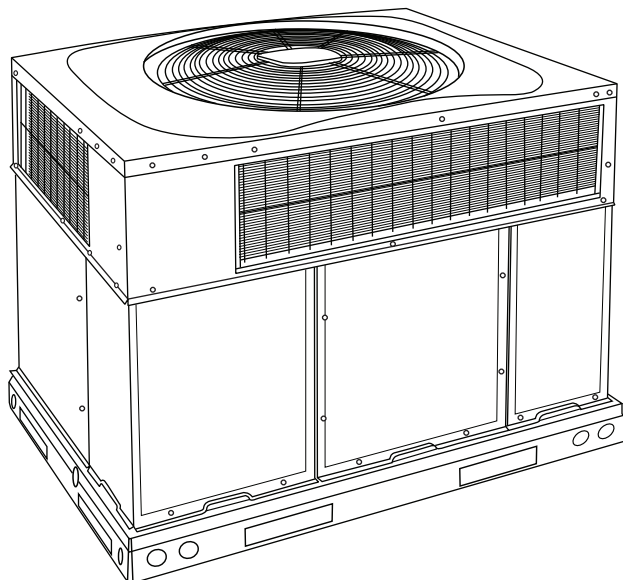


Product Data



A09034

Fig. 1 - Unit 674D--A

Single-Packaged Products with Energy-Saving Features and Puron® refrigerant.

- Up to 13.5 SEER
- Up to 7.7 HSPF
- Up to 80.4% AFUE
- Factory-Installed TXV
- ECM Motor-Standard
- Direct Spark Ignition
- Dehumidification Feature

FEATURES/BENEFITS

One-piece heating and cooling units with low sound levels, easy installation, low maintenance, and dependable performance.

Puron Environmentally Sound Refrigerant is Bryant's unique refrigerant designed to help protect the environment. Puron is an HFC refrigerant which does not contain chlorine that can harm the ozone layer. Puron refrigerant is in service in millions of systems, proving highly reliable, environmentally sound performance.

Easy Installation

Factory-assembled package is a compact, fully self-contained, combination gas heating/electric heating and cooling unit that is prewired, pre-piped, and pre-charged for minimum installation expense. These units are available in a variety of standard and optional heating/cooling size combinations with voltage options to meet residential and light commercial requirements. Units are lightweight and install easily on a rooftop or at ground level. The high tech composite base eliminates rust problems associated with ground level applications.

Convertible duct configuration

Unit is designed for use in either downflow or horizontal applications. Each unit can be converted from horizontal to downflow and includes horizontal duct covers. Downflow operation is provided in the field to allow vertical ductwork connections. The basepan seals on the bottom openings to ensure a positive seal in the vertical airflow mode.

Efficient operation High-efficiency design offers SEER (Seasonal Energy Efficiency Ratios) of up to 13.5, HSPF of up to 7.7 and AFUE (Annual Fuel Utilization Efficiency) ratings as high as 80.4%.

Energy-saving, direct spark ignition saves gas by operating only when the room thermostat calls for heating. Standard units are furnished with natural gas controls. A low-cost field installed kit for propane conversion is available for all units.

Low NOx units are designed for California installations. These models meet the California maximum oxides of nitrogen (NOx) emissions requirement of 40 nanograms/joule or less as shipped from the factory and **MUST** be installed in California Air Quality Management Districts or wherever a Low NOx rule exists.

Durable, dependable components Compressors are designed for high efficiency. Each compressor is hermetically sealed against contamination to help promote longer life and dependable operation. Each compressor also has vibration isolation to provide quieter operation. All compressors have internal high pressure and overcurrent protection.

Monoport inshot burners produce precise air-to-gas mixture, which provides for clean and efficient combustion. The large monoport on the inshot (or injection type) burners seldom, if ever, requires cleaning. All gas furnace components are accessible in one compartment.

Turbo-tubular™ heat exchangers are constructed of aluminized steel for corrosion resistance and optimum heat transfer for improved efficiency. The tubular design permits hot gases to make multiple passes across the path of the supply air.

In addition, dimples located on the heat exchanger walls force the hot gases to stay in close contact with the walls, improving heat transfer.

ECM Motor is standard on all 674D--A models.

Direct-drive, PSC (Permanent Split Capacitor) condenser-fan motors are designed to help reduce energy consumption and provide for cooling operation down to 40°F (4.4°C) outdoor temperature. Motormaster® II low ambient kit is available as a field installed accessory.

Innovative Unit Base Design

On the inside a high-tech composite material will not rust and incorporates a sloped drain pan which improves drainage and helps inhibit mold, algae and bacterial growth. On the outside metal base rails provide added stability as well as easier handling and rigging.

Thermostat Controls

In order to take full advantage of the features afforded by your HYBRID HEAT® (dual-fuel) product, you need to install the Preferred Series Thermostat™ Control in either its programmable (part # T6-PRH) or non-programmable (T6-NRH) models.

Thermostatic Expansion Valve - A hard shutoff, balance port TXV maintains a constant superheat at the evaporator exit (cooling cycle) resulting in higher overall system efficiency.

Refrigerant system is designed to provide dependability. Liquid filter driers are used to promote clean, unrestricted operation. Each unit leaves the factory with a full refrigerant charge. Refrigerant service connections make checking operating pressures easier.

High and Low Pressure Switches provide added reliability for the compressor.

Indoor and Outdoor coils are computer-designed for optimum heat transfer and efficiency. The indoor coil is fabricated from copper tube and aluminum fins and is located inside the unit for protection against damage. The outdoor coil is internally mounted on the top tier of the unit.

Low sound ratings ensure a quiet indoor and outdoor environment with sound ratings as low as 76dBA.

Easy to service cabinets provide easy 3-panel accessibility to serviceable components during maintenance and installation. The base with integrated drain pan provides easy ground level installation with a mounting pad. A nesting feature ensures a positive basepan to roof curb seal when the unit is roof mounted. A convenient 3/4-in. (19 mm) wide perimeter flange makes frame mounting on a rooftop easy.

Integrated Gas Control (IGC) board provides safe and efficient control of heating and simplifies trouble-shooting through its built-in diagnostic function.

Cabinets are constructed of heavyduty, phosphated, zinc-coated prepainted steel capable of withstanding 500 hours in salt spray. Interior surfaces of the evaporator/heat exchanger compartment are insulated with cleanable semi-rigid insulation board, which keeps the conditioned air from being affected by the outdoor ambient temperature and provides improved indoor air quality. (Conforms to American Society of Heating, Refrigeration and Air Conditioning Engineers No. 62P.) The sloped drain pan minimizes standing water in the drain. An external drain is provided.

Short-Cycling protection for the compressor is incorporated into our defrost control board ensuring a five minute delay (+/-2 minutes) before restarting compressor after shutdown for any reason.

674D--A

674D--A

674D--A



3

AHRI* CAPACITIES

COOLING CAPACITIES AND EFFICIENCIES

UNIT 674D--A	NOMINAL TONS	STANDARD CFM	COOLING CAPACITIES (Btuh)	EER**	SEER†
30	2-1/2	1000	29,000	11.5	13.5
36	3	1200	35,000	11.5	13.5
42	3-1/2	1400	40,000	11.5	13.2
48	4	1600	47,000	11.5	13.5
60	5	1850	57,000	11.5	13.5

HEAT PUMP HEATING CAPACITIES AND EFFICIENCIES

UNIT 674D--A	HEATING CAPACITY (Btuh) @ 47°F (8.3°C)	COP @ 47°F (8.3°C)	HEATING CAPACITY (Btuh) @ 17°F (-8.3°C)	COP @ 17°F (-8.3°C)	HSPF†
30	29,000	3.5	15,900	2.2	7.7
36	35,000	3.4	20,400	2.3	7.7
42	40,000	3.4	22,000	2.2	7.7
48	46,500	3.6	26,200	2.3	7.7
60	57,000	3.5	31,000	2.3	7.7

LEGEND

dBA—Sound Levels (decibels)

db—Dry Bulb

SEER—Seasonal Energy Efficiency Ratio

wb—Wet Bulb

COP—Coefficient of Performance

HSPF—Heating Season Performance Factor

* Air Conditioning, Heating & Refrigeration Institute.

**At "A" conditions—80°F (26.7°C) indoor db/67°F (19.4°C) indoor wb & 95°F (35°C) outdoor db.

† Rated in accordance with U.S. Government DOE Department of Energy) test procedures and/or AHRI Standards 210/240.

Notes:

1. Ratings are net values, reflecting the effects of circulating fan heat.

Ratings are based on:

Cooling Standard: 80°F (26.7°C) db, 67°F (19.4°C) wb indoor entering—air temperature and 95°F (35°C) db outdoor entering—air temperature.

2. Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

GAS HEATING CAPACITIES AND EFFICIENCIES

UNIT 674D--A	HEATING INPUT (Btuh)	OUTPUT CAPACITY (Btuh)	TEMPERATURE RISE RANGE °F (°C)	AFUE (%)
30040	40,000	32,000	30-60 (16.7-33.3)	80.0
30060	60,000	48,000	25-55 (13.9-30.6)	80.0
36060		48,000		80.0
42060		47,000		78.5
36090	90,000	72,000	35-65 (19.4-36.1)	79.3
42090		73,000		80.4
48090		73,000		80.4
60090		73,000		80.4
48115	115,000	93,000	30-60 (16.7-33.3)	80.3
00115				
48130	130,000	103,000	35-65 (19.4-36.1)	78.9
60130				

LEGEND

AFUE—Annual Fuel Utilization Efficiency

NOTE: Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

PHYSICAL DATA

UNIT SIZE 674D -- A	30040	30060	36060	36090	42060	42090
NOMINAL CAPACITY (ton)	2-1/2	2-1/2	3	3	3-1/2	3-1/2
NOMINAL HEATING INPUT (Btu/hr)	40,000	60,000	60,000	90,000	60,000	90,000
SHIPPING WEIGHT --lb. (kg)	373 169	373 169	379 172	379 172	461 209	461 209
COMPRESSORS	Scroll					
Quantity	1					
REFRIGERANT (R-410A) Quantity --lb (kg)	10.2 4.6	10.2 4.6	7.9 3.6	7.9 3.6	10.0 4.5	10.0 4.5
REFRIGERANT METERING DEVICE	Indoor--TXV, Outdoor--Accurater					
OUTDOOR ORIFICE in. (qty) (mm)	0.035 (2) .89		0.037 (2) .94		0.038 (Left) 0.040(Right) .97/1.02	
OUTDOOR COIL Rows...Fins/in. Face Area--sq ft	2...21 11.9	2...21 11.9	2...21 11.9	2...21 11.9	2...21 13.6	2...21 13.6
OUTDOOR FAN Nominal Cfm Diameter--in. (mm) Motor Hp (Rpm)	2700 24 610 1/5 (810)	2700 24 610 1/5 (810)	2700 24 610 1/5 (810)	2700 24 610 1/5 (810)	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)
INDOOR COIL Rows...Fins/in. Face Area--sq ft	3...17 3.7	3...17 3.7	3...17 3.7	3...17 3.7	3...17 4.7	3...17 4.7
INDOOR BLOWER Nominal Cooling Airflow--(CFM) Size--in. (mm) Motor --hp	1000 10x10 254x254 1/2	1000 10x10 254x254 1/2	1200 11x10 279x254 3/4	1200 11x10 279x254 3/4	1400 11x10 279x254 3/4	1400 11x10 279x254 3/4
FURNACE SECTION* Burner Orifice Natural Gas Qty...Drill Size (Factory Installed) Propane GasQty...Drill Size	2...44 2...55	2...38 2...53	2...38 2...53	3...38 3...53	2...38 2...53	3...38 3...53
HIGH--PRESSURE SWITCH (psig) Cut--out Reset (Auto)	650 +/-15 420 +/-25					
LOSS--OF--CHARGE / LOW--PRESSURE SWITCH (Liquid Line) (psig) Cut--out Reset (auto)	20 +/-5 45 +/-10					
RETURN--AIR FILTERS † ‡ Throwaway (in.) (mm)	20x24x1 508x610x25		24x30x1 610x762x25			

*Based on altitude of 0 to 2000 ft (0--610 m).

†Required filter sizes shown are based on the larger of the AHRI (Air Conditioning, Heating and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for high--capacity type. Air filter pressure drop for non--standard filters must not exceed 0.08 IN. W.C.

‡ If using accessory filter rack refer to filter rack installation instructions for correct filter size and quantity.

674D -- A

PHYSICAL DATA (CONT)

UNIT SIZE 674D – – A	48090	48115	48130	60090	60115	60130
NOMINAL CAPACITY (ton)	4	4	4	5	5	5
NOMINAL HEATING INPUT (Btu/hr)	90,000	115,000	130,000	90,000	115,000	130,000
OPERATING WEIGHT –lb (kg)	482 219	482 219	482 219	507 230	507 230	507 230
COMPRESSORS	Scroll					
Quantity	1					
REFRIGERANT (R – 410A) Quantity –lb (kg)	9.6 4.4			12.3 5.6		
REFRIGERANT METERING DEVICE	TXV					
OUTDOOR ORIFICE – in. (qty) (mm)	0.046 (2) 1.2			0.052 (2) 1.3		
OUTDOOR COIL Rows...Fins – in. Face Area – sq ft	2...21 13.6	2...21 13.6	2...21 13.6	2...21 17.5	2...21 17.5	2...21 17.5
OUTDOOR FAN Nominal Cfm Diameter – in. (mm) Motor Hp – Rpm	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)	3100 26 660 1/5 (810)
INDOOR COIL Rows...Fins – in. Face Area – sq ft	3...17 4.7	3...17 4.7	3...17 4.7	3...17 5.7	3...17 5.7	3...17 5.7
INDOOR BLOWER Nominal Cooling Airflow – (CFM) Size – in. (mm) Motor – hp	1600 11x10 279x254 1.0	1600 11x10 279x254 1.0	1600 11x10 279x254 1.0	1850 11x10 279x254 1.0	1850 11x10 279x254 1.0	1850 11x10 279x254 1.0
FURNACE SECTION* Burner Orifice Natural Gas Qty...Drill Size (Factory Installed) Propane GasQty...Drill Size	3...38 3...53	3...33 3...51	3...31 3...49	3...38 3...53	3...33 3...51	3...31 3...49
HIGH – PRESSURE SWITCH (psig) Cut – out Reset (Auto)	650 +/– 15 420 +/– 25					
LOSS – OF – CHARGE / LOW – PRESSURE SWITCH (Liquid Line) (psig) Cut – out Reset (auto)	20 +/– 5 45 +/– 10					
RETURN – AIR FILTERS † Throwaway (in.) (mm)	24x36x1 (610x914x25)					

*Based on altitude of 0 to 2000 ft (0-610 m).

†Required filter sizes shown are based on the larger of the AHRI (Air Conditioning, Heating and Refrigeration Institute) rated cooling airflow or the heating airflow velocity of 300 ft/minute for high-capacity type. Air filter pressure drop for non-standard filters must not exceed 0.08 IN. W.C.

‡ If using accessory filter rack refer to filter rack installation instructions for correct filter size and quantity.

A-Weighted Sound Power Level (dBA)

MODEL 674D -- A	STANDARD RATING (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA) (without tone adjustment)						
		125	250	500	1000	2000	4000	8000
30	76	60.5	67.5	72.0	70.0	67.0	61.0	51.5
36	77	63.0	68.0	73.0	71.0	67.0	62.0	55.0
42	78	65.0	68.5	74.5	72.5	69.5	64.5	56.5
48	78	62.0	68.5	74.0	72.5	70.0	64.0	56.0
60	76	63.0	66.5	69.5	71.0	66.0	65.0	59.0

NOTE: Tested in accordance with AHRI Standard 270-1995 (not listed in AHRI).

OPTIONS AND ACCESSORIES

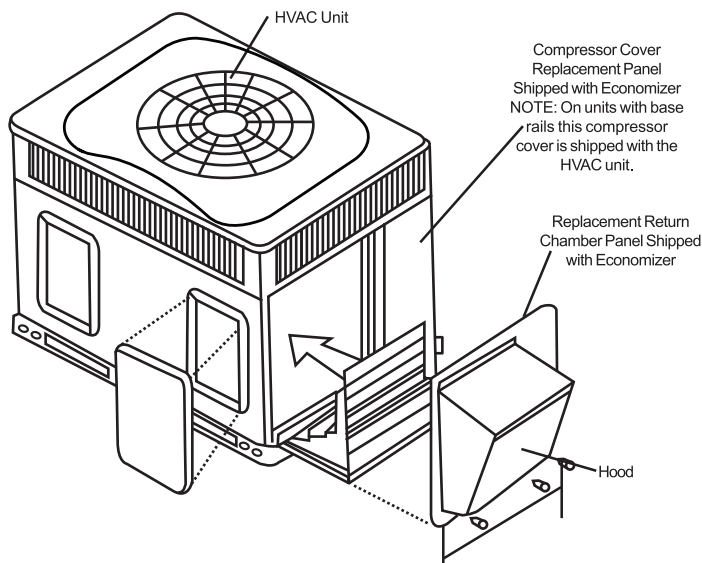
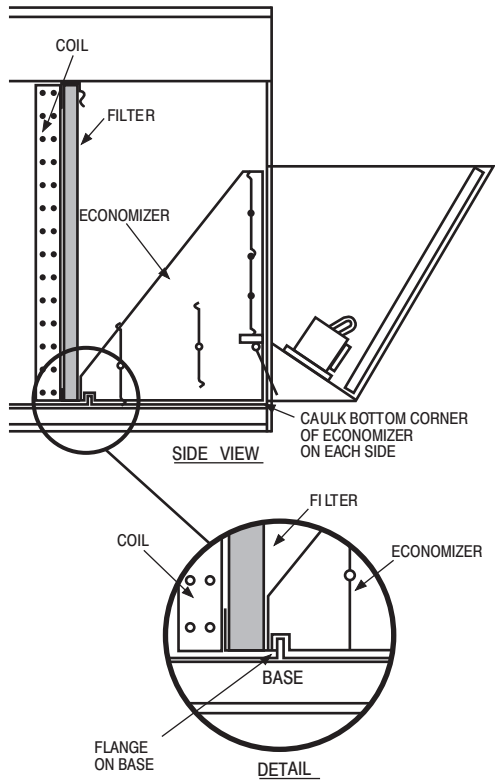
ITEM	DESCRIPTION	FACTORY INSTALLED OPTION	FIELD INSTALLED ACCESSORY
Coil Options	Base unit with tin plated indoor coil hairpins	X	
Compressor Start Kit	Compressor Start Kit assists compressor start-up by providing additional starting torque on sing phase units only.		X
Corporate Thermostats	Thermostats provide control for the system heating and cooling functions.		X
Crankcase Heater	Crankcase Heater provides anti-floodback protection for low-load cooling applications.		X*
Economizer	Horizontal Economizer with solid state controls and barometric relief dampers includes filter racks and provide outdoor air during cooling and reduce compressor operation.		X
	Vertical Economizer with solid state controls and barometric relief dampers includes filter racks and provide outdoor air during cooling and reduce compressor operation.	X	X
Filter Rack	Filter Rack features easy installation, serviceability, and high-filtering performance for vertical applications. Includes 1-in. (25 mm) filter.	X	X
Flat Roof Curb	14-in. (356 mm) Flat Roof Curb is available for roof mounted applications.		X
Flue Discharge Deflector	Directs flue gas exhaust 90 degrees upward from current discharge.		X
Heat Exchanger	Stainless Steel Heat Exchanger	X	
High Altitude Propane Conversion Kit	High Altitude Propane Conversion Kit is for use at 2001 to 6000 ft. (611 – 1829 m) above sea level. Kit consists of propane gas orifices that compensate for gas heat operation at high altitude.		X
Low Ambient Kit	Low Ambient Kit (Motormaster II Control) allows the use of mechanical cooling down to outdoor temperatures as low as 0°F (–18°C) when properly installed.		X
Louver Metal Outdoor Coil Grilles	Louver Metal Outdoor Coil Grilles provides hail and vandalism protection.		
Manual Outside Air Damper	Manual Outside Air Damper includes hood and filter rack with adjustable damper blade for up to 25% outdoor air.		X
Natural to Propane Gas Conversion Kit	Natural to Propane Gas Conversion Kit allows for conversion from natural gas to propane gas (0–2000 ft) (0–610 m)		X
Propane to Natural Gas Conversion Kit	Propane to Natural Gas Conversion Kit allows for conversion from propane to natural gas for altitudes of 0–2000 ft (0–610 m)		X
Square-to-Round Duct Transition Kit	Square-to-Round Duct Transition Kit enable 24–48 size units to be fitted to 14 in. (356 mm) round ductwork.		X
Curb Adapter	Adapter curb for new unit with base rail installed on existing curb		X
Gasket Kit	For field modified existing roof curb with new base rail unit.		X

*Refer to price page for application detail.

