

DISPLAY THIS CARD ON PRINCIPAL FRONTAGE OF WORK



CITY OF PORTLAND

BUILDING PERMIT

This is to certify that ECO CAPITAL LLC

Located At 62 CUMBERLAND AVE

Job ID: 2011-07-1739-HVAC

CBL: 013 - - L - 002 - 001 - - - -

has permission to Install 4 Fujitsu Mini-split system heat pump/condensers and 3 Heat Recovery Ventilators provided that the person or persons, firm or corporation accepting this permit shall comply with all of the provisions of the Statues of Maine and of the Ordinances of the City of Portland regulating the construction, maintenance and use of the buildings and structures, and of the application on file in the department.

Notification of inspection and written permission procured before this building or part thereof is lathed or otherwise closed-in. 48 HOUR NOTICE IS REQUIRED.

A final inspection must be completed by owner before this building or part thereof is occupied. If a certificate of occupancy is required, it must be

Fire Prevention Officer

[Signature] 7/26/11

Code Enforcement Officer / Plan Reviewer

**THIS CARD MUST BE POSTED ON THE STREET SIDE OF THE PROPERTY
PENALTY FOR REMOVING THIS CARD**

City of Portland, Maine - Building or Use Permit Application

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

| | | | |
|---|---|--|---|
| Job No: 2011-07-1739-HVAC | Date Applied: 7/19/2011 | CBL: 013 - - L - 002 - 001 - - - - - | |
| Location of Construction: 62 CUMBERLAND AVE | Owner Name: ECO CAPITAL LLC | Owner Address: PO BOX 2412, SOUTH PORTLAND, ME | Phone: |
| Business Name: | Contractor Name:, MID-COAST ENERGY SYSTEMS INC | Contractor Address: PO BOX 1118 DAMARISCOTTA MAINE 04543 | Phone: 563-5147 |
| Lessee/Buyer's Name: | Phone: | Permit Type: HVAC | Zone: R-6 |
| Past Use: Three family dwelling | Proposed Use: Same: Three family dwelling - to install Fujitsu Mini-split heat pump | Cost of Work: \$34,000.00 | CEO District: |
| | | Fire Dept: <input checked="" type="checkbox"/> Approved w/conditions <input type="checkbox"/> Denied <input type="checkbox"/> N/A Signature: <i>Capt. Malone</i> 7-25-11 | Inspection: Use Group: <i>R-2</i> Type: <i>HVAC</i> Signature: <i>[Signature]</i> 7/26/11 |
| Proposed Project Description: Install a mini split heat pump | | Pedestrian Activities District (P.A.D.) | |
| Permit Taken By: Lannie | | Zoning Approval | |

| Special Zone or Reviews | Zoning Appeal | Historic Preservation |
|---|---|---|
| <input type="checkbox"/> Shoreland <input type="checkbox"/> Wetlands <input type="checkbox"/> Flood Zone <input type="checkbox"/> Subdivision <input type="checkbox"/> Site Plan <input type="checkbox"/> Maj <input type="checkbox"/> Min <input type="checkbox"/> MM Date: <i>[Signature]</i> <i>7/20/11</i> | <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: | <input checked="" type="checkbox"/> Not in Dist 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 Date: <i>[Signature]</i> |

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 | PHON |

BUILDING PERMIT INSPECTION PROCEDURES

Please call 874-8703 or 874-8693 (ONLY)

or email: buildinginspections@portlandmaine.gov

With the issuance of this permit, the owner, builder or their designee is required to provide adequate notice to the city of Portland Inspections Services for the following inspections. Appointments must be requested 48 to 72 hours in advance of the required inspection. The inspection date will need to be confirmed by this office.

- **Please read the conditions of approval that is attached to this permit!! Contact this office if you have any questions.**
 - **Permits expire in 6 months. If the project is not started or ceases for 6 months.**
 - **If the inspection requirements are not followed as stated below additional fees may be incurred due to the issuance of a "Stop Work Order" and subsequent release to continue.**
1. Close In inspection prior to insulation or drywall
 2. Final Inspection at completion of work/Certificate of Occupancy

The project cannot move to the next phase prior to the required inspection and approval to continue, REGARDLESS OF THE NOTICE OF CIRCUMSTANCES.

IF THE PERMIT REQUIRES A CERTIFICATE OF OCCUPANCY, IT MUST BE PAID FOR AND ISSUED TO THE OWNER OR DESIGNEE BEFORE THE SPACE MAY BE OCCUOPIED.



PORTLAND MAINE

Strengthening a Remarkable City, Building a Community for Life • www.portlandmaine.gov

Director of Planning and Urban Development
Penny St. Louis

Job ID: 2011-07-1739-HVAC

Located At: 62 CUMBERLAND

CBL: 013 - - L - 002 - 001 - - - -

Conditions of Approval:

Fire

1. Installation shall comply with City Code Chapter 10.
2. Fuel-fired boilers shall be protected in accordance with NFPA 101, *Life Safety Code*.
3. Installation shall comply with NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel-Burning Appliances*;
4. NFPA 31, *Standard for the Installation of Oil-Burning Equipment*;
5. NFPA 54, *National Fuel Gas Code*;
6. NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*;
7. NFPA 91, *Standard for Exhaust Systems for Air Conveying Vapors, Gases, Mists, and Noncombustible Particulate Solids*;
8. NFPA 70, *National Electrical Code*; and the manufacturer's published instructions.

Building

1. Application approval based upon information provided by applicant. Any deviation from approved plans requires separate review and approval prior to work.
2. All penetrations through rated assemblies must be protected by an approved firestop system installed in accordance with ASTM 814 or UL 1479, per IBC 2009 Section 713.
3. Equipment must be installed in compliance per the manufacturer's specifications



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 62 CUMBERLAND AVE, 04102 Use of Building RESIDENTIAL Date 04/15/11
 Name and address of owner of appliance PAUL LEDMAN, 62 CUMBERLAND AVE, PORTLAND 04101
ECO CAPITAL LLC - PO BOX 2412 - SOPO
 Installer's name and address MID-COAST ENERGY SYSTEMS, INC
P.O. Box 1118, DAMARISCOTTA, ME 04543 Telephone 207-563-5147

3 Jan DUS

13L2

12-6

04116

Location of appliance:
 Basement Floor
 Attic Roof NA

Type of Fuel:
 Gas Oil Solid NA

Appliance Name: FUJITSU MINI-SPLIT HEAT PUMP
 U.L. Approved Yes No

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

IF NO Explain: _____

Type of Chimney:
 Masonry Lined NA
 Factory built _____

Metal NA
 Factory Built U.L. Listing # _____

Direct Vent NA
 Type _____ UL# _____

Type of Fuel Tank
 Oil NA
 Gas

Size of Tank _____

Number of Tanks _____

Distance from Tank to Center of Flame _____ feet.

