

**City of Portland, Maine - Building or Use Permit Application**

389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 04-0149	Issue Date:	CBL: 032 F005001
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Location of Construction: 363 Fore St	Owner Name: Soley Joseph L	Owner Address: Po Box 4894	Phone:
Business Name: n/a	Contractor Name: Portland Airconditioning, Inc.	Contractor Address: 205 Lincoln St. S. Portland	Phone 2077674567
Lessee/Buyer's Name n/a	Phone: n/a	Permit Type: HVAC	Zone: B3

Past Use: Commercial	Proposed Use: Commercial / Install Electric Air handler above ceiling <i>Franklin Donuts</i>	Permit Fee: \$165.00	Cost of Work: \$15,200.00	CEO District: 1
		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group: Type:	

Proposed Project Description:  
Install Electric Air handler above ceiling

*Application has been abandoned & expired 1/24/08*

Signature: *MM* Signature:

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)  
Action:  Approved  Approved w/Conditions  Denied  
Signature: Date:

Permit Taken By: gg	Date Applied For: 02/20/2004	<b>Zoning Approval</b>
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<p>1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules.</p> <p>2. Building permits do not include plumbing, septic or electrical work.</p> <p>3. Building permits are void if work is not started within six (6) months of the date of issuance. False information may invalidate a building permit and stop all work..</p>	<p><b>Special Zone or Reviews</b></p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input type="checkbox"/> Subdivision</p> <p><input type="checkbox"/> Site Plan</p> <p>Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/></p> <p>Date: <i>2/26/04</i></p>	<p><b>Zoning Appeal</b></p> <p><input type="checkbox"/> Variance</p> <p><input type="checkbox"/> Miscellaneous</p> <p><input type="checkbox"/> Conditional Use</p> <p><input type="checkbox"/> Interpretation</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Denied</p> <p>Date:</p>	<p><b>Historic Preservation</b></p> <p><input type="checkbox"/> Not in District or Landmark</p> <p><input type="checkbox"/> Does Not Require Review</p> <p><input type="checkbox"/> Requires Review</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Approved w/Conditions</p> <p><input type="checkbox"/> Denied</p> <p><i>Any extension work requires a sep. review &amp; approval</i></p> <p>Date: <i>Requires A Sep.</i></p>
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**CERTIFICATION**

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

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389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

<b>Permit No:</b> 04-0149	<b>Date Applied For:</b> 02/20/2004	<b>CBL:</b> 032 F005001
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<b>Location of Construction:</b> 363 Fore St	<b>Owner Name:</b> Soley Joseph L	<b>Owner Address:</b> Po Box 4894	<b>Phone:</b>
<b>Business Name:</b> n/a	<b>Contractor Name:</b> Portland Airconditioning, Inc.	<b>Contractor Address:</b> 205 Lincoln St. S. Portland	<b>Phone:</b> (207) 767-4567
<b>Lessee/Buyer's Name:</b> n/a	<b>Phone:</b> n/a	<b>Permit Type:</b> HVAC	

<b>Proposed Use:</b> Commercial - Dunkin' Donuts / Install Electric Air handler above ceiling	<b>Proposed Project Description:</b> Sunkin' Donuts: install Electric Air handler above ceiling.
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<b>Dept:</b> Zoning	<b>Status:</b> Approved	<b>Reviewer:</b> Marge Schmuckal	<b>Approval Date:</b> 02/26/2004
<b>Note:</b>			<b>Ok to Issue:</b> <input checked="" type="checkbox"/>
<b>Dept:</b> Building	<b>Status:</b> Pending	<b>Reviewer:</b> Mike Nugent	<b>Approval Date:</b>
<b>Note:</b>			<b>Ok to Issue:</b> <input type="checkbox"/>
<b>Dept:</b> Fire	<b>Status:</b> Approved	<b>Reviewer:</b> Lt. MacDougal	<b>Approval Date:</b> 02/26/2004
<b>Note:</b>			<b>Ok to Issue:</b> <input checked="" type="checkbox"/>

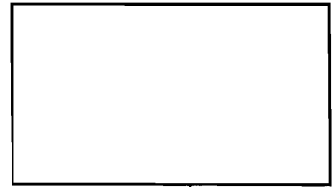
**Comments:**  
03/01/2004-mjn: need engineering for floor loads etc.....advised applicant

*1/14/08  
Expired + abandoned  
Application*



FILL IN AND SIGN WITH INK

# APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



032F005

To the INSPECTOR OF BUILDINGS, PORTLAND, ME.