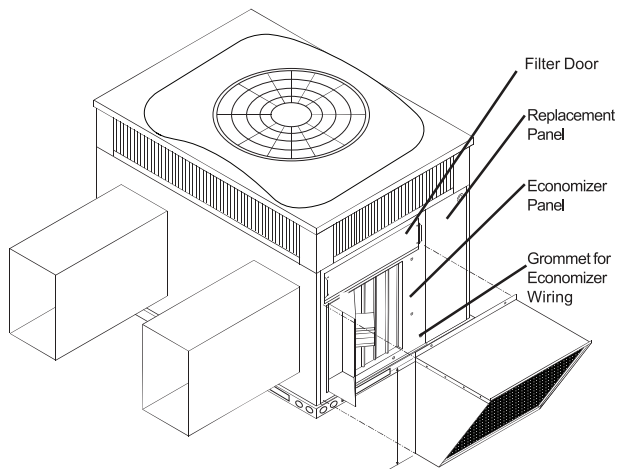
674D--A

ECONOMIZER

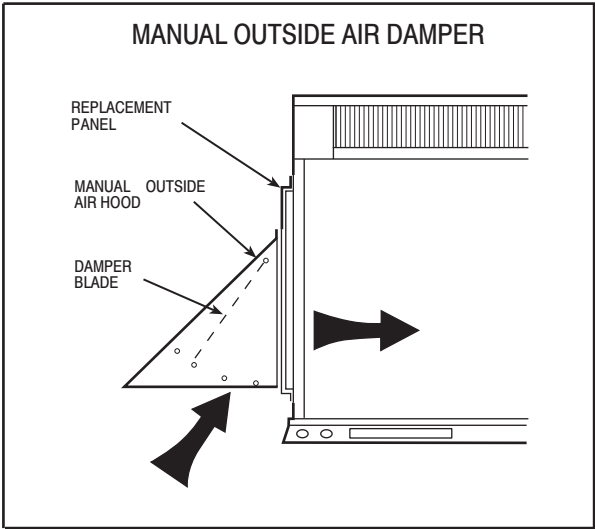
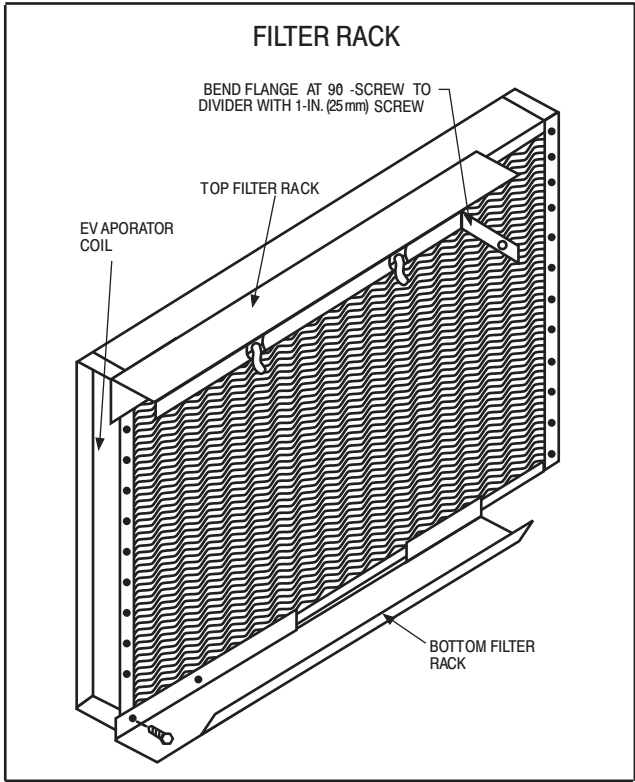
674D--A



Vertical Economizer



Horizontal Economizer



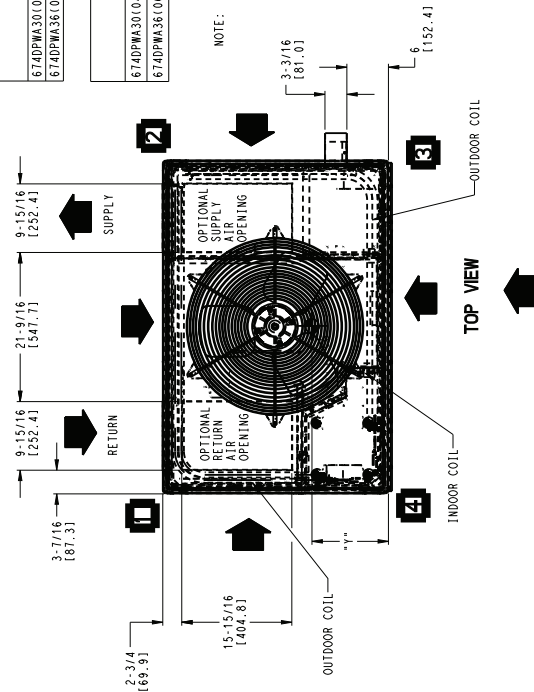
A09375

UNIT DIMENSIONS - 674D--A30-36

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT.		UNIT HEIGHT IN/MM	CENTER OF GRAVITY IN/MM		
		LB	KG		X	Y	Z
674DPA30(040/060)1A/N/A	208/230-3-60	365	165.7	42-1/8	1070	22-1/16	560.4
674DPA36(060/090)1A/N/A	208/230-3-60	372	168.6	42-1/8	1070	22-1/16	560.4

UNITS	VOLTAGE	CORNER WEIGHT LB/KG		
		"1"	"2"	"3"
674DPA30(040/060)1A/N/A	208/230	54.8	24.9	73.1
674DPA36(060/090)1A/N/A	208/230	55.8	25.3	74.4

NOTE: ALL TABLE DATA RELEVANT FOR ALL FACTORY INSTALLED OPTIONS EXCEPT ECONOMIZER



REQUIRED CLEARANCES TO COMBUSTIBLE MATL

	INCHES [MM]
TOP OF UNIT	14 [355.6]
SIDE OF UNIT	14 [355.6]
SIDE OPPOSITE DUCTS	14 [355.6]
BOTTOM OF UNIT	0 [0.0]
FLUE PANEL	36 [914.4]

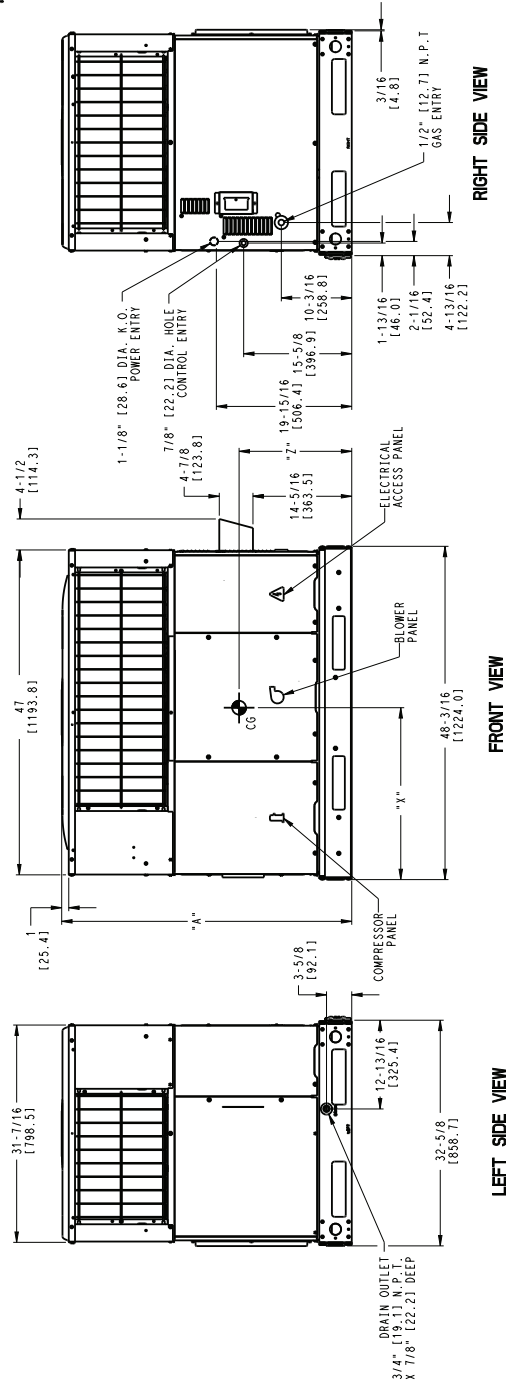
NEC REQUIRED CLEARANCES

	INCHES [MM]
BETWEEN UNITS, POWER ENTRY SIDE	42 [1066.8]
UNIT AND UNGROUNDED SURFACES, POWER ENTRY SIDE	36 [914.0]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE	42 [1066.8]

REQUIRED CLEARANCE FOR OPERATION AND SERVICING

	INCHES [MM]
EVAP. COIL ACCESS SIDE	36 [914.0]
POWER ENTRY SIDE	36 [914.0]
ACCESS FOR NEC REQUIREMENTS	42 [1066.8]
UNIT TOP FOR NEC REQUIREMENTS	48 [1219.2]
SIDE OPPOSITE DUCTS	36 [914.0]
DUCT PANEL	12 [304.8]

• MINIMUM DISTANCES: IF UNIT IS PLACED LESS THAN 12 [304.8] FROM WALL OR OTHER SURFACE, THEN SYSTEM PERFORMANCE MAY BE COMPROMISED. DIMENSIONS IN () ARE IN MM



REV	A
48EZ500506	

674D--A

UNIT DIMENSIONS - 674D--A42-60

674D--A

UNIT	ELECTRICAL CHARACTERISTICS	UNIT WT. LB. KG.	UNIT HEIGHT IN/MM	CENTER OF GRAVITY IN/MM		
				X	Y	Z
674DPA42(060/090)A/N/A	208/230-3-60	453.205.4	44-3/4 1137	22-1/6 560.3	17 431.8	17 431.8
674DPA48(090/115/130)A/N/A	208/230-3-60	474.215.1	44-3/4 1137	22-1/6 560.3	17 431.8	17 431.8
674DPA60(090/115/130)A/N/A	208/230-3-60	498.226.0	48-3/4 1238	22-1/6 560.3	17 431.8	18 457.2

UNITS	CORNER WEIGHT LB/KG		
	"1"	"2"	"3"
674DPA42(060/090)A/N/A	208/230 67.9	30.8	90.5
674DPA48(090/115/130)A/N/A	208/230 71.1	32.3	94.8
674DPA60(090/115/130)A/N/A	208/230 74.7	33.9	99.6

REQUIRED CLEARANCES TO COMBUSTIBLE MATL.

TOP OF UNIT: 14 [355.6]
DUCT ABOVE DUCTS: 12 [305.8]
BOTTOM OF UNIT: 0 [0.0]
FLUE PANEL: 36 [914.4]

INCHES (MM)

REQ. REQUIRED CLEARANCES:

BETWEEN UNITS, POWER ENTRY SIDE: 42 [1066.8]
UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, POWER ENTRY SIDE: 36 [914.0]

INCHES (MM)

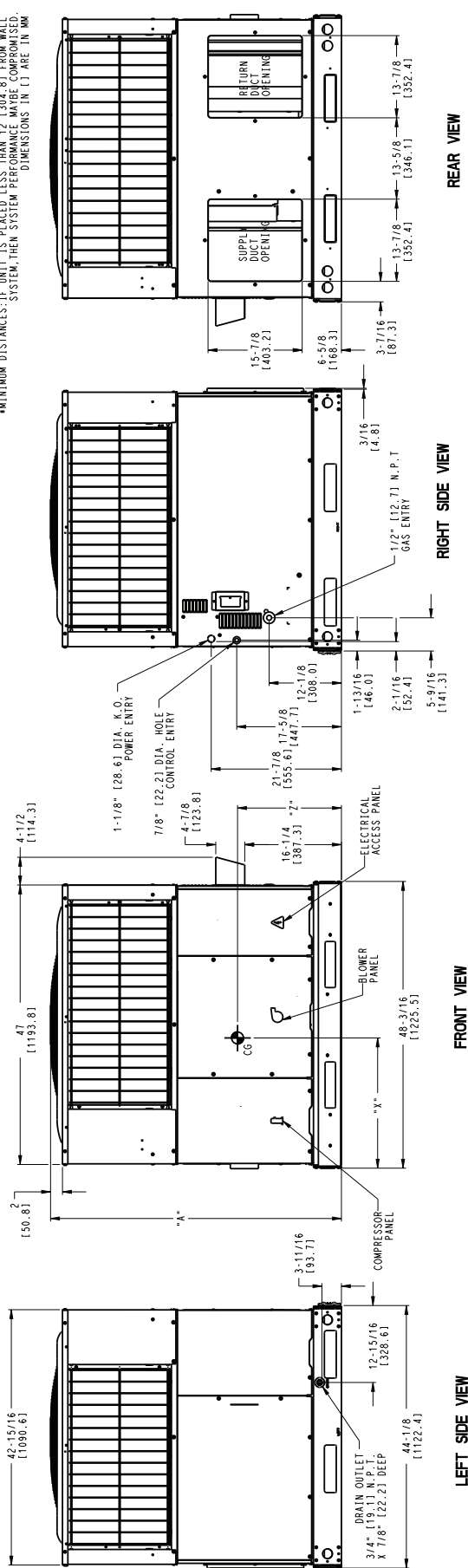
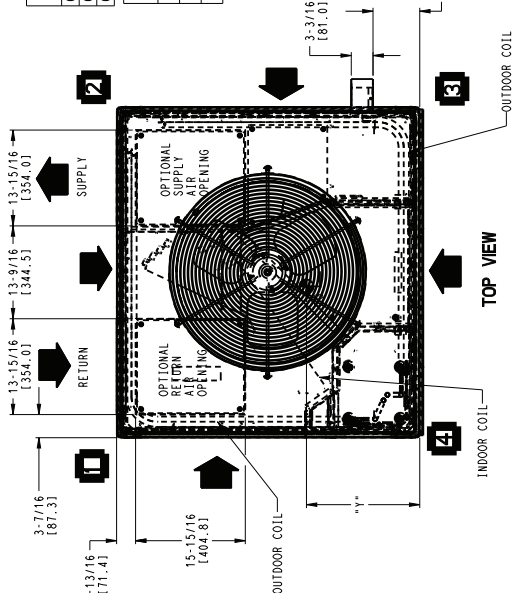
REQUIRED CLEARANCE FOR OPERATION AND SERVICING:

EVAP. COIL ACCESS SIDE: 36 [914.0]
POWER ENTRY SIDE: 42 [1066.8]
DUCT ACCESS FOR NEC REQUIREMENTS: 48 [1219.2]
UNIT TOP: 36 [914.0]
SIDE OPPOSITE DUCTS: 12 [304.8]

INCHES (MM)

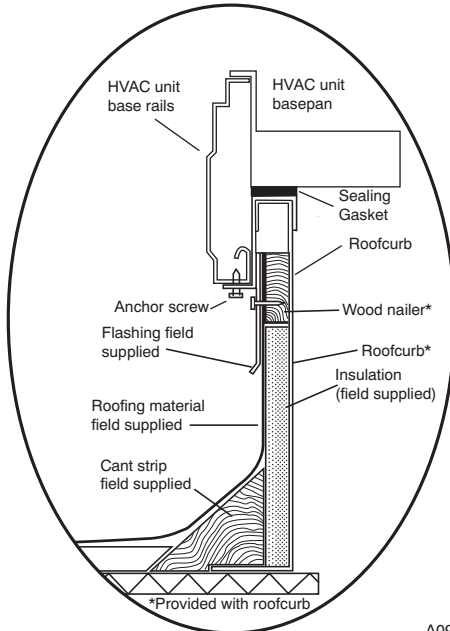
*MINIMUM DISTANCES IF UNIT IS PLACED LESS THAN 12 [304.8] FROM WALL OR OTHER SURFACE. SYSTEM THEN SYSTEM PERFORMANCE MAY BE COMPROMISED.

