

# E-SERIES™

COMMERCIAL PACKAGED ROOFTOP UNITS  
3- TO 25-TON LC/LG/LH/LD MODELS

UP TO 18 SEER  
UP TO 13.3 EER  
UP TO 17.0 IEER



**ALLIED**  
Commercial™

# TECHNOLOGY WITH PERFORMANCE

The complete line of E-Series™ rooftop units represents Allied Commercial's ongoing commitment to the advancement of heating and cooling technology in commercial applications. Designed to provide a low total cost of ownership, the E-Series units help reduce energy costs while being extremely cost-effective to service and maintain. They're an excellent investment any way you look at them.

## E-SERIES™ ROOFTOP UNITS AT A GLANCE:

Exceeds ASHRAE 90.1-2010 minimum standards by more than 28%

Available Single-Zone VAV technology can help significantly reduce energy consumption while preserving the ideal environment for customers

Improved humidity control from a patented dehumidification system

Helps buildings qualify for the most LEED® points

Eco-Last™ coil system maximizes efficiency and performance

Intelli-Guide™ 2.0 unit controller verifies service, operation, required setup and configuration with precision

Unique WireRight™ system helps ensure the most accurate setup and the least service time

## EFFICIENCY RATING

Up to 18 SEER, up to 13.3 EER and up to 17.0 IEER

## WARRANTY

15-YEAR LIMITED WARRANTY on stainless steel gas heat exchanger

10-YEAR LIMITED WARRANTY on aluminized gas heat exchanger

5-YEAR LIMITED WARRANTY on compressor

3-YEAR LIMITED WARRANTY on Intelli-Guide 2.0 unit controller

3-YEAR LIMITED WARRANTY on Eco-Last coil system

1-YEAR LIMITED WARRANTY on covered components

See warranty certificate for actual details.

## OPTIMUM ENERGY EFFICIENCY

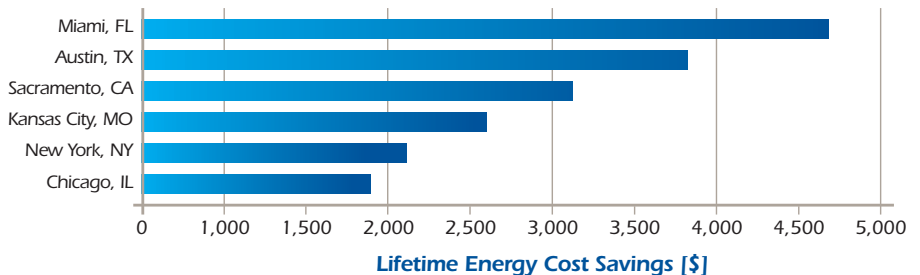
With up to 18.0 SEER, 17.0 IEER, and 13.3 EER E-Series rooftop units exceed the latest U.S. Department of Energy minimum standards by as much as 38%. Compared to a less efficient unit, an E-Series rooftop unit can provide dramatic energy savings even as it delivers year-round comfort. Plus, a variety of optional enhancements are available to achieve even greater efficiency and performance benefits.

Part-load efficiency increased to exceed DOE 2023 minimums. The Eco-Last coil system and the SZVAV supply fan technology further optimize the unit's energy usage.

Available features minimize blower power during free-cooling mode and the optional blower belt auto tensioner can maintain proper tension of the blower belt, increasing system reliability. The system also has the ability to monitor and verify performance in real time, providing confirmation that the unit is operating efficiently.

## THE HIGHER THE SEER, THE LOWER THE ENERGY COST

When comparing annual energy costs of a 18.0 SEER system and a 13.0 SEER system, it's easy to see how fast the savings add up. Simply put, 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 an 18.0 SEER system versus a 13.0 SEER system.\*



E-Series rooftop units are ENERGY STAR® certified products, helping to reduce energy spending and conserve natural resources.

\*Calculations based on Allied Commercial's Total Cost of Ownership™ calculator, comparing 3-ton 18 SEER (12.3 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.

