CH24 SERIES — HORIZONTAL AIR-CONDITIONING ONLY EVAPORATOR UNITS

1 To 5 Tons (4 To 18 kW) Nominal Cooling Capacity

CH24

Bulletin #490***
November 1993

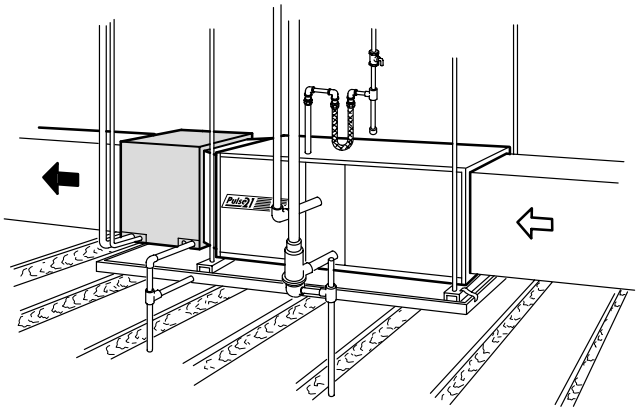
Applications — Lennox designed and built horizontal evaporator coils can easily be installed with most Lennox horizontal furnaces. See Coil/Furnace Match-up Selector table in this bulletin for more information. See condensing units bulletins (section Cooling Units — Condensing Units) for evaporator unit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

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 construction provides long coil life and ease of service. Rifled tubing provides superior refrigerant flow resulting in maximum heat transfer. Twin coils 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 heavy gauge galvanized steel and has dual 3/4 inch (19 mm) mpt drain connections. Refrigerant lines are equipped with sweat connections on suction line and liquid line.

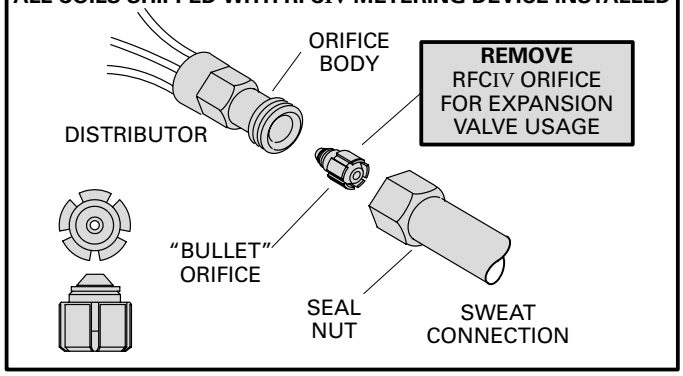
Fully Tested — Evaporator units have been thoroughly tested with matching condensing units in the Lennox Research Laboratory environmental test room. Air resistance data is from tests conducted in the Lennox air test chamber. Coil assemblies are shipped factory assembled and ready for installation.

Typical Applications



Attic Installation
With Pulse21® Furnace

ALL COILS SHIPPED WITH RFCIV METERING DEVICE INSTALLED



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 instanteously after the compressor stops, the unit starts unloaded, eliminating the need for any additional controls.

NOTE — Specifications, Ratings and Dimensions subject to change without notice.

SPECIFICATIONS

Model Number		CH24-21-RFC	CH24-31-RFC	CH24-41-RFC	CH24-51-RFC	CH24-65-RFC
Evaporator Coil	Net face area — sq. ft. (m^2)	1.56 (0.14)	3.11 (0.29)	4.00 (0.37)	5.33 (0.50)	8.00 (0.74)
	Tube diameter — in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows	3	2	2	2	2
	Fins per inch (m)	12 (472)	14 (551)	13 (512)	14 (551)	15 (591)
Suction line connection — in. (mm) sweat		5/8 (15.9)	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)
Condensate drain (mpt) — in. (mm)		(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)	(2) 3/4 (19)
Refrigerant		HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Coil shipping weight — lbs. (kg) 1 pkg		22 (10)	55 (25)	58 (26)	63 (29)	72 (33)
*Expansion Device Furnished		RFCIV Metering Orifice				

*Furnished and factory installed.

