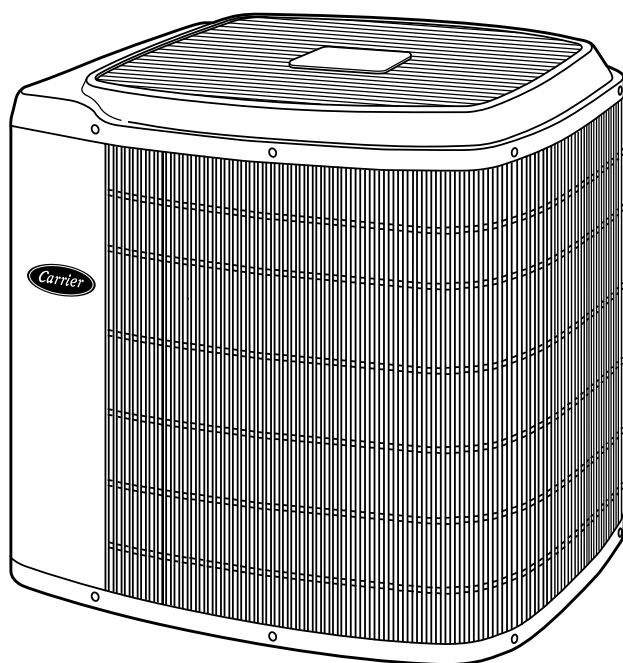




Product Data

Comfort™ 14 38YSA (60 Hz) Heat Pump

Sizes 024 thru 048



Comfort™
S E R I E S

The 38YSA Outdoor Sections of high efficiency Split-System Heat Pumps are designed for quiet, reliable heating during the winter and cooling during the summer. These heat pump systems provide economy of operation through energy conservation. They recover heat for indoor comfort from outdoor air during the heating season and, by automatically reversing the refrigerant system, remove indoor heat and excess humidity during the cooling season. All models are 208/230v, single phase, 60 hertz, and are listed with ARI, CEC, and UL (U.S. and Canada). The 38YSA meets the Energy Star® guidelines for energy efficiency.

CARRIER'S TECH2000 SILENCER SYSTEM

The Silencer System features the InViroFlow design, energy-efficient fan and motor, sound hood, and discharge muffler.

InViroFlow Design — improves airflow pattern and requires less energy.

Energy-Efficient Fan and Fan Motor — adds to quiet operation while moving air more efficiently.

Sound Hood — muffles noise from operation.

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

FEATURES/BENEFITS

Compressor — This unit features a

scroll compressor which is significantly more efficient than conventional compressors, especially in the heating mode at low-ambient temperatures. Its simple design offers improved reliability. Each compressor is mounted on rubber isolators for additional sound reduction. The scroll compressor will start under most system loads, thus eliminating the need for start assistance components. For improved serviceability, all models are equipped with a compressor terminal plug. Continuous operation is approved down to -30°F (-34.4°C) in the heating mode and down to 55°F (12.8°C) in the cooling mode. (See heating and cooling performance tables.) The scroll compressor is covered with a standard 10-year limited warranty.

Built-In-Reliable Components — Include a suction accumulator that minimizes the liquid refrigerant reaching the compressor; high-pressure switch for high-pressure protection; low-pressure switch for loss of charge protection; TXV for heating operation; and a compressor sound hood.

Defrost Control Board — This 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 4 field-selectable (DIP switch) time periods of 30, 60, 90, and 120 minutes. This control also includes a field-selectable (DIP Switch) Quiet Shift defrost mode which, if selected, maintains extremely quiet operation during defrost.

Thermostatic Expansion Valve (TXV) — In addition to the TXV on the outdoor section, this unit must be installed with a TXV on the indoor coil. The FC4 and FK4 indoor fan coils come factory equipped with a bi-flow TXV. When installed in this application, no further change is required. If any other indoor fan coil or furnace coil is used, an accessory bi-flow TXV must be installed. See accessory list in this publication for correct part number. **For optimum performance and reliability, use only approved coil combinations listed in this publication.**

WeatherArmor III System includes three components:

— Casing steel is galvanized and coated with a layer of zinc phosphate. A modified polyester powder coating is then applied and baked on, providing each unit with a hard, smooth finish that will last for many years.

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

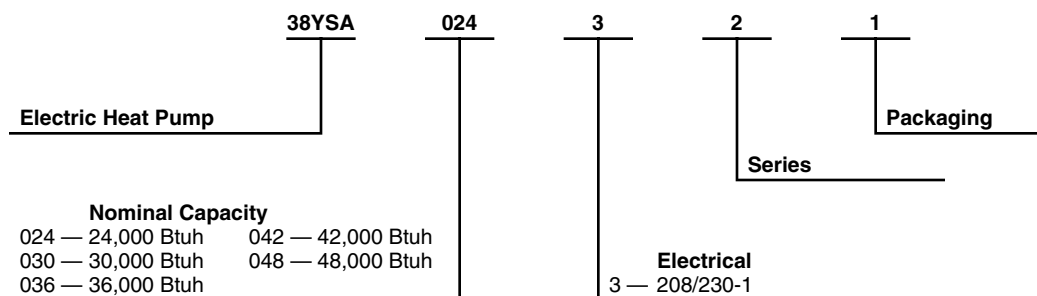
— The coil is protected with an enhanced coil guard. With spacing of 3/8-in. and construction of coated wire, the guard helps to protect from inclement weather (hail), vandalism, and incidental damage.

Unit Design — All units are equipped with totally enclosed fan motors for greater reliability under adverse weather conditions. The large, wraparound coil uses copper tube and enhanced sine wave aluminum fin and is designed for optimum heat transfer during heating and cooling. The vertical air discharge carries sound and air up and away from adjacent patio areas and foliage. Rows of composite coils can be cleaned with a common garden hose.

External Service Valves — Both service valves are brass, back seating type with sweat connections. Each valve has a service port for ease of checking operating refrigerant pressures. The suction service port provides for ease of checking operating pressure in the heating mode.

Limited Warranty — Standard 5-year limited warranty on all parts, with a 10-year limited warranty on the compressor.

Model number nomenclature



This heat pump can be part of a Comfort Heat Pump System which can provide higher heating supply air temperatures, as well as up to 30 times more humidity removal in cooling mode. A Comfort Heat Pump System requires the use of a Variable-Speed Fan Coil with Thermostat Control, Comfort Zone II, or Infinity Control.



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



REGISTERED QUALITY SYSTEM



★ As an ENERGY STARSM 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 Digest for system combinations meeting Energy Star[®] efficiency standards.

Physical data

MODEL 38YSA	024-32, 33	030-32, 33	036-32, 33	042-32, 33	048-32, 33
OPERATING WT (Lb)	205	233	223	243	343
COMPRESSOR Type	Scroll				
REFRIGERANT Control Charge (Lb)	7.38	9.13	TXV (Cooling & Heating) 10.88	10.88	12.38
COND FAN Air Discharge Air Qty (CFM) Motor HP Motor RPM (60 hz)	Propeller Type, Direct Drive Vertical 2400 1/5 825				
COND COIL Face Area (Sq Ft) Fins per In. Rows Circuits	15.15 20 2 3	18.18 20 2 5	18.18 20 2 5	18.18 20 2 5	20.74 20 2 6
CONNECT (In. ID) Vapor Liquid	5/8	3/4	Sweat 3/4 3/8	7/8	7/8
REFRIG TUBES* (In. OD) Vapor (0-50 Ft Tube Length) Vapor (Max Diameter for Long-Line Applications) Liquid (0-50 Ft Tube Length) Liquid (For Long-Line Applications)	5/8 3/4	3/4 7/8	3/4 7/8 3/8	7/8 1-1/8	7/8 1-1/8

* Tube sizes are for runs up to 50 ft. For tube set over 50 ft horizontal or 20 ft vertical differential, consult Residential Split System Long-Line Application Guideline.

NOTE: See unit Installation Instructions for proper installation.

METERING DEVICE

UNIT SIZE	SERIES	OUTDOOR TXV	INDOOR TXV*
024	32, 33	Standard	KSATX0601HSO
030	32, 33	Standard	KSATX0601HSO
036	32, 33	Standard	KSATX0601HSO
042	32, 33	Standard	KSATX0601HSO
048	32, 33	Standard	KSATX0701HSO

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

Accessories

ORDERING NUMBER	DESCRIPTION
KSALA0401AAA	MotorMaster®—Low-Ambient Controller — All Sizes
HC38GE231 (RCD)	Ball Bearing Fan Motor — Sizes 024-042
HC38GE232 (RCD)	Ball Bearing Fan Motor — Size 048
KAAFT0101AAA‡	Evaporator Freeze Thermostat — All Sizes
KHAIR0101AAA‡	Isolation Relay — All Sizes
KSAHS1501AAA	Start Assist — Capacitor and Relay — Sizes 024-042
KSAHS1601AAA	Start Assist — Capacitor and Relay — Size 048
KAACH1201AAA	Crankcase Heater — All Sizes
KHAOT0301FST	Outdoor Thermostat — All Sizes
KHAOT0201SEC	Secondary Outdoor Thermostat — All Sizes
KSATX0601HSO††	Bi-Flow TXV (Hard Shutoff) — Sizes 024-042
KSATX0701HSO††	Bi-Flow TXV (Hard Shutoff) — Size 048
P504-8083S (RCD)	Filter-Drier — Bi-Flow — Sizes 024-036
P504-8163S (RCD)	Filter-Drier — Bi-Flow — Sizes 042, 048
KHALS0101LLS	Liquid-Line Solenoid Valve — All Sizes
KSASF0101AAA	Support Feet — 4 in. — All Sizes
KHASS0206MPK	Snow Stand — Sizes 024-042
KHASS0306MPK	Snow Stand — Size 048

* Isolation relay required.

