LK-ACCTG | **NOVEMBER 2020**
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AIR COOLED CONDENSERS

Technical Guide

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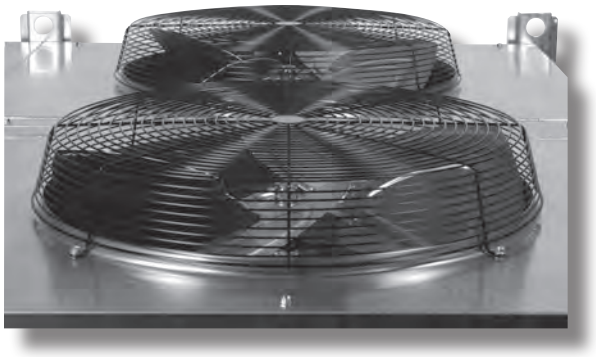
OVERVIEW

The Larkin VSEC and 3-Phase A/C Series of direct drive air-cooled condensers incorporate the latest condenser technology to provide the quietest and most efficient condensers in the industry.

VSEC Series

Optimized sound and energy performance.

The VSEC Series of condensers by Larkin offers the optimum solution for sound and energy performance. The VSEC Series utilizes variable speed EC (VSEC) motor technology, which provides unmatched sound and energy performance and is the perfect solution for those applications where low noise levels and significant energy savings are essential for success.



Since product improvement is a continuing effort, we reserve the right to make changes in specifications without notice.

3-Phase A/C Series

Excellence in sound, energy and capacity solutions.

The 3-Phase A/C Series of condensers by Larkin is designed specifically with the growing needs of the supermarket and grocery industry in mind. This series utilizes 830 and 540 RPM motors and incorporates advanced features that further improve sound levels and energy efficiencies, as well as provide increased capacity in a smaller footprint. In addition, there are new features designed to improve serviceability, resulting in reduced maintenance costs.

The 3-Phase A/C Series is a perfect fit for applications requiring low sound and energy levels and optimized capacities.

1140 Series

Larkin continues to offer the 1140 RPM Series for customers seeking the most economical solution for their capacity requirements.

Larkin condensers now incorporate a broader product range with capacities ranging from 11 to 265 nominal tons to address all applications.

All Larkin condenser coils incorporate the Floating Tube coil design, which virtually eliminates the possibility of tube sheet leaks. Condenser coils are designed for maximum heat transfer and are designed to operate with most common refrigerants.

OVERVIEW (continued)

As with all Larkin products, extensive testing of the condenser ensures long and trouble-free service life.

The condensers are designed for outdoor applications with housings available in aluminum finish and painted or unpainted galvanized steel.

The condensers are available in either single or double wide fan configurations.

The condenser design incorporates the features most desired in air-cooled condensers. An extensive list of options and fan cycle control panels complement the condenser design and allow the condenser to match the most rigid application requirements.

The Floating Tube Coil Design
Dramatically Reduces Tube Sheet Leaks

Venturi Mounted VSEC Series with VSEC Motor Technology

FEATURES

The Larkin air-cooled condenser is available in multiple product tiers and is designed with features to meet specific customer requirements.

Larkin Venturi Mounted VSEC Series of Condensers

Customers seeking optimum sound and energy performance can select the Larken VSEC Series of condensers with variable speed EC motor technology. VSEC motors provide unparalleled sound and energy performance.

Features include:

- VSEC motor, swept fan blade and Venturi incorporating integrated variable speed technology
- Broad capacity range from 16 to 264 tons
- Aluminum housing for an attractive appearance and corrosion protection, with painted galvanized steel, or galvanized steel available as an option
- Side access panels allow for ease of cleaning coils

NOMENCLATURE

L N H – S 04 A 050

- **L** – L- Larkin
- **N** – N – Vintage
- **H** – Motor
  - H - 1140 RPM 1.5 HP
  - L - 830 RPM, 1.5 HP
  - X - 830 RPM, 1.0 HP
  - Q - 540 RPM, 0.5 HP
  - E - Venturi Mounted VSEC, 2.0 kW
  - J - Rail Mounted VSEC, 830 RPM, 1.1 kW
  - K - Rail Mounted VSEC, 1140 RPM, 2.0 kW
- **S** – Width
  - S – Single Wide
  - D – Double Wide
- **04** – Fans
  - 01-14
- **A** – Model Identifier
- **050** – Standard Capacity
  - (MBH/°TD, R-22 @ 10 FPI)

Larkin 3-Phase A/C Series of Condensers

The 3-Phase A/C Series by Larkin is designed specifically with the growing needs of the supermarket and grocery industry in mind. This series utilizes 830 and 540 RPM motors and incorporates advanced features that further improve sound levels and energy efficiencies, as well as provide increased capacity in a smaller footprint. In addition, there are new features designed to improve serviceability, resulting in reduced maintenance costs. The 3-Phase A/C Series is a perfect fit for applications requiring low sound and energy levels and optimized capacities.

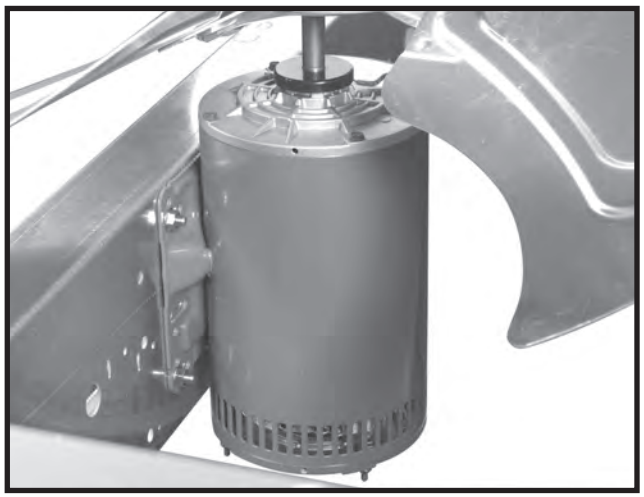
Larkin's Patented QuietEdge Fan Blade for Improved Sound Performance

Features include:

- Direct drive fan motors in 830 or 540 RPM
- The patented QuietEdge fan blade provides an unprecedented sound level of 49.6 dBA (540 RPM @ 10 ft.)
- Larkin's patented (#7, 210, 661) ServiceEase motor mount feature allows for ease of motor service and reduces likelihood of damage to the coils during servicing
- Larkin condenser coils incorporate the latest coil technology to provide maximum capacity
- Broader product range to address all applications. Capacities ranging from 11 to 225 nominal tons
- Galvanized steel cabinet with the option for aluminum or painted galvanized steel
- High efficiency, three-phase fan motors with ball bearings and internal overload protection

1140 Series

For customers seeking an economical solution to their capacity needs, Larkin now offers the 1140 RPM Series with enhancements to improve capacity and serviceability.



ServiceEase Motor Mount System

Features include:

- Direct drive fan motors
- Larkin's patented (#7, 210, 661) ServiceEase™ motor mount
- High efficiency condenser coil designed for optimum performance
- Expanded product range from 15 to 249 nominal tons
- Galvanized steel as a standard housing, with an option for aluminum or painted galvanized steel
- High efficiency, three-phase fan motors with ball bearings and internal overload protection

All Standard Condensers

- 10 fins per inch spacing
- Modular design with models in both single and double wide fan configurations
- All Larkin condensers incorporate the Floating Tube coil design, which virtually eliminates tube sheet leaks
- Internal baffles provided between all fan cells
- Condensers up to 3 fans in length use 3/8" diameter tube to minimize refrigerant charge. Condensers 4 or more fans in length use 1/2" diameter tube to minimize refrigerant pressure drop
- Coated steel fan guards
- Weatherproof control panel with factory-mounted door interrupt disconnect switch
- UL and UL listed for Canada

Available Options:

- Multi-circuiting at no additional charge
- Optional 8, 12 or 14 FPI spacing
- Fan-cycle control panels
- Alternate coil construction including LarkinGuard coated fins, epoxy or phenolic coated fins and copper fins
- Hinged fan panels for ease of servicing (3-Phase A/C and 1140 Series only)
- Side access panels
- Extended condenser legs for increased ground clearance
- Sealtite wiring
- Frame for shipping

Four Solutions Tailored To Fit Your Unique Needs

Choose from Fixed Speed, Rail Mounted VSEC, or Venturi Mounted VSEC series of air-cooled condensers by Larkin. Choosing the Venturi Mounted VSEC Series means that you are selecting the ultimate in capacity, sound, and efficiency. The Rail Mounted VSEC option offers all of the benefits of variable speed in a conventional condenser package, while the fixed speed options continue to provide proven performance and capacity.

FEATURE	1140 RPM FIXED SPEED	830 & 540 RPM FIXED SPEED	RAIL MOUNTED VSEC	VENTURI MOUNTED VSEC
Motors				
Standard Motor	1140 RPM	830, 540 RPM	Variable Speed EC Motors	Variable Speed EC Motors
P66 Motor Option	✓	✓		
Cabinet				
Standard Cabinet	Galvanized	Galvanized	Galvanized	Aluminum
Galvanized Option	(standard)	(standard)	(standard)	✓
Pre-Painted Galvanized Option	✓	✓	✓	✓
Aluminum Option	✓	✓	✓	(standard)
Venturi Cover				
Standard Venturi	Removable	Removable	Removable	EC Tall Optimized
Hinged Option	✓	✓	✓	-
Fan Blades				
Standard Blade	Standard	QuietEdge™	Standard/QuietEdge™	EC Optimized
Motor Mounted				
Standard Motor Mounted	Service Ease™	Service Ease™	Service Ease™	EC Optimized
Warranty				
Two-Year Warranty	✓	✓	✓	✓
Two-Year Warranty - Rail Mounted VSEC Motors	-	-	✓	-
Three-Year Warranty - Venturi Mounted VSEC Motors	-	-	-	✓
Five-Year Warranty - Floating Tube™ Coil Design	✓	✓	✓	✓

Condenser Selection

Capacity for air-cooled condensers are based on Total Heat of Rejection (THR) at the condenser. Total heat of rejection is equal to net refrigeration at the evaporator (compressor capacity) plus the energy input into the refrigerant by the compressor (heat of compression). The heat of compression will vary depending on the compressor manufacturer, type of compressor and the operating conditions of the compressor. Whenever possible, it is recommended that you obtain the heat of compression value from the compressor manufacturer.

If this is not available, the THR can be estimated using the following formula:

THR = (Compressor Capacity) * (Heat of Compression Factor, Tables 1 & 2)

Table 1 contains heat of compression factors for suction cooled compressors and Table 2 contains factors for open drive compressors. For refrigeration systems beyond the range of Tables 1 and 2, use the following equations to estimate THR:

Open Compressors:

THR = Compressor Capacity (BTUH) + (2545) * (Brake Horsepower, BHP)

Suction Cooled Compressors:

THR = Compressor Capacity (BTUH) + (3413 * KW)

The compressor capacity is effected by its altitude. If the condenser location is above sea level, an additional correction is required to the THR, as follows:

THR (altitude) = THR * Altitude Correction Factor, Table 3

Selection Example

Compressor capacity:	350,000
Evaporator temperature:	+25° F
Condensing temperature:	115° F
Ambient temperature	95° F
Refrigerant:	R-22
Compressor type:	Semi-hermetic, suction cooled
Condenser type:	540 RPM, one row of fans
Condenser altitude:	1,000 feet

Step 1: Estimate Condenser THR

From Table 1 for suction cooled compressors, at +25° F suction, we need to determine the heat of compression factor for 115° F condensing temperature (NOT shown in table).

Therefore, select the condensing temperatures and heat of compression factor for +25° F suction temperatures as follows:

From Table 1:

110°	115°	120°	Condensing Temperature
1.31	X	1.36	Heat of Compression Factor

To determine X: (Heat of Compression Factor)

$X = \frac{115-110}{120-110} * (1.36 - 1.31) + 1.31$

$X = \frac{5}{10} * (0.05) + 1.31 X = (0.025) + 1.31$

X = 1.335

Therefore heat of compression factor at 115° F condensing temperature is **1.335**

THR = Compressor Capacity * Heat of Compression Factor
= 350,000 * 1.335
= 467,250

Step 2: Correct for Altitude

From Table 3 obtain an altitude correction factor of 1.02 for 1,000 feet.

THR = THR (from step 1) * Altitude Correction Factor (design)
= 467,250 * 1.02
= 476,595

Step 3: Calculate Design Condenser T.D.

Design Condenser T.D. = Condensing Temp — Ambient Temp
= 115 - 95
= 20° T.D.

Step 4: Condenser Selection

Condenser capacities for condensers at 540 RPM are located in Table 7. These capacities are given in MBH/°TD. Convert the THR calculated in step 2 to MBH/°TD by dividing by 1,000 to get THR in MBH. Then divide the THR by the design TD to get MBH/°TD.

THR (MBH) = 476,595 / 1,000 = 476.6

THR (MBH/°TD) = 476.6 / 20 = 23.83

Locate the 10 FPI column for R-22 refrigerant and read down until you locate a value equal to or just larger than 23.83. This value is 25.9. Read horizontally to the left to obtain a condenser model of LNQ-S05-A026.

Step 5: Calculate Actual T.D. and Condensing Temperature

The actual condenser T.D. can be calculated by dividing the design THR by the condenser rating.

Actual T.D. = THR (Design) / (Rating @ 1° T.D.)
= 476.6 / 25.9
= 18.4°F. T.D.

The actual condensing temperature is the actual T.D. plus the ambient temperature. Actual Condensing Temperature = (Actual T.D.) + (Ambient)
= 18.4 + 95
= 113.4°F.

Table 1. Heat of Compression Factor for Suction Cooled Compressors

Suction Temp. °F	Condensing Temperature °F				
	90°	100°	110°	120°	130°
-40°	1.56	1.63	1.72	1.81	1.94
-30°	1.49	1.55	1.62	1.7	1.8
-20°	1.43	1.49	1.55	1.62	1.7
-10°	1.38	1.43	1.49	1.55	1.63
0°	1.34	1.38	1.43	1.49	1.56
5°	1.31	1.36	1.41	1.48	1.55
10°	1.29	1.34	1.39	1.44	1.52
15°	1.26	1.31	1.36	1.41	1.48
20°	1.24	1.28	1.33	1.38	1.44
25°	1.22	1.26	1.31	1.36	1.42
30°	1.2	1.24	1.28	1.33	1.39
40°	1.17	1.2	1.24	1.28	1.33
50°	1.13	1.16	1.2	1.24	1.28

Table 2. Heat of Compression Factor for Open Drive Compressors

Evaporator Temp. °F	Condensing Temperature °F					
	90°	100°	110°	120°	130°	140°
-30°	1.37	1.42	1.47	—	—	—
-20°	1.33	1.37	1.42	1.47	—	—
-10°	1.28	1.32	1.37	1.42	1.47	—
0°	1.24	1.28	1.32	1.37	1.41	1.47
5°	1.23	1.26	1.3	1.35	1.39	1.45
10°	1.21	1.24	1.28	1.32	1.36	1.42
15°	1.19	1.22	1.26	1.3	1.34	1.4
20°	1.17	1.2	1.24	1.28	1.32	1.37
25°	1.16	1.19	1.22	1.26	1.3	1.35
30°	1.14	1.17	1.2	1.24	1.27	1.32
40°	1.12	1.15	1.17	1.2	1.23	1.28
50°	1.09	1.12	1.14	1.17	1.2	1.24

Table 3. Altitude Correction Factors

Altitude	Correction Factor
0	1.00
1,000	1.02
2,000	1.05
3,000	1.07
4,000	1.10
5,000	1.12
6,000	1.15
7,000	1.17

Multi-Circuiting Selection

Multi-Circuiting Selection Procedure

The air-cooled condensers are available with more than one refrigerant circuit. The condenser will be factory assembled with the condenser coil divided into individual refrigerant circuits, each sized for its own specific application. Each circuit is supplied with its own inlet and outlet connections, individually labeled.

Multi-Circuit Condenser Selection

Given four suction cooled compressors with conditions shown in Table 4. The condenser shall have 830 RPM, 1.0 HP fan motors, with two rows of fans. The condenser location is at 3,000 ft. and the design ambient is 95°F.

Selection Procedure

Step 1: Input customer data in Table 4 in columns 1, 2, 3, 4 and 5.

Step 2: From Table 1, select the heat of compression factor for suction cooled compressors and input into Column #6.

Step 3: From Table 3 obtain the altitude correction factor and input into Column #7.

Step 4: From Table 5 obtain the refrigerant capacity factor and input into Column #8.

Step 5: Calculate the design T.D. for each circuit by subtracting the ambient temperature from the circuit design condensing temperature and input into Column #9.

T.D. = Design Condensing Temperature - Ambient Temperature

Step 6: Calculate the design THR / °T.D. for each circuit. Multiply Column #5 by Column #6 and Column #7 to calculate the THR for each circuit. Divide the result by the refrigerant correction factor, Column #8 to convert the capacities to a common refrigerant. Divide the result by the design T.D., Column #9 to calculate the design THR / °T.D. and input into Column #10.

$$\text{Design THR / °T.D.} = \frac{\text{Compressor Capacity (\#5)} * \text{Heat of Compressor Factor (\#6) x Altitude Factor (\#7)}}{\text{Refrigerant Capacity Factor (\#8)} * \text{Design T.D. (\#9)}}$$

Example for Circuit #1:

$$\text{Design THR / °T.D.} = \frac{235{,}000 * 1.31 * 1.07}{1.02 \times 15}$$

$$= 21{,}529 \text{ BTUH / °T.D.}$$

Step 7: Add the design THR / °T.D. for each circuit in column #10, to get a total of 39,578 BTUH / °T.D. Divide this total by 1,000 to get 39.6 MBH / °T.D.

