

C24 SERIES — UP-FLO AIR-CONDITIONING ONLY EVAPORATOR UNITS

*11,100 to 60,000 Btuh (3.3 to 17.6 kW) Cooling Capacity

C24

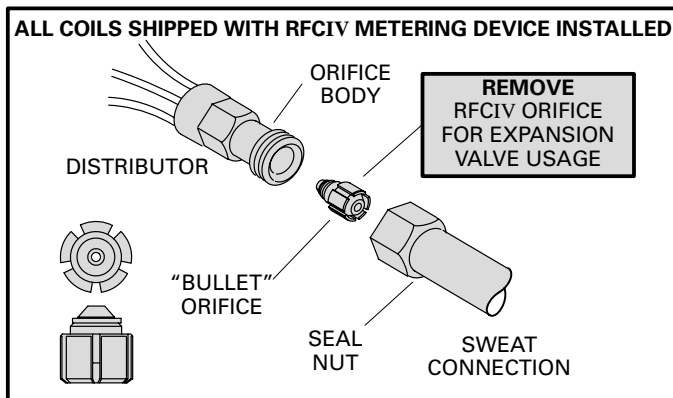
Bulletin #210002
September 1993
Supersedes May 1993

*ARI Standard 210/240 Certified Ratings with Matching Condensing Unit

Applications — Lennox designed and built up-flo evaporator coils can easily be installed with most Lennox up-flo furnaces. Coils match most plenum openings of Lennox furnaces. See Coil to Furnace Selector indexed in this bulletin. Also see dimension drawings and application drawings. See condensing units bulletins (section Cooling Units — Condensing Units) for evaporator unit applications and cooling capacities.

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 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 allows easy access for coil servicing and cleaning. Refrigerant lines are equipped with sweat connections on both 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.

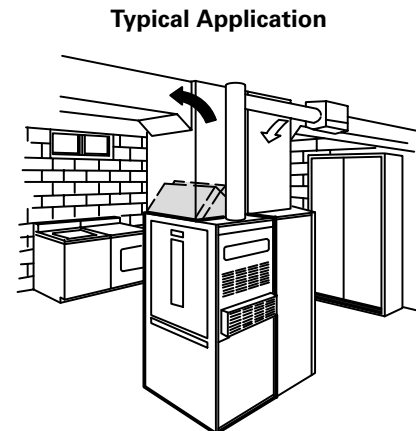


Refrigerant Control Choice — Coils are shipped with factory installed RFCIV refrigerant metering device. An alternate choice is to select an optional expansion valve for a more efficient capacity rating. For expansion valve usage, coils must be field altered by removing the RFCIV metering orifice, see sketch above.

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 (primary and secondary) 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.

Expansion Valve Kits (Optional) — Expansion valve is available for field installation on the coil. See condensing unit bulletins for expansion valve selection.

Adjustable Coil Adaptor Base (Optional) — Adjustable adaptor base (50J15) provides quick and easy installation in a wide variety of applications. See Coil to Furnace Selector, dimension drawings and application drawings.



Utility Room Installation
With G20E Whisperheat™ Furnace
and Humidifier

CF30-00 Non-Adjustable Adaptor Base (Optional) — Fixed width base (46J43) is available for C24 installations with G20E-Q5/6-150 model furnaces. See Specifications table, Coil to Furnace Selector, dimension drawings and application drawings.

Full Height Empty Coil Cabinet (Optional) — Cabinets are fully insulated with thick fiberglass insulation and are constructed of heavy gauge steel with a deluxe baked-on enamel paint finish. Bend-up flanges are provided in outlet opening of cabinet for ease of plenum connection in conventional. See Specifications tables, Empty Coil Cabinet to Furnace Selector and dimension drawing.

