRE SIZE†	MAX LENGTH (FT)‡	MAX LENGTH (FT)‡	MAX FUSE ** or CKT BRK AMP S
		MAX	MIN	LRA	RLA	FLA		60° C	75° C	60° C	75° C	
24–30	208/230–1	187	253	52.0	16.6	0.9	21.6	12	12	58	55	30

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

† If wire is applied at ambient greater than 30° C (86° F), consult table 310–16 of the NEC (ANSI/NFPA 70). The ampacity of non-metallic-sheathed cable (NM), trade name ROMEX, shall be that of 60° C (140° F) conditions, per the NEC (ANSI/NFPA 70) Article 336–26. If other than uncoated (no-plated), 60 or 75° C (140 or 167° C) insulation, copper wire (solid wire for 10 AWG or smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

** 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.

A-WEIGHTED SOUND LEVEL (dBA)

UNIT SIZE – SERIES	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
24–30	69–low stage	46.9	48.4	48.9	59.5	53.2	48.5	42.4
	71–high stage	51.4	48.9	55.3	58.5	50.2	45.0	42.9

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

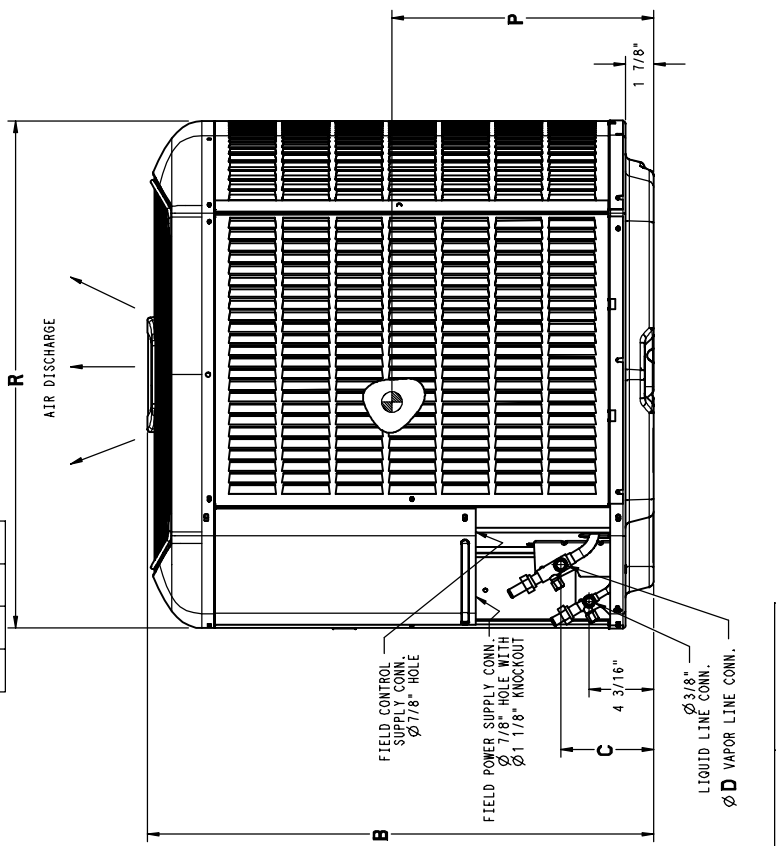
UNIT SIZE–SERIES	REQUIRED SUBCOOLING (F)	OUTDOOR HEATING PISTON #
24–30	12 HIGH STAGE	38

DIMENSIONS

UNIT	SERIES	ELECTRICAL CHARACTERISTICS			A	B	C	D	E	F	G	H	J	K	L	M	N	P	R	OPERATING WEIGHT	SHIPPING WEIGHT	SHIPPING DIMENSIONS (L x W x H)		
25HNA924	0	X	0	0	0	35 1/2"	47 5/16"	6 5/16"	3/4"	6 13/16"	28 3/4"	11 5/8"	1 3/4"	7"	4"	1 1/8"	19 1/2"	17"	20 1/2"	40"	341#	378#	41 1/8" X 38 5/8" X 51 1/16"	

