

# LENNOX

## \*RFC T.M. AIR CONDITIONING SYSTEM 18,000 & 30,000 BTUH COOLING CAPACITY

HSW2 Condensing Unit • Evaporator Unit • Lines

\*RFC system is a complete integrated split refrigeration system including condensing unit, evaporator unit and lines.

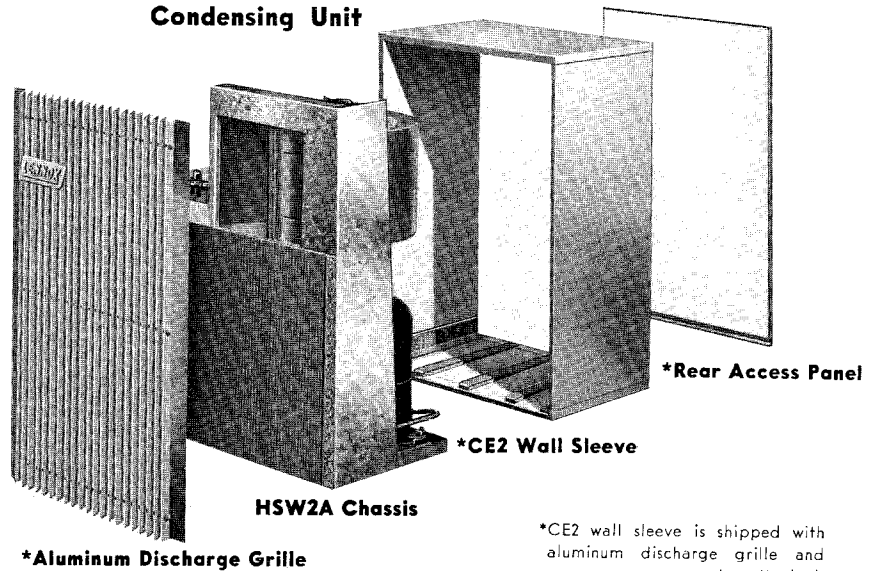
ENGINEERING DATA  
**COOLING UNITS**  
MATCHED REMOTE  
SYSTEMS

Page 1a  
Dec. 15, 1965  
Supersedes 2-25-65

- Many Sizes Available
- Hideaway Condensing Unit
- Choice of Evaporators
- Separate Wall Sleeve
- Full Refrigerant Charge
- Add-On Electric Heat
- Complete Service Access
- Low Cost Field Wiring
- Dependable and Efficient
- Unmatched Design Features



CERTIFICATION APPLIES ONLY  
WHEN USED WITH PROPER  
COMPONENTS AS DESIGNATED  
BY MANUFACTURER



Condensing Unit

\*Rear Access Panel

\*CE2 Wall Sleeve

HSW2A Chassis

\*Aluminum Discharge Grille

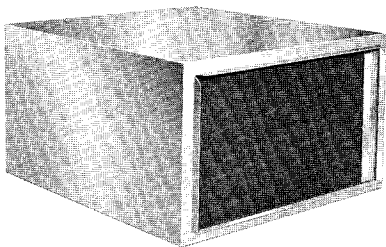
\*CE2 wall sleeve is shipped with aluminum discharge grille and rear access panel attached.

### Complete Expertly Engineered System Has Installation Flexibility

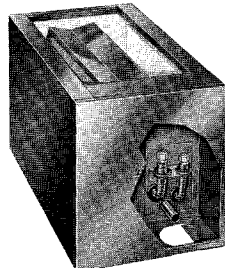
Lennox HIDEAWAY RFC air conditioning systems give the designer unmatched installation flexibility. The uniquely designed condensing unit permits installation on, in, or behind the wall. Also, attractive cabinet is perfect for free-standing application on rooftops or slabs at grade level. Full size centrifugal blower is used for quiet handling of condenser air volumes. It has high "throwaway" air velocities which allow installation in a series of closely banked units without danger of condenser air recirculation. The separate, insulated and completely waterproof wall sleeve (complete cabinet and discharge

grille) can be built in and weather proofed as a rigid part of the building structure. The completely charged refrigeration chassis is then added at a later date. The discharge grille can be removed to allow architectural treatment of the opening in the exterior wall. A large selection of Lennox evaporator units—Up-Flo, Down-Flo or Horizontal, and matching Lennox furnaces are available for compact all-season applications. Additive electric heat in 2 through 16 kw capacities are available for the blower coil units. A two row hot water and steam coil is available for mounting in the CB2 blower coil unit.

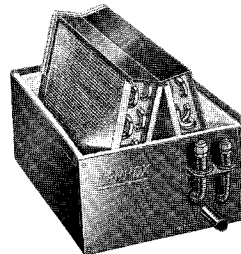
### Evaporator Unit Choice



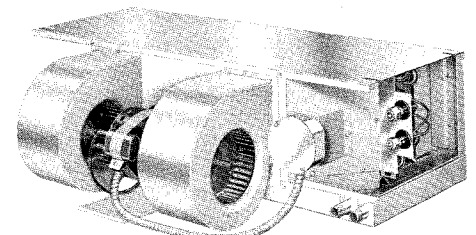
CB1 Blower Powered



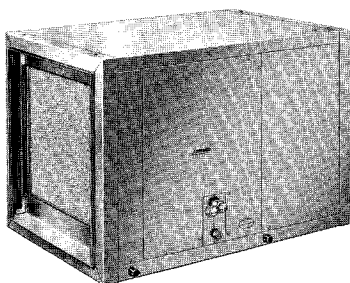
CR2-Down-Flo  
(Add-on to furnace)



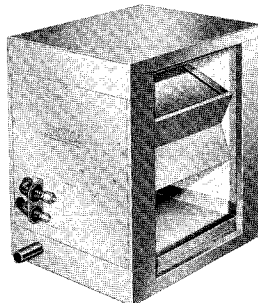
C2 Up-Flo  
(Add-on to furnace)



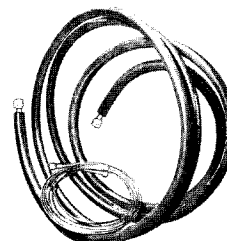
CB2-Horizontal Blower Powered  
(For furred-in installation)



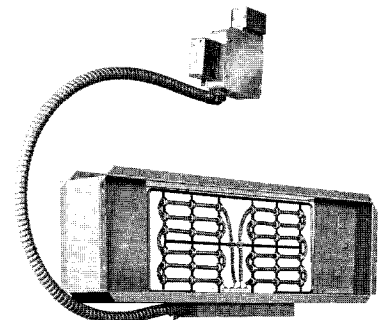
CB1-41-2FF Blower Powered  
(Horizontal, Up-flo & Down-flo)



CH2 Horizontal  
(Add-on to furnace)



L2 Refrigerant Line Set  
(Various lengths available)

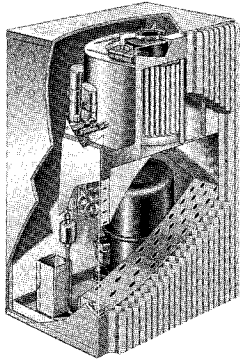


ECB2-21 & 26 Series Auxiliary Electric Heat  
(Add on to CB2 series units)

NOTE: Specifications, ratings and dimensions subject to change without notice.

## MAJOR FEATURES

**New Compact Condensing Unit**—Attractive condensing unit is only 15 inches deep. Extremely compact, yet housing a quiet, powerful centrifugal blower, larger than average condenser coil, internally sprung compressor and all necessary controls. Suction and liquid valves have service ports. Rugged cabinet has a five station metal wash preparation for the finish coat of baked acrylic outdoor enamel. Refrigeration chassis is galvanized. Cabinet interior is insulated with styrofoam, which has excellent acoustical and insulating qualities and in addition is completely waterproof. Multiple choice refrigerant line and power supply inlet location. See dimension drawing.



**HSW2 Condensing Unit**  
(CE2 wall sleeve and HSW2A refrigeration chassis)

**Large Condenser Coil**—Lennox designed and fabricated coil has extra refrigerant tubes for additional sub-cooling. They are located at the air inlet side of the condenser and subject to the coolest entering air temperature resulting in maximum heat transfer. Coil is constructed of ripple-edge aluminum fins flat-bonded to seamless copper tubes for maximum strength and contact area. Each joint is silver soldered resulting in leak proof construction. Pressure leak tested at 455 psi.

**Separate Wall Sleeve Cabinet**—All weather finish galvanized cabinet assembly and aluminum discharge grille can be ordered separately. It can be built into the structure as a permanent part of the building and completely weatherproofed. The refrigeration assembly is then slipped in on the resilient styrofoam when construction is complete. This allows construction without danger of damage to refrigeration equipment, and also, decreases the builders interim financing costs.

**Lennox Engineered Flow Control**—Lennox RFC systems feature a metered liquid line and special evaporator, which accurately control refrigerant flow. The system offers unloaded compressor starting, no field super-heat adjustments and gives years of service free performance with no danger of plugging. Far superior to ordinary small bore capillary tube systems.

