38YCD (60 Hz)
13 SEER Heat Pump
Sizes 018 – 060

Carrier®
Turn to the Experts℠

Product Data

FEATURES AND BENEFITS

AVAILABLE SIZES:

Nominal sizes are available from 18 through 60 to meet the needs of residential and light commercial applications.

CERTIFICATION:

All models are listed with UL and NOM.

ELECTRICAL RANGE:

All units are offered in 208/230-1, single phase, with 208/230-3 three phase offered in model sizes 36, 48, and 60.

FAN MOTOR:

The totally enclosed fan motor provides greater reliability under adverse conditions and dependable performance for many years. The permanent split capacitor type motor was designed for optimum efficiency. The motor was then qualified under extreme conditions to help ensure a long, reliable life.

CABINET:

A weather protective cabinet of prepainted steel is protected underneath by a galvanized coating and treated with a layer of zinc phosphate for a finish that will last for many years. All screws on cabinet exterior are coated for a long-lasting, rust-resistant, quality appearance.

UNIT DESIGN:

The copper tube, enhanced sine wave, aluminum fin coil is designed for optimum heat transfer. Vertical air discharge carries sound and condenser air up and away from adjacent patio areas and foliage. The base pan is designed for easy removal of water, dirt, and leaves.

DEFROST CONTROL BOARD:

Incorporates defrost relay, defrost timer, and low voltage terminations. The defrost control is a time/temperature initiation/termination control which includes three field-selectable time periods of 30, 60 and 90 minutes.

COMPRESSOR:

Each compressor is protected with internal temperature- and current-sensitive overloads. An internal pressure relief valve provides high pressure protection to the refrigerant system. For improved serviceability, all models are equipped with a compressor terminal plug.

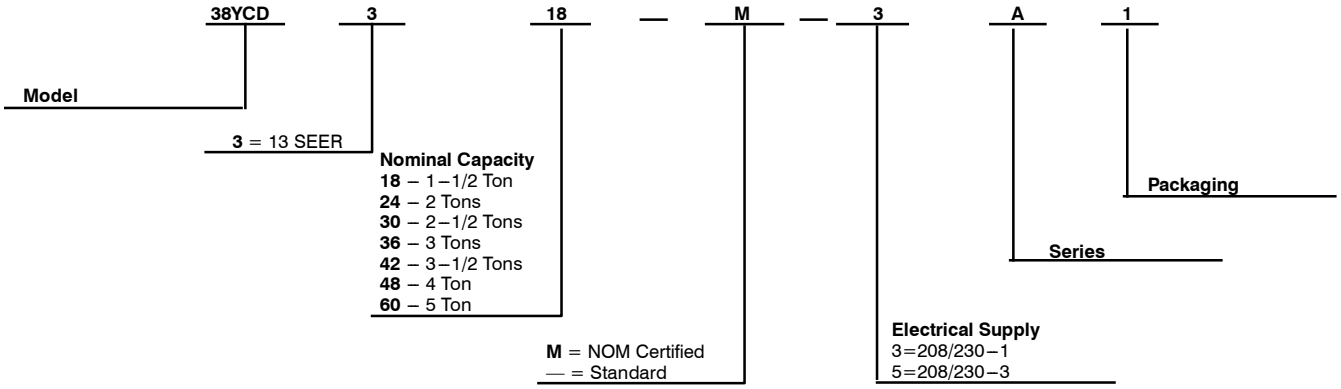
SERVICE VALVES:

Both service valves are brass, front 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.

SERVICEABILITY:

One access panel provides access to electrical controls. Removal of top gives access to fan motor, compressor, and condenser coil.

PRODUCT NUMBER NOMENCLATURE



ISO 9001:2000

QMI REGISTERED

c UL US

ASHRAE 90.1 COMPLIANT

SPECIFICATIONS

UNIT SIZE–SERIES	318–A	324–A	330–A	336–A		342–A	348–A		360–A	
ELECTRICAL										
Unit Volts—Phase—Hertz	208/230—1—60			208/230—1—60	208/230—3—60	208/230—1—60	208/230—1—60	208/230—3—60	208/230—1—60	208/230—3—60
Operating Voltage Range	187—253									
Unit Ampacity for Wire Sizing (MCA)	11.7	14.4	17.6	21.1	14.0	23.8	27.3	19.8	32.7	23.3
Min Wire Size (60°C/75°C Copper) (AWG)*	14	12	10	10	10	8	8	14	8	12
Maximum Length (60°C/75°C) ft (m)†	66/61 (20/19)	84/79 (26/24)	111/106 (34/32)	91/86 (28/26)	91/86 (28/26)	130/123 (40/37)	111/106 (34/32)	39/37 (12/11)	94/90 (29/27)	52/50 (16/15)
Max Branch Circuit Fuse Size (Amps)‡	20	20	30	30	30	40	40	30	50	40
Compressor Rated Load Amps	9.0	10.9	13.5	16.0	10.3	17.9	20.7	14.7	25.0	17.5
Locked Rotor Amps	41.0	54.0	72.5	88.0	77.0	104.0	137.0	91.0	148.0	123.0
Fan Motor HP and RPM	1/12 &1100	1/10 &1100	1/10 &1100	1/5 & 1100		1/4 &1100	1/4 & 1100		1/4 & 1100	
Full Load Amps	0.5	0.8	0.8	1.1		1.4	1.4		1.4	
COMPRESSOR AND REFRIGERANT										
Compressor Type	Scroll									
R–22 Refrigerant Charge lb (kg)	5.35 (2.43)	4.68 (2.12)	5.29 (2.40)	6.50 (2.95)		7.50 (3.40)	9.13 (4.14)		13.03 (5.91)	
Refrigerant Tubes (In. OD)	3/4	3/4	3/4	7/8		7/8	1–1/8		1–1/8	
Vapor and Liquid (Up to 80 ft/ 24/4 m)	3/8	3/8	3/8		3/8	3/8	3/8		3/8	
OUTDOOR COIL AND FAN										
Coil Face Area (Sq Ft)	9.80	12.60	15.14	17.30	17.30	23.79	15.14		23.79	
Rated Airflow (CFM)	1700	2000	2600	3100	3100	3400	3400		3400	
OPTIONAL EQUIPMENT										
Time–Delay Relay	KAATD0101TDR									
Outdoor Thermostat	KHAOT0301FST									
Secondary Outdoor Thermostat	KHAOT0201SEC									
Cycle Protector	KSACY0101AAA									
Crankcase Heater	KAACH1401AAA		KAACH1201AAA							
Compressor Start Assist—Capacitor/Relay	KSAHS1501AAA			KSAHS1501AAA	N/A	KSAHS1501AAA	N/A		KSAHS1601AAA	N/A
Sound Hood	KSASH1801COP			KSASH0601COP			KSASH2101COP			
TXV Kits (Hard Shutoff)	KSATX0601HSO						KSATX0701HSO		KSATX1001HSO	
Low Pressure Switch	Standard									
High–Pressure Switch	KSAHI0101HPS									
Low–Ambient Pressure Switch††	KSALA0201R22									
MotorMaster® Low–Ambient Controller‡‡	KSALA0601AAA									
Ball Bearing Fan Motor	HC32GE234	HC34GE239	HC34GE240	HC38GE219		HC40GE226				
Liquid Line Filter Drier (RCD)	KH43LZ072									
Evaporator Freeze Thermostat**	KAAFT0101AAA									
Isolation Relay**	KHAIR0101AAA									
Liquid Solenoid Valve	KHALS0401LLS									
Interface Control	KHAIC0101AAA									
Start Assist PTC	KAACS0201PTC				N/A	KAACS0201PTC		N/A	KAACS0201PTC	N/A
Corrosion Filter	KAACF1001MED			KAACF1101LRG						
Thermostat, Manual Changeover, Non–Programmable, °F/°C, 2–Stage Heat, 1–Stage Cool	TB–NHP01									
Thermostat, Auto Changeover, 7–Day Programmable, °F/°C, 1–Stage Heat, 1–Stage Cool	TB–PHP01									
Outdoor Sensor (For Programmable Thermostat)	TSTATXXSEN01–B									
Backplate for Non–Programmable Thermostat	TSTATXXBBP01									
Backplate for Programmable Thermostat	TSTATXXPBP01									

N/A – Not applicable in this application.

