ENERGENCE™
Saving Energy with Intelligence

Commercial Packaged Rooftop Units
3- to 50-Ton LC/LG Models

UP TO 18.0 SEER, 12.8 EER
AND 15.5 IEER

LENNOX

Innovation never felt so good.®
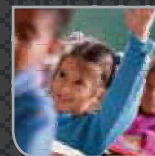
Saving Energy With Intelligence®

At Lennox, we're committed to building innovative products that can help save on energy costs and reduce operating expenses. Our Energence® rooftop unit delivers on both counts. It achieves efficiency ratings up to 18.0 SEER to provide significant utility savings throughout the year. And it's engineered with intelligent features, like our Prodigy® control system, that make service and maintenance extremely cost-effective.

Smartly efficient for an exceptional return on your investment

The standard measure of a rooftop unit's operating efficiency is its SEER, or Seasonal Energy Efficiency Ratio. A higher SEER indicates better performance, and with ratings of up to 18.0 SEER, Energence rooftop units exceed U.S. Department of Energy minimum standards by as much as 38%. Compared to a less efficient unit, an Energence rooftop unit can provide dramatic energy savings even as it delivers year-round comfort.

Plus, a variety of optional enhancements are available to achieve even greater efficiency and performance benefits. Exclusive MSAV® supply fan technology and an Environ™ coil system further optimize the Energence unit's energy use—and your HVAC investment as well.

Energence® rooftop units are ENERGY STAR® qualified products, helping to reduce energy spending and conserve natural resources. In addition to Energence units, Lennox has developed a wide range of products that meet ENERGY STAR guidelines for energy efficiency.

Enjoy lower energy costs with a higher-SEER system

Compare the annual energy costs for a system with 18.0 SEER to the annual energy costs for a system with 13.0 SEER and notice how fast the savings add up. As you can see, the higher the SEER, the lower the energy bill. From Sacramento to Miami, energy savings can range from 19% to 38% a year. Over the lifetime of the system, you can save thousands of dollars with a 18.0 SEER system versus a 13.0 SEER system.*

LIFETIME ENERGY COST SAVINGS [$]
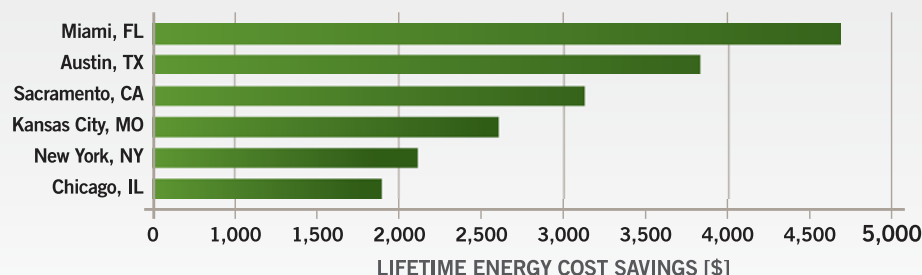
*Calculations based on Lennox' Total Cost of Ownership™ calculator, comparing 3-ton 18 SEER (12.5 EER) unit to a 3-ton 13 SEER (10.7 EER) unit at a retail facility (under 25,000 square feet) and a 10:00 a.m. to 10:00 p.m. operating schedule. Lifetime energy cost savings are calculated by multiplying annual energy costs by 15 years. Actual savings may vary depending on system settings, equipment maintenance, local weather, construction, installation of equipment, duct system, hours of operation, local fuel rates and other factors. This information is intended as an example for comparison purposes only.

MSAV™
MULTI-STAGE AIR VOLUME

Year-round energy savings with MSAV® technology

MSAV® (Multi-Stage Air Volume) supply fan technology provides significant year-round savings and lower monthly utility costs without compromising on comfort. With seven different airflow settings, the MSAV supply fan can easily adjust its speed in response to changing weather conditions, allowing the unit to operate at optimum efficiency and deliver many performance benefits:

- Improved part-load efficiency: Up to 27% IEER improvement*

- Reduced energy consumption: Up to 75% supply fan power savings*

- Improved indoor comfort: Up to 29% better moisture removal*

*At 67% airflow when compared to full load.

Low demand with one compressor running = low-speed airflow

Increasing demand requiring two to three compressors running = medium-speed airflow

Demand for four compressors running = high-speed airflow

MSAV technology can provide up to seven levels of airflow for four-compressor systems.