# TAKE SYSTEM OPTIMIZATION EVEN FURTHER

Allied Commercial's exclusive Single-Zone VAV (Variable Air Volume) supply fan technology can help maximize energy use all year long with improved fan and operational efficiency. Single-Zone VAV technology can provide up to seven levels of airflow, helping the rooftop unit deliver precise performance and energy savings.

- Improved part-load efficiency: Up to 21% 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.    \*\*At 55% airflow when compared to full load.

## SINGLE-ZONE VAV ENERGY CONTROL

When there is a low demand for cooling and one compressor is running, the unit will reduce airflow to save energy. As the cooling demand increases, and the unit adds additional compressors, the unit will increase airflow to provide more cooling capacity.

To further reduce energy use, the blower can run at a separate speed during ventilation mode.

- During free-cooling economizer mode, the blower starts at low speed to meet space demands and increases, as needed, to ensure the most efficient operation.
- For fresh-air requirements, the economizer position automatically adjusts when the blower is at low speed.

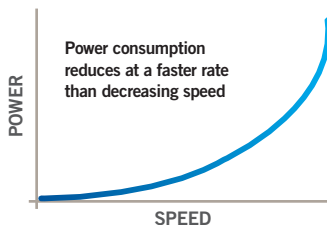
This provides just the right amount of outside air and avoids bringing in too much outside air for conditioning.

## REDUCED SPEED. ADVANCED PERFORMANCE.

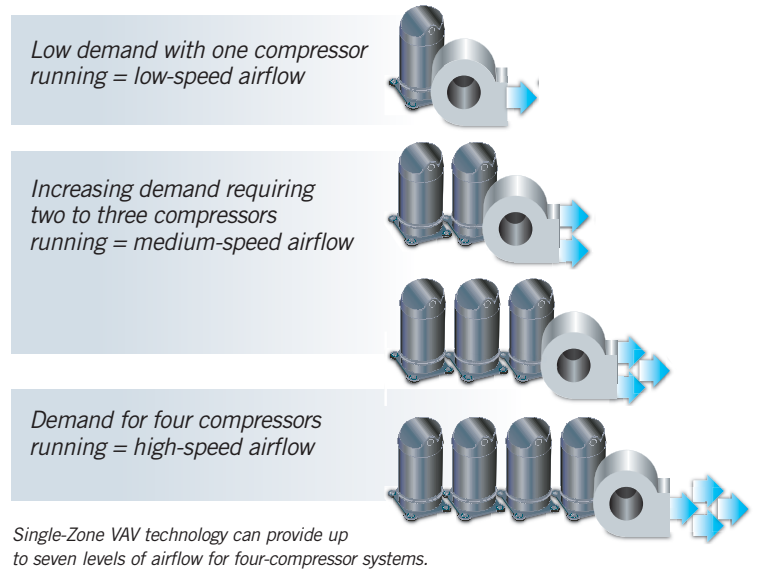
Reducing blower speed can result in reduced energy usage, due to the non-linear relationship between power consumption and rotational speed. This translates into dramatic energy savings when the rooftop unit can reduce its fan speed in certain operating modes. The table below indicates the annual energy savings by running the supply fan at reduced speeds.\*

RTU TONNAGE	BLOWER HP	FAN SPEED	
		50%	67%
10	3	\$465	\$372
20	5	\$780	\$624

\*Calculated based on 8 hours of operation per day, 365 days per year. Electric rates assumed to be \$0.10/kWh.



## HOW SINGLE-ZONE VAV TECHNOLOGY WORKS



## PEACE OF MIND IN CASE OF EMERGENCY

In the event a problem occurs with the variable-frequency drive (VFD), an electronic bypass option can help eliminate the need for an emergency service call and avoid costly downtime.

► **DURING NORMAL OPERATION:** The Intelli-Guide™ 2.0 unit controller communicates with the VFD, which operates the blower.