The undersigned hereby applies for a permit to install the following heating, cooking or power equipment in accordance with the Laws of Maine, the Building Code of the City of Portland, and the following specifications:

Location / CBL 363 Fore St Portland, ME Use of Building Dunkin Donuts Date 02/20/07

Name and address of owner of appliance Danny Bozianis, 363 Fore St  
Portland, ME

Installer's name and address Portland Airconditioning, Inc  
205 Lincoln Street, Portland, ME 04106 Telephone 207.767.4567

### Location of appliance:

- Basement
- Attic
- Air handler above ceiling
- Floor
- Roof - Covered walk

### Type of Fuel:

- Gas
- Electric
- Oil
- Solid

Appliance Name: Bryant

U.L. Approved  Yes  No

Will appliance be installed in accordance with the manufacture's installation instructions?  Yes  No

IF NO Explain: \_\_\_\_\_

### The Type of License of Installer:

- Master Plumber # \_\_\_\_\_
- Solid Fuel # \_\_\_\_\_
- Oil # \_\_\_\_\_
- Gas # FNT434
- Other \_\_\_\_\_

### Type of Chimney: N/A

- Masonry Lined  
Factory built \_\_\_\_\_
- Metal  
Factory Built U.L. Listing # \_\_\_\_\_
- Direct Vent  
Type \_\_\_\_\_ UL# \_\_\_\_\_

### Type of Fuel Tank

- Oil
- Gas
- electric

Size of Tank N/A

Number of Tanks N/A

Distance from Tank to Center of Flame N/A feet.

Cost of Work: \$ 15,200.00

Permit Fee: \$ 165.00

### Approved

### Approved with Conditions

Fire: ELM7  
Ele.: \_\_\_\_\_  
Bldg.: \_\_\_\_\_

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer [Signature]



P.O. BOX 10300 ☐ PORTLAND, MAINE 04104 ☐ TEL (207) 767-4567 ☐ FAX (207) 767-4566

February 20, 2004


City of Portland  
Inspections Department  
389 Congress Street  
Portland , Maine

Ladies and Gentlemen,

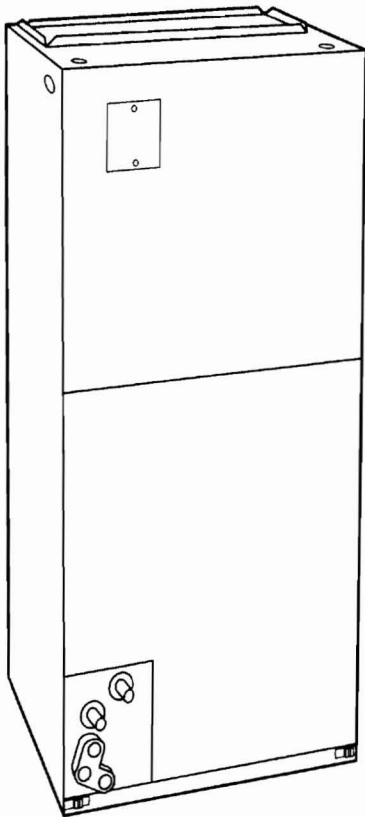
The HVAC system at 363 Fore Street, first floor will consist of two 3.5 ton capacity electric/electric heat pumps. The air handler portion shall hang from the building joist by all thread rod and vibration isolators with an auxiliary drain pan for condensate protection. The condensing unit shall be located on the roof set in a row next to the existing eight condensing units. ACR type refrigeration piping shall be run from the air handler to the condensing unit in an existing mechanical chase. The pipes shall penetrate the roof through a rubber roof boot.

Please feel free to call with any questions or concerns.

Sincerely,



PORTLAND AIRCONDITIONING, INC.  
Kathryn A. E. Mooney  
Project Manager



### Air Handling Technology At Its Finest

The FA4A, FB4A, and FC4B direct expansion fan coils are designed to cover a wide range of air handling requirements. They are compact and ready to fit where needed—in the basement, crawl-space, attic, utility room, or closet.

All units come with solid-state fan controls, 1-in. thick insulation with an R value of 4.2, super-quiet multispeed motors, and fully wettable coils. Units can accommodate factory- or field-installed heaters from 3- to 30-kw.

The FA4A is a residential new construction (RNC) model available with or without factory-installed disconnects. It has an embossed galvanized insulated steel casing, 2-speed motor in 018 through 036 sizes, and 3-speed motor in 042 through 060 sizes. The FA4A is equipped with a Check-Flo-Rater® metering device.