**High Velocity Condenser Air Discharge**—HIDEAWAY condensing unit efficiently pulls air through the larger than ordinary condenser coil and discharges it at a high velocity out the same side it entered. No danger of condenser air recirculation here—the throw-away air feature completely eliminates that problem.

**Dependable Compressor**—Starts unloaded saving wear and tear. The sturdiest and most reliable available in its size range. Suction cooled and internally sprung mounted with external mounting grommets. Overload protected. Carries full five year warranty.

**Control Simplification**—Lennox RFC cooling systems equalize pressures rapidly after compressor stops. It, therefore, starts unloaded eliminating the need of a start capacitor or potential relay.

**Complete System**—One order gives you all that is needed for a complete cooling system—condensing unit—correct operating refrigerant charge—refrigerant lines—evaporator unit—heating-cooling thermostat and blower relay. Just add a Lennox furnace to complete the job. CB1 and CB2 blower powered evaporators also available.

**Complete Refrigerant Charge**—Condensing unit has the precise refrigerant charge sufficient for the entire system. No expensive time consuming evacuating or charging procedures are required with Lennox HIDEAWAY RFC air conditioning systems.

**Sealed Lines With Flare Fittings**—RFC refrigerant lines (suction and liquid) are shipped “refrigeration clean”. They are cleaned, dried and pressurized with R-22 at the factory and shipped with rubber plugs installed to hold the pressure in the lines. These plugs are removed only at the time the flare connections are made thus each RFC system is assured of perfectly clean and dry lines at all times. Available with different lengths of insulated suction line, see table. Suction lines are equipped with tube benders.

**Refrigerant Charge Testing**—Checking refrigerant charge is simple and accurate. Condensing unit is equipped with two liquid level valves. They are conveniently located inside the cabinet and marked for easy identification.

**Blower Relay and Heating-Cooling Thermostat Furnished**—Blower relay mounts to furnace or blower coil unit wiring make-up box. Adequate lengths of wire furnished to make connections. Mercury bulb thermostat has system selector switch and blower switch.

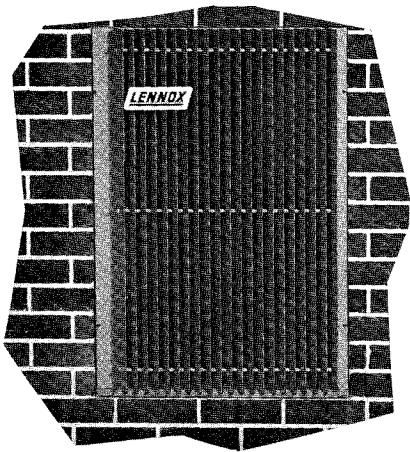
**Complete Service Access**—Removable rear panel and discharge grille gives complete entry into unit for servicing from either the front or rear. If necessary, entire refrigeration assembly can slide out. Blower assembly can be removed separately without disconnecting wiring or removing refrigeration chassis. Refrigerant service valves and line connections are all located in one central location for ease in servicing.

**Approvals**—All Lennox air conditioning equipment is tested and rated in strict accordance with ARI Standard 210-64. Units coming within the scope of the Standard (135,000 Btuh or less) carry the ARI certification seal. U. L. listing and CSA Approval are pending.

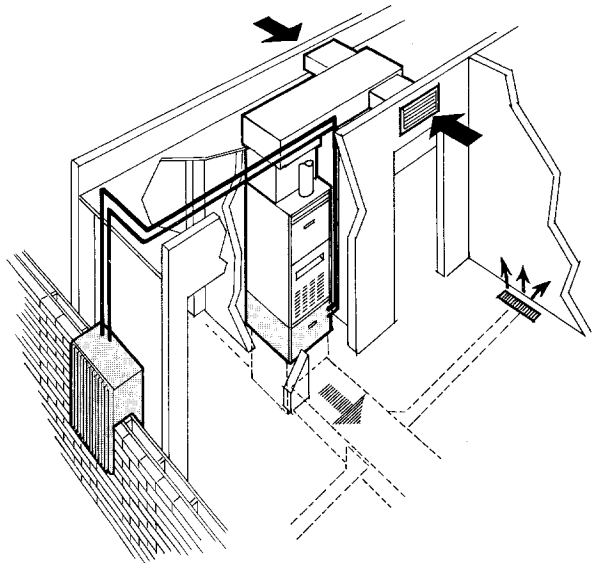
**Add-On Electric Heat**—Add-on electric heat sections are available as optional equipment. Available in several Btuh capacity sizes, see specification table. ECB2 series cabinets match the CB2 units. Wiring junction box with the ECB2 and the junction box furnished with the CB2 units can be installed on the CB2 unit itself or remotely installed on a wall or some other convenient location. A long piece of flexible conduit to both junction boxes allows a selection of mounting locations. Brackets for mounting boxes to the CB2 are furnished and are field installed. A Make Up Kit, ordering No. BM-3286, consisting of a transformer and heating blower relay must be ordered when the ECB2 units are used. They are installed on the CB2 wiring junction box. See installation instructions for complete details.

**Add-On Hot Water and Steam Coil**—A two row hot water or steam coil is available for CB2 blower coil units. It mounts within the CB2 cabinet. See rating charts for capacities. Additional controls required with this coil are a water valve (BM-3198) and a fan relay—transformer kit (BM-3196). The fan relay furnished with the condensing unit is used to control water valve. See two row hot water coil instructions for complete details.

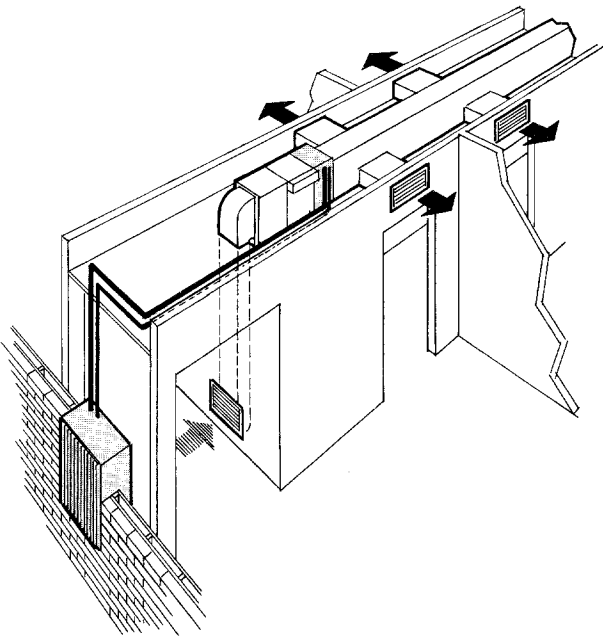
**APPLICATIONS**



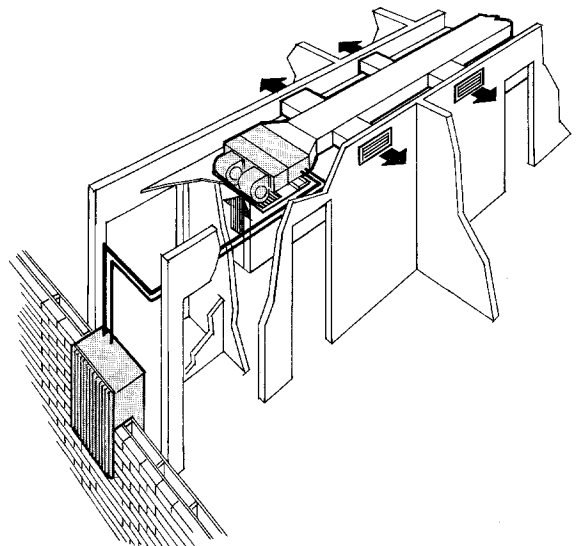
Condensing Unit Installed  
In A Brick Wall



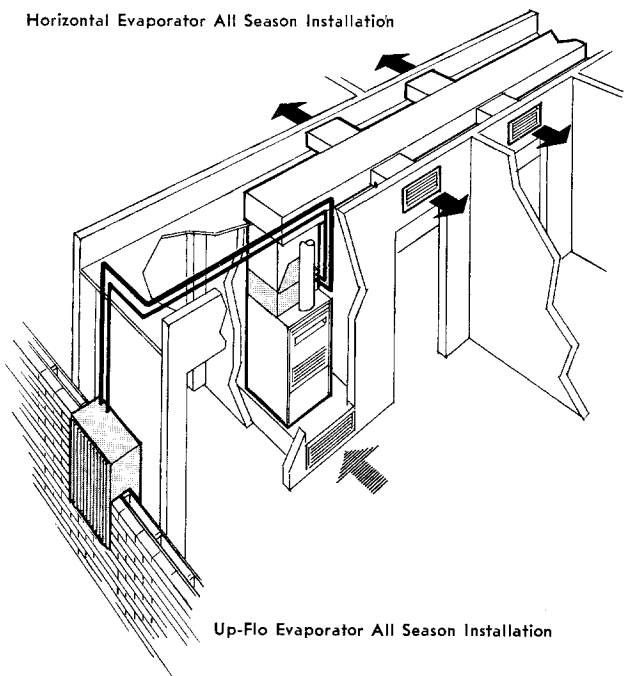
Down-Flo Evaporator All Season Installation



