# SL280DFNV(K)

## DAVE LENNOX *SIGNATURE*® COLLECTION

**Downflow | Two-Stage Heat | Variable Speed Blower | Refrigerant Detection | 60Hz**

**RESIDENTIAL**
**PRODUCT SPECIFICATIONS (EHB)**

**AFUE - 80%**
**Meets NOx Limit of 14 ng/J**
**Input - 60,000 to 80,000 Btuh**
**Nominal Add-on Cooling - 2 to 5 Tons**



S40 Smart Wi-Fi
Communicating Thermostat
(Not Furnished)

## MODEL NUMBER IDENTIFICATION

**SL 2 80 DF 060 N V 36 B K**

**Unit Type**
SL = Dave Lennox *Signature*® Collection

**Stages**
2 = Two-Stage

**AFUE**
80 = 80%

**Configuration**
DF = Downflow

**Nominal Gas Heat Input**
060 = 60,000 Btuh
080 = 80,000 Btuh

**Ultra-Low NOx**
N = Units meet California Nitrogen Oxides Standard (14ng/J)

**Blower**
V = Variable Speed Blower Motor

**Nominal Add-On Cooling Capacity**
36 = 2-3 tons
60 = 3.5-5 tons

**[1] Cabinet Width**
B = 17-1/2 in.
C = 21 in.

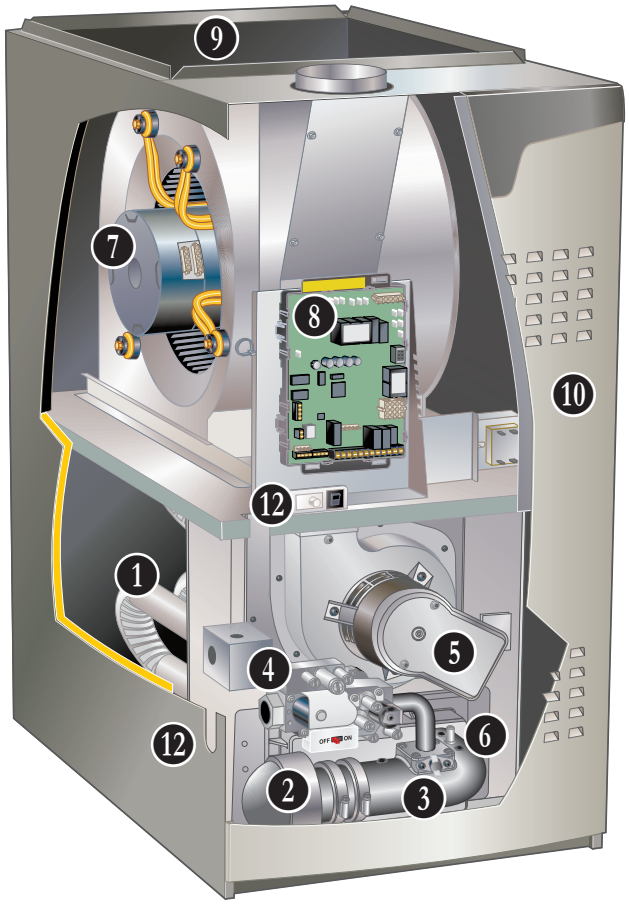
**Refrigerant Detection**
K = Refrigerant Detection-Ready

[1] Downflow indoor coils with the same letter designation physically match the furnace **supply air opening**.

Form Number 211190 | September 2025
Supersedes all previous versions

## FEATURE HIGHLIGHTS

1. Heat Exchanger Assembly
2. Burner Orifice/Air Intake Assembly
3. SureLight® Hot Surface Ignitor
4. Modulating Gas Control Valve
5. Variable-Speed Combustion Air Inducer
6. Thermal Switch
7. Variable Speed Direct Drive Blower
8. SureLight® Integrated Furnace Control
9. Variable Speed Direct Drive Blower
10. Insulated Cabinet
11. Safety Interlock Switch
12. Gas Piping And Electrical Inlets




**NOTE - SL280DFNV(K) FURNACES ARE NOT AVAILABLE IN CANADA!**
**NOTE - SL280DFNV(K) FURNACES CANNOT BE TWINNED!**
**NOTE - NOT AVAILABLE IN ALL AREAS!**
**CONTACT YOUR NEAREST LENNOX SALES OFFICE FOR DETAILS.**

## CONTENTS

## APPROVALS AND WARRANTY

### APPROVALS

- AHRI Certified
- Tested and rated according to US DOE test procedures and FTC labeling regulations
- Approved by the California Energy Commission and meets California Nitrogen Oxides Standard (NOx) limits of 14 ng/J
- Units are approved for installations from 0 - 4500 ft.
- ISO 9001 Registered Manufacturing Quality System
- Blower data from unit tests conducted in Lennox Laboratory air test chamber
- All models meet UL 60335-2-40 Refrigerant Detector Requirements

**NOTE** - This furnace has not been CSA International design certified for installation in mobile homes, recreational vehicles, or outdoors.

California Only

- These furnaces **meet** the South Coast Air Quality Management District (SCAQMD) Rule 1111 and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4905 NOx emission limit (14 ng/J) and can be installed within the SCAQMD, SJVAPCD and Bay area

### WARRANTY

- Heat Exchanger:
  - Limited twenty years in residential applications
  - Limited ten years in non-residential applications
- All other covered components:
  - Limited ten years in residential installations
  - Limited one year in non-residential installations

**NOTE** - Refer to Lennox® Basic Limited Warrenty at www.Lennox.com for additional details.

## FEATURES

### APPLICATIONS

- Input capacities of 60,000 and 80,000 Btuh
- Energy efficiency (AFUE) - 80%
- Compact cabinet for downflow applications without any internal modifications to the unit
- Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace
- Shipped factory assembled with all controls installed and wired
- Each unit factory test operated to ensure proper operation

### ZONING APPLICATIONS

- The SL280NV furnace is designed to work with the Lennox Lennox® Smart Zoning System with the Lennox® Communicating Thermostat
- The Lennox® Smart Zoning System provides direct feedback to the furnace, controlling both airflow and heat output to precisely match the comfort requirements for up to four zones

### HEATING SYSTEM

1 Heat Exchanger Assembly
- Heavy gauge aluminized steel heat exchanger
- Tubular design
- Designed for normal expansion and contraction
- Round surfaces create minimum resistance to air flow for excellent heat transfer
- Laboratory life cycle tested in excess of industry standards
- Compact size permits low overall design of furnace cabinet

2 Burner Orifice/Air Intake Assembly
- Burner assembly has a single orifice located between the gas valve and the air intake assembly
- Orifice is precisely matched to the burner input
- Burner can be removed for servicing

3 SureLight® Hot Surface Ignitor
- Tough, reliable, long-life, trouble-free performance
- Silicon nitride ignitor
- 120 volt
- Cemented to steatite block for protection against current leakage
- Ignition leads are constructed of nickel plated copper and are enclosed in high temperature Teflon® insulation for dependable operation

4 Modulating Gas Control Valve
- 24 volt redundant combination modulating gas control valve combines manual shut off switch (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control

5 Variable-Speed Combustion Air Inducer
- Heavy duty variable-speed blower prepurges heat exchanger and safely vents flue products
- Pressure switch (low fire/high fire) proves blower operation before allowing gas valve to open
- Operates only during heating cycle

## FEATURES

### HEATING SYSTEM (continued)

6 Thermal Switch
- Factory installed on air/fuel intake assembly
- Automatic reset
- Switch provides protection from abnormal operating conditions

Limit Controls
- Primary limit is accurately located on vestibule panel on all units
- Automatic reset

### Optional Accessories

High Altitude Pressure Switch Kit
- Required on 60K natural gas units for proper operation at altitudes from 4501 to 7500 ft.