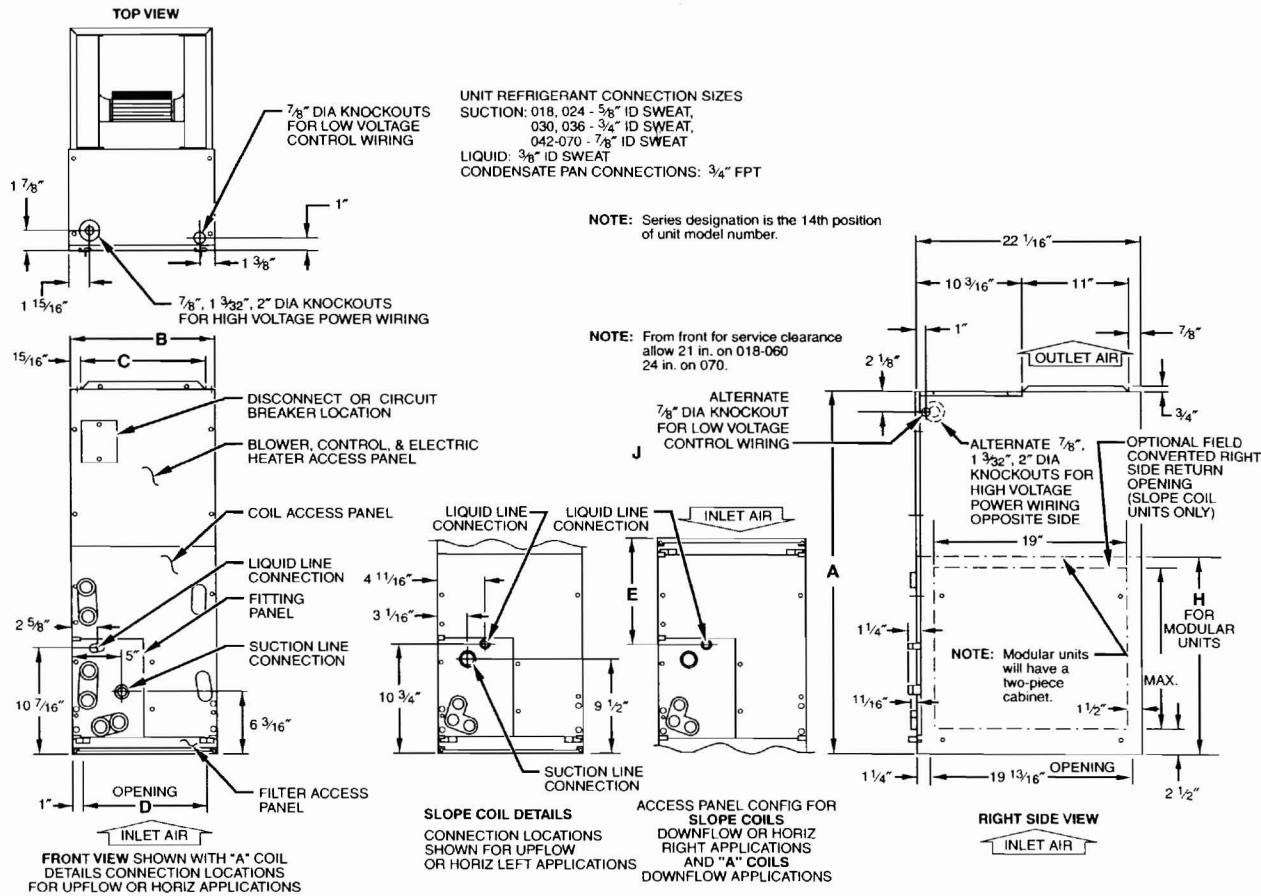
The FB4A is a standard fan coil. It comes in a prepainted galvanized steel casing with 1-in. thick insulation and has a 3-speed motor in the full range of sizes 018 through 070. All FB4A units are equipped with a Check-Flo-Rater® metering device and are also shipped with a cleanable, permanent framed filter.

The FC4B is a deluxe design fan coil incorporating all the features found in the FB4A. In addition, it has a hard shut-off thermostatic expansion valve (TXV) metering device with internal check valve for reverse-flow bypass capability. The FC4B is available in sizes 024 through 070.

