

City of Portland, Maine - Building or Use Permit Application

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

Permit No: 05-1784	ISSUE DATE: DEC 9 2005	PERMIT ISSUED	DBL: 376 AC33001
-----------------------	---------------------------	---------------	---------------------

Location of Construction: 25 SHINGLE WAY	Owner Name: NICOLSON NANCY J & DONNA	Owner Address: 25 SHINGLE WAY	Phone:
Business Name:	Contractor Name: Avery Services, Inc.	Contractor Address: 7 Thomas Drive Westbrook, ME 04091	Phone: 728687
Lessee/Buyer's Name	Phone:	Permit Type: HVAC	Zone:

Past Use: Single Family Home	Proposed Use: Single Family Home/ install Carrier cool coil Condenser	Permit Fee: \$93.00	Cost of Work: \$7,290.00	CEO District: 5
Proposed Project Description: install Carrier cool coil Condenser		FIRE DEPT: <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Denied Signature: <i>[Signature]</i>	INSPECTION: Use Group: U Type: HVAC Signature: <i>[Signature]</i> State Gas Regs	

PEDESTRIAN ACTIVITIES DISTRICT (P.A.D.)	
Action: <input type="checkbox"/> Approved <input type="checkbox"/> Approved w/Conditions <input checked="" type="checkbox"/> Denied	Signature: _____ Date: _____

Permit Taken By: Idobson	Date Applied For: 12/08/2005	Zoning Approval	
-----------------------------	---------------------------------	------------------------	--

<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>Special Zone or Reviews</p> <p><input type="checkbox"/> Shoreland</p> <p><input type="checkbox"/> Wetland</p> <p><input type="checkbox"/> Flood Zone</p> <p><input checked="" 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: 12/16/05</p>	<p>Zoning Appeal</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>Historic Preservation</p> <p><input checked="" 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>Date: 12/16/05</p>
---	---	---	---

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: 05-1784	Date Applied For: 12/08/2005	CBL: 376 A033001
-----------------------	---------------------------------	---------------------

Location of Construction: 25 SHINGLE WAY	Owner Name: NICOLSON NANCY J & DONNA	Owner Address: 25 SHINGLE WAY	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 Carrier cool coil Condenser	Proposed Project Description: install Carrier cool coil Condenser
--	--

Dept: Zoning	Status: Approved	Reviewer: Tammy Munson	Approval Date: 12/16/2005
Note:	Ok to Issue: <input checked="" type="checkbox"/>		

Dept: Building	Status: Approved with Conditions	Reviewer: Tammy Munson	Approval Date: 12/16/2005
Note:	Ok to Issue: <input checked="" type="checkbox"/>		
1) The installation must comply with the State of Maine Gas Regulations.			

PROPOSAL

1091

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

Page 1 of 2

FAX (207) 874-0933

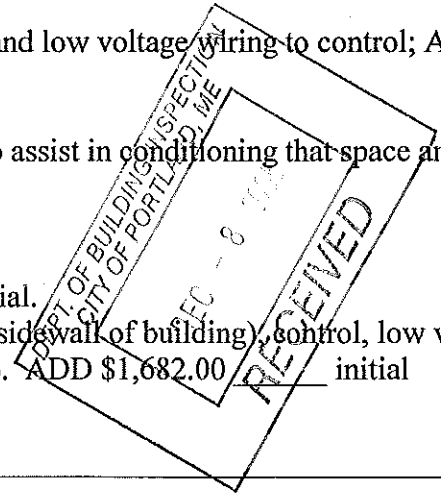
TO: Dave & Renee Smaha
25 Shingle Way
Portland ME 04103

PHONE 799-4055	DATE 11/17/05
JOB NAME / LOCATION Add A/C to existing warm air system	
JOB NUMBER DCA #580055	JOB PHONE

We hereby submit specifications and estimates for:

Avery Services, Inc. is pleased to quote, as requested, on the installation of central air conditioning to your existing heating system. Scope of work to include:

- Remove the existing supply duct plenum (and supply duct runouts) from the existing furnace.
- Supply and install a new plenum and cooling coil, reconnect to the furnace and existing supply duct runouts.
- Remove and dispose of the existing humidifier (torn apart already) and control off existing plenum. Supply and install a new bypass humidifier on the new plenum, reconnect to existing water supply, duct connections and drain.
- Supply and install a Carrier 38TXA 3.5 ton Puron condenser set on a polymer pad, includes; disconnect, whip and interconnecting refrigerant piping.
- Supply and install (in place of existing thermostat) a Carrier Thermidstat and low voltage wiring to control; A/C, heat and humidity control for the home.
- Supply and install a PHI air purifier.
- Supply and install one (1) supply and one (1) return grill in the basement to assist in conditioning that space and minimize sweating of existing duct without insulating duct.
- Start up and test. Price includes: freight, taxes and permit.



