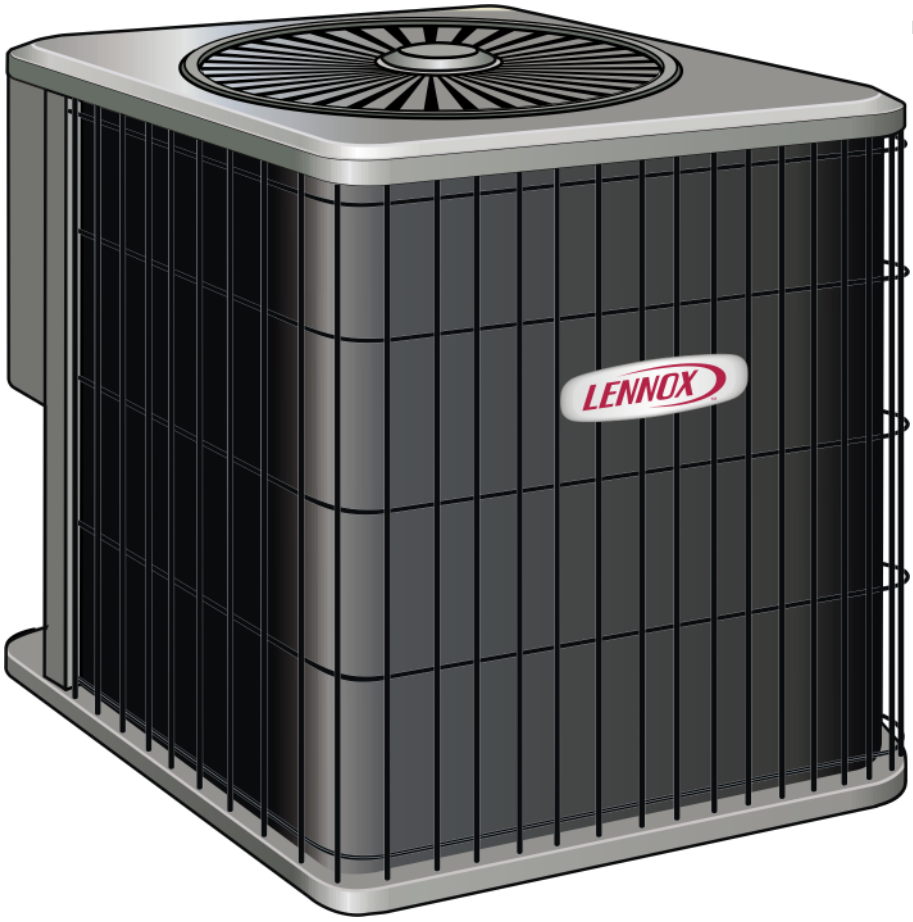
HP29

SPLIT SYSTEMS
R-22 - 60HZ

ENGINEERING DATA

Bulletin No. 210473
July 2006
Supersedes
Bulletin No. 210073
October 2003



3 to 5 Tons
Cooling Capacity - 32,600 to 58,000 Btuh
Heating Capacity - 33,400 to 56,000 Btuh

MODEL NUMBER IDENTIFICATION

HP 29 -036 -2 Y

Unit Type
HP = Heat Pump Outdoor Unit

Series

Nominal Cooling Capacity
036 = 3 Tons
042 = 3.5 Tons
048 = 4 Tons
060 = 5 Tons

Minor Revision Number

Voltage
Y = 208/230V-3 phase-60hz
G = 460V-3 phase-60hz
J = 575V-3 phase-60hz

FEATURES

CONTENTS

WARRANTY

Compressor - **five year** limited warranty
All other covered components - **one year** limited warranty.
Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

APPROVALS

Certified in accordance with the USE certification program, which is based on ARI Standard 210/240-2005.
Sound rated in Lennox reverberant sound test room in accordance with test conditions included in ARI Standard 270-95.
Tested in the Lennox Research Laboratory environmental test room.
Rated according to U.S. Department of Energy (DOE) test procedures.
Outdoor units and components within bonded for grounding to meet safety standards for servicing required by UL, NEC, and CEC.
Units are UL and ULC listed.
ISO 9001 Registered Manufacturing Quality System.