SPECIFICATIONS

Model No.		C24-21-RFC	C24-26-RFC	C24-26W-RFC	C24-31-RFC	C24-31W-RFC
Evaporator Coil	Net face area — sq. ft. (m ²)	3.11 (0.29)	3.11 (0.29)	3.11 (0.29)	3.56 (0.33)	3.56 (0.33)
	Tube diameter — in. (mm)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)
	No. of rows	1	2	2	2	2
	Fins per inch (m)	20 (787)	14 (551)	14 (551)	13 (512)	13 (512)
Suction line connection — in. (mm) sweat		5/8 (15.9)	5/8 (15.9)	5/8 (15.9)	3/4 (19)	3/4 (19)
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 (fpt) — 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 package		27 (12)	32 (15)	36 (16)	35 (16)	39 (18)
*Expansion Device Furnished		RFCIV				
Adjustable Adaptor Base (Optional)		50J15				
Full Height Empty Coil Cabinet (Optional)	Catalog No.	98H79	98H79	98H81	98H80	98H81
	Ship. Wt. — lbs. (kg)	8 (4)	8 (4)	14 (6)	10 (5)	14 (6)

*Furnished and factory installed.

SPECIFICATIONS

Model No.		C24-41-RFC	C24-41W-RFC	C24-46-RFC	C24-51-RFC	C24-65-RFC
Evaporator Coil	Net face area — sq. ft. (m ²)	4.00 (0.37)	4.00 (0.37)	4.89 (0.45)	6.13 (0.57)	7.58 (0.70)
	Tube diameter — in. (mm)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)	3/8 (10)
	No. of rows	2	2	2	2	2
	Fins per inch (m)	13 (512)	13 (512)	14 (551)	13 (512)	13 (512)
Suction line connection — in. (mm) sweat		3/4 (19)	3/4 (19)	7/8 (22.2)	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 (fpt) — 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 package		36 (16)	40 (18)	43 (20)	44 (20)	54 (25)
*Expansion Device Furnished		RFCIV				
Adjustable Adaptor Base (Optional)		50J15				
Non-Adjustable Coil Adaptor Base (Optional)		----			CF30-00 (46J43)	
Full Height Empty Coil Cabinet (Optional)	Catalog No.	98H80	98H81	98H82	98H83	98H84
	Ship. Wt. — lbs. (kg)	10 (5)	14 (6)	22 (10)	26 (12)	32 (15)

*Furnished and factory installed.

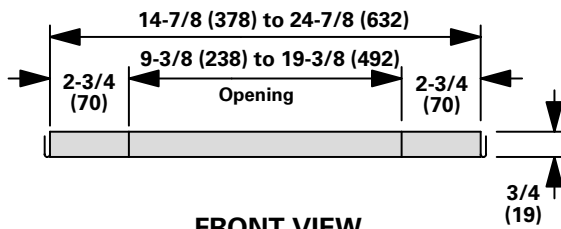
AIR RESISTANCE

Model No.	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C24-21	300	140	.02	5
	400	190	.03	7
	500	235	.05	12
	600	285	.07	17
	700	330	.09	22
C24-26 C24-26W	400	190	.04	10
	600	285	.09	22
	800	380	.15	37
	1000	470	.23	57
	1200	570	.32	80
C24-31 C24-31W	600	285	.07	17
	800	380	.12	30
	1000	470	.18	45
	1200	570	.25	62
	1400	660	.34	85

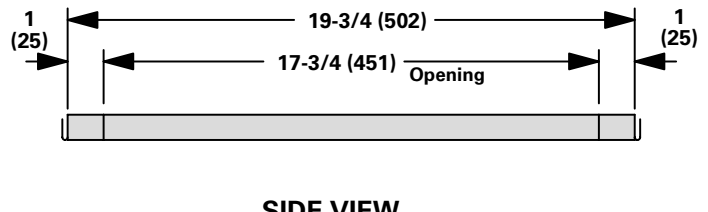
Model No.	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C24-41 C24-41W	800	380	.12	30
	1000	470	.19	47
	1200	570	.26	65
	1400	660	.35	87
	1600	760	.44	109
C24-46	1000	470	.12	30
	1200	570	.16	40
	1400	660	.22	55
	1600	760	.28	70
C24-51	1200	570	.09	22
	1400	660	.12	30
	1600	760	.15	37
	1800	850	.19	47
	2000	940	.23	57
C24-65	1600	760	.11	27
	1800	850	.14	35
	2000	940	.17	42
	2200	1040	.20	50
	2400	1130	.23	57