NOTE: ALL TABLE DATA RELEVANT FOR ALL FACTORY INSTALLED OPTIONS EXCEPT ECONOMIZER



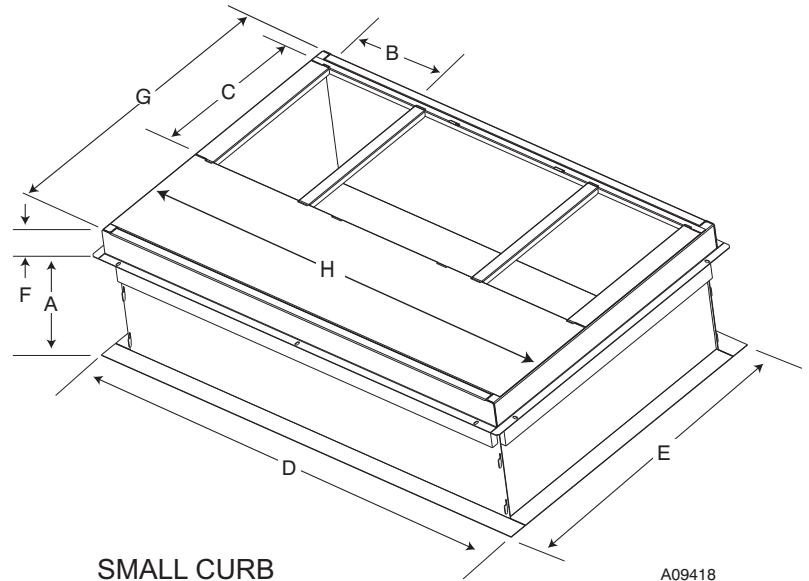
REV A
48EZ500507

ACCESSORY DIMENSIONS



ROOF CURB DETAIL

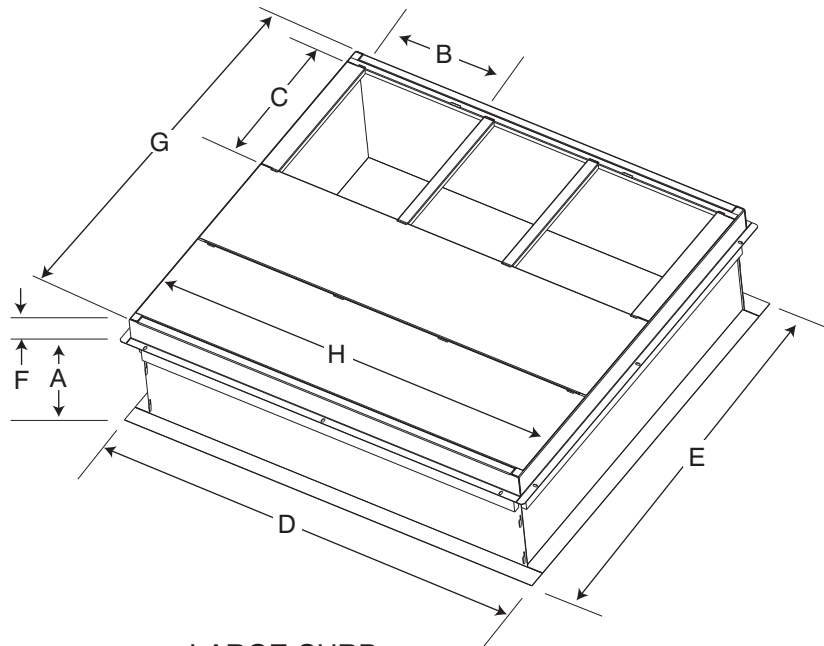
A09090



SMALL CURB

A09418

674D--A



LARGE CURB

A09415

A09419

UNIT SIZE	CATALOG NUMBER	A IN. (mm)	B IN. (mm)*	C IN. (mm)	D IN. (mm)	E IN. (mm)	F IN. (mm)	G IN. (mm)	H IN. (mm)
Small	CPRFCURB011A00	14 (356)	10 (254)	16 (406)	47.8 (1214)	32.4 (822)	2.7 (69)	30.6 (778)	46.1 (1170)
Large	CPRFCURB013A00	14 (356)	14 (356)			43.9 (1116)		42.2 (1072)	

NOTES:

1. Roof curb must be set up for unit being installed.
2. Seal strip must be applied, as required, to unit being installed.
3. Roof curb is made of 16-gauge steel.
4. Attach ductwork to curb (flanges of duct rest on curb).
5. Insulated panels: 1-in. (25.4 mm) thick fiberglass 1 lb. density.

IMPORTANT: Do not install large base pan HYBRID HEAT units onto the small base pan (common curb). The center of gravity on a large base pan HYBRID HEAT unit could overhang the curb causing an unsafe condition. Before installing any large base pan unit onto the common curb, check the "Y" distance in the product

literature dimensional drawing to ensure that "Y" is greater than 14 in. (356 mm). Do not install any large base pan unit onto the common curb with a "Y" dimension (center of gravity) less than 14 in. (356 mm).

SELECTION PROCEDURE (WITH EXAMPLE)

1. Determine cooling and heating requirements at design conditions:

Given:

- Required Cooling Capacity (TC) 34,500 Btuh
- Sensible Heat Capacity (SHC) 26,000 Btuh
- Required Heating Capacity 60,000 Btuh
- Condenser Entering Air Temperature 95°F (35°C)
- Indoor-Air Temperature 80°F (27°C) edb 67°F (19°C) ewb
- Evaporator Air Quantity 1200 CFM
- External Static Pressure 0.20 IN. W.C.
- Electrical Characteristics 208-3-60

2. Select unit based on required cooling capacity.

Enter Net Cooling Capacities table at condenser entering temperature of 95°F (35°C). Unit 36 at 1200 CFM and 67°F (19°C) ewb (entering wet bulb) will provide a total capacity of 35,000 Btuh and a SHC of 26,200 Btuh. Calculate SHC correction, if required, using Note 4 under Cooling Capacities tables.

3. Select heating capacity of unit to provide design condition requirement.

In the Heating Capacities and Efficiencies table, note that the unit 36090 will provide 72,000 Btuh with an input of 90,000 Btuh.

4. Determine fan speed and power requirements at design conditions.

Before entering the air delivery tables, calculate the total static pressure required. From the given example, the Wet Coil Pressure Drop Table, and the Filter Pressure Drop Table:

External Static Pressure	0.20 IN. W.C.
Filter	0.13 IN. W.C.
Wet Coil Pressure Drop	<u>0.18 IN. W.C.</u>
Total Static Pressure	0.51 IN. W.C.

Enter the table for Dry Coil Air Delivery—horizontal and downflow Discharge. At 0.5 ESP (external static pressure), in cooling the fan will deliver 1209 CFM with the MEDIUM speed tap selected.

5. Select unit that corresponds to power source available.

The Electrical Data Table shows that the unit is designed to operate at 208-3-60.

PERFORMANCE DATA

30 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
CFM / BF	EWB °F (°C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
		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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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875 / 0.13	57 (13.9)	27.44	27.44	2.00	26.40	26.40	2.22	25.31	25.31	2.47	24.13	24.13	2.75	22.83	22.83	3.07	21.42	21.42																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														</

*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority [TVA] rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

30 Heating Extended Performance Table -10-60 (-23.3-15.6 °C)

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)															
EDB °F (°C)	CFM	-10 (-23.3)		0 (-17.8)		10 (-12.2)		20 (-6.7)		30 (-1.1)		40 (4.4)		50 (10)		60 (15.6)	
		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		Total		Total		Total		Total		Total		Total		Total	
65	875	8.58	7.89	11.80	10.67	1.98	14.83	13.61	2.04	18.37	16.66	2.12	26.08	2.29	30.29	2.39	35.28
	1000	8.75	8.05	11.81	10.87	1.99	15.07	13.83	2.05	18.71	16.97	2.11	26.39	2.26	30.70	2.35	35.83
	1125	8.92	8.20	11.95	11.04	2.00	15.28	14.02	2.06	19.32	17.52	2.12	26.65	2.24	31.04	2.32	36.29
70	875	8.06	7.42	1.98	11.12	10.23	2.06	14.37	13.19	2.13	17.90	16.23	2.21	25.74	2.40	29.87	2.50
	1000	8.24	7.58	2.00	11.33	10.42	2.07	14.62	13.42	2.14	18.19	16.49	2.20	26.03	2.36	30.27	2.46
	1125	8.40	7.73	2.02	11.51	10.59	2.09	14.83	13.61	2.15	18.43	16.71	2.21	26.29	2.35	30.57	2.43
75	875	7.50	6.90	2.06	10.60	9.76	2.15	13.88	12.74	2.22	17.41	15.79	2.31	24.22	2.51	29.46	2.62
	1000	7.68	7.06	2.08	10.81	9.95	2.16	14.13	12.97	2.23	17.69	16.05	2.30	24.40	2.51	29.83	2.57
	1125	7.84	7.21	2.11	11.00	10.12	2.18	14.34	13.16	2.24	17.94	16.27	2.30	24.66	2.53	30.13	2.54

PERFORMANCE DATA (CONT)
36 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)																	
CFM / BF	EWB °F (°C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)		
		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	
1050 / 0.12	57 (13.9)	33.59	33.59	2.41	32.25	32.25	2.67	30.82	30.82	2.96	29.24	29.24	3.28	27.50	27.50	3.66	25.58	25.58	4.08
	62 (16.7)	34.77	30.70	2.42	33.10	29.87	2.67	31.33	28.94	2.96	29.46	27.90	3.29	27.56	27.56	3.66	25.62	25.62	4.08
	63* (17.2)	35.34	25.01	2.42	33.64	24.23	2.68	31.81	23.40	2.96	29.83	22.52	3.29	27.67	27.67	3.66	25.33	20.50	4.08
	67 (19.4)	38.13	26.06	2.44	36.31	25.28	2.70	34.33	24.46	2.99	32.20	23.57	3.31	29.86	22.59	3.68	27.36	21.54	4.10
	72 (13.9)	41.96	21.04	2.47	39.94	20.31	2.74	37.75	19.54	3.03	35.39	18.70	3.35	32.82	17.81	3.71	30.05	16.85	4.12
1200 / 0.18	57 (13.9)	35.11	35.11	2.47	33.69	33.69	2.73	32.14	32.14	3.02	30.45	30.45	3.34	28.57	28.57	3.71	26.49	26.49	4.14
	62 (16.7)	35.71	33.01	2.47	33.97	32.07	2.73	32.20	32.20	3.02	30.50	30.50	3.34	28.61	28.61	3.71	26.53	26.53	4.14
	63* (17.2)	36.21	26.69	2.47	34.40	25.89	2.73	32.47	25.03	3.02	30.40	24.10	3.34	28.14	23.09	3.71	25.72	21.97	4.13
	67 (19.4)	38.99	27.86	2.50	37.07	27.06	2.76	35.00	26.20	3.04	32.76	25.27	3.37	30.32	24.25	3.73	27.71	23.14	4.15
	72 (13.9)	42.86	22.23	2.53	40.74	21.48	2.79	38.42	20.68	3.08	35.93	19.82	3.40	33.26	18.85	3.76	30.40	17.82	4.17
1350 / 0.24	57 (13.9)	36.41	36.41	2.52	34.89	34.89	2.78	33.23	33.23	3.07	31.42	31.42	3.40	29.41	29.41	3.77	27.22	27.22	4.19
	62 (16.7)	36.54	36.49	2.53	34.95	34.95	2.79	33.28	33.28	3.07	31.47	31.47	3.40	29.45	29.45	3.77	27.25	27.25	4.19
	63* (17.2)	36.85	28.29	2.53	34.96	27.46	2.78	32.97	26.58	3.07	30.82	25.61	3.39	28.48	24.53	3.76	26.00	23.34	4.18
	67 (19.4)	39.63	29.59	2.55	37.64	28.75	2.81	35.49	27.86	3.10	33.16	26.89	3.42	30.65	25.82	3.78	27.98	24.63	4.20
	72 (13.9)	43.50	23.36	2.58	41.27	22.59	2.85	38.89	21.74	3.13	36.32	20.81	3.45	33.56	19.82	3.82	30.62	18.76	4.22

*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority [TVA] rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

36 Heating Extended Performance Table -10-60 (-23.3-15.6°C)

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																							
EDB °F (°C)	CFM	-10 (-23.3)			0 (-17.8)			10 (-12.2)			20 (-6.7)			30 (-1.1)			40 (4.4)			50 (10)			60 (15.6)		
		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	
65	1050	12.15	11.18	2.30	15.31	14.08	2.39	19.19	17.61	2.49	22.68	20.57	2.58	26.68	23.38	2.68	31.28	31.28	2.80	36.70	36.70	2.96	42.99	42.99	3.16
	1200	12.38	11.39	2.32	15.57	14.32	2.40	19.41	17.82	2.50	22.96	20.82	2.58	27.01	23.66	2.67	31.68	31.68	2.78	37.20	37.20	2.94	43.06	43.06	3.12
	1350	12.59	11.58	2.35	15.79	14.53	2.43	19.62	18.01	2.52	23.19	21.03	2.59	27.29	23.91	2.67	32.01	32.01	2.78	37.51	37.51	2.93	42.82	42.82	3.10
70	1050	11.71	10.77	2.41	14.88	13.69	2.50	18.76	17.22	2.61	22.39	20.31	2.70	26.32	23.06	2.80	30.81	30.81	2.93	36.14	36.14	3.09	42.42	42.42	3.31
	1200	11.94	10.99	2.44	15.13	13.93	2.52	19.13	17.55	2.62	22.65	20.54	2.70	26.63	23.34	2.79	31.21	31.21	2.91	36.62	36.62	3.09	42.62	42.62	3.25
	1350	12.15	11.18	2.47	15.37	14.14	2.54	19.35	17.76	2.64	22.88	20.75	2.71	26.91	23.58	2.80	31.54	31.54	2.91	37.00	37.00	3.06	42.49	42.49	3.24
75	1050	11.23	10.33	2.53	14.42	13.27	2.62	18.01	16.53	2.72	22.09	20.03	2.83	25.96	22.75	2.94	30.36	30.36	3.06	35.58	35.58	3.23	41.77	41.77	3.46
	1200	11.46	10.55	2.56	14.68	13.51	2.64	18.31	16.81	2.73	22.36	20.27	2.83	26.27	23.02	2.92	30.74	30.74	3.04	36.04	36.04	3.19	42.15	42.15	3.40
	1350	11.67	10.74	2.59	14.91	13.72	2.67	18.61	17.08	2.75	22.59	20.48	2.84	26.53	23.24	2.93	31.07	31.07	3.03	36.43	36.43	3.19	42.11	42.11	3.38

PERFORMANCE DATA (CONT)
42 Cooling Extended Performance Table

EVAPORATOR AIR		CONDENSER ENTERING AIR TEMPERATURES °F (°C)															
		75 (23.9)				85 (29.4)				95 (35)				105 (40.5)			
		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW	
CFM / BF	EWB °F (°C)	Total	Sens	Total	Sys KW	Total	Sens	Total	Sys KW	Total	Sens	Total	Sys KW	Total	Sens	Total	Sys KW
		Capacity MBtuh															
1225 / 0.14	57 (13.9)	38.29	38.29	2.70	3.00	36.78	36.78	3.00	3.35	35.17	35.17	3.35	3.76	31.55	31.55	4.23	29.53
	62 (16.7)	39.60	35.26	2.71	3.01	37.74	34.27	3.01	3.36	35.79	33.19	3.36	3.76	31.62	31.62	4.24	29.58
	63* (17.2)	40.17	28.70	2.72	3.02	38.23	27.80	3.02	3.37	36.20	26.84	3.37	3.77	31.75	24.73	4.24	29.30
	67 (19.4)	43.43	29.99	2.76	3.07	41.34	29.07	3.07	3.42	39.13	28.10	3.42	3.83	34.33	25.98	4.30	31.69
	72 (21.9)	47.71	24.52	2.83	3.14	45.36	23.64	3.14	3.50	42.91	22.69	3.50	3.91	37.63	20.65	4.40	34.75
1400 / 0.17	57 (13.9)	40.11	40.11	2.76	3.06	38.48	38.48	3.06	3.42	36.73	36.73	3.42	3.83	32.83	32.83	4.31	30.65
	62 (16.7)	40.77	37.93	2.77	3.07	38.83	36.81	3.07	3.42	36.82	36.82	3.42	3.83	32.88	32.88	4.31	30.69
	63* (17.2)	41.23	30.65	2.77	3.07	39.19	29.70	3.07	3.42	37.04	28.70	3.42	3.83	32.38	26.48	4.29	29.83
	67 (19.4)	44.54	32.09	2.82	3.12	42.33	31.12	3.12	3.48	40.00	30.10	3.48	3.89	34.97	27.89	4.37	32.23
	72 (21.9)	48.87	25.87	2.89	3.20	46.39	24.92	3.20	3.56	43.82	23.93	3.56	3.98	38.30	21.80	4.46	35.30
1575 / 0.19	57 (13.9)	41.67	41.67	2.82	3.13	39.92	39.92	3.13	3.48	38.04	38.04	3.48	3.90	33.89	33.89	4.38	31.57
	62 (16.7)	41.78	41.78	2.82	3.13	40.00	40.00	3.13	3.49	38.10	38.10	3.49	3.90	33.94	33.94	4.38	31.61
	63* (17.2)	42.07	32.53	2.83	3.13	39.93	31.53	3.13	3.48	37.70	30.48	3.48	3.88	32.87	28.13	4.35	30.26
	67 (19.4)	45.42	34.11	2.87	3.18	43.10	33.11	3.18	3.53	40.66	32.04	3.53	3.95	35.47	29.68	4.43	32.65
	72 (21.9)	49.79	27.12	2.95	3.26	47.20	26.14	3.26	3.62	44.53	25.11	3.62	4.04	38.81	22.90	4.53	35.71

*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority [TVA] rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

42 Heating Extended Performance Table -10-60 (-23.3-15.6 °C)

INDOOR AIR		OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)															
		-10 (-23.3)				0 (-17.8)				10 (-12.2)				20 (-6.7)			
		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW		Capacity MBtuh		Total Sys KW	
EDB °F (°C)	CFM	Total	Integ	Total	Sys KW	Total	Integ	Total	Sys KW	Total	Integ	Total	Sys KW	Total	Integ	Total	Sys KW
		Capacity MBtuh															
65	1225	13.54	12.46	2.47	17.47	16.08	2.63	21.96	20.15	2.78	25.98	23.56	2.88	30.54	26.76	2.98	35.78
	1400	13.72	12.62	2.48	17.88	16.26	2.64	22.14	20.32	2.77	26.21	23.77	2.86	30.85	27.03	2.95	36.18
	1575	13.88	12.77	2.50	17.85	16.43	2.65	22.30	20.47	2.78	26.41	23.95	2.86	31.10	27.25	2.95	36.50
70	1225	13.21	12.15	2.61	17.11	15.75	2.77	21.74	19.96	2.92	25.70	23.30	3.02	30.15	26.42	3.12	35.27
	1400	13.40	12.33	2.62	17.33	15.95	2.78	21.94	20.14	2.91	25.93	23.52	3.00	30.45	26.68	3.10	35.67
	1575	13.57	12.48	2.64	17.52	16.12	2.79	22.13	20.31	2.92	26.14	23.71	3.00	30.72	26.91	3.09	35.97
75	1225	12.79	11.77	2.75	16.70	15.37	2.91	21.03	19.31	3.05	25.41	23.05	3.17	29.76	26.07	3.27	34.76
	1400	12.99	11.95	2.76	16.93	15.58	2.92	21.59	19.82	3.05	25.64	23.25	3.15	30.06	26.34	3.24	35.15
	1575	13.17	12.12	2.79	17.13	15.76	2.93	21.86	20.07	3.08	25.85	23.44	3.15	30.31	26.56	3.23	35.46