X = YES
O = NO

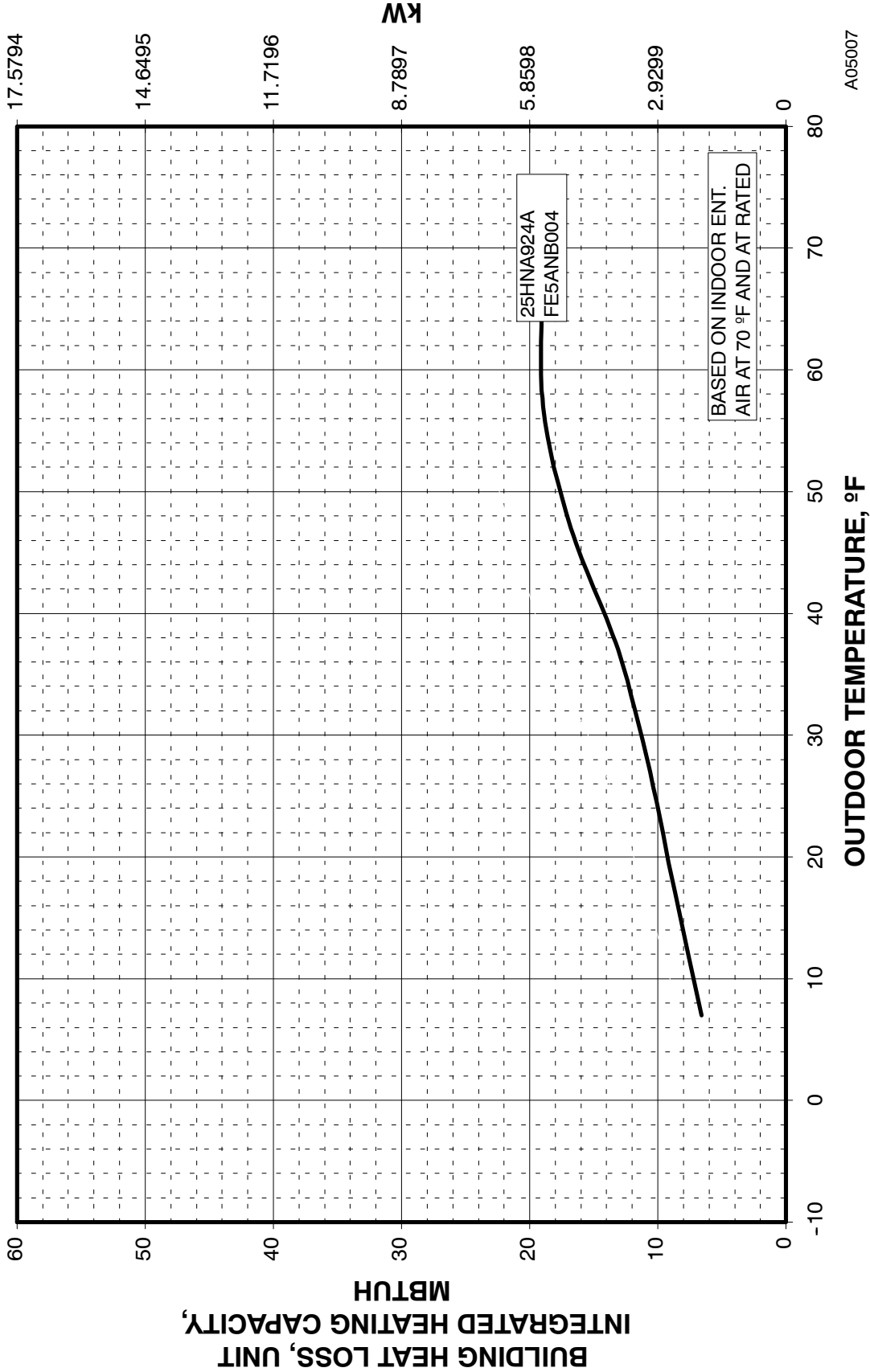
- NOTES:
- 1. ALLOW 30" CLEARANCE TO SERVICE SIDE OF UNIT, 48" ABOVE UNIT, 6" ON ONE SIDE, 12" ON REMAINING SIDE, AND 24" BETWEEN UNITS FOR PROPER AIRFLOW.
 - 2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 55°F, MAX. 125°F.
 - 3. SERIES DESIGNATION IS THE 13TH POSITION OF THE UNIT MODEL NUMBER.
 - 4. CENTER OF GRAVITY



UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
-	29 1/2" X 33"
24	36 1/2" X 40"

