



**CR24 SERIES — DOWN-FLO  
AIR-CONDITIONING ONLY EVAPORATOR UNITS  
1 To 5 Tons (4 To 18 kW) Nominal Cooling Capacity**

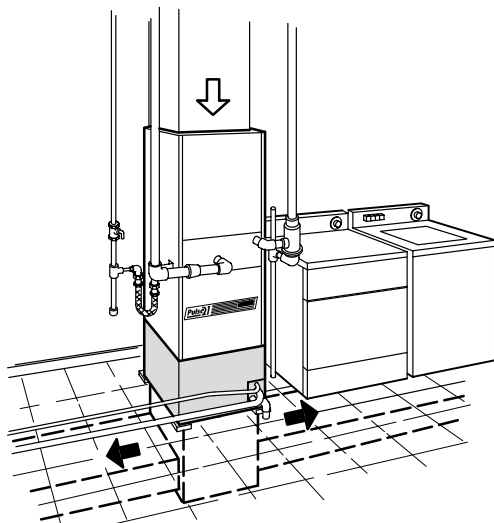
**CR24**  
Bulletin #490\*\*\*  
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**Cabinet Construction** — Cabinets are constructed of heavy gauge steel with a deluxe baked-on enamel paint finish and are fully insulated with thick fiberglass insulation. Removeable panel allows access for easy servicing. Refrigerant lines extend outside of cabinet for ease of construction.

**Coil Construction** — Lennox designed and fabricated coils are constructed of precisely spaced ripple-edged enhanced aluminum fins machine fitted to rifled copper tubes. Lanced fins allow for maximum exposure of fin surface to air stream. Copper rifled tubing provides long coil life and ease of service. Rifled tubing provides superior refrigerant flow resulting in maximum heat transfer. Twin coils assembled in an "A" configuration provides extra large surface and contact area for maximum efficiency. Fins have collars that grip tubing for maximum contact area resulting in excellent heat transfer. Flared shoulder tubing joints and silver soldering provide tight leakproof joints. Coils are thoroughly tested under pressure to insure leakproof construction. Drainpan is constructed of a non-corrosive polymer and has dual 3/4 inch (19 mm) fpt drain connections. Two-piece end panel on coil allows easy access for coil servicing and cleaning. Refrigerant lines are equipped with sweat connections on suction and liquid lines.

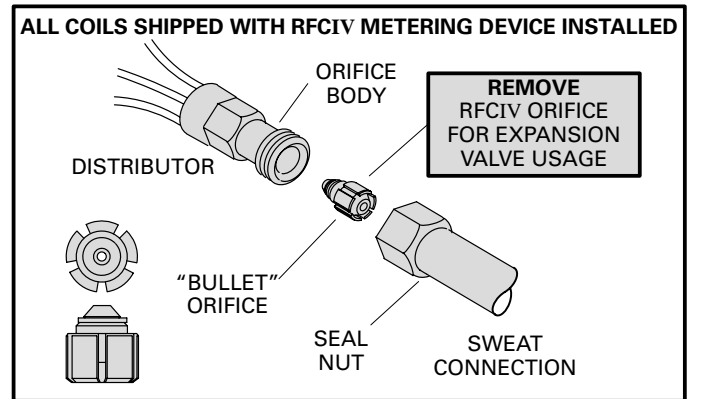
**Fully Tested** — Evaporator units have been thoroughly tested with matching condensing units in the Lennox Research Laboratory environmental test room. Air resistance data is from tests conducted in the Lennox air test chamber. Coil assemblies are shipped factory assembled and ready for installation.

**Typical Applications**



Utility Room Installation  
With Pulse 21® Furnace

**Applications** — Lennox designed and built down-flo evaporator coils can easily be installed with most Lennox down-flo furnaces. Coils match openings of most Lennox furnaces. See Coil/Furnace Match-up Selector table in this bulletin for more information. See condensing units bulletins (section Cooling Units — Condensing Units) for evaporator unit applications and cooling capacities.



**Refrigerant Control Choice** — Coils are shipped with factory installed RFCIV refrigerant metering device. An alternate choice is to select an optional expansion valve for a more efficient capacity rating. For expansion valve usage, coils must be field altered by removing the RFCIV metering orifice, see sketch above. Expansion valve kits are optional and must be ordered extra. See condensing unit bulletins in tab section, Cooling Units — Condensing Units for valve selection.

