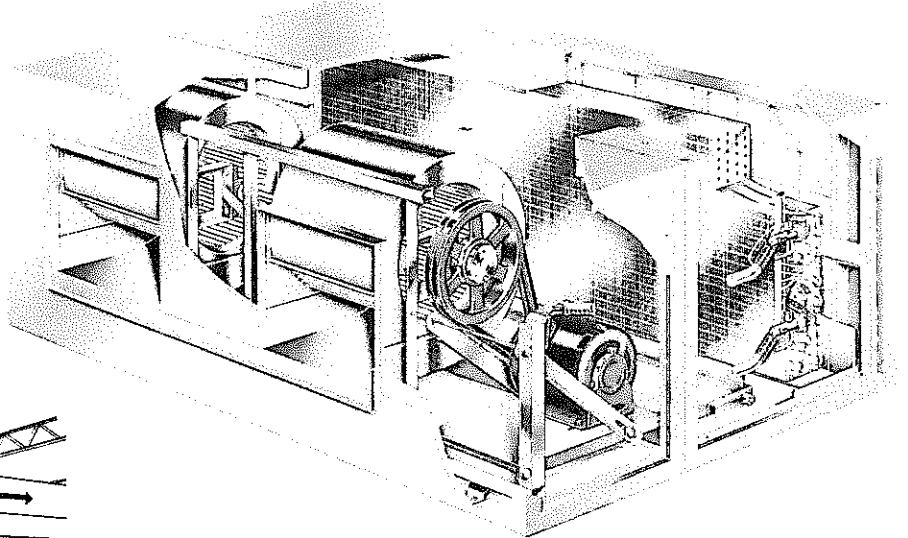
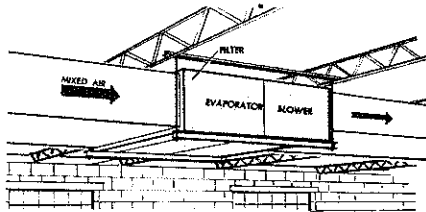
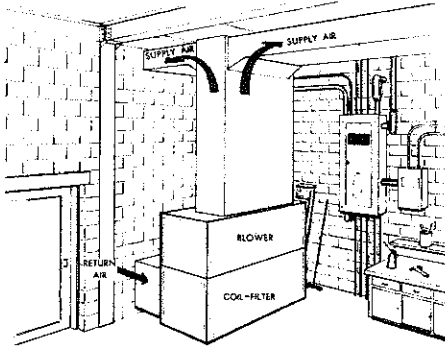




**CB3-185V — CB3-205V — CB3-305V
BLOWER COIL UNITS
UP-FLO — DOWN-FLO — HORIZONTAL
192,000 to 296,000 Btuh Cooling Capacity
At ARI Standard 380 Test Conditions**

ENGINEERING DATA
COOLING UNITS
COILS
BLOWER COIL UNITS
Page 33
February 1984
Supersedes 11-15-77

Typical Applications



Application — Lennox designed and built blower coil units offer versatility of application and maximum efficiency in cooling performance, air handling and filtering. A choice of up-flo, down-flo or horizontal supply air is available. Powerful blowers, with a large selection of drives, provide a wide range of air volume capacities. A choice of optional 50/50 split evaporator coils are provided on all models. Each coil section has a separate expansion valve and distribution system — perfect for two stage control of varying load and humidity control applications. Several larger Lennox condensing units are equipped for two stage operation and are compatible with the split evaporator coils. See Section Cooling Units — Condensing Units for ratings.

Lennox Evaporator Split Coils — Extra large surface area of Lennox designed coils provide maximum cooling efficiency, excellent heat transfer and low air resistance. Coils are face split with separate circuits, each circuit has its separate expansion valve. Lennox fabricated coils are constructed of precisely spaced ripple-edged aluminum fins fitted to durable seamless copper tubes. Fins are equipped with collars that grip tubing for maximum contact area. Flared shoulder tubing connections and silver soldering provide tight, leakproof joints. Long life copper tubing is easy to field service. Coil is thorough factory tested under high pressure to insure leakproof construction.