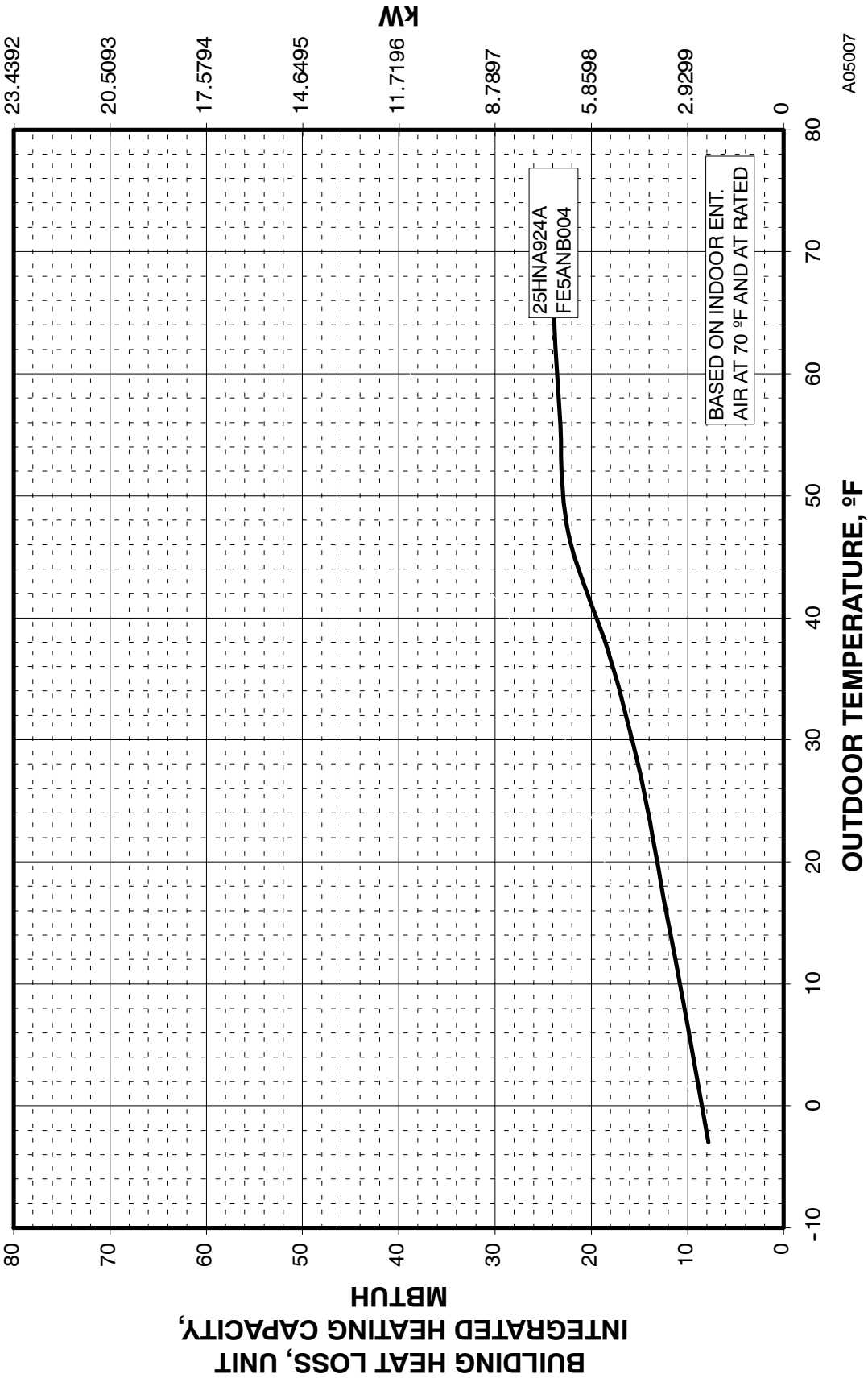
25HNA9 BALANCE POINT WORKSHEET

Low-Stage



25HNA9 BALANCE POINT WORKSHEET

High-Stage



COMBINATION RATINGS

Unit Size – Voltage & Series	Indoor Model	Cooling Capacity		ARI Standard Ratings†												Furnace Model	
				Cooling				Heating									
		SEER	EER	ID CFM		High Temp		Low Temp		HSPF							
						Capacity		COP			Capacity		COP				
High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low				
24–30	*FE5ANB004	26400	19000	19	14.1	800	665	22400	16800	2.64	3.06	13700	9500	2.78	2.4	9.2	
	FE4ANF002	25400	18400	17.9	13.2	800	665	22600	16600	2.58	3	13700	9400	2.66	2.26	8.5	
	FE4ANF003	25600	18400	18.3	13.5	800	665	22600	16400	2.58	2.98	13600	9400	2.66	2.28	8.5	
	CAP**4817A**	26000	18600	18	13.3	800	665	22800	16800	2.56	2.98	13900	9600	2.66	2.32	8.5	58CV(A,X)090–16
	CAP**4817A**	26000	18600	18	13.2	800	665	22800	16800	2.56	2.96	13900	9600	2.66	2.3	8.5	58CV(A,X)110–20
	CAP**4817A**	26000	18600	17.5	13.1	800	665	22800	16800	2.54	2.96	14000	9600	2.64	2.3	8.5	58MB080–20
	CAP**4817A**	26000	18600	17.5	13.2	800	665	22800	16800	2.56	2.96	13900	9600	2.66	2.3	8.5	58MB100–20
	CAP**4821A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13800	9600	2.66	2.32	8.5	58CV(A,X)090–16
	CAP**4821A**	25800	18600	18	13.2	800	665	22600	16800	2.56	2.98	13900	9600	2.66	2.32	8.5	58CV(A,X)110–20
	CAP**4821A**	25800	18600	18	13.3	800	665	22600	16800	2.56	2.98	13800	9600	2.66	2.32	8.5	58CV(A,X)135–22
	CAP**4821A**	25800	18600	18	13.4	800	665	22600	16600	2.56	3	13800	9600	2.68	2.32	8.5	58CV(A,X)155–22
	CAP**4821A**	25800	18600	17.5	13.1	800	665	22600	16800	2.54	2.98	13900	9600	2.64	2.3	8.5	58MB080–20
	CAP**4821A**	25800	18600	17.5	13.2	800	665	22600	16800	2.56	2.98	13900	9600	2.64	2.3	8.5	58MB100–20
	CAP**4821A**	25800	18600	18	13.3	800	665	22600	16800	2.56	2.98	13900	9600	2.66	2.3	8.5	58MB120–20
	CAP**4824A**	25800	18600	17.5	13.2	800	665	22600	16800	2.56	2.98	13900	9600	2.66	2.3	8.5	58CV(A,X)110–20
	CAP**4824A**	25800	18600	18	13.3	800	665	22600	16800	2.56	2.98	13800	9600	2.66	2.32	8.5	58CV(A,X)135–22
	CAP**4824A**	25800	18600	18	13.4	800	665	22600	16800	2.56	2.98	13800	9600	2.66	2.32	8.5	58CV(A,X)155–22
	CAP**4824A**	25800	18600	17.5	13.1	800	665	22600	16800	2.54	2.98	13900	9600	2.64	2.3	8.5	58MB080–20
	CAP**4824A**	25800	18600	17.5	13.2	800	665	22600	16800	2.54	2.98	13900	9700	2.64	2.3	8.5	58MB100–20
	CAP**4824A**	25800	18600	17.5	13.3	800	665	22600	16800	2.56	2.98	13900	9600	2.66	2.3	8.5	58MB120–20
	CAP**6021A**	26200	18800	18	13.5	800	665	22600	16600	2.56	2.96	13800	9500	2.66	2.34	8.5	58CV(A,X)090–16
	CAP**6021A**	26200	18800	18	13.4	800	665	22600	16800	2.56	2.96	13800	9600	2.64	2.32	8.4	58CV(A,X)110–20
	CAP**6021A**	26200	18800	18	13.5	800	665	22600	16600	2.56	2.96	13800	9600	2.66	2.34	8.5	58CV(A,X)135–22
	CAP**6021A**	26200	18800	18	13.6	800	665	22600	16600	2.56	2.96	13800	9500	2.66	2.34	8.5	58CV(A,X)155–22
	CAP**6021A**	26200	18800	18	13.3	800	665	22600	16700	2.54	2.94	13900	9600	2.62	2.32	8.4	58MB080–20
	CAP**6021A**	26200	18800	18	13.4	800	665	22600	16800	2.54	2.94	13800	9600	2.64	2.32	8.4	58MB100–20
	CAP**6021A**	26200	18800	18	13.5	800	665	22600	16600	2.56	2.94	13800	9600	2.64	2.32	8.4	58MB120–20
	CAP**6024A**	26200	18800	18	13.4	800	665	22600	16600	2.54	2.94	13800	9600	2.64	2.32	8.4	58CV(A,X)110–20
	CAP**6024A**	26200	18800	18	13.4	800	665	22600	16600	2.56	2.94	13800	9600	2.64	2.32	8.4	58CV(A,X)135–22
	CAP**6024A**	26200	18800	18	13.5	800	665	22600	16600	2.56	2.94	13800	9600	2.64	2.32	8.4	58CV(A,X)155–22
	CAP**6024A**	26000	18800	18	13.2	800	665	22600	16600	2.52	2.94	13900	9600	2.62	2.3	8.4	58MB080–20
