

SDH

STRATEGOS® ROOFTOP UNITS

Ultra-High Efficiency | Dual-Fuel | Lennox® CORE Controller | **R-454B** | 60Hz

COMMERCIAL

PRODUCT SPECIFICATIONS (EHB)

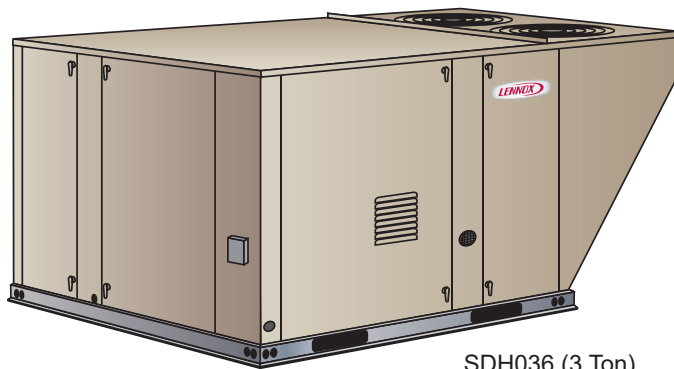


3 to 20 Tons

Net Cooling Capacity - 36,000 to 230,000 Btuh

Net Heating Capacity - 34,000 to 230,000 Btuh

Gas Input Heat Capacity - 70,000 to 480,000 Btuh



SDH036 (3 Ton)
SDH060 (5 Ton)

STRATEGOS™
COMMAND EFFICIENCY

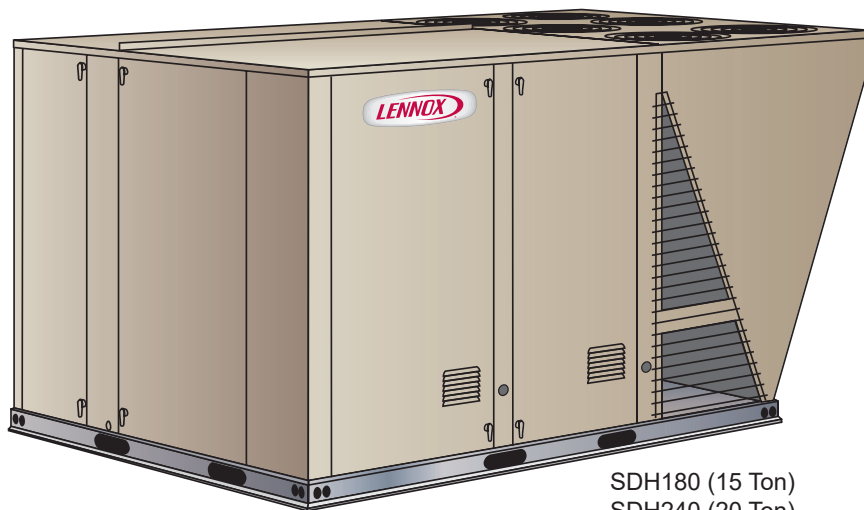


SDH092 (7.5 Ton)
SDH120 (10 Ton)

