C22 SERIES EVAPORATOR UNITS — UP-FLO AIR-CONDITIONING AND HEAT PUMP

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

C22

Bulletin #490***
November 1993

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 in this bulletin for more information. See condensing units bulletins (section Cooling Units — Split System Condensing Units) for evaporator unit applications and cooling capacities. See heat pump outdoor unit bulletins (section Heat Pumps — Split System Heat Pump Units) for indoor coil applications and cooling and heating 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) female pipe thread drain connections. Two-piece end panel allows easy access for coil servicing and cleaning. Refrigerant lines are equipped with sweat connections on both suction (vapor) and liquid line.

Fully Tested — Evaporator units have been thoroughly tested with matching condensing and heat pump 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.

Check and Expansion Valve Kit Furnished — Check and expansion valve is factory installed on all models.

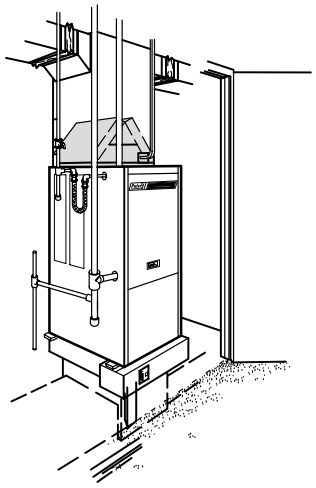
Adjustable Coil Adaptor Base Furnished — Adjustable adaptor base is furnished with coils to provide quick and easy installation in a wide variety of applications. See Coil to Furnace Selector, dimension drawings and application drawings.

CF30-00 Non-Adjustable Adaptor Base (Optional) — Fixed width base **(46J43)** is available for C22 installations with G12Q5-165 model furnaces. See Specifications table, Coil to Furnace Selector, dimension drawings and application drawings.

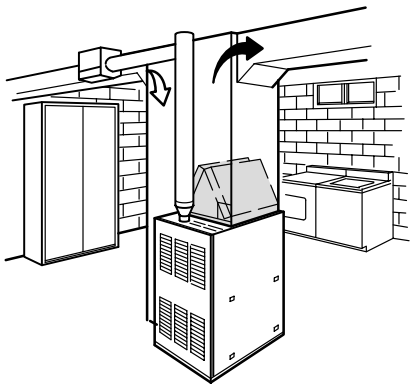
Full Height Empty Coil Cabinet Cabinet (Optional) — Cabinets are fully insulated with thick fiberglass insulation and are constructed of heavy gauge steel with a deluxe baked-on enamel paint finish. Bend-up flanges are provided in outlet opening of cabinet for ease of plenum connection in conventional.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

Up-Flo Coil Twinning Kit (Optional) — Twinning kit LB-65597A **(30J76)** is available to operate two C22-41, C22-46 or C22-65 coils simultaneously with one HS17 condensing unit and two furnaces. Kit contains necessary plumbing fittings to interconnect coils. Must be ordered extra.

Typical Applications



Closet Installation
With Pulse21® Furnace
and Electronic Air Cleaner



Utility Room Installation
With G24M Furnace
and Automatic Humidifier

SPECIFICATIONS

Model Number		C22-21-TXV	C22-26-TXV	C22-26W-TXV	C22-31-TXV	C22-31W-TXV
Evaporator Coil	Net face area — sq. ft. (m^2)	3.11 (0.29)	4.0 (0.37)	4.0 (0.37)	4.0 (0.37)	4.0 (0.37)
	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	2	2	2	3	3
	Fins per inch (m)	15 (590)3	15 (590)	15 (590)	12 (472)	12 (472)
Suction (vapor) 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 (female pipe thread) — in. (mm)		(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Refrigerant		HCFC-22	HCFC-22	HCFC-22	HCFC-22	HCFC-22
Coil shipping weight — lbs. (kg) 1 package		31 (14)	32 (15)	36 (16)	42 (19)	46 (21)
*Expansion Device Furnished		Check and Expansion Valve				
Full Height Empty Coil Cabinet (Optional)	Catalog Number	**98H79**	**98H80**	**98H81**	**98H80**	**98H81**
	Ship Wt. — lbs. (kg)	8 (4)	10 (5)	14 (6)	10 (5)	14 (6)

*Furnished and factory installed.

