

City of Portland, Maine - Building or Use Permit Application
 389 Congress Street, 04101 Tel: (207) 874-8703, Fax: (207) 874-8716

Permit No: 06-0878	Issue Date: JUN 27 2006	SBL: 218-B-9 217 A00001
Owner Address: 1376 WESTBROOK ST	Phone:	
Contractor Name: Avery Services, Inc.	Contractor Address: 7 Thomas Drive Westbrook	Phone: 207 728 687
Lessee/Buyer's Name	Phone:	Permit Type: HVAC
		Zone: R-2

Past Use: Single Family Home	Proposed Use: Single Family Home/ install a Carrier Natural Gas Furnace & AC unit	Permit Fee: \$12000	Cost of Work: \$10,870.00	CEO District: 3
Proposed Project Description: install a Carrier Natural Gas Furnace & AC unit		FIRE DEPT: <input type="checkbox"/> Approved <input type="checkbox"/> Denied	INSPECTION: Use Group HVAC Type 6/27/06 <i>[Signature]</i>	
		Signature	Signature	
		Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied		
		Signature:	Date:	

Permit Taken By: Idobson	Date Applied For: 06/19/2006	Zoning Approval		
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1. This permit application does not preclude the Applicant(s) from meeting applicable State and Federal Rules. 2. Building permits do not include plumbing, septic or electrical work. 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..	Special Zone or Reviews <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetland <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan Maj <input type="checkbox"/> Minor <input type="checkbox"/> MM <input type="checkbox"/> Date: 6/19/06	Zoning Appeal <input type="checkbox"/> Variance <input type="checkbox"/> Miscellaneous <input type="checkbox"/> Conditional Use <input type="checkbox"/> Interpretation <input type="checkbox"/> Approved <input type="checkbox"/> Denied Date:	Historic Preservation <input type="checkbox"/> Not in District or Landmark <input type="checkbox"/> Does Not Require Review <input type="checkbox"/> Requires Review <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input type="checkbox"/> Denied Any other work requires Date: A separate review & approval
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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

City of Portland, Maine - Building or Use Permit

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

Permit No: 06-0878	Date Applied For: 06/19/2006	CBL: 217 A009001
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Location of Construction: 1376 WESTBROOK ST	Owner Name: O'BRIEN CHARLES E JR & EUGE	Owner Address: 1376 WESTBROOK ST	Phone:
Business Name:	Contractor Name: Avery Services, Inc.	Contractor Address: 7 Thomas Drive Westbrook	Phone (207) 772-8687
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	

Proposed Use: Single Family Home/ install a Carrier Natural Gas Furnace & AC unit	Proposed Project Description: install a Carrier Natural Gas Furnace & AC unit
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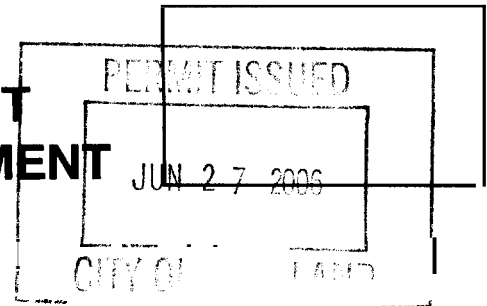
Dept: Zoning	Status: Approved	Reviewer: Marge Schmuckal	Approval Date: 06/19/2006
Note: main assessor's number is 218-B-9			Ok to Issue: <input type="checkbox"/>

Dept: Building	Status: Approved with Conditions	Reviewer: Residential Plan Revie	Approval Date: 06/27/2006
Note:			Ok to Issue: <input checked="" type="checkbox"/>
1) The installation must comply with the State of Maine Gas Regulations.			
2) The new internal unit is 3 lbs less than the original and in the same location according to Dogug Avery at Avery Services.			