► **IF A PROBLEM OCCURS:** The VFD notifies the Intelli-Guide 2.0 unit controller. The Intelli-Guide 2.0 unit controller can be set up to automatically bypass electrical current around the VFD to operate the blower.



ADVANCED. PRECISE. EFFECTIVE.



### IMPROVE AND MAINTAIN AIR QUALITY

Maintaining proper indoor moisture levels can enhance system efficiency and performance levels in a variety of ways. Allied Commercial's patented 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, the 3- to 5-ton E-Series™ units are also available with the advanced dehumidification system that is up to 20% more efficient.

The advanced system reduces power consumption in dehumidification mode by:

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

### PATENTED DEHUMIDIFICATION TECHNOLOGIES

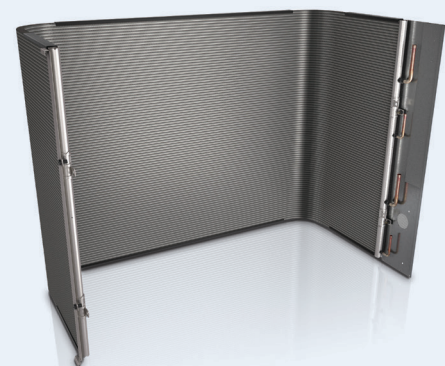
E-Series units offer additional dehumidification technologies that deliver optimized comfort.

E-Series Rooftop units offer an additional reheat dehumidification system, which removes moisture based on humidity requirements rather than temperature, making it easy and efficient to create a better indoor environment.\*

\*Innovative reheat dehumidification technology available for high-efficiency units only.

### MAXIMIZE EFFICIENCY AND PERFORMANCE

Allied Commercial's new Eco-Last™ coil system uses up to 52% less refrigerant, and with up to 20% fewer brazed joints than traditional tube-and-fin coils, the potential for leakage is decreased. In addition, the all-aluminum coil is up to 59% lighter, reducing the rooftop unit's weight.



# FAST, ACCURATE SETUP AND MINIMIZED SERVICE TIME

Standard on every E-Series rooftop unit, the Intelli-Guide™ 2.0 unit controller and WireRight™ system make setup, troubleshooting and servicing easier than ever.

## SIMPLE SERVICE

The Intelli-Guide™ 2.0 Unit Controller reinvents the service process in the palm of your hand with a wireless mobile service app, making setup and service faster than ever before

- **Guided Setup** with progress indicators, detailed help, and exportable summaries drive simple and trouble-free setup, **reducing commissioning times** over similar systems
- **Enhanced Test Functionality** provides real-time sensor readings, trending, and reports that enable easy troubleshooting
- **Multiple Device Support** compatible with both Android and IOS

## IMPROVED INTEGRATION

The Intelli-Guide™ 2.0 Unit Controller empowers customers to choose their building controls, allowing simple or tailored operation

- **Multi-protocol Support** including standard BACnet® IP & MS/TP allows custom monitoring and control while maintaining backwards compatibility
- **Wireless Sensor Support** with no additional gateways reduces installation cost of both retrofits and new installations
- **Device Encryption and Firmware Validation** are engineered to Federal Information Processing Standard 140-2 guidelines and provide peace of mind without sacrificing functionality

## SOLID PERFORMANCE

The Intelli-Guide™ 2.0 Unit Controller uses built-in algorithms™ to deliver key performance indicators and drive unit components simply and reliably

- **Intelligent Operation** optimizes comfort and unit reliability without complex configuration, saving time and delivering results
- **Integrated wireless Gateway** provides a secure connection to optional wireless zone sensors and the Intelli-Guide™ 2.0 Unit Controller Service App
- **Configurable Backup Modes** maintain unit operation and comfort during construction or external building control downtime

## ENHANCED EFFICIENCY

The Intelli-Guide™ 2.0 Unit Controller optimizes unit operation in real-time by processing advanced sensor inputs, maximizing energy efficiency and space comfort