Drain Pan — Deep, corrosion resistant drain pan is constructed of heavy gauge galvanized steel. Equipped with twin drain connections as added protection from overflow.

Powerful Blowers — Twin centrifugal belt driven blowers deliver large air volumes quietly and with low power consumption. Blower wheels are heavy duty, with forward curved blades and double inlet. Wheels are statically and dynamically balanced to eliminate vibration and designed to give maximum air delivery. Bearings are heavy duty, self aligning, permanently sealed and lubricated. All moving parts (blower wheels, drives and motor) are mounted on a rugged frame, resiliently mounted and isolated from the rest of the cabinet. Motor mounting frame allows simple belt adjustment and motor mounting.

Rugged Cabinets — Both the coil-filter section and blower section cabinets are constructed of heavy gauge galvanized steel. A five station metal wash preparation assures a perfect bonding surface for the finish coat of baked-on enamel. Cabinets are completely lined with thick fiberglass insulation resulting in quiet and efficient operation due to the excellent sound deadening and insulating qualities of fiberglass. Large removable panels are provided in both cabinets for complete service access. Electrical inlets are located in lower cabinet. See dimension drawing.

Separate Matching Sections — Blower and coil-filter sections are shipped separately for ease in handling and installing. Positive joining of blower and coil-filter sections in all positions is accomplished by bolting the sections together through prepunched holes in the cabinets. Matching sections permit a choice of up-flo, down-flo or horizontal air discharge. See stacking arrangement sketches.

Expansion Valve — Factory installed and piped. Dual circuited coils have two expansion valves, one for each coil section. Valves are sized for best performance.

Air Filters — Cleanable polyurethane frame type one inch thick filters are furnished as standard. Filter media is coated with oil for maximum efficiency. Use RP products filter coating No. 418 (30165) for recoating after cleaning. Filter rack and arrangement permits quick and easy removal of filters for servicing. Filter rack is designed to accept two inch thick filters.

Piping And Drain Connections - Refrigerant line entry can be made on either side of coil cabinet. See dimension drawings for location. CB3-185V drain connections are located on both sides of the cabinet. CB3-205V and CB3-305V drain connections are made in bottom of the cabinet and adequate installation clearance should be provided for drain lines.

Completely Tested And Assembled — Units are thoroughly tested with matching condensing units in the Lennox Research Laboratory environmental test room according to ARI Standard 360 test conditions. Blower performance data is from actual unit tests conducted in the Lennox air test chamber. Units and components within are bonded for grounding to meet safety standards for servicing required by U.L. and N.E.C. Equipment is shipped completely factory assembled (blower motor shipped separately) in two sections ready to install.

SPECIFICATIONS

Model No.		CB3-185V	CB3-205V	CB3-305V
Blower section model number		B3-185	B3-205	B3-305
*Shipping weight (lbs.) — Blower Section		528	656	746
Air volume range (cfm)		4000 - 9000	5000 - 10,500	6000 - 15,500
Blower wheel nominal diameter x width (in.)		(2) 15 x 11	(2) 15 x 15	(2) 18 x 18
Blower motor hp & blower drives		Choice from drive selection table (shipped separately)		
Number and size of air filters (in.)		(6) 16 x 20 x 1 (2) 16 x 25 x 1	(4) 16 x 20 x 1 (4) 16 x 25 x 1	(2) 16 x 20 x 1 (3) 20 x 20 x 1 (2) 16 x 25 x 1 (3) 20 x 25 x 1
Condensate drain connection FPT (in.)		3/4	1-1/4	1-1/4
Refrigerant		R-22	R-22	R-22
**Evaporator section model number		C3-185V	C3-205V	C3-305V
4 row 50/50 dual circuit DX coil (standard)	Net face area (sq. ft.)	14.32	16.25	24.40
	Tube diameter (in.) & fins per inch	1/2 — 10	1/2 — 10	1/2 — 10
	Suction line connections o.d.m. (in.)	2 — 1-3/8	2 — 1-3/8	2 — 1-3/8
	Liquid line connections o.d.m. (in.)	2 — 5/8	2 — 5/8	2 — 3/4
	Shipping weight (lbs.) — Coil Section	556	650	882
6 row 50/50 dual circuit DX coil (optional)	Net face area (sq. ft.)	14.32	16.25	24.40
	Tube diameter (in.) & fins per inch	1/2 — 10	1/2 — 10	1/2 — 10
	Suction line connections o.d.m. (in.)	2 — 1-3/8	2 — 1-3/8	2 — 1-3/8
	Liquid line connections o.d.m. (in.)	2 — 5/8	2 — 5/8	2 — 3/4
	Shipping weight (lbs.) — Coil Section	627	747	989
††Number of packages in shipment		3	3	3