PERFORMANCE DATA (CONT)
60 Cooling Extended Performance Table

EVAPORATOR AIR			CONDENSER ENTERING AIR TEMPERATURES °F (°C)																							
CFM / BF	EWB °F (°C)	75 (23.9)			85 (29.4)			95 (35)			105 (40.5)			115 (46.1)			125 (51.7)									
		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								
1750 / 0.19	57 (13.9)	56.42	3.97	54.09	54.09	4.39	51.60	51.60	4.86	48.89	48.89	5.40	45.87	45.87	6.01	42.60	42.60	6.70								
	62 (16.7)	58.00	3.99	55.15	50.34	4.40	52.19	48.67	4.87	49.10	48.72	5.40	45.94	45.94	6.01	42.66	42.66	6.70								
	63* (17.2)	58.78	4.00	55.87	40.69	4.41	52.77	39.25	4.88	49.45	37.72	5.41	45.84	36.06	6.01	42.01	34.26	6.69								
	67 (19.4)	63.34	4.05	60.17	42.48	4.47	56.78	41.02	4.94	53.14	39.45	5.46	49.23	37.77	6.06	45.09	35.96	6.74								
	72 (13.9)	69.39	35.42	65.81	34.15	4.55	62.02	32.72	5.02	57.99	31.19	5.54	53.69	29.56	6.13	49.14	27.85	6.80								
1850 / 0.20	57 (13.9)	56.94	3.99	54.57	54.57	4.41	52.03	52.03	4.88	49.27	49.27	5.42	46.23	46.23	6.03	42.88	42.88	6.72								
	62 (16.7)	58.33	4.01	55.44	51.08	4.42	52.47	49.35	4.89	49.36	49.36	5.42	46.30	46.30	6.03	42.94	42.94	6.72								
	63* (17.2)	59.07	4.02	56.12	41.24	4.43	53.00	39.80	4.90	49.63	38.25	5.42	45.98	36.56	6.03	42.13	34.74	6.71								
	67 (19.4)	63.63	4.08	60.42	43.08	4.49	57.00	41.60	4.96	53.31	40.02	5.48	49.37	38.31	6.08	45.20	36.48	6.75								
	72 (13.9)	69.68	35.83	66.07	34.51	4.57	62.25	33.07	5.04	58.17	31.52	5.56	53.84	29.88	6.15	49.25	28.16	6.82								
2250 / 0.27	57 (13.9)	60.87	4.19	58.14	58.14	4.61	55.23	55.23	5.08	52.05	52.05	5.62	48.61	48.61	6.22	44.88	44.88	6.90								
	62 (16.7)	60.95	4.19	58.23	58.23	4.61	55.31	55.31	5.08	52.12	52.12	5.62	48.67	48.67	6.22	44.93	44.93	6.90								
	63* (17.2)	61.07	4.19	57.83	46.01	4.61	54.45	44.43	5.07	50.81	42.69	5.60	46.95	40.79	6.19	42.89	38.69	6.87								
	67 (19.4)	65.61	4.25	62.14	48.23	4.67	58.42	46.60	5.13	54.47	44.84	5.66	50.28	42.93	6.25	45.90	40.82	6.92								
	72 (13.9)	71.73	39.07	67.82	37.60	4.75	63.70	36.05	5.21	59.34	34.41	5.74	54.72	32.67	6.32	49.88	30.83	6.98								

*At 75°F (23.9 °C) entering dry bulb—Tennessee Valley Authority [TVA] rating conditions; all others at 80°F (26.7 °C) entering dry bulb. See Legend and Notes.

60 Heating Extended Performance Table -10-60 (-23.3-15.6 °C)

INDOOR AIR			OUTDOOR COIL ENTERING AIR TEMPERATURES °F (°C)																														
EDB °F (°C)	CFM	-10 (-23.3)				0 (-17.8)				10 (-12.2)				20 (-6.7)				30 (-1.1)				40 (4.4)				50 (10)				60 (15.6)			
		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	Capacity MBtuh		Total Sys KW					
		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ		Total	Integ	Total	Integ	
65		1750	19.26	17.72	3.62	24.88	22.89	3.77	30.79	28.26	3.91	37.20	33.74	4.06	44.98	39.41	4.26	51.96	45.43	60.02	4.64	69.62	69.62	4.91									
		1800	19.34	17.79	3.63	24.98	22.98	3.78	30.90	28.37	3.92	37.33	33.85	4.07	45.09	39.50	4.26	52.09	45.42	60.19	4.62	69.84	69.84	4.89									
		2250	20.06	18.45	3.75	25.74	23.69	3.88	31.75	29.14	4.00	38.31	34.75	4.12	45.93	40.25	4.28	53.12	45.41	61.48	4.58	71.51	71.51	4.81									
70		1750	18.37	16.90	3.77	24.01	22.09	3.92	30.00	27.54	4.08	36.36	32.98	4.24	44.47	38.96	4.46	51.32	45.43	59.22	4.85	68.63	68.63	5.12									
		1800	18.45	16.97	3.78	24.11	22.18	3.93	30.11	27.64	4.09	36.49	33.09	4.24	44.58	39.06	4.45	51.43	45.43	59.39	4.83	68.85	68.85	5.10									
		2250	19.15	17.82	3.90	24.92	22.93	4.04	30.96	28.41	4.17	37.44	33.95	4.30	45.42	39.80	4.47	52.45	45.41	60.85	4.79	70.47	70.47	5.02									
75		1750	17.44	16.04	3.93	23.12	21.27	4.09	29.18	26.78	4.26	35.57	32.26	4.43	43.08	37.74	4.63	50.66	50.66	58.44	5.07	67.67	67.67	5.35									
		1800	17.52	16.12	3.94	23.22	21.36	4.10	29.28	26.88	4.27	35.70	32.37	4.43	43.34	37.97	4.64	50.78	50.78	58.60	5.05	67.87	67.87	5.33									
		2250	18.19	16.73	4.06	23.99	22.07	4.21	30.13	27.65	4.35	36.62	33.21	4.48	44.87	39.31	4.68	51.79	51.79	59.83	5.00	69.45	69.45	5.24									

LEGEND

- BF — Bypass Factor
- edb — Entering Dry – Bulb
- EWb — Entering Wet – Bulb
- kW — Total Unit Power Input
- SHC — Sensible Heat Capacity (1000 Btuh)
- TC — Total Capacity (1000 Btuh) (net)
- rh —Relative Humidity

COOLING NOTES:

- 1. Ratings are net; they account for the effects of the evaporator –fan motor power and heat.
- 2. Direct interpolation is permissible. Do not extrapolate.
- 3. The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{Sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{wb} = \text{Wet--bulb temperature corresponding to enthalpy air leaving evaporator coil (} h_{lwb} \text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where: h_{ewb} = Enthalpy of air entering evaporator coil

4. The SHC is based on 80°F (26.7 °C) edb temperature of air entering evaporator coil. Below 80°F (26.7°C) edb, subtract (corr factor x cfm) from SHC. Above 80°F (26.7°C) edb, add (corr factor x cfm) to SHC.
Correction Factor = 1,10 x (1 + BF) x (edb – 80).

5. Integrated capacity is maximum (instantaneous) capacity less the effect of frost on the outdoor coil and the heat required to defrost it.

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR		EXTERNAL STATIC PRESSURE (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA30040	30 – 60°F (17 – 33°C)	Low	Blue	CFM	741	638	547	415	--	--	--	--	--	--
				Heating Rise (°F)	41	47	55	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	23	26	31	NA	NA	NA	NA	NA	NA	
		Med – Low ¹	Pink	CFM	973	887	823	733	665	538	451	--	--	
				Heating Rise (°F)	31	34	37	41	45	56	NA	NA	NA	
				Heating Rise (°C)	17	19	20	23	25	31	NA	NA	NA	
		Medium	Red	CFM	1088	1023	954	881	800	723	658	563	461	
				Heating Rise (°F)	NA	30	32	34	38	42	46	54	NA	
				Heating Rise (°C)	NA	16	18	19	21	23	26	30	NA	
		Med – High ²	Orange	CFM	1140	1064	996	915	840	758	687	564	480	
				Heating Rise (°F)	NA	NA	30	33	36	40	44	54	NA	
				Heating Rise (°C)	NA	NA	17	18	20	22	24	30	NA	
674D(N,PE)WA30060	25 – 55°F (14 – 31°C)	High	Black	CFM	1202	1140	1082	1015	961	881	810	732	631	
				Heating Rise (°F)	NA	NA	NA	30	31	34	37	41	48	
				Heating Rise (°C)	NA	NA	NA	17	17	19	21	23	27	
		Low	Blue	CFM	741	638	547	415	--	--	--	--	--	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Med – Low	Pink	CFM	973	887	823	733	665	538	451	--	--	
				Heating Rise (°F)	46	50	54	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	25	28	30	NA	NA	NA	NA	NA	NA	
		Medium	Red	CFM	1088	1023	954	881	800	723	658	563	461	
				Heating Rise (°F)	41	43	47	50	NA	NA	NA	NA	NA	
				Heating Rise (°C)	23	24	26	28	NA	NA	NA	NA	NA	
Med – High ²	Orange	CFM	1140	1064	996	915	840	758	687	564	480			
		Heating Rise (°F)	39	42	45	49	53	NA	NA	NA	NA			
		Heating Rise (°C)	22	23	25	27	29	NA	NA	NA	NA			
High ¹	Black	CFM	1202	1140	1082	1015	961	881	810	732	631			
		Heating Rise (°F)	37	39	41	44	46	50	55	NA	NA			
		Heating Rise (°C)	21	22	23	24	26	28	30	NA	NA			

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR	CFM	EXTERNAL STATIC PRESSURE (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA36060	25 – 55°F (14 – 31°C)	Low ¹	Blue	CFM	1234	1168	1093	1021	961	894	825	759	687	
				Heating Rise (°F)	36	38	41	44	46	50	54	NA	NA	
				Heating Rise (°C)	20	21	23	24	26	28	30	NA	NA	
		Med – Low	Pink	CFM	1290	1223	1154	1090	1027	977	894	828	762	
				Heating Rise (°F)	34	36	39	41	43	45	50	54	NA	
				Heating Rise (°C)	19	20	21	23	24	25	28	30	NA	
		Medium ²	Red	CFM	1354	1290	1226	1158	1102	1046	981	918	843	
				Heating Rise (°F)	33	34	36	38	40	42	45	48	53	
				Heating Rise (°C)	18	19	20	21	22	24	25	27	29	
		Med – High	Orange	CFM	1606	1546	1489	1430	1371	1316	1258	1208	1140	
				Heating Rise (°F)	28	29	30	31	32	34	35	37	39	
				Heating Rise (°C)	15	16	17	17	18	19	20	20	22	
674D(N,PE)WA36090	35 – 65°F (19 – 36°C)	High	Black	CFM	1630	1580	1517	1463	1407	1339	1277	1210	1131	
				Heating Rise (°F)	27	28	29	30	32	33	35	37	39	
				Heating Rise (°C)	15	16	16	17	18	18	19	20	22	
		Low	Blue	CFM	1234	1168	1093	1021	961	894	825	759	687	
				Heating Rise (°F)	55	58	62	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	31	32	35	NA	NA	NA	NA	NA	NA	
		Med – Low	Pink	CFM	1290	1223	1154	1090	1027	977	894	828	762	
				Heating Rise (°F)	53	56	59	62	NA	NA	NA	NA	NA	
				Heating Rise (°C)	29	31	33	35	NA	NA	NA	NA	NA	
		Medium ²	Red	CFM	1354	1290	1226	1158	1102	1046	981	918	843	
				Heating Rise (°F)	50	53	55	59	62	65	NA	NA	NA	
				Heating Rise (°C)	28	29	31	33	34	36	NA	NA	NA	
674D(N,PE)WA36090	35 – 65°F (19 – 36°C)	Med – High	Orange	CFM	1606	1546	1489	1430	1371	1316	1258	1208	1140	
				Heating Rise (°F)	42	44	46	48	50	52	54	56	60	
				Heating Rise (°C)	24	24	25	26	28	29	30	31	33	
		High ¹	Black	CFM	1630	1580	1517	1463	1407	1339	1277	1210	1131	
				Heating Rise (°F)	42	43	45	46	48	51	53	56	60	
				Heating Rise (°C)	23	24	25	26	27	28	30	31	33	

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR	EXTERNAL STATIC PRESSURE (IN. W.C.)									
				0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA42060	25 – 55°F (14 – 31°C)	Low ¹	Blue	CFM	1295	1234	1182	1126	1075	1016	955	898	857
				Heating Rise (°F)	34	36	38	39	41	44	47	49	52
				Heating Rise (°C)	19	20	21	22	23	24	26	27	29
		Med – Low	Pink	CFM	1345	1282	1235	1194	1140	1095	1027	974	921
				Heating Rise (°F)	33	35	36	37	39	41	43	46	48
				Heating Rise (°C)	18	19	20	21	22	23	24	25	27
		Medium	Red	CFM	1505	1452	1413	1358	1323	1282	1234	1169	1130
				Heating Rise (°F)	30	31	31	33	34	35	36	38	39
				Heating Rise (°C)	16	17	17	18	19	19	20	21	22
		Med – High ²	Orange	CFM	1545	1492	1449	1411	1362	1313	1278	1231	1188
				Heating Rise (°F)	29	30	31	31	33	34	35	36	37
				Heating Rise (°C)	16	17	17	17	18	19	19	20	21
674D(N,PE)WA42090	35 – 65°F (19 – 36°C)	High	Black	CFM	1705	1643	1607	1568	1518	1483	1448	1404	1360
				Heating Rise (°F)	26	27	28	28	29	30	31	32	33
				Heating Rise (°C)	14	15	15	16	16	17	17	18	18
		Low	Blue	CFM	1295	1234	1182	1126	1075	1016	955	898	857
				Heating Rise (°F)	53	55	58	60	63	NA	NA	NA	NA
				Heating Rise (°C)	29	31	32	34	35	NA	NA	NA	NA
		Med – Low	Pink	CFM	1345	1282	1235	1194	1140	1095	1027	974	921
				Heating Rise (°F)	51	53	55	57	60	62	NA	NA	NA
				Heating Rise (°C)	28	29	31	32	33	35	NA	NA	NA
		Medium ¹	Red	CFM	1505	1452	1413	1358	1323	1282	1234	1169	1130
				Heating Rise (°F)	45	47	48	50	51	53	55	58	60
				Heating Rise (°C)	25	26	27	28	29	29	31	32	33
Med – High ²	Orange	CFM	1545	1492	1449	1411	1362	1313	1278	1231	1188		
		Heating Rise (°F)	44	46	47	48	50	52	53	55	57		
		Heating Rise (°C)	24	25	26	27	28	29	30	31	32		
High	Black	CFM	1705	1643	1607	1568	1518	1483	1448	1404	1360		
		Heating Rise (°F)	40	41	42	43	45	46	47	48	50		
		Heating Rise (°C)	22	23	24	24	25	25	26	27	28		

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR		EXTERNAL STATIC PRESSURE (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA48090	35 – 65°F (19 – 36°C)	Low ¹	Blue	CFM	1402	1351	1311	1263	1224	1172	1136	1080	1041	
				Heating Rise (°F)	49	50	52	54	56	58	60	63	65	
				Heating Rise (°C)	27	28	29	30	31	32	33	35	36	
		Med—Low	Pink	CFM	1457	1404	1367	1318	1284	1233	1197	1144	1104	
				Heating Rise (°F)	47	48	50	52	53	55	57	59	62	
				Heating Rise (°C)	26	27	28	29	29	31	32	33	34	
		Medium ²	Red	CFM	1736	1695	1642	1601	1553	1512	1465	1427	1381	
				Heating Rise (°F)	39	40	41	42	44	45	46	48	49	
				Heating Rise (°C)	22	22	23	24	24	25	26	26	27	
		Med—High	Orange	CFM	2149	2111	2062	2026	1980	1945	1905	1864	1793	
				Heating Rise (°F)	NA	NA	NA	NA	NA	35	36	36	38	
				Heating Rise (°C)	NA	NA	NA	NA	NA	19	20	20	21	
674D(N,PE)WA48115	30 – 60°F (17 – 33°C)	High	Black	CFM	2344	2306	2259	2203	2141	2070	1991	1902	1803	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	36	38	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	20	21	
		Low	Blue	CFM	1402	1351	1311	1263	1224	1172	1136	1080	1041	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Med—Low	Pink	CFM	1457	1404	1367	1318	1284	1233	1197	1144	1104	
				Heating Rise (°F)	60	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	33	NA	NA	NA	NA	NA	NA	NA	NA	
		Medium ²	Red	CFM	1736	1695	1642	1601	1553	1512	1465	1427	1381	
				Heating Rise (°F)	50	51	53	54	56	57	59	NA	NA	
				Heating Rise (°C)	28	28	29	30	31	32	33	NA	NA	
Med—High ¹	Orange	CFM	2149	2111	2062	2026	1980	1945	1905	1864	1793			
		Heating Rise (°F)	40	41	42	43	44	45	46	47	48			
		Heating Rise (°C)	22	23	23	24	24	25	25	26	27			
High	Black	CFM	2344	2306	2259	2203	2141	2070	1991	1902	1803			
		Heating Rise (°F)	37	38	38	39	41	42	44	46	48			
				Heating Rise (°C)	21	21	21	22	23	23	24	25	27	