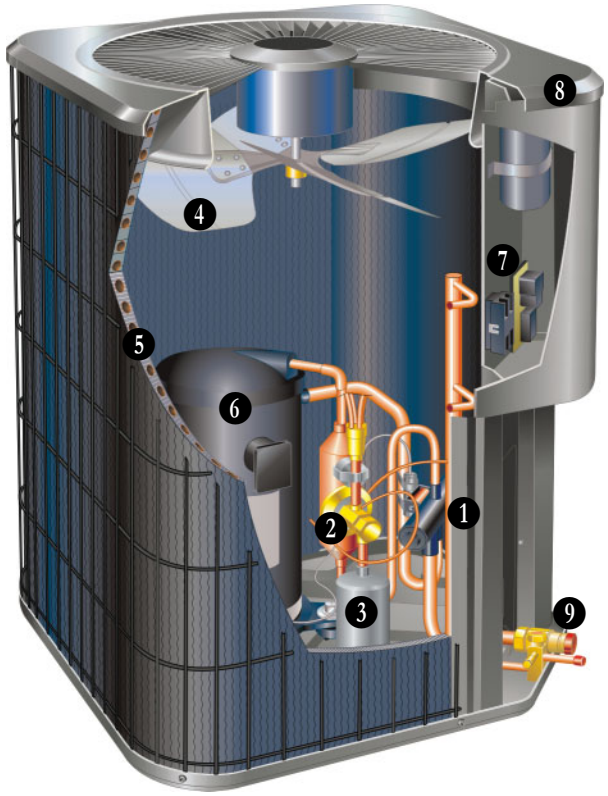
APPLICATIONS

SEER up to 11.50.
Heating C.O.P. up to 3.32.
HSPF up to 8.20 (Region IV).
3 through 5 Ton sizes.
Three phase power supply.
Vertical air discharge allows concealment behind shrubs at grade level or out of sight on a roof.
Designed for applications with remotely located indoor air handler units or gas furnaces with indoor add-on coils.
When heat pumps are used with gas furnaces, a dual-fuel control (i.e. FM21) or a dual-fuel compatible thermostat must be used (ordered extra).
See Indoor Coils and Air Handlers sections for indoor unit data.
Units shipped completely factory assembled, piped and wired. Each unit is test operated at the factory insuring proper operation.
Installer must set outdoor unit, connect refrigerant lines and make electrical connections to complete job.

For expanded ratings, see **www.lennoxdavenet.com**.

REFRIGERATION SYSTEM

1 Reversing Valve
Factory installed 4-way reversing valve provides rapid change in refrigerant flow direction resulting in quick changeover from cooling to heating and vice-versa.
Valve operates on pressure differential between outdoor unit and indoor unit.



2 Expansion Valve
Factory installed and piped expansion valve is designed and sized specifically for use in heat pump system.
Sensing bulb is located on suction line between reversing valve and compressor to sense suction temperature in any cycle.

3 Hi-Capacity Drier
Factory installed.
Drier traps moisture or dirt that could contaminate the refrigerant system.

4 Outdoor Coil Fan
Direct drive fan moves large volumes of air uniformly through entire outdoor coil for high refrigerant cooling capacity.
Vertical air discharge minimizes operating sounds and eliminates damage to lawn and shrubs.
Fan motor has sleeve bearings and is inherently protected.
Motor totally enclosed for maximum protection from weather, dust and corrosion.
Louvered steel top fan guard furnished as standard.
Fan service access accomplished by removal of fan guard.

5 Copper Tube/Enhanced Fin Coil
Lennox designed and fabricated coil.
Ripple-edged aluminum fins.
Copper tube construction.
Lanced fins provide maximum exposure of fin surface to air stream resulting in excellent heat transfer.
Fin collars grip tubing for maximum contact area.
Flared shoulder tubing connections/silver soldering construction.
Coil is factory tested under high pressure to ensure leakproof construction.
Entire coil is accessible for cleaning.
PVC coated steel wire coil guard furnished as standard.

REFRIGERATION SYSTEM - CONTINUED

OPTIONS

Check and Expansion Valve Kits
Must be ordered extra and field installed on certain indoor coil units.
See ARI Ratings table for kit selection.

Freezestat
Installs on or near the discharge line of the evaporator or on the suction line.
Senses suction line temperature and cycles the compressor off when suction line temperature falls below it's setpoint.
Opens at 29°F and closes at 58°F.

Refrigerant Line Kits
Refrigerant lines (vapor & liquid) are shipped refrigeration clean. Lines are cleaned, dried, pressurized and sealed at factory.
Suction line fully insulated.
L15 lines are stubbed at both ends.
Not available for HP29-060.

COMPRESSOR

6 Copeland Scroll™ Compressor

Compressor features high efficiency with uniform suction flow, constant discharge flow and high volumetric efficiency and quiet operation.
Compressor consists of two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them.
During compression, one scroll remains stationary while the other scroll orbits around it. Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates.
As the spiral movement continues, gas pockets are pushed to the center of the scrolls. Volume between the pockets is simultaneously reduced.
When pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls.
During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle.
Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency.
Scroll compressor is tolerant to the effects of slugging and contaminants. If this occurs, scrolls separate, allowing liquid or contaminants to to be worked toward the center and discharged.
Low gas pulses during compression reduces operational sound levels.
Compressor motor is internally protected from excessive current and temperature.
Compressor is installed in the unit on resilient rubber mounts for vibration free operation.

OPTIONS

Crankcase Heater
Prevents migration of liquid refrigerant into compressor and ensures proper compressor lubrication.

Compressor Low Ambient Cut-off
Compressor monitor can be field installed.
Non-adjustable switch (low ambient cut-out) prevents compressor operation when outdoor temperature is below 35°F.

Compressor Sound Cover
A reinforced vinyl compressor cover containing a 1-1/2 in. thick batt of 2 to 2.7 lb. density fiberglass insulation.
All open edges are sealed with a one-inch wide hook and loop fastening tape.

CONTROLS

7 Defrost Control
Solid-state time/temperature defrost control is furnished as standard equipment.
Control initiates a defrost cycle every 30, 60, or 90 minutes of compressor "on" time at outdoor temperatures below 42° F (factory setting 60 minutes).
Maximum defrost cycle 14 minutes.
Defrost thermostat mounted on liquid line determines when defrost cycle is required and when to terminate cycle.

