

SINGLE PACKAGE AIR CONDITIONERS CHA4-201

COOLING UNITS

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Pulls large air volumes uniformly through the entire condenser coil resulting in high refrigerant cooling capacity. Entering air and exhaust air in the same end of unit permitting flush through the wall installation.

All exterior panels have hot dipped galvanized finish with baked acrylic enamel. 5-station metal preparation assures perfect bonding of the outdoor enamel. Base is covered on both sides with a corrosion resistant material and has 3/4 inch female threaded drain connections.

ACCESSIBLE CONTROL BOX

Large size and located for easy service access. All controls factory installed and wired.

THERMAL INSULATION

Cabinet is lined with 1 inch thick $1\frac{1}{2}$ lb. density fiberglass insulation.

ACCESSIBLE CONTROL BOX

Large size and located for easy service access. All controls factory installed and wired.

DUAL PRESSURE SWITCH

Factory installed and wired. Low pressure is automatic reset. High pressure is manual reset.

EVAPORATOR COIL

Almost one square foot of net face area per ton of rated capacity. Four rows seamless copper tubes with flat bonded aluminum fins.

COMPRESSOR

Suction cooled, resiliently mounted. Carries five year warranty. Accessible gauge ports. Overload protected.

EVAPORATOR BLOWER

Direct drive. Quiet operating and easily serviced. Statically and dynamically balanced. All moving parts are resiliently mounted.

CONDENSER COIL

Almost two square feet of face area per ton of rated capacity. Coil guard is optional equipment and must be ordered extra.

Cased unit

ACCURATE RATINGS

Ratings shown in specifications are from Lennox calorimeter room testing procedures according to ARI standard 210-62.

MAJOR FEATURES

Application

Lennox CHA4 units are complete central air conditioners in one package. Evaporator supply air and return air openings are both at the same end of the cabinet. Condenser air inlet is at the opposite end. Condenser air is pulled through the coil and discharged out the weatherproof grilles at the sides. Unit is primarily designed for residential and small business or commercial establishments. However, multiple units can be installed to satisfy requirements of larger buildings.

Installation

Unit is very versatile and can be installed in most any location. Can be installed through a wall in a utility room, attic space or crawl space. Can be installed on a slab at grade level or on a rooftop. Unit is shipped completely charged, and assembled in one package. Installer has only to locate unit, make duct connections and connect power supply. Each unit is test operated at the factory before shipment.

Air Pattern Characteristics

Both the condenser coil and evaporator coil employ pullthrough method of air handling. Evaporator supply air is pulled through the coil, turned 180° and discharged out the same side it entered. Condenser supply air is pulled through the condenser coil and discharged out the sides of unit.

Controls

Controls are prewired at the factory. Unit has been test run at the factory insuring continuity of controls and wiring. Due to the many different types of applications possible with this unit, a thermostat is not furnished.

Approvals

Units are tested and rated according to ARI Standard 210-62. CSA approved and U.L. listed.

Accessories

Evaporator air should be filtered. Lennox has available as optional equipment two types of filter boxes, ceiling type filter box with a built in return air grille (CHA2-C23) or a duct type filter box (CHA2-D23).

NOTE: Specifications, ratings and dimensions subject to change without notice.

SPECIFICATIONS

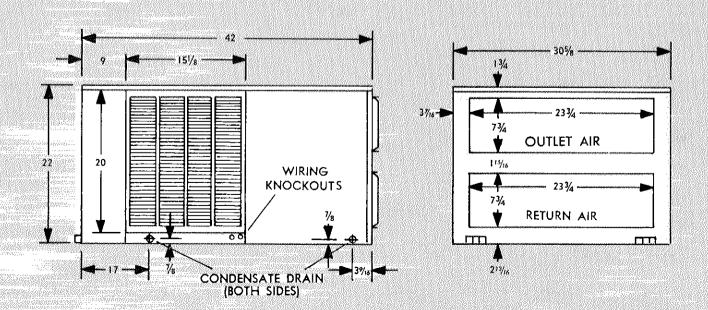
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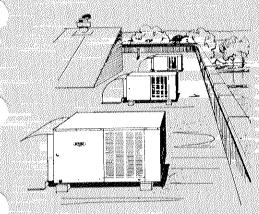
2.77