Cost of Work: \$33,282.00
 Permit Fee: \$ 360.00

RECEIVED

JUL 19 2011

Dept. of Building Inspections
City of Portland Maine

7/19/11

Approved

Approved with Conditions

Fire: _____
 Ele.: _____
 Bldg.: _____

See attached letter or requirement

Inspector's Signature

Date Approved

Signature of Installer

Robert F. Hardwa

White - Inspection

Yellow - File

Pink - Applicant's

Gold - Assessor's Copy



MID-COAST ENERGY SYSTEMS
P.O. Box 1118
DAMARISCOTTA, MAINE 04543
Tel (207) 563-5147 Fax (207) 563-1138
www.midcoastenergysystems.com

July 15, 2011

Mike: I forwarded a copy of the permit information we sent electronically to Portland on April 15th.

We heard nothing.

I followed up with an email to Michael Collins on April 25th. He had talked with Paul on site.

No response.

A phone call to the codes office brought forth the opinion that since the system was not typical it was probably covered under the electrical permits.

Keep me in the loop.

Bob



Bob Hardina <bhardina@midcoastenergysystems.com>

HVAC Permit

1 message

Bob Hardina <bhardina@midcoastenergysystems.com>

Mon, Apr 25, 2011 at 12:40 PM

To: mc@portlandmaine.gov

Mr. Collins:

Paul Stebner spoke highly of the help you gave him regarding the HRV ductwork at the Ledman project at 62 Cumberland Ave.

I have been trying to draw a permit for this project for over two weeks. I submitted the requested material electronically but have heard nothing back. I was told that someone would call with the permit amount seeking a credit card number to make payment. Since the project is underway I am concerned that we do not have a permit in hand

If you have any thoughts on this matter I would appreciate them.

Thank you,
Bob Hardina



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DAMARISCOTTA, MAINE 04543
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www.midcoastenergysystems.com

April 15, 2011

Planning & Urban Development Department
Inspection Services Division
389 Congress Street, #313
Portland, ME 04101-3509

Attached is a Heating or Power Equipment Application for work to be performed at 62 Cumberland Ave. Since the work to be performed does not fit the parameters of the permit, it was suggested that we submit this cover letter describing the work. The owners of the property are Paul Ledman and Colleen Myers.

The residence contains two efficiency apartments and an owner's apartment on the second and third floor. The heating system is electric heat which is being installed by the electrician under a separate permit. Mid-Coast Energy Systems, a licenser electrical, heating and plumbing contractor with certifications in refrigeration and propane will be installing three heat recovery ventilators and four split system heat pumps. The four condensers will be mounted on the exterior of the building with refrigerant lines and control wiring to wall mounted interior evaporator units. The only fuel is electricity with circuits being provided by the electrician.

We were just authorized to perform this work by the owner and would like to expedite the permitting process.

Please call me at 563-5147 to obtain a credit card number to pay for the permit and to let me know what additional information you need in order to issue the permit. I expect to be in the office but if, for some reason I am called out, please talk to Gina Philippon or leave a message and I will get back to you.

Thank you for your help.

Robert F. Hardina

Mid-Coast Energy Systems, Inc.
P. O. Box 1118 Midcoast Road
Damariscotta, ME 04543
207-563-5147 800-890-7196
Fax 207-563-1138

www.midcoastenergysystems.com

FAX

To: Lannie Dobson

From: Bob Hardina

Date: April 15, 2011

of pages 3

Time: 11:25 a.m.

COMMENT:

Permit application and cover letter attached.

Thank You



Bob Hardina <bhardina@midcoastenergysystems.com>

Fwd: Permits Required?

2 messages

Tammy Munson <TMM@portlandmaine.gov>
To: bhardina@midcoastenergysystems.com

Fri, Apr 1, 2011 at 10:19 AM

Bob, they need to pull HVAC permits for this work. This has to be done by the installer.

>>> Bob Hardina <bhardina@midcoastenergysystems.com> 3/31/2011 1:55 PM >>>

I am trying to determine what permits will be necessary to install air to air heat pumps and heat recovery ventilators at a residence under construction at 62 Cumberland Ave in Portland. The owners are Paul Ledman and Colleen Myers. This residence contains two efficiency apartments and one owner's apartment with a penthouse. There will be four heat pump condensers mounted on the exterior of the building with refrigerant lines and controll wiring to eleven wall mounted evaporator units in individual rooms. The only fuel is electricity. Mid-Coast Energy Systems is a licensed electrical, heating and plumbing contractor located in Damariscotta, Maine. Your help would be appreciated. Thank you very much.
Robert F. Hardina

Bob Hardina <bhardina@midcoastenergysystems.com>
To: Tammy Munson <TMM@portlandmaine.gov>

Fri, Apr 1, 2011 at 11:39 AM

Tammy

We are the installer. Where can I obtain permit applications? Our FAX # is 207-563-1138 or they can be emailed to me.

Thank You,
Bob Hardina

[Quoted text hidden]

L Dobson@portlandmaine.gov

*874-8693
LARRY
DOBSON*



MID-COAST ENERGY SYSTEMS
P.O. Box 1118
DAMARISCOTTA, MAINE 04543
Tel (207) 563-5147 Fax (207) 563-1138
www.midcoastenergysystems.com

April 15, 2011

TO: John Blodgett:

SCOPE OF WORK:

Ledman Project 62 Cumberland Ave, Portland, Me

Contractor: Mike White

Permit information was submitted electronically today.

The contract is to install three HRV units and four split system heat pumps. A schematic of the outside locations is attached along with specs on the equipment.

The equipment will come from Johnstone Supply.

As usual they are eager to get the rough in done ASAP.

Mike White will put in backing boards for the ERV vents, the outdoor condensers and the in door heat pump units. The electrician will provide the appropriate circuits for the outdoor condensers. Refrigerant lines will be done from the outside so there is no other rough in unless we decide to run condensate lines from the Indoor units to the basement.

The Heat Recovery Ventilators will be mounted in the closets shown on the prints which are in the estimating office. The intake and exhaust will be mounted vertically for each unit. Mike is installing the blocks.

The heat recovery ventilators are very important as we are depending on them to mix up the heat from the centrally located heat pumps to the other rooms. There will be chases available for the ducting.