*Weight listed is less blower motor and drive weight.

**C3 coil section will be shipped with coil selected mounted and plumbed.

††Packages consist of Blower section with driven pulley, Coil-Filter section and Blower Motor with Drives.

DRIVE KIT SELECTION

Using total Air Volume (cfm) and system Static Pressure External to Unit (inches water gauge) requirements determine from Blower

Performance Chart RPM and Bhp required for job. Specify Bhp, Rpm and power characteristics required when ordering drive kits.

Model Number	Nominal Motor hp	*Maximum Usable hp	Voltage & Phase	RPM Range	Shipping Weight (lbs)
B3-185	1-1/2	1.72	230/460 — 3ph	522-757	41
	2	2.30	230/460 — 3ph	607-832	48
			208 — 3ph		
	3	3.45	230/460 — 3ph	607-918	74
208 — 3ph					
B3-205	3	3.45	230/460 — 3ph	409-918	74
			208 — 3ph	776-918	
	5	5.75	230/460 — 3ph	607-988	84
			208 — 3ph		
B3-205	3	3.45	230/460 — 3ph	420-534	74
	5	5.75	230/460 — 3ph	557-795	84
	†7-1/2	8.62	230/460 — 3ph	660-795	132
			208 — 3ph		

*Maximum usable hp of motors furnished by Lennox. If other motors are used keep within service factor limitations outlined on the motor nameplate.

†Magnetic Starters or Contactors are required and field provided.

BLOWER DATA

B3-185 BLOWER PERFORMANCE

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT (Inches Water Gauge)																												
	0		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00		1.25		1.50				
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM
4000	250	.30	310	.40	370	.45	420	.55	465	.65	505	.75	550	.85	590	.95	---	---	---	---	---	---	---	---	---	---	---	---	---
4500	285	.35	340	.45	390	.55	435	.65	480	.75	520	.85	565	1.00	600	1.10	635	1.25	670	1.35	700	1.50	---	---	---	---	---	---	---
5000	315	.50	365	.60	410	.70	455	.80	500	.90	530	1.00	575	1.15	605	1.25	640	1.40	675	1.55	710	1.70	780	2.05	---	---	---	---	---
5500	345	.65	395	.75	430	.85	475	.95	515	1.05	550	1.20	585	1.40	620	1.60	650	1.75	680	1.85	715	2.05	790	2.50	855	2.95	---	---	---
6000	375	.80	420	.90	465	1.05	500	1.15	530	1.25	565	1.40	600	1.50	630	1.65	665	1.85	695	1.95	725	2.10	800	2.60	865	3.00	---	---	---
6500	405	1.00	450	1.10	485	1.20	520	1.35	550	1.50	585	1.60	620	1.70	650	1.90	680	2.10	710	2.20	735	2.35	810	2.85	875	3.30	---	---	---
7000	435	1.15	475	1.30	510	1.45	545	1.55	575	1.70	610	1.90	635	2.05	665	2.15	700	2.35	725	2.50	750	2.65	820	3.15	---	---	---	---	---
7500	470	1.40	500	1.55	540	1.70	570	1.85	600	2.00	625	2.15	655	2.30	685	2.45	715	2.65	740	2.80	770	3.00	---	---	---	---	---	---	---
8000	500	1.70	530	1.85	565	1.95	595	2.10	620	2.25	650	2.45	680	2.65	710	2.80	735	3.00	760	3.15	785	3.35	---	---	---	---	---	---	---
8500	535	2.00	565	2.15	595	2.30	620	2.45	645	2.60	675	2.82	705	3.00	725	3.15	---	---	---	---	---	---	---	---	---	---	---	---	---
9000	565	2.35	595	2.50	620	2.65	645	2.85	675	3.05	700	3.20	725	3.40	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NOTE — Data is measured external to blower cabinet using standard return air opening. See air resistance table for resistance of coil cabinet and filters.