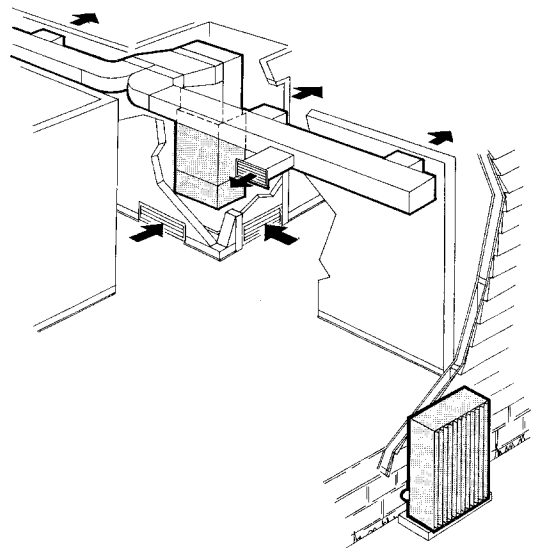
Horizontal Evaporator All Season Installation



CB2 Horizontal Blower Powered Evaporator Installation  
(Can Be All Season With Electric Heat or Hot Water)



Up-Flo Evaporator All Season Installation



CB1 Up-Flo Blower Powered Evaporator Installation  
(Can Be All Season With Electric Heat)

# SELECTOR

Lennox Condensing Unit Model No.	ARI Standard 210-64 Certified Ratings			Lennox Evaporator Unit Used		
	Total Cooling Capacity (Btuh)	Compressor Watts	Dehumidifying Capacity	Up-flo	Down-flo	Horizontal
HSW2-211FF	18,000	2530	29%	*CBI-21FF		*CBI-21FF
	18,500	2440	33%	**C2-21FF	CR2-21FF	CH2-21FF
	18,500	2480	23%			*CB2-21FF
HSW2-261FF	23,000	3180	24%	*CBI-26FF		*CBI-26FF
	24,000	3310	23%			*CB2-26FF
	24,000	3210	29%	**C2-26FF	CR2-26FF	CH2-26FF
HSW2-311FF	31,000	4070	27%	**C1-41-1FF	CRI-41-1FF	CHI-41-1FF
	30,000	4060	27%	*CBI-41-2FF	*CBI-41-2FF	*CBI-41-2FF

Denotes blower powered evaporator.

\*\*Wide cabinet models also available (C2-21WFF, C2-26WFF & C1-41WFF see dimension drawing.)

## SPECIFICATIONS

### CONDENSING UNITS

Refrigeration Chassis	HSW2A-211FF	HSW2A-261FF	HSW2A-311FF	
Cabinet and grille model No.	CE2-21-26	CE2-21-26	CE2-31	
Condenser Coil	Net face area (sq. ft.)	2.74	2.74	3.58
	Tube diam. (in.)	1/2	1/2	1/2
	No. rows of tubes	3	4	4
	Fins per inch	13	13	13
Condenser Blower	Wheel diam. x width (in.)	10 x 8	10 x 8	10 x 6 & 10 x 4
	Motor hp	1/4	1/4	1/2
	Cfm (factory setting)	1285	1250	1750
	Rpm (factory setting)	895	900	1105
	Watts (factory setting)	530	530	665
Refrigerant-22 charge	4 lb 8 oz	5 lb 9 oz	6 lb 4 oz	
Liquid line connection	3/8 flare	3/8 flare	1/2 flare	
Suction line connection	5/8 flare	5/8 flare	3/4 flare	
No. of packages in shipment	2	2	2	

### REFRIGERANT LINE SETS

Condensing Unit Model No.	Line Kit Model No.	Length of Suction Line (ft.)	Length of Liquid Line (ft.)
HSW2-211FF HSW2-261FF	L2-26-18FF	18	35
	L2-26-25FF	25	
	L2-26-30FF	30	
	L2-26-35FF	35	
HSW2-311FF	L2-41-20FF	20	50
	L2-41-30FF	30	
	L2-41-40FF	40	
	L2-41-50FF	50	

Use correct line kit model number when ordering.

### EVAPORATOR UNITS

Model No.	**C2-21FF CR2-21FF CH2-21FF	**C2-26FF CR2-26FF CH2-26FF	**C1-41FF	CRI-41-1FF	CHI-41-2FF	CB1-21-2FF	CB1-26-2FF	CB2-21 FF	CB2-26 FF	CB1-41-2FF
*Nominal tons cooling capacity	1 1/2	2	3	3	3	1 1/2	2	1 1/2	2	3
Net face area (sq. ft.)	2.58	2.29	3.44	2.55	2.60	1.23	1.69	1.34	1.94	2.55
Tube diam. (in.) & No. of rows	1/2-2	1/2-3	1/2-3	1/2-4	1/2-4	1/2-4	1/2-4	1/2-4	1/2-4	1/2-4
Fins per inch	10	10	10	10	10	10	10	10	10	10
Condensate drain mpt (in.)	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Blower wheel nominal diam. x width (in.)	†.....	†.....	†.....	†.....	†.....	9 x 6	9 x 7 1/8	6 x 6	2 - 6 x 4	10 x 8
Blower motor hp	†.....	†.....	†.....	†.....	†.....	1/6	1/6	1/6	1/4	1/3
**No. & size of filter	†.....	†.....	†.....	†.....	†.....	(1) 21 x 12	(1) 23 x 14	None	None	(1) 16 x 25
Electrical characteristics	†.....	†.....	†.....	†.....	†.....	115 volts, 60 cycles, 1 phase				

††Wide cabinet models available (C2-21WFF, C2-26WFF & C1-41WFF (see dimension drawing.)

\*For actual Btuh capacity with Condensing Units see "Ratings" table.

\*\*Washable polyurethane filter media.

†Uses furnace blower and filter.

### AUXILIARY ELECTRIC HEAT UNITS

Model No.	Evap. Coil Unit Model No.	KW Input	Btuh Output	Number of Heating Steps
ECB2-21-171	CB2-21FF	5	17,070	1
ECB2-21-261	CB2-21FF	7.5	25,600	2
ECB2-21-341	CB2-21FF	10	34,140	2
ECB2-26-171	CB2-26FF	5	17,070	1
ECB2-26-261	CB2-26FF	7.5	25,600	2
ECB2-26-341	CB2-26FF	10	34,140	2

# SPECIFICATIONS

## SHIPPING WEIGHTS

Model No.	Shipping Weight (lbs.)
HSW2A-211FF	153
HSW2A-261FF	160
CE2-21-26	45
HSW2A-311FF	200
CE2-31	55
C2-21FF	35
C2-21WFF	38
C2-26FF	44
C2-26WFF	49
CI-41-1FF	69
CI-41WFF	78
CR2-21FF	55
CR2-26FF	58

Model No.	Shipping Weight (lbs.)
CRI-41-1FF	83
CH2-21FF	64
CH2-26FF	67
CHI-41-2FF	86
CBI-21-2FF	78
CBI-26-2FF	86
CB2-21FF	80
CB2-26FF	105
CBA1-21 Base Adapter	12
CBA1-26 Base Adapter	15
CBI-41-2FF	214
ECB2-21 Series	19
ECB2-26 Series	23

## FURNACE SELECTOR

Evaporator Model No.	Exactly Fits Plenum Connection on Lennox Furnaces Listed Below	Adapter Required For Installation With The Lennox Furnaces Listed Below	
		Furnace Model No.	Adapter No. Required
C2-21FF	G8D1-55	OH7D-105	8-6-2268D
C2-21WFF or C2-26FF	G8-82 G8D1-82 G8Q2-82 G9-82 ES2D-171-341-511-681	OH7D-105, OH7Q-105	8-6-2267D
		OH7-140, OF7-140	8-6-1904D
C2-26WFF	G8-110-681 G8Q2-110-681 G8D1-110-681 G9-110-681 G81-65-82-681 ES2-341-511-681	OF7-105, OF7D-105	8-6-1838D
		-----	-----
CR2-21FF	G8RD1-55	G8R-82, G8RD1-82 G8RQ2-82, G8RQ2-110 OSR7D-105 ES2D-171-341-511-681	Field Fabricated (See Installation Instructions)
CR2-26FF	G8R-82, G8RD1-82 G8RQ2-82	OSR7D-105, OSR7Q-105 OHR7-140, G8R-110 G8RQ2-110 ES2D-171-341-511-681	Field Fabricated (See Installation Instructions)
CH2-21FF	GS8D-75	OSR7D-105 ES2D-171-341-511-681	8-6-2265D 8-6-4416D
CH2-26FF	GS8D-75 GS8Q-75	GS8D-105, GS8Q-105	8-6-2269D
		OSR7D-105, OSR7Q-105	8-6-2265D
CI-41-1FF	G8Q2-82, G8-82, G9-82, G8D1-110 G8Q2-110, G8-110, G9-110 & G81-65-82 ES2-341-511-681	OS7-140	8-6-2263D
		ES2D-171-341-511-681	8-6-4416D
		OF7-105	8-6-2073D
		OF7-140 and OH7-140	8-6-2074D
		OH7Q-105	8-6-2076D
		OH4-168	8-6-2077D
		OF7-189	8-6-3830D
GF6-100 and GF6-120	8-6-2255D		
CI-41WFF	G8Q2-137, G8-137 G9-137 & G81-85-110	GF6-140 and GF6-160	8-6-2078D
		-----	-----
CRI-41FF CRI-41-1FF	G8RQ2-110 G8R-110	OHR7-140, OHR4-168 OSR7Q-105, G8RQ2-82, G8R-82 G8R-137, G8RQ2-137 ES2-341-511-681	Field Fabricated (See Installation Instructions)
CHI-41-2FF	GS8Q-105, GS81Q-105 GS8-105	GS8Q-75	8-6-2079D
		GS6-130, GS6-145	8-6-2080D
		OSR7Q-105	8-6-2082D
		OS7-140	8-6-2083D
		OS7-189	8-6-2084D
ES2-341-511-681	8-6-4418D		