† Fan motor with ball bearings required.

‡ Consult low-ambient Installation Instructions for application.

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

†† Must be applied on coils not equipped with TXV.

THERMOSTAT PKG	DESCRIPTION
TSTATCCPRH01-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.) †
TSTATCCPDF01-B	Thermostat, Auto Changeover, 7-Day Programmable, °F/°C, Dual Fuel Thermostat, Must be used with Outdoor Temperature Sensor (TSTATXXSEN01) Included *†
TSTATCCPHP01-B	Thermostat, Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool
TSTATCCNHP01-B	Thermostat, Auto Changeover, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool
TSTATCCBHP01	Builder's Thermostat — Heat Pump, Non-Programmable, 2-Stage Heat, 1-Stage Cool, Manual Changeover, °F/°C. †
TSTATXXSEN01	Outdoor Air Temperature Sensor ‡
TSTATXXNBP01	Backplate for Non-Programmable Thermostat**
TSTATXXBP01	Backplate for Programmable Thermostat**
TSTATXXBBP01	Backplate for Builder's Thermostat**
TSTATXXCNV10	Thermostat Conversion Kit (4 to 5 wire) — 10 Pack ††

* High-pressure switch must be added if not supplied with system.

† Do not use in zoning heat pump applications.

‡ Outdoor temperature sensor is an accessory for all Carrier 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 temperature sensor is included with the Thermidistat Control and dual fuel thermostat.

** This plate is designed to cover surrounding wall area 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.

Accessory description and usage (Listed alphabetically)

1. Ball-Bearing Fan Motor

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

Usage Guideline:

Required on all units when MotorMaster®—Low-Ambient Controller is installed.

2. Coastal Filter

A mesh screen inserted under the top cover and inside the base pan to protect the condenser coil from salt damage without restricting airflow.

3. Compressor Start Assist – Capacitor and Relay

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

Usage Guideline:

Required for single-phase reciprocating compressors in the following applications:

Long line

Low ambient cooling

Hard shut off expansion valve on indoor coil

Liquid line solenoid on indoor coil

Required for single-phase scroll compressors in the following applications:

Long line

Low ambient cooling

Suggested for all compressors in areas with a history of low voltage problems

4. Compressor Start Assist – PTC Type

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

Usage Guideline:

Suggested when compressor power supply is marginal.

Suggested in reciprocating compressor applications with rapid pressure balance (RPB) expansion valve on indoor coil.

5. Crankcase Heater

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

Note: Some heat pumps are factory supplied with a crankcase heater. See accessory list for units that come standard with a crankcase heater. For units that do not, use the guideline below.

Usage Guideline:

Required in low ambient cooling applications.

Required in long line applications.

Suggested in all commercial applications.

6. Cycle Protector

Solid-state timing device which prevents compressor rapid recycling. This control provides an approximate 5-minute delay after power to the compressor has been interrupted for any reason, including normal room thermostat cycling.

Usage Guideline:

Suggested in the following applications:

Installations in areas where power interruptions are frequent.

Where user is likely to "play" with the room thermostat.

All commercial installations.

Long line applications.

High-rise applications.

7. Evaporator Freeze Thermostat

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

Usage Guideline:

Required when low-ambient kit has been added.

8. Filter Drier

A device for removing contaminants from refrigerant circulating in a heat pump system: two-direction flow.

Usage Guideline:

Suggested in all field-connected split-system heat pumps.

9. High-Pressure Switch

Auto reset SPST switch activated by refrigerant pressure on high side of refrigerant circuit. Cycles compressor off if refrigerant pressure rises to 426 ± 10 psig and resets at 320 ± 20 psig. Provides protection against compressor damage due to loss of outdoor airflow.

Usage Guideline:

Suggested in installations exposed to "very dirty" outdoor air.

Suggested in installations where condenser inlet air temperature exceeds 125°F (51.7°C).

10. Isolation Relay

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

Usage Guideline:

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

11. Liquid-Line Solenoid Valve (LLS)

An electrically operated shutoff valve which stops and starts refrigerant liquid flow in response to compressor operation. It maintains a column of refrigerant liquid ready for action at next compressor operation cycle. It also provides system protection against off-cycle refrigerant migration.

Note: When LLS is used with reciprocating compressors, Compressor Start Assist — Capacitor and Relay is required.

Usage Guideline:

Required in all heat pump long line applications to control refrigerant off cycle migration in the heating mode. A second LLS or hard shut off TXV is required in heat pump long line applications for refrigerant off cycle migration in the cooling mode. See Long Line Application Guide-line.

12. 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 100 psig to 225 psig). The control will maintain working head pressure at low-ambient temperatures down to 0°F (–17.8°C) when properly installed.

Usage Guideline:

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

Accessory description and usage (continued)

13. **MotorMaster®—Low-Ambient Controller**

A fan speed control device activated by a temperature sensor. Designed to control condenser fan motor speed in response to the saturated, condensing temperature during operation in cooling mode only. For outdoor temperatures down to -20°F (-28.9°C), it maintains condensing temperature at $100^{\circ}\text{F} \pm 10^{\circ}\text{F}$ ($37.8^{\circ}\text{C} \pm 12^{\circ}\text{C}$).

Usage Guideline:

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

Suggested for all commercial applications.

14. **Outdoor Air Temperature Sensor**

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

Usage Guideline:

Suggested for all Carrier thermostats listed in this publication.

15. **Outdoor Thermostat**

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

Usage Guideline:

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

16. **Secondary Outdoor Thermostat**

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

Usage Guideline:

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

17. **Sound Hood**

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

Usage Guideline:

Suggested when unit is installed closer than 15 ft to quiet areas—bedrooms, etc.

Suggested when unit is installed between two houses less than 10 ft apart.

18. **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.

Usage Guideline:

Coastal installations.

Windy areas or where debris is normally circulating.

Rooftop installations.

19. **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. Both hard shutoff and RPB valves are available.

Note: When using a hard shut off TXV with single phase reciprocating compressors, a Compressor Start Assist — Capacitor and Relay is required

Usage Guideline:

Required to achieve ARI ratings in certain equipment combinations. Refer to combination ratings.

Required for use on all zoning systems.

See long line guideline.

20. **Time-Delay Relay**

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

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

Usage Guideline:

For improved efficiency ratings for certain combinations of indoor and outdoor units. Refer to ARI Unitary Directory.

Electrical data

UNIT SIZE-SERIES	V/PH	OPER VOLTS*		COMPR		FAN FLA	MCA	60°C MIN WIRE SIZE†	75°C MIN WIRE SIZE†	60°C MAX LENGTH (Ft)‡	75°C MAX LENGTH (Ft)‡	MAX FUSE** OR CKT BKR AMPS
		Max	Min	LRA	RLA							
024-32, 33	208/230-1	253	187	56.0	10.9	1.1	14.7	14	14	53	50	20
030-32, 33				72.5	13.5	1.1	18.0	14	14	44	42	25
036-32, 33				88.0	19.5	1.1	25.5	10	10	77	73	40
042-32, 33				104.0	17.9	1.1	23.5	12	12	52	50	35
048-32, 33				129.0	23.9	1.4	31.3	8	10	97	59	45

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

† 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 maximum 2% voltage drop. If other than uncoated (non-plated), 60° 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).

