



Ruud Commercial Achiever® Series Package Air Conditioner



*Unit shown with
optional louver
panels installed.

RLPN- 14 SEER Series

Featuring Industry Standard R-410A Refrigerant
Nominal Sizes 3-5 Tons [10.6-17.6 kW]

RLQN- 15 SEER Series

Featuring Industry Standard R-410A Refrigerant
Nominal Sizes 3-5 Tons [10.6-17.6 kW]



(15 SEER/12.0
EER ONLY)

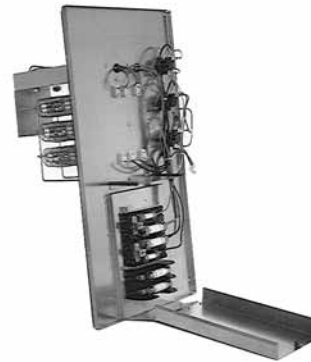
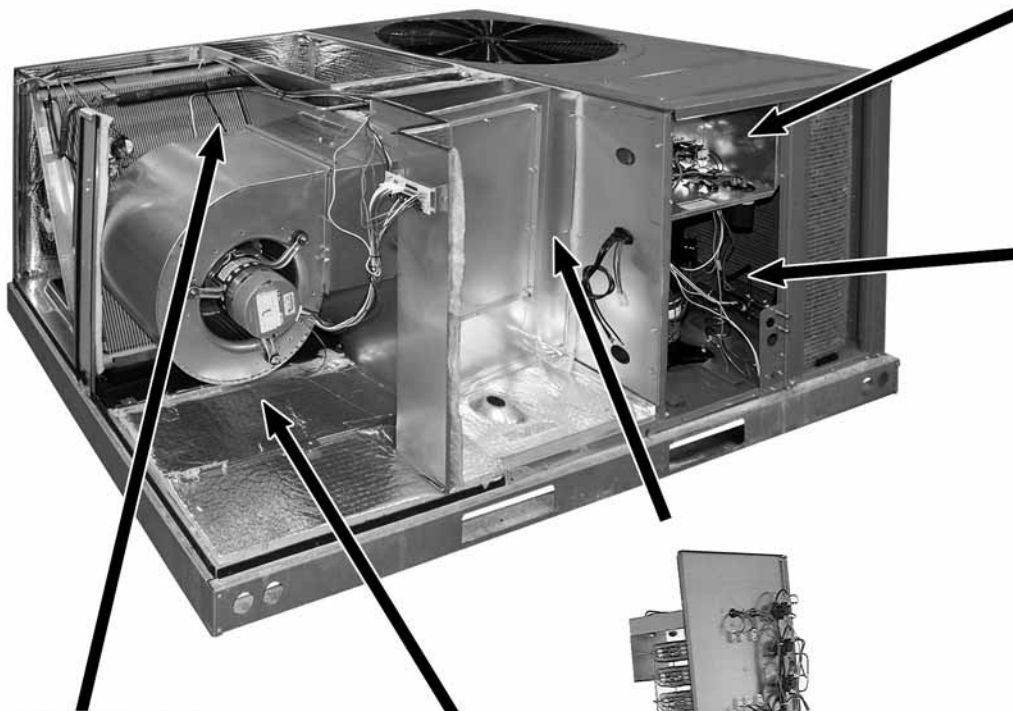
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Control Box Access



Compressor Access
(3 to 5 Ton [10.6 to 17.6 kW] Models)



Optional Electric Heater Kit



Evaporator Coil/Filter Access

- Return air filters, normally provided, are removed in this photo.

- Non-corrosive plastic condensate pan

Blower Access

- Belt drive model shown. (Available on 3-phase models only.)



[] Designates Metric Conversions



RLPN - A036, A048, A060
RLQN - A036, A048, A060

STANDARD FEATURES INCLUDE:

- R-410A HFC refrigerant.
- Complete factory charged, wired and run tested.
- Scroll compressors with internal line break overload and high-pressure protection.
- Single stage compressor on all models. (Except 5 ton 15 SEER) which utilizes two stage scroll.
- Convertible airflow.
- TXV refrigerant metering system.
- High Pressure and Low Pressure/Loss of charge protection standard on all models.
- Solid Core liquid line filter drier.
- Single slab, Micro Channel designed evaporator coil facilitates easy cleaning for maintained high efficiencies.
- Cooling operation up to 125 degree F ambient.
- Easily removable filter, blower, gas heat, and compressor/control access panels permits prompt service.
- Powder Paint Finish meets ASTM B117 steel coated on each side for maximum protection. G90 galvanized.
- One piece top cover and one piece base pan with drawn supply and return opening for superior water management.
- Externally mounted refrigerant gauge ports for easy service diagnostics.
- Factory or field-installed electric heat kits available up to 24 kW.
- Easy to install plug-in; slip in, 100% fully modulating economizer.
- Forkable base rails for easy handling and lifting.
- Single point electrical connections.
- Direct drive or high performance belt drive motor with variable pitch pulleys and quick adjust belt system.
- Permanently lubricated evaporator, condenser and gas heat inducer motors.
- Condenser motors are internally protected, totally enclosed with shaft down design.
- 1 inch filter standard with slide out design.
- Colored and labeled wiring.
- MicroChannel coils.
- Molded compressor plug.
- Micro Channel evaporator and condenser delivers superior performance with less refrigerant charge and less weight than conventional copper tube/aluminum fin coils. In addition the all aluminum construction has superior protection against formicary corrosion and aluminum tube rubbing potential. Its easier to clean and has a more robust surface.

SELECTION PROCEDURES

1. Determine cooling and heating requirements at design conditions.

Example:

Power supply208/230 - 3 Phase
 Total cooling capacity42,500 BTUH [12.44 kW]
 Sensible cooling capacity34,000 BTUH [9.96 kW]
 Heating capacityNone
 Condenser entering air95°F [35°C]
 Evaporator entering air63°F [17°C] wb/76°F [24°C] db
 Indoor air flow1600 CFM [755 L/s]
 External static pressure1.1 in wg
 Required efficiency13 SEER

2. Select unit to meet cooling requirements.

Since total cooling is within the range of 4 ton [14.07 kW] unit and requires 13 SEER efficiency level, enter cooling performance from the RLPN-A048 table, at 95°F [35°C] outdoor temperature, 63°F [17°C] wb entering indoor air, and 1600 CFM [755 L/s]:

Total capacity45,100 BTUH [13.21 kW]
 Power supply44,100 BTUH [12.91 kW]
 Power input3.6 kW

And also, at 76°F [24°C] db indoor entering air, and using the formula at the bottom of the page:

Sensible capacity38,327 BTUH [11.22 kW]

3. Determine blower speed and power to meet the system requirements.

At the given external static pressure of 1.1 in wg, the belt model must be selected. Enter the belt drive blower performance table at 1600 CFM [755 L/s] and 1.1 in wg ESP:

RPM1195
 Watts755
 DriveM

4. Calculate indoor blower BTUH heat effect.

BTUH = Watts x 3.413 = 2577

5. Calculate net cooling capacities.

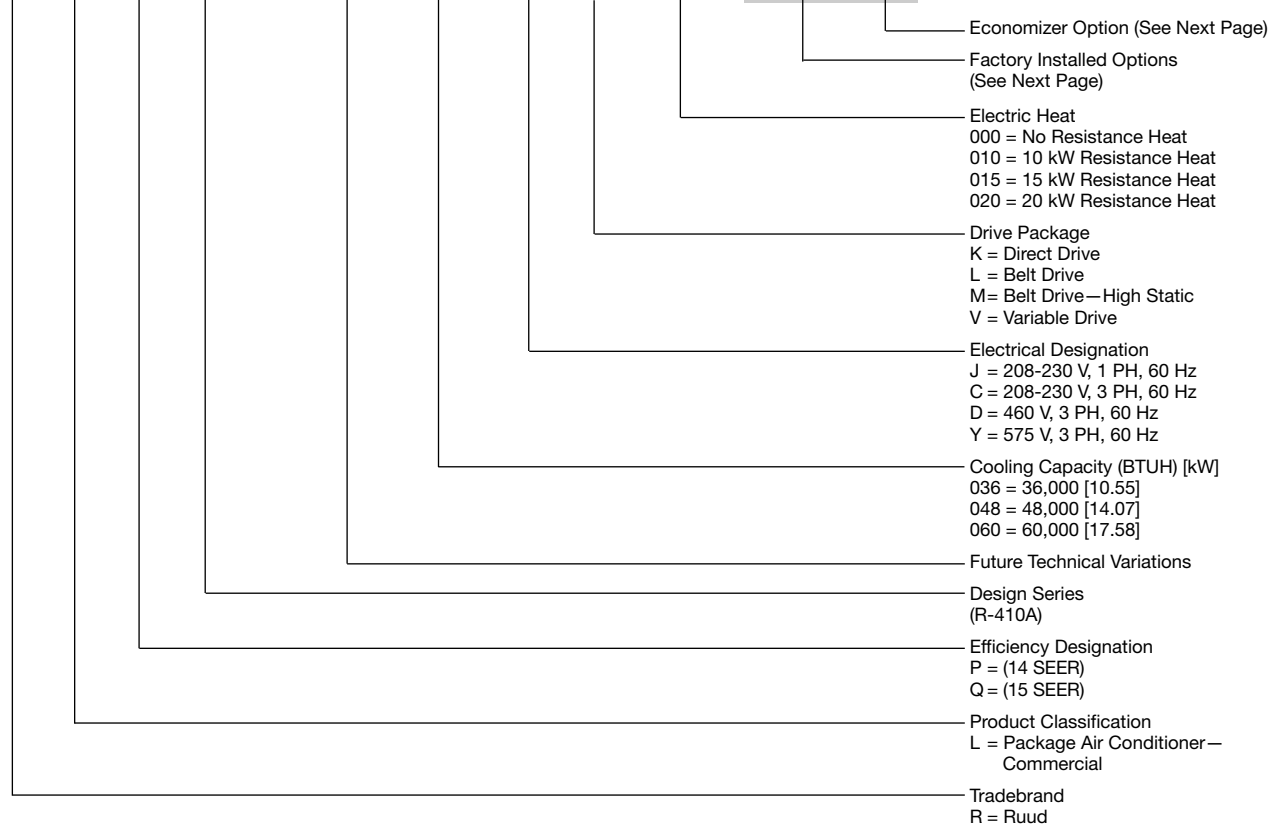
Net total cooling = 45,100 – 2577 = 42,523 BTUH [12.45 kW]
 Net sensible cooling = 36,908 – 2577 = 35,750 BTUH [10.06 kW]