# RATINGS

## HSW2-211FF RFC CONDENSING UNIT

Evaporator Unit Model No.	Evaporator Air 80F Dry Bulb		Outdoor Air Temperature Entering Condenser (F)											
	Entering Wet Bulb Degrees (F)	Total Air Volume (cfm)	85			95			105			115		
			Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
CB2-21FF	64	600	18,250	.89	2395	17,250	.91	2435	15,900	.92	2585	14,200	.94	2755
		675	19,350	.90	2400	18,100	.93	2450	16,450	.94	2600	14,550	.95	2765
		750	19,350	.91	2420	19,150	.95	2460	17,600	.96	2605	15,800	.97	2775
	67	600	19,600	.72	2430	17,950	.75	2470	17,300	.78	2615	15,100	.80	2785
		675	20,000	.73	2440	19,300	.77	2480	17,900	.80	2625	16,150	.85	2795
		750	20,500	.76	2500	20,000	.80	2490	18,950	.85	2640	17,600	.87	2800
	70	600	19,900	.64	2470	19,650	.60	2510	18,650	.64	2655	17,200	.66	2820
		675	20,150	.64	2500	20,400	.63	2540	19,450	.65	2685	18,100	.67	2850
		750	20,650	.65	2520	20,950	.64	2560	20,150	.68	2705	18,750	.71	2870
C2-21FF CH2-21FF CR2-21FF C2-21WFF	64	600	17,600	.77	2260	16,600	.79	2400	15,350	.83	2545	13,700	.84	2710
		675	18,650	.78	2270	17,400	.81	2410	15,850	.88	2555	19,000	.90	2720
		750	18,650	.79	2285	18,200	.83	2420	16,950	.91	2565	15,200	.93	2730
	67	600	19,100	.64	2295	17,600	.65	2430	16,900	.68	2575	19,550	.70	2735
		675	19,750	.65	2305	19,000	.67	2440	17,450	.70	2585	15,550	.74	2750
		750	19,950	.66	2315	19,600	.70	2450	18,450	.74	2595	16,950	.76	2760
	70	600	19,200	.55	2335	18,950	.52	2470	17,950	.56	2615	16,600	.58	2775
		675	19,550	.55	2365	19,600	.55	2495	18,750	.57	2640	17,400	.59	2810
		750	19,900	.63	2380	20,200	.56	2515	19,400	.59	2660	18,050	.61	2830
CB1-21-2FF	64	600	18,000	.82	2345	17,000	.84	2485	15,700	.88	2640	14,000	.89	2810
		675	19,100	.83	2355	17,850	.86	2500	16,250	.93	2650	14,350	.95	2820
		750	19,100	.84	2370	18,450	.88	2510	17,350	.96	2660	15,600	.98	2830
	67	600	19,350	.68	2380	17,700	.69	2520	17,100	.72	2670	14,900	.74	2835
		675	20,050	.69	2390	19,050	.71	2530	17,650	.74	2680	15,950	.78	2850
		750	20,250	.70	2400	19,750	.74	2540	18,700	.78	2695	17,350	.80	2860
	70	600	19,650	.58	2420	19,400	.55	2560	18,400	.59	2710	17,000	.61	2875
		675	20,050	.58	2450	20,100	.58	2590	19,200	.60	2740	17,850	.62	2910
		750	20,400	.59	2470	20,650	.59	2610	19,900	.63	2760	18,500	.65	2930



# RATINGS

## HSW2-261FF RFC CONDENSING UNIT

Evaporator Unit Model No.	Evaporator Air 80F Dry Bulb		Outdoor Air Temperature Entering Condenser (F)											
	Entering Wet Bulb Degrees (F)	Total Air Volume (cfm)	85			95			105			115		
			Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
CB2-26FF	64	800	22,700	.82	3060	21,000	.84	3250	19,250	.85	3435	17,350	.90	3600
		900	25,100	.85	3060	24,200	.86	3250	22,250	.87	3440	19,750	.93	3600
		1000	26,150	.87	3080	25,250	.88	3270	23,550	.92	3450	21,500	.96	3620
	67	800	24,750	.73	3110	23,900	.75	3310	22,000	.78	3490	19,450	.82	3650
		900	25,750	.76	3120	24,850	.77	3310	23,050	.80	3490	20,850	.84	3660
		1000	26,250	.79	3140	25,350	.80	3325	23,700	.82	3510	21,650	.86	3680
	70	800	25,650	.61	3200	24,800	.62	3380	23,150	.63	3560	21,150	.67	3730
		900	26,900	.63	3250	26,000	.63	3440	24,350	.64	3620	22,400	.68	3790
		1000	27,850	.64	3260	27,250	.64	3460	25,900	.65	3700	23,600	.69	3800
C2-26FF CH2-26FF CR2-26FF C2-26WFF	64	800	22,100	.76	2970	20,450	.78	3150	18,750	.78	3330	16,900	.83	3500
		900	24,400	.78	2970	23,550	.79	3150	21,850	.80	3340	19,250	.83	3500
		1000	25,400	.80	2985	24,600	.81	3170	22,900	.83	3350	20,950	.85	3520
	67	800	24,100	.68	3015	23,250	.70	3210	22,400	.72	3390	18,950	.74	3550
		900	25,000	.70	3025	24,200	.71	3210	22,450	.73	3390	20,300	.75	3560
		1000	25,600	.72	3045	24,650	.73	3225	23,050	.74	3410	21,000	.79	3580
	70	800	29,950	.58	3105	24,150	.58	3280	22,550	.58	3460	20,600	.62	3630
		900	25,200	.59	3150	25,150	.59	3340	23,700	.59	3520	21,800	.63	3690
		1000	27,150	.60	3160	26,550	.60	3360	25,200	.60	3600	23,000	.64	3700
CBI-26-2FF	64	800	22,300	.80	2980	20,600	.82	3160	18,900	.83	3340	17,000	.88	3510
		900	24,650	.82	2980	23,750	.84	3160	21,850	.85	3350	19,400	.90	3510
		1000	25,700	.85	2995	24,800	.86	3180	23,100	.89	3360	21,100	.93	3530
	67	800	24,300	.72	3025	23,450	.74	3220	21,600	.77	3400	19,100	.80	3560
		900	25,300	.74	3035	24,400	.75	3220	22,650	.78	3400	20,450	.82	3570
		1000	25,800	.77	3055	24,900	.78	3235	23,250	.80	3420	21,250	.84	3590
	70	800	25,200	.61	3115	24,350	.60	3290	22,700	.61	3470	20,800	.65	3640
		900	26,900	.62	3160	25,500	.62	3350	23,900	.62	3530	22,000	.66	3700
		1000	27,350	.63	3170	26,750	.63	3370	25,400	.63	3610	23,200	.67	3710

# RATINGS

## HSW2-311FF RFC CONDENSING UNIT

Evaporator Unit Model No.	Evaporator Air 80F Dry Bulb		Outdoor Air Temperature Entering Condenser (F)											
	Entering Wet Bulb Degrees (F)	Total Air Volume (cfm)	85			95			105			115		
			Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input	Total Cooling Capacity (Btuh)	Sensible To Total Ratio (S/T)	Comp. Motor Watts Input
CI-41-1FF CI-41WFF CRI-41-1FF CHI-41-1FF CBI-41-2FF	64	1000	31,200	.73	3660	29,500	.76	3920	26,800	.79	4150	24,200	.83	4370
		1125	31,800	.80	3680	30,200	.83	3960	27,500	.88	4180	24,900	.92	4410
		1250	32,600	.86	3720	31,000	.89	4000	28,200	.95	4220	25,600	1.00	4450
	67	1000	33,000	.68	3740	31,500	.70	4030	28,900	.73	4250	26,300	.76	4480
		1125	33,800	.70	3780	32,000	.73	4060	29,500	.77	4280	26,900	.81	4520
		1250	34,600	.71	3810	32,800	.75	4100	30,100	.78	4320	27,700	.82	4550
	70	1000	35,000	.55	3830	33,700	.56	4140	30,800	.57	4360	28,400	.59	4590
		1125	35,200	.57	3840	34,400	.58	4180	31,700	.60	4400	29,200	.62	4640
		1250	35,500	.60	3850	34,800	.61	4200	32,300	.63	4440	29,900	.65	4680