**Refrigerant Flow Control IV** — All models are applicable to Lennox RFCIV™ systems. RFCIV is a very accurate means of metering refrigerant in system. Refrigerant control is accomplished by the exact sizing of a refrigerant metering orifice. The principle of the Lennox RFCIV system involves matching the evaporator coil with the proper bore size in the orifice within the metering device. Because the RFCIV system equalizes pressure almost instantaneously after the compressor stops, the unit starts unloaded, eliminating the need for any additional controls.

**Furnace Support Kit (Optional)** — Kit (41J22) is required to provide additional support when matching 21-1/4 inch (540 mm) wide furnaces with CR24-51 and CR24-65 coils.

## SPECIFICATIONS

| Model Number                             | CR24-21-RFC                               | CR24-31-RFC  | CR24-31W-RFC | CR24-41-RFC  | CR24-51-RFC  | CR24-65-RFC  |             |
|--|---|--------------|--------------|--------------|--------------|--------------|-------------|
| Evaporator<br>Coil                       | Net face area — sq. ft. (m <sup>2</sup> ) | 3.11 (0.29)  | 3.56 (0.33)  | 3.56 (0.33)  | 4.89 (0.45)  | 6.13 (0.57)  | 7.58 (0.70) |
|  | Tube diameter — in. (mm)                  | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)   |
|  | Number of rows                            | 1            | 2            | 2            | 2            | 2            | 2           |
|  | Fins per inch (m)                         | 20 (787)     | 13 (512)     | 13 (512)     | 14 (495)     | 13 (512)     | 13 (512)    |
| Suction line connection — in. (mm) sweat | 5/8 (15.9)                                | 3/4 (19)     | 3/4 (19)     | 3/4 (19)     | 7/8 (22.2)   | 1-1/8 (28.6) |             |
| Liquid line connection — in. (mm) sweat  | 3/8 (9.5)                                 | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    | 3/8 (9.5)    |             |
| Condensate drain (fpt) — in. (mm)        | (2) 3/4 (19)                              | (2) 3/4 (19) | (2) 3/4 (19) | (2) 3/4 (19) | (2) 3/4 (19) | (2) 3/4 (19) |             |
| Refrigerant                              | R-22                                      | R-22         | R-22         | R-22         | R-22         | R-22         |             |
| Coil shipping weight — lbs. (kg) 1 pkg   | 35 (16)                                   | 45 (20)      | 49 (22)      | 65 (29)      | 70 (32)      | 86 (39)      |             |
| *Expansion Device Furnished              | RFCIV Metering Orifice                    |              |              |              |              |              |             |
| **Furnace Support Kit (Optional)         | Not Available                             |              |              |              | 41J22        |              |             |

\*Furnished and factory installed.