SPECIFICATIONS

Model Number		C22-41-TXV	C22-46-TXV	C22-51-TXV	C22-65-TXV
Evaporator Coil	Net face area — sq. ft. (m^2)	4.44 (0.41)	6.71 (0.62)	7.58 (0.70)	7.58 (0.70)
	Tube diameter — in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Number of rows	3	2	2	3
	Fins per inch (m)	12 (472)	15 (590)	15 (590)	12 (472)
Suction (vapor) line connection — in. (mm) sweat		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)
Condensate drain (female pipe thread) — in. (mm)		(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Refrigerant		HCFC-22	HCFC-22	HCFC-22	HCFC-22
Coil shipping weight — lbs. (kg) 1 package		43 (20)	50 (23)	51 (23)	62 (28)
*Expansion Device Furnished		Check and Expansion Valve			
Non-Adjustable Coil Adaptor Base (Optional)		- - - -	CF30-00 **(46J43)**		
Full Height Empty Coil Cabinet (Optional)	Catalog Number	**98H82**	**98H83**	**98H84**	**98H84**
	Ship Wt. — lbs. (kg)	22 (10)	26 (12)	32 (15)	32 (15)
Coil Twinning Kit (Optional)		LB-65597A **(30J76)**		- - - -	LB-65597A **(30J76)**

*Furnished and factory installed.

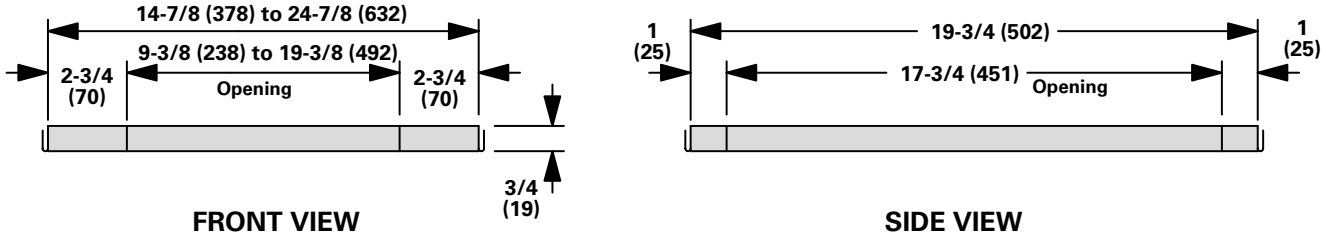
AIR RESISTANCE

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C22-21	300	140	.03	7
	400	190	.05	12
	600	285	.10	25
	700	330	.13	32
C22-26 C22-26W	400	190	.04	10
	600	285	.08	20
	800	380	.13	32
	1000	470	.20	50
	1200	570	.27	67
C22-31 C22-31W	600	285	.09	22
	800	380	.16	40
	1000	470	.24	60
	1200	570	.34	85
	1400	660	.44	109
C22-41	800	380	.10	25
	1000	470	.15	37
	1200	570	.21	52
	1400	660	.28	70
	1600	760	.36	90

Model Number	Air Volume		Total Resistance	
	cfm	L/s	in. w.g.	Pa
C22-46	1000	470	.07	17
	1200	570	.10	25
	1400	660	.13	32
	1600	760	.17	42
	1800	850	.21	52
	2000	940	.25	62
	2200	1040	.30	75
C22-51	1200	570	.09	22
	1400	660	.12	30
	1600	760	.15	37
	1800	850	.19	47
	2000	940	.23	57
	2200	1040	.27	67
C22-65	1600	760	.15	37
	1800	850	.18	45
	2000	940	.22	55
	2200	1040	.26	65
	2400	1130	.31	77