Natural Gas to LPG/Propane Conversion Kit
Required for field changeover from natural gas to LPG/ Propane
- Includes gas and air orifices

Combustion Air Intake Muffler Kit
- Significantly reduces outdoor operating sound levels
- Installed vertically or horizontally in the intake piping
- See Optional Accessories Dimension Drawing

### BLOWER

7 Variable Speed Direct Drive Blower
- Each blower assembly statically and dynamically balanced
- Blower assembly easily removed for servicing

Variable Speed Blower Motor
- Variable speed motor maintains specified air volume from 0 though 0.8 in. w.g. (heating) and 0 through 1.0 in. w.g. (Cooling) static range
- Variable speed operation is achieved by the use of an ECM (Electronically Commutated Motor) motor
- Motor is controlled by furnace control
- Change in blower speed is easily accomplished by simple DIP switch change on furnace control
- See Blower Data tables
- Motor is resiliently mounted

**NOTE** - When furnaces are used with the Lennox® Smart Zoning System and the Lennox® Communicating Thermostat, the blower motor operates from predetermined minimum - maximum air volumes to satisfy zone requirements.

### CONTROLS

8 SureLight® Integrated Furnace Control (Lennox® Communicating)

- Advanced control communicates information about various operating parameters in the furnace to the optional Lennox® Communicating Thermostat to constantly maintain the highest level of comfort and performance available
- Auto Configuration - On start-up the control automatically sends a description of the unit to the optional Lennox® Communicating Thermostat to automatically configure the number of stages and features available
- Terminals for connecting a conventional heating/cooling thermostat are also provided on the control
- Control also features Innovative AirFlex™ technology which allows custom blower settings based on the application
- Thermostat Control - For optimal performance, the use of a high-quality, digital two-stage thermostat with adjustable settings for first stage/second stage, on/off differentials and adjustable stage timers is recommended

Furnace Input Staging Options

| Thermostat Type | Input Staging Available |
|---|---|
| **Lennox® Communicating Thermostat** | Two-Stage (65 and 100%) |
| **Two-Stage (Conventional)** | |
| **Single-Stage (Conventional)** | |

- Safety Controls - Flame sensor utilizes flame rectification for safe and reliable operation
- Should flame fail to ignite, control will initiate 4 re-attempts at ignition before locking out unit operation for 60 minutes
- Watchguard type circuit automatically resets ignition control after one hour of continuous thermostat demand after unit lockout, eliminating nuisance calls for service
- Display LED - Seven segment LED displays alpha-numeric information related to diagnostics as well as system operation and status
  - Diagnostic codes are held in non-volatile memory, immune from power interruptions
  - Holds up to ten diagnostic codes in order of occurrence for recall on demand
  - Port on blower door allows for easy viewing

## FEATURES

**DIP Switch Settings**

- Select Thermostat Used - Single-Stage or Two-Stage
- Two selectable second stage recognition times (7 and 12 minutes) are available on the control when the furnace is used with a single-stage thermostat
- When used with a two-stage thermostat, furnace will only initiate second stage operation with a second stage thermostat demand
- Heating Speeds - A combination of DIP switch settings allow the following motor speed selection settings within the heating speed selected for fine tuning air volume:
  - Factory default
  - 6%, 12%, 18% or 24% increase
  - 6%, 12% or 18% decrease
  - See Blower Performance tables
- Cooling Speeds - A combination of DIP switch settings allow the following motor speed selection settings within the cooling speed selected for fine tuning air volume:
  - Factory default
  - 10% increase
  - 10% decrease
  - See Blower Performance tables
- Blower Speed Ramping (Cooling Mode) - DIP switch settings allow one of four blower speed profiles during cooling operation
  - Profile A (factory setting) - Motor runs at 50% for 30 seconds, then at 82% for 7-1/2 minutes, then at 100% (if needed) until demand is satisfied. Once demand is met, motor runs at 50% for 30 seconds, then ramps down to stop
  - Profile B - Motor runs at 82% for 7-1/2 minutes and then at 100% (if needed) until demand is satisfied. Once demand is met,motor ramps down to stop
  - Profile C - Motor runs at 100% until demand is satisfied. Once demand is met, motor runs at 100% for 60 seconds, then ramps down to stop
  - Profile D - Motor runs at 100% until demand is satisfied. Once demand is met, motor ramps down to stop
- Dehumidification (Active or Humiditrol® Option) - A jumper on the control must be clipped to enable active dehumidification and/or operation with a Humiditrol® Whole-Home Dehumidification System
- A humidity controlling thermostat or device is also required
- During a call for cooling, air volume is automatically reduced, forcing humidity removal by the air conditioner or heat pump system (single stage units or two-stage units running at 2nd stage)
- After the humidity has reached the desired set-point the cooling air volume returns to its designed rate
- A dehumidification signal from the thermostat reduces the cooling cfm to 70% of the requested cooling cfm

**CONTROLS (continued)**

- Dual-Fuel Operation - A jumper on the control must be clipped to enable operation with a single or two-stage heat pump
- The indoor blower is started without delay when a call for heat is received
- Two-Stage Compressor Operation - A jumper on the control must be clipped to enable operation with a two-stage compressor
- The cooling blower speeds for first and second stage cooling will be dictated by the applicable DIP switch settings
- Lennox System Operations Monitor Connection - Monitors outdoor unit operation (communicating mode)
- Blower On/Off Time (Heating) - Blower on time is fixed at 30 seconds, blower off time is adjustable from 60, 90, 120 and 180 seconds (factory setting - 120 seconds)
- Blower On/Off Time (Cooling) - For air-conditioning applications, blower on time is 2 seconds following thermostat demand for cooling
- See Blower Speed Ramping (Cooling Mode) profiles for various blower off details
- Controls evaporator humidity by controlling blower and compressor speed on two-stage outdoor units when used with the Lennox® Communicating Thermostat or the CS7500 Thermostat
- Continuous Blower Speed - Adjustable continuous blower speed is a percentage of the high cooling speed selection
- Two selectable options (via DIP switch settings) of 28% and 38% (default setting)
- Accessory Terminal - One accessory terminal furnished for additional power supply requirements for 120 volt (less than 1 amp) powered air cleaners
- One unpowered pair of contacts are provided for humidifier connections and may be connected to 24V or 120V
- Control is factory installed in the unit control box