* The ampacity of non–metallic (NM) sheathed cable shall be that of 60° C (140° F) conductors per NEC 1999, Article 336–26. If wire used is other than specified in chart, refer to applicable tables available in 1999 NEC. Copper wire must be used from disconnect to unit.

† 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%.

‡ Units may use fuses or circuit breakers (U.S. only).

** Consult low–ambient control Installation Instructions for application.

†† Isolation relay required.

‡‡ Required accessories include fan motor with ball bearings, crankcase heater, compressor start assist, evaporator freeze stat, isolation relay, hard shut–off TXV or liquid line solenoid valve.

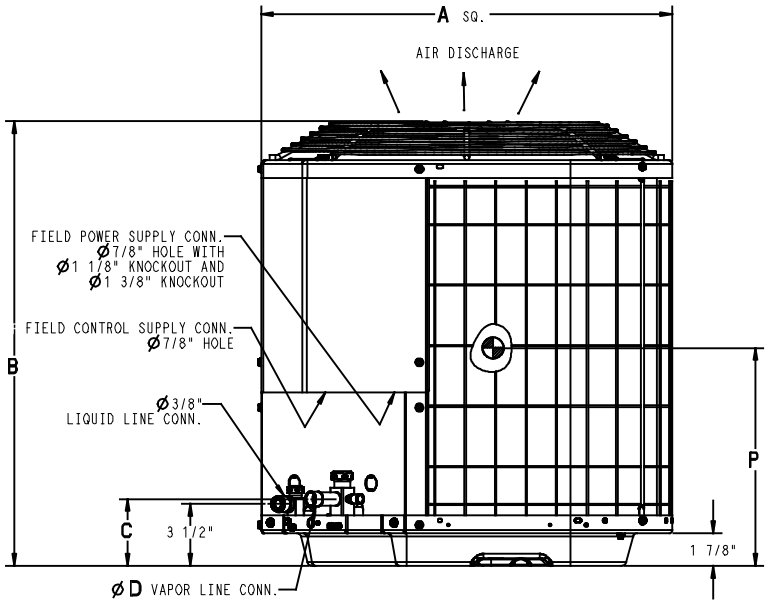
DIMENSIONS - ENGLISH

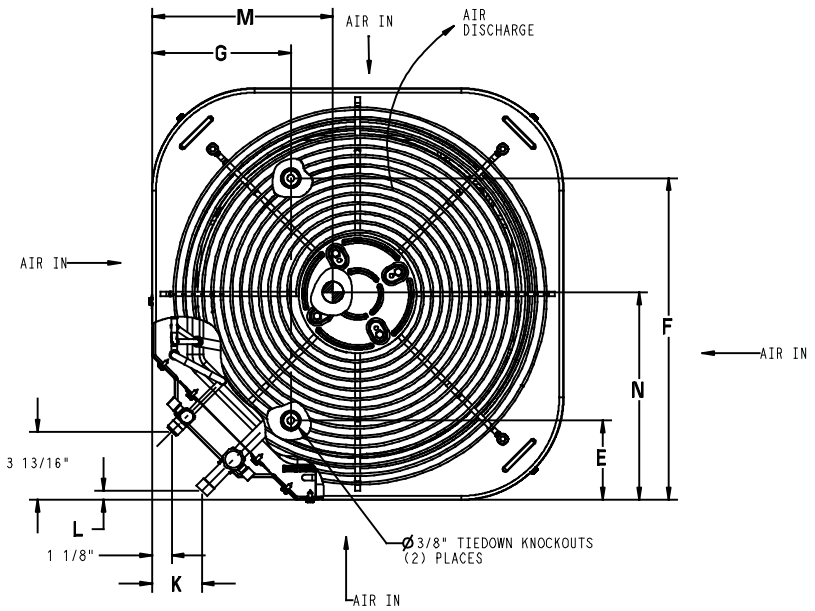
UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (LBS)	SHIPPING WEIGHT (LBS)	SHIPPING DIMENSIONS (L x W x H)
38YCD318-M	A	X	O	O	O	23 1/8"	28 7/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/2"	10 1/2"	12 1/2"	114	127	24 1/8" X 24 1/8" X 30 5/8"
38YCD324-M	A	X	O	O	O	23 1/8"	35 3/16"	3 3/4"	3/4"	4 7/16"	18 1/16"	7 13/16"	2 13/16"	1/2"	11 1/2"	10 1/2"	14 1/2"	120	137	24 1/8" X 24 1/8" X 37 7/16"
38YCD330-M	A	X	O	O	O	31 3/16"	28 7/16"	3 3/4"	3/4"	6 9/16"	24 11/16"	9 1/8"	2 13/16"	1/2"	15"	15"	12"	153	177	32 3/16" X 32 3/16" X 30 5/8"
38YCD336-M	A	X	O	X	O	31 3/16"	31 13/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	11 1/2"	168	192	32 3/16" X 32 3/16" X 34"
38YCD342-M	A	X	O	O	O	31 3/16"	38 5/8"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	15 1/2"	188	213	32 3/16" X 32 3/16" X 40 13/16"
38YCD348-M	A	X	O	X	O	31 3/16"	28 7/16"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	12"	200	223	32 3/16" X 32 3/16" X 30 5/8"
38YCD360-M	A	X	O	X	O	31 3/16"	42"	3 7/8"	7/8"	6 9/16"	24 11/16"	9 1/8"	2 15/16"	5/8"	15"	15"	16"	260	285	32 3/16" X 32 3/16" X 44 1/4"
		208-230-1-60	230-1-60	208/230-3-60	460-3-60															

X = YES
O = NO

NOTES:

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





UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18,24	23 1/2" X 23 1/2"
--	26" X 26"
30,36,42,48,60	31 1/2" X 31 1/2"
--	35" X 35"