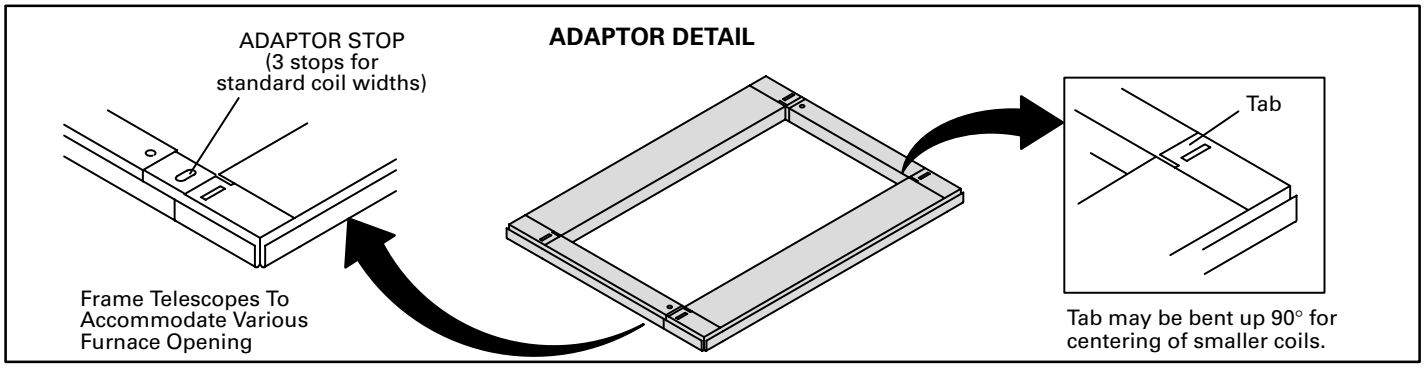
DIMENSIONS — inches (mm)

ADJUSTABLE ADAPTOR BASE (Furnished With C22 Coil)



