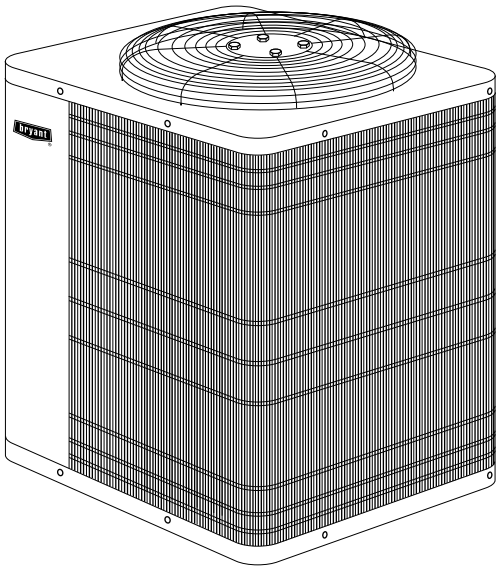
bryant
Heating & Cooling Systems

QUANTUM PLUS 13 SEER HEAT PUMP WITH PURON™ REFRIGERANT

650A (60 Hz)

Sizes 024 thru 060



The Quantum Plus line of split-system outdoor units has been expanded to include the Model 650A 13 SEER heat pump (with efficiencies up to 14.5 SEER). Homeowners will appreciate the Quantum Plus with Puron Refrigerant because of its efficiency, environmental soundness and its availability for years to come.

Another benefit of the Quantum Plus is the durability of the scroll compressor. Model 650A has received certifications from UL, c-UL, ARI, CEC, and CSA-EEV. The 650A is also approved by Energy Star[SM] for energy efficiency and by Green Seal for efficiency and environmental soundness.

FEATURES

REFRIGERANT—The environmentally sound refrigerant used in the 650A is Puron. This advanced refrigerant contains no chlorine which can contribute to ozone depletion in the atmosphere, so it's a smart choice for homeowners who are concerned with protecting our environment, now and for future generations. And it's a smart choice for anyone interested in high-efficiency cooling.

RELIABLE BUILT-IN COMPONENTS—All units include a suction line accumulator that minimizes the amount of liquid refrigerant that reaches the compressor; a high-pressure switch for high-pressure protection; a low-pressure switch for loss of charge protection; and a liquid-line filter drier to remove any moisture or foreign matter from the system. A crankcase heater is standard on the 048 and 060 sizes.

COMPRESSOR PROTECTION—Each scroll compressor motor is protected with internal temperature and current-sensitive overloads. For improved serviceability each compressor is equipped with a compressor terminal plug.

UNIT DESIGN—Copper tube, enhanced aluminum fin coil is designed for strong heat transfer. Vertical air discharge carries sound and hot condenser air up and away from adjacent patio areas and foliage. Heat pump style base pan is popular for its easy removal of water, dirt, and leaves.

The ***AeroQuiet System (AQS)*** consists of 4 design features to achieve ultra-low sound ratings.

Aerocoustic Design featuring the Aeromax opening and wire dome top results in quieter and more efficient operation.

Energy-Efficient Fan and Fan Motor provide a slower fan operation, thus reducing noise and improving efficiency.

Sound Hood muffles noise from operation.

Discharge Muffler minimizes low frequency sound and pressure pulsation generated by compressor discharge gas.

WEATHER-PROTECTIVE CABINET—Steel is galvanized and coated with a layer of zinc phosphate. A layer of modified polyester powder is then applied and baked on, providing each unit with a durable finish that will last for many years.

All screws on cabinet exterior are coated for a long-lasting, rust-resistant, quality appearance.

COIL PROTECTION—The DuraGuard coil protector, made of a 12 gage coated steel wire grid with vertical 3/8-in. spacing, is designed to help protect the coil from inclement weather, vandalism, and incidental damage. It provides protection while not restricting airflow and maintaining ease of coil inspection and cleaning.

EASY SERVICEABILITY—One access panel provides access to electrical controls and compressor. Removal of wire dome gives access to fan motor and removal of the top gives access to the coil.

WIDE RANGE OF SIZES—Available in 6 nominal sizes from 024 through 060 to meet the needs of residential and light commercial applications.

LIMITED WARRANTY—Standard 1-year limited warranty on parts, with an additional 9-year limited warranty on compressor.

TOTALLY ENCLOSED FAN MOTOR—Means greater reliability under adverse weather conditions and dependable performance for many years. Permanent split-capacitor-type motors provide more economical operation.

DEFROST CONTROL BOARD—Incorporates a built-in 5-minute compressor time-delay relay, defrost relay, defrost timer, and low-voltage terminal board. The defrost control is a time/temperature initiation/termination control, which includes 3 field-selectable time periods of 30, 50, and 90 minutes.

APPLICATION VERSATILITY—Due to PressureGuard™ the 650A can be combined with a wide variety of evaporator coils and blower packages to provide quiet, dependable comfort. The 650A can be installed on a roof or at ground level on a slab.

EXTERNAL SERVICE VALVES—Both service valves are brass, back seating type with sweat connections. Valves are externally located so refrigerant tube connections can be made quickly and easily. Each valve has a service port for ease of checking operating refrigerant pressures.

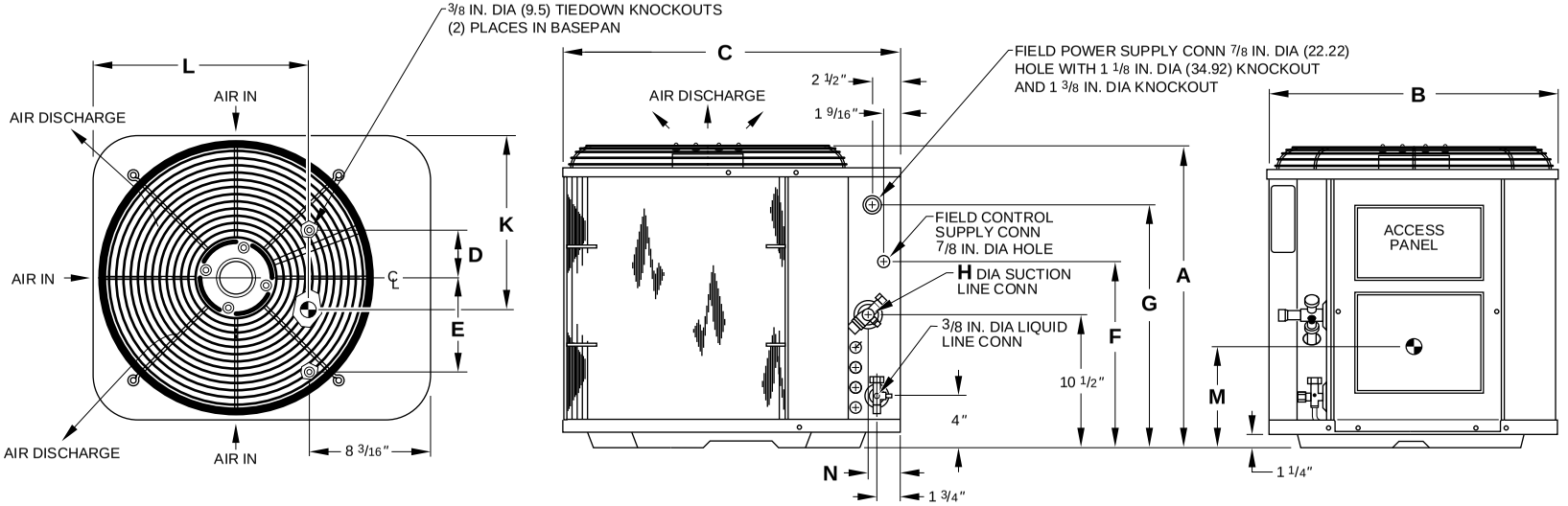
THERMOSTATIC EXPANSION VALVE (TXV)—This unit must be installed with a Puron™ approved TXV on the indoor coil. The FX4 and FV4 fan coils come factory equipped with Puron TXVs. When installed with these fan coils, no further change is required. For any other coil combination, the approved field accessory Puron TXV must be installed. For applications with fan coils such as the FC4 and FK4 which have R-22 TXVs, the R-22 TXV must be replaced with the approved field accessory Puron TXV.

ELECTRICAL RANGE—All units are offered in 208/230v single phase only.

Form No. PDS 650A.24.2

NOTES:

1. Allow 30 in. clearance to service end of unit, 48 in. above unit, 6 in. on one side, 12 in. on remaining side, and 24 in. between units for proper airflow.
2. Minimum outdoor operating ambient in cooling mode is 55°F (unless low ambient control is used) max 125°F.
3. Maximum outdoor operating ambient in heating mode is 66°F.
4. Series designation is the 14th position of the unit model number.
5. Center of gravity ⊕ .



DIMENSIONS (IN.)

UNIT SIZE	SERIES	UNIT DIMENSIONS												MINIMUM MOUNTING PAD DIMENSIONS	
		A	B	C	D	E	F	G	H	K	L	M	N	Support Feet	Snow Stand
024	A,C	39-13/16	30	33	5-1/16	9-11/16	27-15/16	34-3/8	5/8	15-7/8	14-3/8	14-1/4	2-15/16	26 x 32	31 x 35
030	A,C	33-13/16	30	33	5-1/16	9-11/16	21-15/16	28-3/8	3/4	14	13-1/8	13-3/4	2-15/16	26 x 32	31 x 35
036	A,C	27-13/16	30	33	5-1/16	9-11/16	15-15/16	22-3/8	3/4	16-1/8	14-1/8	13-1/4	2-15/16	26 x 32	31 x 35
042	A,C	27-13/16	30	33	5-1/16	9-11/16	15-15/16	22-3/8	7/8	16-1/4	14	13-1/8	2-15/16	26 x 32	31 x 35
048	A,C	39-13/16	30	33	5-1/16	9-11/16	27-15/16	34-3/8	7/8	16-1/4	14-1/4	14-1/2	2-15/16	26 x 32	31 x 35
060	B,C	39-13/16	30	33	5-1/16	9-11/16	27-15/16	34-3/8	7/8	16	13-3/4	14	2-15/16	26 x 32	31 x 35

RECOMMENDED TUBE DIAMETERS

UNIT SIZE	LIQUID TUBE DIAMETER (IN.)		VAPOR TUBE DIAMETER (IN.)		
	0 to 50 Ft Tube Length	Alternate	0 to 50 Ft Tube Length	Alternate	RST* (Not Permitted)
024	3/8	3/8	5/8	3/4 ACR	3/4
030	3/8	3/8	3/4	7/8	1-1/8
036	3/8	3/8	3/4	7/8	1-1/8
042, 048	3/8	3/8	7/8	7/8	3/4 and 1-1/8
060	3/8	3/8	1-1/8	7/8	3/4

* RST—Refrigeration Service Tubing, standard refrigerant grade tubing.

NOTES:

1. Tube diameters are for lengths up to 50 ft. For tubing lengths greater than 50 ft, consult the Application Guideline and Service Manual for Residential Split-System Air Conditioners and Heat Pumps using Puron Refrigerant.
2. Refrigerant tubes and indoor coils must be evacuated to 500 microns to minimize contamination and moisture in the system.