	CAP**6024A**	26200	18800	18	13.3	800	665	22600	16600	2.54	2.92	13800	9600	2.62	2.3	8.4	58MB100–20
	CAP**6024A**	26200	18800	18	13.4	800	665	22600	16600	2.54	2.94	13800	9600	2.64	2.3	8.4	58MB120–20
	CNPH*4821A**	25800	18600	18	13.3	800	665	22600	16800	2.56	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)090–16
	CNPH*4821A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13900	9500	2.64	2.3	8.5	58CV(A,X)110–20
	CNPH*4821A**	26000	18600	18	13.3	800	665	22600	16600	2.56	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)135–22
	CNPH*4821A**	26000	18600	18	13.4	800	665	22600	16600	2.58	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)155–22
	CNPH*4821A**	25800	18600	17.5	13.1	800	665	22800	16600	2.54	3	13900	9500	2.64	2.3	8.5	58MB080–20
	CNPH*4821A**	25800	18600	17.5	13.2	800	665	22600	16600	2.56	3	13900	9600	2.64	2.28	8.5	58MB100–20
	CNPH*4821A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13800	9500	2.66	2.3	8.5	58MB120–20
	CNPH*6024A**	26200	18800	18	13.5	800	665	22400	16600	2.56	3	13800	9600	2.64	2.36	8.7	58CV(A,X)090–16
	CNPH*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9600	2.64	2.34	8.7	58CV(A,X)110–20
	CNPH*6024A**	26200	18800	18	13.5	800	665	22400	16600	2.56	3	13800	9600	2.64	2.36	8.7	58CV(A,X)135–22
CNPH*6024A**	26200	18800	18	13.6	800	665	22400	16400	2.56	3	13700	9600	2.66	2.36	8.7	58CV(A,X)155–22	
CNPH*6024A**	26000	18800	18	13.3	800	665	22600	16600	2.52	2.98	13800	9700	2.62	2.34	8.5	58MB080–20	
CNPH*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9700	2.64	2.34	8.6	58MB100–20	
CNPH*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9700	2.64	2.34	8.6	58MB120–20	
CNPV*4821A**	25800	18700	18	13.3	800	665	22600	16600	2.56	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)090–16	
CNPV*4821A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13900	9500	2.64	2.3	8.5	58CV(A,X)110–20	
CNPV*4821A**	26000	18600	18	13.3	800	665	22600	16600	2.56	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)135–22	
CNPV*4821A**	26000	18600	18	13.4	800	665	22600	16600	2.58	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)155–22	
CNPV*4821A**	25800	18600	17.5	13.1	800	665	22800	16600	2.54	3	13900	9500	2.64	2.3	8.5	58MB080–20	
CNPV*4821A**	25800	18600	17.5	13.2	800	665	22600	16600	2.56	3	13900	9600	2.64	2.28	8.5	58MB100–20	
CNPV*4821A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13800	9500	2.66	2.3	8.5	58MB120–20	
CNPV*4824A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13900	9500	2.64	2.3	8.5	58CV(A,X)110–20	
CNPV*4824A**	26000	18600	18	13.3	800	665	22600	16600	2.56	3.02	13800	9500	2.66	2.3	8.6	58CV(A,X)135–22	
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CNPV*4824A**	25800	18600	17.5	13.1	800	665	22800	16600	2.54	3	13900	9500	2.64	2.3	8.5	58MB080–20	
CNPV*4824A**	25800	18600	17.5	13.2	800	665	22600	16600	2.56	3	13900	9600	2.64	2.28	8.5	58MB100–20	
CNPV*4824A**	25800	18600	18	13.3	800	665	22600	16600	2.56	3	13800	9500	2.66	2.3	8.5	58MB120–20	
CNPV*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9600	2.64	2.34	8.7	58CV(A,X)110–20	
CNPV*6024A**	26200	18800	18	13.5	800	665	22400	16600	2.56	3	13800	9600	2.64	2.36	8.7	58CV(A,X)135–22	
CNPV*6024A**	26200	18800	18	13.6	800	665	22400	16400	2.56	3	13700	9600	2.66	2.36	8.7	58CV(A,X)155–22	
CNPV*6024A**	26000	18800	18	13.3	800	665	22600	16600	2.52	2.98	13800	9700	2.62	2.34	8.5	58MB080–20	
CNPV*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9700	2.64	2.34	8.6	58MB100–20	
CNPV*6024A**	26200	18800	18	13.4	800	665	22400	16600	2.54	2.98	13800	9700	2.64	2.34	8.6	58MB120–20	