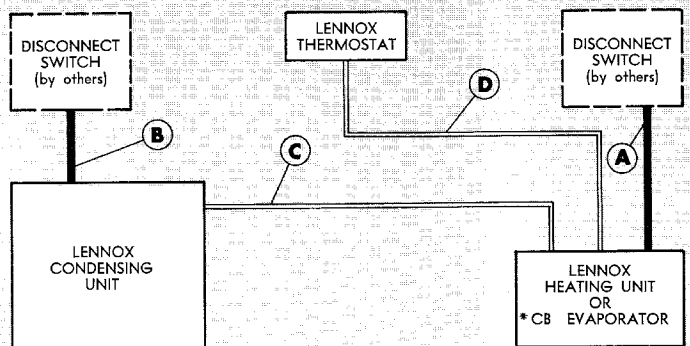
# ELECTRICAL DATA

Model No.	HSW2-211FF	HSW2-261FF	HSW2-261FF	HSW2-311FF	HSW2-311FF	
Line voltage data	208/230-60-1 $\phi$	230-60-1 $\phi$	208-60-1 $\phi$	230-60-1 $\phi$	208-60-1 $\phi$	
Unit operating range (volts)	197-253	207-253	187-229	207-253	187-229	
Compressor	Full load amps	12.2/11.0	13.8	15.3	19.0	
	Power factor	.99	.99	.99	.96	.96
	Locked rotor amps	51.0	57.0	67.0	71.0	80.0
Condenser fan motor	Full load amps	3.0	3.0	3.0	4.0	4.0
	Locked rotor amps	4.4	4.4	4.4	9.3	9.3
Maximum unit amps	15.2/14.0	16.8	18.3	23.0	24.8	
AWG wire size for various lengths of run	10'	12	10	10	10	
	50'	12	10	10	10	
	100'	12	10	10	10	
	200'	10	8	8	8	8
Disconnect size	30	30	30	30	30	
*Fuse/tron size	20	30	30	30	30	

\*Use cartridge type only. If circuit breakers are used, use next size larger. This may also affect wiring size; consult codes.

# FIELD WIRING

- A—2 wire power (not furnished)—16 ga.
  - B—2 or 3 wire power (not furnished)—12 ga.
  - C—2 wire low voltage (not furnished)—18 ga. minimum.
  - D—4 wire low voltage (not furnished)—18 ga. minimum.
- All wiring to conform to NEC and local electrical codes.

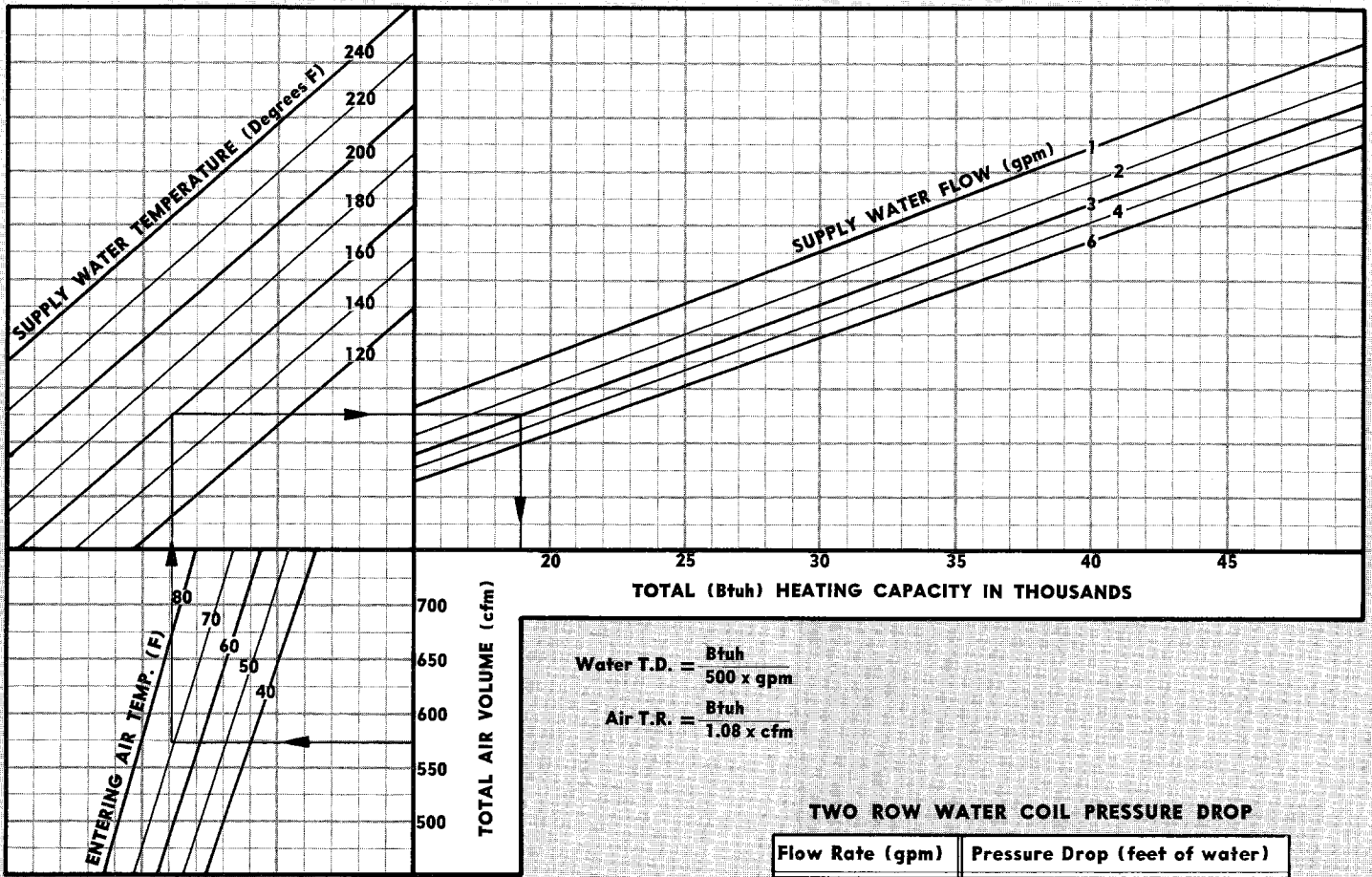


\*Control transformer is not furnished with CB blower-coil unit or with condensing unit. 20 VA (minimum rating) transformer is required.



# HOT WATER COIL RATINGS

## CB2-21FF TWO ROW HOT WATER COIL HEATING CAPACITY CHART



### TWO ROW WATER COIL PRESSURE DROP

Flow Rate (gpm)	Pressure Drop (feet of water)
1	.8
2	2.8
3	5.8
4	9.5
5	14.2
6	19.3

# STEAM COIL RATINGS

## CB2-21FF TWO ROW STEAM COIL (60F Entering air—2 lbs steam supply)

### HEATING CAPACITY CHART

Air Volume (Cfm)	Heating Capacity (Btuh)	Leaving Air Temperature (Degrees F)
450	29,000	119
500	31,500	118
550	32,500	115
600	34,000	112
650	35,500	110
700	37,000	109
750	38,500	108

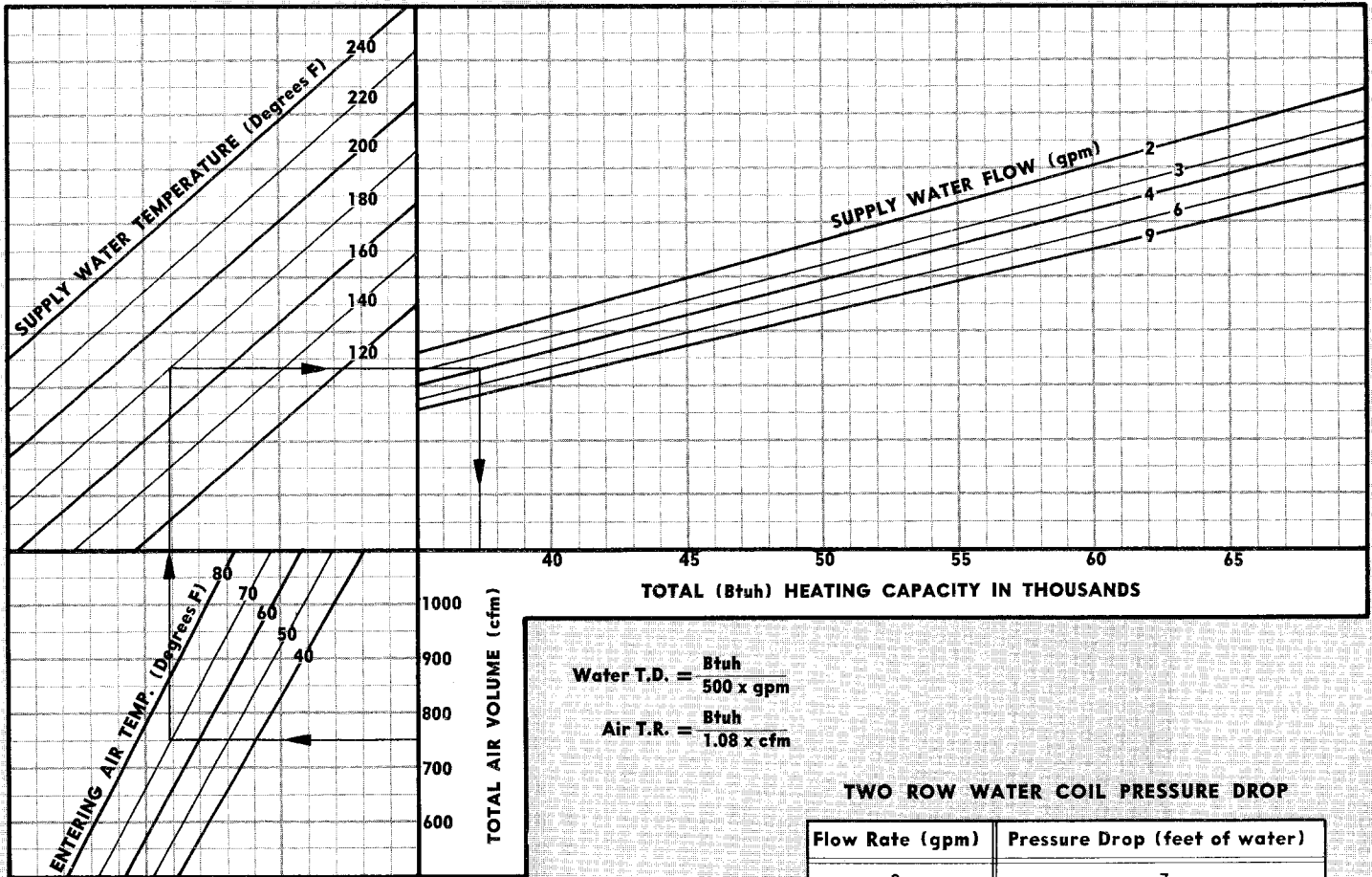
### CORRECTION FACTOR CHART Multiply ratings in steam coil capacity chart by correction factor in table below