- OPTION: A) To eliminate PHI air cleaner. DEDUCT \$595.00 _____ initial.
- B) To supply and install a Rinnai "On Demand" LP gas water heater, flue (sidewalk of building), control, low voltage wire and gas pipe from main heater (plumbing and power wiring by others). ADD \$1,682.00 _____ initial

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 Worker's Compensation Insurance.

Authorized Signature

Douglas C. Avery

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

Signature

[Signature]

Signature

Renee M. Smaha

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: _____

Existing Unit
 Charlock M# 58MVP020F17114
 SN 4703A/5302
 FILTER - KEAFL 030300

Sup 8" V16 = 700 CFM
 8" X 12" = 500 CFM
 6" Ø = 105 CFM
 6" Ø = 105 CFM

RET 12" Ø = 500 CFM
 8" X 6" = 510 CFM
 6" Ø

WENT TO BYPASS
 MUM - Now Abandoned
 1st Basement
 800 CFM

(2) 6" X 8" IE 50 → (150 CFM Ea.)
 300 CFM

CRAWLSPACE FL TO JOIST
 4"

Supply Plenums - FL to Bottom of Duct 5"

Worst Section 7/9" Blows

NEED TO BE RE-INSULATED
 PLEASE NOTE
 BE RIGID



Garage

Sump Hole

Door

Supply V16

RAISED PLUMBING

6"

8" X 18" R14
 BYPASS STOVE

PAINTED (Low Speed)

8" V16

6"

TO UNITS
 INSULATED
 6"

10 3/4" X 16" X 8"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

8" X 12"

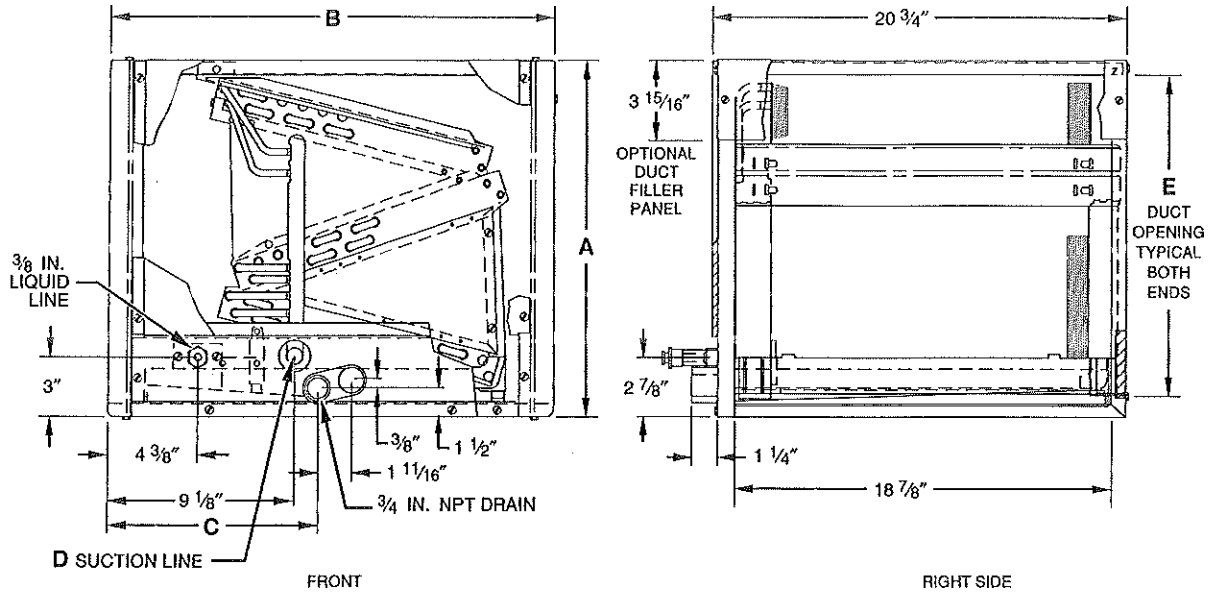
8" X 12"

8" X 12"

8" X 12"

8" X 12"

Cooling Coil



A97621

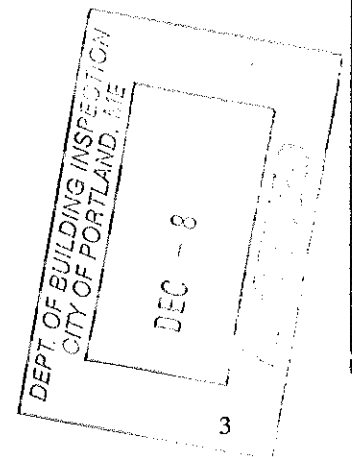
DIMENSIONS (In.)