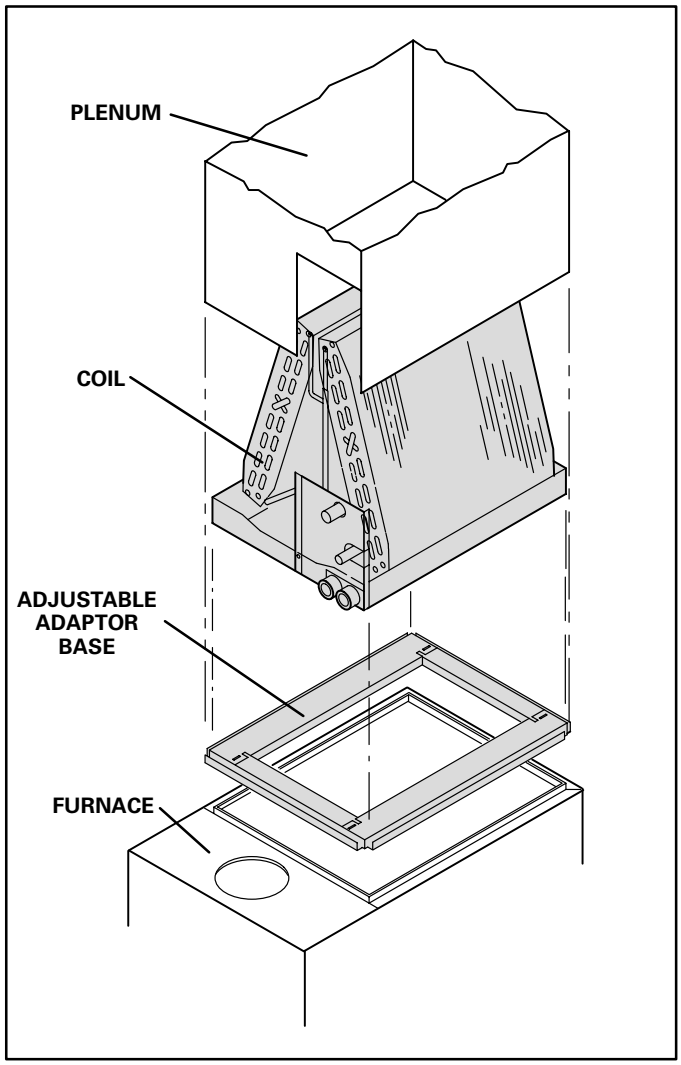
FRONT VIEW **SIDE VIEW**

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

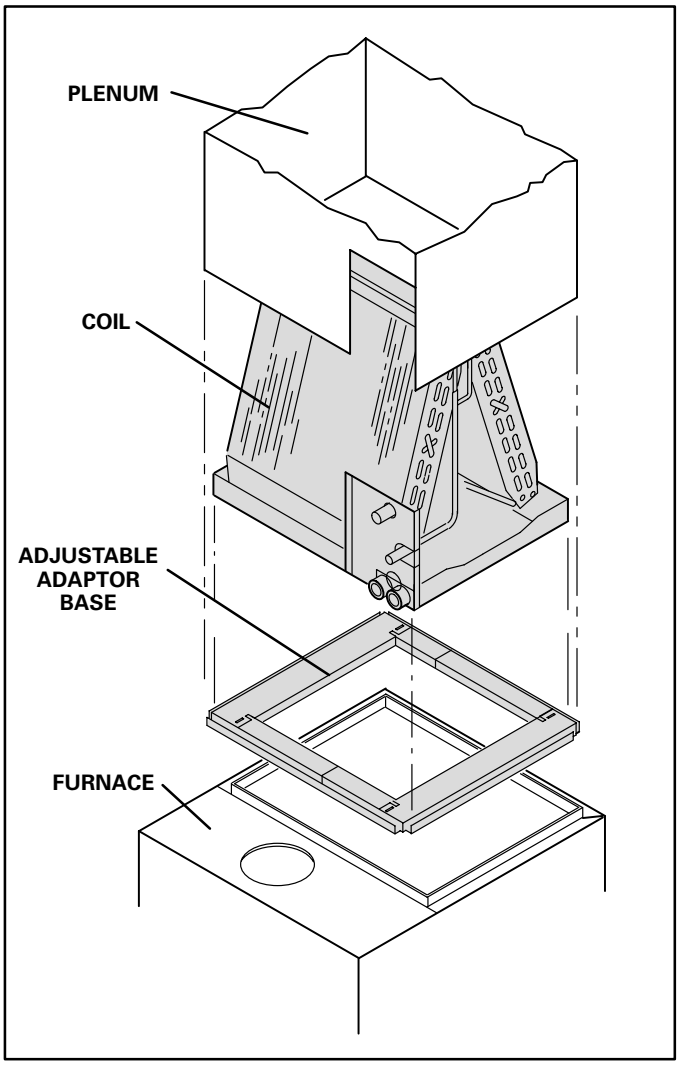


COIL AND ADAPTOR BASE APPLICATIONS

C22-21, C22-26(W), C22-31(W) AND C22-41 COILS

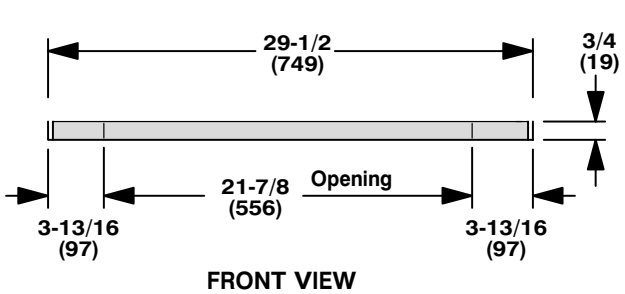


C22-46, C22-51 AND C22-65 COILS

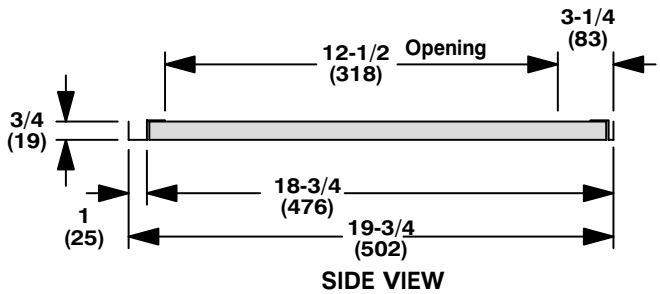


OPTIONAL ACCESSORY DIMENSIONS — inches (mm)