SMARTWIRE™ SYSTEM



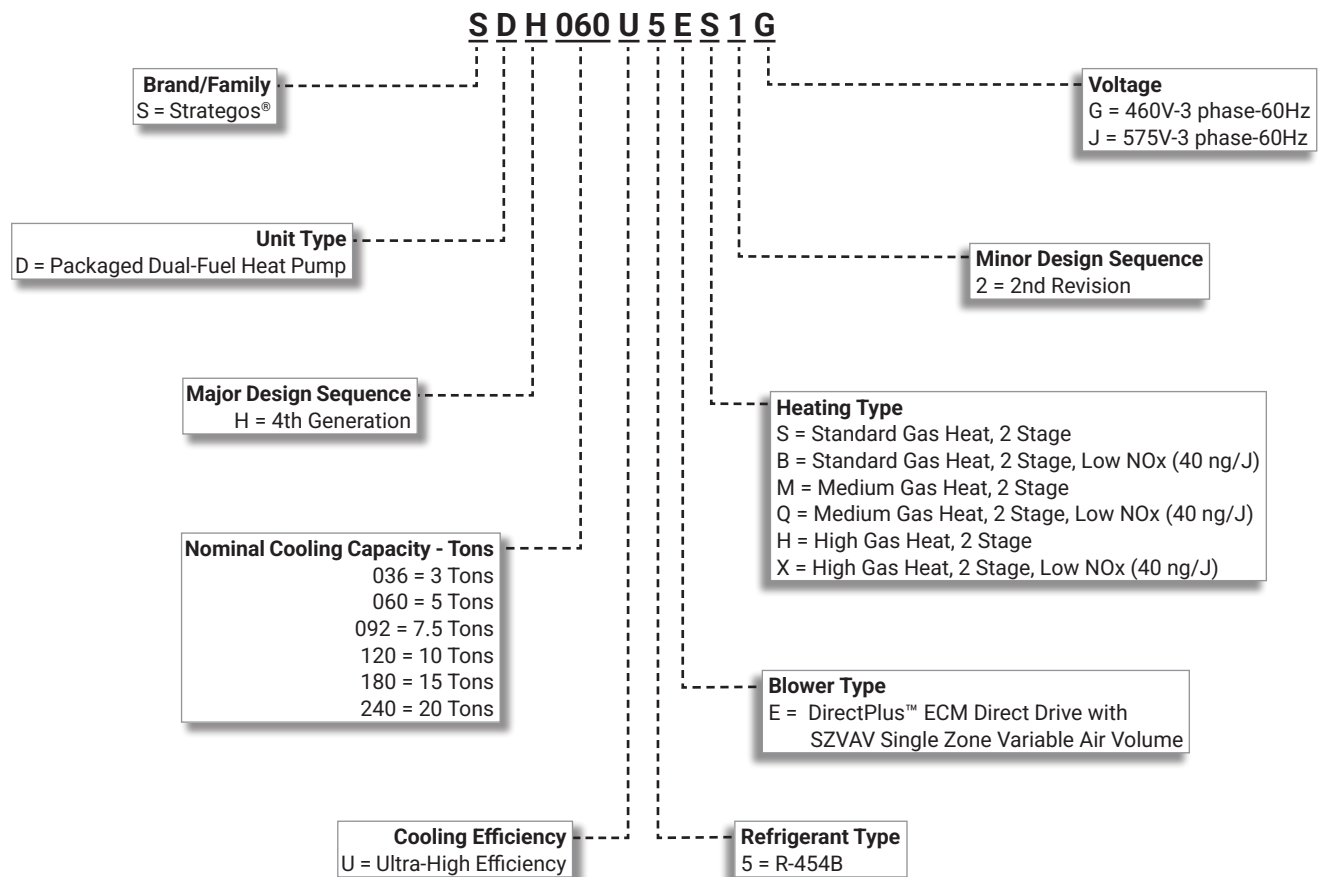
ASHRAE
Standard
90.1



SDH180 (15 Ton)
SDH240 (20 Ton)



MODEL NUMBER IDENTIFICATION

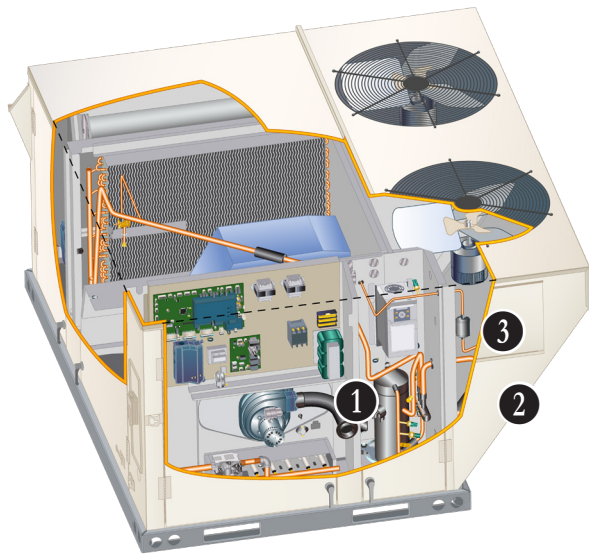


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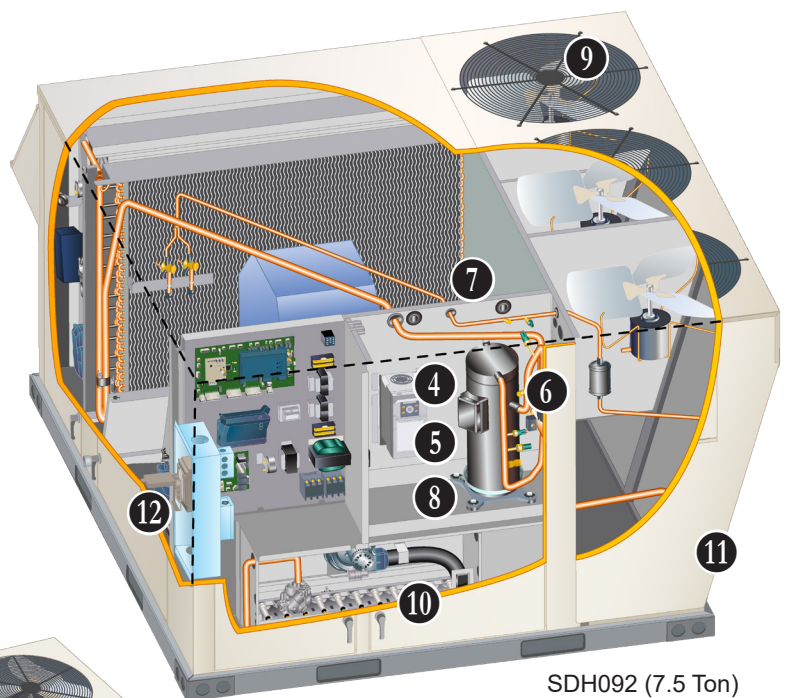
FEATURE HIGHLIGHTS

