ELO183DH
ELITE® SERIES
Horizontal/Downflow
Bulletin No. 210630
May 2020
Supersedes February 2019

AFUE - 83%
Heating Input - 101,000 to 150,000 Btuh
Nominal Add-on Cooling - 3 to 5 Ton

MODEL NUMBER IDENTIFICATION

EL O 1 83 DH 135/150 P 60

- Unit Type
  EL = Elite® Series

- Type of Furnace
  O = Oil

- Stages
  1 = 1 Stage

- AFUE
  83 = 83%

- Configuration
  DH = Horizontal/Downflow

- Nominal Add-On Cooling Capacity
  36 = 3 tons
  60 = 5 tons

- Blower
  P = PSC Multi-Speed Blower Motor

- Nominal Oil Heat Input
  101/114 = 101,000/113,500 Btuh
  135/150 = 135,000/150,000 Btuh
FEATURE HIGHLIGHTS

1. Beckett™ Flame-Retention AFG Oil Burner
2. Advanced Burner Control
3. EZ Clean Heat Exchanger
4. Strategically Placed Cleaning Ports
5. Four-Speed Direct Drive Blower
6. Heavy Gauge Steel Cabinet

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APPLICATIONS
- Horizontal or downflow position
- Approved for reduced clearances to combustibles
- Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace
- Shipped factory assembled including the oil burner, with all controls installed and wired
- Factory test operated to ensure proper operation
- Can be installed on a slab or suspended in a crawl space, utility room or furnace room

NOTE - Units are not approved for attic installations.

HEATING SYSTEM
Beckett™ Flame-Retention AFG Oil Burner
- Smooth operating, high-pressure atomizing type burner blends oil and air to attain maximum efficiency
- Heavy duty motor drives quiet operating blower wheel and fuel pump
- Air turbo injector directs combustion air for smooth ignition
- Flame retention head is designed to agitate and mix oil and air for complete combustion and highest efficiency
- 120VAC primary safety control and ceramic glazed electrodes which provide a safe continuous flame
- Factory installed cadmium sulfide cell flame detector and primary safety control that provides complete shutdown in case of flame failure
- All burner parts are easily removable for servicing
- Burner is U.L. approved, C.S.A. certified and certified according to ANSI Standard 296.6
- Burner is factory installed in the unit, wired and fire tested

NOTE - Units are shipped for lower heating capacity operation. Nozzle must be field provided for field conversion to higher heating capacity.

WARRANTY
- Heat Exchanger:
  - Limited lifetime (twenty year transferable) in residential applications
  - Limited ten years in non-residential applications
- Oil Burner and all other covered components:
  - Limited five years in residential installations
  - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.

FEATURES
Advanced Burner Control
- 120 VAC primary safety control
- Controls the oil burner motor and igniter
- Control features:
  - Welded Relay Protection
  - Limited Reset and Limited Recycle
  - Reset Button - Resets burner if a restricted lockout is present
  - 3 Status Lights for System Monitoring and Diagnostics
    - Yellow - Pump Prime Mode
    - Green - Flame sensing (flashing = 60 second recycle)
    - Red - Restricted Lockout (flashing = Soft lockout) “Strike three” lockout protection to avoid nuisance calls
  - Valve-On Delay / Motor-Off Delay
  - 15 Second Lockout Time
  - Interrupted or Intermittent Duty Ignition
  - Technician Pump Priming Mode
  - Disable Function

APPROVALS AND WARRANTY
APPROVALS
- AHRI Certified
- ETL-Intertek listed
- Tested and rated according to US DOE test procedures and FTC labeling regulations
- Oil furnaces comply with US DOE Fan Efficiency Rating (FER) regulations

WARRANTY
- Heat Exchanger:
  - Limited lifetime (twenty year transferable) in residential applications
  - Limited ten years in non-residential applications
- Oil Burner and all other covered components:
  - Limited five years in residential installations
  - Limited one year in non-residential installations

NOTE - Refer to Lennox Equipment Limited Warranty certificate included with unit for specific details.
HEATING SYSTEM (continued)

EZ Clean Heat Exchanger
- Streamlined drum type heat exchanger exposes maximum surface area to the air stream with minimum air resistance
- Constructed of heavy gauge steel for maximum service life
- Strategically placed ports allow easy cleaning
- Heavy gauge mounting channels are provided in cabinet base for support of heat exchanger

Combustion Chamber
- Specially designed alumina silica ceramic fiber combustion chamber
- Combustion chamber can withstand temperatures of up to 2550°F resulting in more complete combustion and higher efficiencies

Flame Inspection Tube
- Conveniently located at the front of the unit
- Opening is large enough for normal inspection mirror

Barometric Draft Control
- Furnished as standard equipment
- Fitted installed in flue pipe

Optional Accessories

Oil Filter
- Recommended for proper oil filtration
- See Specifications table for order number