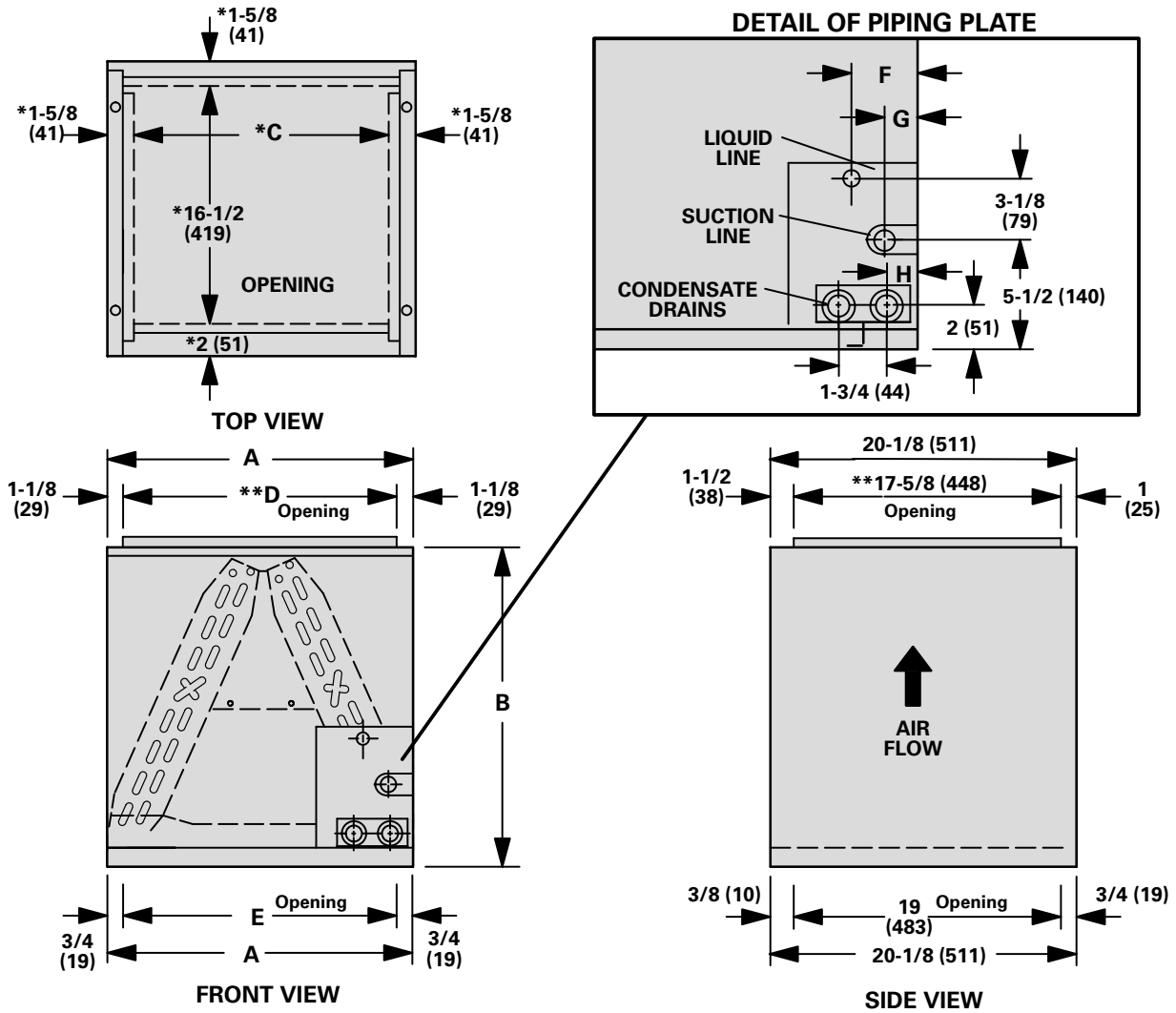
\*\*Required when matching 21-1/4 inch (540 mm) wide furnaces with CR24-51 and CR24-65 coils.

## AIR RESISTANCE

| Model Number | Air Volume |      | Total Resistance |     |
|--------------|------------|------|------------------|-----|
|              | cfm        | L/s  | in. w.g.         | Pa  |
| CR24-21      | 300        | 140  | .04              | 10  |
|              | 400        | 190  | .07              | 17  |
|              | 500        | 235  | .10              | 25  |
|              | 600        | 285  | .14              | 35  |
|              | 700        | 330  | .18              | 42  |
| CR24-31      | 600        | 285  | .12              | 30  |
|              | 800        | 380  | .20              | 50  |
|              | 1000       | 470  | .30              | 75  |
|              | 1200       | 570  | .41              | 102 |
|              | 1400       | 660  | .55              | 137 |
| CR24-31W     | 600        | 285  | .12              | 30  |
|              | 800        | 380  | .20              | 50  |
|              | 1000       | 470  | .30              | 75  |
|              | 1200       | 570  | .41              | 102 |
|              | 1400       | 660  | .55              | 137 |
| CR24-41      | 800        | 380  | .13              | 32  |
|              | 1000       | 470  | .20              | 50  |
|              | 1200       | 570  | .27              | 67  |
|              | 1400       | 660  | .36              | 90  |
|              | 1600       | 760  | .46              | 114 |
| CR24-51      | 1200       | 570  | .17              | 42  |
|              | 1400       | 660  | .23              | 57  |
|              | 1600       | 755  | .29              | 72  |
|              | 1800       | 850  | .36              | 90  |
|              | 2000       | 940  | .43              | 107 |
| CR24-65      | 1600       | 760  | .22              | 55  |
|              | 1800       | 850  | .27              | 67  |
|              | 2000       | 940  | .33              | 82  |
|              | 2200       | 1040 | .39              | 97  |
|              | 2400       | 1130 | .46              | 114 |