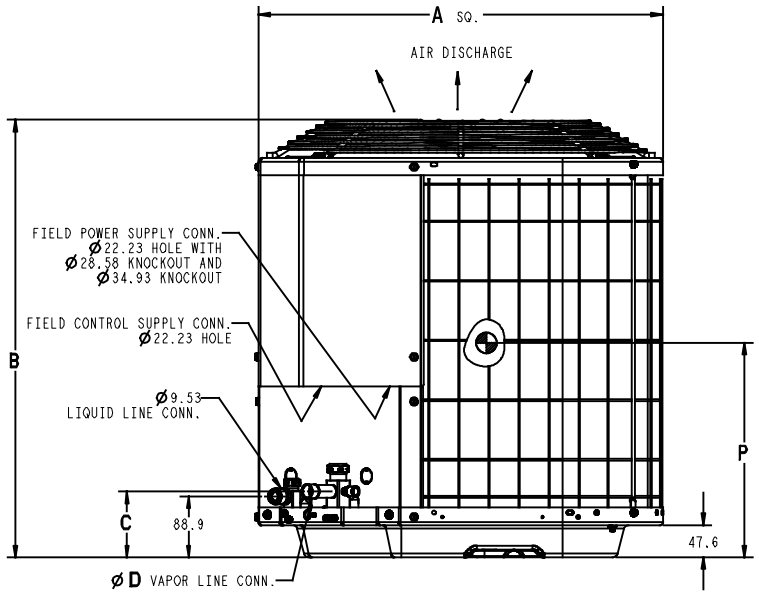
DIMENSIONS - SI

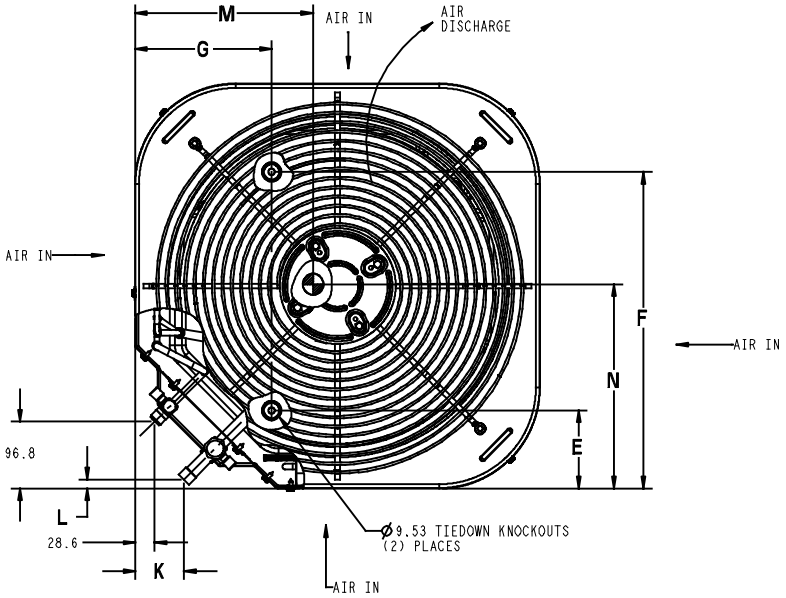
UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A	B	C	D	E	F	G	K	L	M	N	P	OPERATING WEIGHT (Kgs)	SHIPPING WEIGHT (Kgs)	SHIPPING DIMENSIONS (L x W x H)
38YCD318-M	A	X	O	O	O	587.4	722.3	95.2	19.0	112.7	458.8	198.4	71.4	12.7	292.1	266.7	317.5	51.7	57.6	612.8 X 612.8 X 777.9
38YCD324-M	A	X	O	O	O	587.4	893.8	95.2	19.0	112.7	458.8	198.4	71.4	12.7	292.1	266.7	368.3	54.4	62.1	612.8 X 612.8 X 950.9
38YCD330-M	A	X	O	O	O	792.2	722.3	95.2	19.0	166.7	627.1	231.8	71.4	12.7	381.0	381.0	304.8	69.4	80.3	817.6 X 817.6 X 777.9
38YCD336-M	A	X	O	X	O	792.2	808.0	98.4	22.2	166.7	627.1	231.8	74.6	15.9	381.0	381.0	292.1	76.2	87.1	817.6 X 817.6 X 863.6
38YCD342-M	A	X	O	O	O	792.2	981.1	98.4	22.2	166.7	627.1	231.8	74.6	15.9	381.0	381.0	393.7	85.3	96.6	817.6 X 817.6 X 1036.6
38YCD348-M	A	X	O	X	O	792.2	722.3	98.4	22.2	166.7	627.1	231.8	74.6	15.9	381.0	381.0	304.8	90.7	101.2	817.6 X 817.6 X 777.9
38YCD360-M	A	X	O	X	O	792.2	1066.8	98.4	22.2	166.7	627.1	231.8	74.6	15.9	381.0	381.0	406.4	117.9	129.3	817.6 X 817.6 X 1124.0
		208-230-1-60	230-1-60	208/230-3-60	460-3-60															

X = YES
O = NO

NOTES:

1. ALLOW 762.0 CLEARANCE TO SERVICE SIDE OF UNIT, 1219.2 ABOVE UNIT, 152.4 ON ONE SIDE, 304.8 ON REMAINING SIDE, AND 609.6 BETWEEN UNITS FOR PROPER AIRFLOW.
2. MINIMUM OUTDOOR OPERATING AMBIENT IN COOLING MODE IS 13°C, MAX. 52°C.
3. SERIES DESIGNATION IS THE 13TH POSITION OF THE UNIT MODEL NUMBER.
4. CENTER OF GRAVITY ⊕.
5. ALL DIMENSIONS ARE IN "MM" UNLESS NOTED.





UNIT SIZE	MINIMUM MOUNTING PAD DIMENSIONS
18,24	596.9 X 596.9
--	660.4 X 660.4
30,36,42,48,60	800.1 X 800.1
--	889.0 X 889.0

OPTIONAL EQUIPMENT USAGE GUIDELINE

ACCESSORY	REQUIRED FOR LOW–AMBIENT APPLICATIONS (Below 55°F / 12.8°C)	REQUIRED FOR LONG–LINE APPLICATIONS* (Over 80 ft / 24.38 m)
Ball Bearing Fan Motor	Yes	No
Compressor Crankcase Heater	Yes	Yes
Compressor Start Assist Capacitor and Relay	Yes	Yes
Evaporator Freeze Thermostat	Yes	No
Isolation Relay	Yes	No
Liquid–Line Solenoid Valve or Hard Shutoff TXV	Yes	See Long–Line Application Guideline
MotorMaster® Low–Ambient Controller	Yes	No
Wind Baffle	See Low–Ambient Instructions	No
Support Feet	Recommended	No

* For tubing line sets between 80 and 175 ft (24.38 and 53.34 m)., refer to Residential Split Systems Long–Line Application Guideline.

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. Compressor Crankcase Heater

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

Usage Guideline:

Required in low ambient applications.

Required in long line applications.

Suggested in all commercial applications.

3. Compressor 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 (4.57 m) to quiet areas-bedrooms, etc.

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

4. 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 scroll compressors in the following applications:
- Long line
- Low ambient

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

5. Compressor Start Assist - PTC Type

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

Usage Guideline:

Suggested when compressor power supply is marginal
Suggested in reciprocating single-phase compressor applications with rapid pressure balance (RPB) expansion valve on indoor coil.

6. Cycle Protector

Solid-state timing device which prevents compressor rapid recycling. 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:

Installations in areas where power interruptions are frequent.

Where user is likely to play with the room thermostat.

All commercial installations.

Installations where interconnecting tube length exceeds 80 ft (24.38 m).

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. 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).

9. 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.

10. Liquid-Line Solenoid Valve (LLS)

This device serves two purposes. It is 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.

Usage Guideline:

Required in air conditioner long line applications with a piston indoor metering device to prevent off cycle refrigerant migration. A hard shutoff TXV can be used instead of LLS in single flow air conditioner applications. See Long Line Application Guideline.

ACCESSORY DESCRIPTION AND USAGE (Listed Alphabetically)(Cont.)

11. 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 / -18°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.

12. 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 (±11.0°C), it maintains condensing temperature at 100°F ± 10°F (37.8°C ±5.5°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.

13. Outdoor Air Temperature Sensor

Designed for use with Carrier Thermostats listed in this publication. The 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.

14. Thermostatic Expansion Valve (TXV) Single-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.

Usage Guideline:

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

Hard shut off TXV or LLS required in air conditioner long line applications.

Required for use on all zoning systems.

15. 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.

16. Winter Start Control

An SPST delay relay which bypasses the Low-Pressure Switch for approximately 3 minutes to permit start-up for cooling operation under low load conditions.