CF30-00 ADAPTOR BASE (46J43) For G12Q5-165 Only



FRONT VIEW

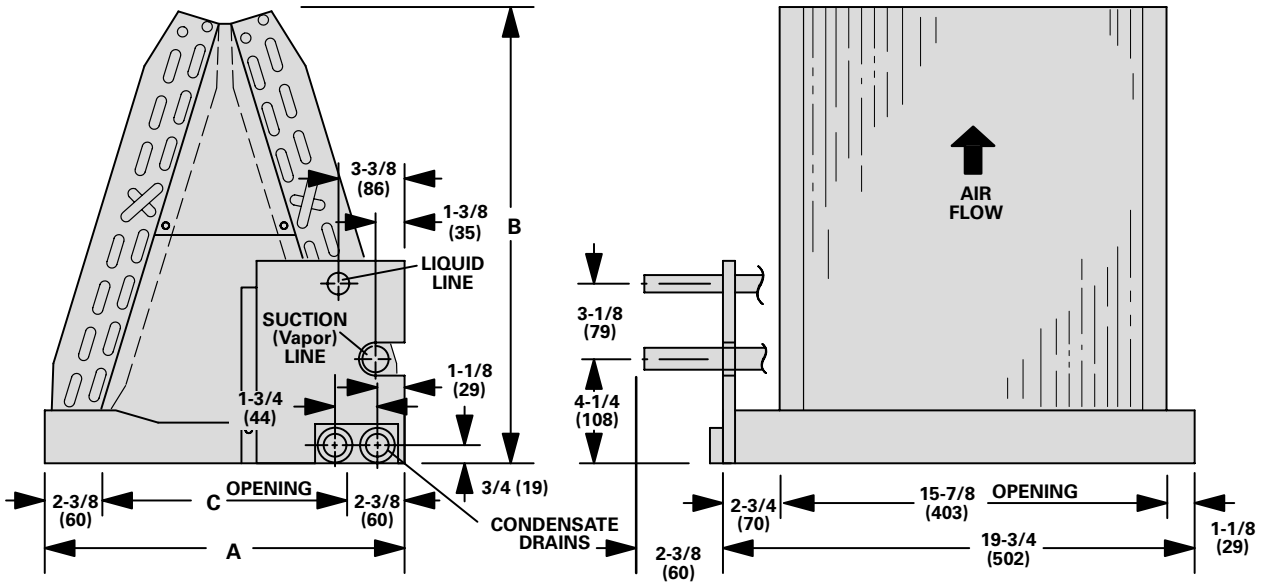


SIDE VIEW

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

DIMENSIONS — inches (mm)