Step 8: From Table 11 for two rows of condenser fans with 830 RPM, 1.0 HP fan motors, locate the column for R-404A capacity with 10 FPI. Read down the column until you get to a capacity equal to or greater than 39.6 MBH / °T.D. This value is 44.5 which corresponds to a LNX-D06-A045. From Table 14 obtain the total number of feeds available as 56.

Multi-Circuiting Condenser

Table 4. Condenser Multi-Circuit Selection

1	2	3	4	5	X	6	X	7	÷	8	÷	9	=	10	11	12	13
Circuit Name	Evap. Temp.°F	Design Cond. Temp.°F	Comp. Refrig. Type	Cap. BTUH	X	Heat of Compress. Factor	X	Altitude Factor	÷	Refrig. Cap. Factor	÷	Design Cond. T.D.	=	Design THR/°TD	No. of Feeds Per Circ.	Actual Cond. T.D.	Actual Cond. Temp. °F
1	25	110	22	235,000	X	1.31	X	1.07	÷	1.02	÷	15	=	21,529	31	13.1	108.1
2	20	110	134a	61,000	X	1.33	X	1.07	÷	.97	÷	15	=	5,966	8	14.1	109.1
3	-10	105	22	31,000	X	1.46	X	1.07	÷	1.02	÷	10	=	4,748	7	8.5	103.5
4	-20	105	22	46,000	X	1.52	X	1.07	÷	1.02	÷	10	=	7,335	10	9.2	104.2
												TOTAL	=	**39,578**	**56**		
												39,578 / 1,000 = 39.6 MBH/°TD					

Step 9: Determine the number of feeds per circuit. Divide the design THR / °T.D. in Column #10 by the total capacity required (39,578) and multiply this result by the number of feeds available, which is 56. Round this value to the nearest integer and place in Column #11 Add the individual feeds per circuit to get a total number of feeds for the condenser. This total must equal the total number of feeds available for the condenser (56).

$$\text{Number of feeds/circuit} = \frac{\text{Design THR / °T.D.(\#10) * Number of Circuits Available (56)}}{\text{Total Capacity Required (39,578)}}$$

Step 10: Calculate actual condensing T.D., (ATD):

$$\text{ATD} = \frac{\text{Design T.D. (\#9) * Design THR/°T.D. (\#10) * Number of Feeds Available (56)}}{\text{Number Feeds / CIR (\#11) * Condenser Capacity / °T.D. (Step \#8) * 1,000}}$$

Example for Circuit #1:

$$\text{ATD} = \frac{15 * 21{,}529 \times 56}{31 * 44.5 * 1{,}000} = 13.1°\text{F.}$$

Input these T.D. values in column #12.

Step 11: Calculate the actual condensing temperature. Actual condensing temperature is equal to the actual condensing T.D., Column #12 plus the design ambient (95°). Input these values in Column #13. If the actual condensing temperature for each circuit is too high, it may be necessary to adjust the number of feeds per circuit or to select the next larger condenser size and recalculate the number of feeds per circuit.

Table 5. Refrigerant Capacity Factor

Refrigerant	Capacity Factor
R-22	1.02
R-134A	0.99
R-404A	1.00
R-407A	0.98
R-407C	0.94
R-407F	0.98
R-448A	0.96
R-449A	0.99
R-410A	1.02
R-507A	1.00

Table 6. Voltage Frequency Capacity Factor

Frequency	Capacity Factor
60 Hz	1.0
50 Hz (H, L, X, Q)	0.92
50 Hz (E)	1.0

Table 7. LNQ Models, 540 RPM, 0.5 HP, 30" Fan Diameter

Model	R22 / R410A MBH / 1° TD				R404A/R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNQ-S01-A005	4.6	**5.2**	5.6	5.9	4.6	**5.1**	5.5	5.8
LNQ-S01-A006	5.5	**6.1**	6.4	6.6	5.4	**5.9**	6.2	6.5
LNQ-S02-A008	7.2	**8.0**	8.7	9.1	7.0	**7.8**	8.5	8.9
LNQ-S02-A010	9.4	**10.3**	10.8	11.8	9.2	**10.1**	10.6	11.6
LNQ-S02-A011	10.8	**11.5**	11.9	12.3	10.6	**11.2**	11.7	12.0
LNQ-S03-A016	14.1	**15.6**	16.2	16.9	13.8	**15.2**	15.9	16.6
LNQ-S03-A017	16.2	**17.2**	17.9	19.8	15.9	**16.9**	17.5	19.4
LNQ-S04-A021	18.8	**20.7**	21.6	23.5	18.4	**20.3**	21.2	23.0
LNQ-S04-A023	21.6	**22.9**	23.8	24.5	21.2	**22.4**	23.3	24.0
LNQ-S05-A026	23.5	**25.9**	27.0	29.3	23.1	**25.4**	26.4	28.8
LNQ-S05-A029	27.0	**28.6**	29.8	30.7	26.5	**28.1**	29.2	30.1
LNQ-S06-A034	32.4	**34.4**	35.7	36.8	31.8	**33.7**	35.0	36.1
LNQ-S07-A042	38.4	**41.6**	42.8	44.3	37.7	**40.7**	41.9	43.4
LNQ-D04-A016	14.3	**16.0**	17.3	18.2	14.0	**15.6**	16.9	17.9
LNQ-D04-A021	18.8	**20.7**	21.6	23.6	18.4	**20.3**	21.2	23.2
LNQ-D04-A023	21.6	**22.9**	23.8	24.5	21.2	**22.4**	23.3	24.0
LNQ-D06-A031	28.2	**31.0**	32.4	33.8	27.6	**30.4**	31.8	33.1
LNQ-D06-A034	32.4	**34.4**	35.7	39.5	31.8	**33.7**	35.0	38.7
LNQ-D08-A041	37.6	**41.4**	43.2	47.0	36.9	**40.6**	42.3	46.1
LNQ-D08-A046	43.2	**45.8**	47.6	49.0	42.4	**44.9**	46.7	48.1
LNQ-D10-A052	47.0	**51.8**	54.0	58.7	46.1	**50.7**	52.9	57.5
LNQ-D10-A057	54.0	**57.3**	59.5	61.3	53.0	**56.1**	58.3	60.1
LNQ-D12-A069	64.8	**68.7**	71.4	73.6	63.6	**67.3**	70.0	72.1
LNQ-D14-A083	76.8	**83.1**	85.5	88.6	75.3	**81.5**	83.8	86.8

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 8. LNQ Models, 540 RPM, 0.5 HP, 30" Fan Diameter

Model	R407A / R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNQ-S01-A005	4.5	**5.0**	5.4	5.7	4.3	**4.8**	5.2	5.5
LNQ-S01-A006	5.3	**5.8**	6.1	6.3	5.1	**5.6**	5.9	6.1
LNQ-S02-A008	6.9	**7.6**	8.3	8.7	6.6	**7.3**	8.0	8.4
LNQ-S02-A010	9.0	**9.9**	10.4	11.3	8.7	**9.5**	10.0	10.9
LNQ-S02-A011	10.4	**11.0**	11.4	11.8	10.0	**10.6**	11.0	11.3
LNQ-S03-A016	13.5	**14.9**	15.6	16.2	13.0	**14.3**	14.9	15.6
LNQ-S03-A017	15.6	**16.5**	17.1	19.0	14.9	**15.8**	16.4	18.2
LNQ-S04-A021	18.1	**19.9**	20.8	22.6	17.3	**19.1**	19.9	21.6
LNQ-S04-A023	20.8	**22.0**	22.9	23.6	19.9	**21.1**	21.9	22.6
LNQ-S05-A026	22.6	**24.9**	25.9	28.2	21.7	**23.8**	24.9	27.0
LNQ-S05-A029	25.9	**27.5**	28.6	29.5	24.9	**26.4**	27.4	28.3
LNQ-S06-A034	31.1	**33.0**	34.3	35.3	29.9	**31.7**	32.9	33.9
LNQ-S07-A042	36.9	**39.9**	41.1	42.5	35.4	**38.3**	39.4	40.8
LNQ-D04-A016	13.8	**15.3**	16.6	17.5	13.2	**14.7**	15.9	16.8
LNQ-D04-A021	18.1	**19.9**	20.7	22.7	17.3	**19.1**	19.9	21.8
LNQ-D04-A023	20.8	**22.0**	22.9	23.6	19.9	**21.1**	21.9	22.6
LNQ-D06-A031	27.1	**29.8**	31.1	32.5	26.0	**28.6**	29.9	31.1
LNQ-D06-A034	31.1	**33.0**	34.3	38.0	29.9	**31.7**	32.9	36.4
LNQ-D08-A041	36.1	**39.8**	41.5	45.1	34.6	**38.1**	39.8	43.3
LNQ-D08-A046	41.5	**44.0**	45.7	47.1	39.8	**42.2**	43.9	45.2
LNQ-D10-A052	45.2	**49.7**	51.9	56.4	43.3	**47.7**	49.7	54.1
LNQ-D10-A057	51.9	**55.0**	57.2	58.9	49.8	**52.8**	54.8	56.5
LNQ-D12-A069	62.3	**66.0**	68.6	70.7	59.7	**63.3**	65.8	67.8
LNQ-D14-A083	73.8	**79.9**	82.2	85.1	70.8	**76.6**	78.8	81.6

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 9. LNQ Models, 540 RPM, 0.5 HP, 30" Fan Diameter

Model	R448 / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNQ-S01-A005	4.5	**5.1**	5.4	5.8
LNQ-S01-A006	5.3	**5.9**	6.2	6.4
LNQ-S02-A008	6.9	**7.7**	8.4	8.8
LNQ-S02-A010	9.1	**10.0**	10.5	11.5
LNQ-S02-A011	10.5	**11.1**	11.5	11.9
LNQ-S03-A016	13.7	**15.1**	15.7	16.4
LNQ-S03-A017	15.7	**16.7**	17.3	19.2
LNQ-S04-A021	18.2	**20.1**	21.0	22.8
LNQ-S04-A023	21.0	**22.2**	23.1	23.8
LNQ-S05-A026	22.8	**25.1**	26.2	28.5
LNQ-S05-A029	26.2	**27.8**	28.9	29.8
LNQ-S06-A034	31.5	**33.3**	34.6	35.7
LNQ-S07-A042	37.3	**40.3**	41.5	43.0
LNQ-D04-A016	13.9	**15.5**	16.8	17.7
LNQ-D04-A021	18.2	**20.1**	20.9	22.9
LNQ-D04-A023	21.0	**22.2**	23.1	23.8
LNQ-D06-A031	27.3	**30.1**	31.5	32.8
LNQ-D06-A034	31.5	**33.3**	34.6	38.3
LNQ-D08-A041	36.5	**40.2**	41.9	45.6
LNQ-D08-A046	41.9	**44.5**	46.2	47.6
LNQ-D10-A052	45.6	**50.2**	52.4	56.9
LNQ-D10-A057	52.4	**55.6**	57.7	59.5
LNQ-D12-A069	62.9	**66.7**	69.3	71.4
LNQ-D14-A083	74.6	**80.7**	83.0	85.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 10. LNQ Models, 540 RPM, 0.5 HP, 30" Fan Diameter

Model	CFM	208-230/3/60			460/3/60			Unit kW	Conn. (in.)	Max. No. of Feeds	Approx. Net Weight (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD				
LNQ-S01-A005	5,400	3.5	15.0	15	1.8	15.0	15	0.4	1 3/8	7	330
LNQ-S01-A006	5,200	3.5	15.0	15	1.8	15.0	15	0.4	1 3/8	14	360
LNQ-S02-A008	11,200	7.0	15.0	15	3.6	15.0	15	0.9	1 3/8	14	580
LNQ-S02-A010	10,800	7.0	15.0	15	3.6	15.0	15	0.9	1 5/8	21	630
LNQ-S02-A011	10,400	7.0	15.0	15	3.6	15.0	15	0.9	2 1/8	28	680
LNQ-S03-A016	16,100	10.5	15.0	20	5.4	15.0	15	1.3	2 1/8	21	930
LNQ-S03-A017	15,600	10.5	15.0	20	5.4	15.0	15	1.3	2 1/8	28	1,000
LNQ-S04-A021	21,500	14.0	15.0	20	7.2	15.0	15	1.7	2 1/8	21	1,210
LNQ-S04-A023	20,800	14.0	15.0	20	7.2	15.0	15	1.7	2 5/8	28	1,310
LNQ-S05-A026	26,900	17.5	20.0	25	9.0	15.0	15	2.2	2 5/8	21	1,510
LNQ-S05-A029	26,000	17.5	20.0	25	9.0	15.0	15	2.2	2 5/8	28	1,640
LNQ-S06-A034	31,200	21.0	21.9	30	10.8	15.0	15	2.6	2 5/8	28	1,950
LNQ-S07-A042	36,400	24.5	25.4	35	12.6	15.0	15	3.1	2 @ 2 5/8	28	2,240
LNQ-D04-A016	22,300	14.0	15.0	20	7.2	15.0	15	1.7	2 @ 1 3/8	28	1,240
LNQ-D04-A021	21,500	14.0	15.0	20	7.2	15.0	15	1.7	2 @ 1 5/8	42	1,340
LNQ-D04-A023	20,800	14.0	15.0	20	7.2	15.0	15	1.7	2 @ 2 1/8	56	1,440
LNQ-D06-A031	32,300	21.0	21.9	30	10.8	15.0	15	2.6	2 @ 2 1/8	42	1,990
LNQ-D06-A034	31,200	21.0	21.9	30	10.8	15.0	15	2.6	2 @ 2 1/8	56	2,140
LNQ-D08-A041	43,000	28.0	28.9	35	14.4	15.0	20	3.5	2 @ 2 1/8	42	2,630
LNQ-D08-A046	41,600	28.0	28.9	35	14.4	15.0	20	3.5	2 @ 2 5/8	56	2,830
LNQ-D10-A052	53,700	35.0	35.9	45	18.0	20.0	20	4.4	2 @ 2 5/8	42	3,290
LNQ-D10-A057	52,100	35.0	35.9	45	18.0	20.0	20	4.4	2 @ 2 5/8	56	3,540
LNQ-D12-A069	62,500	42.0	42.9	50	21.6	22.1	25	5.2	2 @ 2 5/8	56	4,230
LNQ-D14-A083	72,900	49.0	49.9	60	25.2	25.7	30	6.1	4 @ 2 5/8	56	4,910

Table 11. LNX Models, 830 RPM, 1.0 HP, 30" Fan Diameter

Model	R22/R410A MBH / 1° TD				R404A/R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNX-S01-A005	5.6	**6.4**	7.0	7.4	5.5	**6.2**	6.8	7.3
LNX-S01-A006	6.8	**7.5**	8.0	8.4	6.6	**7.4**	7.9	8.3
LNX-S02-A008	8.8	**9.8**	10.6	11.2	8.6	**9.6**	10.4	11.0
LNX-S02-A010	12.0	**13.1**	13.8	14.8	11.8	**12.8**	13.6	14.5
LNX-S02-A011	14.0	**15.1**	15.7	16.0	13.7	**14.8**	15.3	15.7
LNX-S03-A016	18.0	**19.7**	20.8	21.8	17.7	**19.3**	20.4	21.4
LNX-S03-A017	21.0	**22.7**	23.5	25.3	20.5	**22.3**	23.0	24.8
LNX-S04-A021	24.1	**26.3**	27.7	29.3	23.6	**25.7**	27.1	28.7
LNX-S04-A023	27.9	**30.3**	31.3	32.0	27.4	**29.7**	30.7	31.4
LNX-S05-A026	30.1	**32.8**	34.6	36.7	29.5	**32.1**	33.9	36.0
LNX-S05-A029	34.9	**37.8**	39.2	40.1	34.2	**37.1**	38.4	39.3
LNX-S06-A034	41.9	**45.4**	47.0	48.1	41.1	**44.5**	46.0	47.1
LNX-S07-A042	47.7	**52.0**	54.8	56.1	46.8	**51.0**	53.7	55.0
LNX-D04-A016	17.5	**19.6**	21.2	22.5	17.2	**19.2**	20.8	22.0
LNX-D04-A021	24.1	**26.2**	27.7	29.7	23.6	**25.7**	27.1	29.1
LNX-D04-A023	27.9	**30.3**	31.3	32.0	27.4	**29.7**	30.7	31.4
LNX-D06-A031	36.1	**39.4**	41.5	43.7	35.4	**38.6**	40.7	42.8
LNX-D06-A034	41.9	**45.4**	47.0	50.6	41.1	**44.5**	46.0	49.6
LNX-D08-A041	48.1	**52.5**	55.4	58.6	47.1	**51.4**	54.3	57.5
LNX-D08-A046	55.9	**60.6**	62.7	64.1	54.8	**59.3**	61.4	62.8
LNX-D10-A052	60.1	**65.6**	69.2	73.5	58.9	**64.3**	67.8	72.0
LNX-D10-A057	69.9	**75.7**	78.3	80.1	68.4	**74.2**	76.8	78.5
LNX-D12-A069	83.8	**90.8**	94.0	96.1	82.1	**89.0**	92.1	94.2
LNX-D14-A083	95.5	**104.1**	109.6	112.2	93.6	**102.0**	107.5	110.0