Entering Air Temperature (Degrees F)	Steam Pressure (lbs.)			
	0	2	5	10
40	1.11	1.14	1.19	1.25
50	1.03	1.07	1.11	1.18
60	.96	1.00	1.05	1.11
70	.89	.93	.98	1.04
80	.82	.85	.91	.97

NOTE: Leaving air temperature = entering air temperature +  $\frac{\text{Btuh capacity}}{1.08 \times \text{cfm}}$

# HOT WATER COIL RATINGS

## CB2-26FF TWO ROW HOT WATER COIL HEATING CAPACITY CHART



# STEAM COIL RATINGS

## CB2-26FF TWO ROW STEAM COIL (60F Entering air—2 lbs. steam supply)

### HEATING CAPACITY CHART

Air Volume (cfm)	Heating Capacity (Btuh)	Leaving Air Temperature (Degrees F)
500	41,000	136
600	48,000	134
700	51,000	128
800	55,000	124
900	59,000	121
1000	63,000	118

### CORRECTION FACTOR CHART

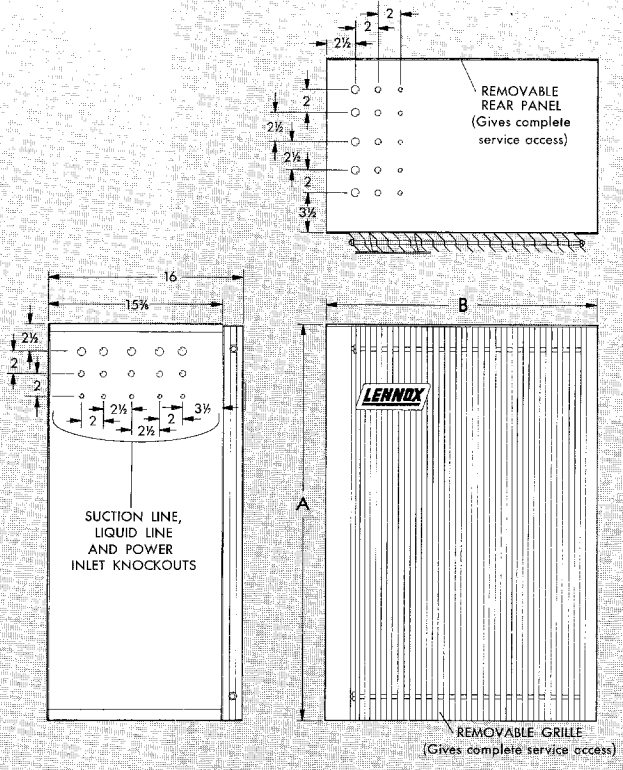
Multiply ratings in steam coil capacity chart by correction factor in table below

Entering Air Temperature (Degrees F)	Steam Pressure (lbs.)			
	0	2	5	10
40	1.11	1.14	1.19	1.25
50	1.03	1.07	1.11	1.18
60	.96	1.00	1.05	1.11
70	.89	.93	.98	1.04
80	.82	.85	.91	.97

NOTE: Leaving air temperature = entering air temperature +  $\frac{\text{Btuh capacity}}{1.08 \times \text{cfm}}$

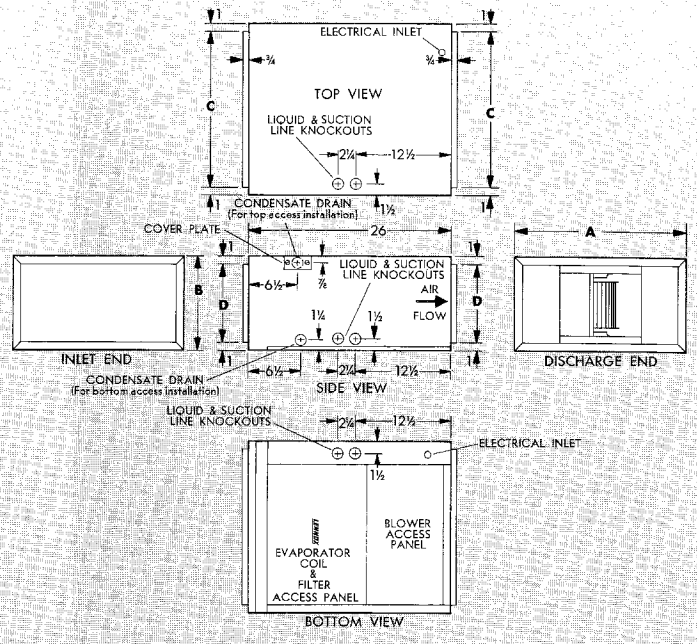
**DIMENSIONS (in.)**

**HSW2-21FF, 261FF & 311FF CONDENSING UNITS**



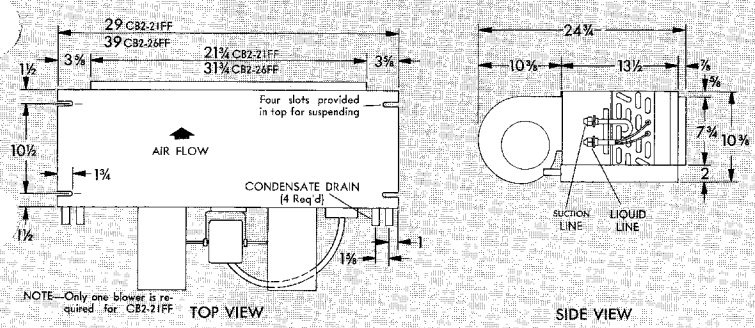
Model No.	A	B
HSW2-211FF	34 7/8	24
HSW2-261FF		
HSW2-311FF	37 7/8	30

**CB1-21-2FF & 26-2FF HORIZONTAL EVAPORATORS**

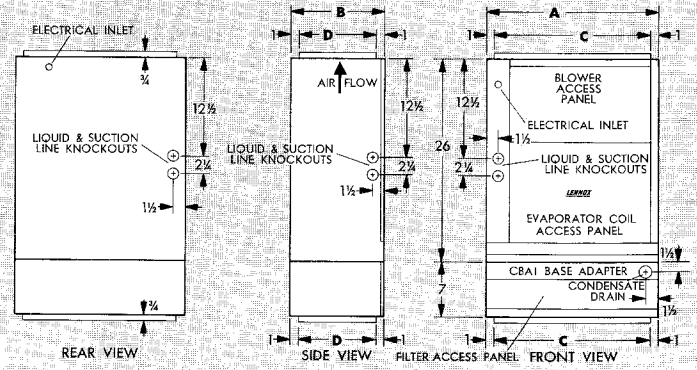


Model No.	A	B	C	D
CB1-21FF	22	12	20	10
CB1-26FF	24	14	22	12

**CB2-21FF & 26FF HORIZONTAL EVAPORATORS**



**CB1-21-2FF & 26-2FF UP-FLO EVAPORATORS WITH CBA1 BASE ADAPTER**



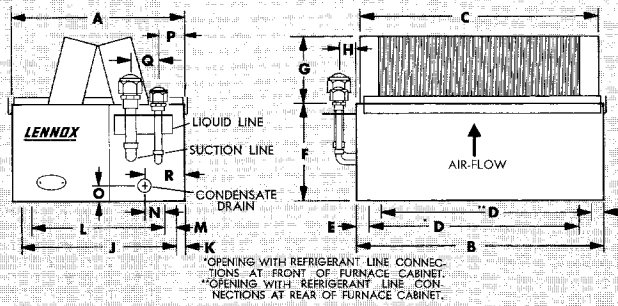
Model No.	A	B	C	D
CB1-21FF	22	12	20	10
CB1-26FF	24	14	22	12

CB1 base adapter is required for up-flo installation of CBI blower coil units. It is not furnished as standard and must be ordered extra.