** Time-delay fuse.

FLA — Full Load Amps
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
RLA — Rated Load Amps

NOTES:

- Control circuit is 24v 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 power (dBA)

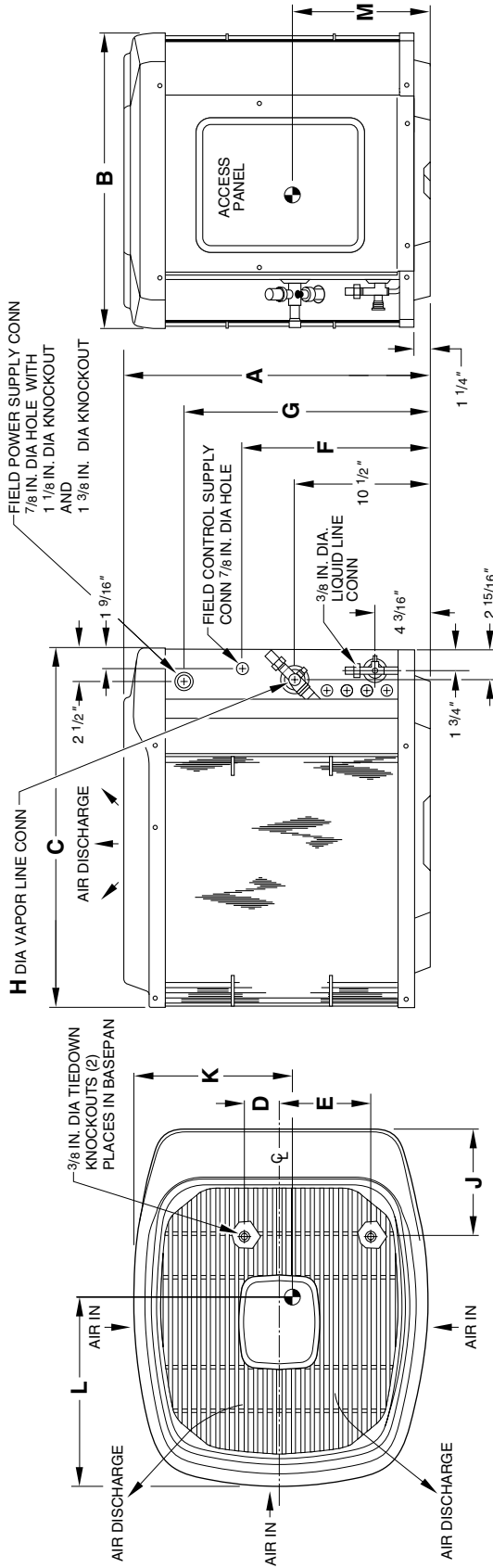
UNIT SIZE	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
024	72	58.5	61.5	64.5	67.0	63.5	60.5	53.0
030	72	56.5	60.5	63.5	67.0	63.0	60.5	53.0
036	75	58.0	61.0	65.0	70.5	66.0	60.5	54.5
042	75	57.5	60.5	66.5	68.5	66.0	60.5	54.5
048	75	61.0	64.5	67.5	69.0	67.5	62.5	56.5

NOTE: Tested in accordance with ARI Standard 270-95. (Not listed with ARI).

Dimensions

NOTES:

1. Allow 30 in. clearance to service side 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 13th position of the unit model number.
5. Center of gravity .

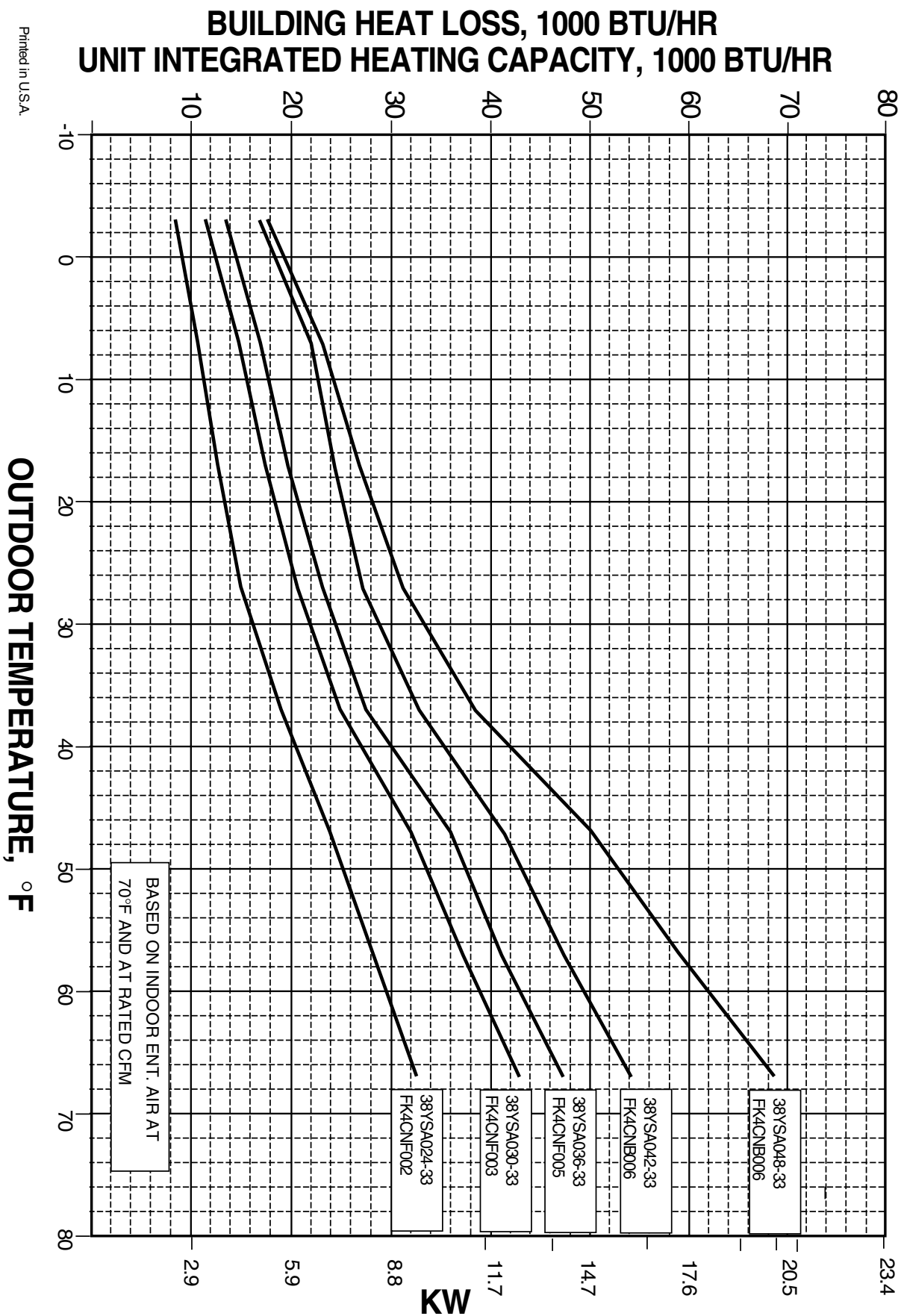


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DIMENSIONS (IN.)

UNIT SIZE	SERIES	UNIT DIMENSIONS													MINIMUM MOUNTING PAD DIMENSIONS	
		A	B	C	D	E	F	G	H	J	K	L	M			
024	2, 3	33-13/16	30	34-15/16	4	9-3/4	21-1/2	27-7/8	5/8	8-3/16	16-13/16	20-1/2	14	26 x 32	31 x 35	
030	2, 3	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	3/4	8-3/16	16-1/2	20-3/8	15	26 x 32	31 x 35	
036	2, 3	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	3/4	8-3/16	16-1/2	20-3/8	16	26 x 32	31 x 35	
042	2, 3	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	8-3/16	16-1/2	20-3/8	15	26 x 32	31 x 35	
048	2, 3	33-13/16	38-5/8	45	5-5/16	11-13/16	21-1/2	27-7/8	7/8	8-9/16	19-1/2	25-1/2	16	32 x 42	36 x 46	