Two-Stage Oil Pump
- See Specifications table for order number

BLOWER
- Quiet, four-speed, direct drive blower
- PSC motor is statically and dynamically balanced, resiliently mounted and has integral overload protection
- Blower assembly easily removed for servicing
- A choice of blower speeds is available
- See blower data tables
- Change in blower speed with simple wiring change

CABINET
- Heavy gauge steel
- Pre-painted, textured finish
- Entire heating section is lined with foil faced fiberglass insulation keeping cabinet surface temperatures low
- Large blower access door gives complete service access to blower
- Blower compartment is completely insulated
- All models have knockouts provided in cabinet for suspending in horizontal position. See dimension drawing

Air Flow Choice
- Units are shipped for horizontal installation with left hand air discharge
- For field change to right hand air discharge, rotate unit 180° end for end, and reposition burner and flue connection
- For conversion to downflow position, turn unit on end and reposition burner

Flue Outlet
- The flue is located on the front of the unit

FILTERS

Optional Accessories

NOTE - Filters are not furnished and must be ordered separately.

Filter Kit
- Filter kit is available for field installation
- See Specifications table for order number
NOTE - ELO183DH101/114P36 kit is mounted internally and contains filter rails, stiffening rods and washable polyurethane filters.
NOTE - ELO183DH135/150P60 kit is mounted externally and contains filter cabinet, support rods and washable polyurethane filters.

CONTROLS

Transformer and Terminal Strip
- 24 volt (40VA) control transformer and terminal strip are furnished as standard and factory installed

Fan and Limit Control
- Factory installed in opening on front of cabinet
- Time-start fan control assures proper blower operation
- Adjustable blower off temperature setting
- Control turns blower on 60 to 90 seconds after thermostat demand
- Limit control has fixed temperature setting
- Protects unit from abnormal operating conditions

Blower Cooling Relay
- Furnished with the unit and factory installed on the wiring junction box
- Relay activates blower operation during cooling cycle

Optional Accessories

Thermostat
- Thermostat (programmable/non-programmable) is not furnished with unit
- See Thermostat bulletins in Controls Section and Lennox Price Book for selection
<table>
<thead>
<tr>
<th>SPECIFICATIONS</th>
<th>Model Number</th>
<th>ELO183DH101/114P36</th>
<th>ELO183DH135/150P60</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Oil Heating Performance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Input - Btuh</td>
<td>Low Fire</td>
<td>101,000</td>
<td>135,000</td>
</tr>
<tr>
<td></td>
<td>High Fire</td>
<td>113,500</td>
<td>150,000</td>
</tr>
<tr>
<td>Output - Btuh</td>
<td>Low Fire</td>
<td>85,000</td>
<td>113,000</td>
</tr>
<tr>
<td></td>
<td>High Fire</td>
<td>95,000</td>
<td>126,000</td>
</tr>
<tr>
<td>2 AFUE</td>
<td></td>
<td>83%</td>
<td>83%</td>
</tr>
<tr>
<td>Flue Size Diameter - in.</td>
<td></td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Temperature rise range</td>
<td></td>
<td>45 - 75°F</td>
<td>45 - 75°F</td>
</tr>
<tr>
<td><strong>Oil Burner</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nozzle rating - gph</td>
<td>Low Fire</td>
<td>.65</td>
<td>.85</td>
</tr>
<tr>
<td></td>
<td>High Fire</td>
<td>.75</td>
<td>1.00</td>
</tr>
<tr>
<td>Nozzle spray angle</td>
<td></td>
<td>80° solid</td>
<td>80° solid</td>
</tr>
<tr>
<td>Oil Burner Pump</td>
<td>1 Stage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil Burner Pump Pressure - psig</td>
<td></td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td><strong>Indoor Blower</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blower Motor Output - hp</td>
<td></td>
<td>1/2</td>
<td>3/4</td>
</tr>
<tr>
<td>Nominal add-on cooling - Tons</td>
<td></td>
<td>2 to 3</td>
<td>3 to 5</td>
</tr>
<tr>
<td>Blower wheel nom. diameter x width - in.</td>
<td></td>
<td>10 x 10</td>
<td>12 x 9</td>
</tr>
<tr>
<td><strong>Shipping weight - lbs. 1 package</strong></td>
<td></td>
<td>250</td>
<td>270</td>
</tr>
<tr>
<td><strong>Electrical</strong></td>
<td>Characteristics</td>
<td>120V-60hz-1ph</td>
<td>120V-60hz-1ph</td>
</tr>
<tr>
<td>Maximum Overcurrent Protection (amps)</td>
<td></td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td><strong>OPTIONAL ACCESSORIES - ORDER SEPARATELY</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filter Kit</td>
<td></td>
<td>35K05</td>
<td>35K06</td>
</tr>
<tr>
<td>Number &amp; size of filters - in.</td>
<td></td>
<td>(2) 10-1/4 x 20-1/2 x 1</td>
<td>(2) 11-3/4 x 23-1/2 x 1</td>
</tr>
<tr>
<td>Oil Filters</td>
<td>10 micron with mounting bracket</td>
<td>53P92</td>
<td>53P92</td>
</tr>
<tr>
<td>Filter restriction indicator gauge</td>
<td></td>
<td>53P90</td>
<td>53P90</td>
</tr>
<tr>
<td>Two-Stage Oil Pump</td>
<td>with solenoid</td>
<td>71M18</td>
<td>71M18</td>
</tr>
</tbody>
</table>

