

## C5 SERIES COILS

### I - INTRODUCTION

The C5 coil is designed for add-on installation to an up-flow furnace with either the adaptor base provided or with the optional C5-00 empty cabinet. Figures 1 and 2 show typical installations. The coil applies to either cooling or heat pump systems.

The Cooling Selector Chart, in the introduction to cooling, shows the approved condensing unit, C5 coil and metering method match-ups.

When a C5 is applied to a heat pump system, a fuelmaster must be used. The Heat Pump Selector Chart, in the introduction to heat pumps, shows the approved heat pump, C5 coil and heat pump kit matchups. The heat pump kit consists of an expansion valve/check valve assembly that installs at the coil.

For maximum system efficiency on applications using the C5-805 and C5-920 coils, remove the 3/4 inch suction flare connection and connect directly to the field fabricated 1-1/8 inch suction line.

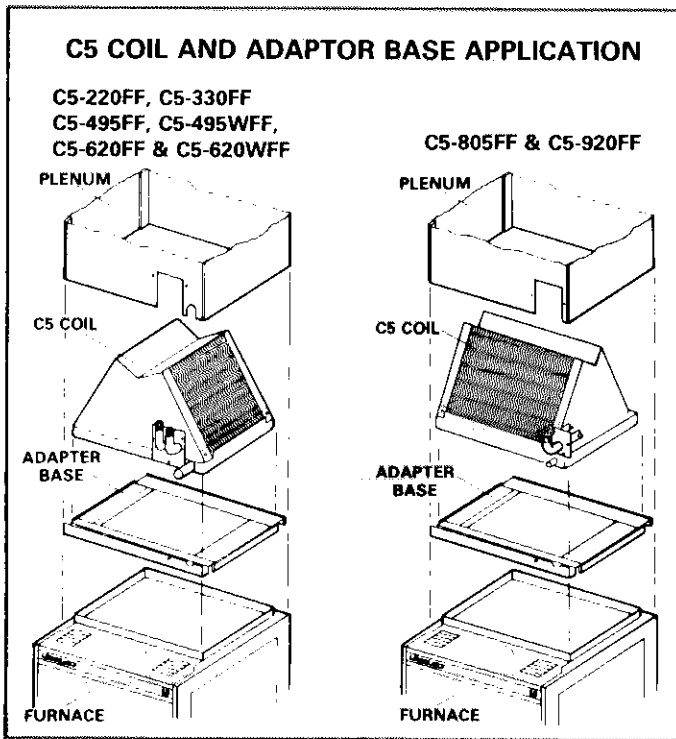


FIGURE 1

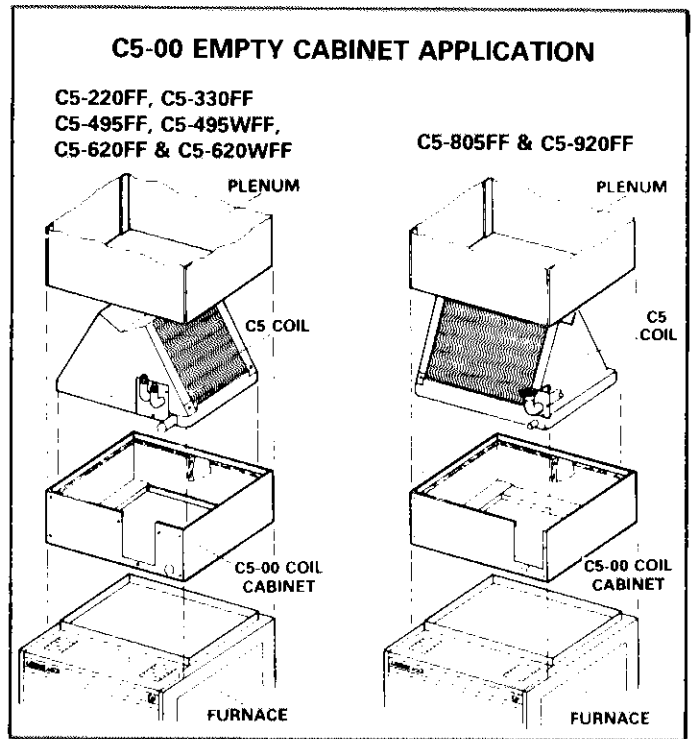


FIGURE 2

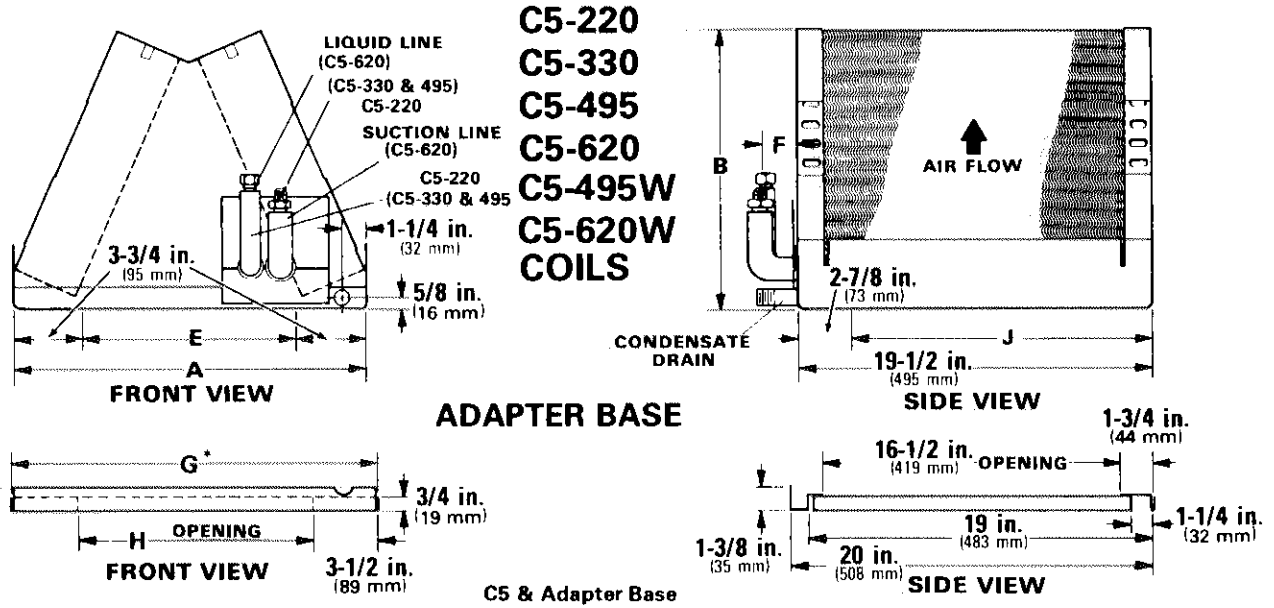