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

CONDENSER CAPACITY

Table 12. LNX Models, 830 RPM, 1.0 HP, 30" Fan Diameter

Model	R407A / R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNX-S01-A006	5.4	**6.1**	6.7	7.1	5.2	**5.9**	6.4	6.8
LNX-S01-A008	6.5	**7.2**	7.7	8.1	6.2	**6.9**	7.4	7.8
LNX-S02-A010	8.4	**9.4**	10.2	10.8	8.1	**9.0**	9.8	10.4
LNX-S02-A013	11.6	**12.6**	13.3	14.3	11.1	**12.1**	12.7	13.7
LNX-S02-A015	13.4	**14.5**	15.0	15.4	12.9	**13.9**	14.4	14.8
LNX-S03-A020	17.3	**18.9**	19.9	21.0	16.6	**18.1**	19.1	20.1
LNX-S03-A023	20.1	**21.8**	22.5	24.3	19.3	**20.9**	21.6	23.3
LNX-S04-A026	23.1	**25.2**	26.6	28.2	22.2	**24.2**	25.5	27.0
LNX-S04-A030	26.8	**29.1**	30.1	30.8	25.7	**27.9**	28.9	29.5
LNX-S05-A033	28.9	**31.5**	33.2	35.3	27.7	**30.2**	31.9	33.9
LNX-S05-A038	33.5	**36.3**	37.6	38.5	32.2	**34.8**	36.1	36.9
LNX-S06-A045	40.2	**43.6**	45.1	46.1	38.6	**41.8**	43.3	44.3
LNX-S07-A052	45.9	**50.0**	52.7	53.9	44.0	**47.9**	50.5	51.7
LNX-D04-A020	16.8	**18.8**	20.4	21.6	16.1	**18.0**	19.6	20.7
LNX-D04-A026	23.1	**25.2**	26.6	28.5	22.2	**24.2**	25.5	27.3
LNX-D04-A030	26.8	**29.1**	30.1	30.8	25.7	**27.9**	28.9	29.5
LNX-D06-A039	34.7	**37.8**	39.9	41.9	33.2	**36.3**	38.3	40.2
LNX-D06-A045	40.2	**43.6**	45.1	48.6	38.6	**41.8**	43.3	46.6
LNX-D08-A052	46.2	**50.4**	53.2	56.3	44.3	**48.4**	51.0	54.0
LNX-D08-A061	53.7	**58.1**	60.2	61.5	51.5	**55.8**	57.7	59.0
LNX-D10-A066	57.8	**63.0**	66.5	70.6	55.4	**60.4**	63.8	67.7
LNX-D10-A076	67.1	**72.7**	75.2	76.9	64.3	**69.7**	72.1	73.8
LNX-D12-A091	80.5	**87.2**	90.3	92.3	77.2	**83.7**	86.6	88.5
LNX-D14-A104	91.7	**100.0**	105.3	107.8	88.0	**95.9**	101.0	103.4

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 13. LNX Models, 830 RPM, 1.0 HP, 30" Fan Diameter

Model	R448A / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNX-S01-A006	5.5	**6.2**	6.7	7.2
LNX-S01-A008	6.6	**7.3**	7.8	8.2
LNX-S02-A010	8.5	**9.5**	10.3	10.9
LNX-S02-A013	11.7	**12.7**	13.4	14.4
LNX-S02-A015	13.6	**14.7**	15.2	15.6
LNX-S03-A020	17.5	**19.1**	20.1	21.2
LNX-S03-A023	20.3	**22.0**	22.8	24.5
LNX-S04-A026	23.3	**25.5**	26.8	28.5
LNX-S04-A030	27.1	**29.4**	30.4	31.1
LNX-S05-A033	29.2	**31.8**	33.6	35.7
LNX-S05-A038	33.9	**36.7**	38.0	38.9
LNX-S06-A045	40.7	**44.1**	45.6	46.6
LNX-S07-A052	46.3	**50.5**	53.2	54.5
LNX-D04-A020	17.0	**19.0**	20.6	21.8
LNX-D04-A026	23.3	**25.5**	26.9	28.8
LNX-D04-A030	27.1	**29.4**	30.4	31.1
LNX-D06-A039	35.0	**38.2**	40.3	42.4
LNX-D06-A045	40.7	**44.1**	45.6	49.1
LNX-D08-A052	46.7	**50.9**	53.7	56.9
LNX-D08-A061	54.2	**58.7**	60.8	62.1
LNX-D10-A066	58.3	**63.7**	67.2	71.3
LNX-D10-A076	67.8	**73.4**	76.0	77.7
LNX-D12-A091	81.3	**88.1**	91.2	93.2
LNX-D14-A104	92.6	**101.0**	106.4	108.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 14. 3-Phase A/C LNX Models, 830 RPM, 1.0 HP, 30" Fan Diameter

Model	CFM	208-230/3/60			460/3/60			Unit kW	Conn. (in.)	Max. No. of Feeds	Approx. Net Weight (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD				
LNX-S01-A005	7,600	4.8	15.0	15	2.4	15.0	15	1.1	1 3/8	7	330
LNX-S01-A006	7,300	4.8	15.0	15	2.4	15.0	15	1.1	1 3/8	14	360
LNX-S02-A008	15,900	9.6	15.0	20	4.8	15.0	15	2.2	1 3/8	14	580
LNX-S02-A010	15,200	9.6	15.0	20	4.8	15.0	15	2.2	1 5/8	21	630
LNX-S02-A011	14,700	9.6	15.0	20	4.8	15.0	15	2.2	2 1/8	28	680
LNX-S03-A016	22,900	14.4	20.0	25	7.2	15.0	15	3.4	2 1/8	21	930
LNX-S03-A017	22,000	14.4	20.0	25	7.2	15.0	15	3.4	2 1/8	28	1,000
LNX-S04-A021	29,800	19.2	20.4	30	9.6	15.0	15	4.5	2 1/8	21	1,210
LNX-S04-A023	28,400	19.2	20.4	30	9.6	15.0	15	4.5	2 5/8	28	1,310
LNX-S05-A026	37,300	24.0	25.2	35	12.0	15.0	15	5.6	2 5/8	21	1,510
LNX-S05-A029	35,500	24.0	25.2	35	12.0	15.0	15	5.6	2 5/8	28	1,640
LNX-S06-A034	42,600	28.8	30.0	40	14.4	15.0	20	6.7	2 5/8	28	1,950
LNX-S07-A042	49,700	33.6	34.8	45	16.8	20.0	20	7.8	2 @ 2 5/8	28	2,240
LNX-D04-A016	31,700	19.2	20.4	30	9.6	15.0	15	4.5	2 @ 1 3/8	28	1,240
LNX-D04-A021	30,500	19.2	20.4	30	9.6	15.0	15	4.5	2 @ 1 5/8	42	1,340
LNX-D04-A023	29,300	19.2	20.4	30	9.6	15.0	15	4.5	2 @ 2 1/8	56	1,440
LNX-D06-A031	45,700	28.8	30.0	40	14.4	15.0	20	6.7	2 @ 2 1/8	42	1,990
LNX-D06-A034	44,000	28.8	30.0	40	14.4	15.0	20	6.7	2 @ 2 1/8	56	2,140
LNX-D08-A041	59,700	38.4	39.6	50	19.2	20.0	25	8.9	2 @ 2 1/8	42	2,630
LNX-D08-A046	56,800	38.4	39.6	50	19.2	20.0	25	8.9	2 @ 2 5/8	56	2,830
LNX-D10-A052	74,600	48.0	49.2	60	24.0	24.6	30	11.2	2 @ 2 5/8	42	3,290
LNX-D10-A057	71,000	48.0	49.2	60	24.0	24.6	30	11.2	2 @ 2 5/8	56	3,540
LNX-D12-A069	85,200	57.6	58.8	70	28.8	29.4	35	13.4	2 @ 2 5/8	56	4,230
LNX-D14-A083	99,400	67.2	68.4	80	33.6	34.2	40	15.6	4 @ 2 5/8	56	4,910

Table 15. LNL Models, 830 RPM, 1.5 HP, 30" Fan Diameter

Model	R22/R410A MBH / 1° TD				R404A/R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNL-S01-A006	5.9	**6.7**	7.3	7.9	5.8	**6.6**	7.2	7.7
LNL-S01-A008	7.2	**8.0**	8.6	9.0	7.0	**7.8**	8.4	8.8
LNL-S02-A010	9.1	**10.1**	11.0	11.7	8.9	**9.9**	10.8	11.4
LNL-S02-A013	12.6	**13.9**	14.9	15.7	12.4	**13.6**	14.6	15.4
LNL-S02-A015	15.0	**16.1**	16.8	17.6	14.7	**15.8**	16.5	17.3
LNL-S03-A020	18.9	**20.9**	22.3	23.4	18.6	**20.5**	21.8	23.0
LNL-S03-A023	22.5	**24.2**	25.2	26.9	22.0	**23.8**	24.7	26.3
LNL-S04-A026	25.3	**27.8**	29.7	31.2	24.8	**27.3**	29.1	30.6
LNL-S04-A030	30.0	**32.3**	33.6	35.2	29.4	**31.7**	32.9	34.5
LNL-S05-A033	32.1	**35.5**	37.4	39.0	31.4	**34.7**	36.6	38.2
LNL-S05-A038	38.4	**41.6**	43.4	44.7	37.7	**40.8**	42.5	43.8
LNL-S06-A045	46.1	**49.9**	52.1	53.6	45.2	**48.9**	51.0	52.6
LNL-S07-A052	50.5	**55.0**	58.0	60.2	49.5	**53.9**	56.8	59.0
LNL-D04-A020	18.1	**20.2**	22.0	23.3	17.7	**19.8**	21.5	22.9
LNL-D04-A026	25.3	**27.8**	29.7	31.4	24.8	**27.3**	29.1	30.7
LNL-D04-A030	30.0	**32.3**	33.6	35.2	29.4	**31.7**	32.9	34.5
LNL-D06-A039	37.9	**41.8**	44.5	46.9	37.2	**40.9**	43.7	45.9
LNL-D06-A045	45.0	**48.4**	50.4	53.7	44.1	**47.5**	49.4	52.7
LNL-D08-A052	50.6	**55.7**	59.4	62.4	49.6	**54.6**	58.3	61.1
LNL-D08-A061	60.0	**64.6**	67.2	70.4	58.8	**63.3**	65.8	69.0
LNL-D10-A066	64.2	**70.9**	74.7	78.0	62.9	**69.5**	73.2	76.5
LNL-D10-A076	76.9	**83.1**	86.8	89.4	75.3	**81.5**	85.0	87.6
LNL-D12-A091	90.4	**99.8**	104.1	107.3	92.2	**97.8**	102.0	105.1
LNL-D14-A104	101.1	**110.0**	116.0	120.3	99.1	**107.9**	113.7	117.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 16. LNL Models, 830 RPM, 1.5 HP, 30" Fan Diameter

Model	R407A / R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNL-S01-A007	5.7	**6.5**	7.0	7.6	5.5	**6.2**	6.8	7.2
LNL-S01-A008	6.9	**7.7**	8.2	8.6	6.6	**7.3**	7.9	8.3
LNL-S02-A010	8.7	**9.7**	10.6	11.2	8.3	**9.3**	10.1	10.8
LNL-S02-A014	12.1	**13.4**	14.3	15.1	11.6	**12.8**	13.7	14.4
LNL-S02-A016	14.4	**15.5**	16.1	16.9	13.8	**14.9**	15.5	16.2
LNL-S03-A021	18.2	**20.1**	21.4	22.5	17.5	**19.2**	20.5	21.6
LNL-S03-A024	21.6	**23.3**	24.2	25.8	20.7	**22.3**	23.2	24.8
LNL-S04-A028	24.3	**26.7**	28.5	30.0	23.3	**25.6**	27.4	28.7
LNL-S04-A032	28.8	**31.0**	32.3	33.8	27.6	**29.8**	31.0	32.4
LNL-S05-A035	30.8	**34.0**	35.9	37.5	29.6	**32.7**	34.4	35.9
LNL-S05-A042	36.9	**39.9**	41.7	42.9	35.4	**38.3**	40.0	41.2
LNL-S06-A050	44.3	**47.9**	50.0	51.5	42.5	**45.9**	48.0	49.4
LNL-S07-A055	48.5	**52.8**	55.7	57.8	46.6	**50.7**	53.4	55.4
LNL-D04-A020	17.4	**19.4**	21.1	22.4	16.7	**18.6**	20.2	21.5
LNL-D04-A028	24.3	**26.7**	28.5	30.1	23.3	**25.6**	27.4	28.9
LNL-D04-A032	28.8	**31.0**	32.3	33.8	27.6	**29.8**	30.9	32.4
LNL-D06-A042	36.4	**40.1**	42.8	45.0	34.9	**38.5**	41.0	43.2
LNL-D06-A048	43.2	**46.5**	48.4	51.6	41.4	**44.6**	46.4	49.5
LNL-D08-A056	48.6	**53.5**	57.1	59.9	46.6	**51.3**	54.8	57.5
LNL-D08-A065	57.6	**62.1**	64.5	67.6	55.3	**59.5**	61.9	64.8
LNL-D10-A071	61.6	**68.1**	71.8	74.9	59.1	**65.3**	68.9	71.9
LNL-D10-A083	73.8	**79.8**	83.3	85.8	70.8	**76.6**	79.9	82.3
LNL-D12-A100	90.4	**95.8**	99.9	103.0	86.7	**91.9**	95.9	98.8
LNL-D14-A110	97.1	**105.7**	111.4	115.6	93.1	**101.4**	106.9	110.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 17. LNL Models, 830 RPM, 1.5 HP, 30" Fan Diameter

Model	R448A / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNL-S01-A007	5.8	**6.5**	7.1	7.6
LNL-S01-A008	7.0	**7.7**	8.3	8.7
LNL-S02-A010	8.8	**9.8**	10.7	11.3
LNL-S02-A014	12.3	**13.5**	14.4	15.2
LNL-S02-A016	14.6	**15.7**	16.3	17.1
LNL-S03-A021	18.4	**20.3**	21.6	22.7
LNL-S03-A024	21.8	**23.5**	24.4	26.1
LNL-S04-A028	24.5	**27.0**	28.8	30.3
LNL-S04-A032	29.1	**31.4**	32.6	34.1
LNL-S05-A035	31.1	**34.4**	36.3	37.9
LNL-S05-A042	37.3	**40.4**	42.1	43.4
LNL-S06-A050	44.8	**48.4**	50.5	52.0
LNL-S07-A055	49.0	**53.4**	56.3	58.4
LNL-D04-A020	17.6	**19.6**	21.3	22.6
LNL-D04-A028	24.5	**27.0**	28.8	30.4
LNL-D04-A032	29.1	**31.4**	32.6	34.1
LNL-D06-A042	36.8	**40.5**	43.2	45.5
LNL-D06-A048	43.6	**47.0**	48.9	52.2
LNL-D08-A056	49.1	**54.0**	57.7	60.5
LNL-D08-A065	58.2	**62.7**	65.2	68.3
LNL-D10-A071	62.2	**68.8**	72.5	75.7
LNL-D10-A083	74.6	**80.7**	84.2	86.7
LNL-D12-A100	91.3	**96.8**	101.0	104.1
LNL-D14-A110	98.1	**106.8**	112.6	116.8

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 18. LNL Models, 830 RPM, 1.5 HP, 30" Fan Diameter

Model	CFM	208-230/3/60			460/3/60			575/3/60			Unit kW	Conn. (in.)	Max. No. of Feeds	Approx. Net Weight (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD	FLA	MCA	MOPD				
LNL-S01-A007	8,400	6.6	15.0	25	3.3	15.0	15	2.6	15.0	15	1.4	1 3/8	7	330
LNL-S01-A008	8,000	6.6	15.0	25	3.3	15.0	15	2.6	15.0	15	1.4	1 3/8	14	360
LNL-S02-A010	17,500	13.2	15.0	30	6.6	15.0	15	5.2	15.0	15	2.7	1 3/8	14	580
LNL-S02-A014	16,700	13.2	15.0	30	6.6	15.0	15	5.2	15.0	15	2.7	1 5/8	21	630
LNL-S02-A016	16,100	13.2	15.0	30	6.6	15.0	15	5.2	15.0	15	2.7	2 1/8	28	680
LNL-S03-A021	25,100	19.8	21.5	35	9.9	15.0	15	7.8	15.0	15	4.1	2 1/8	21	930
LNL-S03-A024	24,100	19.8	21.5	35	9.9	15.0	15	7.8	15.0	15	4.1	2 1/8	28	1,000
LNL-S04-A028	32,800	26.4	28.1	45	13.2	15.0	20	10.4	15.0	15	5.4	2 1/8	21	1,210
LNL-S04-A032	31,200	26.4	28.1	45	13.2	15.0	20	10.4	15.0	15	5.4	2 5/8	28	1,310
LNL-S05-A035	41,000	33.0	34.7	50	16.5	20.0	25	13.0	15.0	20	6.8	2 5/8	21	1,510
LNL-S05-A042	39,100	33.0	34.7	50	16.5	20.0	25	13.0	15.0	20	6.8	2 5/8	28	1,640
LNL-S06-A050	46,900	39.6	41.3	50	19.8	20.6	25	15.6	20.0	20	8.1	2 5/8	28	1,950
LNL-S07-A055	54,700	46.2	47.9	60	23.1	23.9	30	18.2	20.0	25	9.5	2@2 5/8	28	2,240
LNL-D04-A020	35,000	26.4	28.1	45	13.2	15.0	20	10.4	15.0	15	5.4	2 @ 1 3/8	28	1,240
LNL-D04-A028	33,500	26.4	28.1	45	13.2	15.0	20	10.4	15.0	15	5.4	2 @ 1 5/8	42	1,340
LNL-D04-A032	32,100	26.4	28.1	45	13.2	15.0	20	10.4	15.0	15	5.4	2 @ 2 1/8	56	1,440
LNL-D06-A042	50,200	39.6	41.3	50	19.8	20.6	25	15.6	20.0	20	8.1	2 @ 2 1/8	42	1,990
LNL-D06-A048	48,200	39.6	41.3	50	19.8	20.6	25	15.6	20.0	20	8.1	2 @ 2 1/8	56	2,140
LNL-D08-A056	65,600	52.8	54.5	70	26.4	27.2	35	20.8	21.5	25	10.8	2 @ 2 1/8	42	2,630
LNL-D08-A065	62,500	52.8	54.5	70	26.4	27.2	35	20.8	21.5	25	10.8	2 @ 2 5/8	56	2,830
LNL-D10-A071	82,000	66.0	67.7	80	33.0	33.8	40	26.0	26.7	30	13.5	2 @ 2 5/8	42	3,290
LNL-D10-A083	78,100	66.0	67.7	80	33.0	33.8	40	26.0	26.7	30	13.5	2 @ 2 5/8	56	3,540
LNL-D12-A100	93,700	79.2	80.9	90	39.6	40.4	45	31.2	31.9	35	16.2	2 @ 2 5/8	56	4,230
LNL-D14-A110	109,300	92.4	94.1	110	46.2	47.0	50	36.4	37.1	40	18.9	4 @ 2 5/8	56	4,910