FILL IN AND SIGN WITH INK

APPLICATION FOR PERMIT HEATING OR POWER EQUIPMENT



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 217 A 9 Use of Building RESIDENCE Date 6/19/06
 Name and address of owner of appliance CHARLES J. BRIEN
1376 Westbrook 3 Portland, ME 04102
 Installer's name and address HVERY SERVICES INC
7 Thomas Drive Westbrook, Me 04092 Telephone 207-772-8687
TAX 874-0933

Location of appliice:

- Basement
- Attic OF GARAGE
- Floor
- Roof

Type of Fuel:

- Gas
- Oil
- Solid

Appliance Name: Carrier Nat Gas Furnace
 U.L. Approved Yes No Furnace changed AND A/C ADD

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 # PNT1431
- Other _____

Type of Chimney:

- Masonry Lined
Factory built NA

- Metal
Factory Built U.L. Listing # NA

- Direct Vent
Type PVC UL# NA

Type of Fuel Tank

- Oil NA
- Gas NA

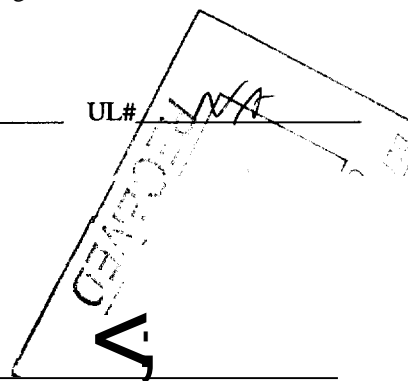
Size of Tank NA

Number of Tanks NA

Distance from Tank to Center of Flame NA feet.

Cost of Work: \$ 10,870

Permit Fee: \$ _____



Approved

Fire: _____
 Ele.: _____
 Bldg: _____

Approved with Conditions

- See attached letter or requirement

Signature of Installer Douglas A. Arney

Inspector's Signature _____

Date Approved _____

AVERY SERVICES, INC.
 7 Thomas Drive
 WESTBROOK, MAINE 04092
 (207) 772-8687

PROPOSAL

1231

Page 1 of 2

FAX (207) 874-0933

TO: Charles O'Brien
 1376 Westbrook Street
 Portland ME 04102

PHONE 773-5610 / Fax: 775-6241	DATE 5/30/06
JOB NUMBER DCA # 680431	JOB PHONE

Avery Services, Inc. is pleased to quote, as requested, on the replacement of your existing gas furnace and add of central air conditioning and upgrade zone system. Scope of work to include:

- Remove and dispose of the existing Carrier gas furnace.
- Supply and install a Carrier 58MVB (2-stage) hi-efficiency gas furnace with a variable speed blower (12 times quieter and uses 80% less electricity than a standard unit) set in same location as the existing unit.
- Supply and install a Carrier horizontal cooling coil.
- Supply and install a Carrier mechanical air cleaner.
- Supply and install a Carrier 24ANA7 (2-speed) Puron condenser set on a polymer pad (on the back side of the garage), includes; disconnect, whip, and interconnecting refrigerant lines.
- Supply and install a PHI cell air purifier.
- Replace your existing Comfort Zone I zone system with a Carrier Infinity Zone System using four (4) existing zones. Includes; one (1) Master Control, three (3) remote room sensors, reusing existing dampers.
- Reconnect to existing systems; power wiring, flue piping, condensate piping, and duct work.
- Price includes; Start up and test, an orientation visit, freight, and taxes.

- OPTIONS: A) Substitute a single speed for the 2-speed condenser. DEDUCT \$937.00 _____ initials.
 B) Eliminate air conditioning system (except coil). DEDUCT \$3,961.00 _____ initials.
 C) Eliminate PHI cell air purifier. DEDUCT \$595.00 _____ initials.
 D) Eliminate Infinity Zone System upgrade. DEDUCT \$1,105.00 _____ initials.

We Propose hereby to furnish material and labor — complete in accordance with the above specifications, for the sum of Cont'd dollars (\$ Cont'd)

Payment to be made as follows
 25% upon acceptance - Progress billing/net ten (10) days - All balances due upon substantial completion.
 If payment is not made as outlined above, a service charge of 2% per month on the overdue balance plus all reasonable costs of collection, including attorney's fees will be paid.

All material is guaranteed to be as specified. All work to be completed in a professional manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado, and other necessary insurance. Our workers are fully covered by Workers Compensation insurance.

Authorized Signature Douglas C. Arney

Note: This proposal may be withdrawn by us if not accepted within 30 days.

Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature [Signature]

Date of Acceptance 5/31/06

Signature _____

AVERY SERVICES, INC.
 7 Thomas Drive
 WESTBROOK, MAINE 04092
 (207) 772-8687

Page 2 of 2

FAX (207) 874-0933

TO: Charles O'Brien
 1376 Westbrook Street
 Portland ME 04102

PHONE	DATE
773-5610 / Fax: 775-6241	5/30/06
JOB NAME/ LOCATION	
Furnace replacement / Air conditioning add to existing system.	
JOB NUMBER	JOB PHONE
DCA # 680431	

We hereby submit specifications and estimates for:

EXCLUSIONS: Structural, carpentry, soffiting, painting, and adequacy of existing systems.

Credit of \$500 From Carrier (DCA) FOR WARRANTY Credit of FURNACE Replacement

(Dca)

Paid down payment
 Check # 7265
 \$ 2,750.00
 (Dca)

We Propose hereby to furnish material and labor — complete in accordance with the above specifications, for the sum of:

Eleven Thousand Three Hundred Seventy and 00/100 Dollars

dollars (\$

~~11,370.00~~
 10,870.00

Payment to be made as follows.

25% upon acceptance - Progress billing/net ten (10) days - All balances due upon substantial completion.

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Authorized Signature

Douglas C. Owen

Note: This proposal may be withdrawn by us if not accepted within _____ days.

Signature

[Signature]

Signature

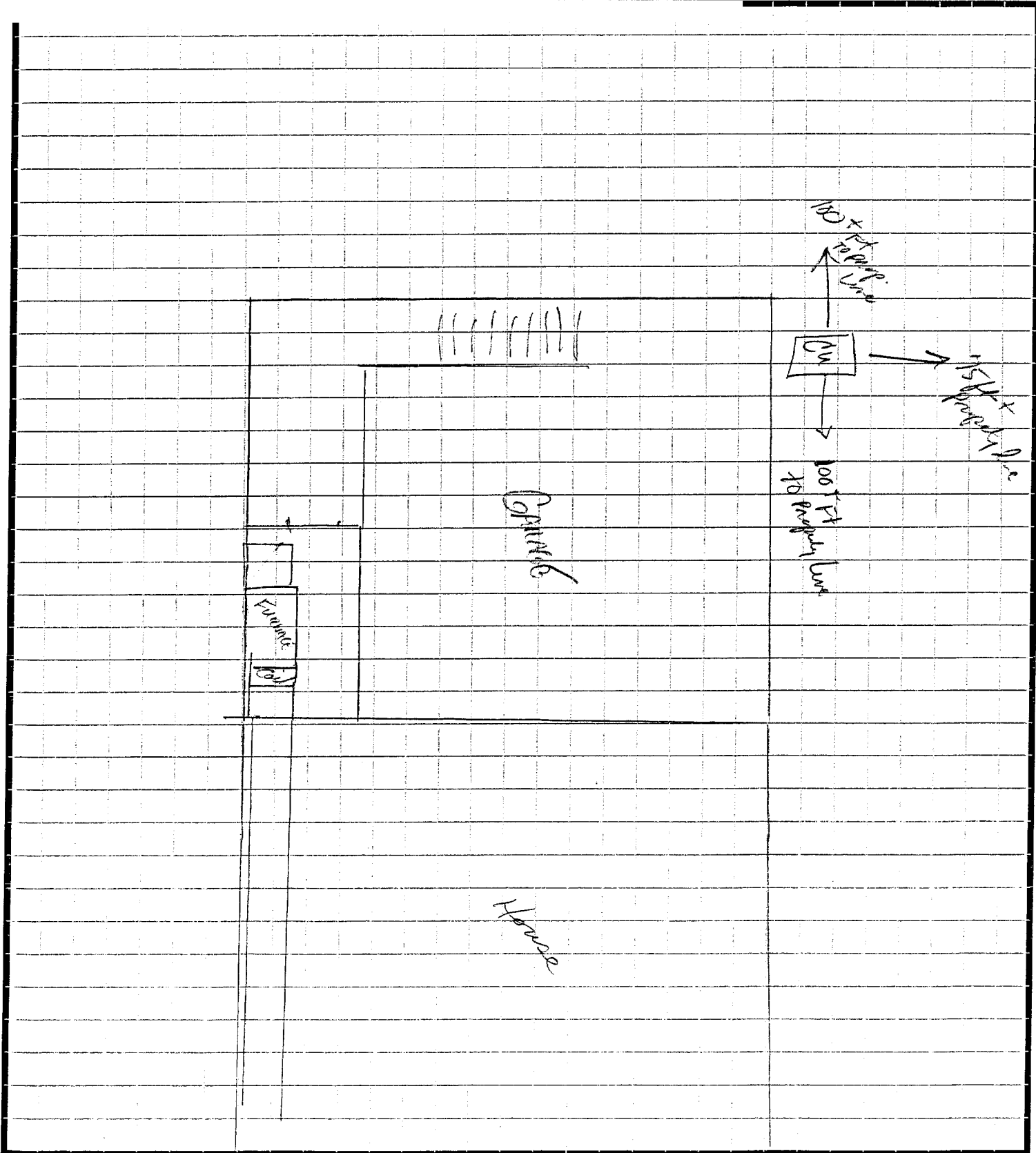
Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance

5/31/06

System Component Layout

(For Duct layout see Sheetmetal Info, Pg2)



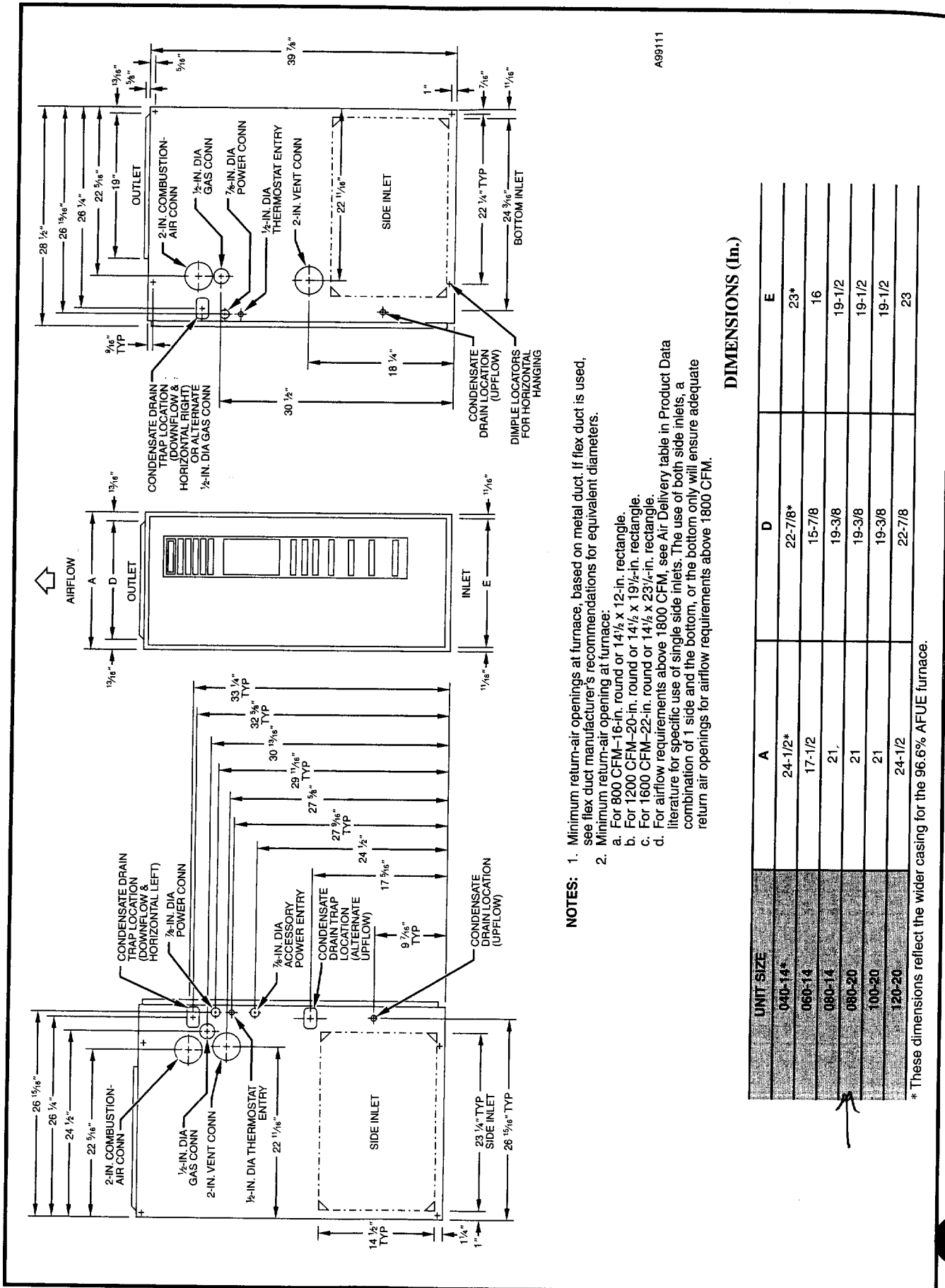
Physical data

UNIT SIZE		040-14	060-14	080-14	080-20	100-20	120-20	
OUTPUT CAPACITY BTUH* (ICS) (Shaded capacities are specified on rating plate)	Low	Upflow	25,000	37,000	49,000	49,000	61,000	73,000
		Downflow	25,000	36,000	49,000	49,000	61,000	73,000
		Horizontal	25,000	36,000	49,000	49,000	61,000	73,000
	High	Upflow	38,000	57,000	75,000	75,000	94,000	113,000
		Downflow	37,000	56,000	75,000	75,000	94,000	113,000
		Horizontal	37,000	56,000	75,000	75,000	93,000	112,000
AFUE%*	Upflow	96.6	94.1	94.1	94.1	94.1	94.1	
	Downflow	95.0	92.7	92.7	92.7	92.7	92.7	
	Horizontal	96.1	93.7	93.7	93.7	93.7	93.7	
INPUT BTUH†	Low	26,000	39,000	52,000	52,000	65,000	78,000	
	High	40,000	60,000	80,000	80,000	100,000	120,000	
SHIPPING WEIGHT (Lb)		205	170	182	204	203	234	
CERTIFIED TEMP RISE RANGE (°F)	Low	25 — 55	50 — 80	50 — 80	50 — 80	50 — 80	50 — 80	
	High	30 — 60	35 — 65	35 — 65	35 — 65	45 — 75	45 — 75	
CERTIFIED EXT STATIC PRESSURE (ESP) (In. wc)	Heating	0.10	0.12	0.15	0.15	0.20	0.20	
	Cooling	0.50	0.50	0.50	0.50	0.50	0.50	
AIRFLOW CFM‡	Heating Low	585(690**)	500(590**)	720(850**)	705(830**)	920(1085**)	1160(1370**)	