### II - UNIT INFORMATION

#### A - Specifications

Model No.		C5-220FF	C5-330FF	C5-495FF	C5-495WFF	C5-620FF	C5-620WFF	C5-805FF	C5-920FF
Evaporator Coil	Net face area (sq. ft.)	2.29	3.44	3.44	3.44	4.30	4.13	5.59	6.39
	Tube diameter (in.)	3/8	1/2	1/2	3/8	1/2	3/8	1/2	1/2
	No. of rows	2	2	3	3	3	3	3	3
	Fins per inch	17	13	13	15	13	13	13	13
Suction line connection (in.)		5/8 flare	5/8 flare	3/4 flare	3/4 flare	3/4 flare	3/4 flare	3/4 flare	3/4 flare
Liquid line connection (in.)		3/8 flare	3/8 flare	1/2 flare	1/2 flare	1/2 flare	1/2 flare	1/2 flare	1/2 flare
Condensate drain size (mpt) (in.)		3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Refrigerant		R-22	R-22	R-22	R-22	R-22	R-22	R-22	R-22
Coil shipping wt. (lbs.) 1 Pkg.		18	30	40	38	52	48	66	69
Evaporator coil cabinet (optional)		C5-330-00	C5-330-00	C5-330-00 or C5-495-00	C5-495-00	C5-495-00 or C5-620-00	C5-620-00	C5-920-00	
Cabinet shipping wt. (lbs.) 1 Pkg.		8	8	8	8	10	10	11	

## B - Unit Dimensions

Figures 3 and 4 show C5 dimensions for both adaptor frame and C5-00 empty cabinet usage.