METERING DEVICE

UNIT SIZE	SERIES	OUTDOOR PISTON	INDOOR TXV*	REQUIRED SUBCOOLING (°F)
024	A,C	46	KSATX0201HSZ	11
030	A,C	52	KSATX0201HSZ	9
036	A,C	57	KSATX0301HSZ	9
042	A,C	59	KSATX0301HSZ	11
048	A,C	61	KSATX0401HSZ	10
060	B,C	73	KSATX0501HSZ	12

* TXV must be installed when indoor coil is not equipped with a Puron approved TXV. TXV listed is for any approved coil combination. All TXVs are Puron specific bi-flow hard shutoff.

SOUND RATING (dBA)

UNIT SIZE–SERIES	SOUND RATING
024-A,C	72
030-A,C	74
036-A,C	76
042-A,C	76
048-A,C	78
060-B,C	78

As an ENERGY STAR[SM] partner, Bryant Heating & Cooling Systems has determined that this product meets the ENERGY STAR guidelines for energy efficiency.

Meets GREEN SEAL Environmental Criteria for high energy efficiency, low noise, and recycled packaging. Does not use an ozone depleting substance during manufacturing, or as a refrigerant.

Puron™ the environmentally sound refrigerant

CERTIFICATION APPLIES ONLY WHEN THE COMPLETE SYSTEM IS LISTED WITH ARI.

REGISTERED QUALITY SYSTEM

SPECIFICATIONS

UNIT SIZE-SERIES	024-A,C	030-A,C	036-A,C
Operating Weight (Lb)	214	205	217
ELECTRICAL			
Unit Volts—Hertz—Phase	208/230—60—1		
Operating Voltage Range*	187—253		
Compressor Rated Load Amps	15.1	14.7	15.4
Compressor Locked Rotor Amps	61.0	72.5	83.0
Condenser Fan Motor—Full Load Amps	0.8	1.1	1.1
Minimum Unit Ampacity for Wire Sizing	19.7	19.5	20.4
Minimum Wire Size (60°C Copper) (AWG)†	14	14	12
Minimum Wire Size (75°C Copper) (AWG)†	14	14	12
Maximum Wire Length (60°C) (Ft)‡	39	39	60
Maximum Wire Length (75°C) (Ft)‡	37	37	57
Maximum Branch Circuit Fuse Size**	30	30	30
COMPRESSOR & REFRIGERANT			
Compressor Manufacturer	Copeland		
Compressor Type	Scroll		
Refrigerant Type	Puron		
Refrigerant Amount (Lb)††	7.18	6.63	8.87
OUTDOOR COIL & FAN			
Coil Face Area (Sq Ft)	18.18	15.15	12.12
Fins per In.—Rows—Circuits	25—1—2	25—1—3	20—2—3
Fan Motor—HP & RPM	1/8 and 825	1/5 and 825	1/5 and 825
Rated Airflow (CFM)	2400	2800	2800
OPTIONAL EQUIPMENT			
Support Feet—4 In. (4)	KSASF0101AAA		
Snow Stand—18 In.	KHASS0206MPK		
Time Delay Relay	KAATD0101TDR		
Interface Control (Energy Minder)‡‡	KHAIC0101AAA		
Service Alarm***	KHASA0101AAA		
Outdoor Thermostat	KHAOT0301FST		
Secondary Outdoor Thermostat	KHAOT0201SEC		
Crankcase Heater	KAACH1201AAA		
Start Assist—Capacitor/Relay Type	KSAHS1501AAA		
Start Assist—PTC Type	Standard		
Bi-Flow TXV (Hard Shutoff)	KSATX0201HSZ		KSATX0301HSZ
Filter Drier (Suction Line)	KH45LG140 (RCD)		
Evaporator Freeze Thermostat†††	KAAFT0101AAA		
Isolation Relay†††	KHAIR0101AAA		
Liquid-Line Solenoid Valve (LSV)	KHALS0401LLS		
Low-Ambient Pressure Switch	KSALA0301410		

See notes on page 5.

SPECIFICATIONS Continued

UNIT SIZE-SERIES	042-A.C	048-A,C	060-B,C
Operating Weight (Lb)	218	266	295
ELECTRICAL			
Unit Volts—Hertz—Phase	208/230—60—1		
Operating Voltage Range*	187—253		
Compressor Rated Load Amps	21.1	20.5	27.6
Compressor Locked Rotor Amps	104.0	109.0	158.0
Condenser Fan Motor—Full Load Amps	1.1	1.4	1.4
Minimum Unit Ampacity for Wire Sizing	27.5	27.0	35.9
Minimum Wire Size (60°C Copper) (AWG)†	10	10	8
Minimum Wire Size (75°C Copper) (AWG)†	10	10	8
Maximum Wire Length (60°C) (Ft)‡	71	74	86
Maximum Wire Length (75°C) (Ft)‡	68	70	82
Maximum Branch Circuit Fuse Size**	40	40	60
COMPRESSOR & REFRIGERANT			
Compressor Manufacturer	Copeland		
Compressor Type	Scroll		
Refrigerant Type	Puron		
Refrigerant Amount (Lb)††	8.63	13.25	13.25
OUTDOOR COIL & FAN			
Coil Face Area (Sq Ft)	12.12	18.18	18.18
Fins per In.—Rows—Circuits	20—2—3	20—2—4	20—2—5
Fan Motor—HP & RPM	1/5 and 825	1/4 and 1100	1/4 and 1100
Rated Airflow (CFM)	2800	3300	3300
OPTIONAL EQUIPMENT			
Support Feet—4 In. (4)	KSASF0101AAA		
Snow Stand—18 In.	KHASS0206MPK		
Time Delay Relay	KAATD0101TDR		
Interface Control (Energy Minder)‡‡	KHAIC0101AAA		
Service Alarm***	KHASA0101AAA		
Outdoor Thermostat	KHAOT0301FST		
Secondary Outdoor Thermostat	KHAOT0201SEC		
Crankcase Heater	KAACH1201AAA	Standard	
Start Assist—Capacitor/Relay Type	KSAHS1501AAA	KSAHS1601AAA	
Start Assist—PTC Type	Standard		KAACS0201PTC
Bi-Flow TXV (Hard Shutoff)	KSATX0301HSZ	KSATX0401HSZ	KSATX0501HSZ
Filter Drier (Suction Line)	KH45LG141 (RCD)		
Evaporator Freeze Thermostat†††	KAAFT0101AAA		
Isolation Relay†††	KHAIR0101AAA		
Liquid-Line Solenoid Valve (LSV)	KHALS0401LLS		
Low-Ambient Pressure Switch	KSALA0301410		

* Permissible limits of the voltage range at which the unit will operate satisfactorily. Operation outside these limits may result in unit failure.

† If other than uncoated (non-plated), 60°C or 75°C (140° or 167°F) insulation, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).
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 nonmetallic-sheathed cable (NM), trade name ROMEX, shall be that of 60°C (140°F) conductors, per the NEC (ANSI/NFPA 70) Article 336-26.

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

** Time-delay fuse or circuit breaker.

†† The factory refrigerant charge is for 15 ft of interconnecting tubing. For tubing lengths other than 15 ft, refer to the Residential Split-Systems Long-Line Application Guideline and Service Manual for Residential Split-System Air Conditioners and Heat Pumps using Puron (R-410A).

‡‡ Outdoor thermostat required.

*** For indicator function, thermostat specified must be used and wired according to service alarm Installation Instructions.

††† Use with low-ambient pressure switch.

NOTE: Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

THERMOSTATS AND ACCESSORIES

Thermostat—Auto Changeover, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool	TSTATBBNHP01-B
Thermostat—Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool	TSTATBBPHP01-B
Thermostat—Auto Changeover, 7-Day Programmable, °F/°C, Dual Fuel, Includes Outdoor Sensor (TSTATXXSEN01)	TSTATBBPDF01-B*
Thermidistat™ Control—Non-Programmable/Programmable Thermostat with Humidity Control (For use in Dual Fuel, AC, HP, and 2S applications. Includes Outdoor Air Temperature Sensor.)	TSTATBBPRH01-B*
Builder's Thermostat—Manual Changeover, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool, Heat Pump	TSTATBBBHP01*
Outdoor Air Temperature Sensor	TSTATXXSEN01
Backplate for Non-Programmable Thermostat	TSTATXXNBP01†
Backplate for Programmable Thermostat and Thermidistat™ Control	TSTATXXPBP01†
Backplate for Builder's Thermostat	TSTATXXBBP01†
Thermostat Conversion Kit (4 to 5 Wire)—10 Pack	TSTATXXCNV10‡

* Do not use in zoning heat pump applications.

† This plate is designed to cover surrounding wall area located behind thermostat.

‡ Thermostat conversion kit is a 24-vac accessory that can turn a 4-wire thermostat application into a 5-wire application. This kit can also be used to replace a broken thermostat wire, or add an extra wire when needed.

** Outdoor air temperature sensor is an accessory for all Bryant electronic thermostats, except the non-programmable air conditioner version and builder's thermostats. It allows the temperature at a remote location (outdoors) to be displayed on the thermostat.
The outdoor air temperature sensor *must be* used with the dual fuel thermostat.
The outdoor air temperature sensor is included with the Thermidistat Control and dual fuel thermostat.

ACCESSORY USAGE GUIDELINE

ACCESSORY	REQUIRED FOR LOW-AMBIENT APPLICATIONS (Below 55°F)	REQUIRED FOR LONG-LINE APPLICATIONS* (Over 50 Ft)
Crankcase Heater	Yes	Yes
Evaporator Freeze Thermostat	Yes	No
Compressor Start Assist—Capacitor and Relay	Yes	Yes
Puron Low-Ambient Pressure Switch	Yes	No
Wind Baffle	See Low-Ambient Pressure Switch Instructions	No
Support Feet	Recommended	No
Puron Hard Shutoff TXV	Yes†	Yes†
Puron Liquid-Line Solenoid Valve for Heating	No	See Long-Line Application Guideline

* For tubing line sets between 50 and 175 ft and/or 20 ft elevation difference between indoor and outdoor units, refer to the Application Guideline and Service Manual for Residential Split-System Air Conditioners and Heat Pumps using Puron Refrigerant.

† Required for all applications.

ACCESSORY DESCRIPTION AND USAGE (Listed Alphabetically)

1. **Compressor Start Assist—Capacitor and Relay**
   Start capacitor and start relay which gives a “hard” boost to compressor motor at each start-up.

SUGGESTED USE: Installations where interconnecting tube length exceeds 50 ft.
Installations where outdoor design temperature exceeds 105°F (40.6°C).
Units installed with Low Ambient Pressure Switch. Units installed with Liquid-Line Solenoid Valve.

2. **Compressor Start Assist—PTC Type**
   Solid-state electrical device which gives a “soft” boost to the compressor at each start-up.

SUGGESTED USE: Installations with marginal power supply.