Usage Guideline:

All air conditioners to which Low-Pressure Switch and Low-Ambient Controller have been added

A-WEIGHTED SOUND POWER

UNIT SIZE – SERIES	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
318–A	76	52.5	57.0	64.5	65.5	60.5	57.5	53.5
324–A	76	57.5	59.5	68.0	69.0	66.0	63.5	60.5
330–A	76	55.0	62.0	68.5	71.0	67.5	69.0	58.5
336–A	77	55.5	66.5	69.5	72.0	70.5	66.0	60.0
342–A	80	60.5	65.5	71.0	72.5	70.0	66.0	62.5
348–A	80	63.0	69.5	74.5	75.0	73.0	68.5	62.0
360–A	80	60.0	68.5	72.0	72.5	71.0	68.5	61.0

Note: Tested in accordance with ARI standard 270.95 (Not listed with ARI)

METERING DEVICE

UNIT SIZE–SERIES	OUTDOOR PISTON	REQUIRED SUBCOOLING °F (°C)	INDOOR METERING DEVICE
318–A	42	21 (11.7)	TXV*
324–A	52	13 (7.2)	
330–A	57	12 (6.7)	
336–A	63	14 (7.8)	
342–A	67	14 (7.8)	
348–A	73	16 (8.9)	
360–A	76	16 (8.9)	

* TXV must be ordered separately when indoor coil is not equipped with a TXV. TXV must be hard–shutoff type.

38YCD

RECOMMENDED TUBE DIAMETERS

UNIT SIZE	TUBE LENGTH ft. (m)*	LIQUID TUBE DIAMETER (In.)	VAPOR TUBE DIAMETER (In.)
318, 324, 330	0 to 80 (0 to 24.38)	3/8	3/4
336, 342			7/8
348, 360			1–1/8

* For tube set over 80 ft / 24.38 m horizontal and/or 20 ft / 6.10 m vertical differential, consult Residential Split System Long Line Application Guidelines.

COMBINATION RATINGS

UNIT SIZE – SERIES	INDOOR MODEL	ARI STANDARD RATINGS								
		COOLING				HEATING				
		CAPACITY	FACTORY ENHANCE	SEER STANDARD	EER	HIGH TEMP E CAPACITY	HIGH TEMP E COP	LOW TEMP H CAPACITY	LOW TEMP H COP	HSPF
318–A	*FC4DNF018	17,600	TDR&TXV	13.00	11.00	16,400	3.68	9,700	2.38	7.7
324–A	*FC4DNF024	23,000	TDR&TXV	13.00	11.00	22,400	3.56	13,600	2.38	7.7
330–A	*FC4DNF030	29,000	TDR&TXV	13.00	11.00	27,400	3.48	17,500	2.40	7.7
	FC4DN(F,B)036	29,200	TDR&TXV	13.00	11.00	26,600	3.36	17,700	2.38	7.7
336–A	*FC4DN(F,B)036	34,000	TDR&TXV	13.00	10.80	33,600	3.46	20,600	2.34	7.7
342–A	*FC4DN(F,B)042	40,000	TDR&TXV	13.00	11.00	40,000	3.60	25,600	2.52	7.8
	FC4DN(F,B)048	40,500	TDR&TXV	13.00	11.00	38,000	3.60	25,400	2.58	7.8
348–A	*FC4DN(F,B)048	46,000	TDR&TXV	13.00	11.00	45,000	3.52	28,800	2.52	7.8
360–A	*FC4DN(F,B)060	55,000	TDR&TXV	13.00	11.00	55,000	3.58	34,800	2.50	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–Temperature Heating Standard: 70°F (21°C) db indoor entering air temperature and 47°C (8°C) db 43°F (6°C) wb air entering outdoor unit.

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

COP – Coefficient of Performance

EER – Energy Efficiency Ratio

HSPF – Heating Seasonal Performance Factor

TDR – Time–Delay Relay

TXV – Thermostatic Expansion Valve

SEER – Seasonal Energy Efficiency Ratio

DETAILED COOLING CAPACITIES#

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD318–A Outdoor Section With FC4DNF018 Indoor Section																
525	57 (13.9)	16.10	16.10	1.38	15.55	15.55	1.56	14.97	14.97	1.77	14.36	14.36	1.99	13.72	13.72	2.24
	62 (16.7)	16.44	15.33	1.38	15.77	14.99	1.57	15.08	14.62	1.77	14.36	14.36	1.99	13.72	13.72	2.24
	67 (19.4)	18.02	12.87	1.40	17.28	12.56	1.58	16.51	12.24	1.79	15.71	11.91	2.01	14.87	11.56	2.25
	72 (22.2)	19.83	10.37	1.42	19.05	10.08	1.60	18.23	9.77	1.81	17.38	9.45	2.03	16.48	9.12	2.28
600	57 (13.9)	16.74	16.74	1.40	16.16	16.16	1.58	15.55	15.55	1.79	14.91	14.91	2.01	14.23	14.23	2.26
	62 (16.7)	16.85	16.38	1.40	16.16	16.16	1.58	15.55	15.55	1.79	14.91	14.91	2.01	14.23	14.23	2.26
	67 (19.4)	18.36	13.71	1.42	17.60	13.40	1.60	16.81	13.07	1.80	15.98	12.73	2.03	15.12	12.38	2.27
	72 (22.2)	20.20	10.89	1.43	19.40	10.60	1.62	18.55	10.28	1.82	17.67	9.96	2.05	16.74	9.63	2.30
675	57 (13.9)	17.28	17.28	1.42	16.67	16.67	1.60	16.04	16.04	1.81	15.37	15.37	2.03	14.66	14.66	2.28
	62 (16.7)	17.27	17.27	1.42	16.67	16.67	1.60	16.03	16.03	1.81	15.37	15.37	2.03	14.66	14.66	2.28
	67 (19.4)	18.63	14.51	1.43	17.85	14.20	1.62	17.04	13.86	1.82	16.19	13.52	2.04	15.31	13.15	2.29
	72 (22.2)	20.49	11.39	1.45	19.66	11.09	1.64	18.79	10.77	1.84	17.89	10.45	2.07	16.93	10.11	2.31

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF018	1.00	1.00	

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD324–A Outdoor Section With FC4DNF024 Indoor Section																
700	57 (13.9)	21.08	21.08	1.82	20.38	20.38	2.06	19.63	19.63	2.31	18.85	18.85	2.60	18.01	18.01	2.90
	62 (16.7)	21.53	20.06	1.83	20.67	19.62	2.06	19.79	19.14	2.32	18.86	18.86	2.60	18.01	18.01	2.90
	67 (19.4)	23.55	16.83	1.83	22.62	16.44	2.07	21.64	16.03	2.33	20.60	15.61	2.61	19.52	15.16	2.92
	72 (22.2)	25.88	13.52	1.85	24.89	13.15	2.08	23.85	12.76	2.34	22.75	12.35	2.63	21.60	11.93	2.94
800	57 (13.9)	21.88	21.88	1.85	21.14	21.14	2.08	20.36	20.36	2.34	19.53	19.53	2.62	18.66	18.66	2.93
	62 (16.7)	22.03	21.36	1.85	21.15	21.15	2.08	20.35	20.35	2.34	19.53	19.53	2.62	18.66	18.66	2.93
	67 (19.4)	23.96	17.89	1.86	23.00	17.50	2.09	21.99	17.08	2.35	20.93	16.65	2.63	19.81	16.19	2.94
	72 (22.2)	26.33	14.18	1.87	25.31	13.80	2.10	24.24	13.40	2.36	23.11	12.99	2.65	21.92	12.57	2.96
900	57 (13.9)	22.55	22.55	1.87	21.77	21.77	2.10	20.96	20.96	2.36	20.10	20.10	2.65	19.19	19.19	2.95
	62 (16.7)	22.54	22.54	1.87	21.77	21.77	2.10	20.96	20.96	2.36	20.10	20.10	2.65	19.19	19.19	2.95
	67 (19.4)	24.28	18.90	1.88	23.30	18.50	2.11	22.26	18.08	2.37	21.18	17.63	2.65	20.04	17.16	2.96
	72 (22.2)	26.67	14.80	1.89	25.63	14.41	2.12	24.53	14.02	2.39	23.37	13.61	2.67	22.15	13.17	2.98