AIR RESISTANCE

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
CH24-21	400	190	.08	20
	500	235	.12	30
	600	285	.17	42
	700	330	.22	56
CH24-31	600	285	.11	26
	800	380	.18	45
	1000	470	.27	67
	1200	565	.38	94
	1400	660	.50	125
CH24-41	800	380	.09	21
	1000	470	.13	32
	1200	565	.18	45
	1400	660	.24	60
	1600	755	.30	76

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
CH24-51	1200	565	.13	31
	1400	660	.17	42
	1600	755	.21	53
	1800	850	.26	66
	2000	945	.32	80
CH24-65	1600	755	.25	64
	1800	850	.32	79
	2000	945	.38	96
	2200	1040	.46	114
	2400	1135	.53	134

CH24 COIL TO FURNACE MATCHING SELECTOR

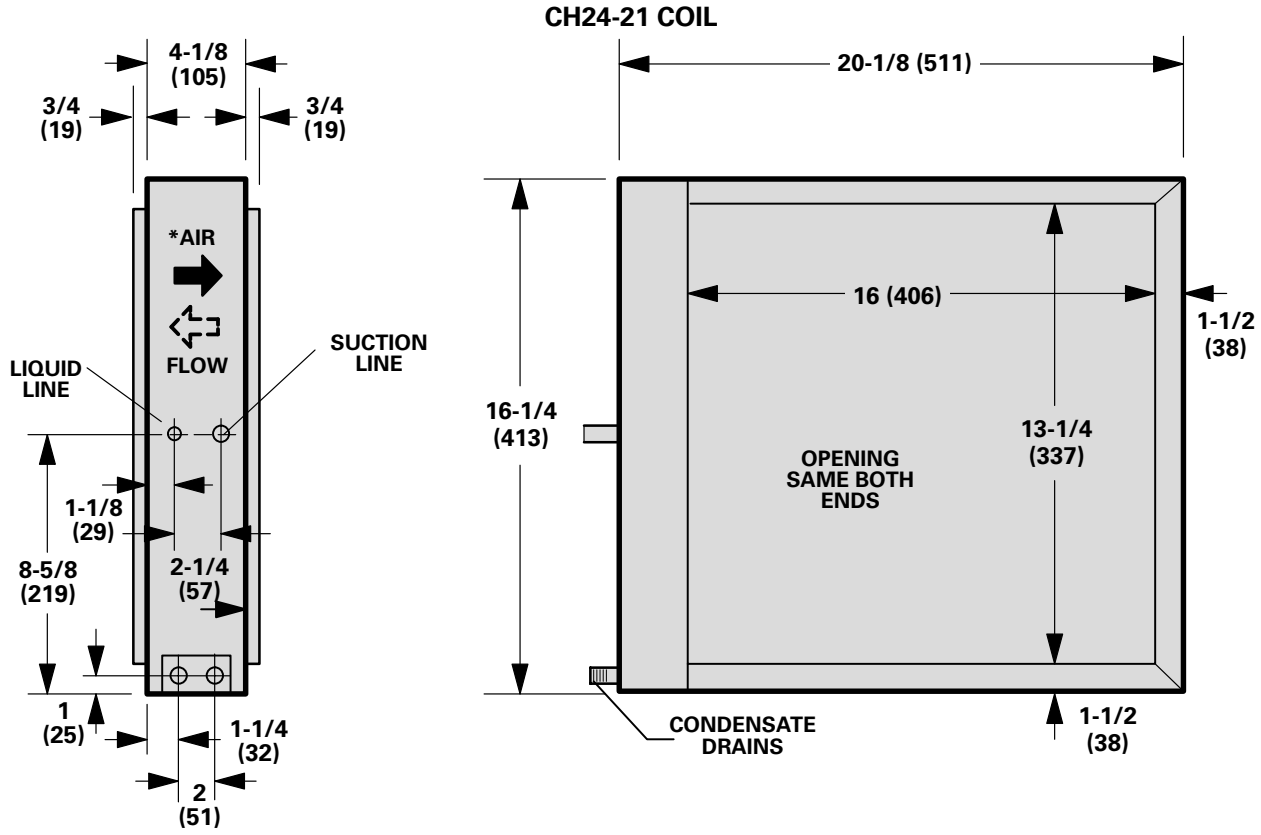
Furnace Model Number		Coil Model Number				
		CH24-21	CH24-31	CH24-41	CH24-51	CH24-65
GSR21	Q3-50	X	X	X	X	
	Q3-80		X	X	X	
	Q4/5-80		X	X	X	X
	Q4/5-100			X	X	X
G24M	2-45	X	X	X		
	2-60	X	X	X		
	3-60		X	X	X	
	2-75	X	X	X		
	3-75		X	X	X	
	4-75		X	X	X	X
	3/4-100		X	X	X	X
	4/5-100				X	X
	3/4-120		X	X	X	X
	4/5-120				X	X
	4/5-140				X	X

X Coil matches air volume. Coil does not match furnace physically and requires field fabricated transition.