3. **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 chance of refrigerant slugging. May or may not include a thermostat control.

SUGGESTED USE: When interconnecting tube length exceeds 50 ft.
When unit will be operated below 55°F (12.8°C) outdoor air temperature. (Use with Low-Ambient Pressure Switch.)
All commercial installations.

4. **Evaporator Freeze Thermostat**
   An SPST temperature actuated switch which stops unit operation when evaporator reaches freeze-up conditions.

SUGGESTED USE: All units to which Low-Ambient Pressure Switch has been added.

5. **Filter Drier—Suction Line**
   A device for removing contaminants from refrigerant circulating in a heat pump system; 2-direction flow for heat pumps.

SUGGESTED USE: Split-system heat pumps.

6. **Interface Control (Energy Minder)**
   An electric control for controlling a heat pump and gas or oil furnace system for maximum energy savings. It allows heat pump to operate down to a predetermined economic balance point temperature, then switches to allow furnace operation only below that temperature. Requires outdoor thermostat (Item 11) to be adjusted for economic balance point temperature.

SUGGESTED USE: For heat pump and gas- or oil-fired furnace combination systems unless Duel Fuel Thermostat or Thermidistat™ Control is used.

7. **Isolation Relay**
   An SPDT relay which switches the Low-Ambient Controller out of the outdoor fan motor circuit when the heat pump switches to heating mode.

SUGGESTED USE: All heat pumps where Low-Ambient Pressure Switch has been added.

8. **Liquid-Line Solenoid Valve (LSV)**
   An electrically operated shutoff valve to be installed at the outdoor unit which stops and starts refrigerant liquid flow in response to compressor operation. Maintains a column of refrigerant liquid ready for action at next compressor operation cycle.

SUGGESTED USE: In long-line applications. (Refer to the Residential Split-System Long-Line Application Guideline and Service Manual.)

9. **Low-Ambient Pressure Switch**
   A long life pressure switch which is mounted to outdoor unit service valve. It is designed to cycle the outdoor fan motor in order to maintain head pressure within normal operating limits (approximately 200 psig to 365 psig). The control will maintain working head pressure at low-ambient temperatures down to 0°F (–17.8°C) when properly installed.

SUGGESTED USE: Cooling operation at outdoor temperatures below 55°F (12.8°C).

10. **Outdoor Air Temperature Sensor**
    A device that allows the temperature at a remote location (outdoors) to be displayed at the thermostat.

SUGGESTED USE: All Bryant programmable thermostats.

11. **Outdoor Thermostat**
    An SPDT temperature actuated switch which turns on supplemental electric heaters when outdoor air temperature drops below set point.

SUGGESTED USE: Heat pump installations with multiple-stage supplemental heaters.

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

SUGGESTED USE: Heat pump installations where 3-stage operation of supplemental heaters is desired.

13. **Service Alarm**
    A current-sensing lockout relay which provides immediate notification that compressor is not operating during a call for heating or cooling. Used with proper room thermostat, a thermostat signal is turned on signifying service is required. This can minimize electrical cost increase due to operation of supplemental heaters only.

SUGGESTED USE: As a feature to notify owner immediately when the system is not operating most efficiently.

14. **Snow Stand**
    Coated wire rack which supports unit 18 in. above mounting pad to allow for drainage from unit base.

SUGGESTED USE: Heat pump installations in heavy snowfall areas.
Heat pump installations in snowdrift locations.
Heat pump installations in areas of prolonged subfreezing temperatures.
All commercial installations.

15. **Support Feet**
    Four stick-on plastic feet which raise the unit 4 in. above the mounting pad. This allows sand, dirt, and other debris to be flushed from the unit base; minimizes corrosion.

SUGGESTED USE: Coastal installations.
Windy areas or where debris is normally circulating.
Rooftop installations.

16. **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. Kit includes valve, adapter tubes, and external equalizer tube.

SUGGESTED USE: Required for all installations.

17. **Time-Delay Relay**
    An SPST delay relay which briefly continues operation of the indoor blower motor to provide additional cooling after the compressor cycles off.

SUGGESTED USE: For improved efficiency ratings for certain combinations of indoor and outdoor units. (Refer to ARI Unitary Directory.)
Required for use on all zoning systems.

COMBINATION RATINGS*

UNIT SIZE-SERIES	INDOOR UNIT	CFM††	ARI STANDARD RATINGS*										
			Cooling						Heating				
				Seasonal Efficiency SEER									
				Factory-Supplied Enhance-ment		Field-Supplied Accessory‡			High-Temp		Low-Temp		
			TC		Standard Rating	Puron TXV	PuronTXV & TDR**	EER	TC	COP	TC	COP	HSPF
024-A,C	FX4ANF030†	800	25,000	TDR&TXV	13.00	—	—	11.10	25,000	3.30	16,600	2.38	8.00
	F(A,B)4AN(F,C)030	800	23,600	TDR	—	12.50	—	10.95	24,400	3.18	16,500	2.32	7.50
	FC4BNF030	800	24,000	TDR	—	12.50	—	10.95	24,400	3.18	16,500	2.32	7.50
	FK4CNF001	700	24,400	TDR	—	13.80	—	12.00	23,800	3.30	16,000	2.42	7.75
	FK4CNF002	700	25,200	TDR	—	14.00	—	12.35	25,000	3.58	16,100	2.54	8.00
	FK4CNF003	700	25,200	TDR	—	14.20	—	12.60	25,200	3.54	16,000	2.54	8.00
	FV4ANF002	700	25,200	TDR&TXV	14.20	—	—	12.05	25,200	3.44	16,100	2.48	8.00
	FV4ANF003	700	25,200	TDR&TXV	14.50	—	—	12.35	25,000	3.44	15,900	2.48	8.00
	CC5A/CD5AA036	900	24,000	NONE	—	—	13.00	11.10	24,800	3.28	16,600	2.36	7.50
	CD5AW036	900	24,000	NONE	—	—	13.00	11.10	24,800	3.28	16,600	2.36	7.50
	CE3AA036	800	23,800	NONE	—	—	12.60	11.05	24,600	3.20	16,600	2.34	7.40
	CJ5A/CK5A/CK5BA036	800	24,200	NONE	—	—	13.00	11.20	24,800	3.34	16,600	2.38	7.50
	CJ5A/CK5A/CK5BW036	800	24,200	NONE	—	—	13.00	11.20	24,800	3.34	16,600	2.38	7.50
	CJ5A/CK5A/CK5BN036	800	24,200	NONE	—	—	13.00	11.20	24,800	3.34	16,600	2.38	7.50
	CK3BA036	800	24,200	NONE	—	—	13.00	11.20	24,800	3.34	16,600	2.38	7.50
030-A,C	FX4ANF030†	1050	29,000	TDR&TXV	13.00	—	—	11.15	30,000	3.56	18,500	2.38	8.00
	F(A,B)4AN(F,C)036	1050	28,400	TDR	—	12.20	—	10.75	29,800	3.42	18,700	2.32	7.40
	FC4BNF036	1050	28,400	TDR	—	12.20	—	10.75	29,800	3.42	18,700	2.32	7.40
	FK4CNF001	875	28,600	TDR	—	13.70	—	12.10	28,600	3.54	17,800	2.44	7.80
	FK4CNF002	875	28,800	TDR	—	13.70	—	12.15	29,000	3.68	17,900	2.48	8.00
	FK4CNF003	875	29,000	TDR	—	14.20	—	12.55	28,600	3.68	17,700	2.50	8.00
	FV4ANF002	875	29,200	TDR&TXV	14.00	—	—	12.15	29,000	3.68	17,900	2.48	8.10
	FV4ANF003	875	29,400	TDR&TXV	14.50	—	—	12.55	28,600	3.70	17,700	2.52	8.10
	FX4ANF036	1050	29,000	TDR&TXV	12.30	—	—	10.85	30,000	3.52	18,800	2.36	8.00
	CC5A/CD5AA036	1080	28,800	NONE	—	—	13.00	11.25	29,400	3.52	18,500	2.38	7.65
	CD5AW036	1080	28,800	NONE	—	—	13.00	11.25	29,400	3.52	18,500	2.38	7.65
	CE3AA036	1050	28,600	NONE	—	—	12.70	11.15	29,200	3.44	18,500	2.36	7.45
	CJ5A/CK5A/CK5BN036	1000	28,800	NONE	—	—	12.70	11.25	29,400	3.54	18,500	2.38	7.65
	CJ5A/CK5A/CK5BW036	1050	28,800	NONE	—	—	13.00	11.30	29,400	3.56	18,500	2.40	7.70
	CK3BA036	1050	28,800	NONE	—	—	13.00	11.30	29,400	3.56	18,500	2.40	7.70
036-A,C	FX4ANF042†	1125	35,000	TDR&TXV	13.00	—	—	10.80	35,000	3.40	21,600	2.34	7.70
	F(A,B)4AN(F,B,C)042	1125	33,600	TDR	—	12.30	—	10.65	34,200	3.26	21,400	2.28	7.40
	FC4BN(F,B)042	1125	33,600	TDR	—	12.30	—	10.65	34,200	3.26	21,400	2.28	7.40
	FK4CNF003	1050	34,000	TDR	—	13.70	—	11.80	33,600	3.40	20,600	2.40	7.70
	FK4CNF005	1050	35,400	TDR	—	14.00	—	12.30	33,800	3.70	20,800	2.52	8.00
	FV4ANF003	1050	34,400	TDR&TXV	13.70	—	—	11.80	33,600	3.44	20,600	2.40	7.80
	FV4ANF005	1050	35,600	TDR&TXV	14.00	—	—	12.30	34,000	3.70	20,800	2.52	8.10
	CC5A/CD5AA042	1125	34,000	NONE	—	—	12.50	10.65	34,000	3.20	21,400	2.26	7.30
	CC5A/CD5AW042	1260	33,600	NONE	—	—	12.20	10.50	34,000	3.16	21,400	2.24	7.30
	CC5A/CD5AC048	1260	33,600	NONE	—	—	12.20	10.50	33,600	3.10	21,400	2.22	7.30
	CC5A/CD5AW048	1275	34,000	NONE	—	—	12.50	10.60	34,200	3.24	21,400	2.28	7.30
	CD5AA048	1275	34,000	NONE	—	—	12.50	10.65	34,200	3.26	21,400	2.28	7.30
	CE3AA042	1125	34,000	NONE	—	—	12.50	10.65	34,200	3.26	21,600	2.28	7.40
	CE3AA048	1125	34,200	NONE	—	—	12.50	10.70	34,200	3.30	21,600	2.30	7.45
	CJ5A/CK5A/CK5BA042	1125	33,800	NONE	—	—	12.50	10.60	34,200	3.26	21,600	2.28	7.40
	CJ5A/CK5A/CK5BN042	1125	33,800	NONE	—	—	12.50	10.60	34,200	3.26	21,600	2.28	7.40
	CJ5A/CK5A/CK5BA048	1125	34,200	NONE	—	—	12.50	10.70	34,400	3.32	21,600	2.30	7.50
	CJ5A/CK5A/CK5BN048	1125	34,200	NONE	—	—	12.50	10.70	34,400	3.32	21,600	2.30	7.50
	CJ5A/CK5A/CK5BW048	1125	34,200	NONE	—	—	12.50	10.70	34,400	3.32	21,600	2.30	7.50
	CK3BA042	1125	33,800	NONE	—	—	12.50	10.60	34,200	3.26	21,600	2.28	7.40
	CK3BA048	1125	34,200	NONE	—	—	12.50	10.70	34,400	3.32	21,600	2.30	7.50
042-A,C	FV4ANF003†	1225	40,500	TDR&TXV	13.00	—	—	11.00	40,500	3.36	25,400	2.46	7.70
	F(A,B)4AN(F,B,C)048	1400	40,000	TDR	—	12.00	—	10.25	41,500	3.34	26,600	2.42	7.50
	FC4BN(F,B)048	1400	40,500	TDR	—	12.00	—	10.25	41,500	3.38	26,600	2.42	7.55
	FK4CNF003	1225	40,500	TDR	—	13.00	—	11.10	40,000	3.32	25,400	2.44	7.40
	FK4CNF005	1225	41,000	TDR	—	13.50	—	11.55	40,000	3.56	25,200	2.56	8.00
	FV4ANF005	1225	41,000	TDR&TXV	14.00	—	—	11.55	40,000	3.56	25,200	2.56	8.10
	FX4ANF042	1400	40,500	TDR&TXV	12.00	—	—	10.25	41,500	3.40	26,600	2.42	7.55
	CE3AA048	1400	40,500	NONE	—	—	12.00	10.35	41,500	3.32	26,400	2.40	7.40
	CJ5A/CK5A/CK5BA048	1400	40,000	NONE	—	—	12.00	10.30	41,500	3.34	26,400	2.40	7.50
	CJ5A/CK5A/CK5BN048	1400	40,000	NONE	—	—	12.00	10.30	41,500	3.34	26,400	2.40	7.50
	CJ5A/CK5A/CK5BW048	1400	40,000	NONE	—	—	12.00	10.30	41,500	3.34	26,400	2.40	7.50
	CK3BA048	1400	4,0000	NONE	—	—	12.00	10.30	41,500	3.34	26,400	2.40	7.50
048-A,C	FV4ANF005†	1400	45,500	TDR&TXV	13.50	—	—	11.60	47,500	3.58	27,600	2.46	8.50
	F(A,B)4AN(F,B,C)060	1400	44,500	TDR	—	11.70	—	10.20	48,500	3.32	29,000	2.26	7.80
	FB4ANB070	1400	46,000	TDR	—	12.50	—	10.90	48,000	3.54	28,600	2.38	8.00
	FC4BN(F,B)060	1400	44,500	TDR	—	11.70	—	10.20	48,000	3.32	29,000	2.26	7.70
	FC4BNB070	1400	46,000	TDR	—	12.50	—	10.90	48,000	3.54	28,600	2.38	8.00
	FK4CNF005	1400	45,500	TDR	—	13.20	—	11.60	48,000	3.58	27,800	2.46	8.20
	FK4CNB006	1400	46,500	TDR	—	14.00	—	12.05	48,000	3.76	27,600	2.54	8.50
	FV4ANB006	1400	46,500	TDR&TXV	14.10	—	—	12.05	48,000	3.76	27,600	2.54	8.60
	FX4ANF048	1400	45,000	TDR&TXV	12.50	—	—	10.75	48,000	3.42	28,400	2.34	8.00
	FX4ANB060	1400	45,500	TDR&TXV	12.60	—	—	10.90	48,000	3.54	28,600	2.38	8.10
	CE3AA060	1400	45,500	NONE	—	—	12.50	10.80	48,000	3.40	28,400	2.34	8.00