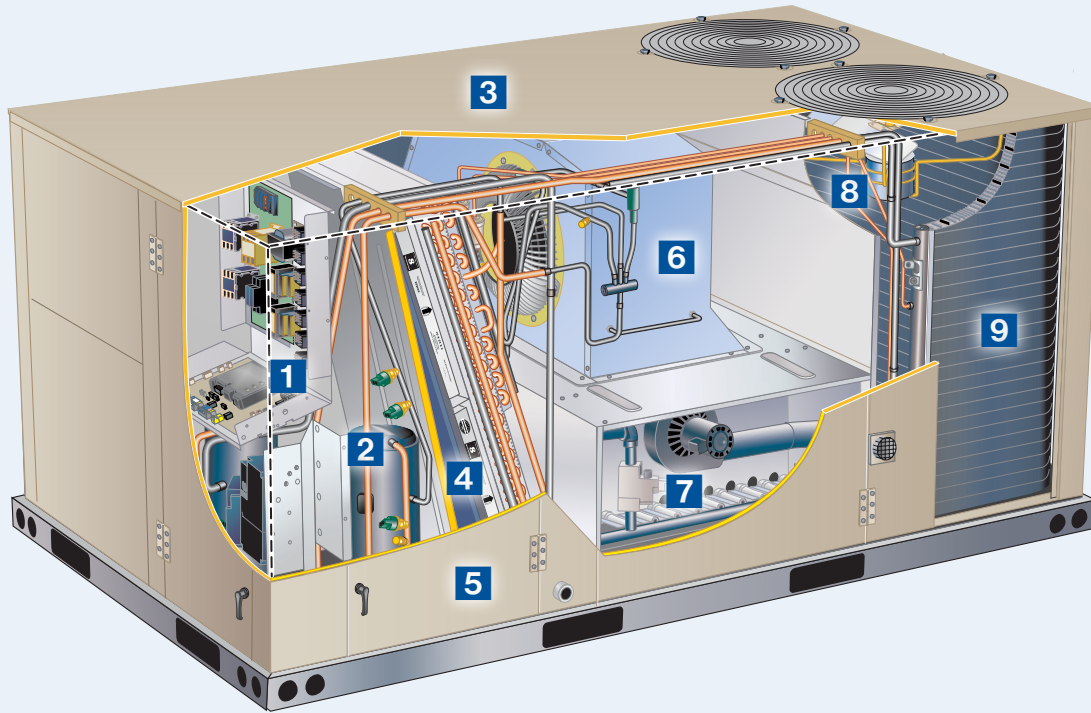
- **Standard Sensor Package** monitors key performance indicators of both the air and refrigeration systems to dynamically adjust system operation
- **System Diagnostics** track efficiency, and indicate specific component failures, allowing your organization to keep units running efficiently while reducing troubleshooting time
- **Configuration Parameters** drive tailored sequences of operation and flexibility of the Intelli-Guide™ 2.0 Unit Controller

## SERVICE APP

This service app replaces a traditional built-in user interface on the Intelli-Guide 2.0 Unit Controller and provides guided setup menus for install, test and balance, and network integration. Reports that detail run times and service history can be exported from the app. The app also facilitates seamless commissioning of wireless sensors and sensor networks compatible with the Intelli-Guide 2.0 Control System.



# INSIDE THE E-SERIES™ ROOFTOP UNIT



## QUALITY COMPONENTS BUILT FOR PERFORMANCE

### 1 INTELLI-GUIDE™ 2.0 UNIT CONTROLLER—

- Standard on every E-Series rooftop unit
- Provides guided setup menus for install, test and balance, and network integration

### 2 SCROLL COMPRESSORS—

- Two-Stage Scroll compressor (3 to 6 tons)
- Individual Refrigerant Circuits, Scroll
  - (2) Compressors (6.5 to 13 tons)
  - (3) Compressors (15 tons)
  - (4) Compressors (17.5 to 25 tons)