See notes on pg. 15

COMBINATION RATINGS CONTINUED

Unit Size – Voltage & Series	Indoor Model	Cooling Capacity		ARI Standard Ratings†												Furnace Model	
				Cooling				Heating									
		SEER	EER	ID CFM		High Temp		Low Temp		HSPF							
						Capacity		COP			Capacity		COP				
		High	Low			High	Low	High	Low	High	Low	High	Low	High	Low		
24–30																	
	CSPH*4812A**	26000	18600	18	13.3	800	665	22600	16600	2.56	3	13900	9500	2.66	2.3	8.6	58CV(A,X)090–16
	CSPH*4812A**	26000	18600	18	13.2	800	665	22600	16600	2.54	3	13900	9600	2.64	2.3	8.5	58CV(A,X)110–20
	CSPH*4812A**	26000	18600	18	13.3	800	665	22600	16600	2.56	3	13900	9600	2.66	2.3	8.5	58CV(A,X)135–22
	CSPH*4812A**	26000	18600	18	13.4	800	665	22600	16600	2.56	3	13800	9600	2.66	2.3	8.6	58CV(A,X)155–22
	CSPH*4812A**	26000	18600	17.5	13.1	800	665	22800	16600	2.54	2.98	13900	9600	2.62	2.3	8.5	58MVB080–20
	CSPH*4812A**	26000	18600	17.5	13.2	800	665	22600	16600	2.54	2.98	13900	9600	2.64	2.28	8.5	58MVB100–20
	CSPH*4812A**	26000	18600	17.5	13.3	800	665	22600	16600	2.56	2.98	13900	9600	2.66	2.3	8.5	58MVB120–20
	CSPH*6012A**	26200	18800	18	13.4	800	665	22600	16800	2.56	2.98	13800	9600	2.66	2.32	8.5	58CV(A,X)090–16
	CSPH*6012A**	26200	18800	18	13.4	800	665	22600	16800	2.56	2.96	13900	9600	2.64	2.32	8.5	58CV(A,X)110–20
	CSPH*6012A**	26200	18800	18	13.5	800	665	22600	16800	2.56	2.96	13800	9600	2.66	2.32	8.5	58CV(A,X)135–22
	CSPH*6012A**	26200	18800	18	13.5	800	665	22600	16800	2.56	2.98	13800	9600	2.66	2.32	8.5	58CV(A,X)155–22
	CSPH*6012A**	26200	18800	18	13.2	800	665	22800	16800	2.54	2.96	13900	9600	2.64	2.3	8.5	58MVB080–20
CSPH*6012A**	26200	18800	18	13.3	800	665	22600	16800	2.54	2.96	13900	9600	2.64	2.3	8.5	58MVB100–20	
CSPH*6012A**	26200	18800	18	13.4	800	665	22600	16800	2.56	2.96	13900	9600	2.66	2.3	8.5	58MVB120–20	

† 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 (±9°C) db 15°F (±10°C) wb air entering outdoor unit.