	Heating High	800	1065	1500	1500	1525	1880	
	Cooling (Max)	1400	1400	1395	1990	2000	2100	
LIMIT CONTROL		SPST						
HEATING BLOWER CONTROL (Off Delay)		Selectable 90, 120, 150, or 180 Sec Intervals						
BURNERS (Monoport)		2	3	4	4	5	6	
GAS CONNECTION SIZE		1/2-in. NPT						
GAS VALVE (Redundant) Manufacturer		White-Rodgers						
Minimum Inlet Pressure (In. wc)		4.5 (Natural Gas)						
Maximum Inlet Pressure (In. wc)		13.6 (Natural Gas)						
IGNITION DEVICE		Hot Surface						

electrical data

UNIT SIZE	040-14	060-14	080-14	080-20	100-20	120-20
DIRECT-DRIVE MOTOR Hp ()	1/2	1/2	1/2	1	1	1
T. LOAD AMPS	7.7	7.7	7.7	12.8	12.8	12.3
RFM (Nominal) — SPEEDS	Variable 250 — 1300					
BLOWER WHEEL DIAMETER x () () () () () ()	11x	10x7	1 x 10	11 x 10	1 x 10	1 10
FILTER SIZE (In.) NOMINAL (Washable)	(1) 24 x 25 x 1	() 16 x 25 x 1	() 20 x 25 x 1	(1) 20 x 25 x 1	() 20 x 25 x 1	() : x 25 x 1

ECM El... ically Commutated Motor



A99111

DIMENSIONS (In.)

UNIT SIZE	A	D	E
040-14*	24-1/2*	22-7/8*	23*
060-14	17-1/2	15-7/8	16
080-14	21	19-3/8	19-1/2
080-20	21	19-3/8	19-1/2
100-20	21	19-3/8	19-1/2
120-20	24-1/2	22-7/8	23

* These dimensions reflect the wider casing for the 96.6% AFUE furnace.