### 3 HEAVY GAUGE STEEL CABINET—Cyclic salt fog and UV exposure up to 1,680 hours per ASTM D5894

### 4 AIR FILTERS—Improve filtration with optional MERV 13 filters which are proven to be more effective at trapping particulates in the air

### 5 HINGED ACCESS PANELS—Provide quick access to components and protect panels and roof from damage during servicing

### 6 E-DIRECT™ DIRECT DRIVE ECM BLOWER SYSTEM—Eliminates maintenance and service costs associated with traditional belt-drive motors

### 7 HEAT EXCHANGER/ INSHOT BURNERS—Tubular construction, aluminized steel

- Life-cycle tested

### 8 OUTDOOR COIL FAN MOTORS—

- Thermal overload protected
- Totally enclosed
- Permanently lubricated ball bearings
- Shaft up
- Wire basket mount

### 9 ECO-LAST™ COIL SYSTEM—All aluminum brazed fin construction, which is up to 59% lighter. Contains up to 52% less refrigerant and has as much as 20% fewer brazed connections

# E-SERIES™ ROOFTOP UNITS

## INDUSTRY-LEADING TECHNOLOGIES

	E-SERIES™
<b>COOLING</b>	
Metering device	TXV
Indoor Coil Freeze Protection	Standard
High-pressure switch	Standard
Low-pressure switch	Standard
Filter driers	Standard
Corrosion protection	Factory
Condensate drain trap	Field
Drain pan overflow switch	Factory, Field
<b>HEATING</b>	
Bottom gas piping kit	Field
Low-temp vestibule heater	Field
LPG/Propane conversion kit	Field
Stainless steel heat exchanger	Factory
<b>BLOWER/SUPPLY AIR</b>	
SZVAV (Single-Zone Variable Air Volume)	Standard
VAV (Variable Air Volume)	Factory
VFD bypass for SZVAV	Factory
<b>CABINET</b>	
Hinged panels	Standard
Coil/Hail guards	Field
<b>CONTROLS</b>	
Intelli-Guide™ 2.0 Unit Controller	Standard
Blower proving switch	Factory, Field
Dirty filter switch	Factory, Field
BACnet® IP and MS/TP	Standard
LonTalk® gateway	Factory, Field
<b>INDOOR AIR QUALITY</b>	
High-efficiency filters	Factory, Field
Reheat dehumidification system	Factory
Demand control ventilation ready	Standard
<b>ELECTRICAL</b>	
HACR circuit breakers	Factory
Phase/voltage detection (SZVAV)	Factory
Disconnect switch	Factory, Field
GFI service outlet	Factory, Field
<b>OUTDOOR AIR CONTROLS</b>	
High-performance economizer	Factory, Field
Differential enthalpy control	Factory, Field
Sensible control	Factory, Field
Single enthalpy control	Factory, Field
Global control	Factory, Field
Barometric relief dampers	Factory, Field
Motorized outdoor air damper	Factory, Field
Manual outdoor air damper	Field
Power exhaust	Factory, Field

Information is representative of most models for each product line. Not all models will have every standard feature, factory option or field-installed accessory available. Please consult the Product Specifications (EHB) document for detailed availability.

LonTalk is a registered trademark of the Echelon Corporation.

BACnet is a registered trademark of the American Society of Heating, Refrigeration and Air-Conditioning Engineers (ASHRAE).