## SPECIFICATIONS Continued

UNIT SIZE-SERIES	661C04/-C/D	195/197	661C042-F/G
Operating Weight (Lb)	195/197		
<b>ELECTRICAL</b>			
Unit Volts—Hertz—Phase	208-230—60—1	208/230—60—3	460—60—3
Operating Voltage Range*	197—253	197—253	414—506
Compressor— Rated Load Amps	24.4/22.9	17.4/16.4	8.01/8.4
Locked Rotor Amps	115.0/127.0	90.0/88.0	45.0/44.0
Condenser Fan Motor—Full Load Amps	1.4		0.8
Min Unit Ampacity for Wire Sizing	31.9/30.0	23.2/21.9	10.8/11.3
Min Wire Size (60°C Copper) (AWG)†	8/10	12	14
Min Wire Size (75°C Copper) (AWG)†	10	12	14
Maximum Length (60°C) (Ft)‡	97/67	60/66	165/152
Maximum Length (75°C) (Ft)‡	59/63	57/63	157/144
Max Branch Circuit Fuse Size**	50	35/30	15
<b>COMPRESSOR AND REFRIGERANT</b>			
Compressor— Manufacturer	Millennium/Copeland		Millennium/Copeland
Type	Scroll		
Refrigerant Charge (Lb) @ 15 ft	7.88		
<b>OUTDOOR COIL &amp; FAN</b>			
Coil Face Area (Sq Ft)	18.5		
Fins per In.—Rows—Circuits	20—1—4		
Fan Motor HP and RPM	1/4 and 1100		
Rated Airflow (CFM)	3000		
<b>OPTIONAL EQUIPMENT</b>			
Heat Pump Risers	P165-0001(RCD) (2 REQ'D/UNIT)		
Time-Delay Relay	KAATD0101TDR		
Interface Control (Energy Minder)	KHAIC0101AAA		
Outdoor Thermostat	KHAOT0301FST		
Secondary Outdoor Thermostat	KHAOT0201SEC		
Cycle Protector	KSACY0101AAA		
Crankcase Heater	KAACH1201AAA	Standard	
Compressor-Start Assist—Capacitor/Relay Type	KSAHS1501AAA	N/A	
Compressor Start Assist—PTC Type	KAACS0201PTC	N/A	
Sound Hood	KSASH1901CYL/KSASH0601COP	KSASH1901CYL/KSASH0601COP	
Bi-Flow TXV Kits (Hard Shutoff)††	KSATX0601HSO		
Bi-Flow TXV Kits (RPB)	KHATX0501RPB		
High-Pressure Switch	KHAHI0101HPS		
Bi-Flow Filter Drier (Liquid Line)	P504-8163S (RCD)		
Evaporator Freeze Thermostat	KAAFT0101AAA		
Isolation Relay†††	KHAIR0101AAA		
Liquid-Line Solenoid Valve (LSV)	KHALS0401LLS		
Low-Ambient Pressure Switch	KSALA0201R22		
MotorMaster® Control***	32LT660004 (RCD)	32LT66005 (RCD)	
Ball Bearing Fan Motor	HC40GE232 (RCD)	HC40GE462 (RCD)	
Inlet Grille Kit—4 pack	KSABG2004CMD		
Thermostat—Auto Changeover, Non-Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool	TSTATBBNHP01-B		
Thermostat—Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat, 1-Stage Cool	TSTATBBPHP01-B		
Thermostat—Auto Changeover, Non-Programmable, °F/°C, Dual Fuel†††† Must be used with Outdoor Sensor (TSTATXXSEN01-B)	TSTATBBPDF01-B		
Thermostat™ Control—Programmable Thermostat with Humidity Control	TSTATBBPRH01-B		
Builder's Thermostat—Manual Changeover, Non-Programmable, °F, 2-Stage Heat, 1-Stage Cool	TSTATBBBHP01		
Outdoor Air Temperature Sensor	TSTATXXSEN01-B		
Backplate for Non-Programmable Thermostat	TSTATXXNBP01		
Backplate for Programmable Thermostat	TSTATXXPP01		
Backplate for Builder's Thermostat	TSTATXXBHP01		
Thermostat Conversion Kit (4 to 5 wire)—10 Pack	TSTATXXCNV10		

See notes on page 9.