38YSA BALANCE POINT WORKSHEET



Combination ratings

UNIT SIZE-SERIES	INDOOR UNIT	ARI STANDARD RATINGS†										Seasonal Efficiency HSPF
		Cooling						Heating				
		TC	Seasonal Efficiency SEER				EER	High-Temp		Low-Temp		
			Factory-Supplied Enhancement	Standard Rating	Field-Supplied Accessory ‡							
					TXV	TXV & TDR**						
024-32, 33	*FK4DNF002	23,600	TDR&TXV	14.50	—	—	12.50	24,000	3.56	13,900	2.30	8.6
	CC5A/CD5AA036	22,800	NONE	—	—	12.50	11.20	24,000	3.28	14,300	2.14	8.0
	CC5A/CD5AW036	22,800	NONE	—	—	12.50	11.20	24,000	3.28	14,300	2.14	8.0
	CK3BA036	23,000	NONE	—	—	12.50	11.30	24,000	3.34	14,300	2.16	8.0
	CK5A/CK5BA036	23,000	NONE	—	—	12.50	11.30	24,000	3.34	14,300	2.16	8.0
	CK5A/CK5BT036	23,000	NONE	—	—	12.50	11.30	24,000	3.34	14,300	2.16	8.0
	CK5A/CK5BW036	23,000	NONE	—	—	12.50	11.30	24,000	3.34	14,300	2.16	8.0
	FK4DNF001	23,400	TDR&TXV	14.20	—	—	12.35	24,000	3.52	13,900	2.30	8.6
	FK4DNF003	23,800	TDR&TXV	14.70	—	—	12.80	24,000	3.58	13,800	2.32	8.6
	COILS + 58CV(A,X)070-12 VARIABLE SPEED FURNACE											
	CC5A/CD5AA036	23,400	NONE	—	14.20	—	12.45	23,600	3.48	13,700	2.28	8.5
	CE3AA036	23,000	NONE	—	14.00	—	11.85	24,000	3.22	13,900	2.16	8.0
	CK3BA036	23,400	NONE	—	14.20	—	12.50	23,800	3.42	13,800	2.24	8.2
	CK5A/CK5BA036	23,400	NONE	—	14.20	—	12.50	23,800	3.42	13,800	2.24	8.2
	CK5A/CK5BT036	23,400	NONE	—	14.20	—	12.50	23,800	3.42	13,800	2.24	8.2
030-32, 33	*FK4DNF003	29,400	TDR&TXV	15.00	—	—	12.50	32,000	3.44	19,200	2.36	8.4
	CC5A/CD5AA042	28,600	NONE	—	—	13.00	11.05	32,000	3.14	19,800	2.20	7.8
	CC5A/CD5AW042	28,600	NONE	—	—	13.00	11.05	32,000	3.14	19,800	2.20	7.8
	CK3BA042	29,000	NONE	—	—	13.00	11.20	32,000	3.24	19,800	2.24	8.0
	CK5A/CK5BA042	29,000	NONE	—	—	13.00	11.20	32,000	3.24	19,800	2.24	8.0
	CK5A/CK5BT042	29,000	NONE	—	—	13.00	11.20	32,000	3.24	19,800	2.24	8.0
	FK4DNF002	29,000	TDR&TXV	14.30	—	—	12.00	32,000	3.42	19,400	2.36	8.3
	FK4DNF005	30,000	TDR&TXV	15.50	—	—	12.85	32,000	3.66	19,300	2.48	9.0
	COILS + 58CV(A,X)090-16 VARIABLE SPEED FURNACE											
	CC5A/CD5AA042	29,200	NONE	—	14.60	—	12.35	31,600	3.46	19,100	2.50	8.5
	CE3AA042	29,400	NONE	—	14.60	—	12.40	31,800	3.46	19,100	2.48	8.5
	CK3BA042	29,400	NONE	—	14.60	—	12.40	32,400	3.20	19,300	2.12	7.6
	CK5A/CK5BA042	29,400	NONE	—	14.60	—	12.40	32,200	3.20	19,300	2.12	7.6
	CK5A/CK5BE042	29,600	NONE	—	14.70	—	12.50	32,000	3.56	19,200	2.48	8.5
	CK5A/CK5BT042	29,400	NONE	—	14.60	—	12.40	32,200	3.20	19,300	2.12	7.6
036-32, 33	*FK4DNF005	35,400	TDR&TXV	14.50	—	—	12.20	36,000	3.72	21,800	2.52	9.0
	CC5A/CD5AA060	33,600	NONE	—	—	12.50	10.75	36,000	3.06	22,600	2.00	7.3
	CC5A/CD5AW048	33,600	NONE	—	—	12.50	10.75	36,000	3.06	22,600	2.00	7.3
	CD5AA048	33,600	NONE	—	—	12.50	10.75	36,000	3.06	22,600	2.00	7.3
	CK3BA060	34,400	NONE	—	—	13.00	11.00	34,200	3.18	21,200	2.10	7.5
	CK5A/CK5BA060	34,400	NONE	—	—	13.00	11.00	34,200	3.18	21,200	2.10	7.5
	CK5A/CK5BT060	34,400	NONE	—	—	13.00	11.00	34,200	3.18	21,200	2.10	7.5
	FK4DNB006	35,400	TDR&TXV	14.70	—	—	12.40	35,400	3.92	21,600	2.66	9.4
	COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AW048	33,800	NONE	—	14.00	—	11.70	36,400	3.38	22,000	2.36	8.2
	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AW048	33,800	NONE	—	14.00	—	11.65	36,400	3.38	22,000	2.36	8.1
	CK5A/CK5BW048	34,000	NONE	—	14.00	—	11.75	37,200	3.22	22,200	2.14	7.5
	COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AW048	33,800	NONE	—	14.00	—	11.80	36,200	3.40	22,000	2.36	8.2
CK5A/CK5BW048	34,000	NONE	—	14.20	—	11.90	37,200	3.24	22,200	2.16	7.6	
042-32, 33	*FK4DNB006	41,000	TDR&TXV	14.20	—	—	12.05	41,500	3.80	25,000	2.60	8.8
	CC5A/CD5AW060	39,000	NONE	—	—	12.20	10.65	42,000	3.34	25,800	2.34	7.8
	CK5A/CK5BX060	40,500	NONE	—	—	12.50	11.00	40,000	3.22	24,600	2.16	7.5
	FC4CNB054	40,000	TDR&TXV	13.00	—	—	11.05	42,000	3.60	25,600	2.46	8.2
	FK4DNF005	41,000	TDR&TXV	13.70	—	—	11.80	42,000	3.56	25,400	2.42	8.2
	COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE											
	CE3AA060	40,000	NONE	—	13.50	—	11.60	42,000	3.46	25,200	2.40	8.0
	CK3BA060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BA060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BT060	40,000	NONE	—	13.60	—	11.65	43,000	3.56	25,600	2.44	8.2
	CK5A/CK5BX060	40,500	NONE	—	13.80	—	11.80	42,000	3.64	25,200	2.50	8.3
	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AA060	39,000	NONE	—	13.30	—	11.35	42,000	3.28	25,400	2.32	7.6
	CC5A/CD5AW060	40,000	NONE	—	13.50	—	11.70	41,000	3.56	25,000	2.48	8.2
	CE3AA060	40,000	NONE	—	13.50	—	11.65	42,000	3.46	25,200	2.40	8.0
	CK3BA060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BA060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BT060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BX060	40,500	NONE	—	13.80	—	11.80	41,500	3.66	25,200	2.50	8.3
	COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AA060	39,000	NONE	—	13.30	—	11.40	42,000	3.28	25,400	2.32	7.6
	CC5A/CD5AW060	40,000	NONE	—	13.50	—	11.65	41,000	3.54	25,000	2.48	8.2
	CE3AA060	40,000	NONE	—	13.70	—	11.70	42,000	3.48	25,200	2.42	8.0
	CK3BA060	40,000	NONE	—	13.70	—	11.75	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BA060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BT060	40,000	NONE	—	13.70	—	11.70	42,500	3.58	25,600	2.44	8.2
	CK5A/CK5BX060	40,500	NONE	—	13.80	—	11.85	41,500	3.66	25,200	2.50	8.3

See notes on pg. 11.

Combination ratings continued

UNIT SIZE-SERIES	INDOOR UNIT	ARI STANDARD RATINGS†										Seasonal Efficiency HSPF
		Cooling						Heating				
		TC	Seasonal Efficiency SEER			EER	High-Temp		Low-Temp			
			Factory-Supplied Enhancement	Standard Rating	Field-Supplied Accessory ‡							
TXV	TXV & TDR**	TC			COP	TC	COP					
048-32, 33	*FK4DNB006	47,500	TDR&TXV	14.00	—		12.00	50,000	3.70	29,400	2.54	9.0
	FC4CNB054	47,000	TDR&TXV	13.00	—		11.20	50,000	3.56	30,000	2.44	8.5
	FK4DNF005	47,500	TDR&TXV	13.50	—		11.65	50,000	3.26	30,200	2.08	7.5
	COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE											
	CK5A/CK5BX060	47,000	NONE	—	13.70		11.80	51,000	3.22	30,000	2.16	7.7
	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE											
	CC5A/CD5AW060	46,000	NONE	—	13.30		11.50	49,500	3.30	29,800	2.32	8.0
	CK5A/CK5BX060	47,000	NONE	—	13.60		11.70	51,000	3.22	30,200	2.14	7.7
COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE												
	CC5A/CD5AW060	46,000	NONE	—	13.50		11.60	50,000	3.32	29,800	2.34	8.0

* Outdoor section/indoor section combination tested in accordance with DOE test procedures for heat pumps. Ratings for other combinations are determined under DOE computer simulation procedures.

† 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.

‡ 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 Carrier furnaces are equipped with TDR except for the 58GFA.