6. Select Model

RLPN-A048CM000

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R L P N – A 036 J K 000 X X X



[] Designates Metric Conversions

**FACTORY INSTALLED OPTION CODES FOR RLPN- (3-5 Ton) [10.6-17.6 kW]
(A036, A048, A060)**

Option Code	Hail Guard	Non-Powered Conv. Outlet	Low Ambient/ Freeze Stat	Hinged Doors
AA	NO OPTIONS			
AD	X			
AG		X		
AP			X	
AV				X
BY	X		X	
BJ	X	X		
JC		X	X	
JK	X			X
JL		X		X
JP			X	X
CX	X	X	X	
KD	X	X		X
KG	X		X	X
KK		X	X	X
DS	X	X	X	X

Example: RLPN-A060JK000XX (where XX is factory installed option)

Example: No Options

RLPN-A060JK000

Example: No Options with Factory Installed Economizer

RLPN-A060JK000AAF

Example: Options with Stainless Steel Heat Exchanger and no Factory Installed Economizer

RLPN-A060JK000ADA

Example: Options same as above with Factory Installed Economizer

RLPN-A060JK000ADF

**ECONOMIZER SELECTION FOR RLPN- (3-5 Ton) [10.6-17.6 kW]
(A036, A048, A060)**

Option Code	No Economizer	Economizer No Smoke Detector	Economizer With Smoke Detector
A	X		
F		X	
G			

"X" indicates factory installed option.

[] Designates Metric Conversions

NOMINAL SIZES 3-5 TONS [10.6-17.6 kW]