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR		EXTERNAL STATIC PRESSURE (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA48130	35 – 65°F (19 – 36°C)	Low	Blue	CFM	1402	1351	1311	1263	1224	1172	1136	1080	1041	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Med–Low	Pink	CFM	1457	1404	1367	1318	1284	1233	1197	1144	1104	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Medium ²	Red	CFM	1736	1695	1642	1601	1553	1512	1465	1427	1381	
				Heating Rise (°F)	55	57	59	60	62	64	NA	NA	NA	
				Heating Rise (°C)	31	32	33	33	34	35	NA	NA	NA	
		Med–High ¹	Orange	CFM	2149	2111	2062	2026	1980	1945	1905	1864	1793	
				Heating Rise (°F)	45	46	47	48	49	50	51	52	54	
				Heating Rise (°C)	25	25	26	26	27	28	28	29	30	
674D(N,PE)WA60090	35 – 65°F (19 – 36°C)	High	Black	CFM	2344	2306	2259	2203	2141	2070	1991	1902	1803	
				Heating Rise (°F)	41	42	43	44	45	47	48	51	53	
				Heating Rise (°C)	23	23	24	24	25	26	27	28	30	
		Low ¹	Blue	CFM	1445	1389	1341	1281	1236	1189	1139	1072	1027	
				Heating Rise (°F)	47	49	51	53	55	57	60	63	NA	
				Heating Rise (°C)	26	27	28	29	31	32	33	35	NA	
		Med–Low	Pink	CFM	1678	1635	1602	1558	1513	1474	1438	1404	1349	
				Heating Rise (°F)	41	42	42	44	45	46	47	48	50	
				Heating Rise (°C)	23	23	24	24	25	26	26	27	28	
		Medium ²	Red	CFM	1927	1893	1858	1824	1791	1759	1720	1689	1640	
				Heating Rise (°F)	35	36	37	37	38	39	40	40	41	
				Heating Rise (°C)	20	20	20	21	21	21	22	22	23	
Med–High	Orange	CFM	2131	2088	2065	2013	1982	1941	1888	1860	1785			
		Heating Rise (°F)	NA	NA	NA	NA	NA	35	36	37	38			
		Heating Rise (°C)	NA	NA	NA	NA	NA	19	20	20	21			
High	Black	CFM	2461	2409	2339	2286	2192	2140	2062	1968	1874			
		Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	35	36			
		Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	19	20			

Dry Coil Air Delivery* - Horizontal Discharge - Unit 674D--A30-60

UNIT	HEATING RISE RANGE	MOTOR SPEED	WIRE COLOR		EXTERNAL STATIC PRESSURE (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	
674D(N,PE)WA60115	30 – 60°F (17 – 33°C)	Low	Blue	CFM	1445	1389	1341	1281	1236	1189	1139	1072	1027	
				Heating Rise (°F)	60	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	33	NA	NA	NA	NA	NA	NA	NA	NA	
		Med – Low	Pink	CFM	1678	1635	1602	1558	1513	1474	1438	1404	1349	
				Heating Rise (°F)	52	53	54	56	57	59	60	NA	NA	
				Heating Rise (°C)	29	30	30	31	32	33	34	NA	NA	
		Medium ²	Red	CFM	1927	1893	1858	1824	1791	1759	1720	1689	1640	
				Heating Rise (°F)	45	46	47	48	49	49	51	51	53	
				Heating Rise (°C)	25	26	26	26	27	27	28	29	29	
		Med – High ¹	Orange	CFM	2131	2088	2065	2013	1982	1941	1888	1860	1785	
				Heating Rise (°F)	41	42	42	43	44	45	46	47	49	
				Heating Rise (°C)	23	23	23	24	24	25	26	26	27	
674D(N,PE)WA60130	35 – 65°F (19 – 36°C)	High	Black	CFM	2461	2409	2339	2286	2192	2140	2062	1968	1874	
				Heating Rise (°F)	35	36	37	38	40	41	42	44	46	
				Heating Rise (°C)	20	20	21	21	22	23	23	25	26	
		Low	Blue	CFM	1445	1389	1341	1281	1236	1189	1139	1072	1027	
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	
		Med – Low	Pink	CFM	1678	1635	1602	1558	1513	1474	1438	1404	1349	
				Heating Rise (°F)	57	59	60	62	64	65	NA	NA	NA	
				Heating Rise (°C)	32	33	33	34	35	36	NA	NA	NA	
		Medium ²	Red	CFM	1927	1893	1858	1824	1791	1759	1720	1689	1640	
				Heating Rise (°F)	50	51	52	53	54	55	56	57	59	
				Heating Rise (°C)	28	28	29	29	30	30	31	32	33	
Med – High ¹	Orange	CFM	2131	2088	2065	2013	1982	1941	1888	1860	1785			
		Heating Rise (°F)	45	46	47	48	49	50	51	52	54			
		Heating Rise (°C)	25	26	26	27	27	28	28	29	30			
High	Black	CFM	2461	2409	2339	2286	2192	2140	2062	1968	1874			
		Heating Rise (°F)	39	40	41	42	44	45	47	49	51			
		Heating Rise (°C)	22	22	23	23	24	25	26	27	29			

* Air delivery values are without air filter and are for dry coil (See Wet Coil Pressure Drop table).

1 Factory – shipped gas heating speed

2 Factory – shipped heat pump speed

NA – Not allowed for heating speed

Note: Duct field – supplied air filter pressure drop and wet coil pressure drop to obtain external static pressure available for ducting.

Shaded areas indicate speed/static combinations that are not permitted for dehumidification speed.

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
30040	30 - 60°F (17 - 33°C)	Low	Blue	CFM	756	669	548	457						
				WATTS	84	90	96	106						
				BHP	0.09	0.10	0.10	0.11						
				Heating Rise (°F)	40	45	55	NA						
				Heating Rise (°C)	22	25	31	NA						
				CFM	1002	928	842	733	660	560	450			
				WATTS	144	155	161	173	185	192	203			
				BHP	0.15	0.17	0.17	0.19	0.20	0.21	0.22			
				Heating Rise (°F)	30	33	36	41	46	54	NA			
				Heating Rise (°C)	17	18	20	23	25	30	NA			
		Med-Low	Pink	CFM	1110	1025	967	879	814	706	611	509	461	
				WATTS	188	195	205	211	223	236	243	255	243	
				BHP	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.26	
				Heating Rise (°F)	NA	NA	31	34	37	43	49	59	NA	
				Heating Rise (°C)	NA	NA	17	19	21	24	27	33	NA	
				CFM	1160	1091	1004	945	866	804	699	615	496	
				WATTS	213	225	232	243	249	261	273	285	291	
				BHP	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.31	
				Heating Rise (°F)	NA	NA	30	32	35	38	43	49	NA	
				Heating Rise (°C)	NA	NA	17	18	19	21	24	27	NA	
		Med-High ¹	Orange	CFM	1240	1173	1110	1031	966	902	821	726	626	
				WATTS	254	266	274	284	295	302	315	327	331	
				BHP	0.27	0.29	0.29	0.30	0.32	0.32	0.34	0.35	0.35	
				Heating Rise (°F)	NA	NA	NA	NA	31	34	37	42	48	
				Heating Rise (°C)	NA	NA	NA	NA	17	19	20	23	27	
		High	Black											

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
30060	25 - 55°F (14 - 31°C)	Low	Blue	CFM	756	669	548	457						
				WATTS	84	90	96	106						
				BHP	0.09	0.10	0.10	0.11						
				Heating Rise (°F)	NA	NA	NA	NA						
				Heating Rise (°C)	NA	NA	NA	NA						
		Med-Low	Pink	CFM	1002	928	842	733	660	560	450			
				WATTS	144	155	161	173	185	192	203			
				BHP	0.15	0.17	0.17	0.19	0.20	0.21	0.22			
				Heating Rise (°F)	45	48	53	NA	NA	NA	NA			
				Heating Rise (°C)	25	27	30	NA	NA	NA	NA			
	25 - 55°F (14 - 31°C)	Medium ²	Red	CFM	1110	1025	967	879	814	706	611	509	461	
				WATTS	188	195	205	211	223	236	243	255	243	
				BHP	0.20	0.21	0.22	0.23	0.24	0.25	0.26	0.27	0.26	
				Heating Rise (°F)	40	44	46	51	55	NA	NA	NA	NA	
				Heating Rise (°C)	22	24	26	28	31	NA	NA	NA	NA	
		Med-High ¹	Orange	CFM	1160	1091	1004	945	866	804	699	615	496	
				WATTS	213	225	232	243	249	261	273	285	291	
				BHP	0.23	0.24	0.25	0.26	0.27	0.28	0.29	0.31	0.31	
				Heating Rise (°F)	39	41	45	47	52	NA	NA	NA	NA	
				Heating Rise (°C)	21	23	25	26	29	NA	NA	NA	NA	
	High	Black		CFM	1240	1173	1110	1031	966	902	821	726	626	
				WATTS	254	266	274	284	295	302	315	327	331	
				BHP	0.27	0.29	0.29	0.30	0.32	0.32	0.34	0.35	0.35	
				Heating Rise (°F)	36	38	40	43	46	50	55	NA	NA	
				Heating Rise (°C)	20	21	22	24	26	28	30	NA	NA	

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
36060	25 - 55°F (14 - 31°C)	Low	Blue	CFM	1277	1215	1147	1094	1045	992	932	874	826	757
				WATTS	285	289	299	305	314	319	328	335	347	352
				BHP	0.31	0.31	0.32	0.33	0.34	0.34	0.35	0.36	0.37	0.38
				Heating Rise (°F)	35	37	39	41	43	45	48	51	54	NA
		Med-Low	Pink	Heating Rise (°C)	19	20	22	23	24	25	27	28	30	NA
				CFM	1312	1260	1203	1153	1095	1050	995	943	889	829
				WATTS	314	324	329	340	344	355	361	372	382	387
				BHP	0.34	0.35	0.35	0.36	0.37	0.38	0.39	0.40	0.41	
		Medium ²	Red	Heating Rise (°F)	34	36	37	39	41	43	45	47	50	54
				Heating Rise (°C)	19	20	21	22	23	24	25	26	28	30
				CFM	1381	1326	1269	1212	1161	1121	1070	1019	974	912
				WATTS	358	365	375	383	391	395	406	418	424	434
		Med-High ¹	Orange	BHP	0.38	0.39	0.40	0.41	0.42	0.42	0.44	0.45	0.45	0.47
				Heating Rise (°F)	32	34	35	37	39	40	42	44	46	49
				Heating Rise (°C)	18	19	20	21	21	22	23	24	26	27
				CFM	1631	1579	1525	1477	1423	1372	1336	1284	1233	1166
		High	Black	WATTS	567	576	581	592	598	609	617	619	613	598
				BHP	0.61	0.62	0.62	0.63	0.64	0.65	0.66	0.66	0.66	0.64
				Heating Rise (°F)	27	28	29	30	31	33	34	35	36	38
				Heating Rise (°C)	15	16	16	17	17	18	19	19	20	21
				CFM	1681	1633	1575	1526	1478	1415	1366	1312	1249	1159
				WATTS	618	626	636	644	652	653	649	642	627	602
				BHP	0.66	0.67	0.68	0.69	0.70	0.70	0.70	0.69	0.67	0.65
				Heating Rise (°F)	27	27	28	29	30	32	33	34	36	39
				Heating Rise (°C)	15	15	16	16	17	18	18	19	20	21

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
36090	35 - 65°F (19 - 36°C)	Low	Blue	CFM	1277	1215	1147	1094	1045	992	932	874	826	757
				WATTS	285	289	299	305	314	319	328	335	347	352
				BHP	0.31	0.31	0.32	0.33	0.34	0.34	0.35	0.36	0.37	0.38
				Heating Rise (°F)	52	55	58	61	64	NA	NA	NA	NA	NA
				Heating Rise (°C)	29	31	32	34	36	NA	NA	NA	NA	NA
				CFM	1312	1260	1203	1153	1095	1050	995	943	889	829
		Med-Low	Pink	WATTS	314	324	329	340	344	355	361	372	382	387
				BHP	0.34	0.35	0.35	0.36	0.37	0.38	0.39	0.40	0.41	
				Heating Rise (°F)	51	53	56	58	61	64	NA	NA	NA	NA
				Heating Rise (°C)	28	29	31	32	34	35	NA	NA	NA	NA
				CFM	1381	1326	1269	1212	1161	1121	1070	1019	974	912
		Medium ²	Red	WATTS	358	365	375	383	391	395	406	418	424	434
				BHP	0.38	0.39	0.40	0.41	0.42	0.42	0.44	0.45	0.45	0.47
				Heating Rise (°F)	48	50	53	55	58	60	62	NA	NA	NA
				Heating Rise (°C)	27	28	29	31	32	33	35	NA	NA	NA
				CFM	1631	1579	1525	1477	1423	1372	1336	1284	1233	1166
		Med-High ¹	Orange	WATTS	567	576	581	592	598	609	617	619	613	598
				BHP	0.61	0.62	0.62	0.63	0.64	0.65	0.66	0.66	0.66	0.64
				Heating Rise (°F)	41	42	44	45	47	49	50	52	54	57
				Heating Rise (°C)	23	24	24	25	26	27	28	29	30	32
				CFM	1681	1633	1575	1526	1478	1415	1366	1312	1249	1159
		High	Black	WATTS	618	626	636	644	652	653	649	642	627	602
				BHP	0.66	0.67	0.68	0.69	0.70	0.70	0.70	0.69	0.67	0.65
				Heating Rise (°F)	40	41	42	44	45	47	49	51	54	58
				Heating Rise (°C)	22	23	24	24	25	26	27	28	30	32

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
42060	25 - 55°F (14 - 31°C)	Low ¹	Blue	CFM	1365	1324	1284	1233	1181	1127	1084	1039	984	939
				WATTS	177	189	201	210	222	236	248	261	269	281
				BHP	0.19	0.20	0.22	0.23	0.24	0.25	0.27	0.28	0.29	0.30
				Heating Rise (°F)	33	34	35	36	38	40	41	43	46	48
				Heating Rise (°C)	18	19	19	20	21	22	23	24	25	26
				CFM	1425	1384	1339	1301	1254	1199	1151	1104	1065	1015
		Med-Low	Pink	WATTS	197	210	223	235	248	257	271	284	296	305
				BHP	0.21	0.23	0.24	0.25	0.27	0.28	0.29	0.30	0.32	0.33
				Heating Rise (°F)	31	32	33	34	36	37	39	41	42	44
				Heating Rise (°C)	17	18	19	19	20	21	22	23	23	25
				CFM	1582	1549	1509	1469	1433	1392	1346	1300	1249	1213
		Medium	Red	WATTS	267	280	294	308	322	336	344	359	374	387
				BHP	0.29	0.30	0.32	0.33	0.35	0.36	0.37	0.38	0.40	0.42
				Heating Rise (°F)	28	29	30	30	31	32	33	34	36	37
				Heating Rise (°C)	16	16	16	17	17	18	18	19	20	21
				CFM	1623	1586	1553	1511	1470	1433	1393	1350	1309	1261
		Med-High ²	Orange	WATTS	285	299	312	324	335	349	363	378	393	407
				BHP	0.31	0.32	0.33	0.35	0.36	0.37	0.39	0.41	0.42	0.44
				Heating Rise (°F)	28	28	29	30	30	31	32	33	34	36
				Heating Rise (°C)	15	16	16	16	17	17	18	18	19	20
				CFM	1775	1736	1696	1660	1622	1588	1557	1516	1472	1426
		High	Black	WATTS	371	386	401	410	424	439	453	468	483	497
				BHP	0.40	0.41	0.43	0.44	0.45	0.47	0.49	0.50	0.52	0.53
				Heating Rise (°F)	25	26	26	27	28	28	29	30	30	31
				Heating Rise (°C)	14	14	15	15	15	16	16	16	17	17

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
42090	35 - 65°F (19 - 36°C)	Low ¹	Blue	CFM	1365	1324	1284	1233	1181	1127	1084	1039	984	939
				WATTS	177	189	201	210	222	236	248	261	269	281
				BHP	0.19	0.20	0.22	0.23	0.24	0.25	0.27	0.28	0.29	0.30
				Heating Rise (°F)	50	51	53	55	58	60	63	65	NA	NA
				Heating Rise (°C)	28	29	29	31	32	34	35	36	NA	NA
				CFM	1425	1384	1339	1301	1254	1199	1151	1104	1065	1015
		Med-Low	Pink	WATTS	197	210	223	235	248	257	271	284	296	305
				BHP	0.21	0.23	0.24	0.25	0.27	0.28	0.29	0.30	0.32	0.33
				Heating Rise (°F)	48	49	51	52	54	57	59	62	64	NA
				Heating Rise (°C)	27	27	28	29	30	32	33	34	35	NA
				CFM	1582	1549	1509	1469	1433	1392	1346	1300	1249	1213
		Medium	Red	WATTS	267	280	294	308	322	336	344	359	374	387
				BHP	0.29	0.30	0.32	0.33	0.35	0.36	0.37	0.38	0.40	0.42
				Heating Rise (°F)	43	44	45	46	47	49	51	52	54	56
				Heating Rise (°C)	24	24	25	26	26	27	28	29	30	31
				CFM	1623	1586	1553	1511	1470	1433	1393	1350	1309	1261
		Med-High ²	Orange	WATTS	285	299	312	324	335	349	363	378	393	407
				BHP	0.31	0.32	0.33	0.35	0.36	0.37	0.39	0.41	0.42	0.44
				Heating Rise (°F)	42	43	44	45	46	47	49	50	52	54
				Heating Rise (°C)	23	24	24	25	26	26	27	28	29	30
				CFM	1775	1736	1696	1660	1622	1588	1557	1516	1472	1426
		High	Black	WATTS	371	386	401	410	424	439	453	468	483	497
				BHP	0.40	0.41	0.43	0.44	0.45	0.47	0.49	0.50	0.52	0.53
				Heating Rise (°F)	38	39	40	41	42	43	44	45	46	48
				Heating Rise (°C)	21	22	22	23	23	24	24	25	26	26

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
48090	35 - 65°F (19 - 36°C)	Low ¹	Blue	CFM	1503	1457	1423	1374	1330	1287	1241	1199	1153	1111
				WATTS	225	233	246	254	269	282	292	307	314	329
				BHP	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.33	0.34	0.35
				Heating Rise (°F)	45	47	48	49	51	53	55	57	59	61
				Heating Rise (°C)	25	26	27	27	28	29	30	32	33	34
				CFM	1556	1508	1461	1432	1388	1346	1302	1256	1221	1168
		Med-Low	Pink	WATTS	244	261	268	281	290	305	319	330	345	353
				BHP	0.26	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37	0.38
				Heating Rise (°F)	44	45	47	47	49	51	52	54	56	58
				Heating Rise (°C)	24	25	26	26	27	28	29	30	31	32
				CFM	1861	1822	1786	1758	1716	1688	1660	1619	1583	1539
				WATTS	400	417	426	441	452	467	482	492	507	519
		Medium ²	Red	BHP	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.53	0.54	0.56
				Heating Rise (°F)	37	37	38	39	40	40	41	42	43	44
				Heating Rise (°C)	20	21	21	21	22	22	23	23	24	25
				CFM	2319	2291	2255	2230	2193	2166	2118	2057	1992	1887
				WATTS	758	769	787	799	808	823	822	805	780	737
				BHP	0.81	0.82	0.84	0.86	0.87	0.88	0.88	0.86	0.84	0.79
		Med-High	Orange	Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	36
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	20
				CFM	2532	2487	2444	2391	2330	2259	2179	2111	2033	1949
				WATTS	1014	1022	1015	994	965	935	898	858	823	786
				BHP	1.09	1.10	1.09	1.07	1.03	1.00	0.96	0.92	0.88	0.84
		High	Black	Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	NA	35
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	NA	19