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF024	1.00	1.00	

See notes on page 12

DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD330–A Outdoor Section With FC4DNF030 Indoor Section																
875	57 (13.9)	26.44	26.44	2.33	25.58	25.58	2.59	24.71	24.71	2.89	23.81	23.81	3.22	22.87	22.87	3.58
	62 (16.7)	27.11	25.23	2.34	26.06	24.68	2.60	25.01	24.12	2.89	23.96	23.52	3.22	22.87	22.87	3.58
	67 (19.4)	29.71	21.20	2.35	28.51	20.69	2.61	27.33	20.19	2.90	26.14	19.69	3.23	24.91	19.18	3.59
	72 (22.2)	32.70	17.10	2.37	31.37	16.59	2.62	30.08	16.10	2.91	28.79	15.61	3.24	27.47	15.11	3.60
1000	57 (13.9)	27.46	27.46	2.37	26.53	26.53	2.63	25.61	25.61	2.92	24.67	24.67	3.25	23.67	23.67	3.61
	62 (16.7)	27.74	26.89	2.37	26.66	26.26	2.63	25.62	25.62	2.92	24.66	24.66	3.25	23.67	23.67	3.61
	67 (19.4)	30.26	22.52	2.38	29.00	22.00	2.64	27.78	21.49	2.93	26.55	20.98	3.26	25.28	20.45	3.62
	72 (22.2)	33.30	17.91	2.40	31.91	17.39	2.65	30.56	16.89	2.94	29.22	16.39	3.27	27.85	15.89	3.63
1125	57 (13.9)	28.30	28.30	2.40	27.33	27.33	2.66	26.36	26.36	2.95	25.37	25.37	3.28	24.34	24.34	3.64
	62 (16.7)	28.32	28.32	2.40	27.32	27.32	2.66	26.36	26.36	2.95	25.37	25.37	3.28	24.34	24.34	3.64
	67 (19.4)	30.69	23.79	2.41	29.39	23.26	2.67	28.13	22.74	2.96	26.87	22.21	3.29	25.57	21.67	3.65
	72 (22.2)	33.76	18.69	2.43	32.32	18.16	2.68	30.93	17.65	2.97	29.55	17.15	3.30	28.14	16.64	3.66

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF030	1.00	1.00	
FC4DN(F,B)036	1.01	1.01	

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD336–A Outdoor Section With FC4DN(F,B)036 Indoor Section																
1050	57 (13.9)	31.17	31.17	2.74	30.13	30.13	3.03	29.04	29.04	3.36	27.90	27.90	3.71	26.69	26.69	4.09
	62 (16.7)	31.87	30.22	2.74	30.62	29.55	3.03	29.33	28.84	3.36	28.00	27.73	3.71	26.69	26.69	4.09
	67 (19.4)	34.84	25.33	2.76	33.46	24.74	3.05	32.02	24.13	3.38	30.51	23.49	3.73	28.94	22.82	4.12
	72 (22.2)	38.25	20.32	2.77	36.78	19.76	3.07	35.24	19.17	3.40	33.64	18.55	3.76	31.95	17.92	4.15
1200	57 (13.9)	32.32	32.32	2.78	31.22	31.22	3.07	30.08	30.08	3.40	28.87	28.87	3.75	27.61	27.61	4.14
	62 (16.7)	32.58	32.16	2.78	31.32	31.08	3.07	30.08	30.08	3.40	28.87	28.87	3.75	27.60	27.60	4.14
	67 (19.4)	35.42	26.90	2.79	34.00	26.30	3.09	32.52	25.67	3.42	30.97	25.02	3.77	29.35	24.34	4.16
	72 (22.2)	38.89	21.28	2.81	37.37	20.70	3.11	35.78	20.11	3.44	34.12	19.49	3.80	32.38	18.84	4.19
1350	57 (13.9)	33.27	33.27	2.82	32.13	32.13	3.12	30.93	30.93	3.44	29.68	29.68	3.80	28.36	28.36	4.18
	62 (16.7)	33.28	33.28	2.82	32.12	32.12	3.12	30.93	30.93	3.44	29.67	29.67	3.80	28.35	28.35	4.18
	67 (19.4)	35.89	28.42	2.83	34.43	27.81	3.13	32.91	27.17	3.46	31.32	26.50	3.81	29.67	25.79	4.20
	72 (22.2)	39.38	22.20	2.85	37.82	21.62	3.15	36.19	21.02	3.48	34.49	20.39	3.84	32.70	19.74	4.23

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)030	1.00	1.00	

See notes on page 12

DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD342–A Outdoor Section With FC4DN(F,B)042 Indoor Section																
1225	57 (13.9)	36.54	36.54	3.22	35.32	35.32	3.55	34.07	34.07	3.92	32.80	32.80	4.34	31.48	31.48	4.80
	62 (16.7)	37.41	35.62	3.22	35.93	34.84	3.56	34.43	34.03	3.93	32.93	33.15	4.34	31.48	31.48	4.80
	67 (19.4)	40.98	29.85	3.25	39.35	29.14	3.58	37.67	28.42	3.95	35.96	27.69	4.37	34.22	26.95	4.83
	72 (22.2)	44.97	23.94	3.28	43.23	23.26	3.61	41.43	22.56	3.99	39.58	21.86	4.40	37.69	21.14	4.86
1400	57 (13.9)	37.92	37.92	3.27	36.63	36.63	3.61	35.31	35.31	3.98	33.95	33.95	4.40	32.57	32.57	4.86
	62 (16.7)	38.24	37.98	3.28	36.75	36.43	3.61	35.31	35.31	3.98	33.95	33.95	4.40	32.56	32.56	4.86
	67 (19.4)	41.70	31.72	3.30	40.00	31.00	3.64	38.26	30.27	4.01	36.49	29.52	4.42	34.69	28.76	4.88
	72 (22.2)	45.71	25.07	3.33	43.90	24.37	3.67	42.04	23.67	4.04	40.13	22.96	4.46	38.18	22.23	4.92
1575	57 (13.9)	39.07	39.07	3.33	37.72	37.72	3.67	36.33	36.33	4.04	34.91	34.91	4.45	33.46	33.46	4.92
	62 (16.7)	39.07	39.07	3.33	37.71	37.71	3.67	36.33	36.33	4.04	34.91	34.91	4.45	33.45	33.45	4.92
	67 (19.4)	42.22	33.49	3.35	40.49	32.76	3.69	38.70	32.01	4.06	36.89	31.25	4.47	35.05	30.47	4.93
	72 (22.2)	46.25	26.12	3.38	44.40	25.42	3.72	42.49	24.72	4.10	40.53	24.00	4.51	38.53	23.27	4.97

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)042	1.00	1.00	
FC4DN(F,B)048	1.01	1.01	