See notes on page 9.

COMBINATION RATINGS Continued

UNIT SIZE-SERIES	INDOOR UNIT	CFM††	ARI STANDARD RATINGS*										
			Cooling						Heating				
				Seasonal Efficiency SEER									
				Factory-Supplied Enhance-ment		Field-Supplied Accessory‡			High-Temp		Low-Temp		
			TC		Standard Rating	Puron TXV	PuronTXV & TDR**	EER	TC	COP	TC	COP	HSPF
048-A,C	CJ5A/CK5A/CK5BA060	1400	45,000	NONE	—	—	12.50	10.75	48,000	3.50	28,600	2.38	8.20
	CJ5A/CK5A/CK5BN060	1400	45,500	NONE	—	—	13.00	10.90	48,500	3.52	28,600	2.38	8.25
	CJ5A/CK5A/CK5BX060	1400	45,500	NONE	—	—	13.00	10.90	48,500	3.52	28,600	2.38	8.25
	CK3BA060	1400	45,000	NONE	—	—	12.50	10.75	48,000	3.50	28,600	2.38	8.20
060-B,C	FV4ANB006†	1750	58,000	TDR&TXV	13.00	—	—	10.75	60,000	3.56	37,000	2.54	8.00
	FB4ANB070	1750	57,000	TDR	—	12.00	—	10.20	60,000	3.44	37,800	2.46	7.80
	FC4BNB070	1750	57,000	TDR	—	12.00	—	10.20	60,000	3.44	37,800	2.46	7.80
	FK4CNB006	1750	58,000	TDR	—	12.80	—	10.75	59,500	3.56	37,000	2.54	8.00
	FX4ANB060	1750	57,000	TDR&TXV	12.00	—	—	10.20	60,000	3.44	37,800	2.46	7.80
	CC5A/CD5AW060	1750	56,000	NONE	—	—	12.50	10.45	58,500	3.26	36,800	2.42	7.50
	CJ5A/CK5A/CK5BX060	1750	56,500	NONE	—	—	12.50	10.55	59,000	3.44	37,000	2.50	7.70

* 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.

† Outdoor section/indoor section combination tested in accordance with DOE test procedure for heat pumps.

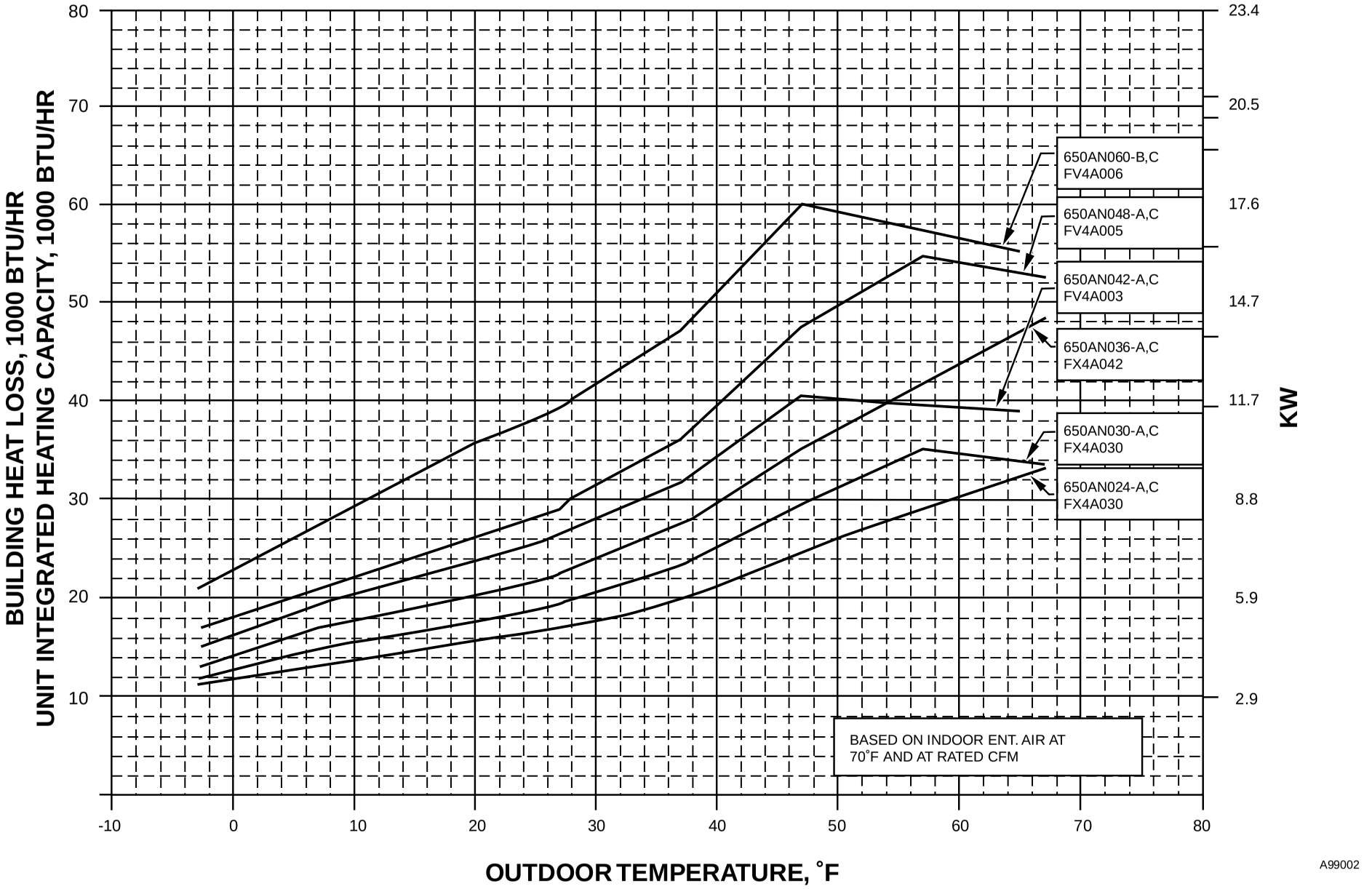
‡ Based on computer simulation. TXV must be Puron compatible and hard shutoff type.

** In most cases, only 1 method should be used to achieve TDR function. Using more than 1 method in a system may cause degradation in performance. Use either the accessory Time-Delay Relay KAATD0101TDR or a furnace equipped with TDR. All Bryant furnaces are equipped with TDR except for the 394HAD.

†† Indoor Airflow

COP — Coefficient of Performance
EER — Energy Efficiency Ratio
HSPF — Heating Seasonal Performance Factor
SEER — Seasonal Energy Efficiency Ratio
TC — Total Capacity (Btuh)
TDR — Time-Delay Relay
TXV — Thermostatic Expansion Valve

650A BALANCE POINT WORKSHEET



NOTE: The performance shown includes the PressureGuard™ cycling the outdoor fan. The ambient temperature that the outdoor fan cycles depends on the outdoor/indoor combination, indoor airflow, installation practices, and system maintenance, all of which affect system performance.