**DIMENSIONS**

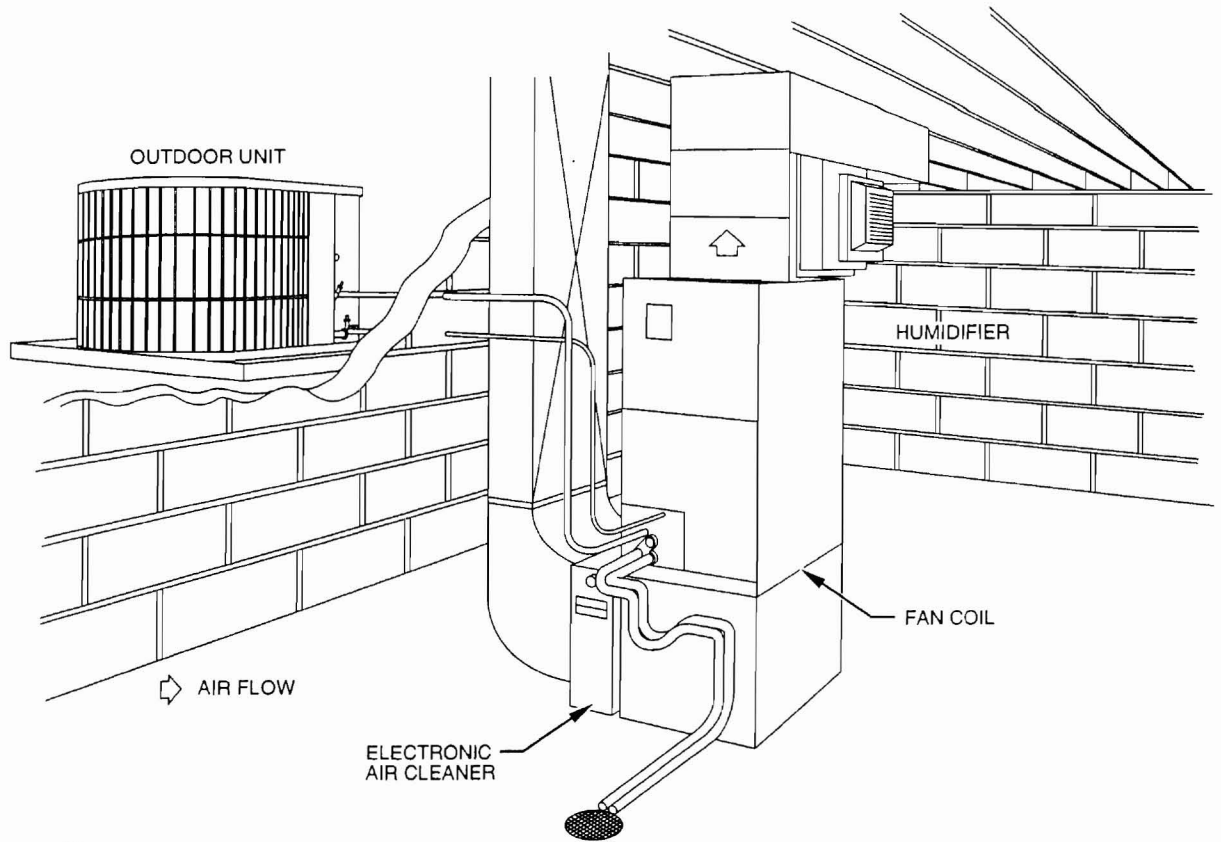
UNIT SIZE*	COIL TYPE	A		B		C		D		E		H†		J	
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
018, 024	Slope	42-11/16	1084.3	14-5/16	363.5	12-7/16	316.0	12-5/16	312.7	10-7/16	265.1	—	—	12.0	304.8
030	Slope	47-11/16	1211.5	17-5/8	447.5	15-3/4	400.1	15-5/8	396.9	15-3/8	390.5	—	—	17.0	431.8
036	Slope	49-5/8	1260.5	17-5/8	447.5	15-3/4	400.1	15-5/8	396.9	15-3/8	390.5	—	—	17.0	431.8
042	Slope	53-7/16	1357.3	21-1/8	536.5	19-1/4	489.0	19-1/8	485.8	19-3/16	487.0	28-5/16	719.1	19.0	482.6
048	A	49-5/8	1260.5	21-1/8	536.5	19-1/4	489.0	19-1/8	485.8	15-11/16	398.3	24-1/2	622.3	—	—
048 MODULAR UNITS	A	53-7/16	1357.3	21-1/8	536.5	19-1/4	489.0	19-1/8	485.8	19-1/2	495.3	28-5/16	719.1	—	—
038, 060	A	53-7/16	1357.3	21-1/8	536.5	19-1/4	489.0	19-1/8	485.8	19-1/2	495.3	28-5/16	719.1	—	—
054, 070	A	59-3/16	1503.4	24-11/16	627.0	22-3/4	577.9	22-11/16	576.2	25-1/4	641.5	34-1/16	685.2	—	—

A00128

\* Descriptions and dimensions apply to all versions (FA4A, FB4A, and FC4B), unless otherwise specified.

† Applicable to modular units only.

# MATCHED SYSTEM



A96416



SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE  
WITH INSTALLATION INSTRUCTIONS

Cancel: PDS FA4A.18.8



### FACTORY-INSTALLED HEATER OPTIONS\*\*

	018	024	030	036	042	048	060
FA4ANF	5, 8, 10	5, 8, 10	5, 8, 10, 15	5, 8, 10, 15	8, 10, 15	8, 10, 15	10
FA4ANC*	5, 8, 10	5, 8, 10	5, 8, 10	5, 8, 10	8, 10	8, 10	10
FB4ANF	5, 8, 10	5, 8, 10	5, 8, 10, 15	5, 8, 10, 15	8, 10, 15	8, 10, 15	10

\* U includes factory-installed disconnect

\*\* For field-installed heater/fan coil combinations, see Electric Heaters on pg. 11.

### FAN COIL ELECTRICAL DATA (UNITS WITHOUT ELECTRICAL HEAT)

UNIT SIZE	VOLTS (1 PHASE)	FLA‡	MIN CKT AMPS	BRANCH CIRCUIT	
				Min Wire Size Awg*	Fuse Amps
018	208/230	1.5	1.9	14	15
024	208/230	1.8	2.3	14	15
030	208/230	2.4	3.0	14	15
036, 038	208/230	2.7	3.4	14	15
042, 054	208/230	2.9	3.7	14	15
048	208/230	4.3	5.4	14	15
060, 070	208/230	5.4	6.8	14	15
070	208/230	5.2	6.5	14	15

\* Use copper wire only. Use 75°C only in this application. When using non-metallic (NM) sheathed cable, wire size required should be based on that of 60°C conductors, instead of wire sizes shown in table above per NEC Article 336-26.

‡ Based on FB4A.

FLA — Full Load Amps

NOTE: If branch circuit wire length exceeds 100 ft, consult NEC 215-2 to determine maximum wire length. Use 2% voltage drop.

### ELECTRIC HEATER INTERNAL PROTECTION\*

HEATER KW	PHASE	FUSE QTY/SIZE	CKT BKR QTY/SIZE†
3	1	—	—
5	1	—	1/60
8	1	—	1/60
10	1	—	1/60
15	1	2/30–2/60	2/60
20	1	4/60	2/60
24	3/1	6/60	—
30	3/1	6/60	—
9	1/3	—	—
15	3	—	—
18	3	—	—

\* 5-, 8-, 10-kw factory-installed heat has no internal protection. 15-kw factory-installed heat is internally protected with fuses.