- NOTES:**
1. Minimum return-air openings at furnace, based on metal duct. If flex duct is used, see flex duct manufacturer's recommendations for equivalent diameters.
 2. Minimum return-air opening at furnace:
 - a. For 800 CFM—16-in. round or 14 1/2 x 19 1/2-in. rectangle.
 - b. For 1200 CFM—20-in. round or 14 1/2 x 23 1/4-in. rectangle.
 - c. For 1600 CFM—22-in. round or 14 1/2 x 23 1/4-in. rectangle.
 - d. For airflow requirements above 1800 CFM, see Air Delivery table in Product Data literature for specific use of single side inlets. The use of both side inlets, a combination of 1 side and the bottom, or the bottom only will ensure adequate return air openings for airflow requirements above 1800 CFM.

Physical data



UNIT SIZE - SERIES	024-30	036-30	037-30	048-30	060-31
OPERATING WEIGHT (Lb)	171	228	276	266	311
REFRIGERANT	Puron® (R-410A)				
Cooling Control	TXV				
Charge (Lb)	6.0	8.9	12.3	11.5	13.1
CONDENSER FAN	Propeller Type, Direct Drive				
Air Discharge	Vertical				
Air Qty (CFM)	1500	2500	2750†	3000	3100
Motor HP	1/15	1/8	1/5	1/5	1/5
Motor RPM	825	825	840†	825	825
CONDENSER COIL	Copper Tube, Aluminum Plate Fin				
Face Area (Sq Ft)	10.8	18.2	18.2	18.2	18.2
Fins per in.	25	25	20	20	20
Rows	1	1	2	2	2
Circuits	2/1	3/1	4/1	5/1	5/1
VALVE CONNECT. (In. ID)	Sweat				
Vapor	5/8	3/4	7/8	7/8	7/8
Liquid			3/8		
REFRIG TUBES" (In. OD)					
Vapor	5/8	3/4	7/8	7/8	1-1/8
Liquid			3/8		
LONG LINE REFRIGERANT TUBES (In. OD)					
Vapor	3/4	7/8	7/8	7/8	1-1/8
Liquid			3/8		

rie

ORDERING NO.	DESCRIPTION
KAACF0801MED	Coastal Filter — Sizes 024-060
KSASF0101AAA	Support Feet (4)
KSATX0201PUR	Bi-flow Balance Port TXV (Hard Shut Off)-Size 024
KSATX0301PUR	Bi-flow Balance Port TXV (Hard Shut Off)-Size 036
KSATX0401PUR	Bi-flow Balance Port TXV (Hard Shut Off)-Size 048
KSATX0501PUR	Bi-flow Balance Port TXV (Hard Shut Off)-Size 060