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
38YCD348–A Outdoor Section With FC4DN(F,B)048 Indoor Section																
1400	57 (13.9)	42.41	42.41	3.68	40.99	40.99	4.09	39.52	39.52	4.54	37.99	37.99	5.03	36.40	36.40	5.57
	62 (16.7)	43.73	40.74	3.71	41.98	39.84	4.11	40.18	38.91	4.55	38.34	37.92	5.04	36.48	36.26	5.57
	67 (19.4)	47.93	34.24	3.78	46.00	33.40	4.18	44.01	32.54	4.63	41.96	31.66	5.12	39.83	30.75	5.65
	72 (22.2)	52.67	27.70	3.86	50.60	26.88	4.27	48.45	26.04	4.72	46.22	25.18	5.21	43.90	24.30	5.74
1600	57 (13.9)	44.10	44.10	3.76	42.59	42.59	4.17	41.03	41.03	4.62	39.41	39.41	5.11	37.72	37.72	5.65
	62 (16.7)	44.73	43.57	3.77	42.94	42.58	4.18	41.14	40.86	4.62	39.40	39.40	5.11	37.72	37.72	5.65
	67 (19.4)	48.85	36.39	3.85	46.84	35.54	4.25	44.78	34.66	4.70	42.65	33.76	5.18	40.44	32.84	5.72
	72 (22.2)	53.67	29.02	3.93	51.52	28.19	4.34	49.28	27.34	4.79	46.96	26.46	5.28	44.56	25.57	5.81
1800	57 (13.9)	45.51	45.51	3.84	43.93	43.93	4.25	42.29	42.29	4.70	40.59	40.59	5.19	38.82	38.82	5.73
	62 (16.7)	45.64	45.29	3.84	43.93	43.93	4.25	42.29	42.29	4.70	40.59	40.59	5.19	38.82	38.82	5.73
	67 (19.4)	49.55	38.45	3.91	47.49	37.58	4.31	45.36	36.69	4.76	43.17	35.77	5.25	40.91	34.82	5.78
	72 (22.2)	54.44	30.27	3.99	52.22	29.43	4.40	49.91	28.57	4.85	47.52	27.68	5.34	45.05	26.78	5.88

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)048	1.00	1.00	

See notes on page 12

DETAILED COOLING CAPACITIES# CONTINUED

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)														
		85 (29.4)			95 (35)			105 (40.6)			115 (46.1)			125 (51.7)		
CFM	EWB °F (°C)	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‡	
PH13NR060(G)–H Outdoor Section With FC4DN(F,B)060 Indoor Section																
1750	57 (13.9)	51.21	51.21	4.38	49.49	49.49	4.86	47.68	47.68	5.38	45.77	45.77	5.95	43.74	43.74	6.56
	62 (16.7)	51.70	50.46	4.39	49.68	49.35	4.86	47.68	47.68	5.38	45.77	45.77	5.95	43.74	43.74	6.56
	67 (19.4)	56.27	41.95	4.44	54.00	41.00	4.91	51.63	40.01	5.43	49.15	38.98	6.00	46.54	37.91	6.61
	72 (22.2)	61.46	33.10	4.49	59.01	32.17	4.97	56.46	31.22	5.49	53.77	30.22	6.06	50.95	29.19	6.68
2000	57 (13.9)	52.99	52.99	4.48	51.17	51.17	4.95	49.25	49.25	5.48	47.23	47.23	6.05	45.09	45.09	6.66
	62 (16.7)	52.99	52.99	4.48	51.16	51.16	4.95	49.25	49.25	5.48	47.23	47.23	6.05	45.08	45.08	6.66
	67 (19.4)	57.06	44.69	4.52	54.72	43.72	4.99	52.28	42.71	5.51	49.72	41.66	6.08	47.04	40.56	6.69
	72 (22.2)	62.26	34.72	4.57	59.73	33.79	5.05	57.10	32.82	5.57	54.33	31.82	6.14	51.42	30.77	6.76
2250	57 (13.9)	54.44	54.44	4.57	52.53	52.53	5.04	50.52	50.52	5.57	48.41	48.41	6.14	46.17	46.17	6.76
	62 (16.7)	54.43	54.43	4.57	52.53	52.53	5.04	50.52	50.52	5.57	48.40	48.40	6.14	46.16	46.16	6.76
	67 (19.4)	57.65	47.30	4.60	55.25	46.31	5.07	52.75	45.28	5.60	50.14	44.19	6.16	47.41	43.04	6.78
	72 (22.2)	62.82	36.27	4.66	60.23	35.33	5.13	57.54	34.36	5.66	54.71	33.35	6.23	51.73	32.29	6.84

COOLING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)060	1.00	1.00	

* Tested combination

\# Detailed cooling capacities are based on indoor and outdoor unit at the same elevation, per ARI Standard 210/240–08, and connected by 25 ft of tubing. If other than 25 ft of tubing is used 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).
When the required data falls between the published data, interpolation may be performed.

** Unit kW is total of indoor and outdoor unit kilowatts.

HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																							
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD318–A Outdoor Section With FC4DNF018 Indoor Section																									
65 (18.3)	525	6.59	6.07	0.95	8.43	7.75	1.00	10.53	9.60	1.07	12.88	11.44	1.14	15.24	13.87	1.22	16.74	16.74	1.28	17.47	17.47	1.31	17.23	17.23	1.29
	600	6.68	6.15	0.95	8.54	7.84	1.00	10.66	9.72	1.05	13.04	11.58	1.13	15.05	13.70	1.19	16.23	16.23	1.23	16.09	16.09	1.22	15.63	15.63	1.21
	675	6.76	6.22	0.95	8.63	7.93	1.00	10.77	9.82	1.05	13.16	11.69	1.12	14.83	13.50	1.16	15.43	15.43	1.19	15.04	15.04	1.17	14.37	14.37	1.15
70 (21.1)	525	6.40	5.88	1.00	8.23	7.56	1.06	10.31	9.40	1.13	12.66	11.24	1.21	15.17	13.81	1.30	16.87	16.87	1.36	18.11	18.11	1.41	18.08	18.08	1.41
	600	6.49	5.97	1.00	8.33	7.66	1.05	10.44	9.52	1.11	12.81	11.38	1.19	15.14	13.78	1.26	16.50	16.50	1.31	16.93	16.93	1.33	16.68	16.68	1.32
	675	6.56	6.04	1.00	8.43	7.74	1.05	10.55	9.62	1.11	12.94	11.49	1.18	14.97	13.63	1.24	16.09	16.09	1.28	15.92	15.92	1.27	15.46	15.46	1.26
75 (23.9)	525	6.20	5.71	1.05	8.06	7.41	1.12	10.10	9.21	1.19	12.42	11.03	1.27	14.99	13.65	1.38	16.95	16.95	1.45	18.48	18.48	1.51	18.79	18.79	1.52
	600	6.27	5.77	1.05	8.14	7.48	1.11	10.22	9.32	1.18	12.58	11.17	1.25	15.08	13.72	1.34	16.66	16.66	1.40	17.53	17.53	1.43	17.32	17.32	1.42
	675	6.35	5.84	1.06	8.23	7.56	1.11	10.33	9.41	1.17	12.71	11.28	1.24	15.06	13.71	1.32	16.36	16.36	1.36	16.63	16.63	1.37	16.44	16.44	1.36