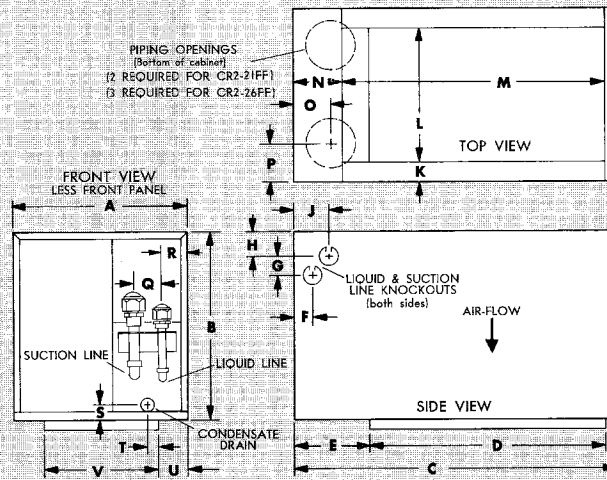
# DIMENSIONS (in.)

## C2-21FF, C2-21WFF, C2-26FF & C2-26WFF UP-FLO EVAPORATORS



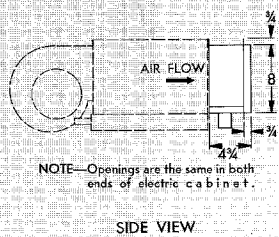
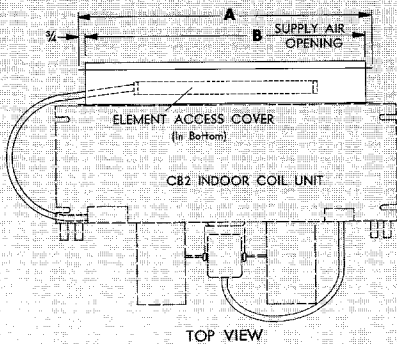
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R
C2-21FF	14	20	19 1/2	16 7/8	1	7 7/8	4 3/8	1 3/8	12 1/2	3/4	10 3/4	7/8	1 5/8	1 1/2	2 1/8	1 1/2	.....
C2-21WFF	16	20	19 1/2	16 7/8	1	8	4 1/4	1 3/8	14 1/2	3/4	10 3/4	1 7/8	1 7/8	1 1/8	3 3/8	1 1/2	.....
C2-26FF	16	20	19 1/2	16 7/8	1	8	4 7/16	1 3/8	14 1/2	3/4	10 3/4	1 7/8	.....	1 1/2	3	1 11/16	2 1/2
C2-26WFF	21	20	19 1/2	16 7/8	1	7	5 7/16	1 3/8	19 1/2	3/4	14 1/2	3 1/4	2	1 3/8	5 5/8	1 11/16	.....

## CR2-21FF & 26FF DOWN-FLO EVAPORATORS



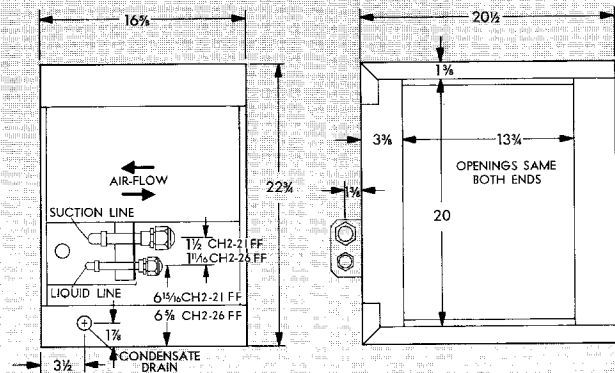
Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S	T	U	V
CR2-21FF	14	17 3/16	26	19	6 1/8	1 1/2	1 1/2	4	2 3/4	1 9/16	10 7/8	21 1/4	3 7/8	3	3	1 1/2	2 3/8	1 3/16	1 1/8	2 3/8	9 1/4
CR2-26FF	16	17 1/2	26	19	6 1/8	1 1/2	1 1/2	5	2 3/4	1 7/8	12 1/4	21 1/4	3 7/8	3	3	1 11/16	2 3/4	1 3/8	5/8	1 7/8	12 1/4

## ECB2-21 & 26 SERIES ELECTRIC HEAT UNITS

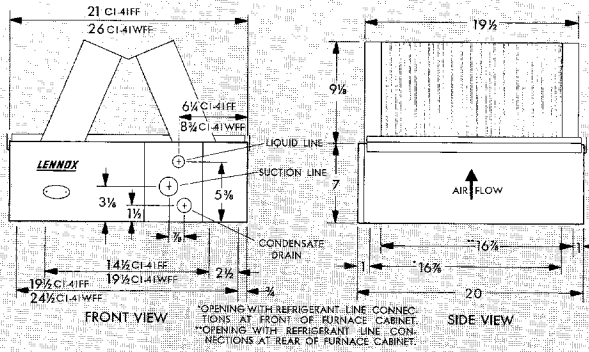


Model No.	A	B
ECB2-21	23 3/8	21 7/8
ECB2-26	33 3/8	31 7/8

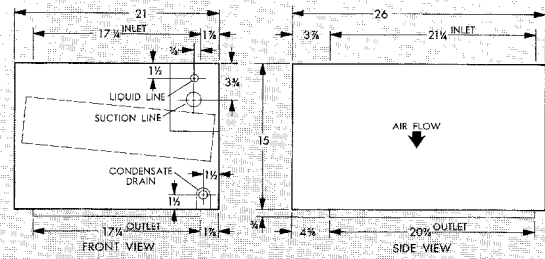
## CH2-21FF & 26FF HORIZONTAL EVAPORATORS



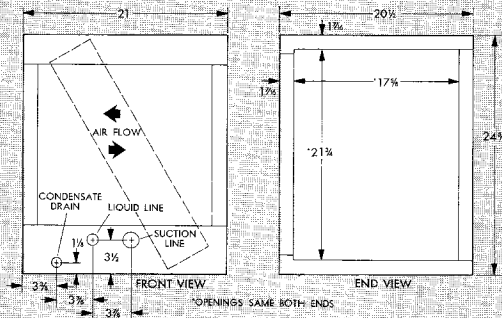
**C1-41-1FF & C1-41-1WFF UP-FLO EVAPORATORS**



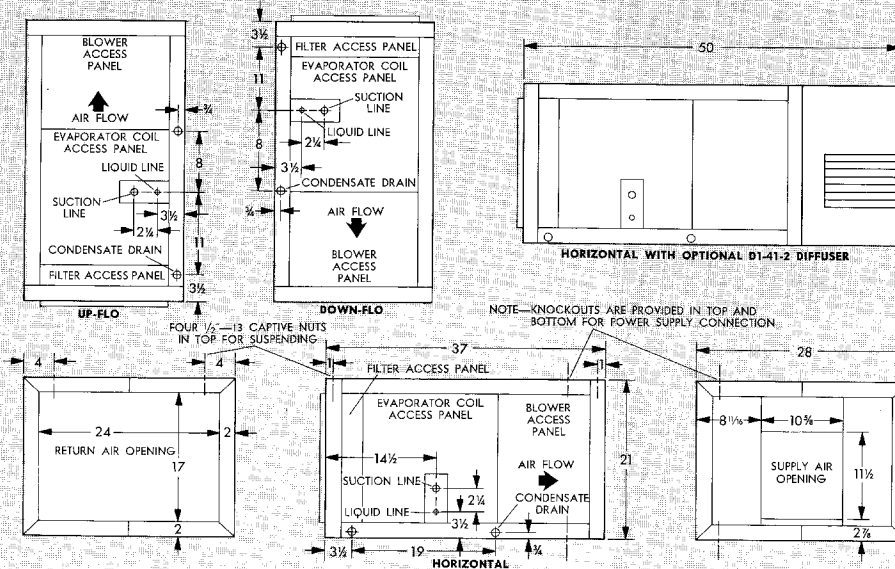
**CRI-41-1FF DOWN-FLO EVAPORATOR**



**CH1-41-1FF HORIZONTAL EVAPORATOR**



**CB1-41-2FF EVAPORATOR (HORIZONTAL-DOWN-FLO-UP-FLO)**



# BLOWER DATA

## CB2-21FF BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	805	695	596
.05	785	683	589
.10	765	670	580
.15	745	658	572
.20	727	644	563
.25	707	630	552
.30	687	615	542
.40	645	582	515
.50	598	544	485

## CB2-21FF WITH 2 ROW ADDITIVE COIL

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	760	670	580
.05	743	658	575
.10	725	647	565
.15	708	635	556
.20	690	622	547
.25	671	607	536
.30	652	592	525
.40	615	560	500
.50	570	525	475