OPTIONS

Loss of Charge Kit
Helps protect the compressor from damage due to a loss of refrigerant charge.
SPST, normally-closed switch, automatic reset.

Low Ambient Kit
Heat pump units operate satisfactorily in the cooling mode down to 45°F outdoor air temperature without any additional controls.
Low Ambient Control Kit can be field installed, allowing cooling operation down to 30°F.

Mild Ambient Kit
Heat pump units operate satisfactorily in the heating mode at outdoor air temperatures up to 75°F.
Mild Ambient Kit can be field installed, allowing heating operation above 75°F.

Monitor Kit
Field installed Monitor Kit includes ambient compensating thermistor and service light thermostat.
Thermistor reduces thermostat droop to improve the operating characteristics of the heat pump system.
Service light thermostat allows operation of the service light on the indoor thermostat.

Outdoor Thermostat Kit
Outdoor thermostat can be used to lock out some electric heating elements on indoor units where two stage control is applicable.
Outdoor thermostat maintains heating load on low power input as long as possible before allowing full power load to come on line.
Thermostat kit and mounting box must be ordered extra.

Thermostat
Thermostat not furnished with unit. See Thermostat bulletins in Thermostats and Controls Section and Lennox Price Book.

Time-Off Control
Prevents compressor short-cycling and allows time for suction and discharge pressure to equalize.
Permits compressor start-up in an unloaded condition.
Automatic reset with 5 minute delay between compressor shut-off and start-up.

FEATURES

CABINET

8 Heavy-gauge steel cabinet with five station metal wash process.
Baked-on outdoor enamel paint finish provides rust and corrosion protection.
Painted base section.
Control box is conveniently located with all controls factory wired.
Corner patch plate allows access to compressor.
Drainage holes are provided in base section for moisture removal.

Refrigerant Line Connections, Electrical Inlets, Service Valves

Sweat connection suction and liquid lines are located on corner of unit cabinet.
9 Fully serviceable brass service valves prevent corrosion and provide access to refrigerant system. Suction valve can be fully shut off, while liquid valve may be back seated to manage refrigerant charge while servicing system.
45° elbow furnished for ease of suction line connection.
Refrigerant line connections and field wiring inlets are located in one central area of cabinet for easy access. See dimension drawing.

OPTIONS

Hail Guards

Constructed of louvered, heavy-gauge steel painted to match cabinet.
Surrounds unit on all four sides to prevent damage to the coil.

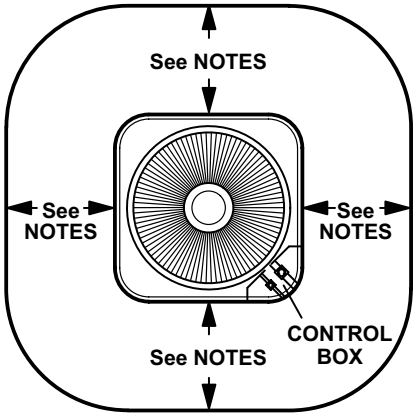
Mounting Base

High-density polyethylene mounting base is lightweight, sturdy, sound absorbing, and will withstand the effects of sun, heat, cold, moisture, oil, and refrigerant.
Provides permanent foundation for outdoor units.

Unit Stand-Off Kit

Black, high-density polyethylene feet are available to raise unit off of mounting surface away from damaging moisture. Four feet are furnished per order number.

INSTALLATION CLEARANCES - INCHES (MM)



NOTES:

Service clearance of 30 in. (762 mm) must be maintained on one of the sides adjacent to the control box.

Clearance to one of the other three sides must be 36 in. (614 mm).

Clearance to one of the remaining two sides may be 12 in. and the final side may be 6 in. (152 mm).

A clearance of 24 in. (610 mm) must be maintained between two units.

48 in. (1219 mm) clearance required on top of unit.

OUTDOOR SOUND DATA

[1] Model Number	Octave Band Sound Power Levels dBA, re 10^{-12} Watts							[1] Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
HP29-036	72	70	69	71	67	66	60	76
HP29-042	73	70	72	73	69	64	61	78
HP29-048	76	72	75	76	72	68	64	78
HP29-060	76	77	78	75	72	70	65	80

NOTE - the octave sound power data does not include tonal correction.
[1] Tested according to ARI Standard 270-95 test conditions.