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF018	1.00	1.00	

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																							
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD324–A Outdoor Section With FC4DNF024 Indoor Section																									
65 (18.3)	700	8.84	8.13	1.39	11.15	10.24	1.46	13.62	12.42	1.52	16.37	14.54	1.60	19.37	17.63	1.70	22.52	22.52	1.79	25.23	25.23	1.88	27.80	27.80	1.98
	800	8.96	8.25	1.40	11.28	10.37	1.45	13.76	12.55	1.51	16.55	14.70	1.58	19.57	17.81	1.67	22.45	22.45	1.74	24.83	24.83	1.82	27.00	27.00	1.89
	900	9.07	8.34	1.40	11.39	10.47	1.45	13.89	12.67	1.51	16.70	14.83	1.57	19.74	17.96	1.65	22.25	22.25	1.71	24.36	24.36	1.77	25.97	25.97	1.82
70 (21.1)	700	8.57	7.88	1.46	10.91	10.02	1.53	13.40	12.22	1.61	16.12	14.32	1.69	19.12	17.40	1.79	22.35	22.35	1.90	25.24	25.24	1.99	27.90	27.90	2.10
	800	8.70	8.00	1.46	11.05	10.15	1.53	13.55	12.35	1.59	16.30	14.48	1.66	19.32	17.58	1.76	22.40	22.40	1.84	24.93	24.93	1.93	27.25	27.25	2.01
	900	8.81	8.10	1.47	11.16	10.26	1.53	13.67	12.47	1.59	16.45	14.61	1.65	19.48	17.73	1.74	22.32	22.32	1.81	24.57	24.57	1.88	26.55	26.55	1.94
75 (23.9)	700	8.28	7.61	1.53	10.65	9.79	1.61	13.17	12.01	1.69	15.86	14.09	1.77	18.86	17.16	1.88	22.11	22.11	2.01	25.19	25.19	2.11	27.94	27.94	2.22
	800	8.40	7.73	1.53	10.79	9.92	1.61	13.32	12.14	1.68	16.04	14.25	1.75	19.06	17.35	1.85	22.26	22.26	1.95	24.97	24.97	2.04	27.43	27.43	2.13
	900	8.52	7.84	1.54	10.91	10.03	1.61	13.44	12.26	1.67	16.20	14.39	1.74	19.22	17.49	1.83	22.28	22.28	1.91	24.69	24.69	1.99	26.84	26.84	2.06

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF024	1.00	1.00	

See notes on pg. 16

HEAT PUMP HEATING PERFORMANCE

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																					
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD330–A Outdoor Section With FC4DNF030 Indoor Section																							
65 (18.3)	875	11.40	10.49	1.80	14.23	13.08	1.88	17.28	15.75	1.95	20.65	18.34	2.05	24.37	22.18	2.17	27.60	27.60	2.24	30.57	30.57	2.34	33.42	33.42	2.44
	1000	11.55	10.63	1.81	14.40	13.23	1.88	17.46	15.92	1.94	20.86	18.53	2.03	24.54	22.33	2.13	27.32	27.32	2.19	29.97	29.97	2.27	31.45	31.45	2.31
	1125	11.69	10.75	1.82	14.55	13.37	1.88	17.63	16.08	1.94	21.04	18.69	2.03	24.52	22.32	2.10	26.99	26.99	2.16	29.33	29.33	2.22	29.52	29.52	2.23
70 (21.1)	875	11.17	10.28	1.88	13.96	12.83	1.96	17.03	15.52	2.05	20.37	18.09	2.15	24.09	21.92	2.27	27.63	27.63	2.36	30.65	30.65	2.47	33.63	33.63	2.57
	1000	11.31	10.41	1.89	14.13	12.98	1.96	17.21	15.69	2.04	20.58	18.28	2.13	24.33	22.14	2.24	27.40	27.40	2.31	30.17	30.17	2.39	32.43	32.43	2.47
	1125	11.43	10.52	1.90	14.28	13.12	1.97	17.37	15.84	2.03	20.77	18.45	2.12	24.48	22.28	2.21	27.16	27.16	2.27	29.65	29.65	2.35	30.65	30.65	2.37
75 (23.9)	875	10.92	10.05	1.97	13.69	12.58	2.05	16.76	15.28	2.14	20.09	17.84	2.24	23.76	21.62	2.38	27.56	27.56	2.49	30.69	30.69	2.60	33.78	33.78	2.72
	1000	11.07	10.19	1.98	13.85	12.73	2.05	16.95	15.45	2.13	20.30	18.03	2.22	24.01	21.85	2.34	27.44	27.44	2.43	30.30	30.30	2.52	33.01	33.01	2.61
	1125	11.20	10.30	1.99	14.00	12.86	2.05	17.11	15.60	2.13	20.49	18.20	2.21	24.25	22.07	2.33	27.25	27.25	2.39	29.87	29.87	2.47	31.61	31.61	2.52

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DNF030	1.00	1.00	
FC4DN(F,B)036	0.97	1.00	

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																					
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD336–A Outdoor Section With FC4DN(F,B)036 Indoor Section																							
65 (18.3)	1050	14.43	13.28	2.22	17.90	16.45	2.31	21.61	19.71	2.41	25.70	22.82	2.53	30.24	27.52	2.67	33.90	33.90	2.77	37.45	37.45	2.88	14.05	14.05	2.43
	1200	14.64	13.47	2.23	18.12	16.65	2.32	21.85	19.92	2.40	25.98	23.07	2.52	30.29	27.57	2.62	33.55	33.55	2.71	36.76	36.76	2.81	38.58	38.58	2.86
	1350	14.82	13.64	2.25	18.31	16.83	2.33	22.06	20.11	2.41	26.22	23.29	2.51	30.21	27.49	2.60	33.16	33.16	2.68	35.99	35.99	2.76	36.32	36.32	2.76
70 (21.1)	1050	14.05	12.93	2.31	17.56	16.14	2.41	21.30	19.42	2.52	25.33	22.50	2.64	29.83	27.14	2.80	33.82	33.82	2.90	37.47	37.47	3.03	41.01	41.01	3.16
	1200	14.26	13.12	2.32	17.78	16.34	2.42	21.54	19.64	2.51	25.62	22.75	2.63	30.15	27.44	2.76	33.60	33.60	2.85	36.93	36.93	2.95	39.61	39.61	3.03
	1350	14.45	13.30	2.34	17.98	16.53	2.43	21.75	19.83	2.51	25.87	22.97	2.62	30.23	27.51	2.73	33.32	33.32	2.81	36.33	36.33	2.90	37.55	37.55	2.93
75 (23.9)	1050	13.64	12.54	2.40	17.19	15.80	2.52	20.97	19.12	2.63	24.98	22.19	2.76	29.43	26.78	2.92	33.74	33.74	3.05	37.43	37.43	3.18	41.09	41.09	3.32
	1200	13.85	12.74	2.41	17.42	16.01	2.52	21.21	19.34	2.63	25.25	22.43	2.74	29.78	27.10	2.89	33.58	33.58	2.99	37.01	37.01	3.10	40.24	40.24	3.21
	1350	14.05	12.92	2.43	17.63	16.20	2.53	21.43	19.54	2.63	25.50	22.64	2.74	30.04	27.34	2.86	33.38	33.38	2.95	36.54	36.54	3.04	38.55	38.55	3.10