Table 19. LNH Models, 1140 RPM, 1.5 HP, 30" Fan Diameter

Model	R22 / R410A MBH / 1° TD				R404A/R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNH-S01-A007	6.4	**7.3**	8.0	8.6	6.3	**7.2**	7.9	8.5
LNH-S01-A009	7.8	**8.7**	9.5	10.0	7.6	**8.6**	9.3	9.8
LNH-S02-A011	9.6	**10.7**	11.7	12.4	9.4	**10.5**	11.5	12.1
LNH-S02-A015	13.1	**14.5**	15.6	16.3	12.8	**14.2**	15.3	16.0
LNH-S02-A017	15.7	**17.1**	18.1	19.2	15.3	**16.7**	17.7	18.8
LNH-S03-A022	19.7	**21.8**	23.4	24.5	19.3	**21.4**	22.9	24.0
LNH-S03-A026	23.5	**25.7**	27.1	29.9	23.1	**25.2**	26.6	29.3
LNH-S04-A029	26.2	**29.1**	31.2	32.6	25.7	**28.5**	30.5	32.0
LNH-S04-A034	31.4	**34.2**	36.1	38.3	30.7	**33.5**	35.4	37.6
LNH-S05-A037	33.6	**37.1**	39.3	41.3	32.9	**36.4**	38.5	40.5
LNH-S05-A044	40.5	**44.0**	46.1	48.6	39.7	**43.1**	45.1	47.6
LNH-S06-A053	48.6	**52.8**	55.3	58.3	47.7	**51.7**	54.1	57.1
LNH-S07-A061	55.4	**61.0**	64.7	67.5	54.3	**59.8**	63.5	66.2
LNH-D04-A021	19.2	**21.4**	23.4	24.8	18.8	**21.0**	22.9	24.3
LNH-D04-A029	26.2	**29.1**	31.2	32.6	25.7	**28.5**	30.6	32.0
LNH-D04-A034	31.4	**34.2**	36.1	38.3	30.7	**33.5**	35.4	37.6
LNH-D06-A044	39.4	**43.6**	46.7	48.9	38.6	**42.8**	45.8	47.9
LNH-D06-A051	47.0	**51.3**	54.2	59.8	46.1	**50.3**	53.1	58.7
LNH-D08-A058	52.5	**58.2**	62.3	65.3	51.4	**57.0**	61.1	63.9
LNH-D08-A068	62.7	**68.4**	72.3	76.7	61.5	**67.1**	70.8	75.1
LNH-D10-A074	67.1	**74.2**	78.5	82.6	65.7	**72.7**	76.9	80.9
LNH-D10-A088	81.0	**88.0**	92.1	97.2	79.4	**86.2**	90.2	95.2
LNH-D12-A106	97.2	**105.6**	110.5	116.6	95.3	**103.5**	108.3	114.2
LNH-D14-A122	110.8	**121.9**	129.5	135.0	108.6	**119.5**	126.9	132.4

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 20. LNH Models, 1140 RPM, 1.5 HP, 30" Fan Diameter

Model	R407A/R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNH-S01-A007	6.1	**7.0**	7.7	8.3	5.9	**6.7**	7.4	8.0
LNH-S01-A009	7.5	**8.4**	9.1	9.6	7.2	**8.1**	8.7	9.2
LNH-S02-A011	9.2	**10.3**	11.2	11.9	8.8	**9.9**	10.8	11.4
LNH-S02-A015	12.6	**14.0**	15.0	15.7	12.1	**13.4**	14.4	15.0
LNH-S02-A017	15.0	**16.4**	17.4	18.4	14.4	**15.7**	16.6	17.6
LNH-S03-A022	18.9	**21.0**	22.4	23.5	18.1	**20.1**	21.5	22.5
LNH-S03-A026	22.6	**24.6**	26.0	28.8	21.7	**23.6**	25.0	27.6
LNH-S04-A029	25.2	**28.0**	29.9	31.3	24.1	**26.8**	28.7	30.1
LNH-S04-A034	30.1	**32.9**	34.7	36.8	28.9	**31.5**	33.3	35.3
LNH-S05-A037	32.2	**35.6**	37.7	39.7	30.9	**34.2**	36.2	38.0
LNH-S05-A044	38.9	**42.3**	44.2	46.7	37.3	**40.5**	42.4	44.8
LNH-S06-A053	46.7	**50.7**	53.1	56.0	44.8	**48.6**	50.9	53.7
LNH-S07-A061	53.2	**58.6**	62.2	64.9	51.1	**56.2**	59.7	62.2
LNH-D04-A021	18.4	**20.5**	22.4	23.8	17.7	**19.7**	21.5	22.8
LNH-D04-A029	25.2	**28.0**	29.9	31.3	24.1	**26.8**	28.7	30.1
LNH-D04-A034	30.1	**32.9**	34.7	36.8	28.9	**31.5**	33.3	35.3
LNH-D06-A044	37.8	**41.9**	44.9	47.0	36.3	**40.2**	43.1	45.1
LNH-D06-A051	45.2	**49.3**	52.0	57.5	43.3	**47.3**	49.9	55.2
LNH-D08-A058	50.4	**55.9**	59.9	62.7	48.3	**53.6**	57.4	60.1
LNH-D08-A068	60.2	**65.7**	69.4	73.6	57.8	**63.0**	66.6	70.6
LNH-D10-A074	64.4	**71.2**	75.4	79.3	61.8	**68.3**	72.3	76.0
LNH-D10-A088	77.8	**84.5**	88.4	93.3	74.6	**81.1**	84.8	89.5
LNH-D12-A106	93.4	**101.4**	106.1	112.0	89.6	**97.3**	101.8	107.4
LNH-D14-A122	106.5	**117.1**	124.4	129.7	102.1	**112.3**	119.3	124.4

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 21. LNH Models, 1140 RPM, 1.5 HP, 30" Fan Diameter

Model	R448A / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNH-S01-A007	6.2	**7.1**	7.8	8.4
LNH-S01-A009	7.6	**8.5**	9.2	9.7
LNH-S02-A011	9.3	**10.4**	11.3	12.0
LNH-S02-A015	12.7	**14.1**	15.1	15.8
LNH-S02-A017	15.2	**16.6**	17.5	18.6
LNH-S03-A022	19.1	**21.2**	22.7	23.7
LNH-S03-A026	22.8	**24.9**	26.3	29.0
LNH-S04-A029	25.4	**28.2**	30.2	31.7
LNH-S04-A034	30.4	**33.2**	35.1	37.2
LNH-S05-A037	32.6	**36.0**	38.1	40.1
LNH-S05-A044	39.3	**42.7**	44.7	47.1
LNH-S06-A053	47.2	**51.2**	53.6	56.5
LNH-S07-A061	53.8	**59.2**	62.8	65.5
LNH-D04-A021	18.6	**20.8**	22.7	24.0
LNH-D04-A029	25.4	**28.2**	30.3	31.7
LNH-D04-A034	30.4	**33.2**	35.1	37.2
LNH-D06-A044	38.2	**42.3**	45.3	47.5
LNH-D06-A051	45.6	**49.8**	52.6	58.1
LNH-D08-A058	50.9	**56.5**	60.5	63.3
LNH-D08-A068	60.9	**66.4**	70.1	74.4
LNH-D10-A074	65.1	**72.0**	76.2	80.1
LNH-D10-A088	78.6	**85.4**	89.3	94.3
LNH-D12-A106	94.3	**102.4**	107.2	113.1
LNH-D14-A122	107.5	**118.3**	125.7	131.1

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 22. LNH Models, 1140 RPM, 1.5 HP, 30" Fan Diameter

Model	CFM	208-230/3/60			460/3/60			575/3/60			Unit kW	Conn. (in.)	Max. No. of Feeds	Approx. Net Weight (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD	FLA	MCA	MOPD				
LNH-S01-A007	9,900	7.0	15.0	25	3.5	15.0	15	2.8	15.0	15	1.9	1 3/8	7	330
LNH-S01-A008	9,500	7.0	15.0	25	3.5	15.0	15	2.8	15.0	15	1.9	1 3/8	14	360
LNH-S02-A010	20,500	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	3.8	1 3/8	14	580
LNH-S02-A014	19,800	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	3.8	1 5/8	21	630
LNH-S02-A016	19,000	14.0	20.0	35	7.0	15.0	15	5.6	15.0	15	3.8	2 1/8	28	680
LNH-S03-A021	29,700	21.0	22.8	40	10.5	15.0	20	8.4	15.0	15	5.8	2 1/8	21	930
LNH-S03-A024	28,500	21.0	22.8	40	10.5	15.0	20	8.4	15.0	15	5.8	2 1/8	28	1,000
LNH-S04-A028	38,600	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	7.7	2 1/8	21	1,210
LNH-S04-A032	37,000	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	7.7	2 5/8	28	1,310
LNH-S05-A035	48,300	35.0	36.8	50	17.5	20.0	25	14.0	15.0	20	9.6	2 5/8	21	1,510
LNH-S05-A042	46,200	35.0	36.8	50	17.5	20.0	25	14.0	15.0	20	9.6	2 5/8	28	1,640
LNH-S06-A050	55,400	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	11.5	2 5/8	28	1,950
LNH-S07-A055	64,700	49.0	50.8	70	24.5	25.4	35	19.6	20.3	25	13.5	2 @ 2 5/8	28	2,240
LNH-D04-A020	41,000	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	7.7	2 @ 1 3/8	28	1,240
LNH-D04-A028	39,600	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	7.7	2 @ 1 5/8	42	1,340
LNH-D04-A032	38,100	28.0	29.8	45	14.0	15.0	20	11.2	15.0	15	7.7	2 @ 2 1/8	56	1,440
LNH-D06-A042	59,400	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	11.5	2 @ 2 1/8	42	1,990
LNH-D06-A048	57,100	42.0	43.8	60	21.0	21.9	30	16.8	20.0	25	11.5	2 @ 2 1/8	56	2,140
LNH-D08-A056	77,200	56.0	57.8	70	28.0	28.9	35	22.4	23.1	30	15.4	2 @ 2 1/8	42	2,630
LNH-D08-A065	73,900	56.0	57.8	70	28.0	28.9	35	22.4	23.1	30	15.4	2 @ 2 5/8	56	2,830
LNH-D10-A071	96,500	70.0	71.8	90	35.0	35.9	45	28.0	28.7	35	19.2	2 @ 2 5/8	42	3,290
LNH-D10-A083	92,400	70.0	71.8	90	35.0	35.9	45	28.0	28.7	35	19.2	2 @ 2 5/8	56	3,540
LNH-D12-A100	110,900	84.0	85.8	100	42.0	42.9	50	33.6	34.3	40	23.1	2 @ 2 5/8	56	4,230
LNH-D14-A110	129,400	98.0	99.8	110	49.0	49.9	60	39.2	39.9	45	26.9	4 @ 2 5/8	56	4,910

Larkin Venturi Mounted VSEC Series Selection Tables

The Larkin Venturi Mounted VSEC Series of air-cooled condensers incorporates Venturi Mounted VSEC motor technology to provide the quietest and most efficient condensers in the industry, using integrated variable speed technology.

Simplicity: Variable speed without the complexity
The Larkin VSEC Series is a complete system that incorporates an VSEC motor, integrated drive and control electronics, optimized swept motor blade and venturi panel in one simple package. Variable speed is accomplished without the complexities typically associated with Variable Frequency Drives.

Flexibility: Maximum efficiency, minimum sound, capacity when you need it
The Venturi Mounted VSEC Series condensers' integrated variable speed capability allows optimization to your operating conditions; at higher speeds on hot summer afternoons to maintain capacity or at lower speeds at night to meet a local sound ordinance. Whatever your requirements, the Larkin VSEC Series can be selected and programmed to your specific needs; whether it is lower energy costs, lower sound or both.

Reliability: The highest quality backed by industry-leading warranties
We are so confident in the reliability of the VSEC motor that we are providing an unprecedented 3-year warranty on the VSEC motor (2-year warranty on the unit) so you can be assured of worry-free operation.

Protection at every level
The VSEC motors have several built-in features that protect against locked-rotors, under-voltage and phase failure.

Variable Speed Operation
The Venturi Mounted VSEC Series condensers provide variable speed operation automatically; providing dramatically lower sound and energy levels than would be observed with condensers using traditional AC motors.

Typical performance of a Venturi Mounted VSEC Series condenser at various loads versus a 540 RPM, 830 RPM or 1140 RPM condenser is shown in the chart on the next page.

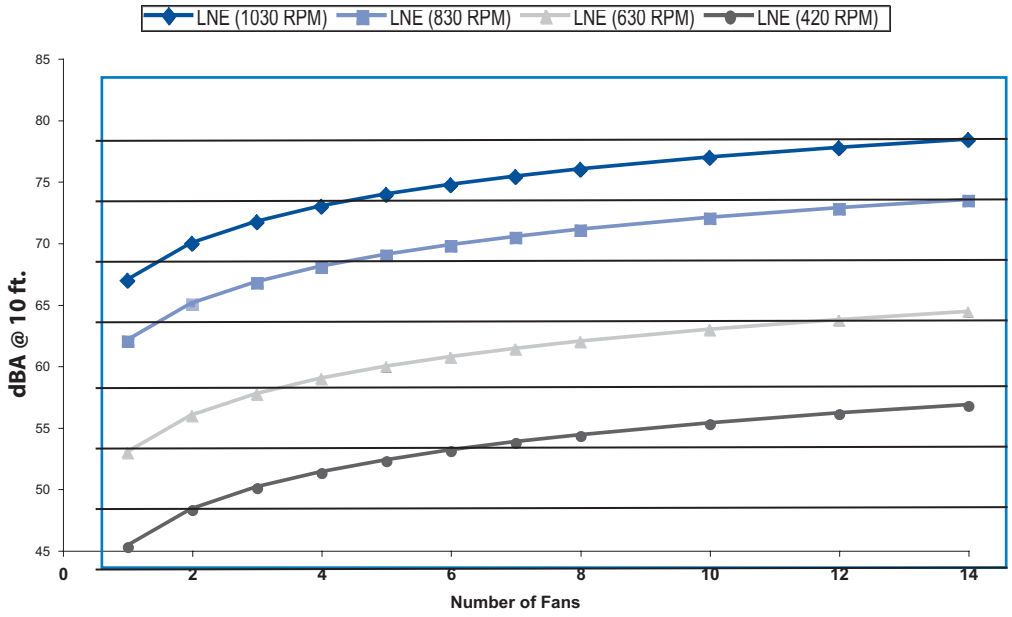
Model Selection
Selecting the right Larkin VSEC Series unit for your needs is easier than you think, and is just as easy as selecting a standard unit.

Simply use Tables 31-33 to find the model and fins per inch required to meet your capacity needs.

Selecting condensers with specific sound or energy levels
The variable speed nature allows selection to meet maximum sound or energy usage levels.