DETAILED COOLING CAPACITIES*

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
CFM	EWB	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**
650AN024-A,C Outdoor Section With FX4ANF030 Indoor Section																			
700	72	29.7	14.5	1.85	28.4	14.0	2.07	26.9	13.5	2.31	25.4	12.9	2.57	23.8	12.3	2.85	22.0	11.7	3.14
	67	27.2	18.2	1.85	25.9	17.6	2.06	24.6	17.1	2.30	23.2	16.5	2.55	21.7	15.9	2.83	20.1	15.3	3.12
	63††	25.3	17.7	1.85	24.1	17.2	2.06	22.9	16.6	2.29	21.6	16.1	2.54	20.2	15.5	2.82	18.7	14.8	3.11
	62	24.8	21.7	1.84	23.7	21.2	2.06	22.5	20.6	2.29	21.3	20.0	2.54	20.0	19.4	2.81	18.6	18.5	3.11
	57	23.7	23.7	1.84	22.8	22.8	2.06	21.9	21.9	2.29	20.9	20.9	2.54	19.8	19.8	2.81	18.6	18.6	3.11
800	72	30.3	15.2	1.88	28.9	14.6	2.11	27.3	14.1	2.35	25.8	13.6	2.61	24.1	13.0	2.88	22.2	12.3	3.18
	67	27.7	19.3	1.88	26.4	18.7	2.10	25.0	18.2	2.34	23.6	17.6	2.59	22.0	17.0	2.87	20.4	16.4	3.16
	63††	25.8	18.8	1.88	24.6	18.2	2.10	23.3	17.7	2.33	21.9	17.1	2.58	20.5	16.5	2.85	19.0	15.8	3.15
	62	25.4	23.3	1.88	24.2	22.7	2.10	23.0	22.1	2.33	21.8	21.4	2.58	20.5	20.5	2.85	19.2	19.2	3.15
	57	24.7	24.7	1.88	23.7	23.7	2.10	22.7	22.7	2.33	21.6	21.6	2.58	20.5	20.5	2.85	19.2	19.2	3.15
900	72	30.8	15.8	1.92	29.3	15.3	2.14	27.7	14.7	2.38	26.1	14.2	2.64	24.3	13.6	2.92	22.4	12.9	3.22
	67	28.2	20.4	1.92	26.8	19.8	2.14	25.3	19.3	2.37	23.9	18.7	2.63	22.3	18.1	2.90	20.5	17.4	3.20
	63††	26.2	19.8	1.92	24.9	19.2	2.13	23.6	18.6	2.37	22.2	18.1	2.62	20.8	17.4	2.89	19.1	16.7	3.19
	62	25.9	24.7	1.92	24.7	24.1	2.13	23.5	23.3	2.37	22.3	22.3	2.62	21.1	21.1	2.89	19.7	19.7	3.19
	57	25.5	25.5	1.91	24.5	24.5	2.13	23.4	23.4	2.37	22.3	22.3	2.62	21.1	21.1	2.89	19.7	19.7	3.19

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling Capacity	Cooling Power	Indoor Section	Size	Cooling Capacity	Cooling Power
FX4ANF	030	1.00	1.00	CE3AA	030	0.94	1.00
F(A,B)4AN(F,C)	030	0.94	1.00		036	0.95	1.00
FC4BNF	030	0.96	1.00	CJ5A/CK5A/CK5BA	030	0.94	1.00
FK4CNF	001	0.98	0.93		036	0.97	1.00
	002	1.01	0.93	CJ5A/CK5A/CK5BN	036	0.97	1.00
	003	1.01	0.91	CJ5A/CK5A/CK5BW	030	0.94	1.00
FV4ANF	002	1.01	0.93		036	0.97	1.00
	003	1.01	0.91	CK3BA	030	0.94	1.00
	—	—	—		036	0.97	1.00

See notes on page 14.

DETAILED COOLING CAPACITIES* Continued

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
		Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys
CFM	EWB	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**
650AN030-A,C Outdoor Section With FX4ANF030 Indoor Section																			
825	72	34.3	17.2	2.07	32.6	16.6	2.31	30.9	15.9	2.58	29.0	15.3	2.87	27.0	14.6	3.20	24.8	13.8	3.56
	67	31.4	21.7	2.06	29.9	21.1	2.29	28.3	20.5	2.56	26.6	19.8	2.86	24.8	19.1	3.18	22.7	18.3	3.54
	63††	29.2	21.1	2.04	27.8	20.5	2.28	26.4	19.9	2.55	24.8	19.2	2.84	23.1	18.5	3.17	21.2	17.7	3.53
	62	28.8	26.2	2.04	27.4	25.5	2.28	26.0	24.8	2.55	24.5	24.0	2.84	23.0	23.0	3.17	21.4	21.4	3.53
	57	27.8	27.8	2.04	26.7	26.7	2.27	25.6	25.6	2.54	24.3	24.3	2.84	23.0	23.0	3.17	21.4	21.4	3.53
1050	72	35.2	18.7	2.14	33.5	18.1	2.38	31.6	17.4	2.65	29.7	16.8	2.94	27.6	16.1	3.27	25.2	15.3	3.62
	67	32.4	24.3	2.13	30.7	23.7	2.36	29.0	23.0	2.63	27.2	22.3	2.93	25.3	21.6	3.25	23.2	20.7	3.61
	63††	30.2	23.6	2.11	28.6	22.9	2.35	27.0	22.3	2.62	25.4	21.5	2.91	23.6	20.8	3.24	21.6	19.9	3.59
	62	29.9	29.4	2.11	28.6	28.5	2.35	27.2	27.2	2.62	25.8	25.8	2.91	24.3	24.3	3.24	22.5	22.5	3.60
	57	29.8	29.8	2.11	28.5	28.5	2.35	27.2	27.2	2.62	25.8	25.8	2.91	24.3	24.3	3.24	22.6	22.6	3.60
1250	72	35.8	20.0	2.20	34.0	19.4	2.44	32.1	18.7	2.71	30.0	18.1	3.00	27.8	17.3	3.33	25.4	16.5	3.68
	67	32.9	26.5	2.19	31.2	25.8	2.42	29.4	25.1	2.69	27.6	24.4	2.98	25.6	23.6	3.31	23.4	22.6	3.67
	63††	30.7	25.6	2.17	29.1	24.9	2.41	27.5	24.2	2.67	25.7	23.4	2.97	23.9	22.6	3.30	21.9	21.5	3.65
	62	31.0	31.0	2.17	29.7	29.7	2.41	28.3	28.3	2.68	26.8	26.8	2.98	25.1	25.1	3.31	23.2	23.2	3.67
	57	31.0	31.0	2.17	29.7	29.7	2.41	28.3	28.3	2.68	26.8	26.8	2.98	25.1	25.1	3.31	23.2	23.2	3.67

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FX4ANF	030	1.00	1.00	FV4ANF	002	1.01	0.93
F(A,B)4AN(F,C)	030	0.97	1.00		003	1.01	0.90
	036	0.98	1.03	FX4ANF	036	1.00	1.03
FC4BNF	030	0.97	1.00	CE3AA	036	0.99	1.00
	036	0.98	1.03	CJ5A/CK5A/CK5BN	036	0.99	1.00
FK4CNF	001	0.99	0.92	CJ5A/CK5A/CK5BW	036	0.99	1.00
	002	0.99	0.93	CK3BA	036	0.99	1.00
	003	1.00	0.90		—	—	—

650AN036-A,C Outdoor Section With FX4ANF042 Indoor Section																			
1125	72	42.3	21.3	2.64	40.3	20.6	2.93	38.3	19.8	3.26	36.0	19.1	3.61	33.7	18.3	4.00	31.0	17.4	4.40
	67	38.7	27.3	2.63	36.9	26.5	2.93	35.0	25.8	3.25	33.0	25.0	3.60	30.8	24.1	3.98	28.3	23.2	4.38
	63††	36.1	26.5	2.63	34.4	25.7	2.92	32.6	25.0	3.24	30.6	24.1	3.59	28.6	23.3	3.96	26.3	22.3	4.36
	62	35.5	33.0	2.63	33.9	32.2	2.92	32.2	31.4	3.24	30.4	30.3	3.59	28.7	28.7	3.96	26.8	26.8	4.37
	57	34.7	34.7	2.63	33.3	33.3	2.92	31.9	31.9	3.24	30.4	30.4	3.59	28.7	28.7	3.96	26.8	26.8	4.37
1250	72	42.7	22.1	2.69	40.7	21.4	2.98	38.6	20.6	3.31	36.3	19.9	3.66	33.9	19.0	4.05	31.2	18.1	4.46
	67	39.2	28.6	2.68	37.3	27.9	2.98	35.4	27.1	3.30	33.2	26.3	3.65	31.0	25.4	4.03	28.5	24.5	4.43
	63††	36.6	27.8	2.68	34.8	27.0	2.97	32.9	26.2	3.29	31.0	25.4	3.64	28.8	24.5	4.01	26.5	23.5	4.41
	62	36.1	34.8	2.68	34.5	33.9	2.97	32.8	32.8	3.29	31.2	31.2	3.64	29.4	29.4	4.02	27.4	27.4	4.42
	57	35.7	35.7	2.68	34.3	34.3	2.97	32.8	32.8	3.29	31.2	31.2	3.64	29.4	29.4	4.02	27.4	27.4	4.42
1375	72	43.1	22.8	2.74	41.1	22.1	3.03	38.9	21.4	3.36	36.6	20.6	3.71	34.1	19.8	4.10	31.3	18.9	4.51
	67	39.6	30.0	2.73	37.7	29.2	3.03	35.6	28.4	3.35	33.5	27.6	3.70	31.3	26.7	4.08	28.7	25.7	4.48
	63††	36.9	29.0	2.73	35.1	28.2	3.02	33.2	27.4	3.34	31.2	26.6	3.69	29.0	25.7	4.06	26.7	24.6	4.46
	62	36.7	36.4	2.73	35.1	35.1	3.02	33.5	33.5	3.34	31.8	31.8	3.69	30.0	30.0	4.07	28.0	28.0	4.48
	57	36.6	36.6	2.73	35.1	35.1	3.02	33.5	33.5	3.34	31.8	31.8	3.69	30.0	30.0	4.07	27.9	27.9	4.48

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FX4ANF	042	1.00	1.00	CE3AA	042	0.97	1.00
F(A,B)4AN(F,B,C)	042	0.96	1.00		048	0.98	1.00
FC4BN(F,B)	042	0.96	1.00	CJ5A/CK5A/CK5BA	042	0.97	1.00
FK4CNF	003	0.97	0.91		048	0.98	1.00
	005	1.01	0.91	CJ5A/CK5A/CK5BN	042	0.97	1.00
FV4ANF	003	0.98	0.91		048	0.98	1.00
	005	1.02	0.91	CJ5A/CK5A/CK5BW	048	0.98	1.00
CC5A/CD5AA	042	0.99	1.00	CK3BA	042	0.97	1.00
	—	—	—		048	0.98	1.00

See notes on page 14.