Model RLPN- Series	A048DK	A048DL	A048DM	A048JK
Cooling Performance¹				CONTINUED →
Gross Cooling Capacity Btu [kW]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]	48,000 [14.06]
EER/SEER ²	11.6/14	11.6/14	11.6/14	11.6/14
Nominal CFM/AHRI Rated CFM [L/s]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]	1600/1500 [755/708]
AHRI Net Cooling Capacity Btu [kW]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]	46,000 [13.48]
Net Sensible Capacity Btu [kW]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]	34,000 [9.96]
Net Latent Capacity Btu [kW]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]	12,000 [3.52]
Net System Power [kW]	3.93	3.93	3.93	3.93
Compressor				
No./Type	1/Scroll	1/Scroll	1/Scroll	1/Scroll
Outdoor Sound Rating (dB)³	78	78	78	78
Outdoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	0.7 [18]	0.7 [18]	0.7 [18]	0.7 [18]
Face Area sq. ft. [sq. m]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]	16.4 [1.52]
Rows / FPI [FPcm]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]	1 / 23 [9]
Indoor Coil—Fin Type	Louvered	Louvered	Louvered	Louvered
Tube Type	MicroChannel	MicroChannel	MicroChannel	MicroChannel
MicroChannel Depth in. [mm]	1.3 [32]	1.3 [32]	1.3 [32]	1.3 [32]
Face Area sq. ft. [sq. m]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]	4.8 [0.45]
Rows / FPI [FPcm]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]	1 / 20 [8]
Refrigerant Control	TX Valves	TX Valves	TX Valves	TX Valves
Drain Connection No./Size in. [mm]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]	1/0.75 [19.05]
Outdoor Fan—Type	Propeller	Propeller	Propeller	Propeller
No. Used/Diameter in. [mm]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]	1/24 [609.6]
Drive Type/No. Speeds	Direct/1	Direct/1	Direct/1	Direct/1
CFM [L/s]	3680 [1737]	3680 [1737]	3680 [1737]	3680 [1737]
No. Motors/HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP	1 at 1/3 HP
Motor RPM	1075	1075	1075	1075
Indoor Fan—Type	FC Centrifugal	FC Centrifugal	FC Centrifugal	FC Centrifugal
No. Used/Diameter in. [mm]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]	1/10x10 [254x254]
Drive Type	Direct	Belt (Adjustable)	Belt (Adjustable)	Direct
No. Speeds	Multiple	Single	Single	Multiple
No. Motors	1	1	1	1
Motor HP	1/2	1/2	3/4	1/2
Motor RPM	1075	1725	1725	1075
Motor Frame Size	48	48	56	48
Filter—Type	Disposable	Disposable	Disposable	Disposable
Furnished	Yes	Yes	Yes	Yes
(NO.) Size Recommended in. [mm x mm x mm]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]	(1)1x16x25 [25x406x635] (1)1x16x25 [25x406x635]
Refrigerant Charge Oz. [g]	68 [1928]	68 [1928]	68 [1928]	68 [1928]
Weights				
Net Weight lbs. [kg]	477 [216]	495 [225]	496 [225]	477 [216]
Ship Weight lbs. [kg]	484 [220]	502 [228]	503 [228]	484 [220]

See Page 22 for Notes.

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ELECTRICAL DATA – RLPN SERIES										
		A048CK	A048CL	A048CM	A048DK	A048DL	A048DM	A048JK	A048YL	A048YM
Unit Information	Unit Operating Voltage Range	187-253	187-253	187-253	414-506	414-506	414-506	187-253	517-633	517-633
	Volts	208/230	208/230	208/230	460	460	460	208/230	575	575
	Minimum Circuit Ampacity	22/22	21/21	22/22	11	11	11	31/31	8	8
	Minimum Overcurrent Protection Device Size	30/30	25/25	25/25	15	15	15	40/40	15	15
	Maximum Overcurrent Protection Device Size	35/35	30/30	30/30	15	15	15	50/50	15	15
Compressor Motor	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	208/230	460	460	460	208/230	575	575
	Phase	3	3	3	3	3	3	1	3	3
	RPM	3450	3450	3450	3450	3450	3450	3450	3450	3450
	HP, Compressor 1	4	4	4	4	4	4	4	4	4
	Amps (RLA), Comp. 1	13.1/13.1	13.1/13.1	13.1/13.1	6.1	6.1	6.1	19.9/19.9	4.4	4.4
	Amps (LRA), Comp. 1	83.1/83.1	83.1/83.1	83.1/83.1	41	41	41	109/109	33	33
Condenser Motor	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	208/230	460	460	460	208/230	575	575
	Phase	1	1	1	1	1	1	1	1	1
	HP	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3	1/3
	Amps (FLA, each)	1.5/1.5	1.5/1.5	1.5/1.5	1	1	1	1.5/1.5	0.8	0.8
	Amps (LRA, each)	3/3	3/3	3/3	1.9	1.9	1.9	3/3	1.9	1.9
Evaporator Fan	No.	1	1	1	1	1	1	1	1	1
	Volts	208/230	208/230	208/230	460	460	460	208/230	575	575
	Phase	1	3	3	1	3	3	1	3	3
	HP	1/2	1/2	3/4	1/2	1/2	3/4	1/2	3/4	3/4
	Amps (FLA, each)	4/4	2.8/2.8	3.4/3.4	2	1.4	1.6	4/4	1.3	1.3
	Amps (LRA, each)	6.5/6.5	11.3/11.3	14.6/14.6	3.6	6.2	8.4	6.7/6.7	6	6

1. Horsepower Per Compressor.

2. Amp Draw Per Motor. Multiply Value By Number of Motors to Determine Total Amps.