# E-SERIES™ ROOFTOP UNIT PERFORMANCE SPECIFICATIONS

NOMINAL TONNAGE	MODEL	COOLING DATA		GAS HEATING INPUTS (KBTUH)				PHYSICAL DATA		
		EER (EER2*)	SEER (SEER2*) OR IEER	LOW	STD.	MED.	HIGH	DIMENSIONS H X W X L [INCHES]	BASE UNIT WT. (LBS)	
GAS/ELECTRIC UNITS	3	LGT036H4E	13.3 (13.0)	18.0 (16.9)	N/A	65	108	N/A	47 x 47 x 86	630
	4	LGT048H4E	12.8 (12.1)	17.6 (17.3)	N/A	65	108	150	47 x 47 x 86	629
	5	LGT060H4E	12.7 (12.0)	17.1 (16.3)	N/A	65	108	150	47 x 47 x 86	630
	6	LGT072H4E	12.1	17.0	N/A	65	108	150	47 x 47 x 86	630
	7.5	LGT092H4(E,P)	12.3	15.7 SZVAV 14.6 VAV	N/A	130	180	240	47 x 61 x 102	1,168
	8.5	LGT102H4(E,P)	12.1	15.7 SZVAV 14.6 VAV	N/A	130	180	240	47 x 61 x 102	1,175
	10	LGT120H4(E,P)	12.0	15.5 SZVAV 14.6 VAV	N/A	130	180	240	47 x 61 x 102	1,210
	12.5	LGT150H4(E,P)	10.8	14.6 SZVAV 14.0 VAV	N/A	130	180	240	47 x 61 x 102	1,226
	13	LGT156H4(M,V)	12.0	15.5 SZVAV 15.0 VAV	169	260	360	N/A	55 x 92 x 104	1,935
	15	LGT180H4(M,V)	12.0	15.0 SZVAV 14.8 VAV	169	260	360	480	55 x 92 x 133	2,115
	17.5	LGT210H4(M,V)	12.0	16.0 SZVAV 15.5 VAV	169	260	360	480	55 x 92 x 133	2,240
	20	LGT240H4(M,V)	12.0	15.8 SZVAV 15.5 VAV	N/A	260	360	480	55 x 92 x 133	2,325
25	LGT300S4(M,V)	10.6	14.5 SZVAV 14.0 VAV	N/A	260	360	480	55 x 92 x 133	2,450	
<b>ELECTRIC HEAT SIZES - [KW]</b>										
ELECTRIC/ELECTRIC UNITS	3	LCT036H4E	13.3 (13.0)	18.0 (16.9)	7.5, 15				47 x 47 x 86	594
	4	LCT048H4E	12.8 (12.1)	17.6 (17.3)	7.5, 15				47 x 47 x 86	593
	5	LCT060H4E	12.7 (12.0)	17.1 (16.3)	7.5, 15, 22.5				47 x 47 x 86	594
	6	LCT072H4E	12.1	17.0	7.5, 15, 22.5, 30				47 x 47 x 86	594
	7.5	LCT092H4(E,P)	12.5	15.7 SZVAV 14.8 VAV	7.5, 15, 22.5, 30, 45				47 x 61 x 102	1,120
	8.5	LCT102H4(E,P)	12.3	15.7 SZVAV 14.8 VAV	7.5, 15, 22.5, 30, 45				47 x 61 x 102	1,127
	10	LCT120H4(E,P)	12.2	15.5 SZVAV 14.8 VAV	15, 22.5, 30, 45, 60				47 x 61 x 102	1,162
	12.5	LCT150H4(E,P)	11.0	14.6 SZVAV 14.2 VAV	15, 22.5, 30, 45, 60				47 x 61 x 102	1,178
	13	LCT156H4(M,V)	12.0	15.7 SZVAV 15.2 VAV	15, 30, 45, 60				55 x 92 x 104	1,785
	15	LCT180H4(M,V)	12.0	15.0 SZVAV 14.8 VAV	15, 30, 45, 60				55 x 92 x 133	1,965
	17.5	LCT210H4(M,V)	12.0	16.0 SZVAV 15.5 VAV	15, 30, 45, 60, 90				55 x 92 x 133	2,090