** Requires hard shutoff TXV; based on computer simulation.

SEER — Seasonal Energy Efficiency Ratio

COP — Coefficient of Performance

HSPF — Heating Seasonal Performance Factor

TC — Total Capacity (Btuh)

TXV — Thermostatic Expansion Valve

TDR — Time-Delay Relay

Detailed cooling capacities*

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
CFM	EWB	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
38YSA024-32, 33 Outdoor Section With FK4DNF002 Indoor Section																			
630	72	27.1	13.5	1.48	26.2	13.2	1.67	25.3	12.9	1.87	24.2	12.5	2.09	23.1	12.1	2.33	21.6	11.5	2.59
	67	25.0	17.0	1.50	24.2	16.6	1.68	23.2	16.3	1.88	22.2	15.9	2.09	21.0	15.3	2.33	19.6	14.8	2.58
	63††	23.3	16.6	1.50	22.5	16.2	1.68	21.6	15.8	1.88	20.6	15.4	2.09	19.6	14.9	2.32	18.3	14.4	2.57
	62	22.9	20.3	1.50	22.1	19.9	1.68	21.2	19.5	1.88	20.2	19.0	2.09	19.2	18.6	2.32	18.2	18.0	2.57
	57	22.0	22.0	1.51	21.3	21.3	1.69	20.6	20.6	1.88	19.8	19.8	2.09	19.0	19.0	2.32	18.0	18.0	2.57
700	72	27.5	14.1	1.49	26.7	13.7	1.68	25.7	13.4	1.88	24.6	13.0	2.10	23.4	12.6	2.34	21.9	12.1	2.60
	67	25.4	17.9	1.51	24.6	17.5	1.69	23.6	17.1	1.89	22.6	16.7	2.11	21.3	16.2	2.34	19.9	15.7	2.59
	63††	23.7	17.4	1.51	22.9	17.0	1.69	22.0	16.6	1.89	20.9	16.2	2.10	19.9	15.7	2.33	18.6	15.2	2.58
	62	23.3	21.5	1.51	22.5	21.1	1.69	21.6	20.7	1.89	20.6	20.2	2.10	19.7	19.6	2.33	18.7	18.7	2.59
	57	22.7	22.7	1.52	22.1	22.1	1.69	21.3	21.3	1.89	20.5	20.5	2.10	19.7	19.7	2.33	18.6	18.6	2.58
805	72	28.0	14.8	1.51	27.1	14.5	1.69	26.1	14.2	1.90	25.0	13.8	2.12	23.8	13.3	2.36	22.3	12.8	2.62
	67	25.9	19.1	1.52	25.0	18.8	1.70	24.1	18.4	1.90	22.9	17.9	2.12	21.7	17.5	2.36	20.3	16.9	2.61
	63††	24.2	18.6	1.53	23.4	18.2	1.71	22.4	17.8	1.90	21.4	17.4	2.12	20.3	16.9	2.35	18.9	16.3	2.60
	62	24.0	23.2	1.53	23.1	22.7	1.71	22.2	22.2	1.90	21.4	21.4	2.12	20.4	20.4	2.35	19.5	19.5	2.61
	57	23.7	23.7	1.53	23.0	23.0	1.71	22.2	22.2	1.90	21.4	21.4	2.12	20.5	20.5	2.35	19.4	19.4	2.61

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
CC5A/CD5AA	036	0.97	1.08	FK4DNF	001	0.99	1.00
CC5A/CD5AW	036	0.97	1.08		002	1.00	1.00
CK3BA	036	0.97	1.08		003	1.01	0.98
CK5A/CK5BA	036	0.97	1.08	COILS + 58CV(A,X)070-12 VARIABLE SPEED FURNACE			
CK5A/CK5BT	036	0.97	1.08	CC5A/CD5AA	036	0.99	1.00
CK5A/CK5BW	036	0.97	1.08	CE3AA	036	0.97	1.03
	—	—	—	CK3BA	036	0.99	0.99
	—	—	—	CK5A/CK5BA	036	0.99	0.99
	—	—	—	CK5A/CK5BT	036	0.99	0.99

38YSA030-32, 33 Outdoor Section With FK4DNF003 Indoor Section

788	72	34.3	17.0	1.74	32.9	16.5	2.01	31.6	16.0	2.32	30.3	15.5	2.66	28.6	14.9	3.02	26.8	14.2	3.41
	67	31.4	21.1	1.77	30.3	20.6	2.04	29.1	20.1	2.35	27.6	19.5	2.68	26.1	18.9	3.04	24.6	18.3	3.43
	63††	29.3	20.6	1.79	28.2	20.1	2.06	27.0	19.6	2.37	25.8	19.0	2.70	24.4	18.4	3.06	22.8	17.7	3.44
	62	28.8	25.1	1.80	27.7	24.6	2.07	26.6	24.1	2.37	25.4	23.5	2.70	24.0	22.9	3.06	22.6	22.1	3.44
	57	27.5	27.5	1.81	26.6	26.6	2.08	25.7	25.7	2.38	24.7	24.7	2.71	23.7	23.7	3.06	22.5	22.5	3.45
875	72	34.8	17.6	1.74	33.5	17.1	2.02	32.2	16.6	2.33	30.7	16.1	2.67	29.0	15.5	3.03	27.2	14.9	3.42
	67	32.0	22.2	1.78	30.8	21.7	2.05	29.4	21.1	2.35	28.1	20.6	2.69	26.5	19.9	3.05	25.0	19.4	3.44
	63††	29.8	21.6	1.80	28.7	21.1	2.07	27.5	20.5	2.38	26.1	19.9	2.70	24.8	19.4	3.07	23.2	18.7	3.45
	62	29.4	26.6	1.81	28.3	26.1	2.08	27.1	25.5	2.38	25.8	24.8	2.71	24.6	24.2	3.07	23.1	23.1	3.45
	57	28.4	28.4	1.82	27.5	27.5	2.09	26.5	26.5	2.38	25.4	25.4	2.71	24.3	24.3	3.07	23.1	23.1	3.45
1006	72	35.4	18.5	1.76	34.2	18.0	2.03	32.8	17.5	2.34	31.1	17.0	2.67	29.5	16.4	3.05	27.7	15.8	3.44
	67	32.7	23.7	1.79	31.3	23.1	2.06	29.9	22.6	2.37	28.6	22.1	2.70	27.0	21.4	3.07	25.5	20.8	3.46
	63††	30.5	23.0	1.81	29.3	22.5	2.09	27.9	21.9	2.39	26.5	21.3	2.72	25.3	20.8	3.09	23.7	20.1	3.47
	62	30.1	28.6	1.82	29.0	28.0	2.09	27.7	27.3	2.39	26.5	26.5	2.72	25.4	25.4	3.08	24.1	24.1	3.47
	57	29.6	29.6	1.82	28.7	28.7	2.10	27.6	27.6	2.39	26.5	26.5	2.72	25.3	25.3	3.08	24.0	24.0	3.47

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
CC5A/CD5AA	042	0.97	1.10	COILS + 58CV(A,X)090-16 VARIABLE SPEED FURNACE			
CC5A/CD5AW	042	0.97	1.10	CC5A/CD5AA	042	0.99	1.01
CK3BA	042	0.99	1.10	CE3AA	042	1.00	1.01
CK5A/CK5BA	042	0.99	1.10	CK3BA	042	1.00	1.01
CK5A/CK5BT	042	0.99	1.10	CK5A/CK5BA	042	1.00	1.01
FK4DNF	002	0.99	1.03	CK5A/CK5BE	042	1.01	1.01
	003	1.00	1.00	CK5A/CK5BT	042	1.00	1.01
	005	1.02	0.99		—	—	—

See notes on pg. 14.

Detailed cooling capacities* continued

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																					
		75				85				95				105				115				125	
CFM	EWB	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**	Capacity MBtu/h†		Total Sys kW**				
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡					
38YSA036-32, 33 Outdoor Section With FK4DNF005 Indoor Section																							
945	72	41.3	20.5	2.33	39.8	20.0	2.60	38.1	19.3	2.90	36.2	18.7	3.23	34.3	18.0	3.59	32.3	17.2	3.98				
	67	37.9	25.6	2.31	36.6	25.1	2.59	34.9	24.4	2.88	33.2	23.7	3.21	31.4	23.0	3.56	29.5	22.3	3.95				
	63††	35.4	25.0	2.30	34.1	24.5	2.57	32.6	23.8	2.87	31.0	23.1	3.19	29.5	22.4	3.55	27.8	21.7	3.93				
	62	34.8	30.7	2.30	33.5	30.1	2.57	32.1	29.4	2.87	30.5	28.7	3.19	28.9	27.9	3.54	27.4	27.1	3.93				
	57	33.4	33.4	2.29	32.4	32.4	2.56	31.2	31.2	2.86	30.0	30.0	3.18	28.6	28.6	3.54	27.2	27.2	3.92				
1050	72	42.1	21.4	2.35	40.4	20.8	2.62	38.6	20.1	2.92	36.6	19.4	3.25	34.6	18.7	3.61	32.5	18.0	4.00				
	67	38.7	27.0	2.34	37.1	26.4	2.60	35.4	25.7	2.90	33.6	25.0	3.23	32.0	24.4	3.59	30.1	23.6	3.98				
	63††	36.2	26.4	2.32	34.7	25.7	2.59	33.1	25.0	2.89	31.6	24.4	3.22	29.9	23.6	3.57	28.1	22.9	3.95				
	62	35.6	32.6	2.32	34.2	31.9	2.59	32.7	31.2	2.89	31.3	30.5	3.21	29.7	29.6	3.57	28.2	28.2	3.95				
	57	34.5	34.5	2.31	33.5	33.5	2.59	32.2	32.2	2.88	30.9	30.9	3.21	29.5	29.5	3.56	28.0	28.0	3.95				
1208	72	43.0	22.6	2.38	41.0	21.9	2.65	39.1	21.2	2.95	37.2	20.5	3.28	35.1	19.8	3.64	32.9	19.1	4.03				
	67	39.6	29.0	2.37	37.8	28.3	2.63	36.0	27.6	2.93	34.4	27.0	3.26	32.7	26.3	3.62	30.7	25.5	4.01				
	63††	37.0	28.2	2.35	35.3	27.5	2.62	33.9	26.9	2.92	32.3	26.2	3.25	30.3	25.4	3.60	28.5	24.6	3.98				
	62	36.6	35.2	2.35	35.0	34.4	2.62	33.5	33.4	2.92	32.3	32.3	3.25	30.8	30.8	3.61	29.2	29.2	3.99				
	57	36.1	36.1	2.35	34.8	34.8	2.62	33.5	33.5	2.92	32.1	32.1	3.24	30.8	30.8	3.61	29.2	29.2	3.99				