ACCESSORY DIMENSIONS — inches (mm)

OPTIONAL ADJUSTABLE ADAPTOR BASE (50J15)

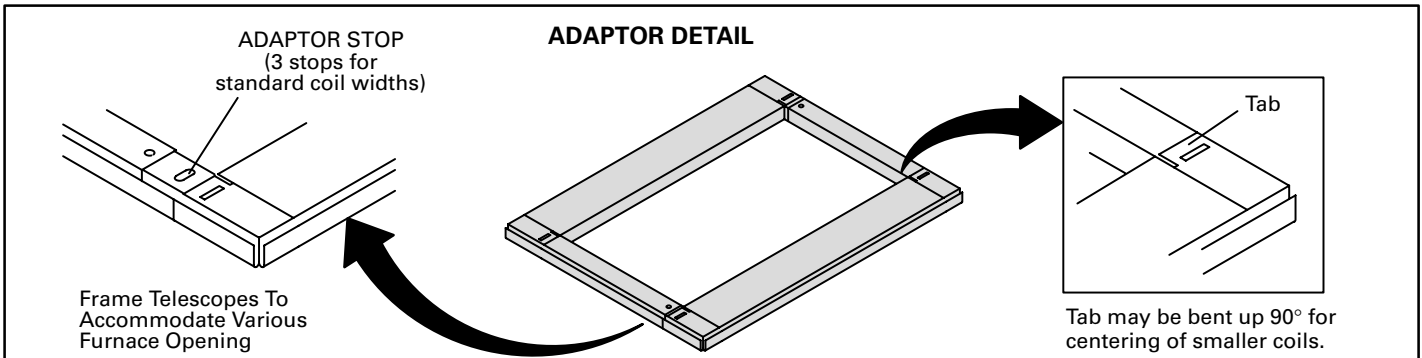


FRONT VIEW



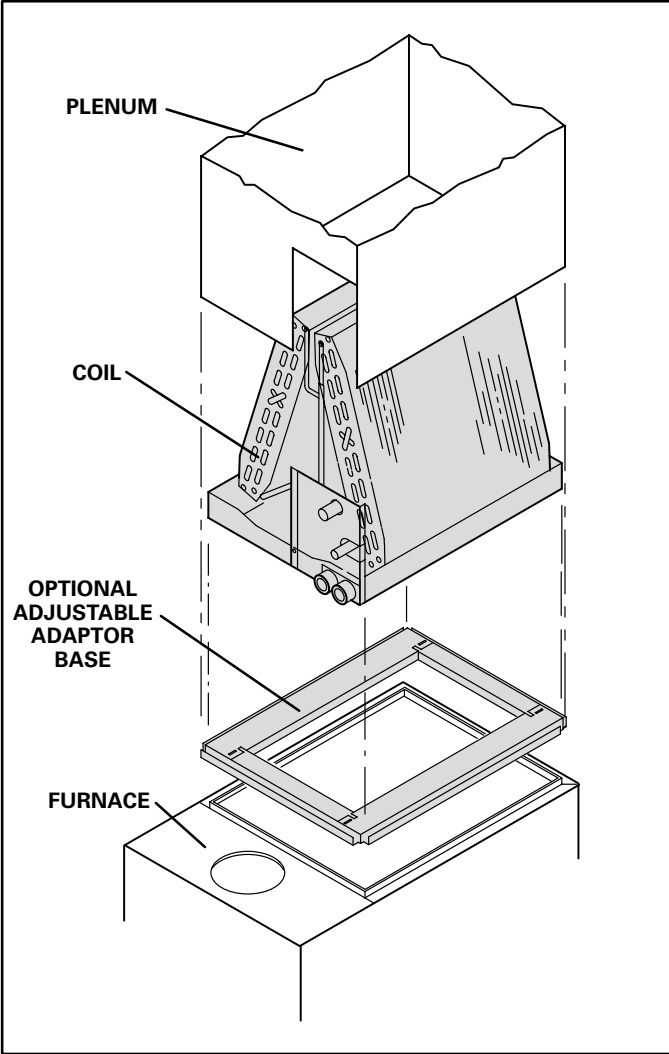
SIDE VIEW

NOTE — Adaptor base is not required with empty coil cabinet.