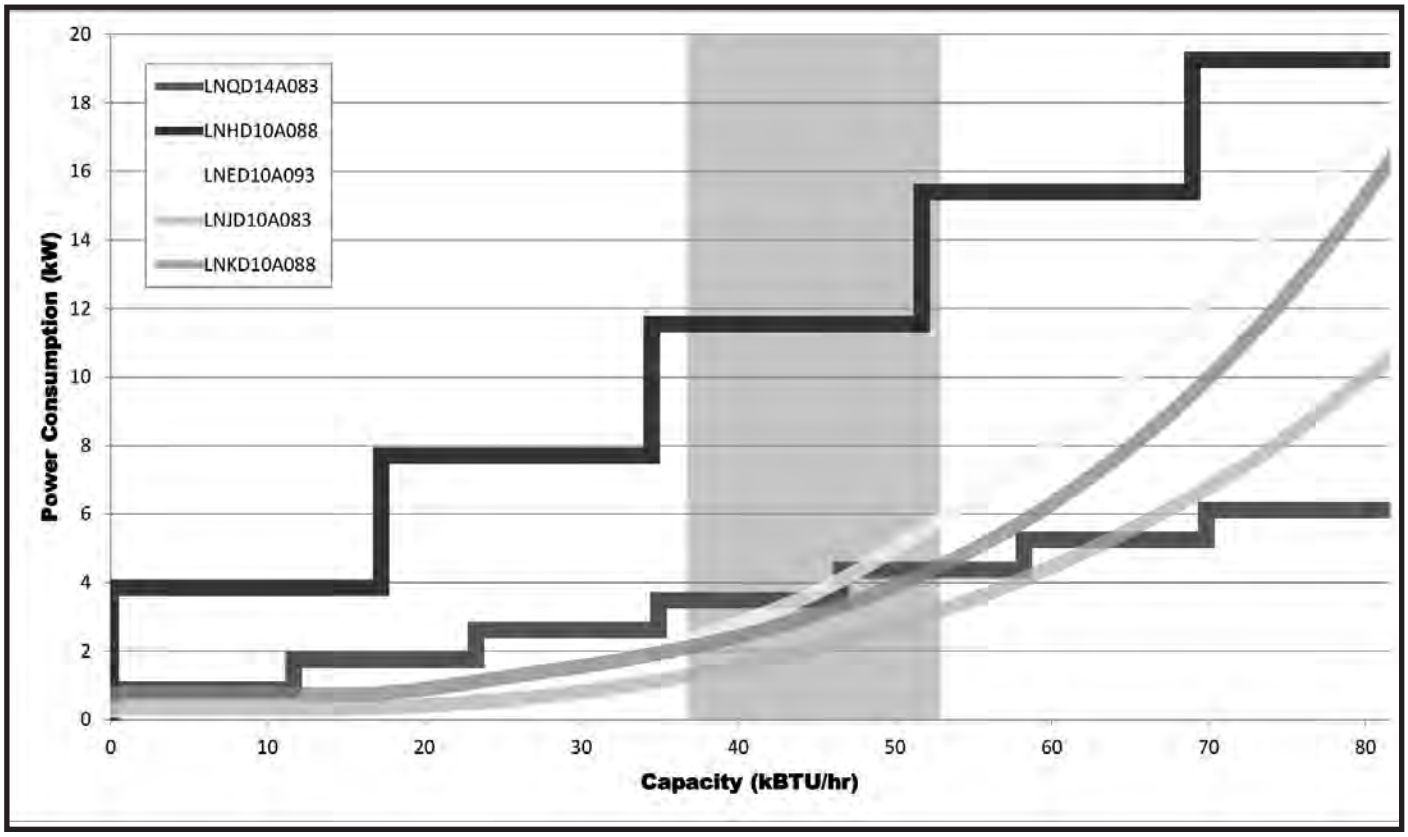
To select condensers with these goals in mind, please contact your sales representative. They will be able to help you select the appropriate model for your specific requirements.

EC Sound Data (dBA @ 10 ft.)



Fans	LNE 1030 RPM	LNE 830 RPM	LNE 630 RPM	LNE 420 RPM
1	66.9	62.0	52.9	45.3
2	69.9	65.0	55.9	48.3
3	71.7	66.8	57.7	50.1
4	72.9	68.0	58.9	51.3
5	73.9	69.0	59.9	52.3
6	74.7	69.8	60.7	53.1
7	75.4	70.5	61.4	53.8
8	75.9	71.0	61.9	54.3
10	76.9	72.0	62.9	55.3
12	77.7	72.8	63.7	56.1
14	78.4	73.5	64.4	56.8

Power Consumption & Variable Speed Operation
Larkin VSEC vs. 540 and 1140 Series



10 Fan EC Motor Sound Production at Various Loads								
Percent of Max. Load	30%	40%	50%	60%	70%	80%	90%	100%
RPM	215	313	407	511	630	748	892	1030
dBA @ 10 ft	49.5	51.8	55	58.4	62.9	67.8	74.8	76.9

Table 23. LNJ Models, 830 RPM, 1.1 kW, 30" Fan Diameter

Model	R22/R410A MBH / 1° TD				R404A / R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNJ-S01-A007	5.9	**6.7**	7.3	7.9	5.8	**6.6**	7.2	7.7
LNJ-S01-A008	7.2	**8.0**	8.6	9.0	7.0	**7.8**	8.4	8.8
LNJ-S02-A010	9.1	**10.1**	11.0	11.7	8.9	**9.9**	10.8	11.4
LNJ-S02-A014	12.6	**13.9**	14.9	15.7	12.4	**13.6**	14.6	15.4
LNJ-S02-A016	15.0	**16.1**	16.8	17.6	14.7	**15.8**	16.5	17.3
LNJ-S03-A021	18.9	**20.9**	22.3	23.4	18.6	**20.5**	21.8	23.0
LNJ-S03-A024	22.5	**24.2**	25.2	26.9	22.0	**23.8**	24.7	26.3
LNJ-S04-A028	25.3	**27.8**	29.7	31.2	24.8	**27.3**	29.1	30.6
LNJ-S04-A032	30.0	**32.3**	33.6	35.2	29.4	**31.7**	32.9	34.5
LNJ-S05-A035	32.1	**35.5**	37.4	39.0	31.4	**34.7**	36.6	38.2
LNJ-S05-A042	38.4	**41.6**	43.4	44.7	37.7	**40.8**	42.5	43.8
LNJ-S06-A050	46.1	**49.9**	52.1	53.6	45.2	**48.9**	51.0	52.6
LNJ-S07-A055	50.5	**55.0**	58.0	60.2	49.5	**53.9**	56.8	59.0
LNJ-D04-A020	18.1	**20.2**	22.0	23.3	17.7	**19.8**	21.5	22.9
LNJ-D04-A028	25.3	**27.8**	29.7	31.4	24.8	**27.3**	29.1	30.7
LNJ-D04-A032	30.0	**32.3**	33.6	35.2	29.4	**31.7**	32.9	34.5
LNJ-D06-A042	37.9	**41.8**	44.5	46.9	37.2	**40.9**	43.7	45.9
LNJ-D06-A048	45.0	**48.4**	50.4	53.7	44.1	**47.5**	49.4	52.7
LNJ-D08-A056	50.6	**55.7**	59.4	62.4	49.6	**54.6**	58.3	61.1
LNJ-D08-A065	60.0	**64.6**	67.2	70.4	58.8	**63.3**	65.8	69.0
LNJ-D10-A071	64.2	**70.9**	74.7	78.0	62.9	**69.5**	73.2	76.5
LNJ-D10-A083	76.9	**83.1**	86.8	89.4	75.3	**81.5**	85.0	87.6
LNJ-D12-A100	90.4	**99.8**	104.1	107.3	92.2	**97.8**	102.0	105.1
LNJ-D14-A110	101.1	**110.0**	116.0	120.3	99.1	**107.9**	113.7	117.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 24. LNJ Models, 830 RPM, 1.1 kW, 30" Fan Diameter

Model	R407A / R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNJ-S01-A007	5.7	**6.5**	7.0	7.6	5.5	**6.2**	6.8	7.2
LNJ-S01-A008	6.9	**7.7**	8.2	8.6	6.6	**7.3**	7.9	8.3
LNJ-S02-A010	8.7	**9.7**	10.6	11.2	8.3	**9.3**	10.1	10.8
LNJ-S02-A014	12.1	**13.4**	14.3	15.1	11.6	**12.8**	13.7	14.4
LNJ-S02-A016	14.4	**15.5**	16.1	16.9	13.8	**14.9**	15.5	16.2
LNJ-S03-A021	18.2	**20.1**	21.4	22.5	17.5	**19.2**	20.5	21.6
LNJ-S03-A024	21.6	**23.3**	24.2	25.8	20.7	**22.3**	23.2	24.8
LNJ-S04-A028	24.3	**26.7**	28.5	30.0	23.3	**25.6**	27.4	28.7
LNJ-S04-A032	28.8	**31.0**	32.3	33.8	27.6	**29.8**	31.0	32.4
LNJ-S05-A035	30.8	**34.0**	35.9	37.5	29.6	**32.7**	34.4	35.9
LNJ-S05-A042	36.9	**39.9**	41.7	42.9	35.4	**38.3**	40.0	41.2
LNJ-S06-A050	44.3	**47.9**	50.0	51.5	42.5	**45.9**	48.0	49.4
LNJ-S07-A055	48.5	**52.8**	55.7	57.8	46.6	**50.7**	53.4	55.4
LNJ-D04-A020	17.4	**19.4**	21.1	22.4	16.7	**18.6**	20.2	21.5
LNJ-D04-A028	24.3	**26.7**	28.5	30.1	23.3	**25.6**	27.4	28.9
LNJ-D04-A032	28.8	**31.0**	32.3	33.8	27.6	**29.8**	30.9	32.4
LNJ-D06-A042	36.4	**40.1**	42.8	45.0	34.9	**38.5**	41.0	43.2
LNJ-D06-A048	43.2	**46.5**	48.4	51.6	41.4	**44.6**	46.4	49.5
LNJ-D08-A056	48.6	**53.5**	57.1	59.9	46.6	**51.3**	54.8	57.5
LNJ-D08-A065	57.6	**62.1**	64.5	67.6	55.3	**59.5**	61.9	64.8
LNJ-D10-A071	61.6	**68.1**	71.8	74.9	59.1	**65.3**	68.9	71.9
LNJ-D10-A083	73.8	**79.8**	83.3	85.8	70.8	**76.6**	79.9	82.3
LNJ-D12-A100	90.4	**95.8**	99.9	103.0	86.7	**91.9**	95.9	98.8
LNJ-D14-A110	97.1	**105.7**	111.4	115.6	93.1	**101.4**	106.9	110.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 25. LNJ Models, 830 RPM, 1.1 kW, 30" Fan Diameter

Model	R448A / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNJ-S01-A007	5.8	**6.5**	7.1	7.6
LNJ-S01-A008	7.0	**7.7**	8.3	8.7
LNJ-S02-A010	8.8	**9.8**	10.7	11.3
LNJ-S02-A014	12.3	**13.5**	14.4	15.2
LNJ-S02-A016	14.6	**15.7**	16.3	17.1
LNJ-S03-A021	18.4	**20.3**	21.6	22.7
LNJ-S03-A024	21.8	**23.5**	24.4	26.1
LNJ-S04-A028	24.5	**27.0**	28.8	30.3
LNJ-S04-A032	29.1	**31.4**	32.6	34.1
LNJ-S05-A035	31.1	**34.4**	36.3	37.9
LNJ-S05-A042	37.3	**40.4**	42.1	43.4
LNJ-S06-A050	44.8	**48.4**	50.5	52.0
LNJ-S07-A055	49.0	**53.4**	56.3	58.4
LNJ-D04-A020	17.6	**19.6**	21.3	22.6
LNJ-D04-A028	24.5	**27.0**	28.8	30.4
LNJ-D04-A032	29.1	**31.4**	32.6	34.1
LNJ-D06-A042	36.8	**40.5**	43.2	45.5
LNJ-D06-A048	43.6	**47.0**	48.9	52.2
LNJ-D08-A056	49.1	**54.0**	57.7	60.5
LNJ-D08-A065	58.2	**62.7**	65.2	68.3
LNJ-D10-A071	62.2	**68.8**	72.5	75.7
LNJ-D10-A083	74.6	**80.7**	84.2	86.7
LNJ-D12-A100	91.3	**96.8**	101.0	104.1
LNJ-D14-A110	98.1	**106.8**	112.6	116.8

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 26. LNJ Models, 1.1 kW, 30" Fan Diameter

Model	CFM	230/3/60			460/3/60			Unit kW	Conn. (in)	Max. No. of Feeds	Approx. Net. Wt. (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD				
LNJ-S01-A007	8400	6.6	15.0	25.0	3.3	15.0	15.0	1.1	1 3/8	7	340
LNJ-S01-A008	8000	6.6	15.0	25.0	3.3	15.0	15.0	1.1	1 3/8	14	370
LNJ-S02-A010	17500	13.2	15.0	30.0	6.6	15.0	15.0	2.1	1 3/8	14	600
LNJ-S02-A014	16700	13.2	15.0	30.0	6.6	15.0	15.0	2.1	1 5/8	21	650
LNJ-S02-A016	16100	13.2	15.0	30.0	6.6	15.0	15.0	2.1	2 1/8	28	700
LNJ-S03-A021	25100	19.8	21.5	35.0	9.9	15.0	15.0	3.2	2 1/8	21	960
LNJ-S03-A024	24100	19.8	21.5	35.0	9.9	15.0	15.0	3.2	2 1/8	28	1030
LNJ-S04-A028	32800	26.4	28.1	45.0	13.2	15.0	20.0	4.2	2 1/8	21	1250
LNJ-S04-A032	31200	26.4	28.1	45.0	13.2	15.0	20.0	4.2	2 5/8	28	1350
LNJ-S05-A035	41000	33.0	34.7	50.0	16.5	20.0	25.0	5.2	2 5/8	21	1570
LNJ-S05-A042	39100	33.0	34.7	50.0	16.5	20.0	25.0	5.2	2 5/8	28	1700
LNJ-S06-A050	46900	39.6	41.3	50.0	19.8	20.6	25.0	6.3	2 5/8	28	2020
LNJ-S07-A055	54700	46.2	47.9	60.0	23.1	23.9	30.0	7.3	2 @ 2 5/8	28	2320
LNJ-D04-A020	35000	26.4	28.1	45.0	13.2	15.0	20.0	4.2	2 @ 1 3/8	28	1280
LNJ-D04-A028	33500	26.4	28.1	45.0	13.2	15.0	20.0	4.2	2 @ 1 5/8	42	1380
LNJ-D04-A032	32100	26.4	28.1	45.0	13.2	15.0	20.0	4.2	2 @ 2 1/8	56	1480
LNJ-D06-A042	50200	39.6	41.3	50.0	19.8	20.6	25.0	6.3	2 @ 2 1/8	42	2060
LNJ-D06-A048	48200	39.6	41.3	50.0	19.8	20.6	25.0	6.3	2 @ 2 1/8	56	2210
LNJ-D08-A056	65600	52.8	54.5	70.0	26.4	27.2	35.0	8.4	2 @ 2 1/8	42	2720
LNJ-D08-A065	62500	52.8	54.5	70.0	26.4	27.2	35.0	8.4	2 @ 2 5/8	56	2920
LNJ-D10-A071	82000	66.0	67.7	80.0	33.0	33.8	40.0	10.4	2 @ 2 5/8	42	3400
LNJ-D10-A083	78100	66.0	67.7	80.0	33.0	33.8	40.0	10.4	2 @ 2 5/8	56	3650
LNJ-D12-A100	93700	79.2	80.9	90.0	39.6	40.4	45.0	12.5	2 @ 2 5/8	56	4360
LNJ-D14-A110	109300	92.4	94.1	110.0	46.2	47.0	50.0	14.6	4 @ 2 5/8	56	5060

Table 27. LNK Models, 1140 RPM, 2.0 kW, 30" Fan Diameter

Model	R22/R410A MBH / 1° TD				R404A / R507 MBH/ 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNK-S01-A007	6.4	**7.3**	8.0	8.6	6.3	**7.2**	7.9	8.5
LNK-S01-A009	7.8	**8.7**	9.5	10.0	7.6	**8.6**	9.3	9.8
LNK-S02-A011	9.6	**10.7**	11.7	12.4	9.4	**10.5**	11.5	12.1
LNK-S02-A015	13.1	**14.5**	15.6	16.3	12.8	**14.2**	15.3	16.0
LNK-S02-A017	15.7	**17.1**	18.1	19.2	15.3	**16.7**	17.7	18.8
LNK-S03-A022	19.7	**21.8**	23.4	24.5	19.3	**21.4**	22.9	24.0
LNK-S03-A026	23.5	**25.7**	27.1	29.9	23.0	**25.1**	26.6	29.3
LNK-S04-A029	26.2	**29.1**	31.2	32.6	25.7	**28.5**	30.5	32.0
LNK-S04-A034	31.4	**34.2**	36.1	38.3	30.7	**33.5**	35.4	37.6
LNK-S05-A037	33.6	**37.1**	39.3	41.3	32.9	**36.4**	38.5	40.5
LNK-S05-A044	40.5	**44.0**	46.0	48.6	39.7	**43.1**	45.1	47.6
LNK-S06-A053	48.6	**52.8**	55.2	58.3	47.7	**51.7**	54.1	57.1
LNK-S07-A061	55.4	**61.0**	64.7	67.5	54.3	**59.8**	63.5	66.2
LNK-D04-A021	19.2	**21.4**	23.4	24.8	18.8	**21.0**	22.9	24.3
LNK-D04-A029	26.2	**29.1**	31.2	32.6	25.7	**28.5**	30.6	32.0
LNK-D04-A034	31.4	**34.2**	36.1	38.3	30.7	**33.5**	35.4	37.6
LNK-D06-A044	39.4	**43.6**	46.7	48.9	38.6	**42.8**	45.8	47.9
LNK-D06-A051	47.0	**51.3**	54.2	59.8	46.1	**50.3**	53.1	58.7
LNK-D08-A058	52.5	**58.2**	62.3	65.3	51.4	**57.0**	61.1	63.9
LNK-D08-A068	62.7	**68.4**	72.3	76.7	61.5	**67.1**	70.8	75.1
LNK-D10-A074	67.1	**74.2**	78.5	82.6	65.7	**72.7**	76.9	80.9
LNK-D10-A088	81.0	**88.0**	92.1	97.2	79.4	**86.2**	90.2	95.2
LNK-D12-A106	97.2	**105.6**	110.5	116.6	95.3	**103.5**	108.3	114.2
LNK-D14-A122	110.8	**121.9**	129.5	135.0	108.6	**119.5**	126.9	132.4

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 28. LNK Models, 1140 RPM, 2.0 kW, 30" Fan Diameter