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
CC5A/CD5AA	060	0.95	1.08	COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE			
CC5A/CD5AW	048	0.95	1.08	CC5A/CD5AW	048	0.95	1.00
CD5AA	048	0.95	1.08	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE			
CK3BA	060	0.97	1.08	CC5A/CD5AW	048	0.95	1.00
CK5A/CK5BA	060	0.97	1.08	CK5A/CK5BW	048	0.96	1.00
CK5A/CK5BT	060	0.97	1.08	COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE			
FK4DNB	006	1.00	0.98	CC5A/CD5AW	048	0.95	0.99
FK4DNF	005	1.00	1.00	CK5A/CK5BW	048	0.96	0.98

38YSA042-32, 33 Outdoor Section With FK4DNB006 Indoor Section

1102	72	48.0	23.8	2.77	46.0	23.1	3.07	44.0	22.3	3.41	41.8	21.6	3.78	39.9	20.9	4.20	38.0
	67	44.1	29.8	2.74	42.3	29.0	3.04	40.4	28.3	3.38	38.5	27.5	3.75	36.7	26.7	4.16	34.9
	63††	41.3	29.1	2.72	39.5	28.3	3.02	37.8	27.5	3.35	36.1	26.8	3.73	34.3	26.0	4.13	32.4
	62	40.5	35.6	2.71	38.8	34.8	3.01	37.1	34.0	3.34	35.5	33.3	3.72	34.0	32.6	4.13	32.1
	57	38.6	38.6	2.70	37.5	37.5	3.00	36.3	36.3	3.34	34.8	34.8	3.71	33.3	33.3	4.12	31.8
1225	72	48.7	24.8	2.79	46.7	24.0	3.10	44.5	23.2	3.44	42.3	22.4	3.81	40.4	21.8	4.23	38.4
	67	44.9	31.3	2.76	43.0	30.6	3.07	41.0	29.8	3.40	39.3	29.1	3.78	37.4	28.4	4.20	35.3
	63††	42.0	30.6	2.74	40.2	29.8	3.04	38.3	29.0	3.38	36.7	28.3	3.75	34.8	27.4	4.16	32.7
	62	41.3	37.8	2.74	39.6	36.9	3.04	38.0	36.2	3.38	36.2	35.3	3.75	34.6	34.5	4.16	32.9
	57	40.1	40.1	2.73	38.7	38.7	3.03	37.5	37.5	3.37	36.0	36.0	3.74	34.4	34.4	4.15	32.7
1409	72	49.6	26.1	2.83	47.5	25.4	3.13	45.3	24.6	3.47	43.3	23.9	3.85	40.9	23.1	4.26	38.8
	67	45.7	33.6	2.80	43.8	32.8	3.10	42.0	32.1	3.44	40.0	31.3	3.82	38.1	30.6	4.24	35.8
	63††	42.8	32.7	2.78	41.0	31.9	3.08	39.3	31.2	3.42	37.3	30.3	3.79	35.3	29.5	4.19	33.2
	62	42.2	40.8	2.77	40.5	39.8	3.07	39.0	39.0	3.42	37.3	37.3	3.79	35.8	35.8	4.21	34.2
	57	41.9	41.9	2.77	40.3	40.3	3.07	39.0	39.0	3.42	37.4	37.4	3.79	35.7	35.7	4.20	33.9

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
CC5A/CD5AW	060	0.95	1.08	CE3AA	060	0.98	1.01
CK5A/CK5BX	060	0.99	1.08	CK3BA	060	0.98	1.00
FC4CNB	054	0.98	1.06	CK5A/CK5BA	060	0.98	1.00
FK4DNB	006	1.00	1.00	CK5A/CK5BT	060	0.98	1.00
FK4DNF	005	1.00	1.02	CK5A/CK5BX	060	0.99	1.01
COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE				COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE			
CE3AA	060	0.98	1.01	CC5A/CD5AA	060	0.95	1.01
CK3BA	060	0.98	1.00	CC5A/CD5AW	060	0.98	1.01
CK5A/CK5BA	060	0.98	1.00	CE3AA	060	0.98	1.00
CK5A/CK5BT	060	0.98	1.01	CK3BA	060	0.98	1.00
CK5A/CK5BX	060	0.99	1.01	CK5A/CK5BA	060	0.98	1.00
COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE				CK5A/CK5BT	060	0.98	1.00
CC5A/CD5AA	060	0.95	1.01	CK5A/CK5BX	060	0.99	1.00
CC5A/CD5AW	060	0.98	1.00	—	—	—	—

See notes on pg. 14.

Detailed cooling capacities* continued

EVAP AIR		CONDENSER ENTERING AIR TEMPERATURES °F																	
		75			85			95			105			115			125		
CFM	EWB	Capacity MBtuh†		Total Sys kW**	Capacity MBtuh†		Total Sys kW**	Capacity MBtuh†		Total Sys kW**	Capacity MBtuh†		Total Sys kW**	Capacity MBtuh†		Total Sys kW**	Capacity MBtuh†		Total Sys kW**
		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡		Total	Sens‡	
38YSA048-32, 33 Outdoor Section With FK4DNB006 Indoor Section																			
1260	72	55.7	27.3	3.10	53.4	26.4	3.51	51.0	25.5	3.96	48.4	24.6	4.44	45.7	23.6	4.97	42.9	22.6	5.54
	67	51.2	34.0	3.08	49.1	33.1	3.49	46.9	32.2	3.93	44.7	31.3	4.42	42.3	30.3	4.94	39.7	29.3	5.50
	63††	48.0	33.3	3.07	45.9	32.4	3.47	44.0	31.5	3.92	41.9	30.5	4.39	39.5	29.5	4.91	37.1	28.4	5.46
	62	47.1	40.6	3.07	45.1	39.7	3.46	43.3	38.8	3.91	41.1	37.8	4.39	38.9	36.7	4.90	36.6	35.6	5.45
	57	44.7	44.7	3.06	43.2	43.2	3.46	41.6	41.6	3.89	40.0	40.0	4.38	38.2	38.2	4.89	36.3	36.3	5.45
1400	72	56.6	28.3	3.13	54.1	27.4	3.54	51.6	26.5	3.99	49.0	25.5	4.47	46.6	24.7	5.01	43.6	23.7	5.58
	67	52.1	35.7	3.11	49.9	34.8	3.52	47.5	33.8	3.96	45.4	33.0	4.45	42.9	32.0	4.97	40.1	30.9	5.53
	63††	48.8	34.9	3.10	46.7	33.9	3.50	44.7	33.1	3.95	42.4	32.1	4.42	40.0	31.0	4.94	37.5	29.9	5.49
	62	48.0	42.9	3.10	46.2	42.1	3.50	44.1	41.1	3.94	41.9	40.0	4.42	39.6	38.9	4.93	37.3	37.3	5.49
	57	46.3	46.3	3.09	44.6	44.6	3.49	43.1	43.1	3.94	41.3	41.3	4.42	39.4	39.4	4.93	37.3	37.3	5.49
1610	72	57.6	29.8	3.18	55.0	28.9	3.58	52.4	27.9	4.03	49.7	27.0	4.52	47.3	26.2	5.06	44.4	25.2	5.63
	67	53.1	38.2	3.16	50.7	37.2	3.56	48.6	36.4	4.01	46.1	35.4	4.50	43.4	34.3	5.02	40.7	33.3	5.58
	63††	49.8	37.2	3.14	47.8	36.3	3.55	45.5	35.3	3.99	43.1	34.3	4.47	40.6	33.3	4.99	38.0	32.2	5.54
	62	49.0	46.3	3.14	47.3	45.4	3.55	45.0	44.3	3.99	42.8	42.8	4.47	40.8	40.8	4.99	38.6	38.6	5.55
	57	48.2	48.2	3.14	46.4	46.4	3.54	44.9	44.9	3.99	42.9	42.9	4.47	40.9	40.9	4.99	38.7	38.7	5.55

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Cooling		Indoor Section	Size	Cooling	
		Capacity	Power			Capacity	Power
FC4CNB	054	0.99	1.06	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE			
FK4DNB	006	1.00	1.00	CC5A/CD5AW	060	0.97	1.01
FK4DNF	005	1.00	1.03	CK5A/CK5BX	060	0.99	1.01
COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE				COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE			
CK5A/CK5BX	060	0.99	1.01	CC5A/CD5AW	060	0.97	1.00

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).