Improved sustainability and reliability with the Environ™ Coil System

Our environmentally friendly Environ™ Coil System works with Energence rooftop units to provide optimal cooling performance with up to 52% less refrigerant than typical units. This means buildings may qualify for additional LEED® credits. Plus, the Environ Coil System is engineered to last, with a unique design that uses up to 20% fewer brazed joints for reduced leakage potential and greater reliability. An all-aluminum construction reduces coil weight by up to 59% for greater installation ease.

S Environ™
Coil System

Green design that helps qualify for additional LEED® credits

Every Energence rooftop unit is designed to reduce your business' carbon footprint. With an efficiency rating 30% above LEED minimum for EA Credit 1.3, Energence rooftop units are the industry's leading efficiency units. Energence units can also be equipped with factory options that can help qualify for additional LEED credits. Energence rooftop units are the perfect choice for sustainable green building design.

Lennox is a committed member of the U.S. and Canada Green Building Councils.

Performance geared for your application

Every building is different, from its age and location to the needs and preferences of its occupants. That's why Lennox provides nearly endless opportunities for customization of every Energence® rooftop unit. With more than 3 million possible factory configurations, it's never been easier to fine-tune your Energence unit to deliver optimal performance for your specific application and budget needs.

Best of all, configured-to-order units can be delivered in as little as 4–6 weeks, with standard units stocked in Lennox distribution centers across the country. And since we offer more than more than 100 field-installable options, you can have a customized Energence unit on your building in as little as 24–48 hours!

The simplest way to go solar and save big

The SunSource® Commercial Energy System is the first and only commercial HVAC system to integrate directly with solar power. Simple, scalable and easy to install, the SunSource system integrates with the solar-ready Energence 3- to 6-ton rooftop unit to achieve effective efficiency levels of 34 SEER and beyond.* Each Energence unit can accommodate up to 25 solar panels for maximum efficiency. The SunSource® system:

- Is available as a factory-installed option
- Helps the rooftop unit achieve net-zero energy status
- Can be installed on almost any size or shape roof and requires no changes to the building's electrical infrastructure
- Uses microinverter technology to convert DC power harnessed by the panels to AC power to power the rooftop unit
- Can help buildings meet the ASHRAE 189.1 requirement to be solar-ready and LEED® EA Credit 2 for On-Site Renewable Energy credit
- Helps businesses qualify for tax credits, rebates, grants and utility credits, where available
- Includes an optional communication module for monitoring system status in real time

*Equipment performance estimates are based on the U.S. Department of Energy (DOE) annual performance factor (APF) method for heat pumps (10CFR part 430). Estimates of annual solar energy production are calculated for a centrally located city in each DOE heating region, using National Renewable Energy Laboratory's (NREL) PVWatts, Version 1. The annual solar energy production is solely an estimate for that region and is based upon a fixed-tilt south-facing array free of shading, with a module tilt angle equal to the local latitude of the installation. The annual solar energy production is included in the APF calculation as a reduction of the annual equipment power consumption.

Indoor air that lets everyone breathe easy

Improving a building's indoor air quality creates a better indoor environment, and a better indoor environment helps protect a company's productivity and profitability. Lennox' patented Humiditrol® dehumidification system removes moisture based on humidity requirements rather than temperature, making it easy and efficient to create a better indoor environment.

Already the most efficient hot-gas reheat system, an advanced Humiditrol system that is up to 20% more efficient is also available for 3- to 5-ton Energence® units. The advanced system reduces power consumption in dehumidification mode by:

- Lowering the indoor airflow while increasing latent capacity
- Lowering the outdoor fan speed

Humiditrol®

Intelligent, integrated operation.
Now that's just smart.

Standard on every Energence® rooftop unit, the Prodigy® control system helps optimize system performance with more than 250 adjustable parameters to meet almost any design specification. Yet it's also remarkably simple, with an intuitive user interface that allows for fast, accurate setup and simplified operation. A text-based display and push-button controls replace complicated jumpers and switches, so you can monitor and control your unit with confidence and ease.

Patent-pending USB port provides the ability to upgrade firmware and download service reports to a standard USB flash drive, making transferring and recording information easier than any other light commercial control system in the industry.

Advanced user-friendly and intuitive interface eases setup and diagnostics.

The SmartWire™ system is designed to simplify field sensor and thermostat installation through connectors that are keyed and color-coded, to help prevent miswiring and ensure the unit and components are installed properly.