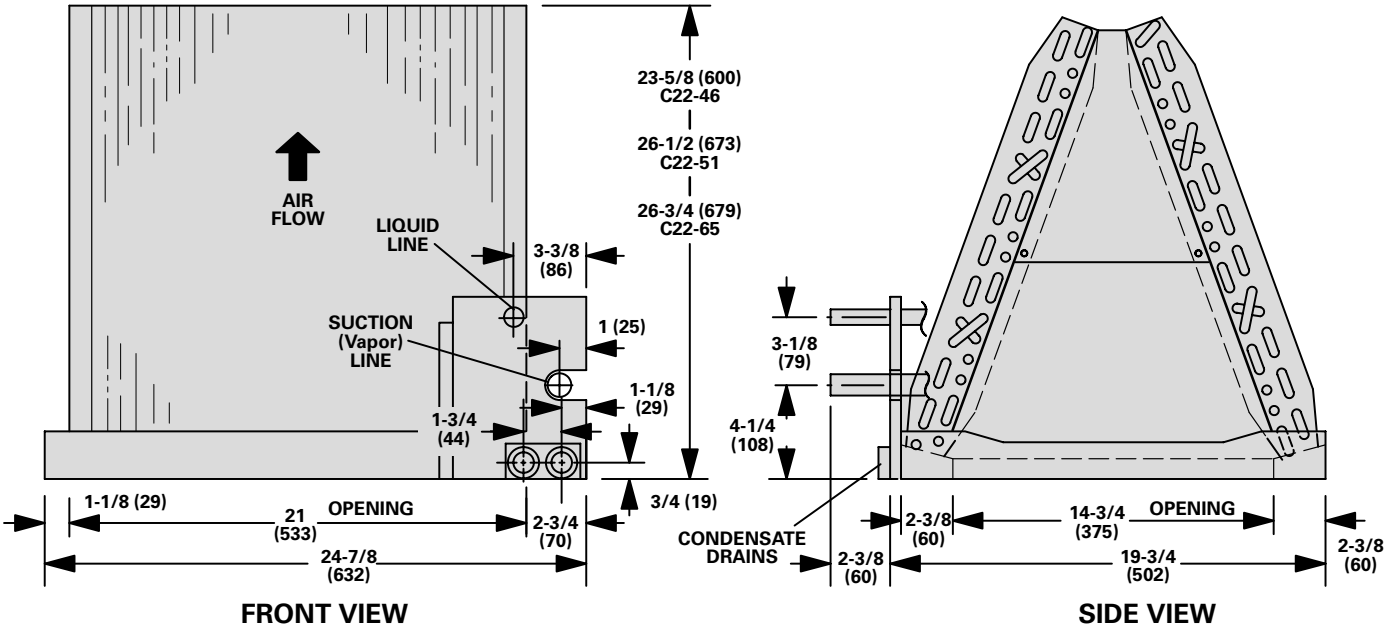
C22-21, C22-26, C22-26W, C22-31, C22-31W AND C22-41 COILS



FRONT VIEW SIDE VIEW

Model Number	A		B		C	
	in.	mm	in.	mm	in.	mm
C22-21	14-3/4	375	15	381	10	254
C22-26	14-3/4	375	18-3/4	476	10	254
C22-26W	19-3/4	502	19	483	15	381
C22-31	14-3/4	375	19	483	10	254
C22-31W	19-3/4	502	19	483	15	381
C22-41	19-3/4	502	21	533	15	381

C22-46, C22-51 AND C22-65 COILS



FRONT VIEW SIDE VIEW

ADJUSTABLE COIL ADAPTOR BASE TO FURNACE SELECTOR

Furnace Model Number		Coil Model Number								
		C22-21	C22-26	C22-26W	C22-31	C22-31W	C22-41	C22-46	C22-51	C22-65
G12	Q3-82									
	Q3-110									
	Q5-137									
	Q5-165							*CF30-00	***CF30-00**	***CF30-00**
G21	Q3-40									
	Q3-60									
	Q3-80									
	Q5-80									
	Q5-100									
G24M	2-45									
	2-60									
	3-60									
	2-75									
	3-75									
	4-75							X	X	
	3/4-100							X	X	
	4/5-100							X	X	X
	3/4-120							X	X	
	4/5-120							X	X	X
	4/5-140									

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 **(46J43)**.

EMPTY COIL CABINET TO FURNACE SELECTOR

Furnace Model Number	Empty Cabinet	98H79	98H80	98H81	98H80	98H81	98H82	98H83	98H84	98H84
	Coil Model Number	C22-21	C22-26	C22-26W	C22-31	C22-31W	C22-41	C22-46	C22-51	C22-65
G12	Q3-82			X		X	X	X		
	Q3-110		X		X			X		
	Q5-137									
	Q5-165							X	X	X
G21	Q3-40		X		X			X		
	Q3-60		X		X			X		
	Q3-80		X		X			X		
	Q5-80									
	Q5-100									
G24M	2-45			X		X				
	2-60			X		X				
	3-60			X		X	X			
	2-75			X		X				
	3-75			X		X	X			
	4-75			X		X	X	X	X	
	3/4-100		X		X			X	X	
	4/5-100							X	X	X
	3/4-120		X		X			X	X	
	4/5-120							X	X	X
	4/5-140							X	X	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.