B3-205 BLOWER PERFORMANCE

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT (Inches Water Gauge)																												
	0		.10		.20		.30		.40		.50		.75		1.00		1.25		1.50		1.75		2.00						
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
5000	290	.50	350	.60	395	.65	445	.80	480	.90	520	1.00	615	1.30	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
5500	320	.65	375	.75	420	.85	465	.95	500	1.05	535	1.15	625	1.45	710	1.75	---	---	---	---	---	---	---	---	---	---	---	---	
6000	345	.75	395	.85	440	.95	480	1.10	515	1.20	555	1.35	635	1.60	715	1.95	790	2.35	---	---	---	---	---	---	---	---	---	---	
6500	375	.90	420	1.05	465	1.15	500	1.25	535	1.35	570	1.50	650	1.80	720	2.15	795	2.55	870	3.10	---	---	---	---	---	---	---	---	
7000	400	1.15	450	1.25	485	1.35	520	1.50	555	1.65	590	1.70	670	2.05	730	2.35	800	2.85	870	3.35	935	3.85	---	---	---	---	---	---	
7500	430	1.35	475	1.45	505	1.60	545	1.70	575	1.85	605	2.00	680	2.30	750	2.70	815	3.15	857	3.65	935	4.00	1010	4.85	---	---	---	---	---
8000	460	1.55	495	1.62	530	1.80	565	2.00	595	2.10	625	2.20	695	2.60	770	3.00	825	3.45	885	4.00	945	4.50	1015	5.20	---	---	---	---	---
8500	485	1.75	520	1.95	555	2.15	590	2.20	615	2.35	650	2.50	715	2.90	780	3.40	840	3.80	885	4.25	955	4.95	---	---	---	---	---	---	
9000	510	2.05	550	2.25	580	2.40	610	2.55	645	2.70	670	2.80	735	3.25	800	3.75	855	4.20	910	4.75	965	5.30	---	---	---	---	---	---	
9500	540	2.40	575	2.55	605	2.70	635	2.85	665	3.00	690	3.20	760	3.70	820	4.15	875	4.70	925	5.25	---	---	---	---	---	---	---	---	
10,000	565	2.70	595	2.85	625	3.00	655	3.20	685	3.40	715	3.60	780	4.15	840	4.65	895	5.20	---	---	---	---	---	---	---	---	---	---	
10,500	590	3.00	620	3.15	655	3.45	685	3.70	715	3.90	740	4.10	800	4.55	855	5.10	---	---	---	---	---	---	---	---	---	---	---	---	

NOTE — Data is measured external to blower cabinet using standard return air opening. See air resistance table for resistance of coil cabinet and filters.

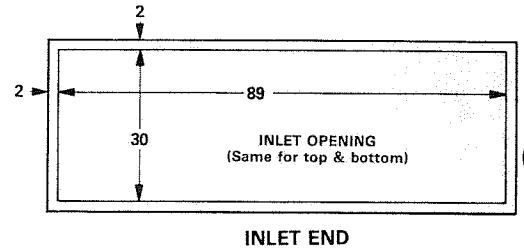
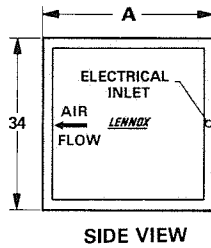
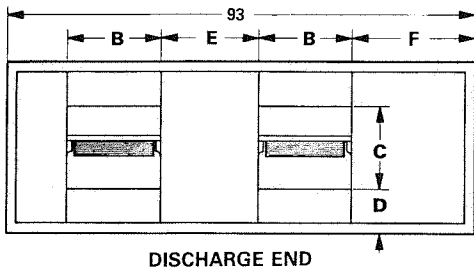
B3-305 BLOWER PERFORMANCE