SPECIFICATIONS

General Data	Model No.	HP29-036	HP29-042	HP29-048	HP29-060
	Nominal Tonnage (kW)	3 (10.6)	3.5 (12.3)	4 (14.1)	5 (17.6)
Connections (sweat)	Liquid line o.d. - in. (mm)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)	3/8 (9.5)
	Vapor line o.d. - in. (mm)	3/4 (19.1)	7/8 (22.2)	7/8 (22.2)	1-1/8 (28.6)
[1] Refrigerant (HCFC-22) furnished		7 lbs. 2 oz. (3.23 kg)	8 lbs. 5 oz. (3.77 kg)	8 lbs. 15 oz. (4.05 kg)	12 lbs. 0 oz. (5.44 kg)
Outdoor Coil	Net face area - sq. ft. (m^2) Outer coil	15.21 (1.41)	15.21 (1.41)	15.21 (1.41)	21.11 (1.96)
	Inner coil	5.44 (0.51)	14.50 (1.35)	14.50 (1.35)	20.31 (1.89)
	Tube diameter - in. (mm) & no. of rows	5/16 (7.9) - 1.37	5/16 (7.9) - 2	5/16 (7.9) -2	5/16 (7.9) - 2
	Fins per inch (m)	18 (709)	18 (709)	18 (709)	18 (709)
Outdoor Coil Fan	Dia. - in. (mm) & no. of blades	18 (457) - 4	18 (457) - 4	18 (457) - 4	22 (559) - 4
	Motor hp (W)	1/6 (124)	1/3 (249)	1/3 (249)	1/3 (249)
	Cfm (L/s)	2530 (1195)	2975 (1405)	3020 (1425)	4330 (2045)
	Rpm	1110	1130	1125	1075
	Watts	195	310	330	420
Shipping Data (1 package)	lbs. (kg)	173 (78)	182 (83)	190 (86)	254 (115)

ELECTRICAL DATA

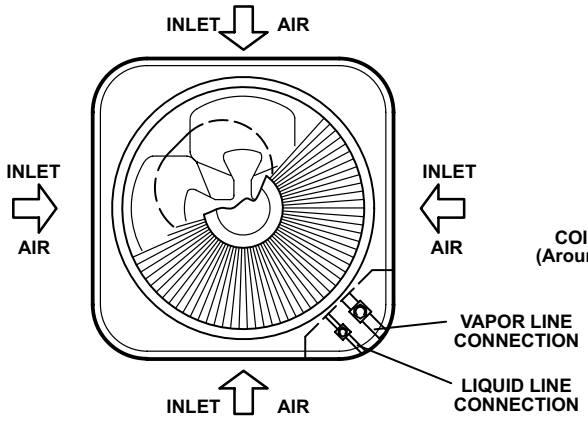
	Line voltage data - 3 ph - 60hz	208/230V	460V	208/230V	460V	208/230V	460V	575V	208/230V	460V	575V
	[2] Maximum overcurrent protection (amps)	20	10	25	15	30	15	10	40	20	15
	[3] Minimum circuit ampacity	13.9	6.9	17.4	8.9	18.8	10.2	8.2	23.5	12.2	9.8
Compressor	Rated load amps	10.2	5.1	12.4	6.4	13.5	7.4	5.8	17.3	9.0	7.1
	Power factor	.84	.84	.85	.85	.88	.88	.88	.86	.86	.86
	Locked rotor amps	77	39	88	44	120	49.5	40	137	62	50
Outdoor Coil Fan Motor	Full load amps	1.1	0.55	1.9	0.90	1.9	0.90	0.90	1.9	0.90	0.90
	Locked rotor amps	1.9	1.0	4.1	2.1	4.1	2.1	2.1	4.1	2.1	2.1

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

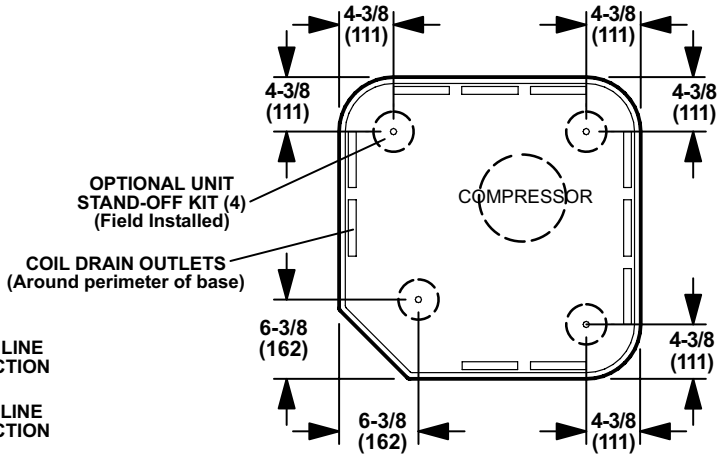
Compressor Crankcase Heater	**90P12**	•		•		•			•		
	49K11		•								
	31J21				•		•			•	
	42J85							•			•
Compressor Low Ambient Cut-Off	**45F08**	•		•		•			•		
Compressor Time-Off Control	**47J27**	•		•		•			•		
Compressor Sound Cover	**53J40**	•									
	69J03			•		•	•		•	•	
Freezestat 3/8 in. tubing	**93G35**	•		•		•			•		
5/8 in. tubing	**50A93**	•		•		•			•		
Hail Guards	**17L73**	•		•		•			•		
High Pressure Switch Kit	**94J46**	•		•		•			•		
Loss of Charge Kit	**94J47**	•		•		•			•		
Low Ambient Kit	**27J00**	•		•		•			•		
Mild Weather Kit	**33M07**	•		•		•			•		
Monitor Kit - Service Light	**76F53**	•		•		•			•		
Mounting Base	**69J06**	•		•		•					
	69J07								•		
Outdoor Thermostat Kit	Thermostat - **56A87**	•		•		•			•		
	Mounting Box - **31461**	•		•		•			•		
Refrigerant Line Sets	L15-41-20 L15-41-30 L15-41-40 L15-41-50	•									
	L15-65-30 L15-65-40 L15-65-50			•		•					
	Field Fabricate								•		
Unit Stand-Off Kit		**94J45**		**94J45**		**94J45**			**94J45**		