The **immediate** concern is to get the duct roughed in so the insulators can do their work. The ducting will be a combination of flex and hard pipe. Mike would like to be ready for the insulators by April 25th. A long day for three techs would probably complete the rough in.

Bob



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April 15, 2011

Planning & Urban Development Department
Inspection Services Division
389 Congress Street, #313
Portland, ME 04101-3509

Attached is a Heating or Power Equipment Application for work to be performed at 62 Cumberland Ave. Since the work to be performed does not fit the parameters of the permit, it was suggested that we submit this cover letter describing the work. The owners of the property are Paul Ledman and Colleen Myers.

The residence contains two efficiency apartments and an owner's apartment on the second and third floor. The heating system is electric heat which is being installed by the electrician under a separate permit. Mid-Coast Energy Systems, a licenser electrical, heating and plumbing contractor with certifications in refrigeration and propane will be installing three heat recovery ventilators and four split system heat pumps. The four condensers will be mounted on the exterior of the building with refrigerant lines and control wiring to wall mounted interior evaporator units. The only fuel is electricity with circuits being provided by the electrician.

We were just authorized to perform this work by the owner and would like to expedite the permitting process.

Please call me at 563-5147 to obtain a credit card number to pay for the permit and to let me know what additional information you need in order to issue the permit. I expect to be in the office but if, for some reason I am called out, please talk to Gina Philippon or leave a message and I will get back to you.

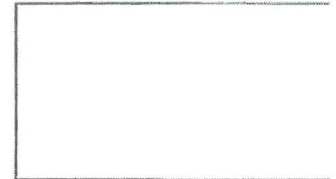
Thank you for your help.

Robert F. Hardina



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 62 CUMBERLAND AVE, 013200001 Use of Building RESIDENTIAL Date 01/15/11
Name and address of owner of appliance PAUL LEDMAN, 62 CUMBERLAND AVE, PORTLAND 04101

Installer's name and address MID-COAST ENERGY SYSTEMS, INC.
P.O. BOX 1118, DAMARISCOTTA, ME 04543 Telephone 207-563-5147

Location of appliance:

- Basement
 - Attic
 - Floor
 - Roof
- NA*

Type of Fuel:

- Gas
 - Oil
 - Solid
- NA*

Appliance Name: FUJITSU MINI-SPLIT HEAT
U.L. Approved Yes No PCMB

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 # _____
- Other REFRIGERATION

Type of Chimney:

- Masonry Lined
 - Factory built _____
- NA*

- Metal
 - Factory Built U.L. Listing # _____
- NA*

- Direct Vent
 - Type _____ UL# _____
- NA*

Type of Fuel Tank

- Oil
 - Gas
- NA*

Size of Tank _____

Number of Tanks _____

Distance from Tank to Center of Flame _____ feet.

Cost of Work: \$33,282.00

Permit Fee: \$360.00

Approved

Fire: _____
Ele.: _____
Bldg.: _____

Approved with Conditions

- See attached letter or requirement

Inspector's Signature _____

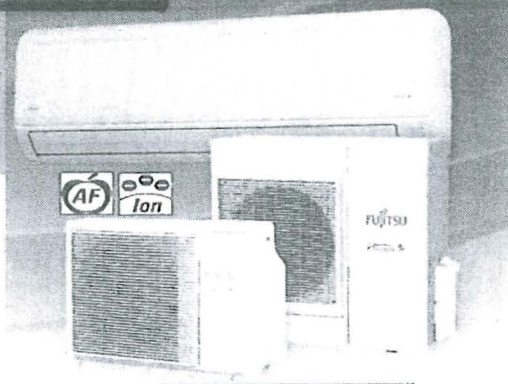
Date Approved _____

Signature of Installer Robert Y. Harlow

Wall Mounted 24, 30 and 36,000 BTU Systems

SYSTEMS 24CL, 24RLXS, 30CLX, 30RLX, 36CLX

2ND FLOOR



Up to 18-SEER

Function

Ultra compact yet efficient, these systems provide maximum cooling in 30% less space while saving you money. Additionally, systems 24RLXS and 30RLX provide low ambient operation rated down to 0° right out of the box without modification.

Standard Features

- Wireless Remote Control
- Sleep Timer
- 24 Hour Timer
- Dry Mode
- Auto Louver: 4 Way
- Auto Mode
- Quiet Mode
- Power Diffuser
- Auto Restart/Reset
- Low Ambient
- Cold Prevention
- Apple Catechin Filter
- Ion Deodorizing Filter
- Pump Down Operation**
- Basic Third Party Interface

Optional Remote

- Weekly Timer
- Full Function Wired Remote
- Child Lock Capable

Applications

The flexibility of the variable speed compressor helps system adapt to shifts in heat load by occupants or fluctuating heat generated by computers. This heat pump provides 13% additional available heat when compared to conventional models.