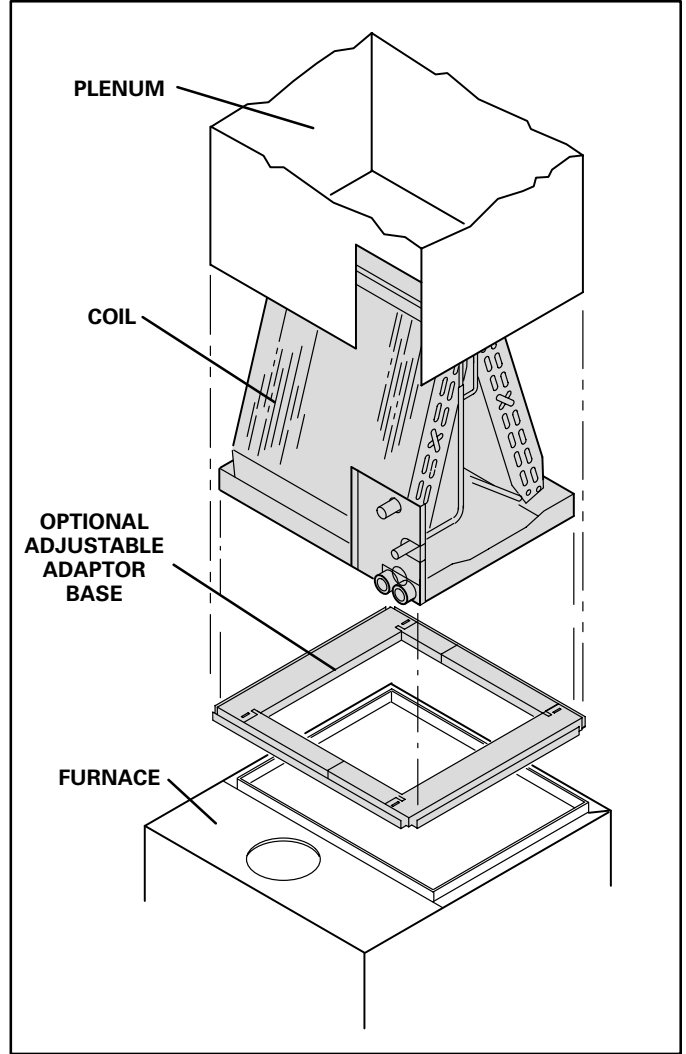


COIL AND OPTIONAL ADAPTOR BASE APPLICATIONS

C24-21, C24-26(W), C24-31(W), C24-41(W), and C24-46 COILS

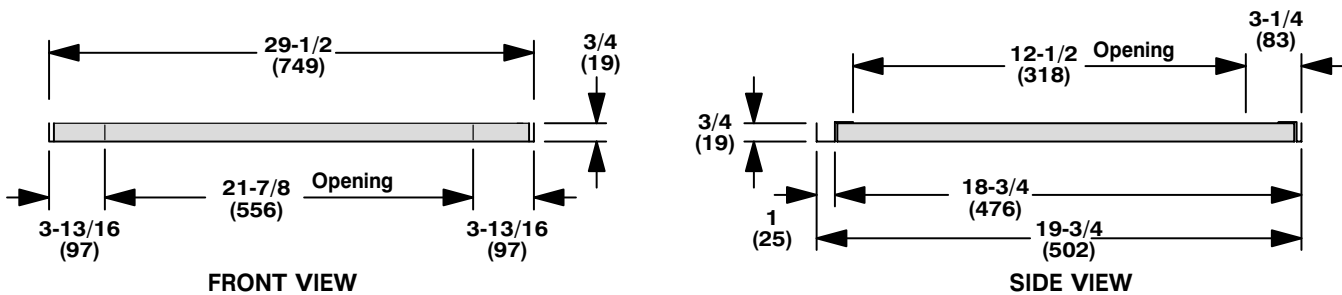


C24-51 AND C24-65 COILS



ACCESSORY DIMENSIONS – inches (mm)