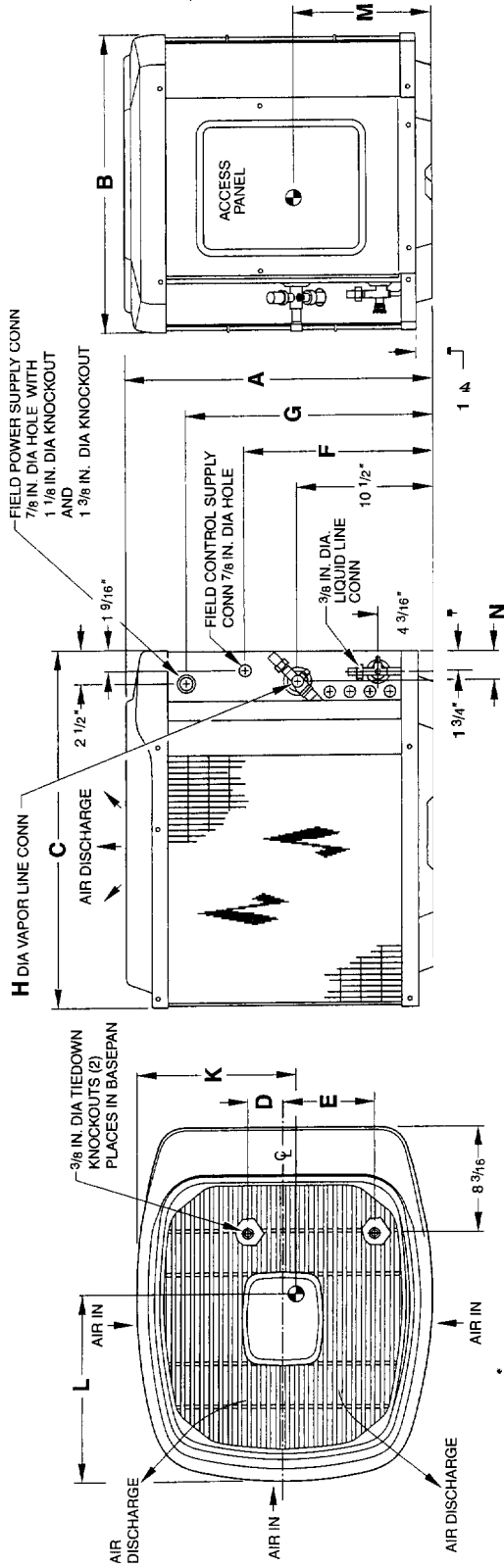
THERMOSTAT	DESCRIPTION
TSTATCCPRH01-B	Carrier Thermostat™ Control — Non-Programmable/Programmable Thermostat with Humidity Control (For use in Dual Fuel, AC, HP, and 2S applications. Includes Outdoor Air Temperature Sensor.)
TSTATCCP2S01-B	Carrier Thermostat, Auto Changeover, 7-Day Programmable, °F/°C, 2-Stage Heat/2-Stage Cool in AC Mode, 3-Stage Heat/2-Stage Cool in HP mode
TSTATCCN2S01-B	Carrier Thermostat, Auto Changeover, Non-Programmable, °F/°C, 2-Stage Heat/2-Stage Cool in AC Mode, 3-Stage Heat/2-Stage Cool in HP mode
TSTATXXSENOI-6	Outdoor Temperature Sensor
TSTATXXNBPO1	Backplate for Non-Programmable Thermostat
TSTATXXPBP01	Backplate for Programmable Thermostat
TSTATXXCNV10	Thermostat Conversion Kit (4 to 5 Wire) — 10 Pack

INFINITY™ CONTROLS	DESCRIPTION
SYSTXCCUID01	Infinity Control Deluxe 7-Day Programmable (Wall-mounted system control.)
SYSTXCCUIZ01	Infinity Control Deluxe Zoning 7-Day Programmable (Wall-mounted control for a multi-zone system.)
SYSTXCC4ZC01	Infinity 4-Zone Damper Control Module (Wall-mounted control for a four-zone system.)
SYSTXCCSMS01	Infinity Smart Sensor (Optional wall control used to monitor temperature and/or fan control in an individual zone.)
SYSTXCCRRS01	Infinity Remote Room Sensor (Monitors temperature in an individual zone.)
SYSTXCCSAM01	Infinity System Access Module (Hardware for wireless access and control via phone or internet.)
SYSTXCCNIM01†	Infinity Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators or older two-speed outdoor models to system.)
SYSTXXXBPU01	Decorative Back Plate for Infinity Control (Decorative wall plate.)

Dimensions

NOTES:

1. Allow 30 in. clearance to service side of unit, 48 in. above unit, 6 in. on one side, 12 in. on remaining side, and 24 in. between units for proper airflow.
2. Minimum outdoor operating ambient in cooling mode is 55°F max 125°F.
3. Series designation is the 13th position of the unit model number.
4. Center of gravity



A02207

DIMENSIONS (IN.)

UNIT SIZE	SERIES	UNIT DIMENSIONS													MOUNTING PAD DIMENSIONS		
		A	B	C	D	E	F	G	H	K	L	M	N				
024	030	33-13/16	22-1/2	27-1/2	2-13/16	6-15/16	21-1/2	27-7/8	5/8	11	14	12-1/2	2-3/8	20 x 27			
036	030	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	3/4	17	19-3/4	17-1/4	2-15/16	26 x 32			
037	030	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	16-3/4	19-1/2	17	2-15/16	26 x 32			
048	030	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	16-3/4	19-1/2	17	2-15/16	26 x 32			
050	031	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	16-1/2	19	16-3/4	2-15/16	26 x 32			