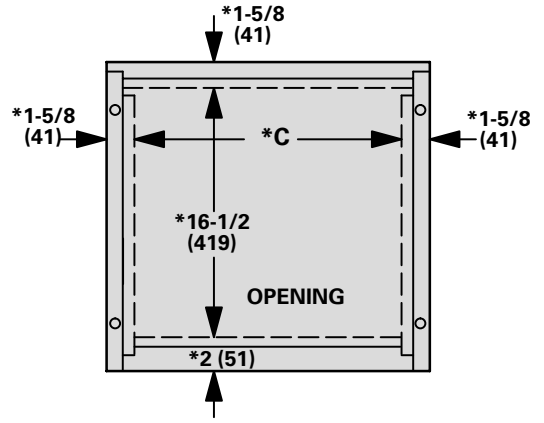
X Coil does not match furnace physically and requires field fabricated transition. Check furnace air volume and total system pressure drop for satisfactory match with coil.

Does not Match

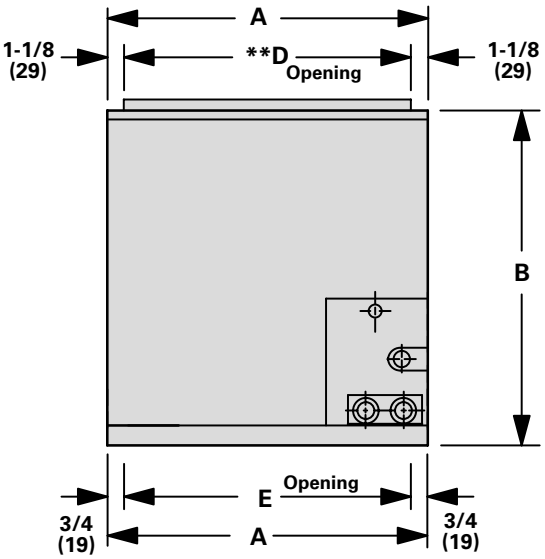
OPTIONAL ACCESSORY DIMENSIONS — inches (mm)

UP-FLO EMPTY COIL CABINETS

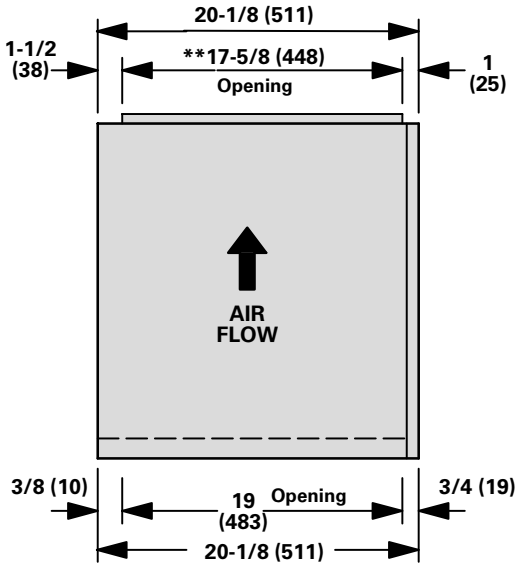
NOTE — Empty coil cabinet is equipped with a 5/8 inch (16mm) flange that may be bent up 90° for plenum connection on conventional up-flo furnace applications
***Dimensions before flange is bent up.**
****Dimensions after flange is bent up.**



TOP VIEW



FRONT VIEW



SIDE VIEW

Empty Cabinet Catalog Number	C22 Coil Model Number	A		B		C		D		E	
		in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
98H79	C22-21	16-1/4	413	17	432	13	330	14	356	14-3/4	375
98H80	C22-26 C22-31	16-1/4	413	21	533	13	330	14	356	14-3/4	375
98H81	C22-26W C22-31W	21-1/4	540	21	533	18	457	19	483	19-3/4	502
98H82	C22-41	21-1/4	540	25-3/4	654	18	457	19	483	19-3/4	502
98H83	C22-46	26-1/4	667	25-3/4	654	23	584	24	610	24-3/4	629
98H84	C22-51 C22-65	26-1/4	667	28-3/4	730	23	584	24	610	24-3/4	629