Air Volume (cfm)	STATIC PRESSURE EXTERNAL TO UNIT (Inches Water Gauge)																												
	0		.10		.20		.30		.40		.50		.75		1.00		1.25		1.50		1.75		2.00						
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP			
6000	235	.40	295	.50	340	.75	375	.90	410	1.00	440	1.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
6500	260	.50	310	.60	350	.80	385	.95	420	1.05	450	1.15	525	1.60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
7000	275	.55	325	.70	360	.85	400	1.00	430	1.15	465	1.30	530	1.72	600	2.20	---	---	---	---	---	---	---	---	---	---	---	---	
7500	300	.70	345	.85	380	.95	415	1.20	445	1.35	475	1.50	540	1.90	610	2.40	---	---	---	---	---	---	---	---	---	---	---	---	
8000	320	.85	355	1.00	400	1.20	425	1.35	460	1.50	485	1.65	555	2.15	615	2.60	660	3.00	---	---	---	---	---	---	---	---	---	---	
8500	340	.95	375	1.15	415	1.35	445	1.50	475	1.70	500	1.85	565	2.30	625	2.85	670	3.25	---	---	---	---	---	---	---	---	---	---	
9000	355	1.15	395	1.35	430	1.55	460	1.70	490	1.90	515	2.05	575	2.55	630	3.05	685	3.60	740	4.25	---	---	---	---	---	---	---	---	
9500	375	1.35	410	1.55	450	1.75	475	1.95	500	2.10	530	2.30	585	2.80	645	3.35	700	4.00	750	4.55	800	5.25	---	---	---	---	---	---	
10,000	395	1.55	430	1.80	465	2.00	490	2.20	520	2.35	545	2.55	600	3.10	655	3.60	710	4.75	760	4.90	805	5.55	850	6.20	---	---	---	---	---
10,500	420	1.85	450	2.05	480	2.30	510	2.45	530	2.60	560	2.85	615	3.40	670	3.95	720	4.55	770	5.25	810	5.85	860	6.60	---	---	---	---	---
11,000	440	2.10	470	2.30	500	2.50	525	2.70	550	2.90	575	3.15	630	3.75	680	4.30	730	4.95	775	5.60	820	6.30	865	7.00	---	---	---	---	---
11,500	465	2.40	485	2.60	515	2.80	540	3.00	565	3.25	590	3.50	640	4.05	690	4.65	745	5.35	785	6.00	830	6.75	875	7.45	---	---	---	---	---
12,000	475	2.65	505	2.85	530	3.05	560	3.35	585	3.60	605	3.85	655	4.40	710	5.10	755	5.75	800	6.55	840	7.25	880	7.85	---	---	---	---	---
12,500	495	2.90	520	3.15	550	3.45	575	3.70	600	4.00	620	4.20	675	4.90	725	5.50	770	6.30	810	6.95	850	7.65	890	8.40	---	---	---	---	---
13,000	515	3.20	540	3.50	570	3.85	590	4.10	615	4.35	635	4.60	690	5.25	735	6.00	780	6.75	820	7.40	855	8.05	---	---	---	---	---	---	---
13,500	535	3.65	565	3.95	585	4.20	610	4.50	630	4.75	650	5.00	705	5.75	755	6.55	795	7.35	830	8.00	---	---	---	---	---	---	---	---	---
14,000	550	3.95	580	4.35	605	4.70	625	4.90	650	5.20	670	5.45	720	6.20	770	7.15	810	7.90	---	---	---	---	---	---	---	---	---	---	---
14,500	575	4.40	600	4.80	620	5.05	645	5.35	665	5.65	690	6.00	735	6.75	785	7.65	820	8.40	---	---	---	---	---	---	---	---	---	---	---
15,000	595	4.95	615	5.20	640	5.50	660	5.80	685	6.15	705	6.50	755	7.40	800	8.05	---	---	---	---	---	---	---	---	---	---	---	---	---
15,500	615	5.40	635	5.65	660	6.05	680	6.35	700	6.70	725	7.15	770	7.95	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

NOTE — Data is measured external to blower cabinet using standard return air opening. See air resistance table for resistance of coil cabinet and filters.