** 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	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†
38YSA024-32, 33 Outdoor Section With FK4DNF002 Indoor Section																									
65	630	9.00	8.28	1.62	11.4	10.4	1.65	14.0	12.8	1.70	17.0	15.1	1.77	20.3	18.5	1.84	24.1	24.1	1.92	28.2	28.2	2.00	32.6	32.6	2.09
	700	9.04	8.32	1.65	11.4	10.5	1.66	14.1	12.9	1.70	17.1	15.2	1.75	20.5	18.7	1.81	24.3	24.3	1.88	28.5	28.5	1.95	33.0	33.0	2.02
	805	9.09	8.37	1.68	11.5	10.6	1.68	14.3	13.0	1.70	17.3	15.4	1.74	20.8	18.9	1.79	24.6	24.6	1.84	28.8	28.8	1.89	33.4	33.4	1.95
70	630	8.89	8.18	1.69	11.2	10.3	1.72	13.8	12.6	1.78	16.7	14.9	1.85	20.0	18.2	1.93	23.7	23.7	2.02	27.8	27.8	2.11	32.2	32.2	2.20
	700	8.94	8.22	1.71	11.3	10.4	1.73	13.9	12.7	1.77	16.9	15.0	1.83	20.9	19.0	1.91	24.0	24.0	1.98	28.1	28.1	2.05	32.5	32.5	2.13
	805	8.99	8.27	1.74	11.3	10.4	1.75	14.0	12.8	1.77	17.1	15.2	1.82	20.5	18.7	1.87	24.3	24.3	1.93	28.5	28.5	1.99	33.0	33.0	2.05
75	630	8.78	8.08	1.76	11.1	10.2	1.80	13.6	12.4	1.86	16.5	14.6	1.94	19.8	18.0	2.03	23.4	23.4	2.12	27.4	27.4	2.22	31.7	31.7	2.32
	700	8.82	8.11	1.78	11.1	10.2	1.80	13.7	12.5	1.85	16.6	14.8	1.92	20.0	18.2	1.99	23.7	23.7	2.07	27.7	27.7	2.16	32.1	32.1	2.25
	805	8.87	8.16	1.81	11.2	10.3	1.82	13.8	12.6	1.85	16.8	14.9	1.90	20.2	18.4	1.96	24.0	24.0	2.03	28.1	28.1	2.10	32.6	32.6	2.17

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
CC5A/CD5AA	036	1.00	1.09	FK4DNF	001	1.00	1.01
CC5A/CD5AW	036	1.00	1.09	FK4DNF	002	1.00	1.00
CK3BA	036	1.00	1.07	FK4DNF	003	1.00	0.99
CK5A/CK5BA	036	1.00	1.07	COILS + 58CV(A,X)070-12 VARIABLE SPEED FURNACE			
CK5A/CK5BT	036	1.00	1.07	CC5A/CD5AA	036	0.98	1.01
CK5A/CK5BW	036	1.00	1.07	CE3AA	036	1.00	1.11
	—	—	—	CK3BA	036	0.99	1.03
	—	—	—	CK5A/CK5BA	036	0.99	1.03
	—	—	—	CK5A/CK5BT	036	0.99	1.03

38YSA030-32, 33 Outdoor Section With FK4DNF003 Indoor Section

65	788	12.8	11.8	2.09	15.9	14.6	2.18	19.3	17.6	2.28	23.1	20.5	2.39	27.3	24.9	2.50	32.1	32.1	2.63	37.2	37.2	2.78	42.9	42.9	2.93
	875	12.9	11.8	2.10	16.0	14.7	2.17	19.4	17.7	2.26	23.3	20.7	2.35	27.6	25.1	2.45	32.3	32.3	2.56	37.6	37.6	2.68	43.4	43.4	2.81
	1006	12.9	11.9	2.13	16.1	14.8	2.18	19.6	17.9	2.24	23.5	20.8	2.31	27.8	25.3	2.39	32.7	32.7	2.48	38.0	38.0	2.57	44.0	44.0	2.68
70	788	12.6	11.6	2.18	15.7	14.4	2.29	19.1	17.4	2.41	22.8	20.3	2.53	27.0	24.6	2.66	31.7	31.7	2.80	36.8	36.8	2.96	42.4	42.4	3.13
	875	12.7	11.7	2.20	15.8	14.5	2.29	19.2	17.5	2.38	23.0	20.4	2.49	27.3	24.8	2.60	32.0	32.0	2.73	37.2	37.2	2.86	42.8	42.8	3.00
	1006	12.8	11.7	2.23	15.9	14.6	2.30	19.4	17.7	2.37	23.2	20.6	2.45	27.5	25.1	2.54	32.4	32.4	2.64	37.6	37.6	2.75	43.5	43.5	2.86
75	788	12.4	11.4	2.28	15.5	14.2	2.41	18.8	17.2	2.54	22.6	20.1	2.68	26.8	24.4	2.83	31.4	31.4	2.98	36.4	36.4	3.15	41.8	41.8	3.33
	875	12.7	11.7	2.30	15.6	14.3	2.40	19.0	17.3	2.52	22.8	20.2	2.64	27.0	24.6	2.76	31.7	31.7	2.90	36.7	36.7	3.04	42.3	42.3	3.20
	1006	12.6	11.6	2.32	15.7	14.4	2.41	19.2	17.5	2.50	23.0	20.4	2.60	27.3	24.8	2.70	32.0	32.0	2.81	37.2	37.2	2.93	42.9	42.9	3.06

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
CC5A/CD5AA	042	1.00	1.10	COILS + 58CV(A,X)090-16 VARIABLE SPEED FURNACE			
CC5A/CD5AW	042	1.00	1.10	CC5A/CD5AA	042	0.99	0.98
CK3BA	042	1.00	1.06	CE3AA	042	0.99	0.99
CK5A/CK5BA	042	1.00	1.06	CK3BA	042	1.01	1.09
CK5A/CK5BT	042	1.00	1.06	CK5A/CK5BA	042	1.01	1.08
FK4DNF	002	1.00	1.01	CK5A/CK5BE	042	1.00	0.97
	003	1.00	1.00	CK5A/CK5BT	042	1.01	1.08
	005	1.00	0.94		—	—	—

See notes on pg. 17.