| 24RLXS Qualifies for Tax Credit of up to \$1,500 | 24CL Cooling Only | | 24RLXS Heat Pump New for 2010 | | 30CLX Cooling Only | | 30RLX Heat Pump New for 2010 | | 36CLX Cooling Only | |
|---|----------------------|--------------------|-------------------------------------|----------------------|-----------------------|---------------------|------------------------------------|---------------------|-----------------------|---------------------|
| | Indoor ASU24CL | Outdoor AOU24CL | Indoor ASU24RLXS | Outdoor AOU24RLXS | Indoor ASU30CLX | Outdoor AOU30CLX | Indoor ASU30RLX | Outdoor AOU30RLX | Indoor ASU36CLX | Outdoor AOU36CLX |
| Nominal Cooling BTU/h | 24,200 | | 22,000 | | 30,700 | | 30,000 | | 33,100 | |
| Min.-Max. Cooling BTU/h | 5,200-26,000 | | 9,900-27,300 | | 9,900-32,400 | | 9,900-32,400 | | 9,900-34,100 | |
| Nominal Heating BTU/h | - | | 27,600 | | - | | 32,000 | | - | |
| Low Temp. Heating 17°F BTU/h | - | | 17,800 | | - | | 20,200 | | - | |
| Min.-Max. Heating BTU/h | - | | 7,500-36,200 | | - | | 8,000-37,500 | | - | |
| HSPF BTU/hW | - | | 10.0 | | - | | 9.5 | | - | |
| SEER BTU/hW | 18.0 | | 18.0 | | 15.0 | | 17.5 | | 15.0 | |
| EER Clg/Htg | 10.5 | | 12.5 | | 8.9 | | 10.0 | | 8.2 | |
| Clg. Operating Range °F(°C) | 14-115 (-10-46) | | 0-115 (-18-46) | | 14-115 (-10-46) | | 0-115 (-18-46) | | 14-115 (-10-46) | |
| Htg. Operating Range °F(°C) | - | | 0-75 (-18-24) | | - | | 0-75 (-18-24) | | - | |
| Moisture Removal Pt./h(lb) | 5.3 (2.5) | | 6.3 (3.0) | | 9.7 (4.6) | | 9.5 (4.5) | | 10.1 (4.8) | |
| Voltage/Frequency/Phase | 208-230/60/1 | | 208-230/60/1 | | 208-230/60/1 | | 208-230/60/1 | | 208-230/60/1 | |
| Recommended Fuse Size (A) | 25 | | 30 | | 30 | | 30 | | 30 | |
| Air Circ. C.F.M. (m ³ /h): Hi | 647 (1,100) | | 659 (1,120) | | 647 (1,100) | | 659 (1,120) | | 706 (1,200) | |
| Medium | 530 (900) | | 500 (930) | | 530 (900) | | 500 (930) | | 530 (900) | |
| Low | 436 (740) | | 435 (740) | | 436 (740) | | 435 (740) | | 436 (740) | |
| Quiet | 365 (620) | | 365 (620) | | 365 (620) | | 365 (620) | | 365 (620) | |
| Noise Level dB(A): Hi | 47 | | 49 | | 47 | | 49 | | 49 | |
| Medium | 41 | | 42 | | 41 | | 42 | | 41 | |
| Low | 36 | | 37 | | 36 | | 37 | | 36 | |
| Quiet | 32 | | 33 | | 32 | | 33 | | 32 | |
| Outdoor Fan Speed RPM Clg/Htg | 1,000 | | 800/850 | | 850 | | 850/850 | | 850 | |
| Outdoor Noise Level dB(A) | 52 | | 54/55 (Clg/Htg) | | 53 | | 54/55 (Clg/Htg) | | 54 | |
| Current Rated/Max (A): Cooling | 10.1/12.0 | | 7.9/15 | | 15.2/18.0 | | 13.2/17.0 | | 17.7/19.0 | |
| Heating | - | | 10.5/15.5 | | - | | 13.1/18.5 | | - | |
| Power Use Rated/Max (kw): Cooling | 2.3/2.6 | | 1.76/3.42 | | 3.5/4.1 | | 3.00/3.87 | | 4.0/4.3 | |
| Heating | - | | 2.38/3.53 | | - | | 2.99/4.22 | | - | |
| Fan Speeds Stage | 4 + Auto | | 4 + Auto | | 4 + Auto | | 4 + Auto | | 4 + Auto | |
| Air Direction: Horizontal | Automatic | | Automatic | | Automatic | | Automatic | | Automatic | |
| Vertical | Automatic | | Automatic | | Automatic | | Automatic | | Automatic | |
| Air Filter | Washable | | Washable | | Washable | | Washable | | Washable | |
| Connection Method | Flare | | Flare | | Flare | | Flare | | Flare | |
| Combined Max. Lgth Ft (m) | 98 (30) | | 164 (50) | | 164 (50) | | 164 (50) | | 164 (50) | |
| Max. Vertical Diff. Ft (m) | 66 (20) | | 98 (30) | | 98 (30) | | 98 (30) | | 98 (30) | |
| Conn. Pipe Diameter Inch | Suc. 5/8 Dis. 1/4 | | Suc. 5/8 Dis. 3/8 | | Suc. 5/8 Dis. 3/8 | | Suc. 5/8 Dis. 3/8 | | Suc. 5/8 Dis. 3/8 | |
| Net Weight lbs. (kg) | 31 (14) 97 (44) | | 31 (14) 137(62) | | 31 (14) 137(62) | | 31 (14) 137(62) | | 31 (14) 137(62) | |
| Dimensions: Height Inch | 12-5/8 22-3/4 | | 12-5/8 32-3/4 | | 12-5/8 32-3/4 | | 12-5/8 32-3/4 | | 12-5/8 32-3/4 | |
| mm | 320 578 | | 320 830 | | 320 830 | | 320 830 | | 320 830 | |
| Width Inch | 39-1/4 31-1/8 | | 39-1/4 35-3/8 | | 39-1/4 35-3/8 | | 39-1/4 35-3/8 | | 39-1/4 35-3/8 | |
| mm | 998 790 | | 998 900 | | 998 900 | | 998 900 | | 998 900 | |
| Depth Inch | 9 12-3/8 | | 9 13 | | 9 13 | | 9 13 | | 9 13 | |
| mm | 228 315 | | 228 300 | | 228 330 | | 228 300 | | 228 330 | |
| Refrigerant | R410A | | R410A | | R410A | | R410A | | R410A | |

Note: Figures are based on 230 Volts.



**Contractor feature only. Only available on Systems 30CLX and 36CLX.

Wall Mounted 18,000 BTU Systems

SYSTEMS 18CL, 18RLQ, 18RLXS

UNIT 1, 2
PENTHOUSE



18RLXS
Qualifies for
Tax Credit of
up to \$1,500

New for 2010

Applications

Systems 18RLQ & 18CL offer clean, aesthetic design with small but mighty indoor units 18-24" shorter in length than competing units, helping them blend into any room. Ideal for spaces requiring additional capacity but are limited on space.

System 18RLXS is a highly efficient system with long piping length, allowing for increased installation options

Standard Features

- Wireless Remote Control
- Sleep Timer
- 24 Hour Timer
- Dry Mode
- Auto Louver: Up/Down
- Minimum Heat (18RLXS)
- Quiet Mode
- Auto Restart/Reset
- Auto Changeover
- Low Ambient to 14°F Clg
- Apple Catechin Filter*
- Ion Deodorizing Filter*
- Plasma Filter (18RLQ)
- Auto Louver: Left/Right**
- Coil Dry Mode (18CL 18RLQ)
- Economy Mode**

Features of System 18RLXS and 24RLXS

NEW for 2010

- **ENERGY STAR® Qualified:** Cuts down on utility bills and may qualify for local utility company rebates of up to \$1,200.
- **Federal Tax Credit Qualified:** Homeowners can claim 30% of the costs (up to a \$1,500 limit) in 2010. The tax credit applies to equipment and labor costs.
- **Long Piping Length of up to 165 Feet:** Place the indoor unit up to 165' from the outdoor unit for increased installation flexibility options.