DETAILED COOLING CAPACITIES* Continued

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
CFM	EWB	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**	Capacity MBtuh† Total	Capacity MBtuh† Sens‡	Total Sys Kw**
650AN042-A,C Outdoor Section With FV4ANF003 Indoor Section																			
1225	72	48.5	24.4	2.95	46.4	23.6	3.32	44.1	22.8	3.72	41.7	21.9	4.17	39.0	21.0	4.65	36.1	20.0	5.17
	67	44.6	30.9	2.91	42.6	30.1	3.28	40.5	29.2	3.68	38.3	28.3	4.12	35.8	27.4	4.61	33.2	26.3	5.12
	63††	41.7	30.1	2.89	39.8	29.3	3.25	37.8	28.4	3.65	35.7	27.5	4.09	33.4	26.5	4.57	31.0	25.5	5.09
	62	41.0	37.2	2.88	39.2	36.3	3.24	37.3	35.3	3.65	35.3	34.3	4.09	33.2	33.0	4.57	31.1	31.1	5.09
	57	39.7	39.7	2.87	38.2	38.2	3.24	36.7	36.7	3.64	35.0	35.0	4.08	33.1	33.1	4.57	31.1	31.1	5.09
1400	72	49.4	25.6	2.99	47.1	24.8	3.36	44.8	23.9	3.77	42.2	23.1	4.22	39.5	22.1	4.70	36.5	21.1	5.22
	67	45.4	32.9	2.96	43.3	32.0	3.32	41.2	31.2	3.73	38.8	30.2	4.17	36.3	29.3	4.65	33.6	28.2	5.17
	63††	42.5	32.0	2.93	40.5	31.1	3.30	38.4	30.2	3.70	36.2	29.3	4.14	33.9	28.3	4.62	31.3	27.2	5.14
	62	41.9	39.7	2.93	40.0	38.7	3.29	38.2	37.6	3.70	36.2	36.2	4.14	34.2	34.2	4.62	32.0	32.0	5.15
	57	41.2	41.2	2.92	39.6	39.6	3.29	37.9	37.9	3.69	36.1	36.1	4.14	34.2	34.2	4.62	32.0	32.0	5.15
1575	72	50.0	26.7	3.04	47.7	25.9	3.41	45.3	25.1	3.81	42.7	24.2	4.26	39.9	23.2	4.74	36.8	22.2	5.26
	67	46.0	34.7	3.00	43.9	33.9	3.37	41.6	33.0	3.77	39.3	32.1	4.22	36.7	31.1	4.70	33.9	29.9	5.22
	63††	43.1	33.7	2.98	41.0	32.8	3.34	38.9	31.9	3.74	36.7	31.0	4.19	34.3	29.9	4.66	31.6	28.8	5.18
	62	42.7	41.9	2.97	40.9	40.7	3.34	39.0	39.0	3.74	37.1	37.1	4.19	35.1	35.1	4.68	32.8	32.8	5.20
	57	42.4	42.4	2.97	40.8	40.8	3.34	39.0	39.0	3.74	37.1	37.1	4.19	35.1	35.1	4.68	32.8	32.8	5.20

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling Capacity	Cooling Power	Indoor Section	Size	Cooling Capacity	Cooling Power
FV4ANF	003	1.00	1.00	CE3AA	048	1.00	1.08
F(A,B)4AN(F,B,C)	048	0.99	1.07	CJ5A/CK5A/CK5BA	048	0.99	1.08
FC4BN(F,B)	048	1.00	1.09	CJ5A/CK5A/CK5BN	048	0.99	1.08
FK4CNF	003	1.00	1.00	CJ5A/CK5A/CK5BW	048	0.99	1.08
	005	1.01	0.98	CK3BA	048	0.99	1.08
FV4ANF	005	1.01	0.98		—	—	—
FX4ANF	042	1.00	1.09				

650AN048-A,C Outdoor Section With FV4ANF005 Indoor Section																			
1400	72	54.7	27.7	3.20	52.2	26.8	3.56	49.6	25.9	3.96	46.9	24.9	4.41	43.9	23.9	4.90	40.7	22.8	5.43
	67	50.2	35.2	3.16	47.9	34.3	3.52	45.5	33.3	3.92	43.0	32.3	4.36	40.3	31.3	4.85	37.4	30.1	5.39
	63††	46.8	34.3	3.13	44.7	33.3	3.49	42.4	32.4	3.89	40.1	31.3	4.33	37.6	30.3	4.82	34.9	29.1	5.36
	62	46.1	42.5	3.12	44.0	41.5	3.48	42.0	40.5	3.88	39.7	39.3	4.33	37.5	37.5	4.82	35.2	35.2	5.37
	57	44.9	44.9	3.11	43.2	43.2	3.47	41.4	41.4	3.88	39.6	39.6	4.33	37.5	37.5	4.82	35.2	35.2	5.37
1600	72	55.6	29.1	3.26	53.0	28.1	3.62	50.3	27.2	4.02	47.4	26.2	4.47	44.4	25.2	4.96	41.1	24.1	5.49
	67	51.1	37.5	3.22	48.7	36.6	3.58	46.2	35.6	3.98	43.6	34.6	4.42	40.8	33.5	4.91	37.8	32.3	5.45
	63††	47.7	36.5	3.19	45.4	35.5	3.55	43.1	34.5	3.95	40.7	33.5	4.39	38.1	32.4	4.88	35.3	31.2	5.42
	62	47.1	45.5	3.18	45.1	44.4	3.54	42.9	42.9	3.95	41.0	41.0	4.39	38.8	38.8	4.89	36.3	36.3	5.43
	57	46.7	46.7	3.18	44.8	44.8	3.54	42.9	42.9	3.94	40.9	40.9	4.39	38.8	38.8	4.89	36.4	36.4	5.43
1800	72	56.3	30.4	3.32	53.6	29.4	3.68	50.8	28.5	4.08	47.9	27.5	4.53	44.8	26.5	5.01	41.4	25.4	5.55
	67	51.7	39.7	3.28	49.3	38.8	3.64	46.7	37.8	4.04	44.1	36.8	4.48	41.2	35.7	4.97	38.2	34.4	5.51
	63††	48.3	38.5	3.24	46.0	37.5	3.60	43.6	36.5	4.00	41.1	35.5	4.45	38.5	34.4	4.94	35.7	33.1	5.48
	62	48.2	48.1	3.24	46.2	46.2	3.61	44.2	44.2	4.01	42.1	42.1	4.46	39.8	39.8	4.95	37.3	37.3	5.50
	57	48.1	48.1	3.24	46.2	46.2	3.60	44.2	44.2	4.01	42.1	42.1	4.46	39.8	39.8	4.95	37.3	37.3	5.50

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling Capacity	Cooling Power	Indoor Section	Size	Cooling Capacity	Cooling Power
FV4ANF	005	1.00	1.00	FX4ANF	048	0.99	1.06
F(A,B)4AN(F,B,C)	060	0.98	1.10	FX4ANB	060	1.00	1.06
FB4ANB	070	1.01	1.06	CE3AA	060	1.00	1.06
FC4BN(F,B)	060	0.98	1.10	CJ5A/CK5A/CK5BA	060	0.99	1.06
FC4BNB	070	1.01	1.06	CJ5A/CK5A/CK5BN	060	1.00	1.06
FK4CNB	006	1.02	0.98	CJ5A/CK5A/CK5BX	060	1.00	1.06
FK4CNF	005	1.00	1.00	CK3BA	060	0.99	1.06
FV4ANB	006	1.02	0.98		—	—	—

See notes on page 14.

DETAILED COOLING CAPACITIES* Continued

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
		Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys	Capacity MBtuh†		Total Sys
CFM	EWB	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**	Total	Sens‡	Kw**
650AN060-B,C Outdoor Section With FV4ANB006 Indoor Section																			
1750	72	70.1	35.6	4.43	66.6	34.4	4.92	63.1	33.1	5.47	59.2	31.7	6.07	55.0	30.3	6.73	50.2	28.7	7.42
	67	64.4	45.5	4.35	61.3	44.2	4.85	58.0	42.9	5.40	54.5	41.5	6.00	50.6	40.0	6.65	46.4	38.4	7.35
	63††	60.2	44.3	4.30	57.2	43.0	4.79	54.2	41.7	5.34	50.9	40.3	5.94	47.3	38.8	6.60	43.4	37.1	7.30
	62	59.2	55.1	4.29	56.4	53.7	4.78	53.5	52.3	5.33	50.5	50.4	5.93	47.5	47.5	6.60	44.2	44.2	7.32
	57	57.8	57.8	4.27	55.6	55.6	4.77	53.1	53.1	5.32	50.5	50.5	5.93	47.5	47.5	6.60	44.2	44.2	7.32
2000	72	71.1	37.4	4.52	67.6	36.1	5.02	63.9	34.8	5.57	59.8	33.4	6.16	55.5	32.0	6.81	50.6	30.4	7.51
	67	65.5	48.5	4.44	62.2	47.2	4.94	58.8	45.9	5.49	55.1	44.4	6.09	51.1	42.9	6.74	46.8	41.2	7.44
	63††	61.2	47.1	4.39	58.1	45.8	4.88	54.9	44.4	5.43	51.6	43.0	6.03	47.9	41.5	6.68	43.8	39.7	7.39
	62	60.5	59.0	4.38	57.7	57.4	4.88	54.9	54.9	5.43	52.1	52.1	6.04	48.9	48.9	6.70	45.3	45.3	7.42
	57	60.1	60.1	4.38	57.6	57.6	4.88	54.9	54.9	5.43	52.1	52.1	6.04	49.0	49.0	6.70	45.4	45.4	7.42
2250	72	72.0	39.1	4.61	68.3	37.8	5.10	64.4	36.5	5.65	60.4	35.1	6.25	55.9	33.7	6.90	50.8	32.0	7.59
	67	66.2	51.4	4.53	62.9	50.1	5.03	59.4	48.7	5.57	55.6	47.3	6.17	51.7	45.7	6.83	47.1	43.9	7.53
	63††	61.9	49.8	4.48	58.8	48.5	4.97	55.6	47.1	5.52	52.1	45.6	6.12	48.3	44.0	6.77	44.1	42.1	7.48
	62	61.8	61.8	4.48	59.2	59.2	4.98	56.5	56.5	5.53	53.5	53.5	6.14	50.2	50.2	6.80	46.4	46.4	7.51
	57	61.8	61.8	4.48	59.2	59.2	4.98	56.4	56.4	5.53	53.4	53.4	6.14	50.2	50.2	6.80	46.4	46.4	7.51

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FV4ANB	006	1.00	1.00	FX4ANB	060	0.98	1.04
FB4ANB	070	0.98	1.04	CC5A/CD5AW	060	0.97	0.99
FC4BNB	070	0.98	1.04	CJ5A/CK5A/CK5BX	060	0.97	1.00
FK4CNB	006	1.00	1.00		—	—	—

* 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).