NOTE - Extremes of operating range are plus 10% and minus 5% of line voltage.
1 Refrigerant charge is sufficient for 15 ft. length line set.
2 HACR type breaker or fuse.
3 Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

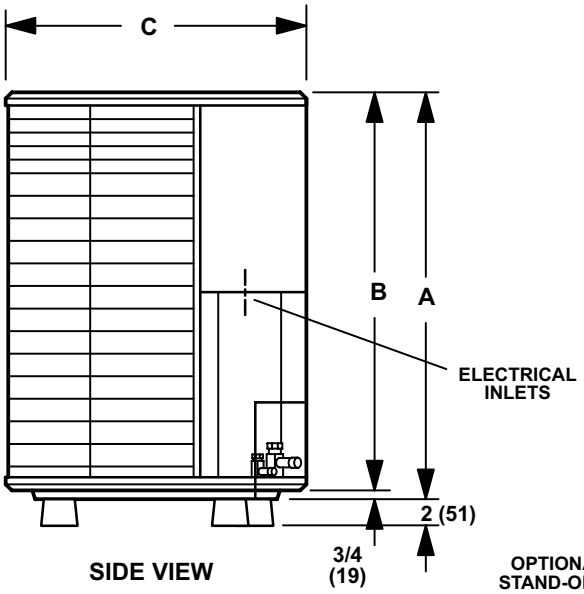
DIMENSIONS - INCHES (MM)



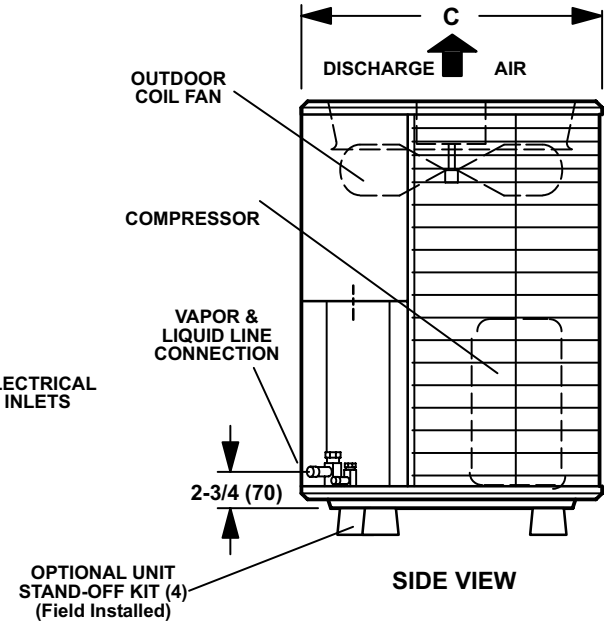
TOP VIEW



TOP VIEW BASE SECTION



SIDE VIEW



SIDE VIEW

Model No.		A	B	C
HP29-036 HP29-042 HP29-048	in.	33	32-1/4	24-1/4
	mm	838	819	616
HP29-060	in.	37-1/4	36-1/2	28-1/4
	mm	946	927	718