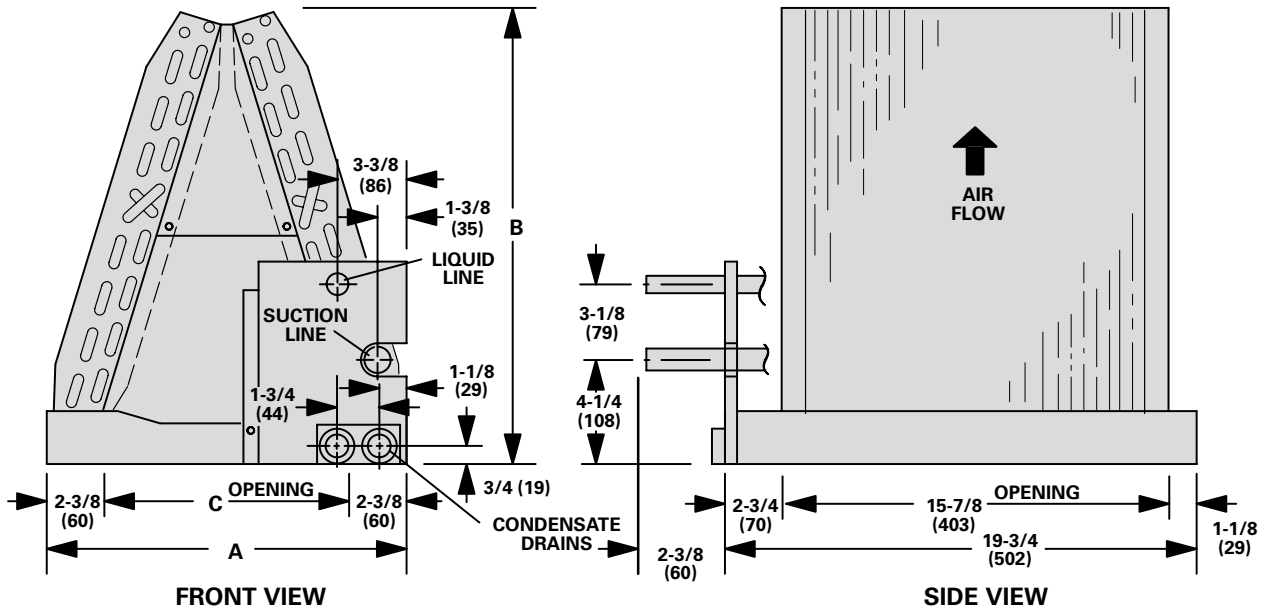
OPTIONAL CF30-00 ADAPTOR BASE (46J43) For G20Q5/6E-150 Only



NOTE – Adaptor base is not required with empty coil cabinet.