† Circuit breakers are 2 pole.

### ESTIMATED SOUND POWER LEVEL (dBA)

UNIT SIZE	CONDITIONS			OCTAVE BAND CENTER FREQUENCY*						
	CFM	Ext Static Pressure	Motor Rpm	63	125	250	500	1000	2000	4000
018	650	0.25	950	63	59	55	54	50	48	44
024	875	0.25	1075	64	60	56	53	53	49	45
030	1075	0.25	1075	65	61	57	54	54	50	46
036, 038	1300	0.25	1075	66	62	58	55	50	47	43
042, 054	1530	0.25	1075	67	63	59	56	56	52	48
048	1750	0.25	1075	67	63	59	56	56	52	48
060	2000	0.25	1100	68	64	60	57	57	53	49
070	2000	0.25	1075	68	64	60	57	57	53	49

\* Estimated sound power levels have been derived using the method described in the 1987 ASHRAE HVAC Systems & Applications Handbook, Chapter 52, p. 52.7.

## GROSS COOLING CAPACITIES (MBH) Continued

UNIT	EVAPORATOR AIR CFM AND BF	COIL REFRIGERANT TEMPERATURE (°F)*														
		35			40			45			50			55		
		72	67	62	72	67	62	72	67	62	72	67	62	72	67	62
FA4A, FB4A 060 FC4B 038, 060	1300	91	74	60	81	65	51	72	55	41	60	44	31	48	31	26
	0.03	43	45	48	38	41	43	35	37	38	30	32	31	25	27	28
	1600	104	85	69	94	76	59	83	64	47	70	51	38	55	37	31
	0.05	49	53	57	45	49	51	40	44	45	35	38	38	30	32	31
	1750	109	91	73	99	80	63	87	68	51	74	54	41	58	39	33
	0.05	52	57	61	47	52	55	43	47	49	38	41	41	32	35	33
FB4A 070 FC4B 054, 070	2000	117	97	80	106	86	68	94	74	56	80	59	45	64	43	38
	0.06	56	62	67	51	57	61	48	51	54	41	45	45	35	39	38
	1300	93	77	63	84	69	52	75	58	43	64	46	33	50	32	27
	0.02	44	47	50	40	43	45	35	38	39	31	33	33	28	27	27
	1600	104	87	72	95	78	61	85	67	50	73	53	40	58	38	34
	0.03	50	54	58	46	50	53	41	45	47	36	39	40	31	33	33
1750	109	91	75	100	82	65	89	70	53	76	57	44	61	41	36	
	0.04	52	57	62	48	53	57	43	48	51	39	42	43	33	36	36
	2000	116	98	81	106	87	70	95	75	58	82	61	49	67	45	40
	0.05	55	62	68	51	57	62	47	52	56	42	46	49	36	40	40

\* Saturated suction leaving evaporator coil.

       Sensible Heat Capacity (1000 Btuh)

       Gross Cooling Capacity (1000 Btuh)

BF—Bypass Factor

### NOTES:

1. Contact manufacturer for cooling capacities at conditions other than shown in table.

2. Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$$

Leaving wb = wb corresponding to enthalpy of air leaving coil ( $h_{lwb}$ )

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

where  $h_{ewb}$  = enthalpy of air entering coil.

3. Direct interpolation is permissible. Do not extrapolate.

4. SHC is based on 80°F db temperature of air entering coil. Below 80°F subtract (corr factor x CFM) from SHC. Above 80°F db, add (corr factor x CFM) to SHC.

### SHC CORRECTION FACTOR

BYPASS FACTOR	ENTERING AIR DRY-BULB TEMP (°F)					
	79	78	77	76	75	Under 75
	81	82	83	84	85	Over 85
	Correction Factor					
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.

Correction Factor =  $1.09 \times (1 - \text{BF}) \times (\text{db} - 80)$

## ELECTRIC HEATERS

HEATER PART NO.	KW @ 240V	VOLTS/PHASE	KW/STAGE	INTERNAL CIRCUIT PROTECTION	FAN COIL SIZE USED WITH	HEATING CAP.** @ 230V
KFCEH0401N03	3	230/1	3	None	018-024	9,400
KFCEH0501N05	5	230/1	5	None	018-060	15,700
KFCEH0801N08	8	230/1	8	None	018-070	25,100
KFCEH0901N10	10	230/1	10	None	018-070	31,400
KFCEH1801F20	20	230/1	5, 15	Fuse‡	030-070	62,800
KFCEH1601315	15	230/3	5, 10	None	036-070	47,100
KFCEH2001318	18	230/3	6, 6, 6	None	042-070	56,500
KFCEH2101F24	24	230/3*	8, 8, 8	Fuse	048, 060, 070	75,300
KFCEH2201F30	30	230/3*	10, 10, 10	Fuse	048, 060, 070	94,100
KFCEH0601C05	5	230/1	5	Circuit Breaker	018-060	15,700
KFCEH1001C08	8	230/1	8	Circuit Breaker	018-070	25,100
KFCEH1101C10	10	230/1	10	Circuit Breaker	018-070	31,400
KFCEH1901C20	20	230/1	5, 15	Circuit Breaker	030-070	62,800
KFCEH1401N09	9	230/1†	3, 6	None	036-070	28,200
KFCEH1501F15	15	230/1	5, 10	Fuse‡	024-070	47,100
KFCEH1701C15	15	230/1	5, 10	Circuit Breaker	024-070	47,100