24 Volt Transformer (40VA)

- Furnished and factory installed on outside of control box
- Circuit breaker (furnished) is wired in series

Field Wiring Make-Up Box

- Furnished for line voltage wiring
- Factory installed internally on left side of furnace
- Box may be installed internally on right side of furnace

## FEATURES

### Refrigeration Detection System (RDS)

(Part of the SureLight® Integrated Furnace Control)

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Plug-in connection to the RDS Coil Sensor
- Supports up to two RDS Coil Sensors (factory setting)
- Used as an interface between indoor unit and thermostat to control system
- Ensures safe operation for systems equipped with R-454B refrigerant
- If R-454B refrigerant is detected, the refrigerant detection system will stop compressor and/or heating operation and operate the blower to reduce concentrations in the conditioned space
- Once safe levels are reached the HVAC system will resume normal operation
- Low GWP test button for troubleshooting
- Alarm/Zone relay interface can trigger an external alarm if R-454B refrigerant is detected and open all zone dampers (if part of a zoning system) if R-454B refrigerant is detected
- Power is disabled to non-communicating thermostats to prevent demand if R-454B refrigerant is detected
- On system start-up blower will run for five minutes and any thermostat demands are disabled

#### Optional Accessories

Thermostat

- Thermostat is not furnished with unit
- See page 8

Transformer (75VA)

- Recommended when furnace is used with zoning or defrost thermostats and other 24V accessories requiring a higher VA rating
- Circuit breaker (furnished) is wired in series
- Replaces the standard 40VA transformer

### CABINET

- Low-profile, narrow width cabinet allows easy installation
- Heavy-gauge, cold rolled steel construction
- Pre-painted cabinet finish
- Flanges provided on supply air opening for ease of plenum connection
- (9) Insulated cabinet with foil faced insulation on sides and back of heating compartment and mat faced insulation in blower compartment
- Sealed blower compartment
- Inner blower compartment access panel seals blower compartment from air leakage
- (10) Cabinet door can be removed without any tools
- Complete service access
- (11) Safety interlock switch automatically shuts off power to unit when inner blower compartment access panel is removed
- (12) Gas piping and electrical inlets are provided in both sides of cabinet.

Coil Match-Up

- All Lennox downflow indoor coils will physically match the furnace supply air opening with the same letter designation (A, B, C, D) as in the furnace model number

Low Leakage Cabinet

- All models have less than 2% air leakage
- Meets ANSI/ASHRAE Standard 193-2010 “Method of Test for Determining the Air Tightness of HVAC Equipment”

#### Optional Accessories

Downflow Combustible Flooring Base

- Required for heating only units installed on combustible floors
- Not required in add-on cooling applications
- See Dimension Drawing

### FILTER (not furnished)

- Filter and provisions for external mounting must be field provided

#### Optional Accessories

Downflow Filter and Rack Kit

- Filter cabinet mounts directly on top of furnace
- “B” and “C” width cabinets include two filters
- Filter rails are furnished
- Front access for servicing
- Cleanable filter(s) are furnished

## INDOOR AIR QUALITY PRODUCT OPTIONS

### Dave Lennox *Signature*® Collection PureAir® S Air Purification System

- Photo-catalytic Oxidation - The UVA lamp activates the photo-catalyst on the PureAir Cartridge that captures and destroys odors and chemical vapors as they flow through the PCO3S
- Carbon Clean 16® (MERV 16) media filter captures more than 95% of particles 0.3 microns and larger and more than 90% of particles 0.01 microns and larger
- Multiple sensors in the cabinet automatically detect and report to the S40 Smart Wi-Fi Thermostat (Required)
  - Dirty air filter status
  - Air filter life notification (%)
  - UVA lamp operational status (On or Off)
  - UVA lamp life notification (%)
- Highest airflow performance and lowest pressure drop compared to a leading brand.
- Long life filters and UVA lamp life up to one year

### Healthy Climate® Media Air Cleaner

- High performance in a narrow 7 in. cabinet
- Available with MERV 11, 13, or 16 rated filters
- Multi-position heavy gauge steel cabinet will support furnace/coil or air handler and associated duct work
- Tool-less entry
- Tool-less assembly for quick installation

### Healthy Climate® Whole Home In Duct Air Purifiers

- Compact Duct Mounted Design
- Effective against odors and VOC's
- Certified Ozone free
- UVC lamp and carbon cells

### Healthy Climate® Ultraviolet Germicidal Lights

- Compact duct mounted design
- Single or dual applications
- Certified ozone free
- Effective against odors to help keep the system clean
- Safety Interlocks (Additional UVC Compliance Kit for UL 60335-2-40 is available for A2L applications)
- Low power consumption
- Available for 24V or 110/230V
- Up to 1340 microwatts /cm² output (dual lamp model)

### Lennox™ Smart Air Quality Monitor

- Designed to work with the S40 Smart Wi-Fi Thermostat
- Continually monitors $CO_2$, particulates and VOC's providing real-time overall air quality score
- Works in conjunction with PureAir® S Air Purification System and Heat Recovery Ventilators (HRV) and Energy Recovery Ventilators (ERV) to automatically operate the blower to provide clean air

**NOTE** - Please refer to the individual Product Specifications for these products for full information.

## CONTROL OPTIONS

### S40 Smart Wi-Fi Thermostat

- Recognizes and connects to all Lennox ® Communicating products to automatically configure and control the heating/cooling system
- Advanced communicating controls in specific heating and cooling units, PureAir™ S Air Purification System and Healthy Climate® HRV/ERV (Heat/Energy) Recovery Ventilators transmit information about various operating parameters to the thermostat to constantly maintain the most comfortable and efficient operating conditions possible
- Lennox Smart Room Sensors, Lennox Wireless Extenders and Lennox Smart Air Quality Monitor can be added to the system
- Smart home automation compatible with Amazon Alexa®, Google Assistant, Control4® and Building36®
- Lennox® Home App controls temperature, fan operation, set programs/schedules and set Away mode on a smartphone
- Lennox Smart Tech App allows the installer to commission the system and remotely turn the system on and off during setup or service call on a smartphone

**NOTE** - When S40 Thermostats are used with a Lennox® communicating furnace and a conventional (non-communicating) heat pump for dual-fuel applications, the optional Equipment Interface Module (EIM) is required for proper operation.