Model	R407A/407F* MBH / 1° TD				407C* MBH/ 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNK-S01-A007	6.1	**7.0**	7.7	8.3	5.9	**6.7**	7.4	8.0
LNK-S01-A009	7.5	**8.4**	9.1	9.6	7.2	**8.1**	8.7	9.2
LNK-S02-A011	9.2	**10.3**	11.2	11.9	8.8	**9.9**	10.8	11.4
LNK-S02-A015	12.6	**14.0**	15.0	15.7	12.1	**13.4**	14.4	15.0
LNK-S02-A017	15.0	**16.4**	17.4	18.4	14.4	**15.7**	16.6	17.6
LNK-S03-A022	18.9	**21.0**	22.4	23.5	18.1	**20.1**	21.5	22.5
LNK-S03-A026	22.6	**24.6**	26.0	28.8	21.7	**23.6**	25.0	27.6
LNK-S04-A029	25.2	**28.0**	29.9	31.3	24.1	**26.8**	28.7	30.1
LNK-S04-A034	30.1	**32.9**	34.7	36.8	28.9	**31.5**	33.3	35.3
LNK-S05-A037	32.2	**35.6**	37.7	39.7	30.9	**34.2**	36.2	38.0
LNK-S05-A044	38.9	**42.3**	44.2	46.7	37.3	**40.5**	42.4	44.8
LNK-S06-A053	46.7	**50.7**	53.1	56.0	44.8	**48.6**	50.9	53.7
LNK-S07-A061	53.2	**58.6**	62.2	64.9	51.1	**56.2**	59.7	62.2
LNK-D04-A021	18.4	**20.5**	22.4	23.8	17.7	**19.7**	21.5	22.8
LNK-D04-A029	25.2	**28.0**	29.9	31.3	24.1	**26.8**	28.7	30.1
LNK-D04-A034	30.1	**32.9**	34.7	36.8	28.9	**31.5**	33.3	35.3
LNK-D06-A044	37.8	**41.9**	44.9	47.0	36.3	**40.2**	43.1	45.1
LNK-D06-A051	45.2	**49.3**	52.0	57.5	43.3	**47.3**	49.9	55.2
LNK-D08-A058	50.4	**55.9**	59.9	62.7	48.3	**53.6**	57.4	60.1
LNK-D08-A068	60.2	**65.7**	69.4	73.6	57.8	**63.0**	66.6	70.6
LNK-D10-A074	64.4	**71.2**	75.4	79.3	61.8	**68.3**	72.3	76.0
LNK-D10-A088	77.8	**84.5**	88.4	93.3	74.6	**81.1**	84.8	89.5
LNK-D12-A106	93.4	**101.4**	106.1	112.0	89.6	**97.3**	101.8	107.4
LNK-D14-A122	106.5	**117.1**	124.4	129.7	102.1	**112.3**	119.3	124.4

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 29. LNK Models, 1140 RPM, 2.0 kW, 30" Fan Diameter

Model	R448A / R449A* MBH/ 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNK-S01-A007	6.2	**7.1**	7.8	8.4
LNK-S01-A009	7.6	**8.5**	9.2	9.7
LNK-S02-A011	9.3	**10.4**	11.3	12.0
LNK-S02-A015	12.7	**14.1**	15.1	15.8
LNK-S02-A017	15.2	**16.6**	17.5	18.6
LNK-S03-A022	19.1	**21.2**	22.7	23.7
LNK-S03-A026	22.8	**24.9**	26.3	29.0
LNK-S04-A029	25.4	**28.2**	30.2	31.7
LNK-S04-A034	30.4	**33.2**	35.1	37.2
LNK-S05-A037	32.6	**36.0**	38.1	40.1
LNK-S05-A044	39.3	**42.7**	44.7	47.1
LNK-S06-A053	47.2	**51.2**	53.6	56.5
LNK-S07-A061	53.8	**59.2**	62.8	65.5
LNK-D04-A021	18.6	**20.8**	22.7	24.0
LNK-D04-A029	25.4	**28.2**	30.3	31.7
LNK-D04-A034	30.4	**33.2**	35.1	37.2
LNK-D06-A044	38.2	**42.3**	45.3	47.5
LNK-D06-A051	45.6	**49.8**	52.6	58.1
LNK-D08-A058	50.9	**56.5**	60.5	63.3
LNK-D08-A068	60.9	**66.4**	70.1	74.4
LNK-D10-A074	65.1	**72.0**	76.2	80.1
LNK-D10-A088	78.6	**85.4**	89.3	94.3
LNK-D12-A106	94.3	**102.4**	107.2	113.1
LNK-D14-A122	107.5	**118.3**	125.7	131.1

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 30. LNK Models, 1140 RPM, 2.0 kW, 30" Fan Diameter

Model	CFM	230/3/60			460/3/60			Unit kW	Conn. (in)	Max. No. of Feeds	Approx. Net. Wt. (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD				
LNK-S01-A007	9900	6.6	15.0	25.0	3.3	15.0	15.0	2.0	1 3/8	7	340
LNK-S01-A009	9500	6.6	15.0	25.0	3.3	15.0	15.0	2.0	1 3/8	14	370
LNK-S02-A011	20500	13.2	15.0	30.0	6.6	15.0	15.0	3.9	1 3/8	14	600
LNK-S02-A015	19800	13.2	15.0	30.0	6.6	15.0	15.0	3.9	1 5/8	21	650
LNK-S02-A017	19000	13.2	15.0	30.0	6.6	15.0	15.0	3.9	2 1/8	28	700
LNK-S03-A022	29700	19.8	21.5	35.0	9.9	15.0	15.0	5.9	2 1/8	21	960
LNK-S03-A026	28500	19.8	21.5	35.0	9.9	15.0	15.0	5.9	2 1/8	28	1030
LNK-S04-A029	38600	26.4	28.1	45.0	13.2	15.0	20.0	7.8	2 1/8	21	1250
LNK-S04-A034	37000	26.4	28.1	45.0	13.2	15.0	20.0	7.8	2 5/8	28	1350
LNK-S05-A037	48300	33.0	34.7	50.0	16.5	20.0	25.0	9.7	2 5/8	21	1570
LNK-S05-A044	46200	33.0	34.7	50.0	16.5	20.0	25.0	9.7	2 5/8	28	1700
LNK-S06-A053	55400	39.6	41.3	50.0	19.8	20.6	25.0	11.7	2 5/8	28	2020
LNK-S07-A061	64700	46.2	47.9	60.0	23.1	23.9	30.0	13.6	2 @ 2 5/8	28	2320
LNK-D04-A021	41000	26.4	28.1	45.0	13.2	15.0	20.0	7.8	2 @ 1 3/8	28	1280
LNK-D04-A029	39600	26.4	28.1	45.0	13.2	15.0	20.0	7.8	2 @ 1 5/8	42	1380
LNK-D04-A034	38100	26.4	28.1	45.0	13.2	15.0	20.0	7.8	2 @ 2 1/8	56	1480
LNK-D06-A044	59400	39.6	41.3	50.0	19.8	20.6	25.0	11.7	2 @ 2 1/8	42	2060
LNK-D06-A051	57100	39.6	41.3	50.0	19.8	20.6	25.0	11.7	2 @ 2 1/8	56	2210
LNK-D08-A058	77200	52.8	54.5	70.0	26.4	27.2	35.0	15.5	2 @ 2 1/8	42	2720
LNK-D08-A068	73900	52.8	54.5	70.0	26.4	27.2	35.0	15.5	2 @ 2 5/8	56	2920
LNK-D10-A074	96500	66.0	67.7	80.0	33.0	33.8	40.0	19.4	2 @ 2 5/8	42	3400
LNK-D10-A088	92400	66.0	67.7	80.0	33.0	33.8	40.0	19.4	2 @ 2 5/8	56	3650
LNK-D12-A106	110900	79.2	80.9	90.0	39.6	40.4	45.0	23.3	2 @ 2 5/8	56	4360
LNK-D14-A122	129400	92.4	94.1	110.0	46.2	47.0	50.0	27.2	4 @ 2 5/8	56	5060

Table 31. LNE Models, 2.0 kW, 31.5" Fan Diameter

Model	R22 / R-410A MBH / 1° TD				R404/R507 MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNE-S01-A008	6.8	**7.7**	8.5	9.1	6.6	**7.6**	8.3	9.0
LNE-S01-A009	8.3	**9.3**	10.0	10.6	8.1	**9.1**	9.8	10.4
LNE-S02-A011	10.2	**11.3**	12.4	13.1	10.0	**11.1**	12.1	12.9
LNE-S02-A015	13.9	**15.4**	16.5	17.3	13.6	**15.1**	16.2	17.0
LNE-S02-A018	16.6	**18.1**	19.2	20.3	16.3	**17.8**	18.8	19.9
LNE-S03-A023	20.9	**23.1**	24.8	25.9	20.4	**22.7**	24.3	25.4
LNE-S03-A027	24.9	**27.2**	28.7	31.7	24.4	**26.7**	28.2	31.1
LNE-S04-A031	27.8	**30.8**	33.0	34.6	27.2	**30.2**	32.4	33.9
LNE-S04-A036	33.2	**36.3**	38.3	40.6	32.6	**35.5**	37.5	39.8
LNE-S05-A039	35.6	**39.3**	41.6	43.8	34.9	**38.5**	40.8	42.9
LNE-S05-A047	43.0	**46.6**	48.8	51.5	42.1	**45.7**	47.8	50.5
LNE-S06-A056	51.6	**56.0**	58.6	61.8	50.5	**54.8**	57.4	60.5
LNE-S07-A065	58.7	**64.6**	68.6	71.6	57.6	**63.3**	67.3	70.2
LNE-D04-A023	20.4	**22.7**	24.8	26.2	19.9	**22.2**	24.3	25.7
LNE-D04-A031	27.8	**30.8**	33.1	34.6	27.2	**30.2**	32.4	33.9
LNE-D04-A036	33.2	**36.3**	38.3	40.6	32.6	**35.5**	37.5	39.8
LNE-D06-A046	41.7	**46.2**	49.5	51.9	40.9	**45.3**	48.6	50.8
LNE-D06-A054	49.8	**54.4**	57.4	63.4	48.8	**53.3**	56.3	62.2
LNE-D08-A062	55.6	**61.7**	66.1	69.2	54.5	**60.5**	64.7	67.8
LNE-D08-A073	66.5	**72.5**	76.6	81.3	65.2	**71.1**	75.1	79.7
LNE-D10-A079	71.1	**78.6**	83.2	87.5	69.7	**77.0**	81.6	85.8
LNE-D10-A093	85.9	**93.3**	97.6	103.0	84.2	**91.4**	95.7	100.9
LNE-D12-A112	103.1	**111.9**	117.1	123.6	101.0	**109.7**	114.8	121.1
LNE-D14-A129	117.5	**129.2**	137.2	143.1	115.2	**126.7**	134.5	140.3

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

Table 32. LNE Models, 2.0 kW, 31.5" Fan Diameter

Model	R407A/R407F* MBH / 1° TD				R407C* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI	8 FPI	10 FPI	12 FPI	14 FPI
LNE-S01-A008	6.5	**7.4**	8.2	8.8	6.2	**7.1**	7.8	8.4
LNE-S01-A009	7.9	**8.9**	9.6	10.2	7.6	**8.5**	9.2	9.7
LNE-S02-A011	9.8	**10.9**	11.9	12.6	9.4	**10.4**	11.4	12.1
LNE-S02-A015	13.3	**14.8**	15.9	16.6	12.8	**14.2**	15.2	15.9
LNE-S02-A018	15.9	**17.4**	18.4	19.5	15.3	**16.7**	17.6	18.7
LNE-S03-A023	20.0	**22.2**	23.8	24.9	19.2	**21.3**	22.8	23.9
LNE-S03-A027	23.9	**26.1**	27.6	30.5	23.0	**25.1**	26.5	29.2
LNE-S04-A031	26.7	**29.6**	31.7	33.2	25.6	**28.4**	30.4	31.9
LNE-S04-A036	31.9	**34.8**	36.8	39.0	30.6	**33.4**	35.3	37.4
LNE-S05-A039	34.2	**37.8**	40.0	42.0	32.8	**36.2**	38.3	40.3
LNE-S05-A047	41.3	**44.8**	46.9	49.5	39.6	**43.0**	45.0	47.5
LNE-S06-A056	49.5	**53.8**	56.2	59.3	47.5	**51.6**	53.9	56.9
LNE-S07-A065	56.4	**62.1**	65.9	68.8	54.1	**59.5**	63.2	66.0
LNE-D04-A023	19.5	**21.8**	23.8	25.2	18.8	**20.9**	22.8	24.2
LNE-D04-A031	26.7	**29.6**	31.7	33.2	25.6	**28.4**	30.5	31.9
LNE-D04-A036	31.9	**34.8**	36.8	39.0	30.6	**33.4**	35.3	37.4
LNE-D06-A046	40.1	**44.4**	47.6	49.8	38.4	**42.6**	45.6	47.8
LNE-D06-A054	47.9	**52.2**	55.2	61.0	45.9	**50.1**	52.9	58.5
LNE-D08-A062	53.4	**59.2**	63.4	66.4	51.2	**56.8**	60.9	63.7
LNE-D08-A073	63.9	**69.7**	73.6	78.1	61.3	**66.8**	70.6	74.9
LNE-D10-A079	68.3	**75.5**	79.9	84.0	65.5	**72.4**	76.7	80.6
LNE-D10-A093	82.5	**89.6**	93.7	98.9	79.1	**85.9**	89.9	94.9
LNE-D12-A112	99.0	**107.5**	112.5	118.7	94.9	**103.1**	107.9	113.8
LNE-D14-A129	112.8	**124.1**	131.9	137.5	108.2	**119.1**	126.5	131.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

CONDENSER CAPACITY

Table 33. LNE Models, 2.0 kW, 31.5" Fan Diameter

Model	R448A / R449A* MBH / 1° TD			
	8 FPI	10 FPI	12 FPI	14 FPI
LNE-S01-A008	6.6	**7.5**	8.3	8.9
LNE-S01-A009	8.0	**9.0**	9.7	10.3
LNE-S02-A011	9.9	**11.0**	12.0	12.7
LNE-S02-A015	13.5	**14.9**	16.0	16.8
LNE-S02-A018	16.1	**17.6**	18.6	19.7
LNE-S03-A023	20.2	**22.4**	24.0	25.2
LNE-S03-A027	24.2	**26.4**	27.9	30.8
LNE-S04-A031	27.0	**29.9**	32.0	33.6
LNE-S04-A036	32.3	**35.2**	37.2	39.4
LNE-S05-A039	34.5	**38.2**	40.4	42.5
LNE-S05-A047	41.7	**45.2**	47.4	50.0
LNE-S06-A056	50.0	**54.3**	56.8	59.9
LNE-S07-A065	57.0	**62.7**	66.6	69.5
LNE-D04-A023	19.7	**22.0**	24.0	25.5
LNE-D04-A031	27.0	**29.9**	32.1	33.6
LNE-D04-A036	32.3	**35.2**	37.2	39.4
LNE-D06-A046	40.5	**44.9**	48.1	50.3
LNE-D06-A054	48.4	**52.8**	55.7	61.6
LNE-D08-A062	54.0	**59.9**	64.1	67.1
LNE-D08-A073	64.5	**70.4**	74.3	78.9
LNE-D10-A079	69.0	**76.3**	80.7	84.9
LNE-D10-A093	83.3	**90.5**	94.7	99.9
LNE-D12-A112	100.0	**108.6**	113.6	119.9
LNE-D14-A129	114.0	**125.4**	133.2	138.9

BOLD indicates standard model capacity.
* Data based on mid point condensing temperature

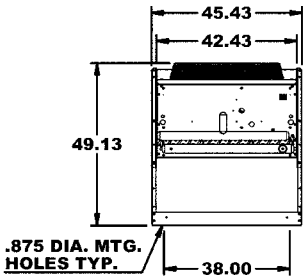
Table 34. LNE Models, 2.0 kW, 31.5" Fan Diameter