| | 18CL | 18RLQ | 18RLXS |
|--|-----------------------------------|-------------------------------------|---------------------------------------|
| Nominal Cooling BTU/h | 18,000 | 18,000 | 18,000 |
| Min.-Max. Cooling BTU/h | 5,500-19,000 | 5,500-19,000 | 7,000-23,000 |
| Nominal Heating BTU/h | - | 21,600 | 21,600 |
| Low Temp. Heating 17°F BTU/h | - | 13,700 | 14,600 |
| Min.-Max. Heating BTU/h | - | 4,600-29,000 | 7,000-29,000 |
| HSPF BTU/hW | - | 10.0 | 10.0 |
| SEER BTU/hW | 19.0 | 19.0 | 19.2 |
| EER Clg/Htg | 10.4 | 10.4/11.2 | 13.0/12.0 |
| Clg. Operating Range °F(°C) | 14~115 (-10~46) | 14~115 (-10~46) | 14~115 (-10~46) |
| Htg. Operating Range °F(°C) | - | 5~75 (-15~24) | 5~75 (-15~24) |
| Moisture Removal Pt. (h/h) | 5.9 (2.8) | 5.9 (2.8) | 5.9 (2.8) |
| Voltage/Frequency/Phase | 208-230/60/1 | 208-230/60/1 | 208-230/60/1 |
| Recommended Fuse Size (A) | 20 | 20 | 30 |
| Air Circ. C.F.M. (m ³ /h): Hi | 412 (700) | 412 (700) | 541 (920) |
| Medium | 342 (581) | 341 (580) | 435 (740) |
| Low | 271 (460) | 270 (460) | 365 (620) |
| Quiet | 218 (370) | 218 (370) | 306 (520) |
| Noise Level dB(A) (Clg/Htg): Hi | 44 | 45/42 (Clg/Htg) | 43/44 (Clg/Htg) |
| Medium | 38 | 39/38 (Clg/Htg) | 37/37 (Clg/Htg) |
| Low | 32 | 33/33 (Clg/Htg) | 33/33 (Clg/Htg) |
| Quiet | 25 | 25/27 (Clg/Htg) | 28/28 (Clg/Htg) |
| Outdoor Fan Speed RPM Clg/Htg | 860 | 860/820 | 620/620 |
| Outdoor Noise Level (Clg/Htg) dB(A) | 50 | 50/50 (Clg/Htg) | 48/50 (Clg/Htg) |
| Current Rated (A): Cooling | 7.7/9.0 | 7.7/9.0 | 6.3/13.5 |
| Heating | - | 8.6/13.5 | 8.0/14.5 |
| Power Use Rated (kw): Cooling | 1.73/2.0 | 1.73/2.0 | 1.38/3.01 |
| Heating | - | 1.93/2.93 | 1.80/3.23 |
| Fan Speeds Stage | 4 + Auto | 4 + Auto | 4 + Auto |
| Air Direction: Horizontal | Manual | Manual | Manual |
| Vertical | Automatic | Automatic | Automatic |
| Air Filter | Washable | Washable | Washable |
| Plasma Filter | No | Yes | No |
| Connection Method | Flare | Flare | Flare |
| Combined Max. Lgth Ft (m) | 66 (20) | 66 (20) | 164 (50) |
| Max. Vertical Diff. Ft (m) | 49 (15) | 49 (15) | 98 (30) |
| Conn. Pipe Diameter Inch | Suc 1/2 Dis 1/4 | Suc 1/2 Dis 1/4 | Suc 5/8 Dis 3/8 |
| Net Weight lbs. (kg) | 20 (9) 83 (40) | 22 (10) 83 (40) | 31 (14) 137 (62) |
| Dimensions. Height Inch | 10-13/16 22-3/4 | 11-1/8 22-3/4 | 12-5/8 32-3/4 |
| mm | 275 578 | 283 578 | 320 830 |
| Width Inch | 31-1/8 31-1/8 | 31-1/8 31-1/8 | 39-1/4 35-3/8 |
| mm | 790 790 | 790 790 | 998 900 |
| Depth Inch | 8-7/16 11-13/16 | 9-1/16 11-13/16 | 9 13 |
| mm | 215 300 | 230 300 | 228 330 |
| Refrigerant | R410A | R410A | R410A |
| | Indoor ASU18CL Outdoor AOU18CL | Indoor ASU18RLQ Outdoor AOU18RLQ | Indoor ASU18RLXS Outdoor AOU18RLXS |

Note: Figures are based on 230 Volts

*Feature available only on Systems 18CL and 18RLXS
**Feature available only on System 18RLXS

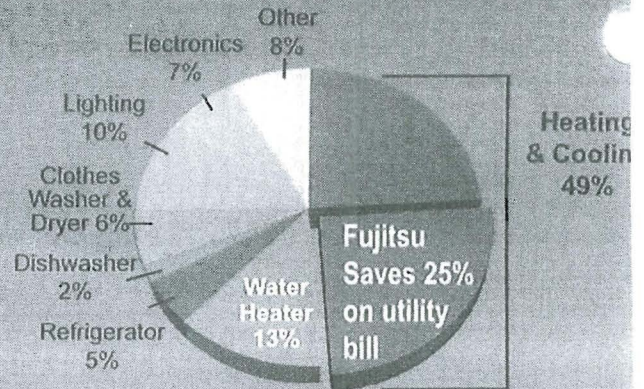


Fujitsu: The Smart Choice in Whole Home Comfort

As much as half of the energy used in your home goes to heating and cooling. So making smart decisions about your home or business' heating and air conditioning system can have a big effect on your utility bills — and your comfort.

Where Does My Money Go?

If your average annual utilities are \$4,200, Fujitsu can save you \$1,050 annually or \$10,500 in 10 yrs!*



How Does a Mini-Split Work?

What is a Mini-Split?

Like your refrigerator, heat pumps use electricity to pump refrigerant and transfer heat from one space to another. When we transfer heat from within our home to the outdoors, we call it "air conditioning". Conversely, when we transfer heat from the outdoors to within the home, we call it a "heat-pump".

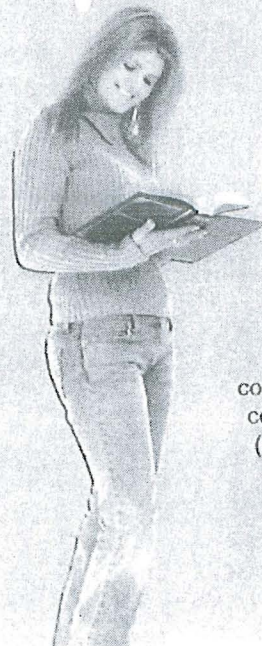
*Savings may vary based on model selected, hours of operation and geographical location. Example given based on 26-SEER system versus 13-SEER system.