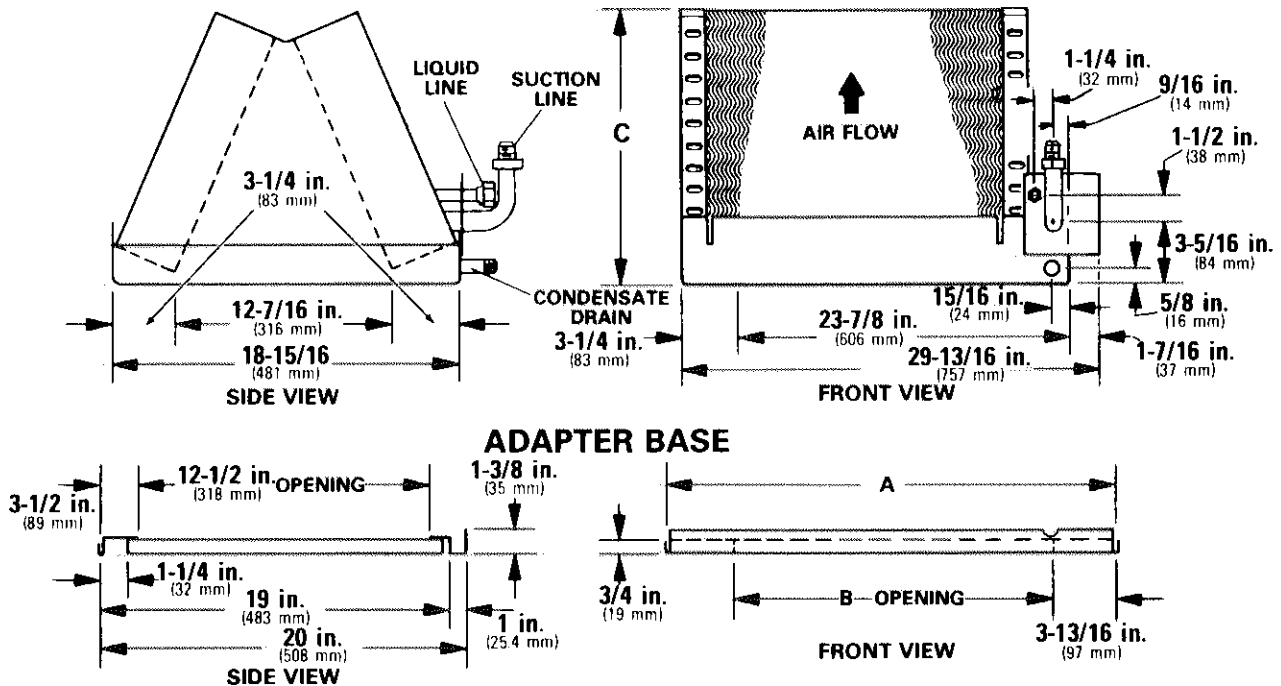


C5 & Adapter Base

Model No.	A		B		E		F		G		H		J	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
C5-220FF	14-3/8	365	11-3/4	298	6-7/8	175	2-1/32	52	15	381	8	203	16-5/8	422
C5-330FF	14-3/8	365	16-11/16	424	6-7/8	175	2-1/32	52	15	381	8	203	16-5/8	422
C5-495FF	14-3/8	365	17	432	6-7/8	175	2-1/32	52	15	381	8	203	16-5/8	422
C5-620FF	19-3/8	492	20-1/8	511	11-7/8	302	2-1/16	52	20	737	13	330	16-5/8	422
C5-495WFF	19-3/8	492	16-3/16	411	11-7/8	302	2	51	20	508	13	330	16-5/8	422
C5-620WFF	24-5/8	625	19-1/8	486	18	457	2-5/8	67	25	635	18	457	17	432

\*C5-495 and C5-620 coils include 2 adaptor base extensions for use as indicated in Table 1. The extensions add a combined total of 5" (127 mm) to the "G" dimension.