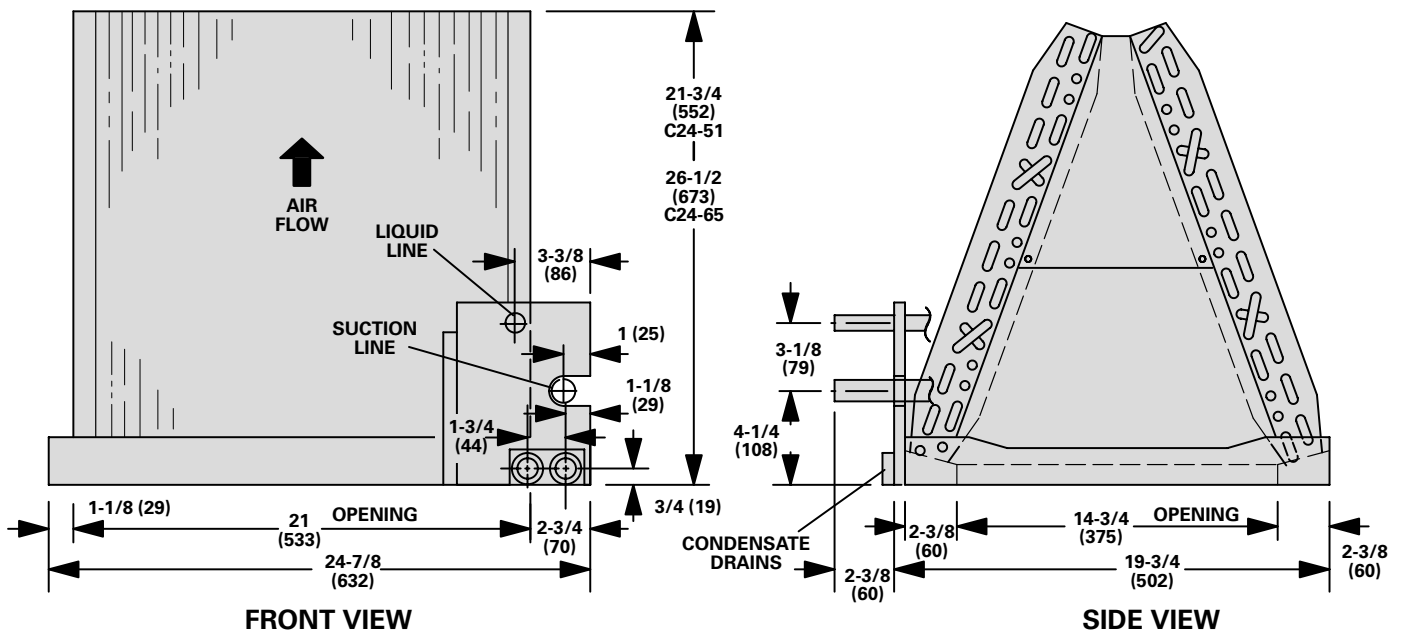
DIMENSIONS – inches (mm)

C24-21, C24-26, C24-26W, C24-31, C24-31W, C24-41, C24-41W AND C24-46 COILS



Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
C24-21	14-3/4	375	15	381	10	254
C24-26	14-3/4	375	15	381	10	254
C24-26W	19-3/4	502	15	381	15	254
C24-31	14-3/4	375	16-7/8	428	10	254
C24-31W	19-3/4	502	16-7/8	428	15	254
C24-41	14-3/4	375	18-3/4	476	10	254
C24-41W	19-3/4	502	18-3/4	476	15	254
C24-46	19-3/4	502	22-3/4	578	15	381

C24-51 AND C24-65 COILS



ADJUSTABLE COIL ADAPTOR BASE TO FURNACE SELECTOR

Furnace Model No.		Coil Model Number									
		C24-21	C24-26	C24-26W	C24-31	C24-31W	C24-41	C24-41W	C24-46	C24-51	C24-65
G20E G20X	Q2-50										
	Q3-50								X		
	Q2-75										
	Q3-75								X		
	Q4-75										
	Q3/4-100										
	Q5/6-100										
	Q3/4-125										
	Q5/6-125										
G20E	Q5/6-150							X	*CF30-00	*CF30-00	
G21	Q3-40										
	Q3-60										
	Q4-60										
	Q3-80										
	Q4-80										
	Q5-80										
	Q3-100										
	Q4/5-100										
G21	V3-60										
	V3-80										
	V5-80										
	V5-100										
G23	Q3-50								X		
	Q2/3-75								X		
	Q3-100										
	Q4/5-100										
	Q5/6-125						X				
G24M	2-45										
	2-60										
	3-60								X		
	2-75										
	3-75								X		
	4-75								X	X	
	3/4-100								X	X	
	4/5-100								X	X	
	3/4-120								X	X	
	4/5-120								X	X	
	4/5-140							X			
G26	Q3-50								X		
	Q3-75								X		
	Q3/4-100										
	Q4/5-100										
	Q5/6-125										
O20	Q2-70										
	Q3-105/120							X	X		
	Q5-140/154							X	X	X	
OF20	Q3-105/120								X		
	Q3-105/120R								X		
	Q5-140/154						X	X	X	X	
	Q5-140/154R						X	X	X	X	
	Q5-175/210R							X	X	X	
	-245										X

- Coil matches furnace and air volume.
 - Coil matches furnace physically. Check furnace air volume and total system pressure drop for satisfactory match with coil.
 - 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
- *Coil matches furnace with optional CF30-00 adaptor base.