Model	CFM	208-230/3/60			460/3/60			Unit kW	Conn. (in.)	Max. Number of Feeds	Approx. Net Weight (lbs)
		FLA	MCA	MOPD	FLA	MCA	MOPD				
LNE-S01-A008	11,000	7.0	15.0	25	3.5	15.0	15	2.0	1 3/8	7	330
LNE-S01-A009	10,500	7.0	15.0	25	3.5	15.0	15	2.0	1 3/8	14	360
LNE-S02-A011	23,400	14.0	20.0	35	7.0	15.0	15	4.0	1 3/8	14	590
LNE-S02-A015	22,000	14.0	20.0	35	7.0	15.0	15	4.0	1 5/8	21	640
LNE-S02-A018	20,900	14.0	20.0	35	7.0	15.0	15	4.0	2 1/8	28	690
LNE-S03-A023	33,100	21.0	22.8	40	10.5	15.0	20	6.0	2 1/8	21	930
LNE-S03-A027	31,400	21.0	22.8	40	10.5	15.0	20	6.0	2 1/8	28	1,010
LNE-S04-A031	42,600	28.0	29.8	45	14.0	15.0	20	8.0	2 1/8	21	1,220
LNE-S04-A036	40,000	28.0	29.8	45	14.0	15.0	20	8.0	2 5/8	28	1,320
LNE-S05-A039	53,200	35.0	36.8	50	17.5	20.0	25	10.0	2 5/8	21	1,520
LNE-S05-A047	50,000	35.0	36.8	50	17.5	20.0	25	10.0	2 5/8	28	1,650
LNE-S06-A056	60,000	42.0	43.8	60	21.0	21.9	30	12.0	2 5/8	28	1,960
LNE-S07-A065	70,000	49.0	50.8	70	24.5	25.4	35	14.0	2 @ 2 5/8	28	2,260
LNE-D04-A023	46,700	28.0	29.8	45	14.0	15.0	20	8.0	2 @ 1 3/8	28	1,290
LNE-D04-A031	44,100	28.0	29.8	45	14.0	15.0	20	8.0	2 @ 1 5/8	42	1,390
LNE-D04-A036	41,800	28.0	29.8	45	14.0	15.0	20	8.0	2 @ 2 1/8	56	1,490
LNE-D06-A046	66,100	42.0	43.8	60	21.0	21.9	30	12.0	2 @ 2 1/8	42	2,060
LNE-D06-A054	62,700	42.0	43.8	60	21.0	21.9	30	12.0	2 @ 2 1/8	56	2,210
LNE-D08-A062	85,100	56.0	57.8	70	28.0	28.9	35	16.0	2 @ 2 1/8	42	2,730
LNE-D08-A073	80,000	56.0	57.8	70	28.0	28.9	35	16.0	2 @ 2 5/8	56	2,930
LNE-D10-A079	106,400	70.0	71.8	90	35.0	35.9	45	20.0	2 @ 2 5/8	42	3,410
LNE-D10-A093	100,100	70.0	71.8	90	35.0	35.9	45	20.0	2 @ 2 5/8	56	3,660
LNE-D12-A112	120,100	84.0	85.8	100	42.0	42.9	50	24.0	2 @ 2 5/8	56	4,370
LNE-D14-A129	140,100	98.0	99.8	110	49.0	49.9	60	28.0	4 @ 2 5/8	56	5,070

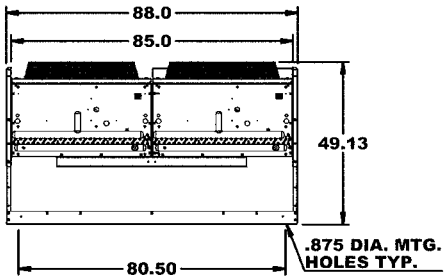
CONDENSER DIMENSIONS

End Views

Single Row of Fans



Double Row of Fans



Side Views

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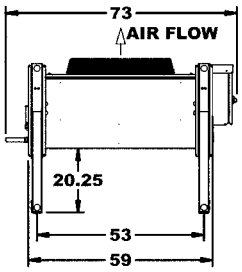

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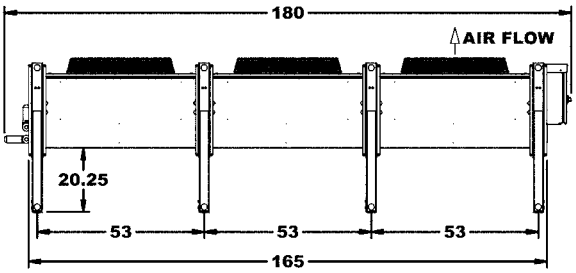

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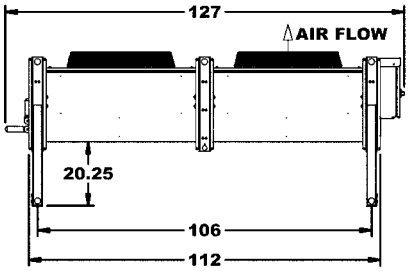

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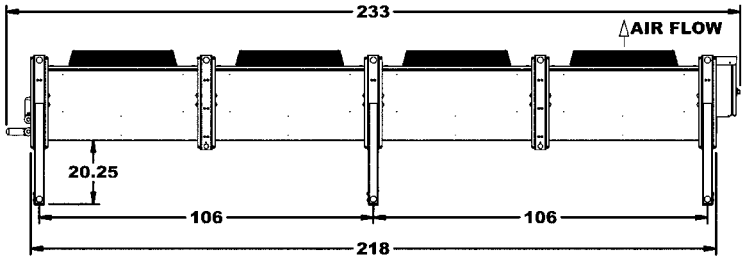

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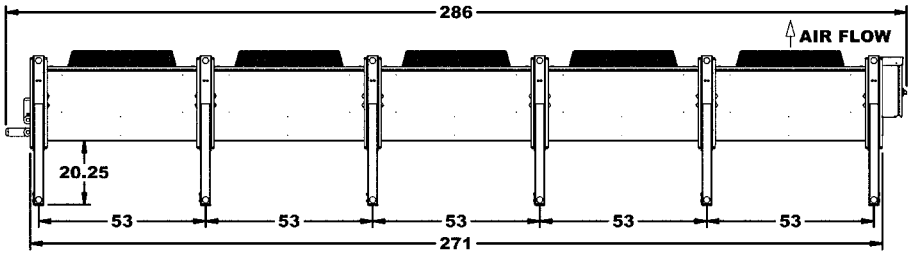

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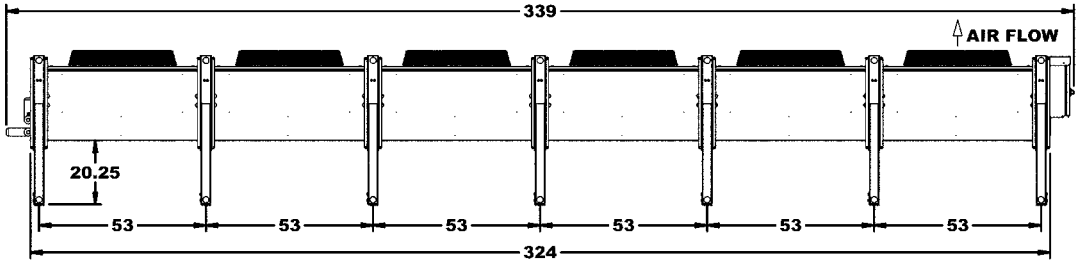
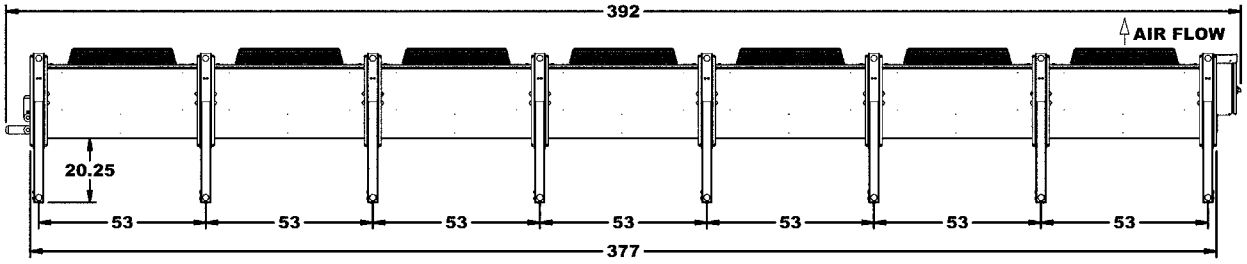


1 x 7
2 x 7



Fan Cycle Control Panels

Fan cycling panels are available to cycle fans on ambient temperature or condensing pressure or custom built control panels can be factory installed to interface with electronic refrigeration controllers.

- All fans are cycled with contactors.
- Condensers with a single row of fans cycle fans separately with one contactor per fan.
- Condensers with two rows of fans are typically cycled in pairs, with one contactor per pair of fans.
- Fans closest to the header end of the unit are wired to run continuously.
- Standard control circuit voltage is 230 volts. Control circuits with 24 or 115 volts are available on request.
- Control circuits are factory wired to a control circuit terminal board for convenient single point field wiring.
- Standard control circuits require an external power supply for powering control circuit (by others).
- A control circuit transformer is available on 460 volt condensers as a factory mounted option to provide power to the control circuit.

Ambient Fan Cycle

Condenser fans are controlled by ambient temperature using electronic temperature controls. Ambient fan cycling is recommended for multi-circuited condensers or single circuit condensers where there is little variation in condenser load.

Ambient fan cycling is limited in its ability to control head pressure to mild ambient conditions, see Table 35 for minimum ambients for fan cycling. Full year head pressure control can be obtained by combining ambient fan cycling with another means of head pressure control, such as condenser flooding controls or variable speed. Combining these controls with ambient fan cycling has the additional advantage of reducing the amount of refrigerant required to flood the condenser.

See Table 36 for typical settings for ambient thermostats.

Pressure Fan Cycling

Condenser fans are controlled by pressure switches which monitor condenser pressure. Pressure fan cycling is ideal for those condensers which see a significant change in condenser load. Since the controls sense condensing pressure, they can cycle fans at any ambient temperature, in response to a change in condensing pressure.

An additional pressure switch is available as an option to cycle the fan closest to the header end of the condenser. This option is only recommended for condensers with large variations in condenser load caused by heat reclaim, hot gas defrost or a high percentage of compressor unloading.

Table 35. Minimum Ambient for Fan Cycling

Number of Fans		Design T.D.*				
Single Row	Double Row	30	25	20	15	10
2	4	35	45	55	60	70
3	6	15	30	40	55	65
4	8	0	15	30	45	60
5	10	0	10	20	35	55
6/7	12/14	0	0	10	30	50

*Based on maintaining 90° F minimum condensing temperature.

Table 36. Fan Cycling Thermostat Settings

Number of Fans		Design	Thermostat Setting				
Single Row	Double Rows	T.D.	1	2	3	4	5
2	4	30	60				
		25	65				
		20	70				
		15	75				
		10	80				
3	6	30	60	40			
		25	65	55			
		20	70	60			
		15	75	65			
		10	80	75			
4	8	30	60	50	30		
		25	65	55	40		
		20	70	65	50		
		15	75	70	60		
		10	80	75	70		
5	10	30	60	55	45	30	
		25	65	60	50	35	
		20	70	65	60	40	
		15	75	70	65	55	
		10	80	75	70	65	
6/7	12/14	30	55	50	40	30	25
		25	65	60	55	45	35
		20	70	65	60	50	40
		15	75	70	65	60	50
		10	80	75	70	65	60

Variable Speed

Condenser head pressure control is provided by varying the air flow through the condenser by changing the RPM of the condenser fan. This control package is offered in combination with ambient fan cycling. The fan motor next to the header end of the condenser is the variable speed fan. The remainder of the fans are constant speed and are cycled separately using ambient sensing thermostats. On condensers with two rows of fans, two variable speed fans are provided (one per row) and the remainder of the fans are constant speed and are cycled in pairs. The variable speed control package consists of a special variable speed motor (1140 RPM, single phase) and an electronic speed control which controls the speed of the motor in response to condensing pressure. Fan motor, speed control and all related components are all factory mounted and wired. Two speed controls are provided on units with two rows of fans to allow for separate control of each fan motor.

Splitting Controls

Additional head pressure can be provided by valving off a portion of the condenser circuit and removing that portion from the refrigeration circuit, or splitting the condenser. In addition to providing a means of head pressure control, this control will reduce the amount of refrigerant required to operate the condenser with a flooded head pressure control. Condenser splitting is recommended as a seasonal adjustment controlled by ambient temperature. A pressure switch is also provided as a backup control to prevent high head pressures from occurring during heavy load conditions. On condensers with a single row of fans the control package consists of an ambient sensing thermostat, a pressure switch sensing condensing pressure and a splitting relay. The splitting relay provides a set of dry contacts to control the valves required to split the condenser (valves supplied by others). On condensers with double rows of fans, additional controls and contactors are provided to cycle all of the fans on the side of the condenser which has been split off. Except as noted above, the splitting packages do not control fan cycling. It is recommended that fan cycling be controlled by combining the splitting package with pressure fan cycling.

Control Panels for Electronic Controllers

Custom control panels can often be fabricated to interface with many of the microprocessor based electronic refrigeration controls. These panels often include individual motor fusing, individual fan motor contactors, splitting relays and printed circuit boards to interface with the microprocessor control. Contact the factory with your specific requirements.

Condenser Refrigerant Charge

The normal summer operating charge for condensers is shown in Table 37. This charge can also be used in condensers with fan cycling kits, since added refrigerant is not required for mild weather control. Table 37 also contains the additional refrigerant charge required when using flooded style head pressure controls.

Combining fan cycling with flooded head pressure controls significantly reduces the amount of winter charge required to flood the condenser. Table 39 shows the refrigerant charge required when fan cycling is used in conjunction with a flooded style head pressure control.

Table 37. Refrigerant Charge, Lbs. R-404A for Flooded Condenser

Model*	Refrigerant R404A Charge for summer Operation, Lbs.	Additional Refrigerant R404A Charge Required for Flooded Condenser Operation Lbs. For 20°F TD Minimum Ambient at Condenser				
		+60	+40	+20	+0	-20
1	7	7	9	10	10	10
2	9	9	12	13	14	14
3	9	9	12	13	13	14
4	14	13	17	19	19	20
5	18	17	23	26	27	28
6	21	19	25	28	29	30
7	28	25	33	37	38	40
8	47	44	59	65	68	70
9	65	57	76	84	88	91
10	59	55	73	81	84	87
11	80	72	96	106	111	115
12	95	87	115	128	133	139
13	109	102	136	151	157	163
14	18	17	23	25	27	28
15	27	26	34	38	40	41
16	37	34	45	50	52	54
17	40	39	52	57	60	62
18	53	52	69	77	80	83
19	97	86	114	127	132	138
20	130	114	152	169	176	183
21	116	110	147	163	170	176
22	160	144	192	212	221	230
23	186	176	234	260	271	281
24	219	204	271	301	313	326

* See Model Cross Reference Table #40.

Table 38. Flooded Charge Temperature Difference Factor

Ambient	Design T.D.				
	30°F	25°F	20°F	15°F	10°F
60°F	—	0.29	1.00	1.71	2.43
40°F	0.60	0.80	1.00	1.20	1.40
20°F	0.77	0.88	1.00	1.12	1.23
0°F	0.84	0.92	1.00	1.08	1.16
-20°F	0.87	0.94	1.00	1.06	1.13

Table 39. Refrigerant Charge for Fan Cycling plus Flooded Condenser (lbs. R-404A)

Model*	Summer Charge	25° TD				20° TD				15° TD				10° TD			
		40°F	20°F	0°F	-20°F	40°F	20°F	0°F	-20°F	40°F	20°F	0°F	-20°F	40°F	20°F	0°F	-20°F
1	7	5	7	8	8	6	8	9	9	7	9	10	10	8	10	11	10
2	9	7	10	11	12	9	11	12	13	11	12	13	14	13	14	14	15
3	9	0	5	7	9	3	7	9	10	6	9	11	12	9	12	13	13
4	14	0	6	10	12	4	9	12	14	8	12	14	16	12	15	17	18
5	18	0	9	14	17	5	13	17	20	10	17	21	23	16	22	24	26
6	21	0	0	7	12	0	6	12	16	0	12	17	20	0	18	22	24
7	28	0	0	10	16	0	8	16	22	0	16	23	28	0	23	29	33
8	47	0	0	4	17	0	0	18	29	0	0	32	41	0	0	47	53
9	65	0	0	5	22	0	0	23	37	0	0	41	52	0	0	59	67
10	59	0	0	0	9	0	0	10	26	0	0	29	43	0	0	47	60
11	80	0	0	0	12	0	0	12	33	0	0	34	54	0	0	57	76
12	95	0	0	0	0	0	0	0	26	0	0	0	53	0	0	0	81
13	109	0	0	0	0	0	0	0	16	0	0	0	46	0	0	0	77
14	18	0	9	14	16	5	13	17	19	10	17	21	22	16	22	24	25
15	27	0	13	20	25	7	19	25	29	14	26	30	33	22	32	35	37
16	37	0	17	26	33	10	25	33	38	21	34	40	44	31	42	46	49
17	40	0	1	15	25	0	13	25	34	0	26	35	43	0	38	45	51
18	53	0	1	20	34	0	18	34	46	0	35	48	58	0	53	61	70
19	97	0	0	7	33	0	0	34	56	0	0	61	79	0	0	88	102
20	130	0	0	10	44	0	0	46	74	0	0	82	104	0	0	119	135
21	116	0	0	0	18	0	0	19	51	0	0	54	84	0	0	90	117
22	160	0	0	0	24	0	0	25	67	0	0	72	110	0	0	118	154
23	186	0	0	0	0	0	0	0	53	0	0	0	109	0	0	0	165
24	219	0	0	0	0	0	0	0	31	0	0	0	90	0	0	0	149

* See Model Cross Reference Table #40.

Refrigerant	Multiply charge by:
R404A	1.00
R407A	1.04
R407C	1.05
R407F	1.07
R448A	1.05
R449A	1.05
R410A	1.07
R507A	1.00

Note: For other refrigerants, use the table at the right. For alternate T.D.s, multiply by flooded charge T.D. factors in Table 38.