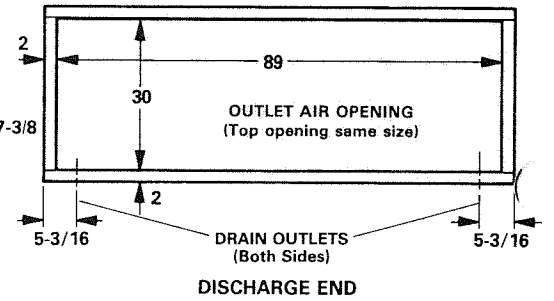
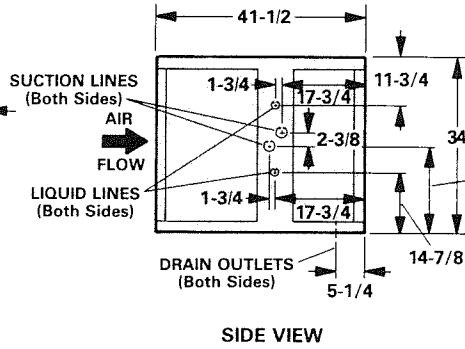
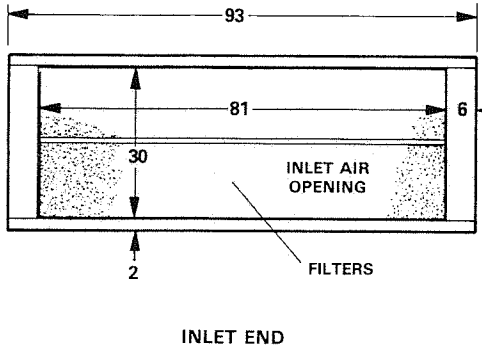
DIMENSIONS (inches)

B3-205 AND B3-305 BLOWER SECTION

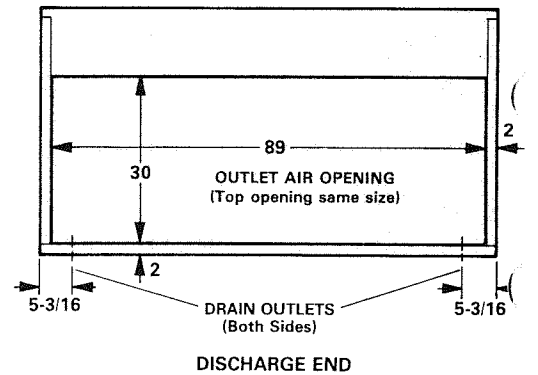
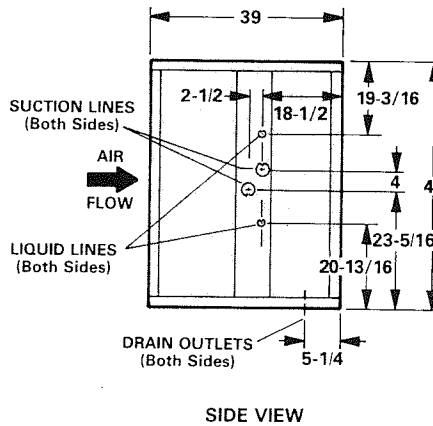
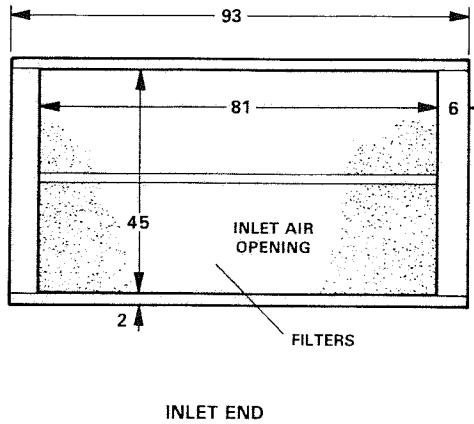


Model No.	A	B	C	D	E	F
B3-205	34	18-3/4	16-9/16	8-3/4	19-1/2	24
B3-305	36	22-1/2	19	3-3/4	14-7/8	24-1/8