\* Field convertible to 1 phase.

† Field convertible to 3 phase.

‡ Single point wiring kit required for these heaters in Canada.

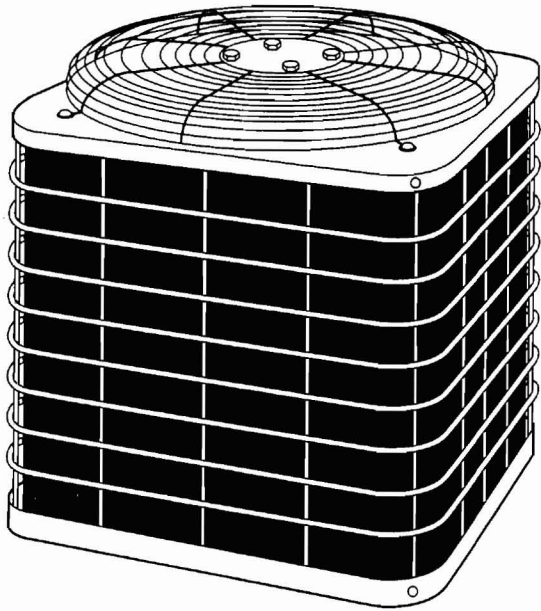
\*\* Blower motor heat not included.



## SPLIT-SYSTEM HEAT PUMP UNITS

# 661C (60 Hz)

661C Sizes 018 thru 060



The 661C Outdoor Section of Split-System Heat Pumps is designed for quiet, reliable heating during the winter and cooling during the summer. With a SEER up to 11.5 and HSPF from 6.8 to 7.5, this heat pump system provides economy of operation through energy conservation when used with components designated by manufacturer. 661C recovers heat for indoor comfort from outdoor air during the heating season and, by automatically reversing the refrigerant system, removes indoor heat and excess humidity during the cooling season. All models are listed with UL, c-UL, CEC, ARI, CSA-EEV, and RADCO.

### AVAILABLE OPTIONS

**ELECTRICAL RANGE**—All units are offered in single phase 208-230v. The 661C030 through 060 models are offered in 208/230v 3 phase and the 661C036 through 060 models are offered in 460v 3 phase.

**WIDE RANGE OF SIZES**—The 661C is available in 7 nominal sizes from 018 through 060 to meet the needs of residential and light commercial applications.

**COMPRESSOR**—Designed specifically for heat pump duty, with energy efficiency during heating and cooling operation.

Each compressor is hermetically sealed against contamination to assure long life and dependable performance, internally sprung (units with reciprocating compressor) and externally mounted on rubber isolators for quiet operation. Continuous compressor operation is approved down to  $-30^{\circ}\text{F}$  ( $-34.4^{\circ}\text{C}$ ) in the heating mode, and down to  $55^{\circ}\text{F}$  ( $12.8^{\circ}\text{C}$ ) in the cooling mode. (See Heating and Cooling Performance tables.)

**RELIABLE BUILT-IN COMPONENTS**—Includes a suction-tube accumulator that reduces the amount of liquid refrigerant that reaches the compressor; a low-pressure switch to stop the compressor if refrigerant charge is lost; a crankcase heater on all 3-phase units to keep compressor oil warm and free of refrigerant for maximum lubricity; an internal compressor relief valve for high-pressure protection.

**3-PHASE (SCROLL COMPRESSOR UNITS) MONITOR BOARD**—Control board that monitors the electrical phase and prevents compressor operation if wired incorrectly.

**DISCHARGE MUFFLER**—Minimizes low frequency sound and pressure pulsation generated by compressor discharge gas.

**DEFROST CONTROL BOARD**—Incorporates a defrost relay, defrost timer, and low-voltage terminations. The defrost control is a time and temperature initiation/termination control which includes 3 field-selectable time periods of 30, 50, and 90 minutes.