Unit Can Be Showcased...

Wall mounted units eliminate the need for ductwork, mount high on a wall and deliver all of the cooling you pay for.

Heat Pumps Provide Heat When it is Chilly...

Because refrigerant is naturally much colder than outdoor temperatures even on a very cold day, it actually absorbs heat from outdoors, and transfers the heat it absorbed outside to within your home. The refrigerant's physical properties do this naturally. What you pay for is the electricity to pump refrigerant via copper tubing from outdoors to indoors. Because we move the heat rather than create it (as electric baseboard or resistant heat does), we can deliver up to 4 times the heat for the energy we consume!



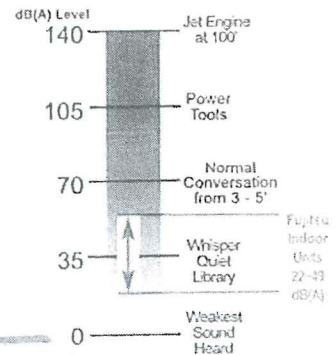
evaporator/
fancoil (indoor)

refrigerant lines,
electric, drain

compressor/
condenser
(outdoor)

Flexible and Quiet

Mini splits offer flexibility because they can be suspended from a ceiling, mounted flush behind a drop ceiling, hung on a wall or floor-standing. Ductless heat pumps allow for a peaceful inside environment by enabling the contractor to install components like compressors and motors outdoors.



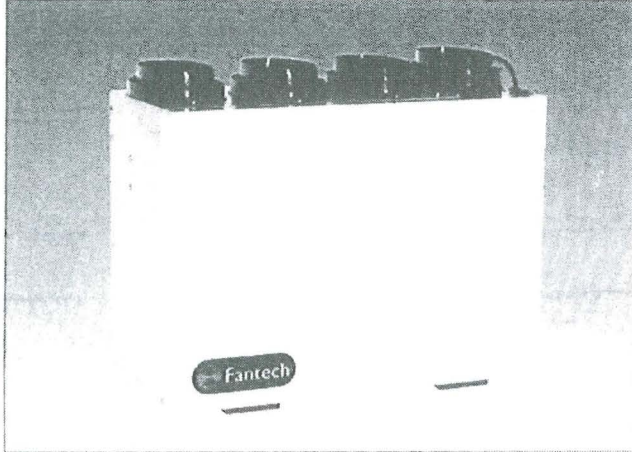


Fantech

UNIT 1 + Z

VHR 704R

Heat Recovery Ventilator



Compact top port design HRV with easy-mount wall bracket. Brings a continuous supply of fresh air into a home while exhausting an equal amount of contaminated air. HRVs use what is called a "sensible" heat recovery core. This special core transfers heat from the exhaust air stream to the incoming air stream. Fresh incoming air is tempered by the heat that is transferred from the outgoing air to save on energy costs. The VHR 704R is equipped with automatic defrost mechanisms so even if you live in the coldest climates you can use your HRV all year long.

FEATURES

- Super Compact Size
- Top Port Design Fits in Tight Spaces
- Includes Easy-Mount Wall Bracket
- Aluminum Heat Recovery Core
- 5" (125mm) Oval Duct Connections
- Easy Access Service Door
- 3' (914mm) Plug-in Power Cord
- Only 30 lbs (13.5 kg)
- Electrostatic Filters (washable)
- Easy Core Guide Channels For Removing Core
- Multiple Speed Operation

ACCESSORIES

- EDF1 -- Multi-function control
- RTS3 -- 20/40/60 minute over-ride
- RTS2 -- 20 minute over-ride
- EDF5 -- Multi-function control
- MDEH1 -- Dehumidistat
- EDF1R -- Triple function wall control

SPECIFICATIONS

CASE 24 gauge galvanized steel. Baked powder-coated paint, antique white. Cabinet fully insulated with 1" (25 mm) aluminum foil-face high density polystyrene foam to prevent condensation and meet the requirements of the UL 94HF.

MOTORS Two (2) German-manufactured, factory-balanced ebm™ motors with backward curved blades. Motors come with permanently lubricated, sealed ball-bearings to guarantee long life and maintenance-free operation. Seven (7) year warranty.

CORE Aluminum heat recovery core configured for efficient cross-flow ventilation. Core is 8.5" x 8.5" (216 x 216 mm) with a 8" (205 mm) depth. Cores are designed and manufactured by Fantech to withstand extreme temperature variations.

FILTERS Two (2) Washable Electrostatic Panel Type Air Filters, 8.5" (216mm) x 8" (203mm) x 0.125" (3mm).

CONTROLS Unit is designed to accommodate the whole series of Fantech HRV controls.

DEFROST A preset defrost sequence is activated at an outdoor temperature of 23° F (-5°C) and lower. During the defrost sequence, the fresh air is interrupted momentarily and indoor air is allowed to recirculate in the exchanger to maximize the effectiveness of the defrost strategy. The unit then returns to normal operation until the next defrost sequence.

SERVICEABILITY Core, filters, motors and drain pan can be easily accessed through latched door. Core conveniently slides out on our new easy glide core guides. 10" (250mm) of clearance is recommended for removal of core.

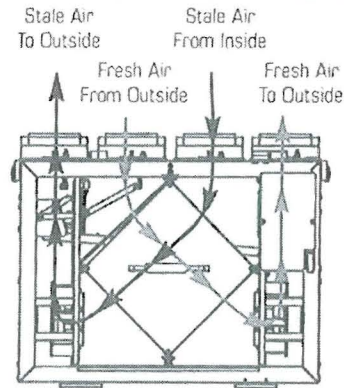
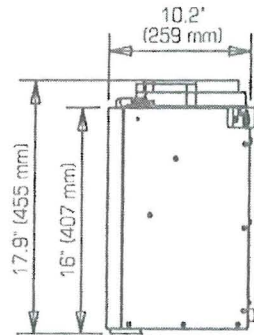
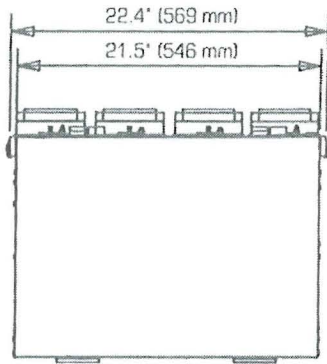
DUCT CONNECTION 5" (125mm) Oval plastic duct connections integrated with balancing damper and balancing port.