### E30 Smart Wi-Fi Thermostat

- 4 Htg.-2 Clg.
- 7-day, universal, programmable, touchscreen thermostat
- Controls dehumidification during cooling mode and humidification during heating mode
- Smooth Setback Recovery and compressor short-cycle protection
- One-Touch Away Mode, Smart Away™ (geo-fencing), equipment maintenance reminders and scheduling
- Smart home automation compatible with Apple HomeKit™, Amazon Alexa® and Google Assistant
- Lennox® Home App controls temperature, fan operation, set programs/schedules and set Away mode on a smartphone
- Lennox Smart Tech App allows the installer to commission the system and remotely turn the system on and off during setup or service call on a smartphone

### M30 Smart Wi-Fi Thermostat

- 4 Htg.-2 Clg.
- 7-day, universal, programmable, touchscreen thermostat
- Humidification / dehumidification / dewpoint measurement and control, Humiditrol ® control
- Smooth Setback Recovery and compressor short-cycle protection
- One-Touch Away Mode, Smart Away™ (geo-fencing), equipment maintenance reminders and scheduling
- Smart home automation compatible with Apple HomeKit™, Amazon Alexa® and Google Assistant
- Lennox® Home App controls temperature, fan operation, set programs/schedules and set Away mode on a smartphone
- Lennox Smart Tech App allows the installer to commission the system and remotely turn the system on and off during setup or service call on a smartphone

**NOTE** - Please refer to the individual Product Specifications for these products for full information.

## INDOOR AIR QUALITY PRODUCT OPTIONS - ORDERING

**NOTE - Refer to the individual Product Specifications documents for additional accessories and maintenance items.**

| Description | Dimensions | Furnace Width | Order Number |
|---|---|---|---|
| **PureAir® S Air Purification System** | | | |
| PCO3S-16-16 | 17-1/2 x 8-3/4 x 26-1/2 | A/B/C | **Y8904** |
| PCO3S-20-16 | 21-1/8 x 8-3/4 x 26-1/2 | C/D | **Y8903** |
| **Healthy Climate® Media Air Cleaner** | | | |
| HCC16-28 (Cabinet) | 17-1/2 x 28-1/2 x 7 | A/B/C | **Y2920** |
| HCC16-28 (Cabinet) 4-pack | 17-1/2 x 28-1/2 x 7 | - - - | **Y2921** |
| HCF16-16 (Filter) MERV 16 | 16 x 25 x 5 | - - - | **X6672** |
| HCXF16-16 (Expandable Filter) MERV 16 | 16 x 25 x 5 | - - - | **X8306** |
| HCF16-13 MERV 13 | 16 x 25 x 5 | - - - | **19L16** |
| HCF16-11 (Filter) MERV 11 | 16 x 25 x 5 | - - - | **X6670** |
| HCXF16-11 (Expandable Filter) MERV 11 | 16 x 25 x 5 | - - - | **X8303** |
| HCC20-28 (Cabinet) | 21 x 28-1/2 x 7 | C/D | **X6661** |
| HCC20-28 (Cabinet) 4-pack | 21 x 28-1/2 x 7 | - - - | **X7751** |
| HCF20-16 (Filter) MERV 16 | 20 x 25 x 5 | - - - | **X6675** |
| HCXF20-16 (Expandable Filter) MERV 16 | 20 x 25 x 5 | - - - | **X8307** |
| HCF20-13 MERV 13 | 20 x 25 x 5 | - - - | **19L17** |
| HCF20-11 (Filter) MERV 11 | 20 x 25 x 5 | - - - | **X6673** |
| HCXF20-11 (Expandable Filter) MERV 11 | 20 x 25 x 5 | - - - | **X8304** |
| **Healthy Climate® Whole Home In Duct Air Purifiers** | | | |
| HCWHAP1 | 8 x 7 x 16.5 | - - - | **23V99** |
| **Healthy Climate® Ultraviolet Germicidal Lights** | | | |
| UVC-24V (24V) 17-1/2 in. | Ballast 4-3/4 x 2-1/4 x 2 | - - - | **X9423** |
| UVC-41W-S (110/230V) 17-1/2 in. | Ballast 11-3/4 x 2-3/4 x 1-5/8 | - - - | **X9424** |
| UVC-41W-D (110/230V) 17-1/2 in. | Ballast 11-3/4 x 2-3/4 x 1-5/8 | - - - | **X9425** |

## CONTROLS - ORDERING

| | | | |
|---|---|---|---|
| S40 Smart Wi-Fi Thermostat | 5 x 7-1/4 x 1 | - - - | **22V24** |
| Lennox® Smart Room Sensor | 4 x 5-1/2 x 3 | - - - | **22V25** |
| Lennox® Smart Air Quality Monitor | 3-5/8 x 4-3/8 x 1-3/8 | - - - | **21P02** |
| Lennox® Wireless Extender | 4 x 5-1/2 x 2-1/2 | - - - | **22V26** |
| E30 Smart Wi-Fi Thermostat | 5 x 7-1/2 x 1 | - - - | **20A65** |
| M30 Smart Wi-Fi Thermostat | 3-5/16 x 4-5/16 x 7/8 | - - - | **15Z69** |
| **Thermostat Accessories** | | | |
| [1] Discharge Air Temperature Sensor (For S40, E30) | | | **88K38** |
| [2] Remote Outdoor Air Temperature Sensor (For dual-fuel and Humiditrol®) | | | **X2658** |

[1] Optional for service diagnostics (S40/E30).

[2] Remote Outdoor Air Temperature Sensor is used with conventional (non-Lennox® Communicating) outdoor units (sensor is furnished with Lennox® Communicating outdoor units). Allows the thermostat to display outdoor temperature. Required in dual-fuel and Humiditrol® applications.

## SPECIFICATIONS

| | | | | |
|---|---|---|---|---|
| **Gas Heating Performance** | | **Model** | **SL280DF060NV36BK** | **SL280DF080NV60CK** |
| | | [1] AFUE | 80% | 80% |
| | **High Fire** | Input - Btuh | 60,000 | 80,000 |
| | | Output - Btuh | 47,000 | 64,000 |
| | | Temperature rise range - °F | 35 - 65 | 25 - 55 |
| | | Gas Manifold Pressure (in. w.g.) Natural Gas Only | 3.4 | 3.4 |
| | **Low Fire** | Input - Btuh | 39,000 | 52,000 |
| | | Output - Btuh | 32,000 | 43,000 |
| | | Temperature rise range - °F | 25 - 55 | 15 - 45 |
| | | Gas Manifold Pressure (in. w.g.) Natural Gas Only | 1.5 | 1.5 |
| **High static - in. w.g.** | | Heating | 0.8 | 0.8 |
| | | Cooling | 1.0 | 1.0 |
| **Connections** | | Flue connection − in. round | 4 | 4 |
| | | Gas pipe size IPS | 1/2 | 1/2 |
| **Indoor Blower** | | Wheel diameter x width - in. | 10 x 8 | 11-1/2 x 10 |
| | | Motor output - hp | 1/2 | 1.0 |
| | | Tons of add-on cooling | 2 - 3 | 3 - 5 |
| | | Air Volume Range - cfm | 600 - 1350 | 890 - 2270 |
| **Electrical Data** | | Voltage | 120 volts - 60 hertz - 1 phase | |
| | | Blower motor full load amps | 7.7 | 12.8 |
| | | Maximum overcurrent protection | 15 | 15 |
| **Shipping Data** | | lbs. - 1 package | 123 | 145 |

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

[1] Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

## INSTALLATION CLEARANCES

| Vent Type | Type B1 | Type C |
|---|---|---|
| Sides | 0 inches (0 mm) | [1] 0 inches (0 mm) |
| Rear | 0 inches (0 mm) | 0 inches (0 mm) |
| Top | 1 inch (25 mm) | 1 inch (25 mm) |
| Front | 2-1/4 inches (57 mm) | 2-1/4 inches (57 mm) |
| Front (alcove) | 24 inches (610 mm) | 24 inches (610 mm) |
| Front (service) | 24 inches (610 mm) | 24 inches (610 mm) |
| Floor | [2] Combustible | [2] Combustible |
| Flue | 1 inch (25 mm) | 6 inches (152 mm) |

NOTE - Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1).