Table 40. Model Cross Reference

Model Reference	LNH	LNK	LNL	LNJ	LNX	LNQ	LNE
1	LNH-S01-A007	LNK-S01-A007	LNL-S01-A007	LNJ-S01-A007	LNX-S01-A006	LNQ-S01-A005	LNE-S01-A008
2	LNH-S01-A009	LNK-S01-A009	LNL-S01-A008	LNJ-S01-A008	LNX-S01-A008	LNQ-S01-A006	LNE-S01-A009
3	LNH-S02-A011	LNK-S02-A011	LNL-S02-A010	LNJ-S02-A010	LNX-S02-A010	LNQ-S02-A008	LNE-S02-A011
4	LNH-S02-A015	LNK-S02-A015	LNL-S02-A014	LNJ-S02-A014	LNX-S02-A013	LNQ-S02-A010	LNE-S02-A015
5	LNH-S02-A017	LNK-S02-A017	LNL-S02-A016	LNJ-S02-A016	LNX-S02-A015	LNQ-S02-A011	LNE-S02-A018
6	LNH-S03-A022	LNK-S03-A022	LNL-S03-A021	LNJ-S03-A021	LNX-S03-A020	LNQ-S02-A016	LNE-S03-A023
7	LNH-S03-A026	LNK-S03-A026	LNL-S03-A024	LNJ-S03-A024	LNX-S03-A023	LNQ-S03-A017	LNE-S03-A027
8	LNH-S04-A029	LNK-S04-A029	LNL-S04-A028	LNJ-S04-A028	LNX-S04-A026	LNQ-S04-A021	LNE-S04-A031
9	LNH-S04-A034	LNK-S04-A034	LNL-S04-A032	LNJ-S04-A032	LNX-S04-A030	LNQ-S04-A023	LNE-S04-A036
10	LNH-S05-A037	LNK-S05-A037	LNL-S05-A035	LNJ-S05-A035	LNX-S05-A033	LNQ-S05-A026	LNE-S05-A039
11	LNH-S05-A044	LNK-S05-A044	LNL-S05-A042	LNJ-S05-A042	LNX-S05-A038	LNQ-S05-A029	LNE-S05-A047
12	LNH-S06-A053	LNK-S06-A053	LNL-S06-A050	LNJ-S06-A050	LNX-S06-A045	LNQ-S06-A034	LNE-S06-A056
13	LNH-S07-A061	LNK-S07-A061	LNL-S07-A055	LNJ-S07-A055	LNX-S07-A052	LNQ-S07-A042	LNE-S07-A065
14	LNH-D04-A021	LNK-D04-A021	LNL-D04-A020	LNJ-D04-A020	LNX-D04-A020	LNQ-D04-A016	LNE-D04-A023
15	LNH-D04-A029	LNK-D04-A029	LNL-D04-A028	LNJ-D04-A028	LNX-D04-A026	LNQ-D04-A021	LNE-D04-A031
16	LNH-D04-A034	LNK-D04-A034	LNL-D04-A032	LNJ-D04-A032	LNX-D04-A030	LNQ-D04-A023	LNE-D04-A036
17	LNH-D06-A044	LNK-D06-A044	LNL-D06-A042	LNJ-D06-A042	LNX-D06-A039	LNQ-D06-A031	LNE-D06-A046
18	LNH-D06-A051	LNK-D06-A051	LNL-D06-A048	LNJ-D06-A048	LNX-D06-A045	LNQ-D06-A034	LNE-D06-A054
19	LNH-D08-A058	LNK-D08-A058	LNL-D08-A056	LNJ-D08-A056	LNX-D08-A052	LNQ-D08-A041	LNE-D08-A062
20	LNH-D08-A068	LNK-D08-A068	LNL-D08-A065	LNJ-D08-A065	LNX-D08-A061	LNQ-D08-A046	LNE-D08-A073
21	LNH-D10-A074	LNK-D10-A074	LNL-D10-A071	LNJ-D10-A071	LNX-D10-A066	LNQ-D10-A052	LNE-D10-A079
22	LNH-D10-A088	LNK-D10-A088	LNL-D10-A083	LNJ-D10-A083	LNX-D10-A076	LNQ-D10-A057	LNE-D10-A093
23	LNH-D12-A106	LNK-D12-A106	LNL-D12-A100	LNJ-D12-A100	LNX-D12-A091	LNQ-D12-A069	LNE-D12-A112
24	LNH-D14-A122	LNK-D14-A122	LNL-D14-A110	LNJ-D14-A110	LNX-D14-A104	LNQ-D14-A083	LNE-D14-A129

Calculate Refrigerant Charge

Refrigeration operating charges are located in Table 37 for flooded condenser and Table 39 for fan cycling plus flooded condenser.

Charge for flooded condenser = summer charge (Table 37) + additional flooding charge (Table 37) * flooded charge T.D. factor (Table 38)

Charge for fan cycling + flooding = summer charge (Table 39) + additional charge for fan cycling (Table 39)

Example:
Obtain the summer charge for a LNH-S05-A037. What is the flooding charge required to operate this condenser at 0° ambient at a 20°T.D. with R-404A refrigerant? What is the reduction in operating charge if fan cycling is combined with flooding?

Procedure:
From Table 40, obtain the model reference for LNH-S05-A037 as model 10. From Table 37, obtain the summer operating charge for model 10 at 59 lbs. The charge for winter operation with flooded controls is equal to the summer operating charge of 59 lbs. plus the additional charge at 0° ambient (Table 37) of 84 lbs., times the flooded charge T.D. factor (Table 38) of 1.0 for 20°T.D.

Charge for flooded condenser = 59 + (84) * 1.0
= 143 lbs.

The charge for fan cycling plus flooded condenser is obtained using Table 39. Using this table obtain the additional charge for 20°T.D. at 0° ambient, which is 10 lbs. The total charge is the summer charge (59 lbs.) plus the additional charge.

Charge for fan cycle + flooding = 59 + 10
= 69 lbs.

The savings in refrigerant charge = 143 - 69
= 74 lbs.

Diagram 1. Typical Condenser Wiring Diagram With No Fan Cycle Controls

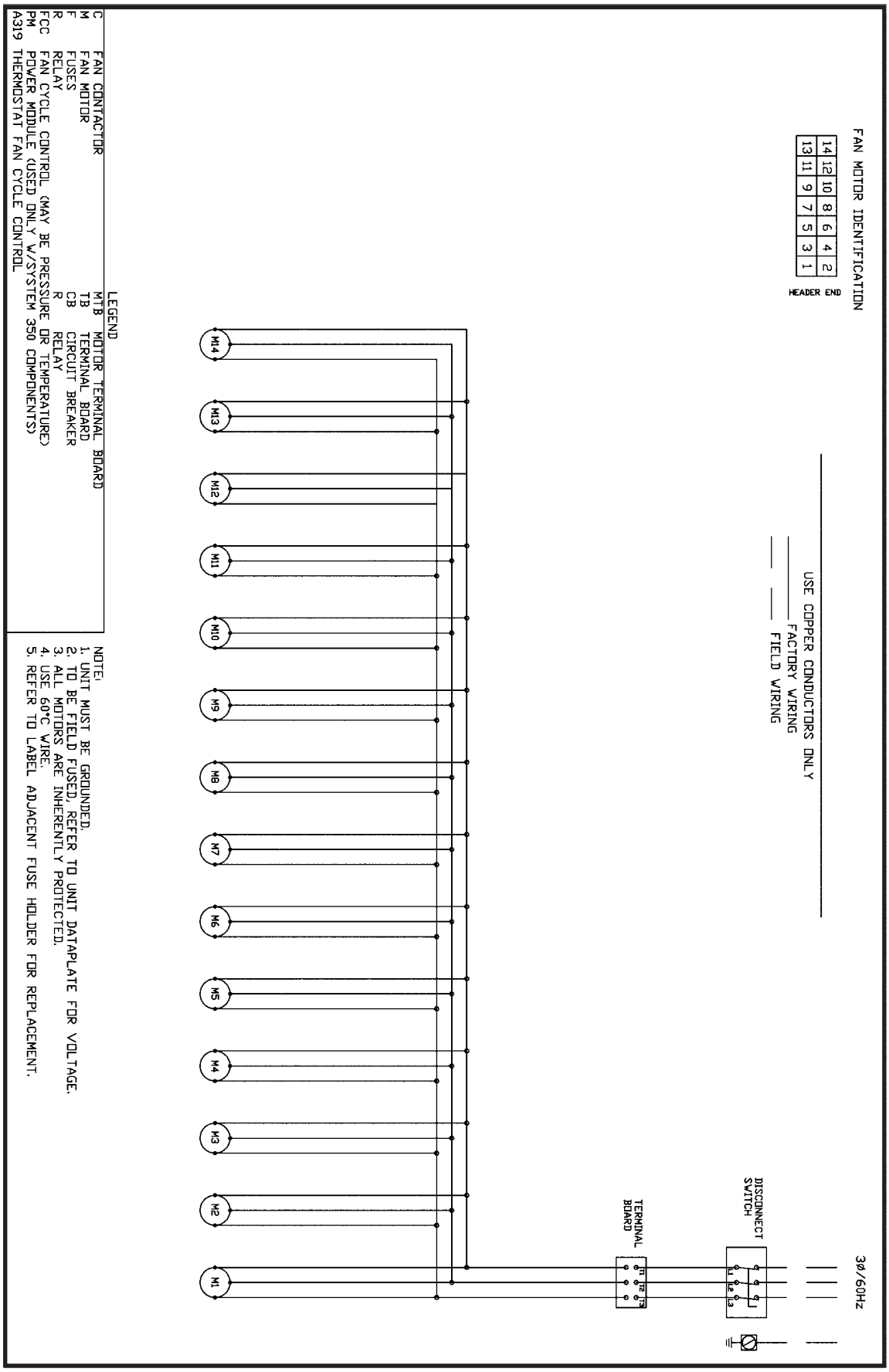
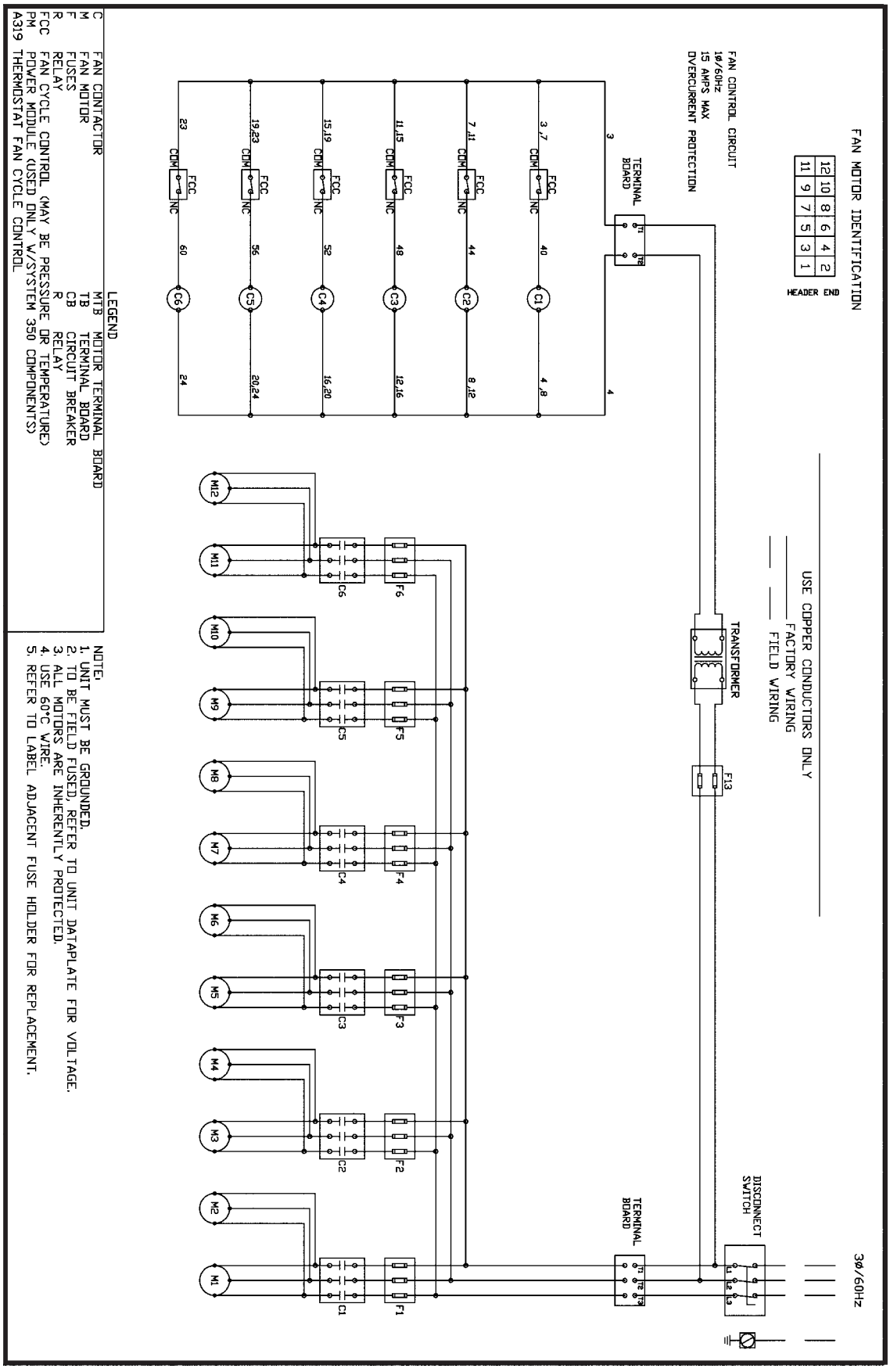
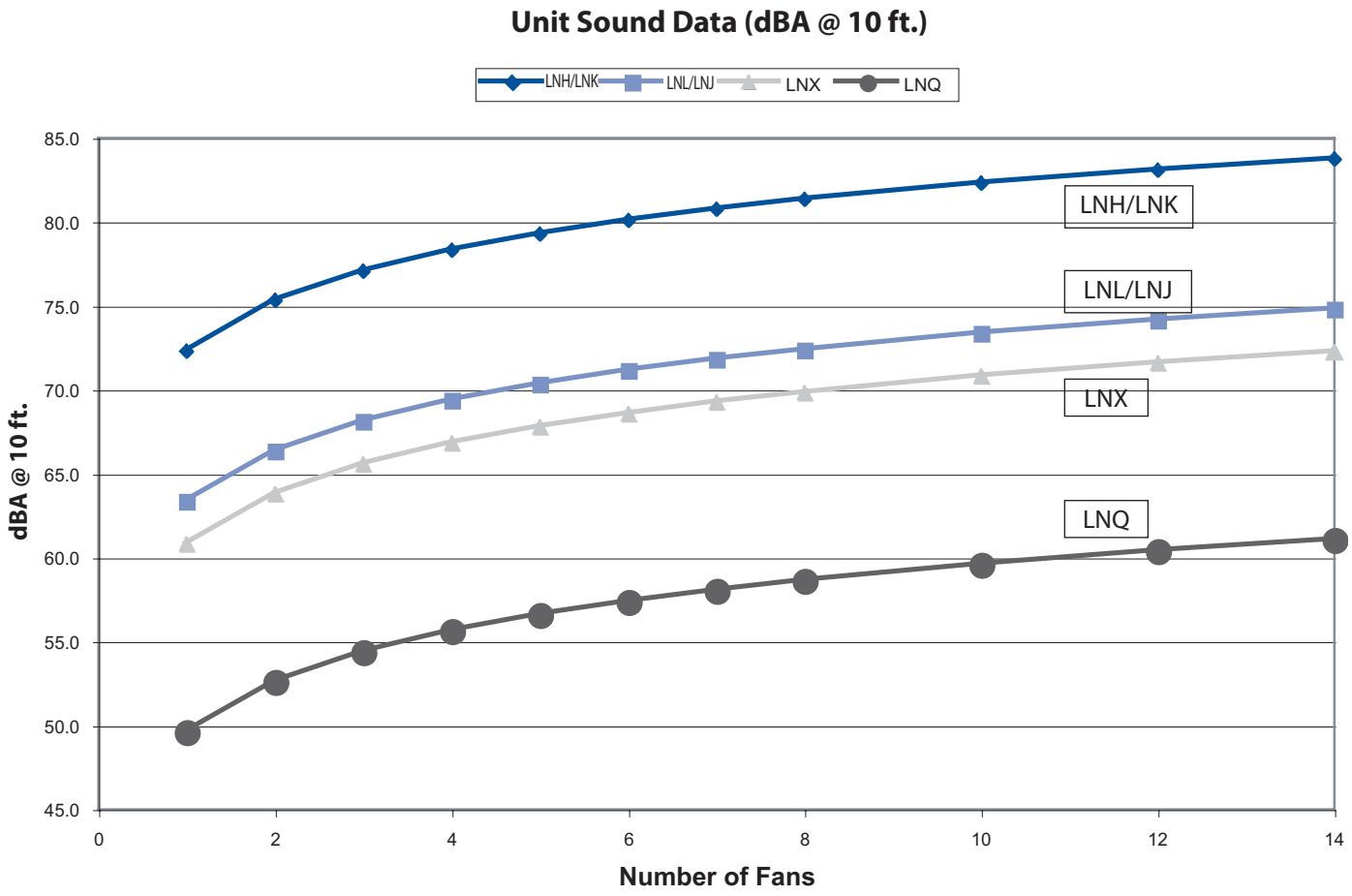


Diagram 2. Typical Condenser Wiring Diagram With Fan Cycle Controls



Sound Data for 3-Phase A/C , 1140 Series and Rail Mounted VSEC



Unit Sound Data (dBA @ 10 ft.)

Fans	LNH/LNK	LNL/LNJ	LNX	LNQ
1	72.3	63.4	60.8	49.6
2	75.3	66.4	63.8	52.6
3	77.1	68.1	65.6	54.4
4	78.3	69.4	66.8	55.6
5	79.3	70.3	67.8	56.6
6	80.1	71.1	68.6	57.4
7	80.8	71.8	69.3	58.1
8	81.3	72.4	69.8	58.6
10	82.3	73.4	70.8	59.6
12	83.1	74.1	71.6	60.4
14	83.8	74.8	72.3	61.1

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