Reliable operation for a low total cost of ownership

Not only does the Prodigy control system help your Energence unit deliver the most efficient performance possible, but it also provides the highest degree of system reliability and helps keep maintenance costs low. More than 100 diagnostic codes detect operating issues to help prevent premature equipment failures and simplify troubleshooting. Plus, the Prodigy control system tracks the runtime of every major component and records when service or maintenance is performed, helping cut the length and cost of service calls.
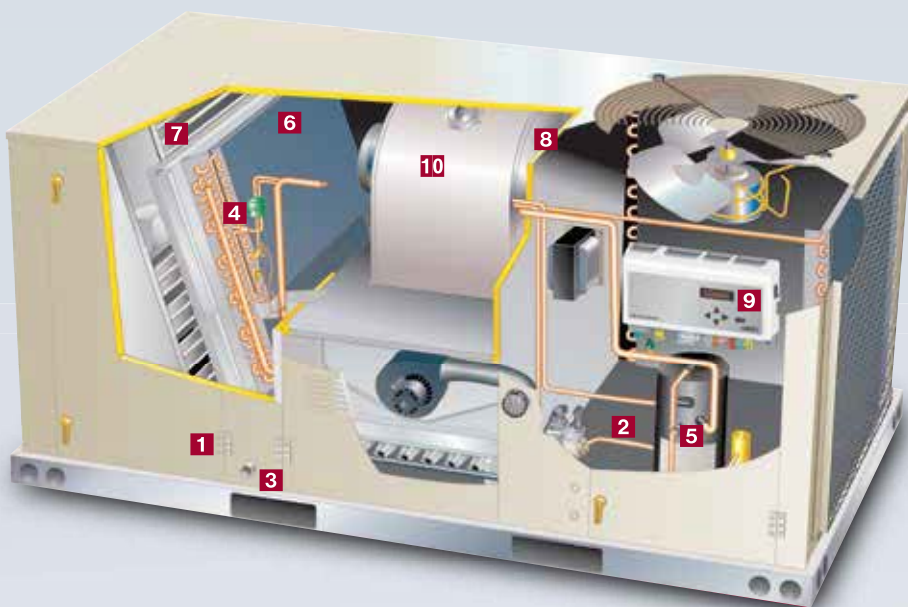
Verification when and where you need it

The Prodigy® unit controller service report:

- Validates effectiveness of service and maintenance work
- Makes "service versus replacement" decisions based on component runtime
- Alarm and status log provides quick view of problem areas, speeding up maintenance
- Allows trending of service and unit operation over time with time/date-stamped reports
- Date-and-time stamp allows verification that service was performed on time
- Helps assure correct unit operation after maintenance with sensor readings


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USB Service Report Exam

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USB SERVICE REPORT
==============================
Service Date          1/1/2010
Service Time          12:00:00
Serial No.            5609K00002
M2  Version           7.02.00
DB1Version            1.05.00
Unit No.              2
Sbus Address          2
BACnet Address.       2
CAT No.               NO CN
MODEL NO.             LGH036H4ES
Status                HEATING
==============================
Runtime Data
   Total Power On     1832 F
   Before Install     286 F
   Filter             2040 F
   Belt               1063 F
   Blower             1162 F
   Compressor 1       46
   Compressor 2       14
   Compressor 3       0
   Compressor 4       0
   Outdoor Fan 1      14
   Outdoor Fan 2      0
   Outdoor Fan 3      0
   Outdoor Fan 4
   Outdoor Fan 5
   Outdoor Fan 6
   Heat Stage 1       9
   Heat Stage 2       9
   Reheat
   Free Cooling       23
   UV Lamp
==============================
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![Energence logo]
ENERGENCE™
Saving Energy with Intelligence

Quality components built for performance

1 **Hinged Access Panel:** Provides quick access to components and protects panels and roof from damage during servicing.

2 **Isolated Compressor Compartment:** Allows performance check during normal compressor operation without disrupting airflow.

3 **Corrosion-Resistant, Removable, Double-Sloped Drain Pan:** Provides application flexibility, durability and improved serviceability.

4 **Thermostatic Expansion Valves:** Provide peak cooling performance across the entire application range.

5 **Scroll Compressor:** Standard on all units for reliable, long-term operation.

6 **Humiditrol® Dehumidification System:** Patented system allows for independent control of temperature and humidity, providing enhanced comfort control.

7 **MERV 13 Filters:** Available as factory or field option, provide an enhanced level of indoor air quality, and can help the building qualify for additional LEED® credits.