NOTE - In the U.S. flue sizing must conform to the methods outlined in the current National Fuel Gas Code (NFPA 54/ ANSI-Z223.1) or applicable provisions of local building codes.

[1] Left side requires 4 in. clearance if single wall vent is used on 14-1/2 in. A" width cabinets, and 2 in. clearance on 17-1/2 in. B" width cabinets.

[2] Clearance for installation on combustible floor if optional Downflow Combustible Flooring Base is installed between furnace and combustible floor. Not required in add-on cooling applications if installed in accordance with local codes or National Fuel Gas Code ANSI-Z223.1.

## OPTIONAL ACCESSORIES - ORDER SEPARATELY

| | "B" Width Models | "C" Width Models |
|---|---|---|
| **CABINET ACCESSORIES** | | |
| **Downflow Combustible Flooring Base** | **11M60** | **11M61** |
| **CONTROLS** | | |
| **Transformer (75VA)** | **27J32** | **27J32** |
| **DOWNFLOW FILTER KITS** | | |
| **Downflow Air Filter and Rack Kit** | **51W07** | **51W08** |
| No. and Size of filter - in. | (2) 16 x 20 x 1 | (2) 16 x 20 x 1 |
| **DOWNFLOW FILTER KITS** | | |
| **Combustion Air Intake Muffler Kit** | **29K98** | **29K98** |

## REFRIGERANT DETECTION SYSTEM (RDS) COMPONENTS

| Description | | Order No. |
|---|---|---|
| Refrigerant Detection System (RDS) Coil Sensor Kit | | **26Z69** |
| Refrigerant Detection System (RDS) Blower Control Board | Any Lennox® Communicating Furnace or any Non-Communicating 24V Furnace (Universal) | **27A03** |
| | Any Non-Communicating 24V Furnace | **27A02** |

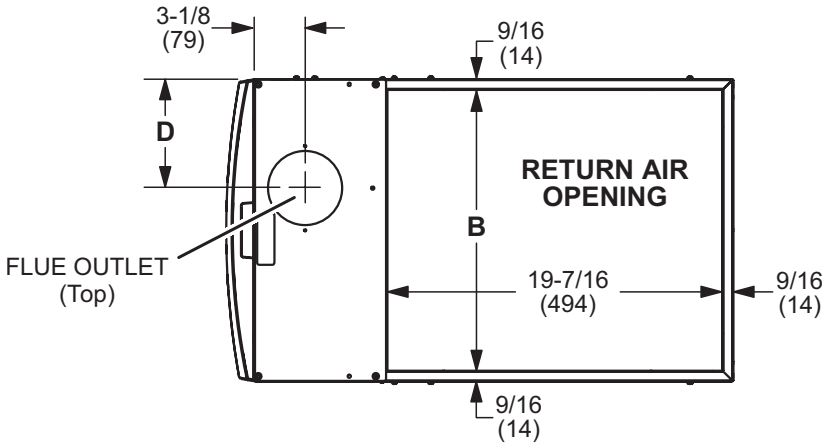
NOTE - Communicating Blower Control Board and Sensor can be used universally with Lennox® communicating furnace or any non-communicating 24 volt furnace. Non-Communicating Blower Control Board and Sensor can be used with any non-communicating 24 volt furnace.

## HIGH ALTITUDE OPERATION

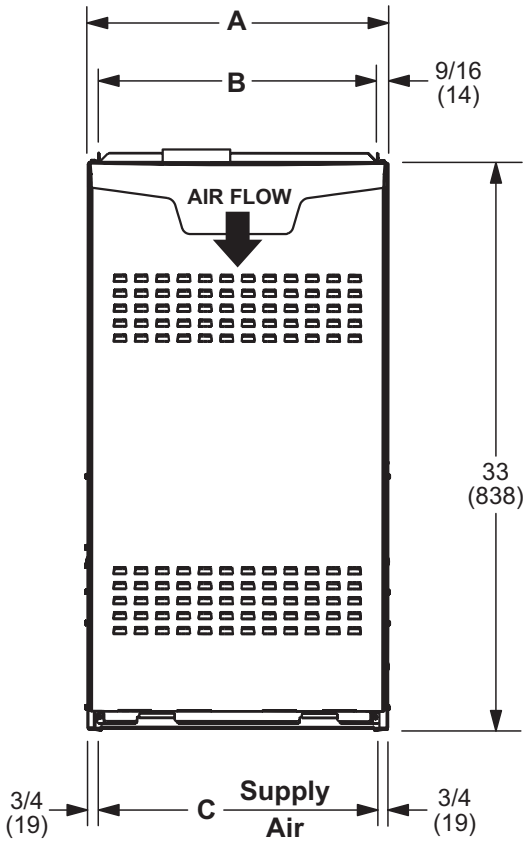
Units may be installed at altitudes up to 7500 ft. above sea level without any modification.
60K natural gas units installed at altitudes of 4501 to 7500 feet require a field installed High Altitude Pressure Switch. See table below.