** 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 °F																							
		–3			7			17			27			37			47			57			67		
		Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr
EDB	CFM	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†
650AN024-A,C Outdoor Section With FX4ANF030 Indoor Section																									
65	700	12.0	11.1	1.79	14.3	13.1	1.87	16.6	15.1	1.95	19.0	16.9	2.04	21.9	19.9	2.16	25.0	25.0	2.30	28.5	28.5	2.48	32.6	32.6	2.74
	800	12.2	11.2	1.80	14.5	13.3	1.87	16.8	15.3	1.95	19.2	17.1	2.03	22.1	20.1	2.13	25.4	25.4	2.27	28.9	28.9	2.44	33.1	33.1	2.69
	900	12.4	11.4	1.82	14.6	13.4	1.88	17.0	15.5	1.95	19.4	17.3	2.03	22.4	20.4	2.13	25.6	25.6	2.25	29.3	29.3	2.43	33.4	33.4	2.67
70	700	11.8	10.8	1.87	14.1	13.0	1.96	16.4	15.0	2.05	18.8	16.7	2.14	21.6	19.6	2.26	24.7	24.7	2.41	28.1	28.1	2.60	32.0	32.0	2.87
	800	12.0	11.0	1.88	14.3	13.1	1.96	16.6	15.1	2.04	19.0	16.9	2.13	21.8	19.9	2.24	25.0	25.0	2.38	28.5	28.5	2.56	32.5	32.5	2.81
	900	12.1	11.2	1.90	14.4	13.3	1.97	16.8	15.3	2.05	19.2	17.0	2.13	22.1	20.1	2.23	25.3	25.3	2.36	28.8	28.8	2.54	32.9	32.9	2.79
75	700	11.5	10.6	1.96	13.9	12.8	2.05	16.2	14.8	2.15	18.5	16.5	2.25	21.3	19.4	2.38	24.3	24.3	2.53	27.7	27.7	2.73	31.5	31.5	3.00
	800	11.7	10.7	1.97	14.1	13.0	2.06	16.4	15.0	2.14	18.8	16.7	2.23	21.5	19.6	2.35	24.6	24.6	2.50	28.1	28.1	2.68	32.0	32.0	2.94
	900	11.8	10.9	1.98	14.3	13.1	2.07	16.6	15.1	2.15	19.0	16.8	2.23	21.8	19.8	2.34	24.9	24.9	2.48	28.4	28.4	2.66	32.4	32.4	2.91

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FX4ANF	030	1.00	1.00	CE3AA	030	0.98	1.01
F(A,B)4AN(F,C)	030	0.98	1.01		036	0.98	1.01
FC4BNF	030	0.98	1.01	CJ5A/CK5A/CK5BA	030	0.98	1.01
FK4CNF	001	0.95	0.95		036	0.99	0.98
	002	1.00	0.92	CJ5A/CK5A/CK5BN	036	0.99	0.98
	003	1.01	0.94	CJ5A/CK5A/CK5BW	030	0.98	1.01
FV4ANF	002	1.01	0.97		036	0.99	0.98
	003	1.00	0.96	CK3BA	030	0.98	1.01
	—	—	—		036	0.99	0.98

650AN030-A,C Outdoor Section With FX4ANF030 Indoor Section																									
65	825	12.6	11.6	2.07	15.4	14.1	2.12	18.3	16.7	2.16	21.6	19.2	2.22	25.4	23.1	2.29	29.7	29.7	2.39	34.6	34.6	2.69	32.7	32.7	2.55
	1050	12.9	11.9	2.11	15.7	14.4	2.14	18.7	17.0	2.17	22.0	19.6	2.21	25.9	23.6	2.27	30.4	30.4	2.35	35.4	35.4	2.63	33.5	33.5	2.49
	1250	13.2	12.2	2.15	16.0	14.7	2.17	19.0	17.3	2.19	22.4	19.9	2.23	26.3	23.9	2.28	30.8	30.8	2.36	36.0	36.0	2.64	33.9	33.9	2.49
70	825	12.3	11.3	2.18	15.2	14.0	2.23	18.1	16.5	2.28	21.4	19.0	2.33	25.1	22.8	2.41	29.4	29.4	2.52	34.1	34.1	2.82	32.2	32.2	2.67
	1050	12.7	11.7	2.21	15.6	14.3	2.25	18.5	16.9	2.28	21.8	19.4	2.32	25.6	23.3	2.38	30.0	30.0	2.47	34.9	34.9	2.76	33.0	33.0	2.60
	1250	13.0	11.9	2.25	15.8	14.5	2.28	18.8	17.1	2.30	22.1	19.6	2.34	26.0	23.6	2.39	30.4	30.4	2.47	35.4	35.4	2.76	33.4	33.4	2.60
75	825	12.0	11.1	2.29	15.0	13.7	2.34	18.0	16.4	2.40	21.1	18.8	2.46	24.8	22.6	2.54	29.0	29.0	2.65	33.7	33.7	2.96	31.7	31.7	2.80
	1050	12.4	11.4	2.32	15.3	14.1	2.35	18.3	16.7	2.40	21.6	19.1	2.44	25.3	23.0	2.50	29.6	29.6	2.59	34.4	34.4	2.89	32.5	32.5	2.72
	1250	12.7	11.7	2.36	15.6	14.4	2.39	18.6	17.0	2.42	21.9	19.4	2.45	25.7	23.4	2.51	30.0	30.0	2.59	34.9	34.9	2.89	33.0	33.0	2.71

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FX4ANF	030	1.00	1.00	FV4ANF	002	0.97	0.94
F(A,B)4AN(F,C)	030	0.98	1.02		003	0.95	0.92
	036	0.99	1.03	FX4ANF	036	1.00	1.01
FC4BNF	030	0.98	1.02	CE3AA	036	0.97	1.01
	036	0.99	1.03	CJ5A/CK5A/CK5BN	036	0.98	0.99
FK4CNF	001	0.95	0.96	CJ5A/CK5A/CK5BW	036	0.98	0.98
	002	0.97	0.94	CK3BA	036	0.98	0.98
	003	0.95	0.92		—	—	—

See notes on page 17.

HEAT PUMP HEATING PERFORMANCE Continued

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																							
		–3			7			17			27			37			47			57			67		
		Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr
EDB	CFM	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†
650AN036-A,C Outdoor Section With FX4ANF042 Indoor Section																									
65	1125	14.7	13.5	2.42	18.3	16.8	2.51	21.9	20.0	2.59	25.8	22.9	2.66	30.4	27.6	2.76	35.6	35.6	2.88	41.7	41.7	3.04	48.8	48.8	3.27
	1250	14.9	13.7	2.45	18.5	17.0	2.53	22.9	20.9	2.61	26.1	23.2	2.67	30.7	27.9	2.76	35.9	35.9	2.87	42.1	42.1	3.03	49.3	49.3	3.25
	1375	15.1	13.9	2.49	18.7	17.2	2.56	22.4	20.4	2.62	26.3	23.4	2.68	31.0	28.2	2.76	36.3	36.3	2.87	42.5	42.5	3.03	49.7	49.7	3.25
70	1125	14.1	13.0	2.51	17.9	16.4	2.61	21.6	19.7	2.70	25.4	22.6	2.79	29.9	27.2	2.89	35.0	35.0	3.02	41.5	41.5	3.19	48.0	48.0	3.42
	1250	14.4	13.2	2.54	18.1	16.7	2.63	21.9	19.9	2.72	25.7	22.8	2.79	30.2	27.5	2.89	35.4	35.4	3.00	41.5	41.5	3.17	48.5	48.5	3.40
	1375	14.6	13.4	2.58	18.4	16.9	2.66	22.1	20.1	2.74	26.0	23.1	2.81	30.5	27.8	2.89	35.7	35.7	3.00	41.8	41.8	3.16	48.9	48.9	3.39
75	1125	13.5	12.4	2.60	17.4	16.0	2.71	21.2	19.4	2.82	25.0	22.2	2.92	29.5	26.8	3.03	34.5	34.5	3.16	40.3	40.3	3.34	47.1	47.1	3.58
	1250	13.8	12.7	2.63	17.7	16.2	2.74	21.5	19.6	2.84	25.3	22.5	2.92	29.8	27.1	3.02	34.8	34.8	3.15	40.8	40.8	3.31	47.7	47.7	3.55
	1375	14.0	12.9	2.67	17.9	16.4	2.76	21.7	19.8	2.86	25.6	22.7	2.93	30.1	27.4	3.03	35.2	35.2	3.15	41.2	41.2	3.31	48.1	48.1	3.54

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FX4ANF	042	1.00	1.00	CJ5A/CK5A/CK5BA	042	0.98	1.02
F(A,B)4AN(F,B,C)	042	0.98	1.02		048	0.98	1.01
FC4BN(F,B)	042	0.98	1.02	CJ5A/CK5A/CK5BN	042	0.98	1.02
FK4CNF	003	0.96	0.96		048	0.98	1.01
	005	0.97	0.89	CJ5A/CK5A/CK5BW	048	0.98	1.01
FV4ANF	003	0.96	0.95	CK3BA	042	0.98	1.02
	005	0.97	0.89		048	0.98	1.01
CE3AA	042	0.98	1.02		—	—	—
	048	0.98	1.01				

650AN042-A,C Outdoor Section With FV4ANF003 Indoor Section																									
65	1225	17.3	15.9	2.61	21.5	19.8	2.74	25.7	23.4	2.86	30.0	26.6	2.99	35.1	32.0	3.14	41.1	41.1	3.34	40.4	40.4	3.30	39.5	39.5	3.21
	1400	17.6	16.2	2.61	22.5	20.7	2.74	25.9	23.6	2.84	30.2	26.9	2.95	35.5	32.3	3.09	41.5	41.5	3.28	40.8	40.8	3.22	40.0	40.0	3.14
	1575	17.8	16.4	2.62	21.9	20.2	2.73	26.1	23.8	2.83	30.5	27.1	2.93	35.8	32.6	3.06	41.9	41.9	3.24	41.2	41.2	3.18	40.4	40.4	3.09
70	1225	16.8	15.5	2.74	21.1	19.4	2.88	25.4	23.2	3.03	29.6	26.3	3.16	34.7	31.6	3.32	40.5	40.5	3.53	39.8	39.8	3.48	38.9	38.9	3.38
	1400	17.1	15.7	2.75	21.4	19.6	2.87	25.6	23.4	3.00	29.9	26.6	3.12	35.0	31.9	3.27	41.0	41.0	3.46	40.2	40.2	3.40	39.4	39.4	3.30
	1575	17.3	15.9	2.76	21.6	19.8	2.87	25.8	23.6	2.99	30.1	26.8	3.10	35.3	32.2	3.24	41.3	41.3	3.42	40.6	40.6	3.35	39.8	39.8	3.25
75	1225	16.3	15.0	2.88	20.6	19.0	3.02	25.1	22.9	3.19	29.3	26.0	3.34	34.3	31.2	3.51	40.0	40.0	3.73	39.2	39.2	3.66	38.3	38.3	3.56
	1400	16.6	15.2	2.89	20.9	19.2	3.01	25.3	23.1	3.17	29.6	26.3	3.30	34.6	31.5	3.46	40.4	40.4	3.66	39.6	39.6	3.58	38.8	38.8	3.47
	1575	16.8	15.4	2.90	21.2	19.4	3.01	25.5	23.3	3.16	29.8	26.5	3.28	34.9	31.8	3.42	40.8	40.8	3.61	40.0	40.0	3.53	39.1	39.1	3.41

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FV4ANF	003	1.00	1.00	FX4ANF	042	1.02	1.01
F(A,B)4AN(F,B,C)	048	1.02	1.03	CE3AA	048	1.02	1.04
FC4BN(F,B)	048	1.02	1.02	CJ5A/CK5A/CK5BA	048	1.02	1.03
FK4CNF	003	0.99	1.00	CJ5A/CK5A/CK5BN	048	1.02	1.03
	005	0.99	0.93	CJ5A/CK5A/CK5BW	048	1.02	1.03
FV4ANF	005	0.99	0.93	CK3BA	048	1.02	1.03

See notes on page 17.