X Coil does not match furnace physically and requires field fabricated transition. Check furnace air volume and total system pressure drop for satisfactory match with coil.

Does not Match

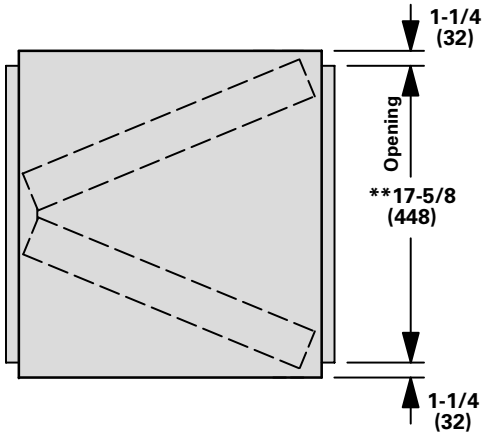
DIMENSIONS — inches (mm)



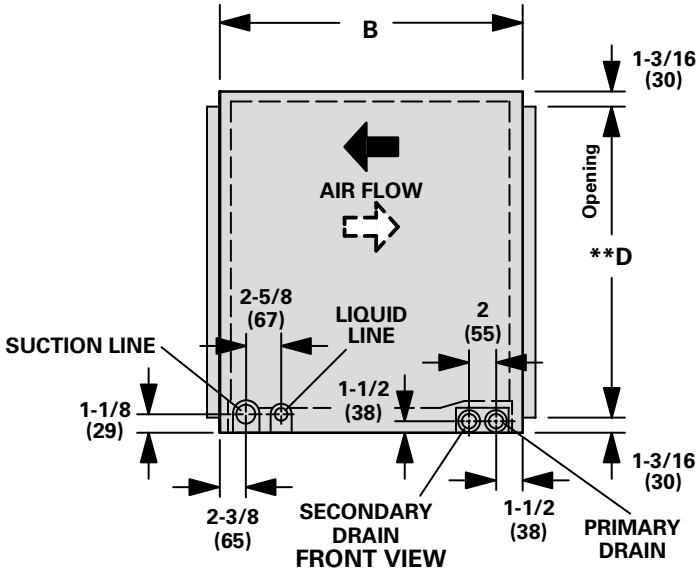
DIMENSIONS — inches (mm)

CH24-31-41-51-65 COILS

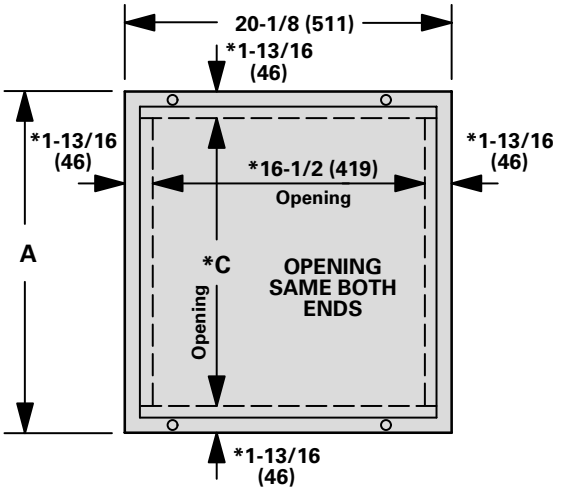
NOTE — Coil cabinet is equipped with a 5/8 inch (16mm) flange that may be bent out 90° for plenum connection.
***Dimensions before flange is bent up.**
****Dimensions after flange is bent up.**



TOP VIEW



FRONT VIEW



END VIEW

Model Number	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
CH24-31	16-1/4	413	20-7/8	530	12-5/8	346	13-7/8	380
CH24-41	21-1/4	540	20-7/8	530	17-5/8	483	18-7/8	517
CH24-51	26-1/4	667	20-7/8	530	22-5/8	620	23-7/8	654
CH24-65	26-1/4	667	29-3/8	805	22-5/8	620	23-7/8	654