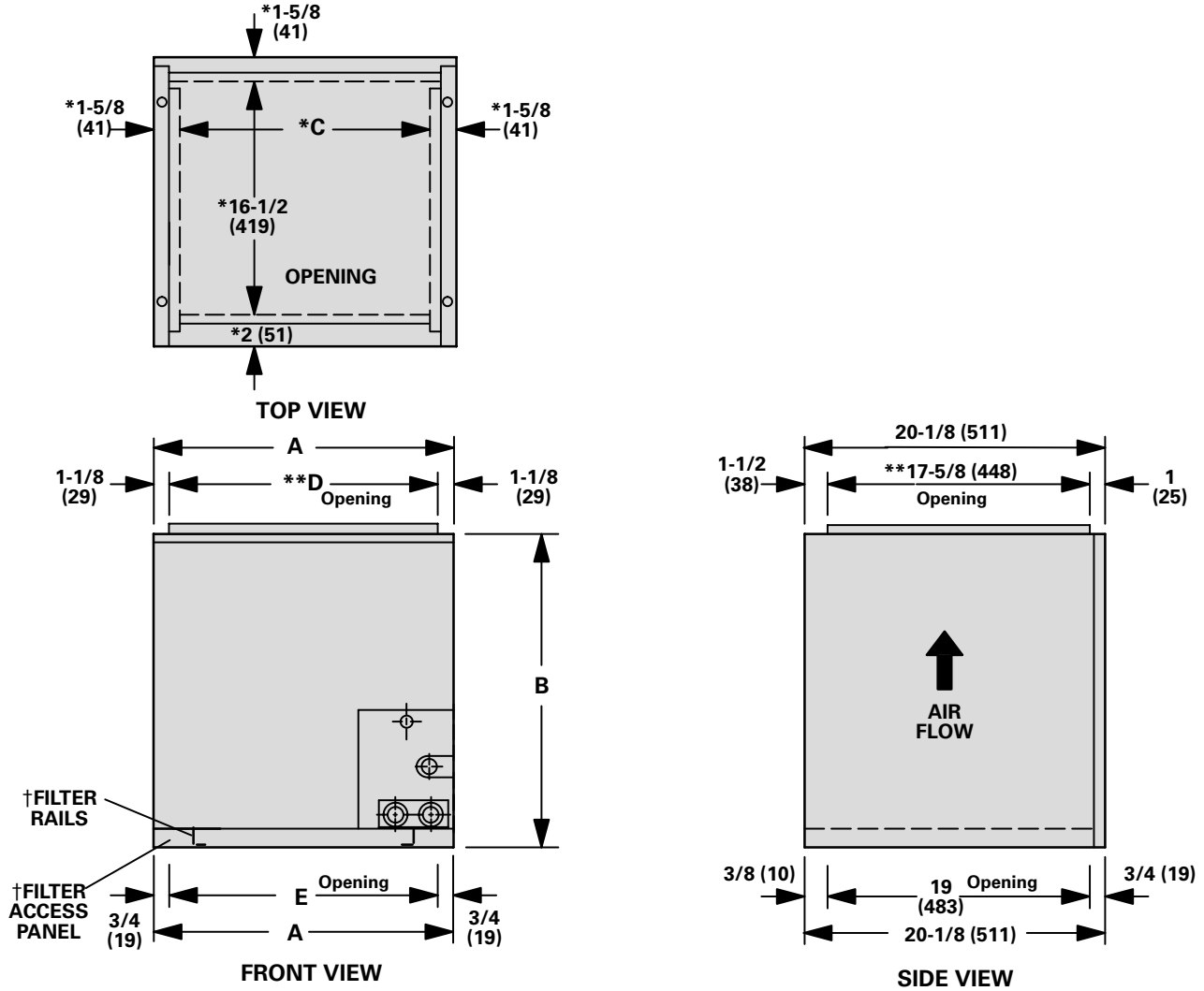
ACCESSORY DIMENSIONS – inches (mm)

UP-FLO EMPTY COIL CABINETS

NOTE – Empty coil cabinet is equipped with a 5/8 inch (16mm) flange that may be bent up 90° for plenum connection on conventional up-flo furnace applications or to help in alignment with B24 Series Blower Units.