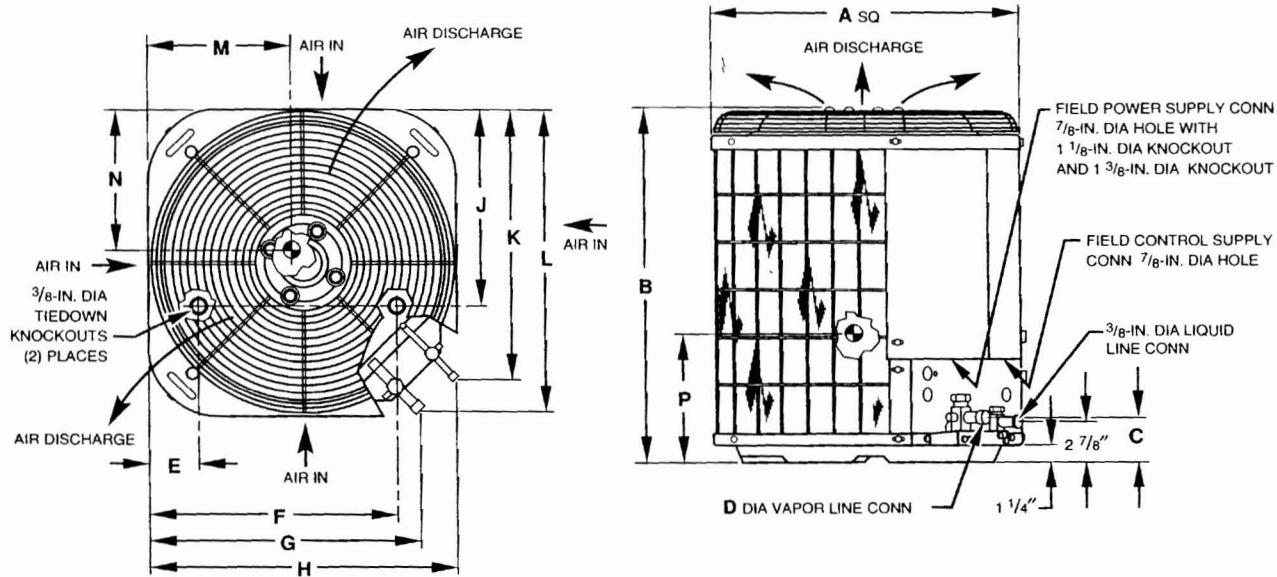
**WEATHER-PROTECTIVE CABINET**—The steel casing is protected with a galvanized coating and treated with a layer of zinc phosphate. A modified polyester powder coating is then applied and baked on, providing each unit with a hard, smooth finish that will last for many years.

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

**UNIT DESIGN**—All units are equipped with totally enclosed fan motors for greater reliability under rain and snow conditions. The large, wraparound coil uses copper tube and enhanced aluminum fin and is designed for optimum heat transfer during heating and cooling. The vertical air discharge carries the sound and air up and away from adjacent patio areas and foliage. Coils can be cleaned with a common garden hose.

**EXTERNAL SERVICE VALVES**—Both service valves are brass, front seating type. The 661C has sweat field connections. Valves are externally located so refrigerant tube connections can be made quickly and easily. Each valve has a service port for ease of checking operating refrigerant pressures.

**LIMITED WARRANTY**—Standard 1-year warranty on all parts. Limited 5-year warranty on compressor parts.



**NOTES:**

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

DIMENSIONS—661C

A97071

**DIMENSIONS (IN.)**

UNIT SIZE	SERIES	UNIT DIMENSIONS														MINIMUM MOUNTING PAD DIMENSIONS
		A	B	C	D	E	F	G	H	J	K	L	M	N	P	
018	A, C	22-1/2	25-15/16	3-3/16	5/8	3-11/16	18-1/8	19-3/4	21-5/8	14-3/8	18-7/8	22-1/16	11	5	12	22-1/2 X 22-1/2
024	A, C	22-1/2	25-15/16	3-3/16	5/8	3-11/16	18-1/8	19-3/4	21-5/8	14-3/8	18-7/8	22-1/16	10	5	13	22-1/2 X 22-1/2
030	A, C	22-1/2	33-15/16	3-3/16	3/4	3-11/16	18-1/8	19-3/4	21-5/8	14-3/8	18-7/8	22-1/16	12-1/2	12	14	22-1/2 X 22-1/2
036	A, D, E	30	27-15/16	3-3/16	3/4	6-1/2	23-1/2	27-1/4	29-1/8	20	26-3/8	29-9/16	16-3/4	15	12	30 X 30
042	C, D, F, G	30	33-15/16	3-1/4	7/8	6-1/2	23-1/2	27-1/4	29-1/8	20	26-3/8	29-9/16	15	15-3/4	13-1/2	30 X 30
048	A, E	30	27-15/16	3-1/4	7/8	6-1/2	23-1/2	27-1/4	29-1/8	20	26-3/8	29-9/16	15	15-3/4	15-1/2	30 X 30
054	A, E	30	27-15/16	3-1/4	7/8	6-1/2	23-1/2	27-1/4	29-1/8	20	26-3/8	29-9/16	15	15	13	30 X 30
060	A, E	30	27-15/16	3-1/4	7/8	6-1/2	23-1/2	27-1/4	29-1/8	20	26-3/8	29-9/16	15	15	13	30 X 30