| | | | CHA4-20 |
|--|---|--|---------------------|
| | Model No. | | |
| | Total cooling | 23,000 | |
| Sep. 11 | Compressor v | 2660 | |
| 1997 TO THE TO THE TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE TO | | 29 | |
| 00 to 10 to | Dendinanyin | g capacity % of total cooling capacity | |
| | Refrigerant type | | R-22 4 lbs. 1 o: |
| Medicane Control of Co | | Net face area (sq ft) | 3.75 |
| | Condenser | Tube diameter (in.) | 1/2 |
| The same of the sa | Coil | Number rows of tubes | 3 |
| ************************************** | | Fins per inch | 10 |
| The second secon | | Diameter (in.) and No. of blades | 18-6 |
| | Condenser Fan | Air volume (factory setting) | 1872 |
| | | Rpm (factory setting) | 1080 |
| | | *Motor harsepower | 1/3 |
| 200,000,000 | | *Motor watts (factory setting) | 580 |
| PARAMETER TO THE STATE OF THE S | Evaporator Coil | Net face area (sq ft) | 1.87 |
| | | Tube diameter (in.) | 1/2 |
| | | Number rows of tubes | 4 |
| | | Fins per inch | 10 |
| | Evaporator | Wheel nominal diameter x width (in.) | 9 x 5 |
| DALLIN AND ALLE AND | Blower | Nominal air volume (cfm) | 860 |
| | Condensate drain size fpt (in.) | | 3/4 |
| ARTICLE STATE OF THE STATE OF T | Number of packages Approximate shipping weight | | |
| | | | |

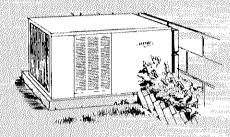
*Single 1/3 hp motor with double shaft for both condenser fan and evaporator

(DIMENSIONS (in.)





These Stowaways on rooftop cool a large building. They provide zoned comfort, take no interior space. Insulated ducts carry elithrough roof. Sturdy cabinets are designed to withstand weather.



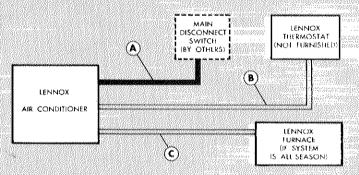
A home with basement or crawl space can be cooled automatically in this manner. Stowaway connects to ducts under floor.

ELECTRICAL DATA

| Model No. Line voltage data | | CHA4-201 | |
|---|-------------------|--------------|--|
| | | 230v/60cy/lø | |
| | **Running amps | 0.81 | |
| Compressor | Power factor | .89 | |
| | Locked rotor amps | 50.0 | |
| Condenser Coil Fan | Running amps | *2.4 | |
| | Locked rotor amps | *7.4 | |
| Evaporator Coil Blower | Running amps | *2.4 | |
| | Locked rotor amps | *7.4 | |
| Maximum unit an | nps | 15.4 | |
| AWG Wire Size For Various Lengths Of Run | 10' | 12 | |
| | 50′ | 12 | |
| | 100' | 12 | |
| | 200' | 10 | |
| Disconnect size | | 30 | |
| Fusetron size | | 20 | |

^{*}Same motor is used on condenser fan and evaporator blower.

FIELD WIRING



A—Two Wire Power—Single Phase
Three Wire Power—Three Phase
See Electrical Data table for wire size.

B—†Three Wire Low Voltage—18 ga. min.—for cooling only installations

†Four Wire Low Voltage—18 ga. min.—for all-season installations C—†Two Wire Low Voltage—18 ga. min.—for all-season installations All wiring must conform to NEC.

†May be class II wiring if local codes permit.