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)030	1.00	1.00	

See notes on pg. 16

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																					
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD342–A Outdoor Section With FC4DN(F,B)042 Indoor Section																							
65 (18.3)	1225	17.53	16.13	2.56	21.57	19.82	2.66	25.94	23.65	2.77	30.84	27.39	2.91	36.11	32.86	3.05	40.46	40.46	3.17	44.73	44.73	3.30	47.92	47.92	3.39
	1400	17.78	16.35	2.58	21.83	20.06	2.67	26.23	23.91	2.77	31.19	27.70	2.90	36.04	32.79	3.01	39.90	39.90	3.10	43.57	43.57	3.20	44.19	44.19	3.21
	1575	18.00	16.56	2.61	22.06	20.27	2.69	26.49	24.16	2.78	31.49	27.97	2.90	35.83	32.61	2.99	39.27	39.27	3.07	40.85	40.85	3.11	41.07	41.07	3.10
70 (21.1)	1225	17.16	15.79	2.66	21.25	19.53	2.78	25.63	23.37	2.90	30.45	27.05	3.04	35.84	32.62	3.20	40.40	40.40	3.32	44.81	44.81	3.46	48.92	48.92	3.60
	1400	17.41	16.02	2.68	21.51	19.77	2.79	25.91	23.62	2.89	30.79	27.35	3.02	35.93	32.70	3.15	40.00	40.00	3.26	43.90	43.90	3.37	45.48	45.48	3.41
	1575	17.63	16.22	2.71	21.74	19.98	2.81	26.16	23.85	2.90	31.09	27.61	3.03	35.84	32.62	3.13	39.51	39.51	3.22	42.17	42.17	3.29	42.71	42.71	3.29
75 (23.9)	1225	16.75	15.41	2.77	20.92	19.23	2.90	25.33	23.09	3.03	30.07	26.71	3.17	35.44	32.25	3.35	40.28	40.28	3.48	44.81	44.81	3.63	49.14	49.14	3.79
	1400	17.01	15.65	2.79	21.18	19.46	2.91	25.60	23.34	3.02	30.41	27.01	3.16	35.75	32.53	3.30	40.01	40.01	3.41	44.07	44.07	3.54	46.58	46.58	3.61
	1575	17.24	15.86	2.82	21.41	19.68	2.93	25.85	23.57	3.03	30.70	27.27	3.15	35.81	32.58	3.27	39.64	39.64	3.37	43.20	43.20	3.47	43.97	43.97	3.48

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)042	1.00	1.00	
FC4DN(F,B)048	0.95	0.95	

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																					
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
38YCD348–A Outdoor Section With FC4DN(F,B)048 Indoor Section																							
65 (18.3)	1400	19.78	18.19	2.78	24.28	22.31	2.91	29.16	26.58	3.05	34.55	30.69	3.23	40.08	36.48	3.38	45.03	45.03	3.55	46.35	46.35	3.58	45.69	45.69	3.54
	1600	20.02	18.42	2.79	24.54	22.55	2.91	29.43	26.84	3.04	34.90	31.00	3.20	39.87	36.28	3.32	42.99	42.99	3.41	43.14	43.14	3.40	43.09	43.09	3.39
	1800	20.24	18.62	2.81	24.77	22.76	2.92	29.69	27.07	3.04	35.14	31.21	3.17	39.66	36.09	3.29	40.59	40.59	3.31	40.90	40.90	3.31	40.53	40.53	3.29
70 (21.1)	1400	19.40	17.84	2.92	23.93	21.99	3.06	28.83	26.29	3.21	34.18	30.36	3.40	39.91	36.32	3.56	45.00	45.00	3.75	47.54	47.54	3.83	48.16	48.16	3.83
	1600	19.65	18.07	2.93	24.20	22.24	3.06	29.13	26.56	3.20	34.51	30.65	3.37	39.88	36.29	3.50	44.11	44.11	3.64	44.64	44.64	3.64	45.03	45.03	3.64
	1800	19.87	18.28	2.95	24.45	22.46	3.07	29.38	26.79	3.20	34.81	30.92	3.35	39.75	36.17	3.47	41.93	41.93	3.53	42.44	42.44	3.53	42.57	42.57	3.52
75 (23.9)	1400	19.00	17.48	3.07	23.59	21.68	3.22	28.51	25.99	3.38	33.81	30.03	3.57	39.67	36.10	3.76	44.86	44.86	3.95	48.48	48.48	4.08	49.33	49.33	4.09
	1600	19.25	17.71	3.08	23.86	21.92	3.22	28.80	26.26	3.36	34.12	30.31	3.54	39.75	36.17	3.69	44.55	44.55	3.85	45.72	45.72	3.88	45.84	45.84	3.87
	1800	19.48	17.92	3.10	24.10	22.14	3.22	29.04	26.48	3.36	34.44	30.58	3.53	39.71	36.14	3.65	43.13	43.13	3.76	43.84	43.84	3.77	44.32	44.32	3.77

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)048	1.00	1.00	

See notes on pg. 16

HEAT PUMP HEATING PERFORMANCE CONTINUED

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																					
		–3 (–19.4)			7 (–13.9)			17 (–8.3)			27 (–2.8)			37 (2.8)			47 (8.3)			57 (13.9)			67 (19.4)		
EDB °F (°C)	CFM	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†	Capacity MBtuh		Total Sys. KW†
		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*		Total	Integ*	
PH13NR060(G)–H Outdoor Section With FC4DN(F,B)060 Indoor Section																							
65 (18.3)	1750	25.07	23.06	3.64	30.45	27.98	3.77	36.25	33.05	3.92	42.92	38.12	4.11	49.71	45.24	4.24	53.85	53.85	4.34	55.00	55.00	4.36	55.33	55.33	4.35
	2000	25.41	23.38	3.67	30.81	28.31	3.80	36.65	33.42	3.93	43.39	38.53	4.09	49.44	44.99	4.21	51.16	51.16	4.24	50.79	50.79	4.21	51.09	51.09	4.21
	2250	25.74	23.68	3.72	31.14	28.62	3.83	37.02	33.75	3.96	43.69	38.80	4.08	47.79	43.49	4.17	48.10	48.10	4.17	48.16	48.16	4.16	48.18	48.18	4.15
70 (21.1)	1750	24.57	22.61	3.79	30.04	27.60	3.95	35.86	32.69	4.11	42.40	37.66	4.30	49.56	45.10	4.45	55.00	55.00	4.60	56.84	56.84	4.64	57.40	57.40	4.63
	2000	24.94	22.94	3.83	30.41	27.95	3.97	36.24	33.04	4.11	42.91	38.11	4.30	49.48	45.03	4.42	52.84	52.84	4.49	53.26	53.26	4.49	53.40	53.40	4.48
	2250	25.28	23.25	3.88	30.75	28.26	4.01	36.61	33.38	4.14	43.32	38.47	4.30	49.35	44.91	4.41	50.23	50.23	4.42	50.26	50.26	4.41	50.52	50.52	4.40
75 (23.9)	1750	24.07	22.14	3.95	29.62	27.22	4.13	35.48	32.35	4.30	41.85	37.17	4.49	49.25	44.82	4.68	55.86	55.86	4.87	58.34	58.34	4.93	59.16	59.16	4.93
	2000	24.44	22.49	3.99	30.00	27.57	4.15	35.86	32.70	4.31	42.38	37.64	4.49	49.38	44.94	4.64	53.88	53.88	4.75	54.77	54.77	4.76	54.94	54.94	4.75
	2250	24.78	22.80	4.04	30.35	27.89	4.18	36.22	33.02	4.33	42.84	38.04	4.51	49.31	44.87	4.63	51.57	51.57	4.67	52.12	52.12	4.67	52.33	52.33	4.66

HEATING INDOOR MODEL	CAPACITY	POWER	FURNACE MODEL
*FC4DN(F,B)060	1.00	1.00	

NOTE: When the required data fall 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 without low-ambient operation accessory is 55°F (12.8°C).
3. Maximum outdoor operating air temperature is 115°F (46.1°C).
4. For reliable operation, unit should be level in all horizontal planes.
5. Maximum elevation of indoor coil above or below base of outdoor unit is: indoor coil above = 80 ft (24.38 m), indoor coil below = 200 ft (60.96 m).
6. For interconnecting refrigerant tube lengths greater than 80 ft (24.38 m) horizontal or 20 ft (6.10 m) vertical differential, consult Residential Split System Long-Line Application Guideline available from equipment distributor.
7. Crankcase heater required when interconnecting refrigerant tube length exceeds 80 ft (24.38 m).
8. If any refrigerant tubing is buried, provide a minimum 6 in (152.4 mm). vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in (914.4 mm). may be buried without further consideration.
9. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.

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Replaces: New