* Tested Combination

SEER — Seasonal Energy Efficiency Ratio

COP — Coefficient of Performance

TDR — Time–Delay Relay

HSPF — Heating Seasonal Performance Factor

EER — Energy Efficiency Ratio

25HNA9

DETAILED COOLING CAPACITIES

EVAPORATOR AIR				CONDENSER ENTERING AIR TEMPERATURES deg F																	
CFM	EWB	75		85		95		105		115		125									
		Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**								
700																					
	72	30.67	15.94	1.40	29.68	15.62	1.63	28.56	15.26	1.88	27.30	14.86	2.17	25.85	14.39	2.50	24.23	13.87	2.88		
	67	27.79	19.52	1.38	26.86	19.25	1.60	25.82	18.93	1.85	24.65	18.57	2.14	23.33	18.16	2.46	21.80	17.67	2.84		
	63	25.74	18.85	1.36	24.87	18.56	1.58	23.89	18.24	1.83	22.79	17.86	2.11	21.54	17.43	2.44	20.10	16.92	2.82		
	62	25.18	23.12	1.36	24.32	22.89	1.58	23.36	22.62	1.83	22.31	21.37	2.11	21.37	21.37	2.44	20.29	20.29	2.82		
750																					
	57	24.36	24.36	1.35	23.76	23.76	1.57	23.08	23.08	1.82	22.29	22.29	2.11	21.37	21.37	2.44	20.29	20.29	2.82		
	72	31.07	16.37	1.41	30.05	16.06	1.64	28.90	15.70	1.89	27.60	15.29	2.18	26.14	14.84	2.51	24.46	14.31	2.89		
	67	28.16	20.21	1.39	27.20	19.94	1.61	26.13	19.63	1.86	24.93	19.27	2.15	23.57	18.85	2.48	22.00	18.37	2.85		
	63	26.09	19.50	1.37	25.19	19.21	1.59	24.18	18.89	1.84	23.05	18.51	2.13	21.77	18.08	2.45	20.29	17.58	2.83		
800																					
	62	25.52	24.05	1.37	24.64	23.83	1.59	23.67	23.55	1.84	22.80	22.80	2.12	21.85	21.85	2.45	20.72	20.72	2.84		
	57	24.95	24.95	1.36	24.33	24.33	1.58	23.62	23.62	1.84	22.80	22.80	2.12	21.85	21.85	2.45	20.72	20.72	2.84		
	72	31.42	16.80	1.42	30.37	16.48	1.65	29.19	16.13	1.90	27.87	15.73	2.19	26.37	15.27	2.52	24.66	14.74	2.90		
	67	28.49	20.88	1.40	27.50	20.61	1.62	26.40	20.31	1.87	25.17	19.95	2.16	23.78	19.54	2.49	22.19	19.06	2.87		
EVAPORATOR AIR																					
	63	26.40	20.13	1.38	25.47	19.85	1.60	24.43	19.53	1.85	23.27	19.16	2.14	21.97	18.73	2.46	20.47	18.23	2.84		
	62	25.83	24.97	1.38	24.94	24.74	1.60	24.12	24.12	1.85	23.27	23.27	2.14	22.28	22.28	2.47	21.12	21.12	2.85		
	57	25.51	25.51	1.37	24.86	24.86	1.60	24.12	24.12	1.85	23.27	23.27	2.14	22.28	22.28	2.47	21.12	21.12	2.85		
	CONDENSER ENTERING AIR TEMPERATURES deg F																				
CFM	EWB	75		85		95		105		115		125									
		Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**	Capacity MBtu/h Total	Sens†	Total Sys-tem KW**								
600																					
	72	23.46	12.45	0.94	22.23	11.97	1.13	20.93	11.48	1.36	19.55	10.96	1.63	18.08	10.41	1.96	16.50	9.83	2.36		
	67	20.99	15.30	0.92	19.85	14.80	1.11	18.65	14.29	1.34	17.38	13.75	1.61	16.02	13.19	1.94	14.57	12.59	2.34		
	63	19.25	14.66	0.90	18.18	14.17	1.10	17.05	13.65	1.32	15.86	13.11	1.60	14.59	12.56	1.92	13.22	11.96	2.32		
	62	18.77	18.15	0.90	17.73	17.63	1.09	16.82	16.82	1.32	15.89	15.89	1.60	14.89	14.89	1.93	13.79	13.79	2.33		
665																					
	57	18.51	18.51	0.90	17.69	17.69	1.09	16.82	16.82	1.32	15.88	15.88	1.60	14.89	14.89	1.93	13.79	13.79	2.33		
	72	23.94	13.01	0.95	22.66	12.52	1.14	21.32	12.02	1.37	19.89	11.49	1.64	18.37	10.93	1.97	16.73	10.34	2.37		
	67	21.43	16.18	0.93	20.25	15.66	1.12	19.00	15.14	1.35	17.68	14.59	1.62	16.29	14.01	1.95	14.79	13.40	2.35		
	63	19.65	15.49	0.91	18.54	14.97	1.11	17.38	14.45	1.33	16.14	13.90	1.61	14.84	13.32	1.94	13.42	12.71	2.33		
700																					
	62	19.24	19.24	0.91	18.37	18.37	1.11	17.45	17.45	1.34	16.48	16.48	1.61	15.42	15.42	1.94	14.27	14.27	2.34		
	57	19.24	19.24	0.91	18.37	18.37	1.11	17.45	17.45	1.34	16.47	16.47	1.61	15.42	15.42	1.94	14.27	14.27	2.34		
	72	24.16	13.30	0.95	22.86	12.81	1.14	21.50	12.30	1.37	20.05	11.77	1.65	18.51	11.21	1.98	16.85	10.61	2.37		
	67	21.63	16.63	0.93	20.43	16.12	1.13	19.16	15.59	1.35	17.83	15.03	1.63	16.41	14.45	1.96	14.88	13.83	2.35		
EVAPORATOR AIR																					
	63	19.84	15.91	0.92	18.71	15.40	1.11	17.53	14.87	1.34	16.28	14.31	1.61	14.95	13.73	1.94	13.52	13.11	2.34		
	62	19.60	19.60	0.92	18.71	18.71	1.11	17.77	17.77	1.34	16.76	16.76	1.62	15.68	15.68	1.95	14.51	14.51	2.35		
	57	19.60	19.60	0.92	18.71	18.71	1.11	17.77	17.77	1.34	16.76	16.76	1.62	15.68	15.68	1.95	14.50	14.50	2.35		