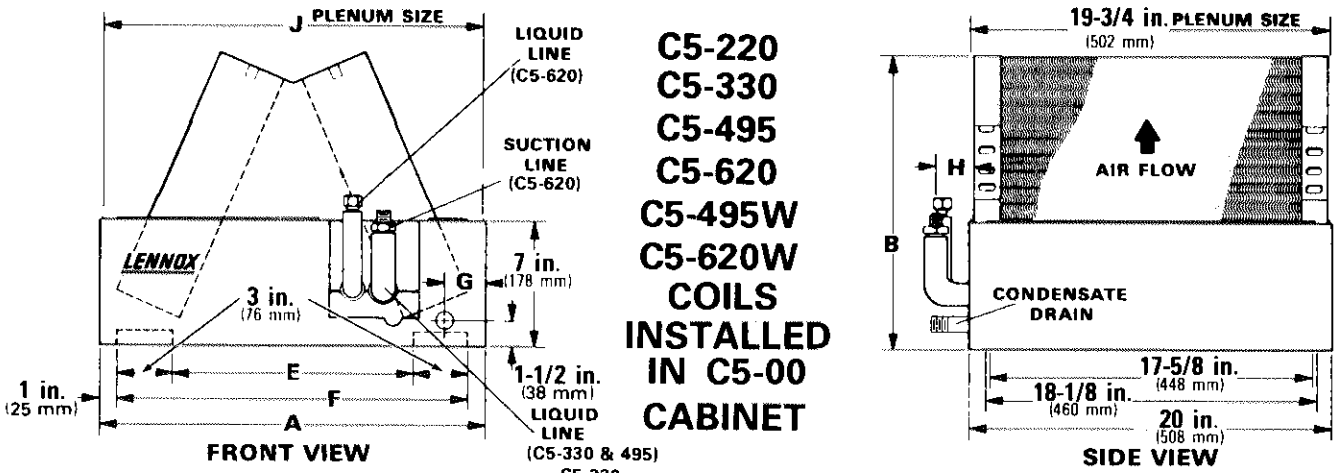
## C5-805 AND C5-920 COILS



C5 & Adapter Base

Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
C5-805	29-1/2	749	21-7/8	556	18-5/8	473
C5-920	29-1/2	749	21-7/8	556	21-3/8	543