**DIMENSIONS – inches (mm)**

**NOTE** – Coil cabinet is equipped with a 5/8 inch (16mm) flange on top of cabinet that may be bent up for plenum connection.  
 When coil is used in conventional down-flo furnace applications, flange should be bent in.  
 \*Dimensions before flange is bent.  
 \*\*Dimensions after flange is bent.



| Model Number | A      |     | B      |     | C   |     | D   |     | E      |     | F     |     | G     |     | H     |     |
|--------------|--------|-----|--------|-----|-----|-----|-----|-----|--------|-----|-------|-----|-------|-----|-------|-----|
|              | in.    | mm  | in.    | mm  | in. | mm  | in. | mm  | in.    | mm  | in.   | mm  | in.   | mm  | in.   | mm  |
| CR24-21      | 16-1/4 | 413 | 17     | 432 | 13  | 330 | 14  | 356 | 14-3/4 | 375 | 4-1/8 | 105 | 2-1/8 | 54  | 1-7/8 | 48  |
| CR24-31      | 16-1/4 | 413 | 21     | 533 | 13  | 330 | 14  | 356 | 14-3/4 | 375 | 4-1/8 | 105 | 2-1/8 | 54  | 1-7/8 | 48  |
| CR24-31W     | 21-1/4 | 540 | 21     | 533 | 18  | 457 | 19  | 483 | 19-3/4 | 502 | 6-5/8 | 168 | 4-5/8 | 117 | 4-3/8 | 111 |
| CR24-41      | 21-1/4 | 540 | 25-3/4 | 654 | 18  | 457 | 19  | 483 | 19-3/4 | 502 | 4-1/8 | 105 | 2-1/8 | 54  | 1-7/8 | 48  |
| CR24-51      | 26-1/4 | 667 | 25-3/4 | 654 | 23  | 584 | 24  | 610 | 24-3/4 | 629 | 4-1/8 | 105 | 2-1/8 | 54  | 1-7/8 | 48  |
| CR24-65      | 26-1/4 | 667 | 28-3/4 | 730 | 23  | 584 | 24  | 610 | 24-3/4 | 629 | 4-1/8 | 105 | 2-1/8 | 54  | 1-7/8 | 48  |

## CR24 COIL TO FURNACE MATCHING SELECTOR

| Furnace Model Number |          | Coil Model Number |         |          |         |         |         |
|----------------------|----------|-------------------|---------|----------|---------|---------|---------|
|                      |          | CR24-21           | CR24-31 | CR24-31W | CR24-41 | CR24-51 | CR24-65 |
| GSR21                | Q3-50    |                   |         |          |         |         |         |
|                      | Q3-80    |                   |         |          |         | XX      |         |
|                      | Q4/5-80  |                   |         |          |         | XX      | XX      |
|                      | Q4/5-100 |                   |         |          |         | XX      | XX      |
| G24M                 | 2-45     | X                 | X       | X        |         |         |         |
|                      | 2-60     | X                 | X       | X        |         |         |         |
|                      | 3-60     |                   | X       | X        | X       |         |         |
|                      | 2-75     | X                 | X       | X        |         |         |         |
|                      | 3-75     |                   | X       | X        | X       |         |         |
|                      | 4-75     |                   | X       | X        | X       | XX      |         |
|                      | 3/4-100  |                   | X       | X        | X       | XX      |         |
|                      | 4/5-100  |                   |         |          |         | XX      | XX      |
|                      | 3/4-120  |                   |         |          |         | XX      |         |
|                      | 4/5-120  |                   |         |          |         | XX      | XX      |
| 4/5-140              |          |                   |         |          | XX      | XX      |         |

- Coil matches furnace and air volume.
- X Coil matches air volume. Coil does not match furnace physically and requires field fabricated transition.
- XX Coil matches air volume. Coil does not match furnace physically and requires field fabricated transition. Requires Furnace Support Kit (41J22).
- Coil matches furnace physically. Check furnace air volume and total system pressure drop for satisfactory match with coil.
- XX Coil does not match furnace physically and requires field fabricated transition. Check furnace air volume and total system pressure drop for satisfactory match. Requires Furnace Support Kit (41J22).
- Does not match.