See notes on pg. 13

DETAILED COOLING CAPACITIES CONTINUED

25HNA924A30 Outdoor Section With FE5ANB004 Indoor Section											
Cooling Indoor Model	High Speed Capacity	Pow-er	Low Speed Capac-ity	Power	Furnace Model	Cooling Indoor Model	High Speed Capacity	Pow-er	Low Speed Capac-ity	Power	Furnace Model
*FE5ANB004	1.00	1.00	1.00	1.00		CNPH*4821A**	0.98	1.04	0.98	1.02	56CV(A,X)135--22
FE4ANF002	0.96	1.03	0.97	1.02		CNPH*6024A**	0.99	1.04	0.99	1.02	56CV(A,X)135--22
FE4ANF003	0.97	1.01	0.97	1.01		CNPV*4821A**	0.98	1.04	0.98	1.02	56CV(A,X)135--22
CAP**4817A**	0.98	1.04	0.98	1.02	56CV(A,X)090--16	CNPV*4824A**	0.98	1.04	0.98	1.02	56CV(A,X)135--22
CAP**4821A**	0.98	1.04	0.98	1.02	56CV(A,X)090--16	CNPV*6024A**	0.99	1.04	0.99	1.02	56CV(A,X)135--22
CAP**6021A**	0.99	1.04	0.99	1.02	56CV(A,X)090--16	CSPH*4812A**	0.98	1.04	0.98	1.02	56CV(A,X)135--22
CNPH*4821A**	0.98	1.04	0.98	1.02	56CV(A,X)090--16	CAP**4821A**	0.99	1.04	0.99	1.03	56CV(A,X)135--22
CNPH*6024A**	0.98	1.04	0.98	1.02	56CV(A,X)090--16	CAP**4824A**	0.98	1.03	0.98	1.02	56CV(A,X)155--22
CNPV*4812A**	0.98	1.04	0.98	1.02	56CV(A,X)090--16	CAP**6021A**	0.99	1.03	0.99	1.02	56CV(A,X)155--22
CSPH*6012A**	0.99	1.04	0.99	1.03	56CV(A,X)090--16	CAP**6024A**	0.99	1.04	0.99	1.02	56CV(A,X)155--22
CAP**4817A**	0.98	1.05	0.98	1.03	56CV(A,X)110--20	CNPH*4821A**	0.98	1.04	0.98	1.02	56CV(A,X)155--22
CAP**4821A**	0.98	1.04	0.98	1.03	56CV(A,X)110--20	CNPH*6024A**	0.99	1.03	0.99	1.02	56CV(A,X)155--22
CAP**4824A**	0.98	1.04	0.98	1.03	56CV(A,X)110--20	CNPV*4821A**	0.98	1.04	0.98	1.02	56CV(A,X)155--22
CAP**6021A**	0.99	1.04	0.99	1.02	56CV(A,X)110--20	CNPV*4824A**	0.98	1.04	0.98	1.02	56CV(A,X)155--22
CNPV*6024A**	0.99	1.04	0.99	1.03	56CV(A,X)110--20	CNPV*6024A**	0.99	1.03	0.99	1.02	56CV(A,X)155--22
CNPH*4821A**	0.98	1.04	0.98	1.03	56CV(A,X)110--20	CSPH*4812A**	0.98	1.04	0.98	1.02	56CV(A,X)155--22
CNPV*4824A**	0.98	1.04	0.98	1.03	56CV(A,X)110--20	CAP**4817A**	0.98	1.06	0.98	1.03	58MV/B080--20
CNPV*4824A**	0.98	1.04	0.98	1.03	56CV(A,X)110--20	CAP**4821A**	0.98	1.05	0.98	1.03	58MV/B080--20
CNPV*6024A**	0.99	1.04	0.99	1.02	56CV(A,X)110--20	CAP**4824A**	0.98	1.05	0.98	1.03	58MV/B080--20
CSPH*4812A**	0.98	1.05	0.98	1.03	56CV(A,X)110--20	CAP**6021A**	0.99	1.05	0.99	1.03	58MV/B080--20
CSPH*6012A**	0.99	1.04	0.99	1.03	56CV(A,X)110--20	CAP**6024A**	0.98	1.05	0.99	1.03	58MV/B080--20
CAP**4821A**	0.98	1.04	0.98	1.02	56CV(A,X)135--22	CNPH*4821A**	0.98	1.05	0.98	1.03	58MV/B080--20
CAP**4824A**	0.98	1.04	0.98	1.03	56CV(A,X)135--22	CNPH*6024A**	0.98	1.04	0.99	1.03	58MV/B080--20
CAP**6021A**	0.99	1.04	0.99	1.02	56CV(A,X)135--22	CNPV*4812A**	0.98	1.04	0.98	1.02	58MV/B080--20
CAP**6024A**	0.99	1.04	0.99	1.03	56CV(A,X)135--22	CNPV*4824A**	0.98	1.04	0.98	1.02	58MV/B080--20

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

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per ARI standard 210/240--94. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

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

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

* Tested Combination

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

†† At TVA rating indoor condition (75°F edb/63°F ewb). All other indoor air temperatures are at 80°F edb.

EWB — Entering Wet Bulb

HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES deg F																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
EDB	CFM	7			17			27			37			47			57			67			Total Sys-tem KWh																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
		Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†	Capacity MBtuh	Total	Integ†																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
25HNA924A30 Outdoor Section With FE5ANB004 Indoor Section – Low Stage																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
65	600	7.32	6.72	1.00	9.69	8.83	1.09	12.17	10.81	1.20	14.65	13.33	1.33	17.07	15.4	19.25	18.76	1.49	18.76	16.91	1.69	18.76	16.91	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1.73	19.69	18.76	1