UNIT	A	B	C	D	E	SHIPPING WEIGHT (LB)
CK3BXA024(O,T)17	17-9/16	19-1/16	10-1/16	5/8	16	37.0
CK3BXA030(O,T)17	17-9/16	19-1/16	10-1/16	3/4	16	40.5
CK3BXA036(O,T)17	17-9/16	22-1/16	10-1/4	3/4	16	45.5
CK3BXA042(O,T)21	21-17/16	22-1/16	10-1/4	7/8	19-1/2	47.0
CK3BXA048(O,T)21	21-1/16	22-1/16	10-1/4	7/8	19-1/2	51.0
CK3BXA060(O,T)24	24-9/16	28-1/8	13-3/16	7/8	23	64.0

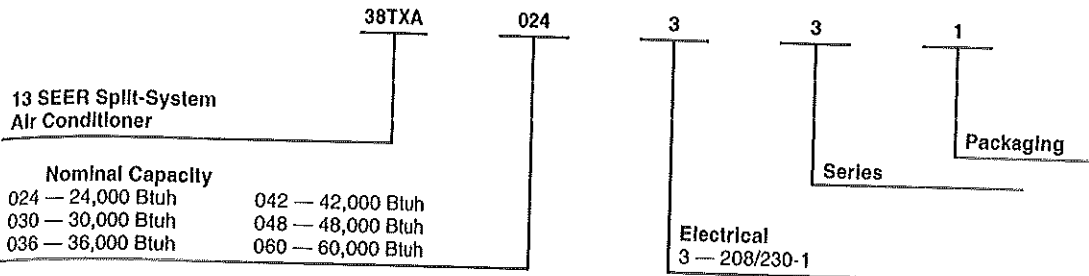
NOTE: For the 10th digit position in the model number, O = standard copper and T = tin-plated copper.

ACCURATER® Piston Chart

Coil CK3B	Piston No.
024	59
030	67
036	70
042	78
048	84
060	90



Model number nomenclature



Physical data

UNIT SIZE-SERIES	024-34	030-33	036-33	042-33	048-33	060-34/35
Operating Weight (Lb)	220	213	243	253	301	337
COMPRESSOR Type	Scroll					
REFRIGERANT Control	Puron® (R-410A)					
Charge (Lb)	5.50	6.00	6.88	8.75	9.95	12.00/11.50
COND FAN Air Discharge	Propeller Type, Direct Drive Vertical					
Air Qty (CFM)	2400	2400	2800	2800	3400	3400
Motor HP	1/8	1/8	1/5	1/5	1/4	1/4
Motor RPM	825	825	825	825	1125	1125
COND COIL Face Area (Sq ft)	12.2	12.2	Copper Tube, Aluminum Plate Fin		18.2	18.2
Fins per In.	25	25	15.2	18.2	20	20
Rows	1	1	25	25	2	2
Circuits	2	2	1	1	5	5
VALVE CONNECT. (In. ID)	Sweat					
Vapor	5/8	3/4	3/4	7/8	7/8	7/8
Liquid				3/8		
REFRIGERANT TUBES* (In. OD)	Sweat					
Vapor (0-50 Ft Tube Length)	5/8	3/4	3/4	7/8	7/8	1-1/8
Vapor (Max Diameter for Long-Line Applications)	7/8	7/8	7/8	1-1/8	1-1/8	1-1/8
Liquid (0-50 Ft Tube Length)				3/8		
Liquid (For Long-Line Applications)				3/8		

* For tubing sets greater than 50 ft horizontal and/or 20 ft vertical differential, consult Residential Split System Long-Line Application Guideline and Service Manual.

NOTE: See unit Installation Instructions for proper installation.