ARI RATINGS

[1] ARI Standard 210/240 Ratings

Cooling Capacity		High Temp. Heating Capacity		Low Temp. Heating Capacity		Efficiency				Total Cool. Watts	Total High Htg. Watts	Total Low Htg. Watts	High Htg. COP	Low Htg. COP	Indoor Unit Model No.	Expansion Device
								HSPF								
Btuh	kW	Btuh	kW	Btuh	kW	SEER	EER	IV	V							
HP29-036																**3 TON**
Air Handlers															**Air Handlers**	
33,400	9.8	38,200	11.2	24,200	7.1	10.20	8.75	7.50	6.50	3815	3730	3255	3.00	2.18	[3] CB29M-41 (Multi-Position)	Factory TXV
34,800	10.2	34,200	10.0	22,800	6.7	11.15	9.55	8.10	7.40	3645	3110	2760	3.22	2.42	[3] CB30M-31 (Multi-Position)	Factory TXV
34,800	10.2	34,200	10.0	22,800	6.7	11.15	9.55	8.10	7.40	3645	3110	2760	3.22	2.42	[3] CB30U-31 (Up-Flow)	Factory TXV
35,200	10.3	34,400	10.1	23,200	6.8	11.00	9.35	8.00	7.00	3765	3210	3375	3.14	2.36	[3] CB29M-46 (Multi-Position)	[2] **56J19**
35,200	10.3	35,000	10.3	23,600	6.9	10.50	9.10	7.80	6.90	3870	3310	2980	3.10	2.32	[3] CB29M-51 (Multi-Position)	[2] **56J19**
35,400	10.4	34,400	10.1	23,000	6.7	11.10	9.45	8.00	7.00	3745	3090	2785	3.26	2.42	[3] CB30M-41 (Multi-Position)	Factory TXV
35,400	10.4	34,400	10.1	23,000	6.7	11.10	9.45	8.00	7.00	3745	3090	2785	3.26	2.42	[3] CB30U-41/46 (Up-Flow)	[2] **56J19**
35,600	10.4	34,400	10.1	23,000	6.7	11.20	9.55	8.05	7.10	3730	3075	2785	3.28	2.42	[3] CB30M-46 (Multi-Position)	[2] **56J19**
35,600	10.4	34,200	10.0	22,800	6.7	11.50	9.80	8.20	7.20	3635	3020	2695	3.32	2.48	[4] CB31MV-41 (Multi-Position)	Factory TXV
Up-Flow Indoor Coils															**Indoor Coil**	
33,000	9.7	33,400	9.8	22,400	6.6	10.60	9.10	7.50	6.50	3625	3400	2880	2.88	2.28	[3] C33-36A/B/C	[2] **56J19**
35,000	10.3	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3765	3230	2905	3.12	2.34	[3] C33-38A/B	[2] **56J19**
35,600	10.4	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3830	3230	2905	3.12	2.34	[3] C33-44C	[2] **56J19**
Down-Flow Indoor Coils															**Indoor Coil**	
33,000	9.7	33,400	9.8	22,400	6.6	10.60	9.10	7.50	6.50	3625	3400	2880	2.88	2.28	[3] CR33-24A/B-F	[2] **56J19**
33,000	9.7	33,400	9.8	22,400	6.6	10.60	9.10	7.50	6.50	3625	3400	2880	2.88	2.28	[3] CR33-36A-F	[2] **56J19**
35,000	10.3	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3765	3230	2905	3.12	2.34	[3] CR33-36B/C-F	[2] **56J19**
35,600	10.4	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3830	3230	2905	3.12	2.34	[3] CR33-48B/C-F	[2] **56J19**
Horizontal Indoor Coils															**Indoor Coil**	
32,600	9.6	33,800	9.9	23,000	6.7	10.25	8.80	7.95	7.10	3710	3370	2965	2.94	2.28	[3] CH33-36A/B/C-2F	[2] **56J19**
35,000	10.3	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3765	3230	2905	3.12	2.34	[3] CH23-41	[2] **56J19**
35,000	10.3	34,400	10.1	23,200	6.8	11.00	9.30	7.80	6.90	3765	3230	2905	3.12	2.34	[3] CH33-42B-2F	[2] **56J19**
HP29-042																**3.5 TON**
R-22 Air Handlers															**Air Handlers**	
38,500	11.3	40,500	11.9	26,000	7.6	10.00	8.80	7.20	6.30	4375	4065	3595	2.92	2.12	[3] CB29M-41 (Multi-Position)	Factory TXV
39,000	11.4	40,500	11.9	26,000	7.6	11.00	9.40	8.00	7.00	4150	3805	3370	3.12	2.26	[3] CB30M-41 (Multi-Position)	Factory TXV
39,500	11.6	40,500	11.9	26,200	7.7	10.10	9.00	7.40	6.40	4390	4035	3620	2.94	2.12	[3] CB29M-46 (Multi-Position)	Factory TXV
40,000	11.7	40,500	11.9	26,000	7.6	11.00	9.40	8.10	7.10	4255	3805	3370	3.12	2.26	[3,5] CB30M-46 (Multi-Position)	Factory TXV
40,000	11.7	40,500	11.9	26,000	7.6	11.00	9.40	8.10	7.10	4255	3805	3370	3.12	2.26	[3] CB30U-41/46 (Up-Flow)	Factory TXV
40,000	11.7	40,500	11.9	26,000	7.6	11.20	9.46	8.10	7.10	4230	3805	3370	3.12	2.26	[4] CB30MV-41 (Multi-Position)	Factory TXV
40,000	11.7	41,000	12.0	26,400	7.7	10.25	8.90	7.25	6.30	4495	3950	3650	3.04	2.12	[3] CB29M-51 (Multi-Position)	Factory TXV
40,000	11.7	41,000	12.0	26,400	7.7	10.50	9.10	7.30	6.30	4395	3925	3615	3.06	2.14	[3] CB29M-65 (Multi-Position)	Factory TXV
41,000	12.0	39,000	11.4	24,600	7.2	11.10	9.50	7.40	6.40	4315	3885	3400	2.94	2.12	[3] CB30M-51 (Multi-Position)	Factory TXV
41,000	12.0	39,000	11.4	24,600	7.2	11.10	9.50	7.40	6.40	4315	3885	3400	2.94	2.12	[3] CB30U-51 (Up-Flow)	Factory TXV
41,500	12.2	38,500	11.3	24,400	7.2	11.3	9.6	7.50	6.50	4325	3710	3340	3.04	2.14	[4] CB31MV-51 (Multi-Position)	Factory TXV
R-22 Up-Flow Indoor Coils															**Up-Flow Coils**	
38,500	11.3	40,000	11.7	26,000	7.6	10.00	9.00	7.10	6.20	4280	4040	3700	2.90	2.06	[3] C33-42B	[2] **56J20**
40,000	11.7	41,000	12.0	26,200	7.7	10.50	9.16	7.30	6.30	4365	4005	3620	3.00	2.12	[3] C33-44C	[2] **56J20**
Down-Flow Indoor Coils															**Up-Flow Coils**	
39,000	11.4	40,500	11.9	26,400	7.7	10.20	9.00	7.40	6.40	4335	4010	3685	2.96	2.10	[3] CR33-30/36B/C-F	[2] **56J20**
40,000	11.7	41,000	12.0	26,200	7.7	10.50	9.16	7.30	6.30	4365	4005	3620	3.00	2.12	[3] CR33-48B/C-F	[2] **56J20**
Horizontal Indoor Coils															**Horizontal Coils**	
39,000	11.4	40,500	11.9	26,400	7.7	10.20	9.00	7.40	6.40	4335	4010	3685	2.96	2.10	[3] CH23-41	[2] **56J20**
39,000	11.4	40,500	11.9	26,400	7.7	10.20	9.00	7.40	6.40	4335	4010	3685	2.96	2.10	[3] CH33-42B-2F	[2] **56J20**
40,000	11.7	41,000	12.0	26,200	7.7	10.20	8.90	7.50	6.50	4495	3900	3620	3.08	2.12	[3] CH33-48C-2F	[2] **56J20**
40,000	11.7	41,000	12.0	26,200	7.7	10.20	8.90	7.50	6.50	4495	3900	3620	3.08	2.12	[3] CH23-51	[2] **56J20**