	20	LCT240H4(M,V)	12.0	15.8 SZVAV 15.5 VAV	15, 30, 45, 60, 90				55 x 92 x 133	2,175
25	LCT300S4(M,V)	10.6	14.5 SZVAV 14.0 VAV	15, 30, 45, 60, 90				55 x 92 x 133	2,300	
NOMINAL TONNAGE	MODEL	COOLING DATA		HEATING PERFORMANCE				PHYSICAL DATA		
		EER (EER2*)	SEER (SEER2*) OR IEER	HSPF (HSPF2*)	COP 47°F	COP 17°F	ELECTRIC HEAT [KW]	DIMENSIONS H X W X L [INCHES]	BASE UNIT WT. (LBS)	
HEAT PUMP	2	LHT024H4E	(11.0)	(15.2)	(7.95)	N/A	N/A	5 - 10	47 x 47 x 86	646
	3	LHT036H4E	12.7 (12.0)	16.5 (15.8)	8.5 (8.1)	3.7	2.5	7.5 - 15	47 x 47 x 86	645
	4	LHT048H4E	12.8 (12.0)	16.1 (15.6)	8.5 (8.0)	3.9	3.0	7.5 - 22.5	47 x 47 x 86	641
	5	LHT060H4E	12.2 (11.4)	16.1 (15.5)	8.4 (8.2)	3.7	3.8	7.5 - 22.5	47 x 47 x 86	686
	6.5	LHT078H4E	12.4	16.0	N/A	3.5	2.25	7.5 - 45	47 x 61 x 102	1,073
	7.5	LHT092H4E	12.1	15.5	N/A	3.5	2.25	7.5 - 45	47 x 61 x 102	1,073
	8.5	LHT102H4E	12.1	15.5	N/A	3.5	2.25	7.5 - 45	47 x 61 x 102	1,075
	10	LHT122H4E	12.1	15.5	N/A	3.5	2.25	15 - 60	47 x 61 x 125	1,216
	12.5	LHT150H4E	11.0	14.1	N/A	3.4	2.1	15 - 60	47 x 61 x 125	1,216
	13	LHT156H4M	12.1	15.5	N/A	3.4	2.1	15 - 60	55 x 92 x 133	2,198
	15	LHT180H4M	11.1	15.5	N/A	3.4	2.1	15 - 60	55 x 92 x 133	2,226
	20	LHT240H4M	10.9	15.5	N/A	3.4	2.1	15 - 90	55 x 92 x 133	2,268
DUAL FUEL HEAT PUMP	2	LDT024H4E	(11.0)	(15.2)	(7.3)	N/A	N/A	65	47 x 47 x 86	675
	3	LDT036H4E	12.7 (12.0)	16.5 (15.8)	16.5 (15.8)	3.7	2.5	65, 108	47 x 47 x 86	674
	4	LDT048H4E	12.8 (12.0)	16.1 (15.6)	16.1 (15.6)	3.9	3.0	65, 108, 150	47 x 47 x 86	670
	5	LDT060H4E	12.2 (11.4)	16.1 (15.5)	16.1 (15.5)	3.7	3.8	65, 108, 150	47 x 47 x 86	715
	6.5	LDT078H4E	12.2	16.0	N/A	3.5	2.25	130, 180	47 x 61 x 102	1,121
	7.5	LDT092H4E	11.9	15.5	N/A	3.5	2.25	130, 180, 240	47 x 61 x 102	1,121
	8.5	LDT102H4E	11.9	15.5	N/A	3.5	2.25	130, 180, 240	47 x 61 x 102	1,123
	10	LDT122H4E	11.9	15.5	N/A	3.5	2.25	130, 180, 240	47 x 61 x 125	1,264
	12.5	LDT150H4E	10.8	14.1	N/A	3.4	2.1	130, 180, 240	47 x 61 x 125	1,264
	13	LDT156H4M	11.9	15.3	N/A	3.4	2.1	260, 360	55 x 92 x 133	2,348
	15	LDT180H4M	10.9	15.3	N/A	3.4	2.1	260, 360, 480	55 x 92 x 133	2,376
	20	LDT240H4M	10.7	15.3	N/A	3.4	2.1	260, 360, 480	55 x 92 x 133	2,418





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Litho U.S.A.

ACES-300 2/23 PC86213