ACCURATER® PISTON CHART

UNIT SIZE-SERIES	PISTON* IDENTIFICATION NO.
024-34	55
030-33	63
036-33	70
042-33	73
048-33	78
060-34	96
060-35	TXV

* Piston listed is for any approved non-capillary tube coil combination. Piston is shipped with outdoor unit and must be installed in approved indoor coil.

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE*)

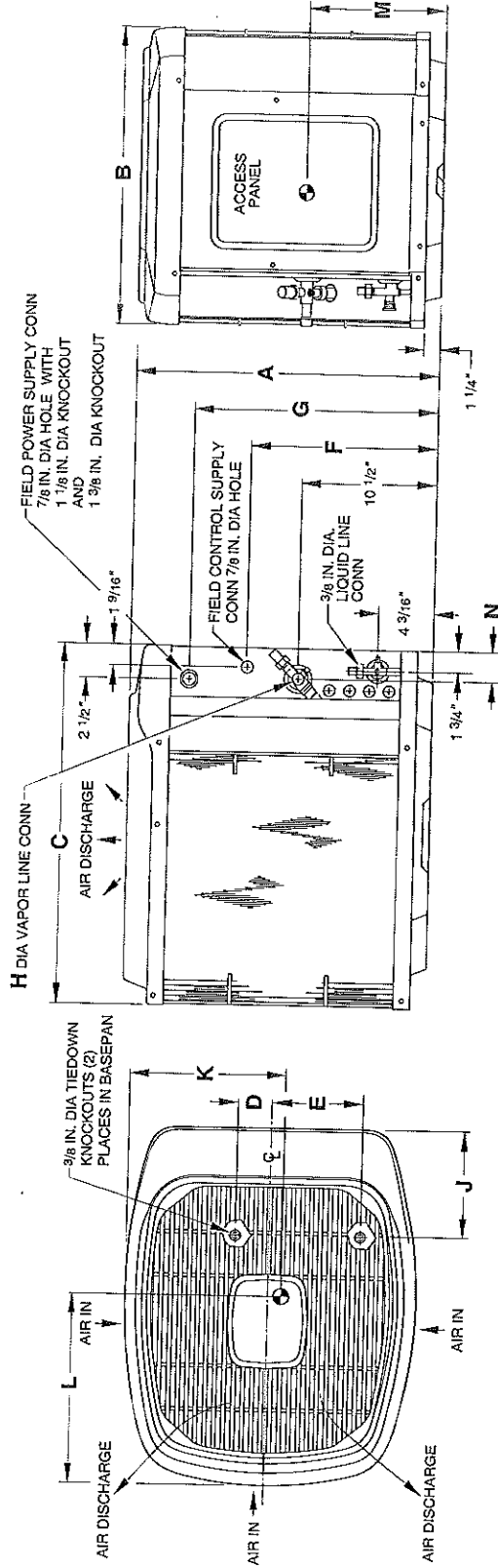
UNIT SIZE-SERIES	REQUIRED SUBCOOLING (°F)
024-34	10
030-33	12
036-33	11
042-33	12
048-33	11
060-34, 35	12

* Must be a Puron® (R-410A) approved hard shutoff TXV.

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 (unless low ambient control is used) max 125°F.
3. Series designation is the 13th position of the unit model number.
4. Center of gravity



A97084

DIMENSIONS (IN.)

UNIT SIZE	SERIES	UNIT DIMENSIONS											MINIMUM MOUNTING PAD DIMENSIONS		
		A	B	C	D	E	F	G	H	J	K	L		M	N
024	34	27-13/16	30	34-15/16	4	9-3/4	15-1/2	21-7/8	5/8	8-3/16	17	19-3/4	13	2-15/16	26 x 32
030	33	27-13/16	30	34-15/16	4	9-3/4	15-1/2	21-7/8	3/4	8-3/16	18-1/2	19-3/4	13	2-15/16	26 x 32
036	33	33-13/16	30	34-15/16	4	9-3/4	21-1/2	27-7/8	3/4	8-3/16	17	19-3/4	15-3/4	2-15/16	26 x 32
042	33	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	8-3/16	17-3/4	19	17-3/4	2-15/16	26 x 32
048	33	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	8-3/16	16-3/4	19-1/2	17-1/4	2-15/16	26 x 32
060	34, 35	39-13/16	30	34-15/16	4	9-3/4	27-1/2	33-7/8	7/8	8-3/16	16-1/2	19	16-3/4	2-15/16	26 x 32



Cond. Unit

ACCESSORY DESCRIPTION AND USAGE (continued)

9. Outdoor Air Temperature Sensor

Designed for use with Carrier Thermostats listed in this publication. This device enables the thermostat to display the outdoor temperature. This device also is required to enable special thermostat features such as auxiliary heat lock out.