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
48115	30 - 60°F (17 - 33°C)	Low ¹	Blue	CFM	1503	1457	1423	1374	1330	1287	1241	1199	1153	1111
				WATTS	225	233	246	254	269	282	292	307	314	329
				BHP	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.33	0.34	0.35
				Heating Rise (°F)	57	59	NA	NA	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	32	33	NA	NA	NA	NA	NA	NA	NA	NA
				CFM	1556	1508	1461	1432	1388	1346	1302	1256	1221	1168
		Med-Low	Pink	WATTS	244	261	268	281	290	305	319	330	345	353
				BHP	0.26	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37	0.38
				Heating Rise (°F)	55	57	59	60	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	31	32	33	33	NA	NA	NA	NA	NA	NA
				CFM	1861	1822	1786	1758	1716	1688	1660	1619	1583	1539
		Medium ²	Red	WATTS	400	417	426	441	452	467	482	492	507	519
				BHP	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.53	0.54	0.56
				Heating Rise (°F)	46	47	48	49	50	51	52	53	54	56
				Heating Rise (°C)	26	26	27	27	28	28	29	30	30	31
				CFM	2319	2291	2255	2230	2193	2166	2118	2057	1992	1887
		Med-High	Orange	WATTS	758	769	787	799	808	823	822	805	780	737
				BHP	0.81	0.82	0.84	0.86	0.87	0.88	0.88	0.86	0.84	0.79
				Heating Rise (°F)	37	38	38	39	39	40	41	42	43	46
				Heating Rise (°C)	21	21	21	21	22	22	23	23	24	25
				CFM	2532	2487	2444	2391	2330	2259	2179	2111	2033	1949
		High	Black	WATTS	1014	1022	1015	994	965	935	898	858	823	786
				BHP	1.09	1.10	1.09	1.07	1.03	1.00	0.96	0.92	0.88	0.84
				Heating Rise (°F)	34	35	35	36	37	38	40	41	42	44
				Heating Rise (°C)	19	19	20	20	21	21	22	23	24	25

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
48130	35 - 65°F (19 - 36°C)	Low ¹	Blue	CFM	1503	1457	1423	1374	1330	1287	1241	1199	1153	1111
				WATTS	225	233	246	254	269	282	292	307	314	329
				BHP	0.24	0.25	0.26	0.27	0.29	0.30	0.31	0.33	0.34	0.35
				Heating Rise (°F)	64	NA	NA	NA	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
		Med-Low	Pink	CFM	1556	1508	1461	1432	1388	1346	1302	1256	1221	1168
				WATTS	244	261	268	281	290	305	319	330	345	353
				BHP	0.26	0.28	0.29	0.30	0.31	0.33	0.34	0.35	0.37	0.38
				Heating Rise (°F)	62	64	NA	NA	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	34	36	NA	NA	NA	NA	NA	NA	NA	NA
	35 - 65°F (19 - 36°C)	Medium ²	Red	CFM	1861	1822	1786	1758	1716	1688	1660	1619	1583	1539
				WATTS	400	417	426	441	452	467	482	492	507	519
				BHP	0.43	0.45	0.46	0.47	0.48	0.50	0.52	0.53	0.54	0.56
				Heating Rise (°F)	52	53	54	55	56	57	58	60	61	63
				Heating Rise (°C)	29	29	30	30	31	32	32	33	34	35
		Med-High	Orange	CFM	2319	2291	2255	2230	2193	2166	2118	2057	1992	1887
				WATTS	758	769	787	799	808	823	822	805	780	737
				BHP	0.81	0.82	0.84	0.86	0.87	0.88	0.88	0.86	0.84	0.79
				Heating Rise (°F)	42	42	43	43	44	45	46	47	48	51
				Heating Rise (°C)	23	23	24	24	24	25	25	26	27	28
	High	Black		CFM	2532	2487	2444	2391	2330	2259	2179	2111	2033	1949
				WATTS	1014	1022	1015	994	965	935	898	858	823	786
				BHP	1.09	1.10	1.09	1.07	1.03	1.00	0.96	0.92	0.88	0.84
				Heating Rise (°F)	38	39	39	40	41	43	44	46	47	49
				Heating Rise (°C)	21	22	22	22	23	24	25	25	26	27

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
60090	35 - 65°F (19 - 36°C)	Low	Blue	CFM	1479	1436	1387	1346	1298	1253	1206	1160	1114	1061
				WATTS	224	239	247	262	270	284	300	307	319	330
				BHP	0.24	0.26	0.26	0.28	0.29	0.30	0.32	0.33	0.34	0.35
				Heating Rise (°F)	46	47	49	51	52	54	56	59	61	64
				Heating Rise (°C)	26	26	27	28	29	30	31	33	34	36
				CFM	1841	1796	1761	1724	1690	1651	1616	1578	1527	1478
		Med-Low	Pink	WATTS	425	434	453	460	476	485	501	508	525	542
				BHP	0.46	0.47	0.49	0.49	0.51	0.52	0.54	0.54	0.56	0.58
				Heating Rise (°F)	37	38	39	39	40	41	42	43	45	46
				Heating Rise (°C)	21	21	21	22	22	23	23	24	25	26
				CFM	2045	2009	1970	1933	1905	1868	1829	1802	1751	1683
				WATTS	569	579	597	607	623	639	648	665	674	663
		Medium ²	Red	BHP	0.61	0.62	0.64	0.65	0.67	0.69	0.69	0.71	0.72	0.71
				Heating Rise (°F)	33	34	35	35	36	36	37	38	39	40
				Heating Rise (°C)	18	19	19	20	20	20	21	21	22	22
				CFM	2178	2148	2105	2073	2036	2002	1967	1919	1845	1751
				WATTS	674	691	703	717	733	743	758	754	734	701
				BHP	0.72	0.74	0.75	0.77	0.79	0.80	0.81	0.81	0.79	0.75
		Med-High ¹	Orange	Heating Rise (°F)	NA	NA	NA	NA	NA	NA	35	35	37	39
				Heating Rise (°C)	NA	NA	NA	NA	NA	NA	19	20	20	22
				CFM	2480	2432	2375	2322	2236	2161	2085	2006	1917	1808
				WATTS	1029	1012	995	975	941	908	869	836	796	751
				BHP	1.10	1.09	1.07	1.05	1.01	0.97	0.93	0.90	0.85	0.81
				Heating Rise (°F)	NA	NA	NA	NA	NA	NA	NA	NA	35	38
		High	Black	Heating Rise (°C)	NA	NA	NA	NA	NA	NA	NA	NA	20	21

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
60115	30 - 60°F (17 - 33°C)	Low	Blue	CFM	1479	1436	1387	1346	1298	1253	1206	1160	1114	1061
				WATTS	224	239	247	262	270	284	300	307	319	330
				BHP	0.24	0.26	0.26	0.28	0.29	0.30	0.32	0.33	0.34	0.35
				Heating Rise (°F)	58	60	NA	NA	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	32	33	NA	NA	NA	NA	NA	NA	NA	NA
				CFM	1841	1796	1761	1724	1690	1651	1616	1578	1527	1478
				WATTS	425	434	453	460	476	485	501	508	525	542
				BHP	0.46	0.47	0.49	0.49	0.51	0.52	0.54	0.54	0.56	0.58
		Med-Low	Pink	Heating Rise (°F)	47	48	49	50	51	52	53	55	56	58
				Heating Rise (°C)	26	27	27	28	28	29	30	30	31	32
				CFM	2045	2009	1970	1933	1905	1868	1829	1802	1751	1683
				WATTS	569	579	597	607	623	639	648	665	674	663
		Medium ²	Red	BHP	0.61	0.62	0.64	0.65	0.67	0.69	0.69	0.71	0.72	0.71
				Heating Rise (°F)	42	43	44	45	45	46	47	48	49	51
				Heating Rise (°C)	23	24	24	25	25	26	26	27	27	28
				CFM	2178	2148	2105	2073	2036	2002	1967	1919	1845	1751
	Med-High ¹	Orange	Orange	WATTS	674	691	703	717	733	743	758	754	734	701
				BHP	0.72	0.74	0.75	0.77	0.79	0.80	0.81	0.81	0.79	0.75
				Heating Rise (°F)	40	40	41	42	42	43	44	45	47	49
				Heating Rise (°C)	22	22	23	23	24	24	24	25	26	27
		High	Black	CFM	2480	2432	2375	2322	2236	2161	2085	2006	1917	1808
				WATTS	1029	1012	995	975	941	908	869	836	796	751
				BHP	1.10	1.09	1.07	1.05	1.01	0.97	0.93	0.90	0.85	0.81
				Heating Rise (°F)	35	35	36	37	39	40	41	43	45	48
				Heating Rise (°C)	19	20	20	21	21	22	23	24	25	27

Dry Coil Air Delivery - Downflow Discharge

Unit	Heating Rise Range	Motor Speed	Wire Color		External Static Pressure (IN. W.C.)									
					0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
60130	Low	Blue		CFM	1479	1436	1387	1346	1298	1253	1206	1160	1114	1061
				WATTS	224	239	247	262	270	284	300	307	319	330
				BHP	0.24	0.26	0.26	0.28	0.29	0.30	0.32	0.33	0.34	0.35
				Heating Rise (°F)	65	NA	NA	NA	NA	NA	NA	NA	NA	NA
				Heating Rise (°C)	36	NA	NA	NA	NA	NA	NA	NA	NA	NA
				CFM	1841	1796	1761	1724	1690	1651	1616	1578	1527	1478
	Med-Low	Pink		WATTS	425	434	453	460	476	485	501	508	525	542
				BHP	0.46	0.47	0.49	0.49	0.51	0.52	0.54	0.54	0.56	0.58
				Heating Rise (°F)	52	54	55	56	57	58	60	61	63	65
				Heating Rise (°C)	29	30	30	31	32	32	33	34	35	36
				CFM	2045	2009	1970	1933	1905	1868	1829	1802	1751	1683
				WATTS	569	579	597	607	623	639	648	665	674	663
	Medium ²	Red		BHP	0.61	0.62	0.64	0.65	0.67	0.69	0.69	0.71	0.72	0.71
				Heating Rise (°F)	47	48	49	50	51	52	53	54	55	57
				Heating Rise (°C)	26	27	27	28	28	29	29	30	31	32
				CFM	2178	2148	2105	2073	2036	2002	1967	1919	1845	1751
				WATTS	674	691	703	717	733	743	758	754	734	701
				BHP	0.72	0.74	0.75	0.77	0.79	0.80	0.81	0.81	0.79	0.75
	Med-High ¹	Orange		Heating Rise (°F)	44	45	46	47	47	48	49	50	52	55
				Heating Rise (°C)	25	25	25	26	26	27	27	28	29	31
				CFM	2480	2432	2375	2322	2236	2161	2085	2006	1917	1808
				WATTS	1029	1012	995	975	941	908	869	836	796	751
				BHP	1.10	1.09	1.07	1.05	1.01	0.97	0.93	0.90	0.85	0.81
				Heating Rise (°F)	39	40	41	42	43	45	46	48	50	53
	High	Black		Heating Rise (°C)	22	22	23	23	24	25	26	27	28	30

*Air delivery values are without air filter and are for dry coil (See Wet Coil Pressure Drop table).

¹ Factory-shipped heating speed² Factory-shipped cooling speed

"NA" = Not allowed for heating speed

NOTE: Duct field-supplied air filter pressure drop and wet coil pressure drop to obtain external static pressure available for ducting.

Shaded areas indicate speed/static combinations that are not permitted for dehumidification speed.

Wet Coil Pressure Drop (IN. W.C.)

UNIT SIZE	STANDARD CFM (SCFM)																
	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
30				0.05	0.06	0.07	0.08	0.11									
36				0.06	0.06	0.09	0.10	0.11	0.14								
42					0.05	0.05	0.06	0.07	0.08	0.08	0.09	0.09	0.11				
48							0.04	0.06	0.09	0.10	0.10	0.11	0.12	0.13	0.14		
60										0.06	0.07	0.01	0.08	0.09	0.10	0.12	0.13

Economizer with 1-in. Filter Pressure Drop (IN. W.C.)

FILTER SIZE IN. (MM)	COOLING TONS	STANDARD CFM (SCFM)																
		600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
600-1400 CFM 12x20x1 + 12x20x1 (305x508x25 + 305x508x25)	2.5, 3.0	-	-	0.09	0.14	0.16	0.18	0.25	0.28	0.3	-	-	-	-	-	-	-	-
1200-1800 CFM 16x24x1 + 14x24x1 (406x610x25 + 356x610x25)	3.5, 4.0	-	-	-	-	-	-	0.10	0.11	0.12	0.13	0.14	0.16	0.16	-	-	-	-
1500-2200 CFM 16x24x1 + 18x24x1 (406x610x25 + 457x610x25)	5.0	-	-	-	-	-	-	-	-	-	0.15	0.17	0.18	0.20	0.21	0.22	0.23	0.23

Filter Pressure Drop Table (IN. W.C.)

FILTER SIZE IN. (MM)	COOLING TONS	STANDARD CFM (SCFM)																
		600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200
600-1400 CFM 12x20x1+12x20x1 (305x508x25+305x508x25)	2.5, 3.0	0.03	0.05	0.06	0.08	0.10	0.11	0.13	0.14	0.16	-	-	-	-	-	-	-	-
1200-1800 CFM 16x24x1+14x24x1 (406x610x25+356x610x25)	3.5, 4.0	-	-	-	-	-	-	0.07	0.08	0.09	0.09	0.10	0.11	0.12	-	-	-	-
1500-2200 CFM 16x24x1+18x24x1 (406x610x25+457x610x25)	5.0	-	-	-	-	-	-	-	-	-	0.04	0.06	0.08	0.10	0.11	0.13	0.14	0.15

Natural Gas Orifice Sizes and Manifold Pressure

Nameplate Input (Btu/hr)	ALTITUDE OF INSTALLATION (FT. ABOVE SEA LEVEL) U.S.A.*				
	0 to 2000 (0-610 m)	2001 to 3000* (611 to 914 m)	3001 to 4000 (915 to 1219 m)	4001 to 5000 (1220 to 1524 m)	5001 to 6000 (1524 to 1829 m)
40000	Orifice No. (Qty)	44 (2)	45 (2)†	48 (2)†	48 (2)†
	Manifold Press. (in. W.C.)	3.2	3.2	3.8	3.5
60000	Orifice No. (Qty)	38 (2)	41 (2)†	41 (2)†	42 (2)†
	Manifold Press. (in. W.C.)	3.6	3.8	3.4	3.2
90000	Orifice No. (Qty)	38 (3)	41 (3)†	41 (3)†	42 (3)†
	Manifold Press. (in. W.C.)	3.6	3.8	3.4	3.2
115000	Orifice No. (Qty)	33 (3)	36 (3)†	36 (3)†	38 (3)†
	Manifold Press. (in. W.C.)	3.8	3.8	3.6	3.6
130000	Orifice No. (Qty)	31 (3)	31 (3)	33 (3)†	34 (3)†
	Manifold Press. (in. W.C.)	3.8	3.2	3.7	3.4

*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610 – 1372 m), use U.S.A. column 2001 to 3000 ft (611 – 914).
Note: Orifice sizes and manifold pressure settings are based on natural gas with a heating value of 1025 Btu/ft3 and a specific gravity of .6.
† Orifices available through your distributor.

Propane Gas Orifice Sizes and Manifold Pressure (IN. W.C.)

Nameplate Input (Btu/hr)	ALTITUDE OF INSTALLATION (FT. ABOVE SEA LEVEL) U.S.A.*				
	0 to 2000 (0-610 m)	2001 to 3000* (611 to 914 m)	3001 to 4000 (915 to 1219 m)	4001 to 5000 (1220 to 1524 m)	5001 to 6000 (1524 to 1829 m)
40000	Orifice No. (Qty)	55 (2)	56 (2)	56 (2)	56 (2)
	Manifold Press. (in. W.C.)	10.0	11.0	11.0	10.7
60000	Orifice No. (Qty)	53 (2)	54 (2)	54 (2)	54 (2)
	Manifold Press. (in. W.C.)	11.0	11.0	11.0	11.0
90000	Orifice No. (Qty)	53 (3)	54 (3)	54 (3)	54 (3)
	Manifold Press. (in. W.C.)	10.0	11.0	11.0	11.0
115000	Orifice No. (Qty)	51 (3)	52 (3)	52 (3)	53 (3)
	Manifold Press. (in. W.C.)	10.0	11.0	10.6	11.0
130000	Orifice No. (Qty)	49 (3)	50 (3)	51 (3)	52 (3)
	Manifold Press.	10.0	11.0	11.0	11.0

*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610 – 1372 m), use U.S.A. column 2001 to 3000 ft (611 to 914 m).
†Use Kit No. CPLPCONV013A00 (0 – 2000 ft [0 – 610 m] above sea level). Use Kit No. CPLPCONV014A00 (2001 – 6000 ft [611 – 1829 m] above sea level).

High Altitude Compensation, Propane Gas

Nameplate Input (Btu/hr)	Rated Heating Input (Btu/hr), Propane Gas at Installation Altitude Above Sea Level, U.S.A.*			
	0 to 2000 ft (0-610 m)	2001 to 3000 ft* (611 to 914 m)	3001 to 4000 ft (915 to 1219 m)	4001 to 5000 ft (1220 to 1524 m)
40000	38000	31700	31700	31700
60000	53000	45900	45900	45800
90000	79000	68900	68900	68600
115000	103000	100400	98900	83000
130000	116000	115500	111800	101300

*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610 – 1372 m), use U.S.A. column 2001 to 3000 ft (611 to 914 m).