C3-205V COIL-FILTER SECTION



C3-305V COIL-FILTER SECTION



BLOWER DATA

C3-185V COIL SECTION AIR RESISTANCE

Air Volume (cfm)	Total Resistance (inches water gauge)		
	4 Row DX Coil	6 Row DX Coil	Filters
4500	.13	.20	.06
5000	.15	.23	.07
5500	.18	.27	.09
6000	.20	.30	.11
6500	.22	.32	.13
7000	.24	.35	.16
7500	.27	.39	.18
8000	.30	.43	.20
8500	----	.46	.22
9000	----	.51	.24

C3-205V COIL SECTION AIR RESISTANCE

Air Volume (cfm)	Total Resistance (inches water gauge)		
	4 Row DX Coil	6 Row DX Coil	Filters
5000	.09	.13	.06
5500	.11	.17	.08
6000	.13	.21	.10
6500	.15	.25	.12
7000	.18	.29	.13
7500	.21	.32	.15
8000	.24	.36	.17
8500	.27	.39	.19
9000	.30	.43	.22
9500	.32	.47	.24
10,000	----	.53	.27
10,500	----	.57	.29

C3-305 COIL SECTION AIR RESISTANCE

Air Volume (cfm)	Total Resistance (inches water gauge)		
	4 Row DX Coil	6 Row DX Coil	Filters
6000	.05	.09	.05
6500	.06	.10	.06
7000	.07	.12	.06
7500	.08	.14	.07
8000	.10	.17	.08
8500	.11	.19	.08
9000	.13	.22	.09
9500	.14	.24	.10
10,000	.16	.26	.11
10,500	.17	.28	.12
11,000	.19	.30	.13
11,500	.21	.32	.14
12,000	.22	.34	.15
12,500	.24	.37	.16
13,000	.25	.39	.17
13,500	.27	.42	.19
14,000	.29	.45	.20
14,500	.31	.48	.22
15,000	----	.51	.24
15,500	----	.53	.26

GUIDE SPECIFICATIONS

Prepared for the guidance of architects, consulting engineers and mechanical contractors.

General — Furnish and install in separate matching cabinets a blower-coil-filter unit consisting of a coil-filter section and blower section. The unit shall be a standard product of a firm regularly engaged in the manufacture of heating-cooling equipment. The manufacturer shall have parts and service available throughout the United States.

The installed weight shall not be more than lbs. Unit shall have a width of not more than inches, a depth of not more than inches and an overall height of not more than inches.

The equipment shall be shipped in separate sections, completely assembled ready for necessary field connections. Unit shall be capable of up-flo, down-flo or horizontal air distribution.

Cabinet — The unit cabinet shall be constructed of galvanized steel with a baked-on enamel finish. Panels shall be insulated with not less than one inch thick fiberglass insulation. Cabinet shall be equipped with large removable panels providing service access to interior. Inlets shall be provided for refrigerant line, power connection entry, and dual drain connections.

DX Cooling System — The total certified cooling capacity shall not be less than Btuh with an evaporator air volume of cfm, an entering wet bulb temperature of °F and °F coil refrigerant evaporating temperature.