FIGURE 3

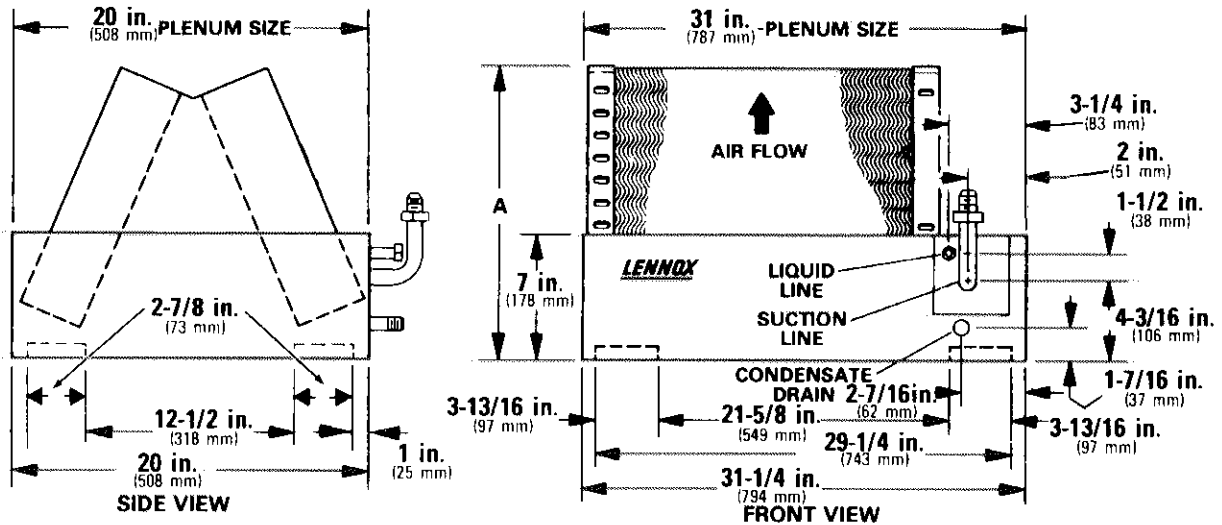


**C5-220  
C5-330  
C5-495  
C5-620  
C5-495W  
C5-620W  
COILS  
INSTALLED  
IN C5-00  
CABINET**

C5 and -00 Cabinet

Model No.	A		B		E		F		G		H		J	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
C5-220 & C5-330-00	16-1/4	413	12-11/16	322	8-1/4	210	14-1/4	362	2-1/2	64	2-1/32	52	16	406
C5-330 & C5-330-00	16-1/4	413	17-5/8	448	8-1/4	210	14-1/4	362	2-1/2	64	2-1/32	52	16	406
C5-495 & C5-330-00	16-1/4	413	17-15/16	456	8-1/4	210	14-1/4	362	2-1/2	64	2-1/32	52	16	406
C5-495 & C5-495-00	21-1/4	540	17-15/16	456	13-1/4	337	19-1/4	489	5	127	2-1/32	52	21	533
C5-620 & C5-495-00	21-1/4	540	21-1/16	535	13-1/4	337	19-1/4	489	2-1/2	64	2-1/16	52	21	533
C5-620 & C5-620-00	26-1/4	540	21-1/16	535	18-1/4	464	24-1/4	616	5	127	2-1/16	52	26	660
C5-495W & C5-495-00	21-1/4	540	17-1/16	433	13-1/4	337	19-1/4	489	2-1/2	64	2	51	21	533
C5-495W & C5-620-00	26-1/4	667	17-1/16	433	18-1/4	464	24-1/4	616	5	127	2	51	26	660
C5-620W & C5-620-00	26-1/4	667	20	508	18-1/4	464	24-1/4	616	2-1/2	64	2-5/8	67	26	660

**C5-805 AND C5-920 COILS INSTALLED IN C5-00 CABINET**



C5 and -00 Cabinet

Model No.	A	
	in.	mm
C5-805 & C5-920-00	19-1/2	495
C5-920 & C5-920-00	21-3/4	552

FIGURE 4

### III - PARTS ARRANGEMENT

Figure 5 shows a C5 exploded view.