HEAT PUMP HEATING PERFORMANCE Continued

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																							
		–3			7			17			27			37			47			57			67		
		Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr	Capacity MBtuh†		Total Pwr
EDB	CFM	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†	Total	Int*	Kw†
650AN048-A,C Outdoor Section With FV4ANF005 Indoor Section																									
65	1400	18.5	17.0	2.86	22.9	21.1	2.99	27.9	25.4	3.11	33.5	29.8	3.26	40.2	36.6	3.45	48.2	48.2	3.69	53.8	53.8	4.34	53.1	53.1	4.20
	1600	18.7	17.2	2.87	23.2	21.3	2.98	28.1	25.6	3.10	33.8	30.1	3.23	40.7	37.0	3.41	48.7	48.7	3.64	54.4	54.4	4.28	53.7	53.7	4.14
	1800	18.9	17.4	2.89	23.4	21.5	2.99	28.4	25.9	3.10	34.1	30.3	3.23	41.0	37.3	3.40	49.1	49.1	3.63	54.9	54.9	4.26	54.1	54.1	4.12
70	1400	18.1	16.7	3.03	22.7	20.9	3.16	27.6	25.2	3.29	33.2	29.4	3.44	39.8	36.2	3.64	47.5	47.5	3.89	54.3	54.3	4.57	52.3	52.3	4.40
	1600	18.4	16.9	3.03	23.0	21.1	3.15	27.8	25.4	3.27	33.5	29.7	3.41	40.2	36.5	3.60	48.0	48.0	3.83	53.6	53.6	4.50	52.9	52.9	4.33
	1800	18.6	17.1	3.05	23.2	21.3	3.16	28.1	25.6	3.27	33.8	30.0	3.41	40.5	36.9	3.58	48.4	48.4	3.81	54.1	54.1	4.47	53.3	53.3	4.31
75	1400	17.7	16.3	3.19	22.4	20.6	3.33	27.4	24.9	3.48	32.8	29.2	3.64	39.3	35.7	3.84	46.8	46.8	4.09	52.2	52.2	4.80	51.4	51.4	4.62
	1600	18.0	16.6	3.20	22.7	20.9	3.33	27.6	25.2	3.46	33.1	29.4	3.60	39.7	36.1	3.79	47.4	47.4	4.04	52.8	52.8	4.72	52.0	52.0	4.54
	1800	18.2	16.8	3.22	22.9	21.1	3.33	27.8	25.4	3.45	33.4	29.7	3.59	40.0	36.4	3.77	47.8	47.8	4.01	53.3	53.3	4.69	52.5	52.5	4.51

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FV4ANF	005	1.00	1.00	FX4ANB	060	1.01	1.02
F(A,B)4AN(F,B,C)	060	1.02	1.10	FX4ANF	048	1.01	1.06
FB4ANB	070	1.01	1.02	CE3AA	060	1.01	1.06
FC4BN(F,B)	060	1.01	1.09	CJ5A/CK5A/CK5BA	060	1.01	1.03
FC4BNB	070	1.01	1.02	CJ5A/CK5A/CK5BN	060	1.02	1.04
FK4CNB	006	1.01	0.96	CJ5A/CK5A/CK5BX	060	1.02	1.04
FK4CNF	005	1.01	1.01	CK3BA	060	1.01	1.03
FV4ANB	006	1.01	0.96		—	—	—

650AN060-B,C Outdoor Section With FV4ANB006 Indoor Section																									
65	1750	24.4	22.4	3.73	30.9	28.4	3.88	37.9	34.6	4.05	45.0	40.0	4.24	52.6	47.9	4.45	60.8	60.8	4.68	58.2	58.2	4.52	56.3	56.3	4.47
	2000	24.9	22.9	3.76	31.5	28.9	3.90	38.5	35.1	4.05	45.7	40.6	4.22	53.2	48.4	4.41	61.6	61.6	4.61	59.0	59.0	4.44	57.1	57.1	4.37
	2250	25.3	23.3	3.80	31.9	29.3	3.93	39.0	35.5	4.06	46.2	41.0	4.23	53.7	48.9	4.39	62.2	62.2	4.58	59.6	59.6	4.39	57.8	57.8	4.31
70	1750	23.4	21.5	3.92	30.0	27.6	4.09	37.0	33.7	4.27	44.2	39.2	4.46	52.0	47.3	4.70	60.0	60.0	4.94	57.4	57.4	4.76	55.4	55.4	4.71
	2000	23.8	21.9	3.95	30.5	28.0	4.10	37.6	34.3	4.26	44.8	39.8	4.44	52.5	47.8	4.65	60.7	60.7	4.87	58.1	58.1	4.67	56.2	56.2	4.60
	2250	24.3	22.3	4.00	31.0	28.5	4.13	38.1	34.7	4.28	45.4	40.3	4.45	53.1	48.3	4.63	61.4	61.4	4.83	58.8	58.8	4.62	56.9	56.9	4.53
75	1750	22.2	20.5	4.12	28.9	26.6	4.30	36.0	32.9	4.49	43.2	38.4	4.70	51.3	46.7	4.96	59.2	59.2	5.21	56.5	56.5	5.02	54.5	54.5	4.95
	2000	22.7	20.9	4.15	29.5	27.1	4.31	36.7	33.4	4.49	43.9	39.0	4.67	51.9	47.2	4.90	59.9	59.9	5.13	57.3	57.3	4.92	55.3	55.3	4.83
	2250	23.2	21.3	4.20	30.0	27.5	4.34	37.2	33.9	4.50	44.5	39.5	4.67	52.4	47.7	4.88	60.6	60.6	5.09	57.9	57.9	4.86	56.0	56.0	4.76

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FV4ANB	006	1.00	1.00	FX4ANB	060	1.00	1.03
FB4ANB	070	1.00	1.03	CC5A/CD5AW	060	0.98	1.06
FC4BNB	070	1.00	1.03	CJ5A/CK5A/CK5BX	060	0.98	1.02
FK4CNB	006	0.99	0.99		—	–	—

* 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.

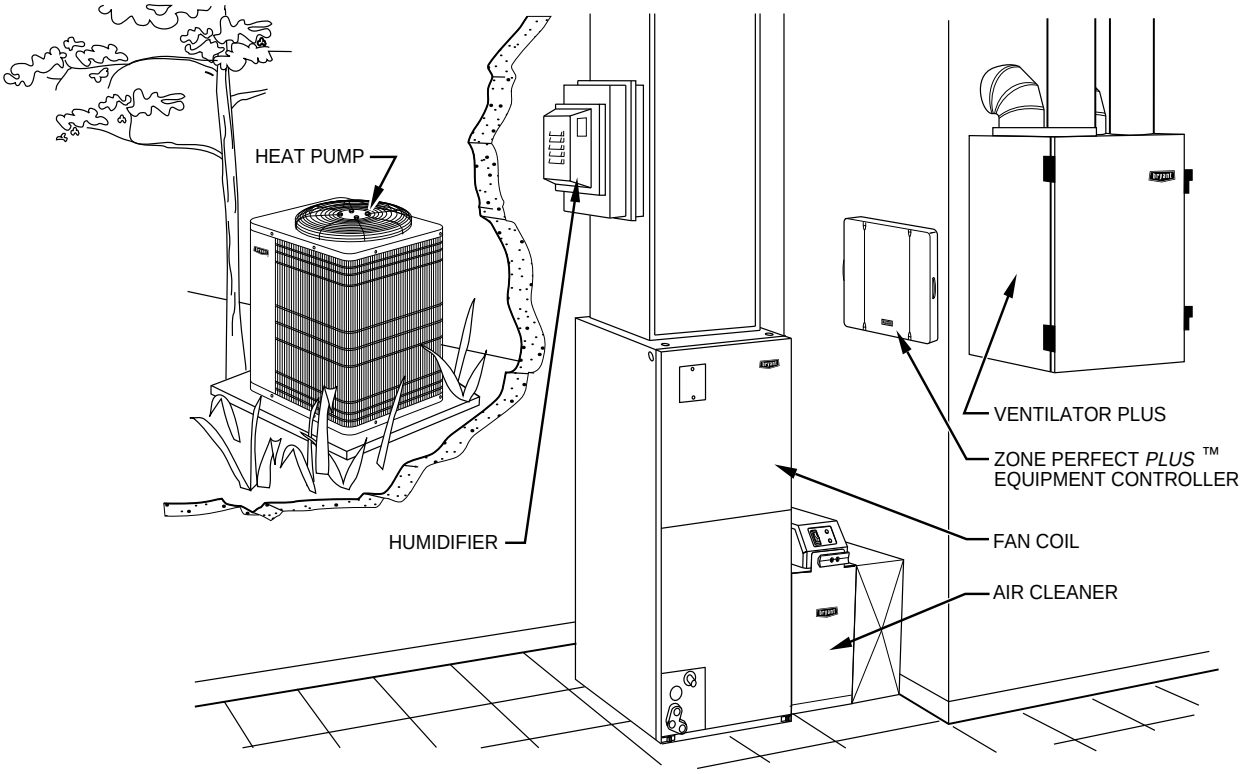
EDB—Entering Dry Bulb

NOTE: The performance shown includes the PressureGuard™ cycling the outdoor fan. The ambient temperature that the outdoor fan cycles depends on the outdoor/indoor combination, indoor airflow, installation practices, and system maintenance, all of which affect system performance.

System Design

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. Minimum outdoor operating air temperature for cooling mode without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature for cooling mode is 125°F (51.7°C).
4. Minimum outdoor operating air temperature for heating mode is –30°F (–34.4°C).
5. Maximum outdoor operating air temperature for heating mode is 66°F (18.9°C).
6. For reliable operation, unit should be level in all horizontal planes.
7. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 50 ft, indoor coil below = 150 ft. (See items 8 and 9 following).
8. For interconnecting refrigerant tube lengths greater than 50 ft and/or elevation differences between indoor and outdoor units greater than 20 ft, consult Residential Split-System Application Guideline and Service Manual for Air Conditioners and Heat Pumps using Puron Refrigerant.
9. If ANY refrigerant tubing is buried, provide a minimum 6-in. vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36-in. may be buried without further considerations. Buried refrigerant tubing lengths greater than 36 in. are not recommended.
10. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
11. Mixmatches of indoor coil capacity more than 1 size larger than outdoor unit capacity (unless so specified) may result in inadequate indoor comfort.
12. Do not apply capillary tube indoor coils to these units.
13. Factory-supplied filter drier must be installed.

MATCHED SYSTEM



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SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

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