8 **Foil-Faced Insulation:** On all internal surfaces that contact airflow, helps minimize airborne fibers and improve IAQ.

9 **Prodigy® Control System:** Standard on every Energence® rooftop unit.

10 **MSAV™ (Multi-Stage Air Volume) Supply Fan:** Achieve the highest level of energy savings and comfort control with blower speed modulation (factory option on 7.5- to 25-ton models).

Environ™ Coil System: Uses less refrigerant and is lighter than traditional coils (available on select models, not shown).

Blower Belt Auto Tensioner: Factory option ensures blower is delivering the proper airflow for comfort, while maximizing efficiency and belt life (not shown).

LonTalk is a registered trademark of the Echelon Corporation.

Options and accessories to maximize your savings

Factory-Installed Options

- HACR circuit breakers
- Direct-drive blower motor
- Belt-drive blower motor
- Drive kits
- Corrosion protection
- Novar® LSM
- Phase monitor
- Humiditrol® dehumidification system
- Gas heat input
- Stainless steel heat exchanger

Factory- or Field-Installed Options

- Condensate drain trap
- Blower proving switch
- Prodigy BACnet module (BTL certified)
- Prodigy LonTalk® module (LonTalk® certified)
- Dirty filter switch
- Fresh air tempering
- Smoke detector (return and/or supply)
- Disconnect switch
- GFI service outlets
- Economizer
- Outdoor air dampers
- High-efficiency air filters
- UVC light kit
- Barometric relief dampers
- Low-temperature vestibule heater

Field-Installed Options

- Coil guards
- Hail guards
- L Connection® Network
- Horizontal economizer control kit
- Humidity sensor kit
- CO_2 sensor
- LGP/propane conversion kit