1 Nozzle must be field provided for field conversion to higher heating input.
2 Annual Fuel Utilization Efficiency based on U.S. DOE test procedures and FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.
### BLOWER DATA

#### ELO183DH101/114P36 BLOWER PERFORMANCE

<table>
<thead>
<tr>
<th>External Static Pressure (in. w.g.)</th>
<th>Air Volume at Various Blower Speeds - cfm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>.20</td>
<td>1410</td>
</tr>
<tr>
<td>.30</td>
<td>1320</td>
</tr>
<tr>
<td>.40</td>
<td>1280</td>
</tr>
<tr>
<td>.50</td>
<td>1195</td>
</tr>
<tr>
<td>.60</td>
<td>1090</td>
</tr>
<tr>
<td>.70</td>
<td>1000</td>
</tr>
<tr>
<td>.80</td>
<td>850</td>
</tr>
<tr>
<td>.90</td>
<td>790</td>
</tr>
</tbody>
</table>

**NOTE** - All air data is measured external to the unit with the air filter in place.

#### ELO183DH135/150P60 BLOWER PERFORMANCE

<table>
<thead>
<tr>
<th>External Static Pressure (in. w.g.)</th>
<th>Air Volume at Various Blower Speeds - cfm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High</td>
</tr>
<tr>
<td>.20</td>
<td>2205</td>
</tr>
<tr>
<td>.30</td>
<td>2120</td>
</tr>
<tr>
<td>.40</td>
<td>2070</td>
</tr>
<tr>
<td>.50</td>
<td>2005</td>
</tr>
<tr>
<td>.60</td>
<td>1930</td>
</tr>
<tr>
<td>.70</td>
<td>1850</td>
</tr>
<tr>
<td>.80</td>
<td>1765</td>
</tr>
<tr>
<td>.90</td>
<td>1675</td>
</tr>
</tbody>
</table>

**NOTE** - All air data is measured external to the unit with the air filter in place.

### INSTALLATION CLEARANCES

#### HORIZONTAL

**DOTFLOW**

- Approved for closet or alcove installation. When installing in a closet, two ventilation openings must be provided in the closet door; one 6 in. (152 mm) from the top and one 6 in. (152 mm) from the bottom. Each opening should be 7 x 14 in. (178 x 356 mm) for 101/114 models and 8 x 16 in. (203 x 406 mm) for 135/150 models

<table>
<thead>
<tr>
<th>Clearances</th>
<th>Dimensions (in.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Top of Cabinet</td>
<td>3 in. 76 mm</td>
</tr>
<tr>
<td>Bottom of Plenum &amp; Duct work</td>
<td>1 in. 25 mm</td>
</tr>
<tr>
<td>Bottom &amp; Rear of Cabinet</td>
<td>1 in. 25 mm</td>
</tr>
<tr>
<td>Front of Cabinet</td>
<td>24 in. 607 mm</td>
</tr>
<tr>
<td>Service Clearance (Front)</td>
<td>24 in. 607 mm</td>
</tr>
<tr>
<td>End of Supply Plenum</td>
<td>0 in. 0 mm</td>
</tr>
<tr>
<td>Supply Air Opening</td>
<td>0 in. 0 mm</td>
</tr>
<tr>
<td>Return Air Opening</td>
<td>0 in. 0 mm</td>
</tr>
<tr>
<td>Above Horiz. Warm Air Duct Within 3 ft. (1 m) of Furnace</td>
<td>0 in. 0 mm</td>
</tr>
<tr>
<td>Flue Pipe Horizontal</td>
<td>7 in. 178 mm</td>
</tr>
<tr>
<td>Flue Pipe Vertical</td>
<td>7 in. 178 mm</td>
</tr>
<tr>
<td>*Floor</td>
<td>*Combustible</td>
</tr>
</tbody>
</table>

*NOTE - When furnace is installed on combustible floor, 1 in. (25 mm) spacer legs must be installed to elevate unit off of mounting surface.
OPTIONAL FILTER KIT

RETURN AIR OPENING ON FURNACE

FILTER RACK

FILTER RACK OPENING SIZE
101/114 Model
18-1/2 x 18-1/2 (470 x 470)
140/154 Model
21-1/2 x 21-1/2 (546 x 546)

FILTER SUPPORT RODS (3)

FILTERS (2)

REVISIONS

<table>
<thead>
<tr>
<th>Sections</th>
<th>Description of Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approvals</td>
<td>Added US DOE Fan Efficiency Rating (FER) regulations approval.</td>
</tr>
</tbody>
</table>