## GAS HEAT ACCESSORIES

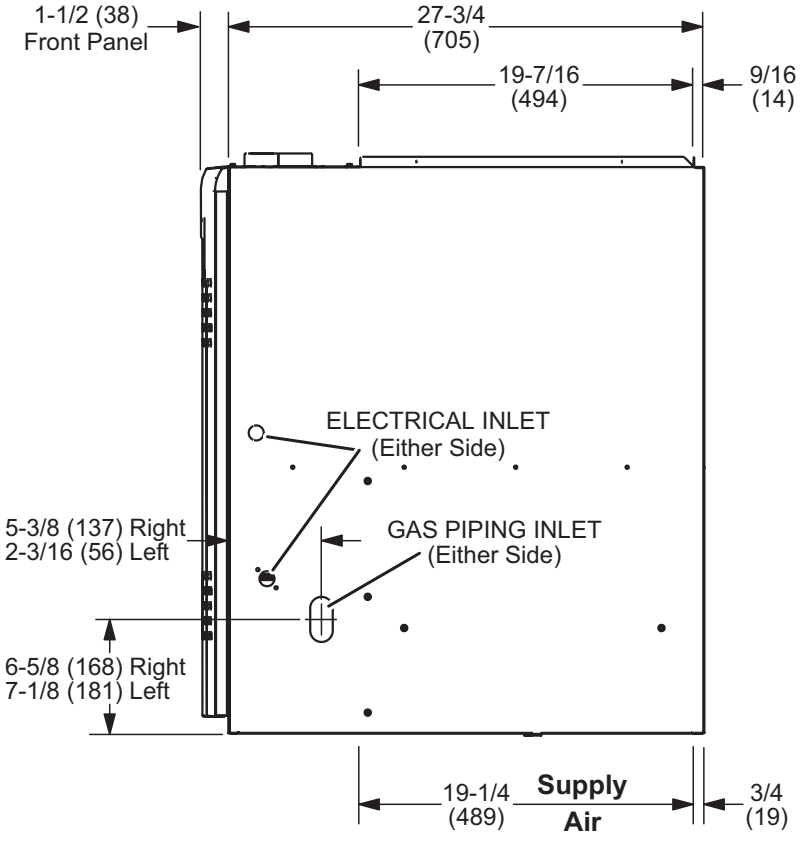
| Input | High Altitude Pressure Switch Kit (4501 - 7500 ft.) | | Natural Gas to LPG/Propane Kit | |
|---|---|---|---|---|
| | Natural Gas | LPG/Propane | 0 - 4500 ft. | 0 - 7500 ft. |
| 060 | 20K91 | No Change | - - - | 20P40 |
| 080 | No Change | N/A | 20P41 | - - - |




**TOP VIEW**




**FRONT VIEW**

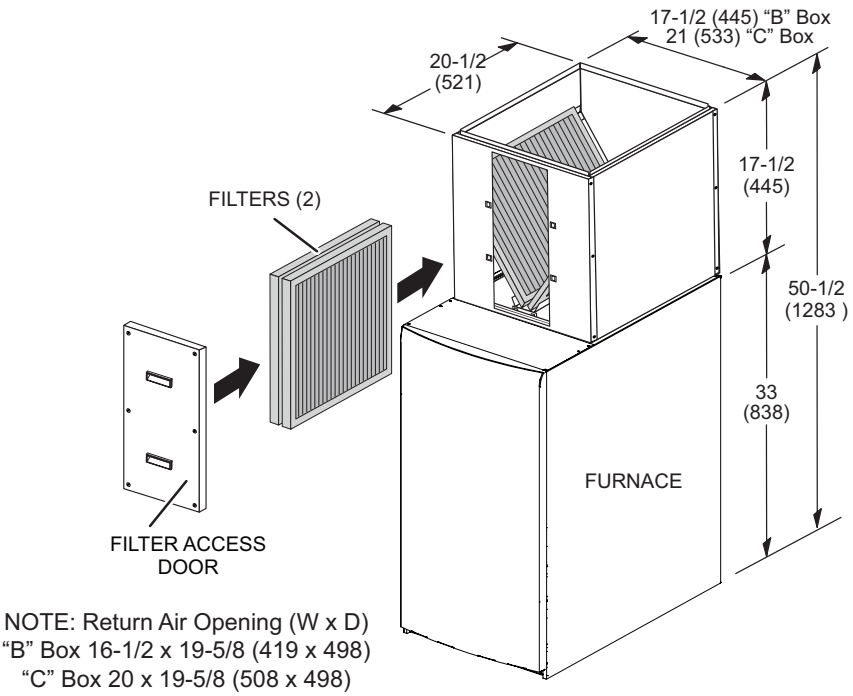



**SIDE VIEW**

| Model No. | A | | B | | C | | D | |
|---|---|---|---|---|---|---|---|---|
| | in. | mm | in. | mm | in. | mm | in. | mm |
| SL280DF060NV36BK | 17-1/2 | 446 | 16-3/8 | 416 | 16 | 406 | 6-1/4 | 159 |
| SL280DF080NV60CK | 21 | 533 | 19-7/8 | 504 | 19-1/2 | 495 | 8 | 203 |

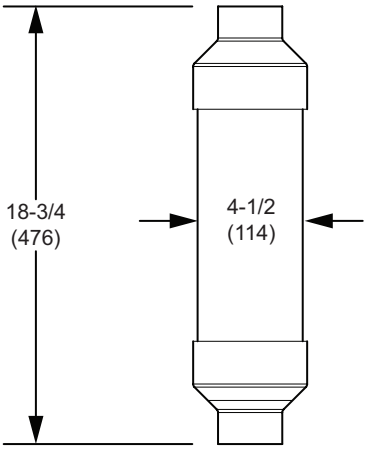
## DOWNFLOW FILTER CABINET

**“B AND ”C” WIDTH FURNACES**
**(Two Filters)**



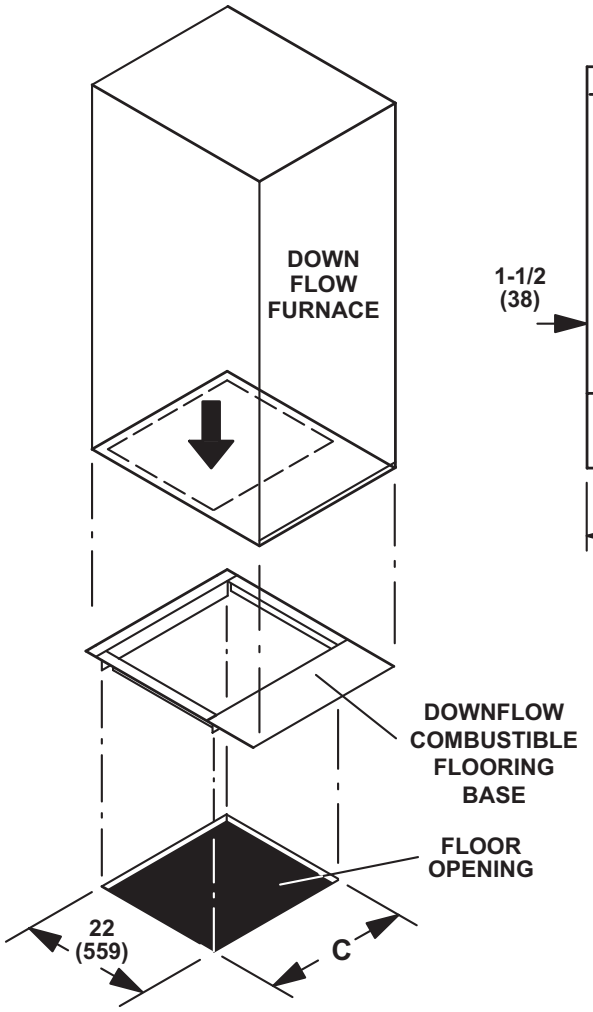

NOTE: Return Air Opening (W x D)
“B” Box 16-1/2 x 19-5/8 (419 x 498)
“C” Box 20 x 19-5/8 (508 x 498)