NOTE - These are the only approved system match-ups. For other matches, contact the Lennox Applications Department.
NOTE - Ratings for C33 coils include all cased and uncased coils.
NOTE - When used with gas furnaces, a dual-fuel control (i.e. FM21) or a dual-fuel compatible thermostat must be used (ordered extra).

[1] Certified in accordance with USE certification program which is based on ARI Standard 210/240 with 25 ft. of connecting refrigerant lines;
Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.
High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F db entering indoor coil air.
Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F db entering indoor coil air.

[2] **Factory installed expansion valve or RFC on indoor unit MUST be replaced with valve or RFC specified.**

[3] Blower must be capable of time-off blower delay. Time Delay Relay Kit (**40K58**) is recommend for field installation.

[4] Blower control must be set for a time-off blower delay.

[5] Most popular air handler combination.

ARI RATINGS

[1] ARI Standard 210/240 Ratings

Cooling Capacity		High Temp. Heating Capacity		Low Temp. Heating Capacity		Efficiency				Total Cool. Watts	Total High Htg. Watts	Total Low Htg. Watts	High Htg. COP	Low Htg. COP	Indoor Unit Model No.	Expansion Device
								HSPF								
Btuh	kW	Btuh	kW	Btuh	kW	SEER	EER	IV	V							
HP29-048																**4 TON**
42,500	12.5	43,000	12.6	27,200	8.0	10.50	8.90	7.50	6.50	4775	4145	3625	3.04	2.20	[3] CB30M-41 (Multi-Position)	[2] **56J20**
44,000	12.9	43,500	12.7	28,200	8.3	11.00	9.40	7.50	6.50	4680	4195	3755	3.04	2.20	[3, 5] CB30M-46 (Multi-Position)	Factory TXV
44,000	12.9	43,500	12.7	28,200	8.3	11.00	9.40	7.50	6.50	4680	4195	3755	3.04	2.20	[3] CB30U-41/46 (Up-Flow)	Factory TXV
44,000	12.9	43,000	12.6	27,200	8.0	11.00	9.10	7.50	6.50	4835	4145	3625	3.04	2.20	[4] CB31MV-41 (Multi-Position)	[2] **56J20**
44,500	13.0	44,000	12.9	28,200	8.3	10.30	8.70	7.50	6.50	5115	4295	3755	3.00	2.20	[3] CB29M-46 (Multi-Position)	Factory TXV
44,500	13.0	44,500	13.0	28,600	8.4	10.20	8.55	7.50	6.50	5205	4290	3810	3.04	2.20	[3] CB29M-51 (Multi-Position)	Factory TXV
45,000	13.2	44,500	13.0	28,400	8.3	10.30	8.75	7.50	6.50	5145	4290	3780	3.04	2.20	[3] CB29M-65 (Multi-Position)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.30	9.50	8.00	7.00	4840	3955	3580	3.26	2.26	[4] CB31MV-51 (Multi-Position)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.30	9.50	8.00	7.00	4840	3955	3580	3.26	2.26	[4] CB31MV-65 (Multi-Position)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.20	9.45	7.80	6.90	4870	4030	3610	3.20	2.24	[3] CB30M-51 (Multi-Position)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.20	9.45	7.80	6.90	4870	4030	3610	3.20	2.24	[3] CB30U-51 (Up-Flow)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.20	9.45	7.80	6.90	4870	4030	3610	3.20	2.24	[3] CB30M-65 (Multi-Position)	Factory TXV
46,000	13.5	44,000	12.9	27,600	8.1	11.20	9.45	7.80	6.90	4870	4030	3610	3.20	2.24	[3] CB30U-65 (Up-Flow)	Factory TXV
Up-Flow Indoor Coils															**Indoor Coil**	
43,500	12.7	42,500	12.5	27,000	7.9	10.50	8.85	7.20	6.30	4915	4265	3695	2.92	2.14	[3] C33-44C	[2] **56J20**
45,000	13.2	43,000	12.6	27,000	7.9	10.60	9.00	7.20	6.30	5000	4170	3595	3.02	2.20	[3] C33-48C	[2] **56J20**
Down-Flow Indoor Coils															**Indoor Coil**	
43,500	12.7	42,500	12.5	27,000	7.9	10.50	8.85	7.20	6.30	4915	4265	3695	2.92	2.14	[3] CR33-48B-F	[2] **56J20**