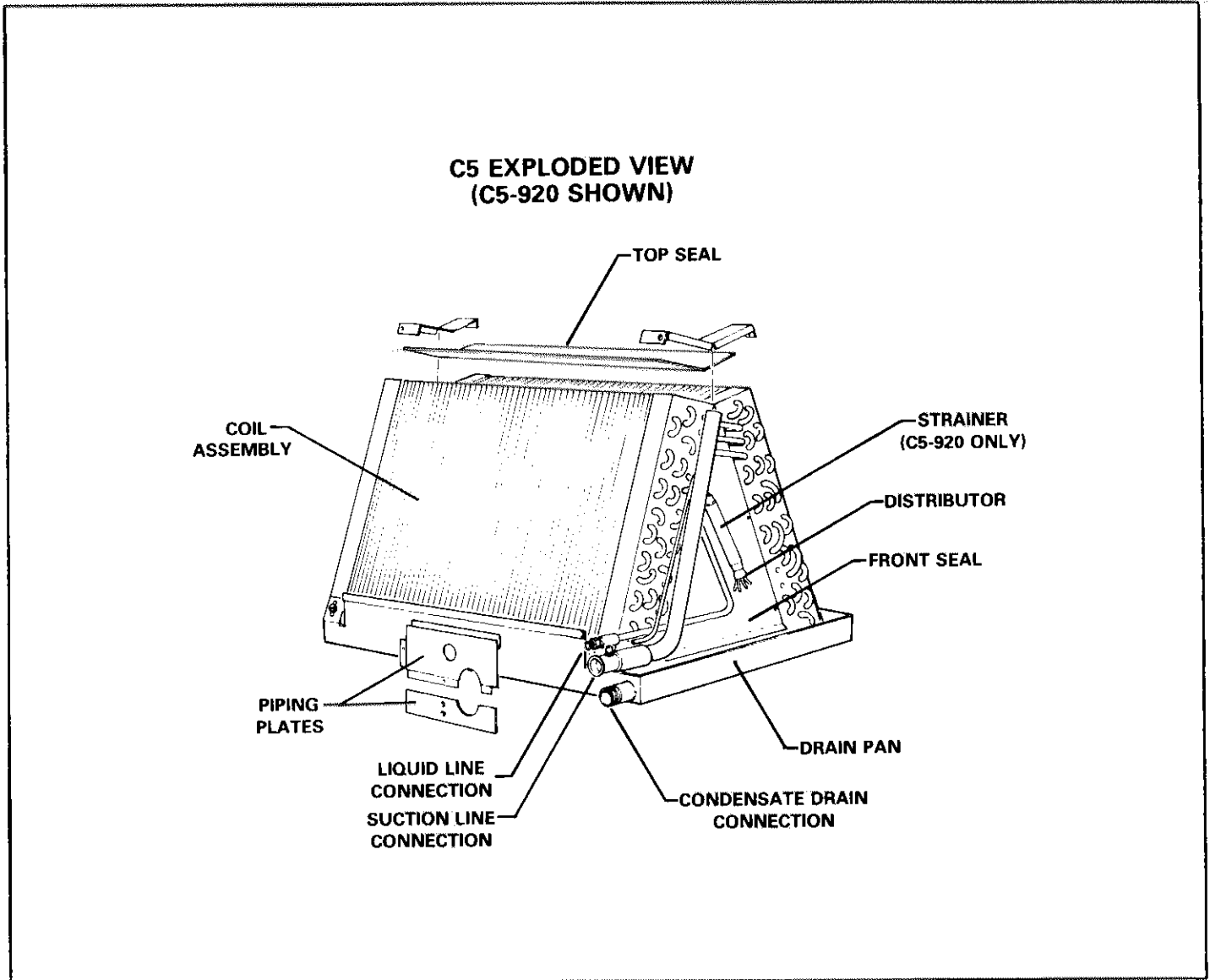


FIGURE 5

### IV - BLOWER SPEED ADJUSTMENT

Proper air volumes must be maintained to achieve optimum system performance. ARI testing is based on 450 CFM per nominal ton of cooling. To find actual CFM, measure the coil pressure drop as follows and then compare to Table 1.

- 1 - Drill 5/16 inch air test holes in plenum as specified in Figures 6 and 7. C5-805 and C5-920 coils have a plastic hose connection at coil. Remove patch plate for access.
- 2 - Connect the zero end of an inclined manometer to entering air side of coil. Insert hoses so about 1/4 inch extends inside plenum. Seal around holes with permagum.
- 3 - Start furnace blower motor by placing thermostat fan switch to "on" without a heating or cooling demand. This check must be made to a dry coil.
- 4 - Observe manometer reading and compare to Table 1. If reading is above desired air volume, decrease blower speed. If reading is below desired air volume, increase blower speed. Refer to furnace wiring diagram for changing direct drive blower speed.
- 5 - On belt drive blowers, check the actual motor amp draw and compare to the full load amps listed on the motor nameplate. The motor pulley must not be adjusted to exceed the motor nameplate rating.
- 6 - After check is completed, insert snaphole plugs into the test holes.

TABLE 1

DRAFT GAUGE READING (DRY EVAPORATOR)				
SIZE UNIT	AIR VOLUME		READING	
	CFM	m <sup>3</sup> /h	in. water	mm water
C5-220	500	849	.08	2.03
	600	1019	.10	2.54
	700	1189	.13	3.30
	750	1274	.15	3.81
C5-330	600	1020	.08	2.03
	800	1359	.11	2.79
	1000	1699	.14	3.56
	1200	2039	.18	4.57
C5-495	800	1359	.16	4.06
	1000	1699	.21	5.33
	1200	2039	.28	7.11
	1400	2379	.36	9.14
C5-495WFF	900	1529	.09 - .11	2,3 - 2,8
	1000	1699	.12 - .14	3,0 - 3,6
	1200	2039	.16 - .18	4,1 - 4,6
	1400	2379	.21 - .23	5,3 - 5,8
	1500	2548	.24 - .26	6,1 - 6,6
C5-620	1000	1699	.15	3.81
	1200	2039	.20	5.08
	1400	2379	.25	6.35
	1600	2719	.30	7.62
	1800	3059	.36	9.14
	2000	3398	.44	11.18
C5-620WFF	1400	2379	.18 - .20	4,6 - 5,1
	1600	2719	.24 - .26	6,1 - 6,6
	1800	3059	.29 - .31	7,4 - 7,9
	2000	3398	.35 - .37	8,9 - 9,4
C5-805	1200	2039	.12	3.04
	1400	2379	.15	3.81
	1600	2719	.18	4.57
	1800	3059	.21	5.33
C5-920	1400	2379	.10	2.54
	1600	2719	.11	2.79
	1800	3059	.13	3.30
	2000	3398	.15	3.81
	2200	3738	.17	4.32