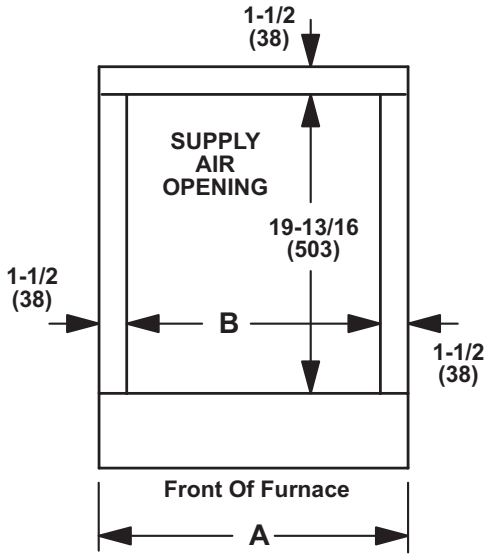
## COMBUSTION AIR INTAKE MUFFLER KIT
**29K98 - 2-inch**



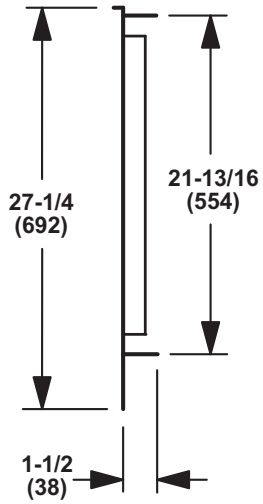

(Muffler can be installed in horizontal or vertical position on the intake pipe.)

## DOWNFLOW COMBUSTIBLE FLOORING BASE




TOP VIEW

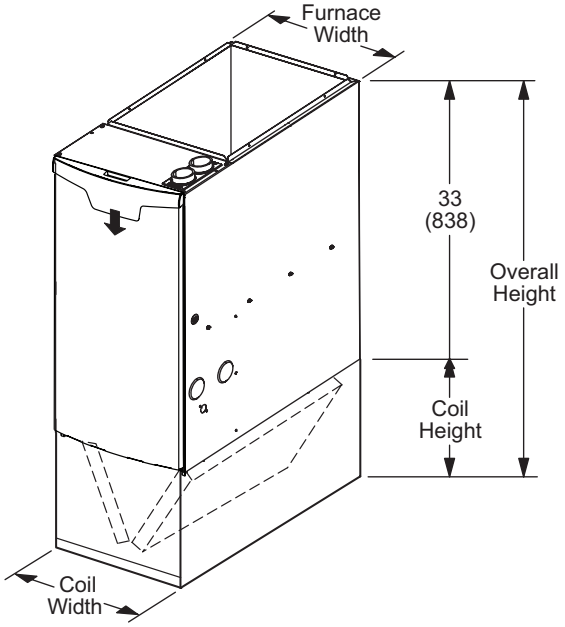



SIDE VIEW

| Cabinet Width | Catalog Number | A | | B | | C | |
|---|---|---|---|---|---|---|---|
| | | in. | mm | in. | mm | in. | mm |
| B | 11M60 | 19-9/16 | 497 | 16-9/16 | 421 | 18-3/4 | 476 |
| C | 11M61 | 23-1/16 | 586 | 20-1/16 | 510 | 22-1/4 | 565 |



| Model | | Coil/Furnace Width | | Coil Height | | Overall Height | |
|---|---|---|---|---|---|---|---|
| CK40DT | CRX35 | in. | mm | in. | mm | in. | mm |
| CK40DT-24B | CRX35-24B | 17-1/2 | 445 | 18 | 457 | 51 | 1295 |
| CK40DT-30/36B | CRX35-30/36B | 17-1/2 | 445 | 23-1/2 | 597 | 56-1/2 | 1435 |
| CK40DT-30/36C | CRX35-30/36C | 21 | 533 | 23-1/2 | 597 | 56-1/2 | 1435 |
| CK40DT-42B | CRX35-42B | 17-1/2 | 445 | 23-1/2 | 597 | 56-1/2 | 1435 |
| CK40DT-48C | CRX35-48C | 21 | 533 | 27-1/2 | 699 | 60-1/2 | 1537 |
| CK40CT-50/60C | CRX35-50/60C | 21 | 533 | 27-1/2 | 699 | 60-1/2 | 1537 |



## BLOWER DATA

**SL280DF060NV36BK BLOWER PERFORMANCE (less filter)**

**0 through 0.8 in. w.g. (Heating) and 0 through 1.0 in. w.g. (Cooling) External Static Pressure Range**

| HEATING | | |
|---|---|---|
| [1] Heating Speed DIP Switch Settings | First Stage Heating Speed - cfm | Second Stage Heating Speed - cfm |
| +24% | 1065 | 1175 |
| +18% | 1010 | 1105 |
| +12% | 965 | 1055 |
| +6% | 910 | 990 |
| Factory Default | 855 | 930 |
| –6% | 795 | 880 |
| –12% | 745 | 820 |
| –18% | 695 | 760 |

| COOLING | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| [1] Cooling Speed DIP Switch Settings | First Stage Cooling Speed - cfm | | | | Second Stage Cooling Speed - cfm | | | |
| | Low | Medium-Low | Medium-High | [2] High | Low | Medium-Low | Medium-High | [2] High |
| + | 730 | 780 | 840 | 960 | 1000 | 1090 | 1215 | 1350 |
| Factory Default | 665 | 705 | 760 | 870 | 910 | 990 | 1095 | 1220 |
| – | 600 | 635 | 685 | 765 | 810 | 885 | 985 | 1095 |

[1] Cooling and heating speeds are based on a combination of DIP switch settings on the furnace control. Refer to Installation Instructions for specific DIP Switch Settings.

[2] Factory default setting.

NOTES - The effect of static pressure is included in air volumes shown.
First stage HEAT is approximately 91% of the same second stage HEAT.
First stage COOL (two-stage air conditioning units only) is approximately 70% of the same second stage COOL speed position.
Continuous Fan Only speed is selectable at 28% and 38% of the selected second stage cooling speed - minimum 380 cfm.
Lennox® Smart Zoning System Applications - Minimum blower speed is 380 cfm.