44,500	13.0	42,500	12.5	27,000	7.9	10.50	8.95	7.20	6.30	4970	4265	3695	2.92	2.14	[3] CR33-48C-F	[2] **56J20**
Horizontal Indoor Coils															**Indoor Coil**	
43,500	12.7	43,500	12.7	27,600	8.1	10.30	8.80	7.40	6.40	4945	4220	3675	3.02	2.20	[3] CH23-41	[2] **56J20**
43,500	12.7	43,500	12.7	27,600	8.1	10.30	8.80	7.40	6.40	4945	4220	3675	3.02	2.20	[3] CH33-42B-2F	[2] **56J20**
45,000	13.2	44,000	12.9	28,000	8.2	10.50	8.90	7.50	6.50	5055	4185	3630	3.08	2.26	[3] CH23-51	[2] **56J20**
45,000	13.2	44,000	12.9	28,000	8.2	10.60	8.95	7.50	6.50	5030	4185	3630	3.08	2.26	[3] CH33-48C-2F	[2] **56J20**
45,000	13.2	44,000	12.9	28,000	8.2	10.60	8.95	7.50	6.50	5030	4185	3630	3.08	2.26	[3] CH23-65	[2] **56J20**
HP29-060																**5 TON**
55,000	16.1	55,000	16.1	35,000	10.3	10.20	8.70	6.80	6.00	6320	5970	5025	2.70	2.04	[3] CB29M-51 (Multi-Position)	Factory TXV
56,000	16.4	56,000	16.4	36,000	10.6	10.50	8.95	6.80	6.00	6255	5965	5170	2.75	2.04	[3] CB29M-65 (Multi-Position)	Factory TXV
56,000	16.4	53,500	15.7	33,500	9.8	11.00	9.50	7.10	6.20	5895	5405	4500	2.90	2.18	[3] CB30M-51 (Multi-Position)	Factory TXV
56,000	16.4	53,500	15.7	33,500	9.8	11.00	9.50	7.10	6.20	5895	5405	4500	2.90	2.18	[3] CB30U-51 (Up-Flow)	Factory TXV
56,000	16.4	53,500	15.7	33,500	9.8	11.10	9.60	7.20	6.30	5835	5370	4460	2.92	2.20	[4] CB31MV-51 (Multi-Position)	Factory TXV
58,000	17.0	55,000	16.1	35,000	10.3	11.00	9.40	7.20	6.30	6170	5555	4705	2.90	2.18	[3, 5] CB30M-65 (Multi-Position)	Factory TXV
58,000	17.0	55,000	16.1	35,000	10.3	11.00	9.40	7.20	6.30	6170	5555	4705	2.90	2.18	[3] CB30U-65 (Up-Flow)	Factory TXV
58,000	17.0	55,000	16.1	35,000	10.3	11.10	9.60	7.20	6.30	6040	5555	4705	2.90	2.18	[4] CB31MV-65 (Multi-Position)	Factory TXV
Up-Flow Indoor Coils															**Indoor Coil**	
57,000	16.7	56,000	16.4	35,600	10.4	10.70	9.25	7.20	6.30	6160	5660	4785	2.90	2.18	[3] C33-50/60C	[2] **56J20**
58,000	17.0	55,000	16.1	35,000	10.3	11.00	9.60	7.20	6.30	6040	5555	4705	2.90	2.18	[3] C33-60D	[2] **56J20**
Down-Flow Indoor Coils															**Indoor Coil**	
55,000	16.1	55,000	16.1	35,000	10.3	10.20	8.90	6.80	5.90	6180	5925	5025	2.72	2.04	[3] CR33-48C-F	[2] **56J20**
57,000	16.7	56,000	16.4	35,600	10.4	10.70	9.25	7.20	6.30	6160	5660	4785	2.90	2.18	[3] CR33-60D-F	[2] **56J20**
Horizontal Indoor Coils															**Indoor Coil**	
56,000	16.4	55,500	16.3	35,000	10.3	10.50	9.10	6.80	5.90	6155	5980	5025	2.72	2.04	[3] CH33-48C-2F	[2] **56J20**
56,000	16.4	55,500	16.3	35,000	10.3	10.50	9.10	6.80	5.90	6155	5980	5025	2.72	2.04	[3] CH23-51	[2] **56J20**
57,000	16.7	56,000	16.4	35,600	10.4	10.70	9.25	7.20	6.30	6160	5660	4785	2.90	2.18	[3] CH33-50C-2F	[2] **56J20**
57,000	16.7	56,000	16.4	35,600	10.4	10.70	9.25	7.20	6.30	6160	5660	4785	2.90	2.18	[3] CH23-65	[2] **56J20**
58,000	17.0	55,000	16.1	35,000	10.3	11.00	9.60	7.20	6.30	6040	5555	4705	2.90	2.18	[3] CH33-62D-2F	[2] **56J20**
58,000	17.0	55,000	16.1	35,000	10.3	11.00	9.60	7.20	6.30	6040	5555	4705	2.90	2.18	[3] CH23-68	[2] **56J20**

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[2] **Factory installed expansion valve or RFC on indoor unit MUST be replaced with valve or RFC specified.**

[3] Blower must be capable of time-off blower delay. Time Delay Relay Kit (**40K58**) is recommend for field installation.

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[5] Most popular air handler combination.

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