See notes on pg. 15

HEAT PUMP HEATING PERFORMANCE CONTINUED

25HNA924A30 Outdoor Section With F5ANB004 Indoor Section

Heating Indoor Model	High Speed Capacity	Pow-er	Low Speed Capacity	Pow-er	Furnace Model	Heating Indoor Model	High Speed Capacity	Pow-er	Low Speed Capacity	Furnace Model	Heating Indoor Model	High Speed Capacity	Pow-er	Low Speed Capacity	Pow-er	Furnace Model
*F5ANB004	1.00	1.00	1.00	1.00		CAP**6024A**	1.01	1.04	0.99	58CV(A.X)135-22	CNPH*4824A**	1.02	1.06	1.00	1.00	58MB080-20
FE4ANF002	1.01	1.03	0.99	1.01		CNPH*4821A**	1.01	1.04	0.99	58CV(A.X)135-22	CNPH*6024A**	1.01	1.05	1.01	1.01	58MB080-20
FE4ANF003	1.01	1.03	0.99	1.01		CNPH*6024A**	1.00	1.03	0.99	58CV(A.X)135-22	CSPH*4812A**	1.02	1.06	1.01	1.01	58MB080-20
CAP**4817A**	1.02	1.05	1.00	1.02	58CV(A.X)090-16	CNPH*4821A**	1.01	1.04	0.99	58CV(A.X)135-22	CSPH*6012A**	1.02	1.06	1.03	1.03	58MB080-20
CAP**4821A**	1.01	1.04	0.99	1.01	58CV(A.X)090-16	CNPH*4824A**	1.01	1.04	0.99	58CV(A.X)135-22	CAP**4817A**	1.02	1.05	1.00	1.03	58MB100-20
CAP**6021A**	1.01	1.04	0.99	1.02	58CV(A.X)090-16	CNPH*6024A**	1.00	1.03	0.99	58CV(A.X)135-22	CAP**4821A**	1.01	1.04	1.00	1.03	58MB100-20
CNPH*4821A**	1.01	1.04	0.99	1.00	58CV(A.X)090-16	CSPH*4812A**	1.01	1.04	0.99	58CV(A.X)135-22	CAP**4824A**	1.01	1.04	1.00	1.03	58MB100-20
CNPH*6024A**	1.00	1.03	0.99	1.01	58CV(A.X)090-16	CSPH*6012A**	1.01	1.04	1.00	58CV(A.X)135-22	CAP**6021A**	1.01	1.04	1.03	1.03	58MB100-20
CNPH*4821A**	1.01	1.04	0.99	1.00	58CV(A.X)090-16	CAP**4821A**	1.01	1.03	0.99	58CV(A.X)155-22	CAP**6024A**	1.01	1.05	1.03	1.03	58MB100-20
CNPH*6012A**	1.01	1.04	1.00	1.03	58CV(A.X)090-16	CAP**4824A**	1.01	1.04	1.02	58CV(A.X)155-22	CNPH*4821A**	1.01	1.04	1.01	1.01	58MB100-20
CAP**4817A**	1.02	1.05	1.00	1.03	58CV(A.X)110-20	CAP**6021A**	1.01	1.04	0.99	58CV(A.X)155-22	CNPH*6024A**	1.00	1.04	1.01	1.01	58MB100-20
CAP**4824A**	1.01	1.04	1.00	1.02	58CV(A.X)110-20	CAP**6024A**	1.01	1.03	0.99	58CV(A.X)155-22	CNPH*4821A**	1.01	1.04	1.01	1.01	58MB100-20
CAP**6021A**	1.01	1.04	0.99	1.02	58CV(A.X)110-20	CNPH*4821A**	1.00	1.03	0.98	58CV(A.X)155-22	CNPH*6024A**	1.00	1.04	1.01	1.01	58MB100-20
CAP**6024A**	1.01	1.05	0.99	1.03	58CV(A.X)110-20	CNPH*4824A**	1.01	1.03	0.99	58CV(A.X)155-22	CSPH*6012A**	1.01	1.04	1.03	1.03	58MB100-20
CNPH*4821A**	1.01	1.04	0.99	1.00	58CV(A.X)110-20	CNPH*6024A**	1.00	1.03	0.98	58CV(A.X)155-22	CAP**4821A**	1.01	1.04	1.02	1.02	58MB120-20
CNPH*6024A**	1.00	1.04	0.99	1.01	58CV(A.X)110-20	CSPH*4812A**	1.01	1.04	1.00	58CV(A.X)155-22	CAP**6021A**	1.01	1.04	1.03	1.03	58MB120-20
CNPH*4824A**	1.01	1.04	0.99	1.00	58CV(A.X)110-20	CSPH*6012A**	1.01	1.04	1.00	58CV(A.X)155-22	CAP**6024A**	1.01	1.04	1.04	1.04	58MB120-20
CNPH*4824A**	1.01	1.04	0.99	1.00	58CV(A.X)110-20	CAP**4817A**	1.02	1.06	1.00	58MB080-20	CNPH*4821A**	1.01	1.04	1.00	1.00	58MB120-20
CNPH*6012A**	1.01	1.04	1.00	1.03	58CV(A.X)110-20	CAP**4821A**	1.01	1.05	1.00	58MB080-20	CNPH*6024A**	1.00	1.04	1.01	1.01	58MB120-20
CNPH*6012A**	1.01	1.04	1.00	1.03	58CV(A.X)110-20	CAP**6021A**	1.01	1.05	1.00	58MB080-20	CNPH*4821A**	1.01	1.04	1.01	1.01	58MB120-20
CNPH*6012A**	1.01	1.04	1.00	1.03	58CV(A.X)135-22	CAP**6024A**	1.01	1.05	0.99	58MB080-20	CNPH*4821A**	1.01	1.04	1.01	1.01	58MB120-20
CAP**4821A**	1.01	1.04	1.00	1.02	58CV(A.X)135-22	CNPH*4821A**	1.02	1.05	0.99	58MB080-20	CSPH*4812A**	1.01	1.04	1.01	1.01	58MB120-20
CAP**6021A**	1.01	1.04	0.99	1.02	58CV(A.X)135-22	CNPH*6024A**	1.01	1.05	0.99	58MB080-20	CSPH*6012A**	1.01	1.04	1.03	1.03	58MB120-20

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

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

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

* Tested Combination

EDB — Entering Dry Bulb

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 compressor, an air-cooled coil, forward swept blade propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

- Unit will be rated in accordance with the latest edition of ARI Standard 240.
- 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 are pressure tested and the outdoor units are leak tested.
- Unit constructed in ISO9001 approved facility.

Delivery, Storage, and Handling

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

Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

PRODUCTS

Equipment

- Factory assembled, single piece, air-cooled heat pump unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge Puron® (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, forward swept blade, discharging air upward.

AIR-COOLED, SPLIT-SYSTEM HEAT PUMP

25HNA9

2 NOMINAL TONS

- Condenser fan motors will be electronic ECM motors that provide multi-speed operation with enhanced low-speed efficiencies and sound levels.
- Shafts will be corrosion resistant.
- Forward swept fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

Compressor

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

Condenser Coil

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

Refrigeration Components

- Refrigeration circuit components will include liquid-line back-seating shutoff valve with sweat connections, vapor-line back-seating shutoff valve with sweat connections, system charge of Puron® (R-410A) refrigerant, POE compressor oil, accumulator, and reversing valve.
- Unit will be equipped with high pressure switch, loss of charge switch, and filter drier for Puron refrigerant.

Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F. 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 wet bulb and _____ °F dry bulb, and air entering the unit at _____ °F.
- The system will have a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

- Nominal unit electrical characteristics will be _____ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.

Special Features

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