**SL280DF060NV36BK BLOWER MOTOR WATTS (COOLING)**

| [1] Cooling Speed DIP Switch Settings | | Motor Watts @ Various External Static Pressures - in. wg. | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | First Stage | | | | | | | | Second Stage | | | | | | | | | |
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
| **+ Setting** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 65 | 86 | 106 | 125 | 148 | 160 | 179 | 196 | 116 | 143 | 177 | 193 | 224 | 251 | 269 | 297 | 321 | 350 |
| | Med-Low | 71 | 98 | 115 | 133 | 157 | 177 | 190 | 215 | 146 | 174 | 200 | 232 | 261 | 288 | 317 | 338 | 372 | 394 |
| | Med-High | 87 | 115 | 130 | 156 | 178 | 203 | 215 | 239 | 191 | 228 | 265 | 295 | 324 | 355 | 386 | 416 | 445 | 477 |
| | High | 102 | 136 | 156 | 182 | 207 | 228 | 252 | 279 | 246 | 293 | 335 | 362 | 399 | 441 | 476 | 508 | 531 | 547 |
| **Factory Default** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 56 | 73 | 92 | 109 | 128 | 145 | 158 | 175 | 95 | 118 | 143 | 166 | 188 | 212 | 233 | 256 | 277 | 303 |
| | Med-Low | 57 | 77 | 99 | 119 | 134 | 151 | 168 | 188 | 113 | 139 | 170 | 194 | 216 | 245 | 268 | 290 | 311 | 336 |
| | Med-High | 70 | 90 | 111 | 134 | 152 | 169 | 191 | 213 | 146 | 176 | 205 | 230 | 260 | 289 | 320 | 345 | 370 | 406 |
| | High | 87 | 106 | 129 | 147 | 174 | 198 | 216 | 239 | 191 | 228 | 263 | 294 | 332 | 360 | 391 | 413 | 447 | 475 |
| **– Setting** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 47 | 65 | 81 | 98 | 113 | 134 | 146 | 162 | 76 | 99 | 118 | 144 | 165 | 184 | 202 | 223 | 246 | 267 |
| | Med-Low | 52 | 69 | 88 | 106 | 124 | 137 | 152 | 171 | 91 | 110 | 138 | 155 | 183 | 203 | 224 | 246 | 267 | 291 |
| | Med-High | 55 | 75 | 96 | 111 | 131 | 147 | 168 | 187 | 111 | 139 | 167 | 189 | 216 | 240 | 265 | 289 | 313 | 341 |
| | High | 64 | 89 | 106 | 130 | 153 | 169 | 185 | 211 | 150 | 189 | 217 | 244 | 270 | 295 | 327 | 348 | 374 | 405 |

## BLOWER DATA

**SL280DF080NV60CK BLOWER PERFORMANCE (less filter)**

**0 through 0.8 in. w.g. (Heating) and 0 through 1.0 in. w.g. (Cooling) External Static Pressure Range**

| HEATING | | |
|---|---|---|
| [1] Heating Speed DIP Switch Settings | First Stage Heating Speed - cfm | Second Stage Heating Speed - cfm |
| +24% | 1475 | 1610 |
| +18% | 1385 | 1515 |
| +12% | 1335 | 1445 |
| +6% | 1255 | 1360 |
| Factory Default | 1175 | 1285 |
| –6% | 1100 | 1195 |
| –12% | 1050 | 1140 |
| –18% | 980 | 1045 |

| COOLING | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| [1] Cooling Speed DIP Switch Settings | First Stage Cooling Speed - cfm | | | | Second Stage Cooling Speed - cfm | | | |
| | Low | Medium-Low | Medium-High | [2] High | Low | Medium-Low | Medium-High | [2] High |
| + | 1090 | 1220 | 1380 | 1575 | 1575 | 1800 | 2000 | 2270 |
| Factory Default | 990 | 1110 | 1250 | 1440 | 1400 | 1600 | 1820 | 2050 |
| – | 890 | 995 | 1135 | 1300 | 1270 | 1435 | 1635 | 1855 |

[1] Cooling and heating speeds are based on a combination of DIP switch settings on the furnace control. Refer to Installation Instructions for specific DIP Switch Settings.

[2] Factory default setting.

NOTES - The effect of static pressure is included in air volumes shown.
First stage HEAT is approximately 91% of the same second stage HEAT.
First stage COOL (two-stage air conditioning units only) is approximately 70% of the same second stage COOL speed position.
Continuous Fan Only speed is selectable at 28% and 38% of the selected second stage cooling speed - minimum 450 cfm.
Lennox® Smart Zoning System Applications - Minimum blower speed is 450 cfm.

**SL280DF080NV60CK BLOWER MOTOR WATTS (COOLING)**

| [1] Cooling Speed DIP Switch Settings | | Motor Watts @ Various External Static Pressures - in. wg. | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | First Stage | | | | | | | | Second Stage | | | | | | | | | |
| | | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | 0.8 | 0.9 | 1.0 |
| **+ Setting** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 117 | 148 | 175 | 200 | 228 | 252 | 276 | 297 | 296 | 336 | 368 | 404 | 444 | 478 | 515 | 545 | 577 | 611 |
| | Med-Low | 155 | 184 | 212 | 243 | 273 | 302 | 330 | 354 | 408 | 441 | 484 | 522 | 554 | 601 | 641 | 689 | 731 | 774 |
| | Med-High | 215 | 255 | 283 | 319 | 354 | 380 | 411 | 439 | 578 | 629 | 682 | 718 | 763 | 824 | 859 | 903 | 951 | 989 |
| | High | 285 | 335 | 358 | 401 | 436 | 473 | 512 | 545 | 877 | 935 | 979 | 1036 | 1052 | 1058 | 1057 | 1047 | 1042 | 1035 |
| **Factory Default** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 98 | 121 | 150 | 173 | 198 | 221 | 238 | 262 | 221 | 247 | 293 | 317 | 362 | 388 | 417 | 448 | 483 | 504 |
| | Med-Low | 126 | 150 | 179 | 207 | 233 | 262 | 286 | 309 | 317 | 350 | 393 | 432 | 471 | 503 | 538 | 572 | 610 | 642 |
| | Med-High | 167 | 199 | 231 | 259 | 286 | 319 | 344 | 368 | 423 | 464 | 520 | 547 | 593 | 646 | 686 | 722 | 760 | 813 |
| | High | 225 | 255 | 292 | 322 | 359 | 392 | 428 | 456 | 639 | 683 | 733 | 789 | 837 | 887 | 932 | 977 | 1018 | 1034 |
| **– Setting** | | | | | | | | | | | | | | | | | | | |
| Cooling Speed | Low | 86 | 110 | 135 | 157 | 177 | 197 | 217 | 238 | 164 | 198 | 228 | 260 | 288 | 320 | 349 | 372 | 399 | 429 |
| | Med-Low | 95 | 123 | 148 | 173 | 202 | 222 | 241 | 264 | 239 | 269 | 302 | 343 | 376 | 411 | 437 | 472 | 501 | 534 |
| | Med-High | 137 | 166 | 196 | 217 | 248 | 271 | 296 | 320 | 309 | 342 | 385 | 426 | 463 | 501 | 538 | 573 | 603 | 644 |
| | High | 166 | 201 | 229 | 264 | 292 | 323 | 347 | 384 | 458 | 501 | 545 | 586 | 632 | 687 | 729 | 762 | 814 | 851 |

## REVISIONS

| Sections | Description of Change |
|---|---|
| IAQ Products | Updated. |
| New Section | Added Control Options. |



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