## CB2-26FF BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	1055	945	800
.05	1032	925	786
.10	1008	904	774
.15	984	884	759
.20	960	862	744
.25	935	840	728
.30	910	820	712
.40	861	777	675
.50	806	730	635

## CB2-26FF WITH 2 ROW ADDITIVE COIL

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	1010	912	775
.05	990	895	765
.10	966	877	753
.15	944	860	740
.20	920	840	725
.25	897	820	710
.30	873	800	695
.40	822	755	660
.50	770	705	620

## CH2-21FF AIR RESISTANCE

Air Volume (cfm)	Total Resistance (in. wg)			
	With GS8D or GS8Q-75		Duct Installation	
	Standard Air Direction	Air Direction Reversed	Standard Air Direction	Air Direction Reversed
500	.095	.11	.125	.13
600	.135	.16	.185	.18
700	.19	.22	.25	.25
800	.26	.29	.33	.33

## CH2-26FF AIR RESISTANCE

Air Volume (cfm)	Total Resistance (in. wg)			
	With GS8D or GS8Q-75		Duct Installation	
	Standard Air Direction	Air Direction Reversed	Standard Air Direction	Air Direction Reversed
600	.125	.15	.135	.16
700	.175	.195	.18	.21
800	.20	.26	.235	.27
900	.23	.30	.295	.34
1000	.26	.355	.36	.40

## CB1-21-2FF HORIZONTAL BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	795	717	612
.05	773	698	600
.10	751	680	587
.15	728	661	573
.20	706	642	560
.25	682	621	545
.30	658	600	528
.40	605	552	494
.50	545	500	452

## CB1-21-2FF UP-FLO WITH CBA1-21 ADAPTER BASE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	765	700	596
.05	743	680	585
.10	722	662	573
.15	700	643	560
.20	677	623	545
.25	653	602	530
.30	630	580	515
.40	575	532	481
.50	515	477	440

## CB1-26-2FF HORIZONTAL BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	936	805	712
.05	915	792	702
.10	892	775	693
.15	870	757	680
.20	846	737	665
.25	821	717	645
.30	794	695	626
.40	728	650	580
.50	698	580	525

## CB1-26-2FF UP-FLO WITH CBA1-26 ADAPTER BASE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds		
	High	Medium	Low
0	900	785	695
.05	877	770	692
.10	853	750	680
.15	830	730	665
.20	805	708	650
.25	780	686	630
.30	750	662	608
.40	685	615	562
.50	605	555	505



# BLOWER DATA

## C2 SERIES AIR RESISTANCE

Model No.	Air Volume (cfm)	Total Resistance (in. wg)
C2-21FF C2-21WFF	500	.07
	600	.095
	700	.12
	750	.14
C2-26FF C2-26WFF	600	.07
	700	.095
	800	.125
	900	.15
	1000	.18

## CR2 SERIES AIR RESISTANCE

Model No.	Air Volume (cfm)	Total Resistance (in. wg)
CR2-21FF	500	.11
	600	.16
	700	.22
	750	.29
CR2-26FF	600	.15
	700	.195
	800	.26
	900	.30
	1000	.355

## C1-41-1FF & C1-41-1WFF AIR RESISTANCE

Air Volume (cfm)	Total Resistance (in. wg)
800	.07
1000	.10
1200	.15
1300	.17
1400	.19

## CH1-41-2FF AIR RESISTANCE

Air Volume (cfm)	Total Resistance (inches wg)	
	With Matching Furnace	Duct Installation
800	.10	.102
1000	.12	.148
1200	.14	.203
1300	.15	.232
1400	.17	.262

## CR1-41-1FF AIR RESISTANCE

Air Volume (cfm)	Total Resistance (inches wg)
800	.115
1000	.165
1200	.225
1300	.26
1400	.29

## CB1-41-2FF DOWN-FLO BLOWER PERFORMANCE

External Static Pressure (in.wg)	Air Volume (cfm) @ Various Controller Speeds			
	High <sup>1</sup>	High <sup>2</sup>	Medium	Low
0	1537	1285	1020	830
.05	1515	1270	1015	825
.10	1490	1255	1010	820
.15	1466	1240	1005	812
.20	1440	1225	1000	805
.25	1412	1210	990	796
.30	1386	1190	975	778
.40	1326	1158	945	765
.50	1265	1120	910	735
.60	1200	1080	870	690

## CB1-41-2FF DIFFUSER HEAD WITH THROW CHART

Model No.	Air Volume (cfm)	EFFECTIVE THROW IN FEET					
		10' CEILING		12' CEILING		14' CEILING	
		Front of Unit	45° from Front	Front of Unit	45° from Front	Front of Unit	45° from Front
CB1-41FF	800	43	30	50	35	56	40
	1000	48	34	55	38	60	43
	1200	52	37	60	42	65	46
	1400	56	40	65	45	70	50
	1600	60	42	69	48	74	53

NOTE: Effective throw is figured at point where conditioned air reaches a level of 3' above floor or where velocity has decreased to 50'/min.

# BLOWER DATA

## CB1-41-2FF HORIZONTAL BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds			
	High <sup>1</sup>	High <sup>2</sup>	Medium	Low
0	1590	1320	1030	840
.05	1570	1305	1025	835
.10	1545	1290	1020	830
.15	1523	1275	1015	822
.20	1500	1260	1010	814
.25	1475	1242	1005	806
.30	1450	1225	990	790
.40	1395	1188	965	782
.50	1355	1147	930	752
.60	1270	1105	890	715

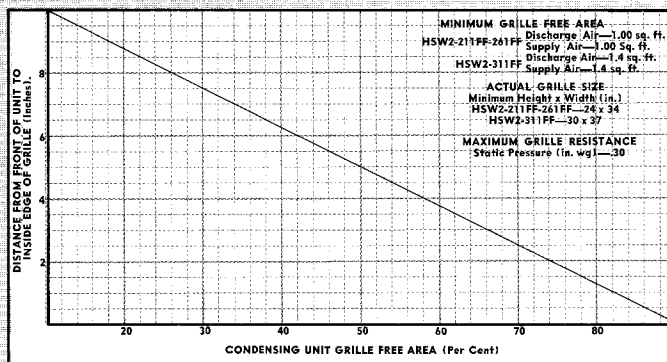
## CB1-41-2FF UP-FLO BLOWER PERFORMANCE

External Static Pressure (in. wg)	Air Volume (cfm) @ Various Controller Speeds			
	High <sup>1</sup>	High <sup>2</sup>	Medium	Low
0	1565	1300	1025	835
.05	1540	1287	1020	830
.10	1518	1272	1015	825
.15	1493	1256	1010	817
.20	1467	1240	1005	813
.25	1440	1225	1000	800
.30	1414	1207	985	780
.40	1355	1170	955	770
.50	1295	1137	920	740
.60	1230	1090	880	700

# GRILLE SELECTOR

## CONDENSING UNIT GRILLE SELECTION

Many types of ornamental grilles can be used in place of the standard grille furnished. When selecting another type of grille use the chart below to establish correct positioning of grille. Enter chart at bottom (Grille Free Area), read vertically to diagonal line intersection and read horizontally left to find distance from front of unit to inside edge of grille. Types of ornamental grilles possible are: brick, red-wood, tile, ornamental concrete block and numerous types of metal grilles. In order to keep best performance never select a grille which turns the discharge air to the left as viewed from the grille side of unit.



# ORDERING DATA

### \*Builder Sleeve and Grille

- CE2-21-26
- CE2-31

Builder Sleeve is complete cabinet and discharge grille assembly. May be ordered without chassis and chassis added at a later date.

### Refrigerant Line Set:

- L2-26-18       L2-41-18FF
- L2-26-25       L2-41-30FF
- L2-26-30       L2-41-40FF
- L2-26-35       L2-41-50FF

### Optional 2 Row Hot Water or Steam Coil:

- CB2-21FF
- CB2-26FF

\*Both items required to make a complete condensing unit.

### \*Condensing Unit Chassis

- HSW2A-211FF (208/230 volts)
- HSW2A-261FF (230 volts)
- HSW2A-261FF (208 volts)
- HSW2A-311FF (230 volts)

### Evaporator Unit:

- C2-21FF       C2-21WFF       C1-41FF
- C2-26FF       C2-26WFF       C1-41WFF
- CR2-21FF       CR2-26FF       CRI-41-1FF
- CH2-21FF       CH2-26FF       CHI-41-2FF
- CBI-21-2FF       CBI-26-2FF       CBI-41-2FF
- CB2-21FF       CB2-26FF

### †CBI Additive Base:

- CBA1-21
- CBA1-26

†Required for CBI Up-flo installations.

**LENNOX Industries Inc.**

MARSHALLTOWN, IOWA • COLUMBUS, OHIO • SYRACUSE, N.Y. • FORT WORTH, TEXAS • LOS ANGELES, CALIF. • DECATUR, GEORGIA  
SALT LAKE CITY, UTAH • LENNOX INDUSTRIES (CANADA) LTD., TORONTO, ONTARIO • CALGARY, ALBERTA