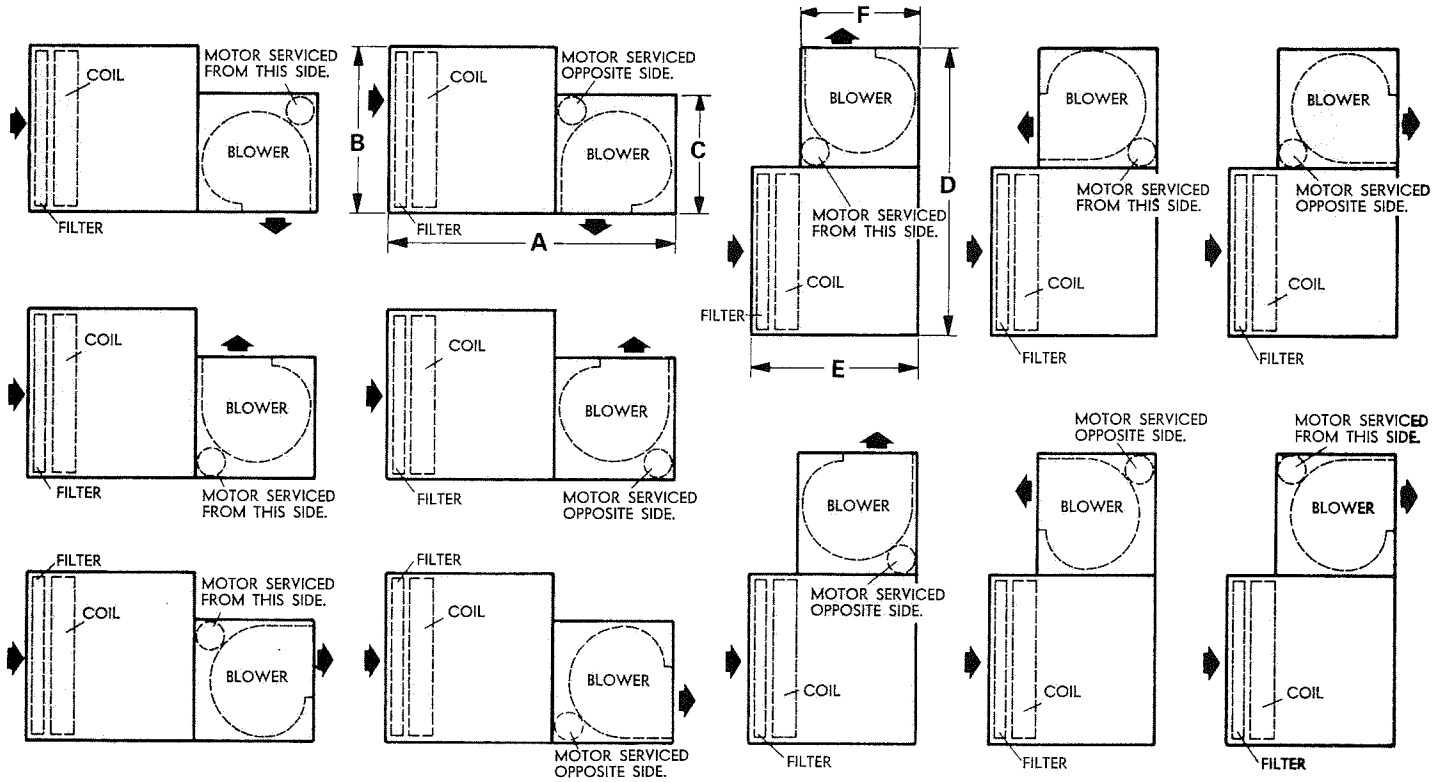
The coil shall be non-ferrous construction with aluminum fins machine fitted to copper tubes. The coil shall be dual circuit with each circuit having an expansion valve. Coil shall be factory pressure leak tested. Coil face area shall be not less than sq. ft.

Air Movers — Dual centrifugal conditioned air blowers shall have statically and dynamically balanced, forwardly curved, double inlet blower wheels, permanently lubricated bearings, adjustable belt drives and be capable of delivering cfm at an external static pressure of inches water gauge, requiring not more than bhp and rpm. Blower motor and pulley shall be shipped separate and field installed.

Air Filters — One inch thick cleanable filters furnished shall have not less than sq. ft. of area. Filter rack shall be capable of holding optional two inch thick filters.

STACKING ARRANGEMENTS

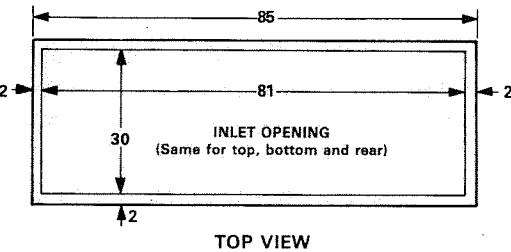
(CB3-305V Model Illustrated)



Model No.	A	B	C	D	E	F
CB3-185V	68	34	34	68	34	34
CB3-205V	75-1/2	34	34	68	41-1/2	34
CB3-305V	73	49	36	85	39	34

DIMENSIONS (inches)

B3-185V BLOWER SECTION



C3-185V COIL-FILTER SECTION