Usage Guideline:

Suggested for all Carrier thermostats listed in this publication.

10. Sound Hood

Wraparound sound reducing cover for the compressor. Reduces the sound level by about 2 dBA.

Usage Guideline:

Suggested when unit is installed closer than 15 ft to quiet areas—bedrooms, etc.
Suggested when unit is installed between two houses less than 10 ft apart.

11. Support Feet

Four stick-on plastic feet that raise the unit 4 in. above the mounting pad. This allows sand, dirt, and other debris to be flushed from the unit base, minimizing corrosion.

Usage Guideline:

Suggested in the following applications:
Coastal installations.
Windy areas or where debris is normally circulating.
Rooftop installations.
For improved sound ratings.

12. Thermostatic Expansion Valve (TXV)

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator. Kit includes valve, adapter tubes, and external equalizer tube. Hard shut off types are available.

Note: When using a hard shut off TXV with single phase reciprocating compressors, a Compressor Start Assist — Capacitor and Relay is required.

Usage Guideline:

Required to achieve ARI ratings in certain equipment combinations. Refer to combination ratings.
Hard shut off TXV or LLS required in air conditioner long line applications.
Required for use on all zoning systems.

13. Time-Delay Relay

An SPST delay relay which briefly continues operation of indoor blower motor to provide additional cooling after the compressor cycles off.

Note: Most indoor unit controls include this feature. For those that do not, use the guideline below.

Usage Guideline:

For improved efficiency ratings for certain combinations of indoor and outdoor units. Refer to ARI Unitary Directory.

Electrical data

UNIT SIZE-SERIES	V/PH	OPER VOLTS*		COMPR		FAN FLA	MCA	60°C MIN WIRE SIZE†	75°C MIN WIRE SIZE†	60°C MAX LENGTH (F)‡	75°C MAX LENGTH (F)‡	MAX FUSE** OR CKT BKR AMPS
		Max	Min	LRA	RLA							
024-34	208/230/1	253	187	60.0	12.8	0.8	16.8	14	14	46	44	25
030-33				72.5	14.7	0.8	19.2	14	14	41	39	30
036-33				83.0	15.4	1.1	20.2	12	12	62	59	30
042-33				105.0	18.6	1.1	24.4	10	10	80	76	40
048-33				109.0	20.5	1.4	27.0	10	10	73	70	40
060-34, 35				158.0	27.6	1.4	35.9	8	8	85	80	60

* Permissible limits of the voltage range at which unit will operate satisfactorily.

† If wire is applied at ambient greater than 30°C (86°F), consult Table 310-16 of the NEC (ANSI/NFPA 70). The ampacity of nonmetallic-sheathed cable (NM), trade name ROMEX, shall be that of 60°C (140°F) conductors, per the NEC (ANSI/NFPA 70) Article 336-26. If other than uncoated (non-plated), 60 or 75°C (140 or 167°F) insulation, copper wire (solid wire for 10 AWG and smaller, stranded wire for larger than 10 AWG) is used, consult applicable tables of the NEC (ANSI/NFPA 70).

‡ Length shown is as measured 1 way along wire path between unit and service panel for voltage drop not to exceed 2%.

** Time-delay fuse.

FLA — Full Load Amps

LRA — Locked Rotor Arms

MCA — Minimum Circuit Amps

RLA — Rated Load Amps

NOTE: Control circuit is 24-v on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

A-weighted sound power (dBA)

UNIT SIZE-SERIES	STANDARD RATING	TYPICAL OCTAVE BAND SPECTRUM (without tone adjustment)							
		125	250	500	1000	2000	4000	8000	
024-33	70	55.5	60.0	63.0	64.0	62.0	61.0	55.0	
024-34	71	58.5	64.0	65.0	65.0	64.0	57.0	49.5	
030-33	71	54.0	61.5	65.5	64.0	62.0	60.0	52.0	
036-33	71	58.0	62.5	64.5	64.5	61.5	57.5	49.0	
042-33	72	55.5	62.5	65.5	67.0	64.5	63.5	57.0	
048-33	76	61.5	67.0	68.5	67.0	65.0	64.0	54.5	
060-34, 35	78	63.5	67.5	71.5	72.0	67.0	62.0	55.0	

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