Heat pump heating performance continued

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																							
		-3			7			17			27			37			47			57			67		
EDB	CFM	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
		Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†
38YSA036-32, 33 Outdoor Section With FK4DNF005 Indoor Section																									
65	945	14.9	13.7	2.20	18.2	16.7	2.31	22.0	20.0	2.42	26.0	23.1	2.51	30.7	27.9	2.64	35.8	35.8	2.77	41.4	41.4	2.90	47.5	47.5	3.06
	1050	14.9	13.7	2.19	18.3	16.8	2.30	22.0	20.0	2.38	26.0	23.1	2.46	30.7	28.0	2.58	35.7	35.7	2.66	41.4	41.4	2.80	47.6	47.6	2.94
	1208	15.0	13.8	2.18	18.3	16.8	2.26	22.0	20.1	2.33	26.1	23.2	2.43	30.7	28.0	2.51	35.8	35.8	2.58	41.5	41.5	2.69	47.6	47.6	2.79
70	945	14.7	13.5	2.33	18.2	16.7	2.46	21.8	19.9	2.58	25.8	23.0	2.67	30.5	27.7	2.82	35.5	35.5	2.94	41.1	41.1	3.08	47.1	47.1	3.24
	1050	14.7	13.6	2.32	18.1	16.6	2.42	21.8	19.9	2.54	26.1	23.1	2.62	30.4	27.7	2.71	36.0	36.0	2.84	41.1	41.1	2.98	47.3	47.3	3.12
	1208	14.8	13.6	2.29	18.1	16.7	2.39	21.8	19.9	2.48	25.9	23.0	2.55	30.5	27.7	2.65	35.4	35.4	2.73	41.2	41.2	2.86	47.2	47.2	2.96
75	945	14.5	13.3	2.44	18.1	16.6	2.59	21.6	19.7	2.72	25.6	22.7	2.82	30.2	27.5	2.98	35.2	35.2	3.11	40.9	40.9	3.28	46.9	46.9	3.46
	1050	14.6	13.4	2.43	17.9	16.4	2.55	21.6	19.7	2.68	25.9	23.0	2.78	30.3	27.5	2.92	35.3	35.3	3.04	40.8	40.8	3.15	46.9	46.9	3.30
	1208	14.6	13.4	2.43	18.0	16.5	2.51	21.6	19.7	2.63	25.7	22.8	2.71	30.2	27.5	2.80	35.2	35.2	2.91	40.8	40.8	3.02	46.9	46.9	3.15
Multipliers for Determining the Performance With Other Indoor Sections																									
Indoor Section		Size		Heating				Indoor Section		Size		Heating													
Capacity				Power		Capacity						Power													
CC5A/CD5AA		060		1.00				1.22		COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE															
CC5A/CD5AW		048		1.00				1.22		CC5A/CD5AW		048		1.01		1.11									
CD5AA		048		1.00				1.22		COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE															
CK3BA		060		0.95				1.11		CC5A/CD5AW		048		1.01		1.11									
CK5A/CK5BA		060		0.95				1.11		CK5A/CK5BW		048		1.03		1.19									
CK5A/CK5BT		060		0.95				1.11		COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE															
FK4DNB		006		0.98				0.93		CC5A/CD5AW		048		1.01		1.10									
FK4DNF		005		1.00				1.00		CK5A/CK5BW		048		1.03		1.19									
38YSA042-32, 33 Outdoor Section With FK4DNB006 Indoor Section																									
65	1102	18.9	17.4	2.57	22.7	20.9	2.67	26.9	24.6	2.77	31.4	27.9	2.88	36.4	33.1	2.98	42.0	42.0	3.13	47.9	47.9	3.28	54.3	54.3	3.44
	1225	19.0	17.5	2.56	22.8	20.9	2.64	27.0	24.6	2.73	31.4	27.9	2.82	36.5	33.2	2.93	41.9	41.9	3.04	47.9	47.9	3.16	54.4	54.4	3.31
	1409	19.0	17.5	2.54	22.8	21.0	2.62	27.0	24.6	2.70	31.4	27.9	2.77	36.5	33.2	2.86	42.0	42.0	2.95	48.0	48.0	3.06	54.3	54.3	3.16
70	1102	18.8	17.3	2.69	22.6	20.8	2.80	26.8	24.4	2.92	31.1	27.7	3.03	36.2	32.9	3.16	41.5	41.5	3.29	47.5	47.5	3.45	54.0	54.0	3.64
	1225	18.8	17.3	2.68	24.2	22.2	2.79	26.8	24.4	2.88	31.2	27.7	2.98	36.1	32.9	3.09	41.5	41.5	3.20	47.5	47.5	3.34	54.1	54.1	3.50
	1409	18.9	17.4	2.67	22.6	20.8	2.75	26.8	24.4	2.83	31.2	27.7	2.92	36.2	32.9	3.01	41.6	41.6	3.12	47.7	47.7	3.23	54.1	54.1	3.35
75	1102	18.6	17.1	2.81	22.4	20.6	2.95	26.6	24.3	3.08	30.9	27.5	3.20	35.9	32.7	3.34	41.4	41.4	3.50	47.3	47.3	3.67	53.5	53.5	3.84
	1225	18.6	17.1	2.80	22.4	20.6	2.92	26.6	24.3	3.05	31.0	27.5	3.15	35.9	32.6	3.26	41.3	41.3	3.39	47.2	47.2	3.54	53.5	53.5	3.69
	1409	18.7	17.2	2.79	22.5	20.7	2.90	26.6	24.3	2.99	30.9	27.5	3.08	35.8	32.6	3.17	41.3	41.3	3.29	47.3	47.3	3.41	53.6	53.6	3.54
Multipliers for Determining the Performance With Other Indoor Sections																									
Indoor Section		Size		Heating				Indoor Section		Size		Heating													
Capacity				Power		Capacity						Power													
CC5A/CD5AW		060		1.01				1.15		CC5A/CD5AW		060		0.99		1.05									
CK5A/CK5BX		060		0.96				1.14		CE3AA		060		1.01		1.11									
FC4CNB		054		1.01				1.07		CK3BA		060		1.02		1.09									
FK4DNB		006		1.00				1.00		CK5A/CK5BA		060		1.02		1.09									
FK4DNF		005		1.01				1.08		CK5A/CK5BT		060		1.02		1.09									
COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE										CK5A/CK5BX		060		1.00		1.04									
CE3AA		060		1.01				1.11		COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE															
CK3BA		060		1.02				1.09		CC5A/CD5AA		060		1.01		1.17									
CK5A/CK5BA		060		1.02				1.09		CC5A/CD5AW		060		0.99		1.06									
CK5A/CK5BT		060		1.04				1.11		CE3AA		060		1.01		1.11									
CK5A/CK5BX		060		1.01				1.06		CK3BA		060		1.02		1.09									
COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE										CK5A/CK5BA		060		1.02		1.09									
CC5A/CD5AA		060		1.01				1.17		CK5A/CK5BT		060		1.02		1.09									
		—		—				—		CK5A/CK5BX		060		1.00		1.04									

See notes on pg. 17.

Heat pump heating performance continued

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F																							
		-3			7			17			27			37			47			57			67		
EDB	CFM	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
		Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†	Total	Integ*	kW†
38YSA048-32, 33 Outdoor Section With FK4DNB006 Indoor Section																									
65	1260	19.5	18.0	2.91	24.2	22.2	3.07	29.6	27.0	3.25	35.6	31.6	3.45	42.5	38.6	3.61	50.3	50.3	3.83	59.3	59.3	4.09	69.0	69.0	4.36
	1400	19.6	18.0	2.89	24.3	22.3	3.04	29.6	27.0	3.21	35.5	31.5	3.33	42.5	38.7	3.53	50.4	50.4	3.72	59.2	59.2	3.91	69.0	69.0	4.14
	1610	19.7	18.1	2.87	25.2	23.1	3.00	29.7	27.0	3.13	35.5	31.6	3.27	42.4	38.6	3.39	50.3	50.3	3.55	59.3	59.3	3.73	68.9	68.9	3.90
70	1260	19.3	17.8	3.06	24.0	22.1	3.25	29.4	26.8	3.45	35.3	31.3	3.65	42.1	38.3	3.83	50.0	50.0	4.10	58.8	58.8	4.35	68.5	68.5	4.64
	1400	19.4	17.8	3.05	25.2	23.2	3.24	29.4	26.8	3.39	35.2	31.3	3.55	42.2	38.4	3.77	50.0	50.0	3.96	58.8	58.8	4.17	68.6	68.6	4.43
	1610	19.5	17.9	3.02	24.1	22.2	3.18	29.4	26.8	3.33	35.3	31.4	3.49	42.2	38.4	3.64	50.0	50.0	3.80	58.8	58.8	3.97	68.7	68.7	4.18
75	1260	19.1	17.6	3.22	23.8	21.9	3.43	29.1	26.6	3.64	35.0	31.1	3.87	42.0	38.2	4.12	49.6	49.6	4.35	58.5	58.5	4.64	68.1	68.1	4.94
	1400	19.2	17.7	3.21	25.2	23.2	3.42	29.2	26.6	3.59	35.1	31.1	3.81	41.8	38.1	3.97	49.5	49.5	4.19	58.4	58.4	4.44	68.0	68.0	4.70
	1610	19.3	17.7	3.19	23.9	22.0	3.36	29.2	26.7	3.54	35.0	31.1	3.69	41.8	38.1	3.85	49.5	49.5	4.03	58.5	58.5	4.25	67.9	67.9	4.42

Multipliers for Determining the Performance With Other Indoor Sections

Indoor Section	Size	Heating		Indoor Section	Size	Heating	
		Capacity	Power			Capacity	Power
FC4CNB	054	1.00	1.04	COILS + 58CV(A,X)135-22 VARIABLE SPEED FURNACE			
FK4DNB	006	1.00	1.00	CC5A/CD5AW	060	0.99	1.11
FK4DNF	005	1.00	1.13	CK5A/CK5BX	060	1.02	1.17
COILS + 58CV(A,X)110-22 VARIABLE SPEED FURNACE				COILS + 58CV(A,X)155-22 VARIABLE SPEED FURNACE			
CK5A/CK5BX	060	1.02	1.17	CC5A/CD5AW	060	1.00	1.11

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

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 or 20 ft vertical differential, consult Residential Split System Long-Line Application Guideline available from equipment distributor.
9. Not more than 36 in. of refrigerant tube should be buried in the ground. If necessary to bury tubes under a sidewalk, provide a minimum 6-in. vertical rise to the valve connections at the unit. For buried refrigerant tube lengths from 3 to 100 ft, consult your local distributor.
10. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.

Guide specifications

**Air-Cooled, Split-System
Heat Pump
38YSA
2 to 4 Tons Nominal**

GENERAL

System Description

Outdoor-mounted, air-cooled, split-system heat pump unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, 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 will be leak tested at 217 psig and pressure tested at 450 psig.

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 will be all factory wiring, piping, controls, compressor, refrigerant charge (Puron®), and special features required prior to field start-up.

Unit Cabinet

Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

Condenser fan will be direct-drive propeller type, discharging air upward.

Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated bearings.

Shafts will be corrosion resistant.

Fan blades will be statically and dynamically balanced.

Condenser fan openings will be equipped with steel wire safety guards.

Compressor

Compressor will be hermetically sealed.

Compressor will be mounted on rubber vibration isolators.

Condenser Coil

Condenser coil will be air cooled.

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

Refrigeration Components

Refrigeration circuit components will include liquid tube shutoff valve with sweat connections, suction tube shutoff valves with sweat connections, system charge of Puron® refrigerant, POE compressor oil, accumulator, and reversing valve.

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, ____ 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.