*Dimensions before flange is bent up.

**Dimensions after flange is bent up.



†Filter Rails are furnished with B24 Series Blower Units for field installation in empty coil cabinets.

Empty Cabinet Catalog No.	C24 Coil Model No.	A		B		C		D		E	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
98H79	C24-21 C24-26	16-1/4	413	17	432	13	330	14	356	14-3/4	375
98H80	C24-31 C24-41	16-1/4	413	21	533	13	330	14	356	14-3/4	375
98H81	C24-26W C24-31W C24-41W	21-1/4	540	21	533	18	457	19	483	19-3/4	502
98H82	C24-46	21-1/4	540	25-3/4	654	18	457	19	483	19-3/4	502
98H83	C24-51	26-1/4	667	25-3/4	654	23	584	24	610	24-3/4	629
98H84	C24-65	26-1/4	667	28-3/4	730	23	584	24	610	24-3/4	629

EMPTY COIL CABINET TO FURNACE SELECTOR

Furnace Model No.	Empty Cabinet	98H79	98H79	98H81	98H80	98H81	98H80	98H81	98H82	98H83	98H84
	Coil Model No.	C24-21	C24-26	C24-26W	C24-31	C24-31W	C24-41	C24-41W	C24-46	C24-51	C24-65
G20E G20X	Q2-50			X		X		X			
	Q3-50			X		X		X	X	X	
	Q2-75			X		X		X	X		
	Q3-75			X		X		X	X	X	
	Q4-75				X		X			X	X
	Q3/4-100		X		X		X			X	X
	Q5/6-100								X		
	Q3/4-125					X		X	X		
	Q5/6-125							X	X		
G20E	Q5/6-150									X	X
G21	Q3-40		X		X		X			X	
	Q3-60		X		X		X			X	
	Q4-60				X		X			X	X
	Q3-80		X		X		X			X	
	Q4-80				X		X			X	X
	Q5-80								X		
	Q3-100							X	X		
	Q4/5-100								X		
G21	V3-60	X	X		X		X			X	
	V3-80	X	X		X		X			X	
	V5-80			X		X		X	X		
	V5-100			X		X		X	X		
G23	Q3-50			X		X		X	X	X	
	Q2/3-75			X		X		X	X	X	
	Q3-100		X		X		X			X	
	Q4/5-100						X			X	X
	Q5/6-125								X		
G24M	2-45			X		X		X			
	2-60			X		X		X			
	3-60			X		X		X	X	X	
	2-75			X		X		X			
	3-75			X		X		X	X	X	
	4-75			X		X		X	X	X	X
	3/4-100		X		X		X			X	X
	4/5-100									X	X
	3/4-120		X		X		X			X	X
	4/5-120									X	X
	4/5-140								X	X	X
G26	Q3-50			X		X		X	X	X	
	Q3-75			X		X		X	X	X	
	Q3/4-100				X		X			X	X
	Q4/5-100									X	X
	Q5/6-125								X		
O20	Q2-70		X	X	X	X	X	X			
	Q3-105/120				X	X	X	X	X	X	
	Q5-140/154						X	X	X	X	X
OF20	Q3-105/120		X	X	X	X	X	X	X	X	
	Q3-105/120R		X	X	X	X	X	X	X	X	
	Q5-140/154						X	X	X	X	X
	Q5-140/154R						X	X	X	X	X
	Q5-175/210R								X	X	X
	-245										X

- Coil matches furnace and air volume.
- Coil matches furnace physically. Check furnace air volume and total system pressure drop for satisfactory match with coil.
- 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