Energence® rooftop unit performance specifications

		COOLING DATA		HEATING DATA				PHYSICAL DATA	
NOM TON.	MODEL	EER	SEER OR IEER	LOW	STD.	MED.	HIGH	DIMENSIONS H X W X L [INCHES]	SHIP WT. [LBS.]
3	LGH036S4T	11.6	15.0	—	65	105	—	39 x 47 x 86	629
3	LGH036H4E	12.7	18.0	—	65	105	—	39 x 47 x 86	629
4	LGH048S4T	12.5	15.0	—	65	105	150	39 x 47 x 86	659
4	LGH048H4E	12.8	17.6	—	65	105	150	39 x 47 x 86	659
5	LGH060S4T	12.5	15.5	—	65	105	150	47 x 47 x 86	746
5	LGH060H4E	12.7	17.1	—	65	105	150	47 x 47 x 86	746
6	LGH072H4B	12.0	13.5	—	65	105	150	47 x 47 x 86	823
7.5	LGH092H4B/M	12.5	13.0/14.0	—	130	180	240	47 x 61 x 102	1,253
8.5	LGH102H4B/M	12.2	12.9/14.0	—	130	180	240	47 x 61 x 102	1,260
10	LGH120H4B/M	12.0	13.0/13.8	—	130	180	240	47 x 61 x 102	1,295
12.5	LGH150S4B/M	10.8	11.0/13.1	—	130	180	240	47 x 61 x 102	1,335
13	LGH156H4B/M	12.0	13.6/14.1	169	260	360	—	55 x 91 x 108	2,200
15	LGH180H4B/M	12.0	13.5/13.7	169	260	360	480	55 x 91 x 133	2,315
17.5	LGH210H4B/M	12.0	13.0/14.0	169	260	360	480	55 x 91 x 133	2,530
20	LGH240H4B/M	12.0	13.2/14.5	—	260	360	480	55 x 91 x 133	2,375
20	LGH242H4V	12.3	15.5	—	260	360	480	65 x 91 x 145	3,317
25	LGH300S4B/M	10.5	10.9/13.8	—	260	360	480	55 x 91 x 133	2,695
25	LGH300H4B/V	11.6	12.5/14.3	—	260	360	480	65 x 91 x 145	3,317
30	LGH360H4B/V	10.6	11.5/13.5	—	260	360	480	65 x 91 x 145	3,317
35	LGH420S4B/V	9.8/10.0	10.2/11.0	—	500	—	800	68 x 90 x 286	6,345–8,600
35	LGH420H4B/V	10.8	11.3/12.5	—	500	—	800	68 x 90 x 286	6,345–8,600
40	LGH480S4B/V	9.8	10.1/11.0	—	500	—	800	68 x 90 x 286	6,345–8,600
40	LGH480H4B/V	11.0/10.8	12.0/13.0	—	500	—	800	68 x 90 x 286	6,345–8,600
45	LGH540S4B/V	9.8/10.0	10.5/11.7	—	500	—	800	68 x 90 x 286	6,345–8,600
50	LGH600S4B/V	9.8	10.3/11.0	—	500	—	800	68 x 90 x 286	6,345–8,600
				KW RANGE					
3	LCH036S4T	11.6	15.0	7.5	15	—	—	—	39 x 47 x 86	593
3	LCH036H4E	12.7	18.0	7.5	15	—	—	—	39 x 47 x 86	593
4	LCH048S4T	12.5	15.0	7.5	15	—	—	—	39 x 47 x 86	623
4	LCH048H4E	12.8	17.6	7.5	15	—	—	—	39 x 47 x 86	623
5	LCH060S4T	12.5	15.5	7.5	15	22.5	—	—	47 x 47 x 86	710
5	LCH060H4E	12.7	17.1	7.5	15	22.5	—	—	47 x 47 x 86	710
6	LCH072H4B	12.0	13.5	7.5	15	22.5	30	—	47 x 47 x 86	787
7.5	LCH092H4B/M	12.7	13.0/14.0	7.5	15	22.5	30	45	47 x 61 x 102	1,205
8.5	LCH102H4B/M	12.4	12.9/14.0	7.5	15	22.5	30	45	47 x 61 x 102	1,212
10	LCH120H4B/M	12.2	13.2/14.0	15	22.5	30	45	60	47 x 61 x 102	1,247
12.5	LCH150S4B/M	11.0	11.2/13.1	15	22.5	30	45	60	47 x 61 x 102	1,287
13	LCH156H4B/M	12.0	13.6/14.1	15	30	45	60	—	55 x 91 x 108	2,050
15	LCH180H4B/M	12.0	13.5/13.7	15	30	45	60	—	55 x 91 x 133	2,165
17.5	LCH210H4B/M	12.0	13.0/14.0	15	30	45	60	90	55 x 91 x 133	2,380
20	LCH240H4B/M	12.0	13.2/14.5	15	30	45	60	90	55 x 91 x 133	2,375
20	LCH242H4V	12.5	15.5		30–120				65 x 91 x 145	3,207
25	LCH300S4B/M	10.5	10.9/13.8	15	30	45	60	90	55 x 91 x 133	2,545
25	LCH3000H4B/V	11.8	12.5/14.3		30–120				65 x 91 x 145	3,207
30	LCH360H4B/V	10.8	11.5/13.5		30–120				65 x 91 x 145	3,207
35	LCH420S4B/V	10.0	10.2/11.0		30–120				68 x 90 x 286	6,345–8,600
35	LCH420H4B/V	10.8	11.3/12.5		30–120				68 x 90 x 286	6,345–8,600
40	LCH480S4B/V	10.0	10.1/11.0		30–150				68 x 90 x 286	6,345–8,600
40	LCH480H4B/V	11.0/10.8	12.0/13.0		30–150				68 x 90 x 286	6,345–8,600
45	LCH540S4B/V	10.0	10.5/11.7		45–165				68 x 90 x 286	6,345–8,600
50	LCH600S4B/V	10.0	10.3/11.0		45–180				68 x 90 x 286	6,345–8,600

GAS/ELECTRIC UNITS

ELECTRIC/ELECTRIC UNITS

NOTE: Due to Lennox' ongoing commitment to quality, all specifications, ratings and dimensions are subject to change. All ratings shown are for the highest-rated model in the tonnage size.

Solutions for customized comfort

Don't just choose a Lennox® product—choose a Lennox Commercial Comfort System.
These complete packages of HVAC solutions provide tools to create a healthy and comfortable environment.

Packaged Units

- Energence® Rooftop Units
- Strategos® Rooftop Units
- Landmark® Rooftop Units
- Raider™ Rooftop Units

Commercial Controls

- Systems Integration Solutions
- Commercial Thermostats
- L Connection® Network

Solar Ready

- SunSource® Commercial
  Energy System

Indoor Air Quality

- Humiditrol® Dehumidification System
- Demand Control Ventilation
- Air Filters
- UVC Lamps

Split Systems

- S-Class® Air Conditioners/Heat Pumps
- T-Class™ Air Conditioners/Heat Pumps
- Air Handlers
- Indoor Coils

Heating

- Unit Heaters
- Duct Furnaces
- Furnaces

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Innovation never felt so good.®

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