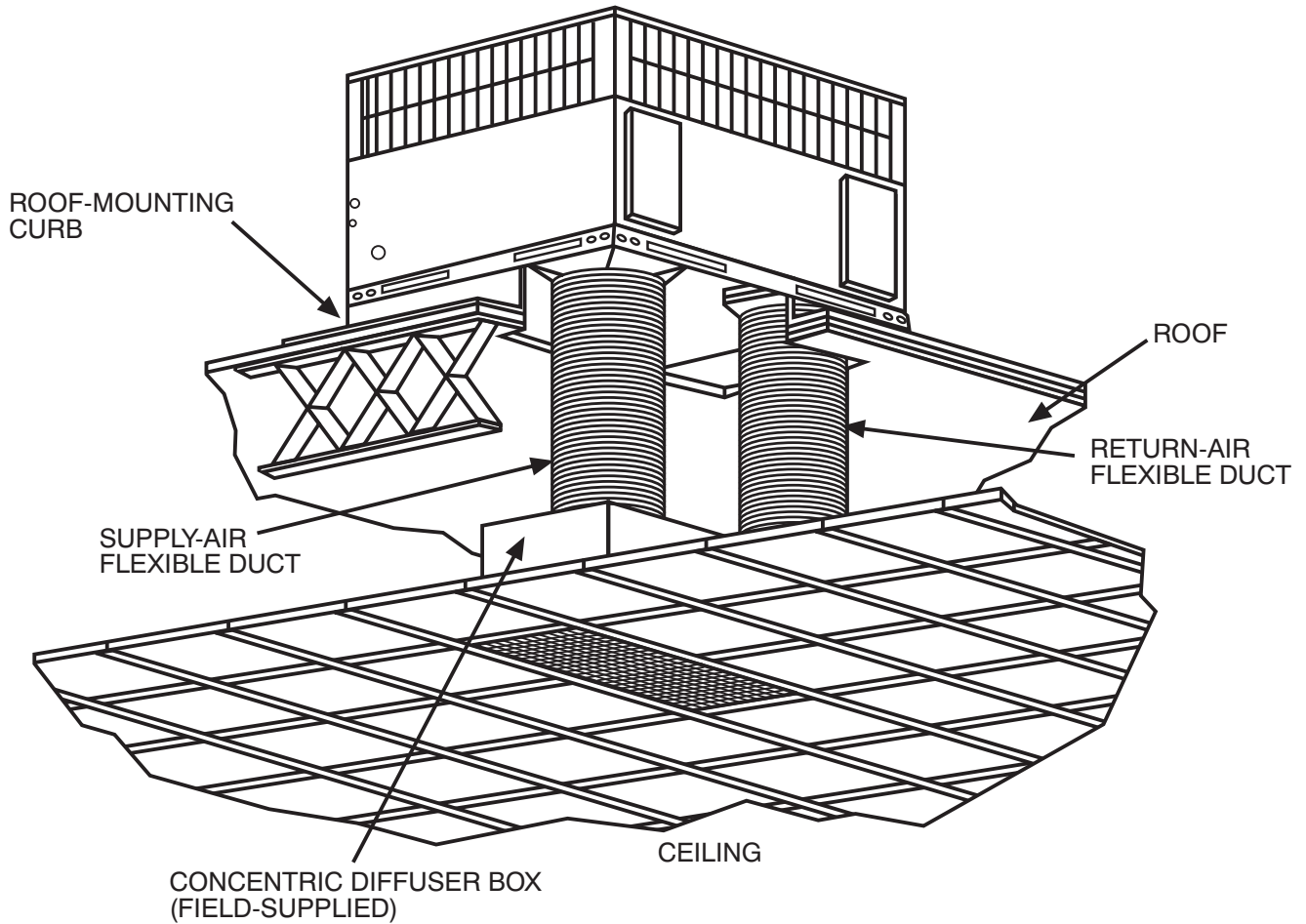
High Altitude Compensation, Natural Gas

Nameplate Input (Btu/hr)	Rated Heating Input (Btu/hr), Natural Gas at Installation Altitude Above Sea Level, U.S.A.*				
	0 to 2000 ft (0–610 m)	2001 to 3000 ft* (611 to 914 m)	3001 to 4000 ft (915 to 1219 m)	4001 to 5000 ft (1220 to 1524 m)	5001 to 6000 ft (1524 to 1829 m)
40000	40000	36000	34400	32800	31200
60000	60000	54000	51600	49200	46800
90000	90000	81000	77400	73800	70200
115000	115000	103500	98900	94300	89700
130000	130000	117000	111800	106600	101400

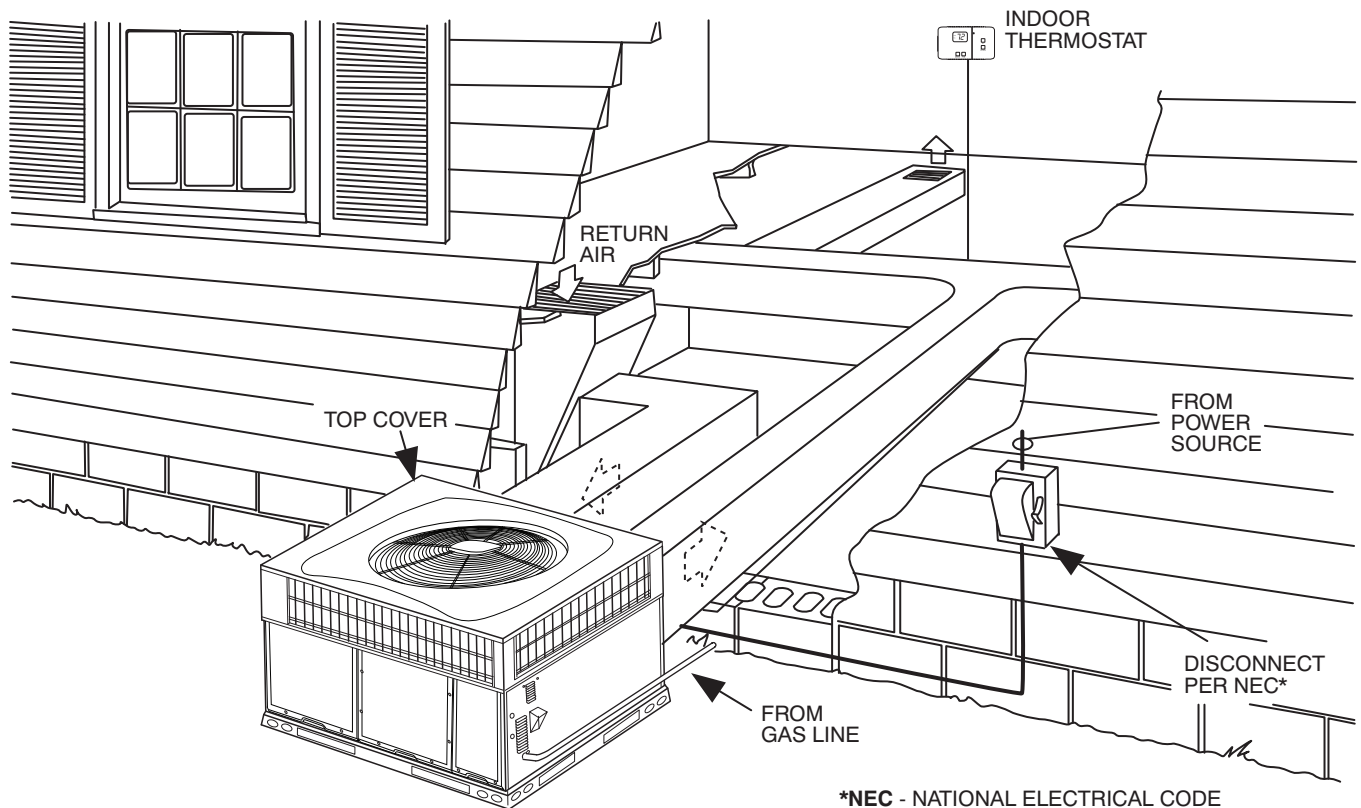
*In the U.S.A., the input rating for altitudes above 2000 ft (610m) must be reduced by 4% for each 1000 ft (305 m) above Sea level.
In Canada, the input rating for altitudes from 2001 to 4500 ft (611 to 1372 m) above sea level must be derated by 10% by an authorized gas conversion station or dealer.
For Canadian Installations from 2000 to 4500 ft (610–1372 m), use U.S.A. column 2001 to 3000 ft (611 to 914 m).

TYPICAL PIPING AND WIRING

674D--A



A09230



A09231

APPLICATION DATA

Condensate trap — A 2-in. (51 mm) condensate trap must be field supplied.

Ductwork — Secure downflow discharge ductwork to roof curb. For horizontal discharge applications, attach ductwork to unit with flanges.

To convert a unit to downflow discharge — Units are equipped with factory-installed inserts in the down-flow openings. Removal of the inserts is similar to removing an electrical knock-out. The unit is factory equipped with duct covers to seal the horizontal discharge openings in the unit. Units installed in horizontal discharge orientation do not require duct covers.

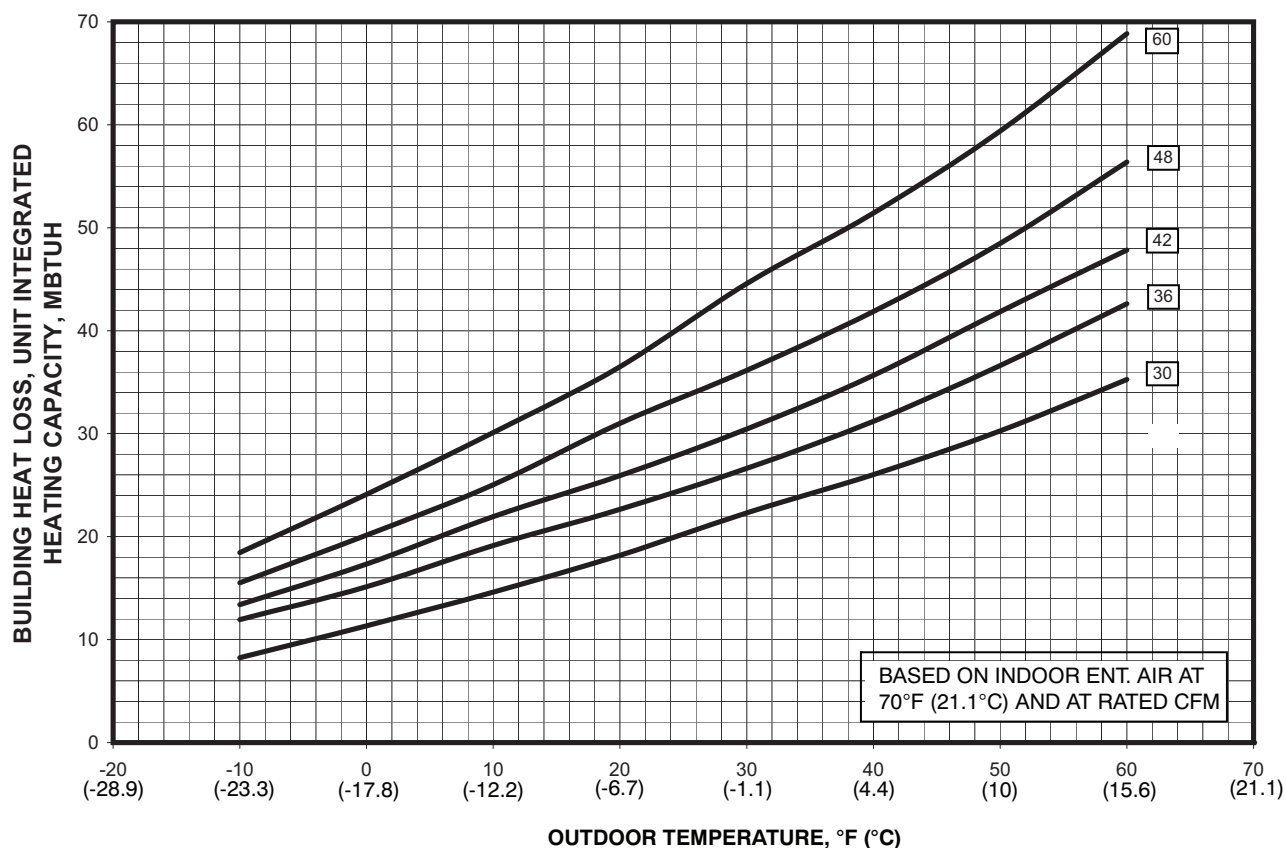
Maximum cooling airflow — To minimize the possibility of condensate blow-off from the evaporator, airflow through the units should not exceed 450 cfm per ton.

Minimum cooling airflow — Minimum cooling airflow is 350 cfm per ton in cooling mode. Airflow can be lower in certain modes when humidity removal is an issue.

Minimum ambient cooling operation temperature — All standard units have a minimum ambient cooling operating temperature of 55°F (12.8°C). With accessory low ambient temperature kit, units can operate at temperatures down to 0°F (-17.8°C).

Maximum operating outdoor air temperature for cooling is 125°F (51.7°C).

BALANCE POINT WORKSHEET



A150694

674D--A

ELECTRICAL DATA

UNIT	NOMINAL V-PH-HZ	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	IDM	POWER SUPPLY	
		MIN	MAX	RLA	LRA	FLA	FLA	FLA	MCA	HACR
674D--A30040	208/230-3-60	197	253	10.9	58	1.2	4.1	0.65	18.9	25
674D--A30060		197	253	10.9	58	1.2	4.1	1.65	18.9	25
674D--A36060		197	253	13	88	1.2	6	1.65	23.5	30
674D--A36090		197	253	13	88	1.2	6	0.52	23.5	30
674D--A42060		197	253	13.5	88	1.2	6	1.65	24.1	35
674D--A42090		197	253	13.5	88	1.2	6	0.65	24.1	35
674D--A48090		197	253	14.8	83.1	1.2	7.6	0.65	27.3	40
674D--A48115		197	253	14.8	83.1	1.2	7.6	1.65	27.3	40
674D--A48130		197	253	14.8	83.1	1.2	7.6	0.52	27.3	40
674D--A60090		197	253	18.4	110	1.2	7.6	0.65	31.8	45
674D--A60115		197	253	18.4	110	1.2	7.6	1.65	31.8	45
674D--A60130		197	253	18.4	110	1.2	7.6	0.52	31.8	45

LEGEND

FLA - Full Load Amps
 IDM - Inducer Motor
 IFM - Indoor Fan Motor
 LRA - Locked Rotor Amps
 MCA - Minimum Circuit Amps
 MOCP - Maximum Over Current Protection
 OFM - Outdoor Fan Motor
 RLA - Rated Load Amps

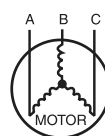
NOTES:

- In compliance with NEC (National Electrical Code) requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be Power Supply fuse or circuit breaker.
- Minimum wire size is based on 60 C copper wire. If other than 60 C wire is used, or if length exceeds wire length in table, determine size from NEC.
- Unbalanced 3-Phase Supply Voltage
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percentage of voltage imbalance

% Voltage imbalance

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

EXAMPLE: Supply voltage is 230-3-60.



AB = 228 v
 BC = 231 v
 AC = 227 v

$$\begin{aligned} \text{Average Voltage} &= \frac{228 + 231 + 227}{3} \\ &= \frac{686}{3} \\ &= 229 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 229 - 228 = 1 v
 (BC) 231 - 229 = 2 v
 (AC) 229 - 227 = 2 v

Maximum deviation is 2 v.

Determine percent of voltage imbalance

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{2}{229} \\ &= 0.8\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

IMPORTANT: If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

A06564

CONNECTION TYPICAL WIRING SCHEMATIC - 208/230-3-60

CONNECTION WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

SCHEMATIC
208/230-3-60

NOTES:

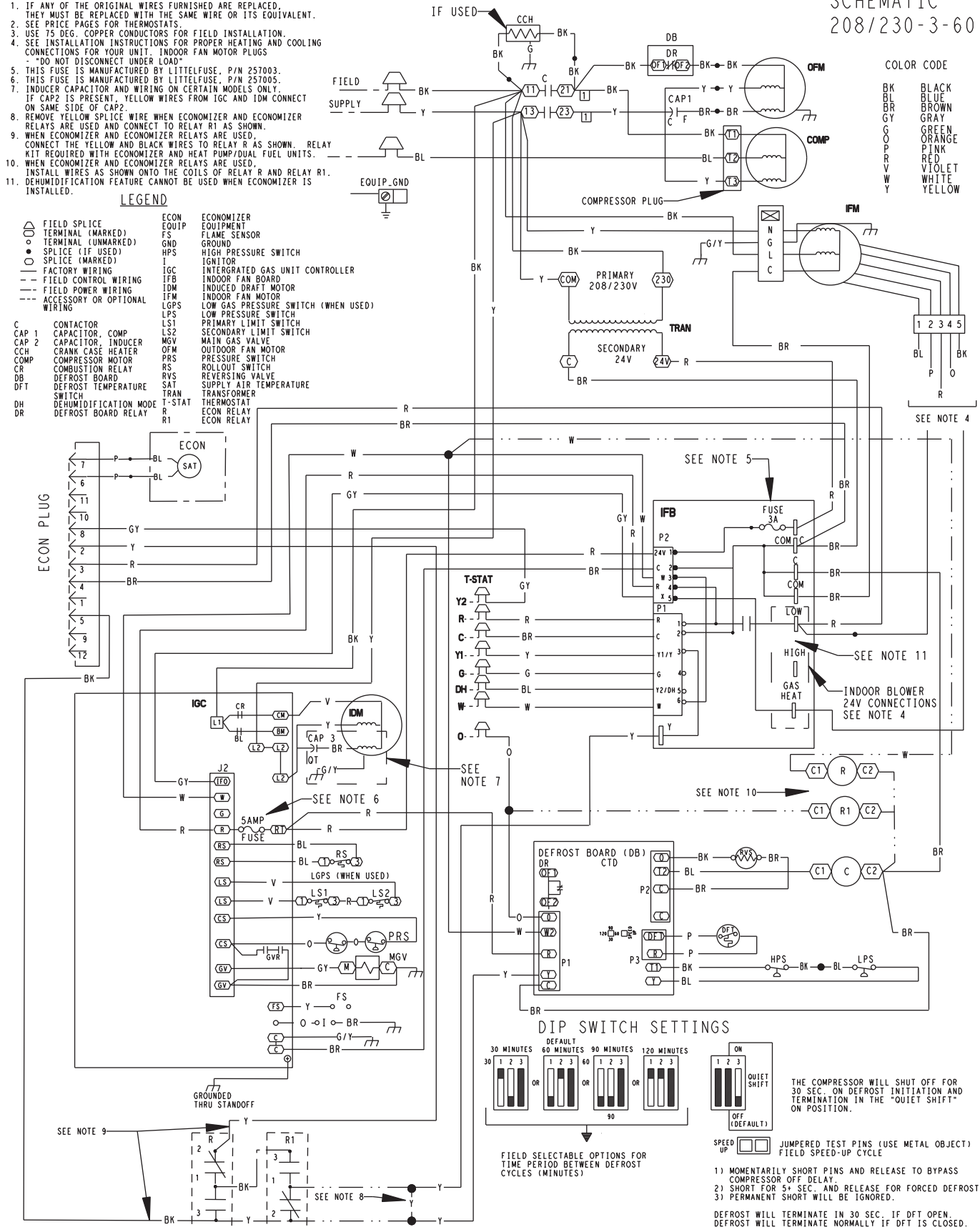
1. IF ANY OF THE ORIGINAL WIRES FURNISHED ARE REPLACED, THEY MUST BE REPLACED WITH THE SAME WIRE OR ITS EQUIVALENT.
2. SEE PRICE PAGES FOR THERMOSTATS.
3. USE 75 DEG. COPPER CONDUCTORS FOR FIELD INSTALLATION.
4. SEE INSTALLATION INSTRUCTIONS FOR PROPER HEATING AND COOLING CONNECTIONS FOR YOUR UNIT. INDOOR FAN MOTOR PLUGS - "DO NOT DISCONNECT UNDER LOAD"
5. THIS FUSE IS MANUFACTURED BY LITTELFUSE, P/N 257003.
6. THIS FUSE IS MANUFACTURED BY LITTELFUSE, P/N 257005.
7. INDUCER CAPACITOR AND WIRING ON CERTAIN MODELS ONLY. IF CAP2 IS PRESENT, YELLOW WIRES FROM IGC AND IDM CONNECT ON SAME SIDE OF CAP2.
8. REMOVE YELLOW SPICE WIRE WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED AND CONNECT TO RELAY R1 AS SHOWN.
9. WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED, CONNECT THE YELLOW AND BLACK WIRES TO RELAY R AS SHOWN. RELAY KIT REQUIRED WITH ECONOMIZER AND HEAT PUMP/DUAL FUEL UNITS.
10. WHEN ECONOMIZER AND ECONOMIZER RELAYS ARE USED, INSTALL WIRES AS SHOWN ONTO THE COILS OF RELAY R AND RELAY R1.
11. DEHUMIDIFICATION FEATURE CANNOT BE USED WHEN ECONOMIZER IS INSTALLED.