DRAIN 1/2" (13mm) OD (outside diameter) drain spout provided, entire bottom of unit covered by pan.

WARRANTY Limited lifetime on aluminum core, 7 year on motors, and 5 year on parts.

FOR MORE INFORMATION CONTACT:

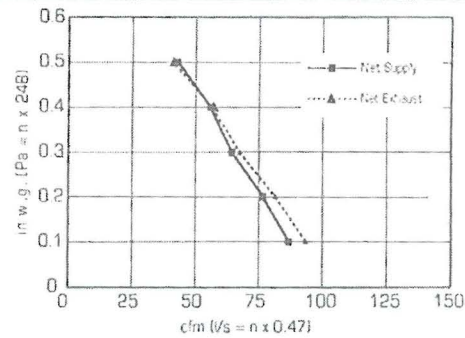
Dimensions & Airflow - All units feature three foot plug-in power cord with 3-prong plug.



- Continuous ventilation mode of supply and exhaust airstreams
- 10" (254mm) of clearance is recommended for removal of core

Ventilation Performance

| EXT. STATIC PRESSURE | | NET SUPPLY AIR FLOW | | GROSS AIR FLOW SUPPLY | | | | EXHAUST | |
|----------------------|-------|---------------------|-----|-----------------------|-----|-----|-----|---------|-----|
| Pa | in wg | L/s | cfm | L/s | cfm | L/s | cfm | L/s | cfm |
| 25 | 0.1 | 40 | 84 | 41 | 86 | 43 | 91 | | |
| 50 | 0.2 | 35 | 76 | 36 | 77 | 38 | 81 | | |
| 75 | 0.3 | 30 | 64 | 31 | 66 | 33 | 70 | | |
| 100 | 0.4 | 26 | 55 | 26 | 56 | 27 | 58 | | |
| 125 | 0.5 | 21 | 44 | 21 | 45 | 20 | 43 | | |



Energy Performance

| | SUPPLY TEMPERATURE | | NET AIRFLOW | | POWER CONSUMED WATTS | SENSIBLE RECOVERY EFFICIENCY | APPARENT SENSIBLE EFFECTIVENESS |
|---------|--------------------|-----|-------------|-----|----------------------|------------------------------|---------------------------------|
| | °C | °F | L/s | cfm | | | |
| Heating | 0 | 32 | 25 | 52 | 34 | 61 | 69 |
| | 0 | 32 | 30 | 64 | 44 | 59 | 67 |
| | 0 | 32 | 35 | 75 | 44 | 59 | 66 |
| | -25 | -13 | 30 | 63 | 42 | 61 | 73 |

Specifications and Ratings

- Model: VHR 704R
- Total assembled weight: 30 lbs (13.5 kg)
- Cabinet: 24 ga. steel w/powder coat finish
- Motors: ebm motors w/backward curved blades
- Filters: 2 washable electrostatic filters 8.5" (216mm) x 8" (205mm) x 0.125" (3mm)
- Insulated with 1" (25 mm) aluminum foil-face high density polystyrene foam to prevent condensation and meet the requirements of the UL 94HF.
- Core: Aluminum 8.5" (216mm) x 8.5" (216mm) x 8" (205mm)
- Supply & exhaust ducts: 5" (125mm) oval
- Mounting: Wall bracket included
- Electrical requirements:

| Volts | Frequency | Amps | Watts |
|-------|-----------|-------|-------|
| 115V | 60Hz | 0.40A | 40W |

Contacts

Submitted by: _____ Date: _____

Qty: _____ Model #: _____

Comments: _____

Project #: _____

Location: _____

Architect: _____

Engineer: _____

Contractor: _____



United States
 10048 Industrial Blvd.
 Lenexa, KS 66215
 Phone: 800.747.1762; 913.752.6000
 Fax: 800.487.9915; 913.752.6466

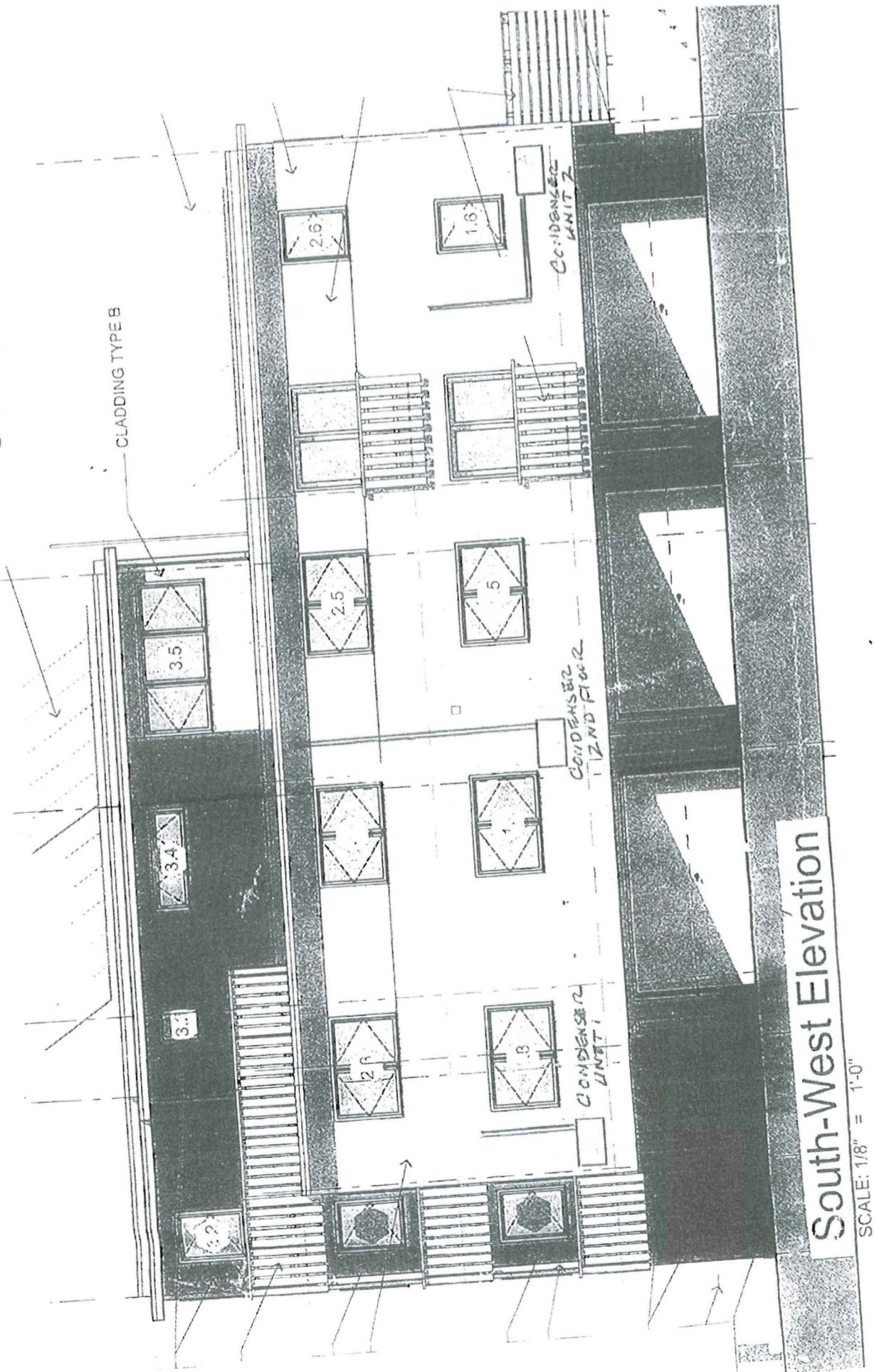
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 Bouctouche, NB E4S 3M5
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www.fantech.net; info@fantech.net