These are not total resistance readings, but simply pressure drop readings across the coil.

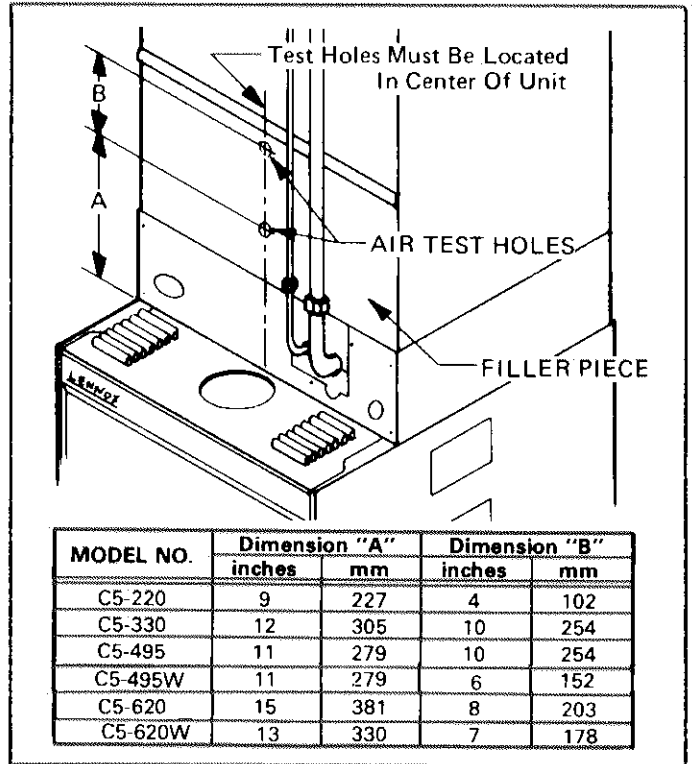


FIGURE 6

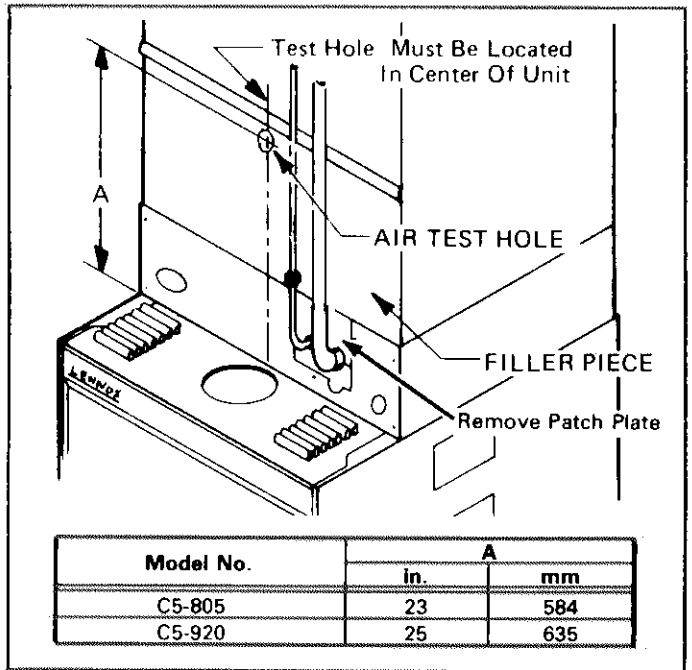


FIGURE 7