LEGEND

- | | |
|---|--|
| <p>FIELD SPICE
TERMINAL (MARKED)
TERMINAL (UNMARKED)
SPICE (IF USED)
SPICE (MARKED)
FACTORY WIRING
FIELD CONTROL WIRING
FIELD POWER WIRING
ACCESSORY OR OPTIONAL WIRING</p> | <p>ECON
EQUIP
EQUIPMENT
FS
FLAME SENSOR
GND
GROUND
HPS
HIGH PRESSURE SWITCH
IGC
INDUCER GAS UNIT CONTROLLER
IFB
INDOOR FAN BOARD
IDM
INDUCED DRAFT MOTOR
IFM
INDOOR FAN MOTOR
LPS
LOW GAS PRESSURE SWITCH (WHEN USED)
LPS
LOW PRESSURE SWITCH
LS1
PRIMARY LIMIT SWITCH
LS2
SECONDARY LIMIT SWITCH
MGV
MAIN GAS VALVE
OFM
OUTDOOR FAN MOTOR
PRS
PRESSURE SWITCH
RVS
ROLLOUT SWITCH
SAT
SUPPLY AIR TEMPERATURE
TRANS
TRANSFORMER
T-STAT
THERMOSTAT
ECON RELAY
ECON RELAY</p> |
|---|--|

COLOR CODE

- | | |
|----|--------|
| BK | BLACK |
| BL | BLUE |
| BR | BROWN |
| GY | GRAY |
| GR | GREEN |
| OR | ORANGE |
| PK | PINK |
| RD | RED |
| VT | VIOLET |
| WH | WHITE |
| YL | YELLOW |



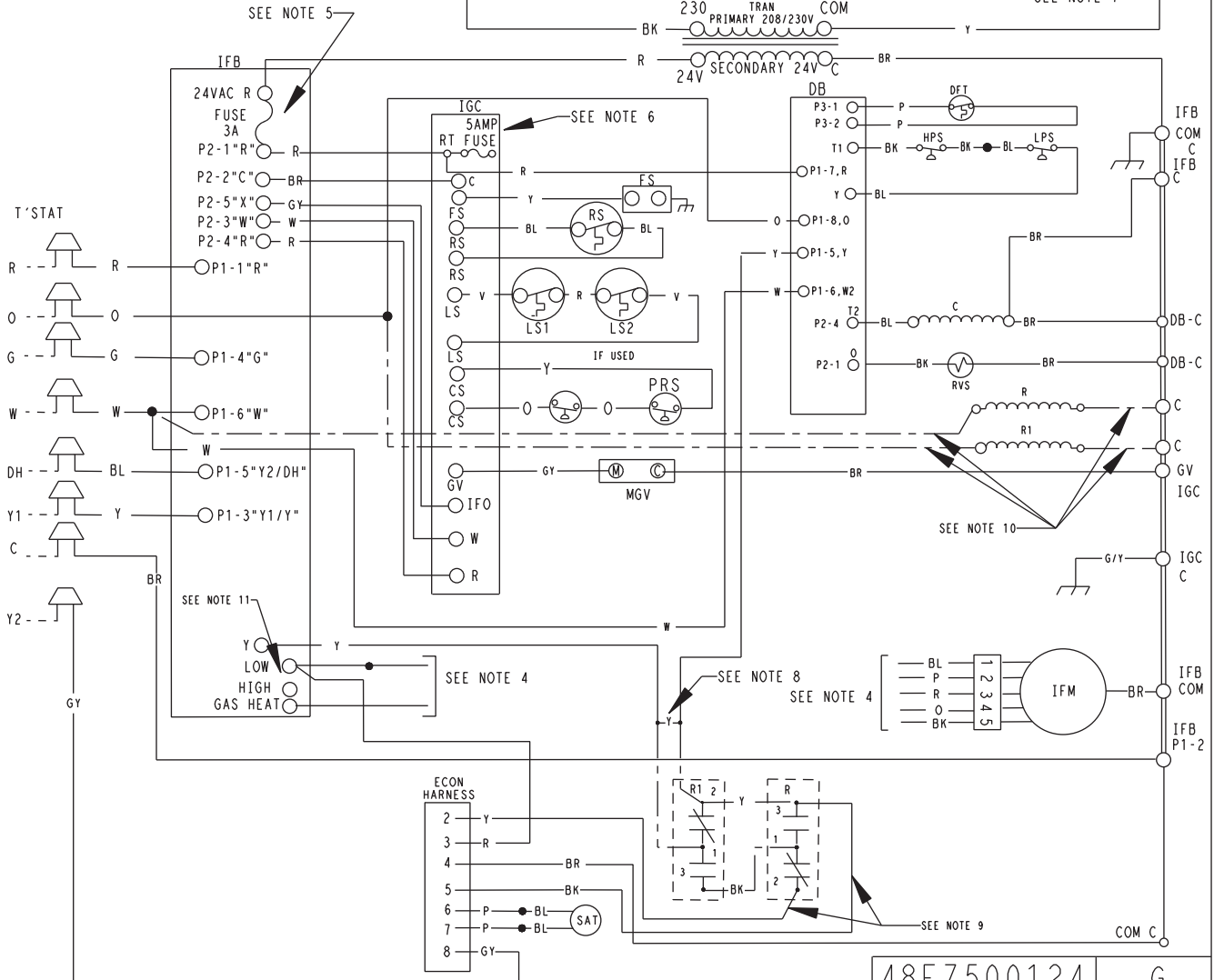
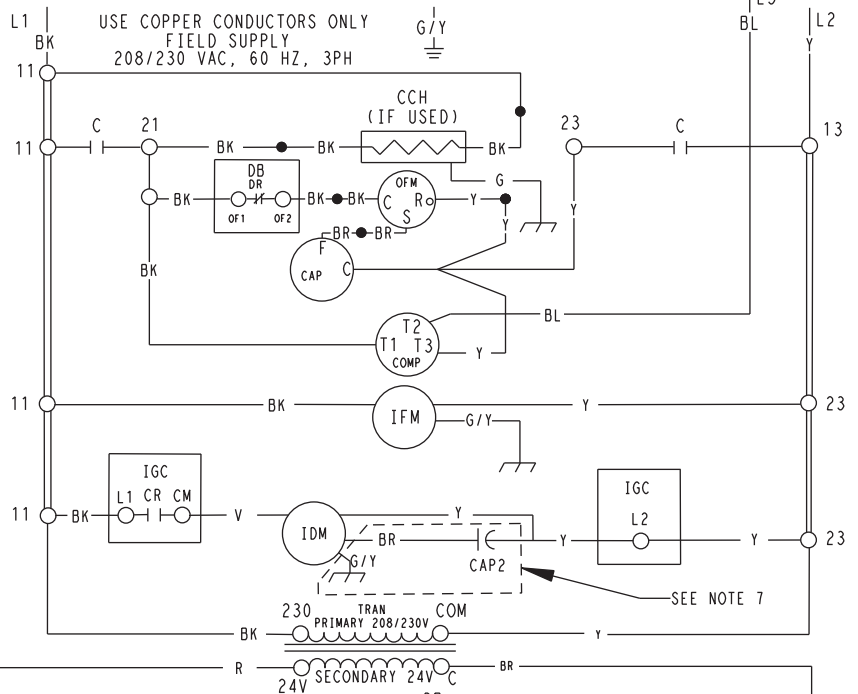
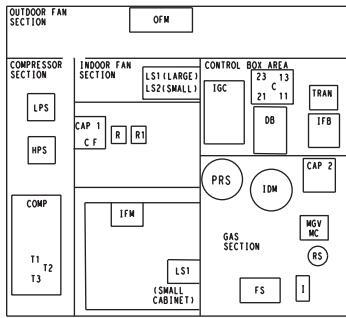
674D--A

LADDER TYPICAL WIRING SCHEMATIC - 208/230-3-60

LADDER WIRING DIAGRAM

DANGER: ELECTRICAL SHOCK HAZARD DISCONNECT POWER BEFORE SERVICING

3Ø UNIT COMPONENT ARRANGEMENT



48EZ500124

G

A10208L

CONTROLS

Operating sequence

When power is supplied to unit, the transformer (TRAN) is energized.

On units with crankcase heater, heater is also energized.

Cooling — With the thermostat subbase in the cooling position, the thermostat makes circuit “R” to “O”. This energizes the reversing valve solenoid (RVS) and places the unit in standby condition for cooling.

As the space temperature rises, the thermostat closes circuit “R” to “Y1/Y”. A circuit is made to contactor (C), starting the compressor (COMP) and outdoor-fan motor (OFM). Circuit “R” to “G” is made at the same time and starts the indoor-fan motor (IFM).

On the loss of the thermostat call for cooling, 24 V is removed from both the “Y1/Y” and “G” terminals (provided the fan switch is in the “AUTO” position) de-energizing the compressor contactor and opening the contacts supplying power to compressor/OFM. After a 90-second delay, the IFM shuts off. If the thermostat fan selector switch is in the “ON” position, the IFM will run continuously.

Heating - On a call for heating, terminal “W” of the thermostat is energized, starting the induced-draft motor. When the pressure switch senses that the induced-draft motor is moving sufficient combustion air, the burner sequence begins. This function is performed by the integrated gas unit controller (IGC). The indoor (evaporator)-fan motor is energized 45 sec after flame is established. When the thermostat is satisfied and “W” is de-energized, the burners stop firing and the indoor (evaporator) fan motor shuts off after a 45-sec time-off delay. Please note that the IGC has the capability to automatically reduce the indoor fan motor on delay and increase the indoor fan motor off delay in the event of high duct static and/or partially-clogged filter.

Heat Pump Heating — On a call for heat, thermostat makes circuits “R” to “Y1/Y” and “R” to “G”.

A circuit is made to C, starting COMP and OFM. Circuit “R” to “G” is also completed, starting IFM.

Defrost — Defrost board (DB) is a time and temperature control, which includes a field-selectable time period (dip switch 1 and 2 on the board) between checks for defrost (30, 60, 90, or 120 minutes). Electronic timer and defrost cycle start only when contactor is energized and defrost thermostat (DFT) is closed.

The defrost board is also equipped with a third dip switch for selecting Quiet Shift operation. The Quiet Shift operation turns compressor off at defrost initiation and termination. Unit is factory shipped with quiet shift turned off.

Defrost mode is identical to cooling mode, except outdoor fan motor stops and gas heat turns on to warm air supplying the conditioned space. After defrost cycle, gas heat stays on to meet the demand cycle.

NOTE:

1. Compressor time delay occurs through the defrost control board.
2. Defrost control board has built in 5 minute compressor delay; once the compressor has started and then stopped, it cannot be restarted again until 5 minutes have elapsed.

GUIDE SPECIFICATIONS

Packaged Hybrid Heat Units Constant Volume Application

HVAC Guide Specifications

Size Range: 2 1/2 to 5 Tons, Nominal Cooling
40,000 to 130,000 Btuh,
Nominal Heating Input

Model Number: 674D--A

Part 1—General

SYSTEM DESCRIPTION

Outdoor, packaged, air-to-air heat pump unit utilizing a hermetic scroll compressor for cooling duty and optional electric heating. Unit shall discharge supply air vertically or horizontally as shown on contract drawings. Outdoor fan/coil section shall have a draw-thru design with vertical discharge for minimum sound levels.

QUALITY ASSURANCE

- A. Unit shall be rated in accordance with AHRI Standards 210/240 and 270-1995.
- B. Unit shall be designed in accordance with UL Standard 1995 and ANSI Z21.47.
- C. Unit shall be manufactured in a facility registered to ISO 9001 manufacturing quality standard.
- D. Unit shall be UL listed and c-UL certified as a total package for safety requirements.
- E. Roof curb shall be designed to conform to NRCA Standards.
- F. Insulation and adhesives shall meet NFPA 90A requirements for flame spread and smoke generation.
- G. Cabinet insulation shall meet ASHRAE Standard 62P.

DELIVERY, STORAGE AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

Part 2 — Products

EQUIPMENT

A. General:

Factory-assembled, single-piece, heat pump unit. Contained within the enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-410A), and special features required prior to field start-up.

B. Unit Cabinet:

- 1. Unit cabinet shall be constructed of phosphated, zinc-coated, pre-painted steel capable of withstanding 500 hours of salt spray.
- 2. Normal service shall be through a single removable cabinet panel.
- 3. The unit shall be constructed on a rust proof unit base that has an externally trapped, integrated sloped drain.
- 4. Indoor fan compartment top surface shall be insulated with a minimum 1/2-in. (13 mm) thick, flexible fiberglass insulation, coated on the air side and retained by adhesive and mechanical means. The indoor wall sections will be insulated with a minimum semi-rigid, foil-faced board capable of being wiped clean. Aluminum foil-faced fiberglass insulation shall be used in the entire indoor air cavity section.
- 5. Unit shall have a field-supplied condensate trap.
- 6. Metal Insulated Duct Covers for side discharge will be standard on all sizes.
- 7. Unit insulation conforms to ASHRAE 62P.

C. Fans:

- 1. The evaporator fan motor shall be ECM Motor.
- 2. Fan wheel shall be made from steel, be double-inlet type with forward-curved blades with corrosion resistant finish. Fan wheel shall be dynamically balanced.
- 3. Outdoor fan shall be direct-drive, propeller-type with aluminum blades riveted to corrosion resistant steel spiders, be dynamically balanced, and discharge air vertically.

D. Compressor:

- 1. Fully hermetic compressors with factory-installed vibration isolation.
- 2. Scroll compressors shall be standard on all units.
- 3. Compressor Protection:
Defrost control shall protect compressor by preventing "short cycling."

E. Coils:

Indoor and outdoor coils shall have aluminum plate fins mechanically bonded to seamless copper tubes with all joints brazed. Tube sheet openings shall be belled to prevent tube wear.

F. Refrigerant Metering Device:

Refrigerant metering device shall be thermostatic expansion valve for cooling, and fixed orifice for heating.

G. Filters:

Filter section shall consist of field-installed, throwaway, 1-in. (25 mm)- thick fiberglass filters of commercially available sizes.

H. Controls and Safeties:

- 1. Unit controls shall be complete with a self-contained, low-voltage control circuit.
- 2. Units shall incorporate an internal compressor protector that provides reset capability.

I. Operating Characteristics:

- 1. Unit shall be capable of starting and running at 125°F (51.7°C) ambient outdoor temperature.
- 2. Compressor with standard controls shall be capable of operation down to 40°F (4.4°C) ambient outdoor temperature in cooling mode.
- 3. Unit shall be provided with 90-second fan time delay after the thermostat is satisfied.

J. Electrical Requirements:

All unit power wiring shall enter the unit cabinet at a single location.

GUIDE SPECIFICATIONS (CONT)

K. Motors:

1. Compressor motors shall be of the refrigerant-cooled type with line-break thermal and current overload protection.
2. All fan motors shall have permanently lubricated bearings, and inherent, automatic reset, thermal overload protection.
3. Condenser fan motor shall be totally enclosed.
4. Evaporator Fan Motor to be ECM Motor.

L. Low NOx:

Shall provide NOx reduction to values below 40 nanograms/joule to meet California's and other localities' emission requirements as shipped from factory.

M. Compressor Protection:

Solid-state control shall protect compressor by preventing "short cycling."

N. Special Features Available

1. Coil Options
Base unit with tin plated indoor coil hairpins available as a factory installed option.
2. Compressor Start Kit
Shall provide additional starting torque for single-phase compressors.
3. Thermostat:
To provide for Hybrid heat two stage heating and one stage cooling in addition manual or automatic changeover and indoor fan control.
4. Crankcase Heater:
Shall provide anti-floodback protection for lowload cooling applications.
5. Economizer:
(Horizontal - field installed accessory)
(Vertical - field installed accessory or factory installed option)
 - a. Economizer controls capable of providing free cooling using outside air.
 - b. Equipped with low leakage dampers not to exceed 3% leakage, at 1.0 IN. W.C. pressure differential.
 - c. Spring return motor shuts off outdoor damper on power failure.

6. Filter Rack Kit:

Shall provide filter mounting for downflow applications. Offered as an accessory or as a factory installed option.

7. Flat Roof Curb:

Curbs shall have seal strip and a wood nailer for flashing and shall be installed per manufacturer's instructions.

8. Flue Discharge Deflector

Shall direct flue gas exhaust 90 degrees upward from current discharge, available as a field installed accessory.

9. Heat Exchanger

Stainless Steel Heat Exchanger available as a factory installed option.

10. High Altitude Propane Conversion Kit

Shall consist of all required hardware to convert to propane gas heat operation at 2001 to 6000 ft (611 to 1829 m) above sea level.

11. Low Ambient Package:

Shall consist of a solid-state control and outdoor coil temperature sensor for controlling outdoor-fan motor operation, which shall allow unit to operate down to 0°F (17°C) outdoor ambient temperature.

12. Louver Metal Outdoor Coil Grilles provide hail and vandalism protection.

13. Manual Outdoor Air Damper:

Package shall consist of damper, birdscreen, and rainhood which can be preset to admit outdoor air for year-round ventilation.

14. Natural-to-Propane Conversion Kit:

Shall be complete with all required hardware to convert to propane gas operation at standard altitude (0 to 2000 ft [0 to 610 m] above sea level).

15. Propane-to-Natural Conversion Kit:

Shall be complete with all hardware to convert to natural gas at standard altitude (0 to 2000 ft [0 to 610 m] above sea level).

16. Square-To-Round Duct Transitions (24-48 size):

Shall have the ability to convert the supply and return openings from rectangular to round.