Item # 412840
 Rev Date 060809



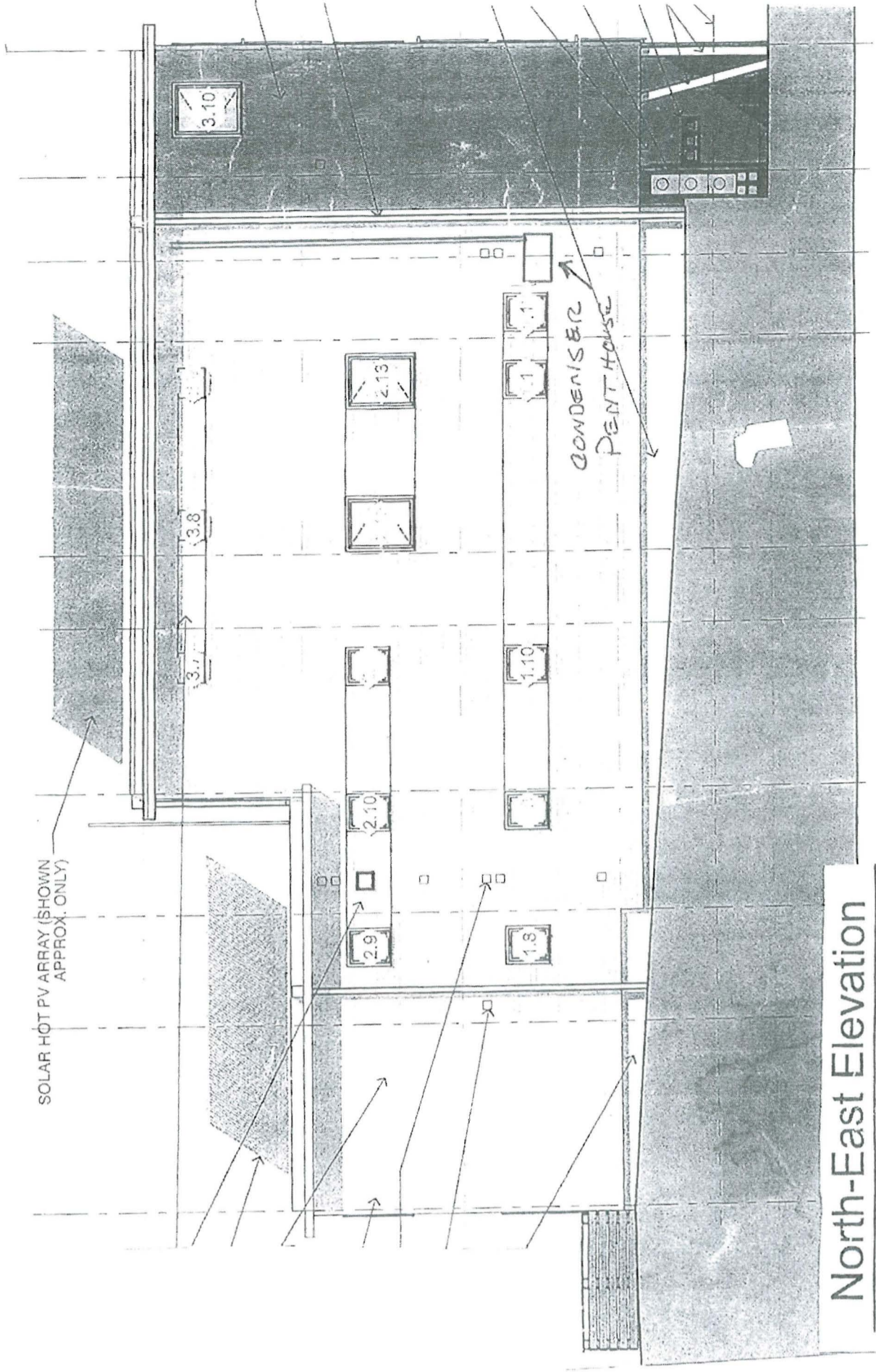
**EXTERIOR CONDENSER
LOCATIONS.
62 CAMBERLAND AVE**



South-West Elevation

SCALE: 1/8" = 1'-0"

**EXTERIOR CONDENSER
LOCATION
62 CAMBERLAND AVE**



North-East Elevation

SCALE: 1/8" = 1'-0"



CITY OF PORTLAND, MAINE

Department of Building Inspections

Original Receipt

7-13 20 11

Received from Ronald Russell

Location of Work 62 Cumberland St

Cost of Construction \$ _____ Building Fee: _____

Permit Fee \$ _____ Site Fee: _____

Certificate of Occupancy Fee: _____

Total: 360

Building (IL) _____ Plumbing (I5) _____ Electrical (I2) _____ Site Plan (U2) _____

Other NOAC

CBL: _____

Check #: _____ Total Collected \$ 360

**No work is to be started until permit issued.
Please keep original receipt for your records.**

Taken by: [Signature]

WHITE - Applicant's Copy
YELLOW - Office Copy
PINK - Permit Copy