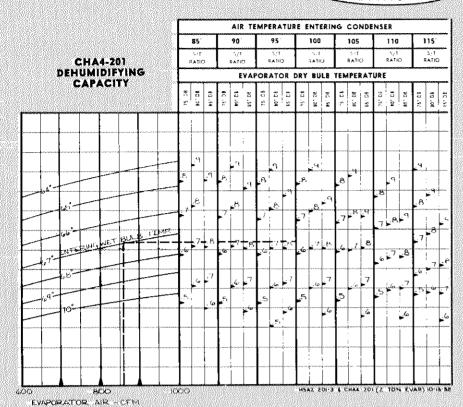
BLOWER DATA

EVAPORATOR BLOWER PERFORMANCE CHART

| Static Pressure | Air Volume (cfm) | RPM |
|--------------------|---------------------|------|
| 0 | 877 | 1080 |
| .1 | 843 | 1083 |
| .2 | 808 | 1087 |
| .3 | 773 | 0901 |
| .4 | 730 | 1094 |

^{**}Running amps are at ARI standard conditions

PERFORMANCE DATA



How to find S/T Ratio

EXAMPLE:

Given—Evaporator Cfm 860; entering condenser temperature 95 F.; entering evaporator wet bulb temperature 67 F.; entering evaporator air dry bulb temperature, 80 F.

Find from graph—S/T ratio: 71. Thus, dehumidifying (or latent heat removal) capacity is 29%. S/T ratio is the ratio of sensible heat removal capacity to total capacity in Btuh.

| | | | | PERATURE ENTERING CO | | | |
|------------------------------|---|--|--|--|--|---|---|
| | 70 | 75 | 80' 85' | 90" 95" | 100 | 105' 110 | 115 |
| CHA4-201 PERFORMANCE DATA | CAP. (1000 Bh./hr) COMP. POWER (KW] COMD. TEMP. (*F) SUCT. TEMP. (*F) | COMP. POWER IKW; COMP. POWER IKW; COND. TEMP. (*F) SLCT. TEMP. (*F) CAP. (1000 Bus/hr) | COMP. POWER (KW) | | SUCLITEME THE CAPE, DOOR BLUTH, COMP. FOWER IKM COND. TEMP. ITS! | COAP. 100 BL/P) COAP. POWER RW/ COND. TEMP. (F) SUCT TEMP. (F) CAP. (1000 Bu/P) COMP. POWER RW/ | CAP. (100 Bu/hr) CAP. (100 Bu/hr) COMP. POWER (KW) COND. TEMP. (19) |
| | 48 | 1.6 | | | 3 285 54 | 295 55 24 3,06 | 56 23 J46 |
| 80 19 | 33 IA 46 | 32 3 , 290 47 | 20118 | 2.68 50 27 2.75 128 2.68 50 5 | | 136 53 | 54 3.15 |
| 18 17 | 230 | 30 290 47 30 29 | 28 245 116 119 | 27 25 270 26 26 2 48 25 270 26 2 | 230 130 19 50 | 2.90 22 3.00 134 51 136 13 | 21 19 ₅₂ 3.10 |
| 74° 13° | <u> </u> | F" F" | 46 47 250 26 | 25 | 275 | 285 | 19 |
| 10 69 ENTERING WET BURY | 29 110 42 | 28 2 | 240114 44 117 45 | 255 46 23 26 9124 4 | 7 22 128 48 | 132 49 | 37 50 3.08 |
| 66 65 | 220 | 2,30 | 245 | 23 | 2.70 | 280 18 290 | 49 17 140 |
| (A) (3) | 27 108 40 | 26 41 225 41 | 42 | 250 21 260122 4 | | | 3.00 |
| 3 6 | 25 106 38 | 24 108 39 | 22 240 230110 40 113 41 | 116 ⁴² 19 25:120 245 | 3 18 124 44 | 275 17 45 16 2.65 128 18 | 46 ¹⁵ 38 |
| 60 59 | | 2 20 | 20235 | 19 | 260 | 5 270 43 14 280 | 44 13 134 |
| | 23 04 36 | 22 37 ²¹ | 2.210838 111 | 114 40 17 250118 240 | | 126 | |
| | 2100 102 34 | | 9 2.20106 109 | 17 38 3 112 15 245116 | 9 2.55 | 2.65 41 12 2.75 124 12 2.75 | 285 |

How to use Performance Chart

EXAMPLE:

Given—Evaporator Cfm 860; entering condenser air temperature 95 F.; entering evaporator wet bulb temperature 67 F. Find from graph—Capacity 23,000 Btuh; compressor power 2.66 km; condensing temperature 124 F.; suction temperature 47 F.

NOTE: Condenser blower and evaporator blower motor watts 580 (factory setting).