Lennox' Strategos® packaged rooftop unit product line was created to save energy with intelligence by offering some of the highest energy efficiency ratings available with a powerful, easy to use unit controller. This makes Strategos® rooftop units perfect for business owners looking for an HVAC product with the lowest total cost of ownership



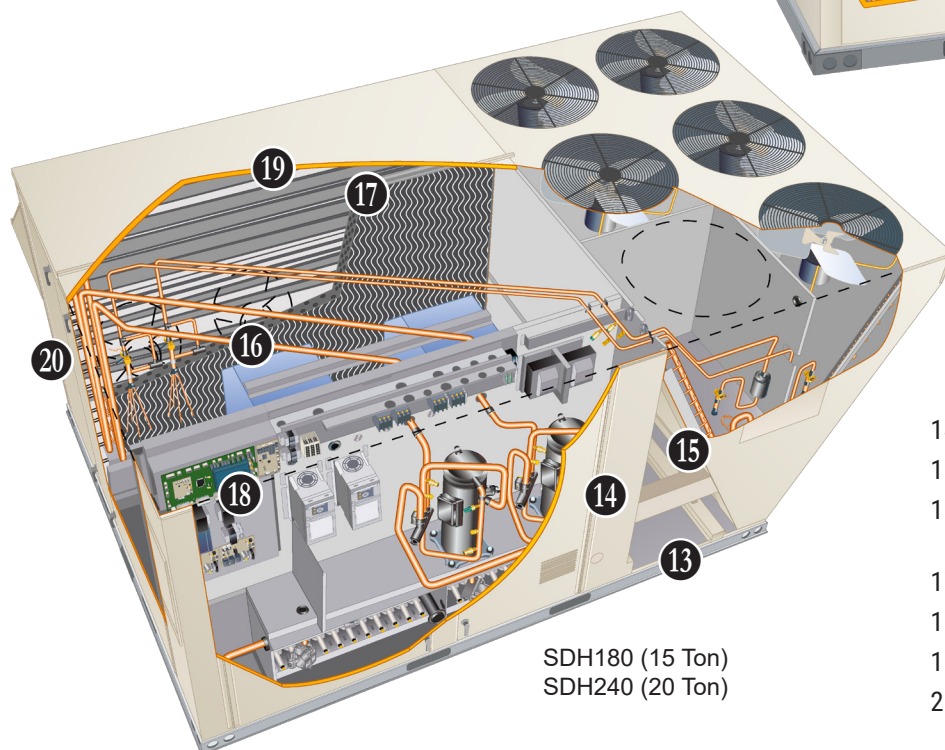
SDH036 (3 Ton)
SDH060 (5 Ton)

1. Variable-Speed Scroll Compressor
2. Thermal Expansion Valve
3. Filter/Drier
4. High Pressure Switch
5. High Pressure Transducer
6. Low Pressure Transducer
7. Liquid Pressure Transducer
8. Discharge Line Thermistor



SDH092 (7.5 Ton)
SDH120 (10 Ton)

9. Variable Speed ECM Outdoor Coil Fan Motors
10. Stainless steel Heat Exchanger/Inshot burners
11. Heavy Gauge Steel Cabinet
12. Power Entry
13. Fully Insulated



SDH180 (15 Ton)
SDH240 (20 Ton)

14. Hinged Access Panels
15. Grille Guards
16. DirectPlus™ ECM Direct Drive with SZVAV Single Zone Variable Air Volume
17. Air Filters
18. Lennox® CORE Unit Controller
19. Economizer (option)
20. Power Exhaust Fans (180/240 option)

APPROVALS AND WARRANTY

APPROVALS

- All 3 and 5 ton models are AHRI Standard 210/240-2023 certified
- All 7.5-20 ton models are AHRI Standard 340/360-2023 certified
- ENERGY STAR® certified (certain models), visit www.energystar.gov for a list of qualifying products
- ETL and CSA listed
- All models are ASHRAE 90.1-2022 compliant
- All models meet DOE 2023 energy efficiency standards
- All models are listed to UL 60335-1 & 60335-2-40 and meet the Refrigerant Detection and Dissipation Requirements
- Components are bonded for grounding to meet safety standards for servicing required by ETL, NEC and CEC
- ISO 9001 Registered Manufacturing Quality System
- All 7.5- 20 ton models meet California Code of Regulations, Title 24 and ASHRAE 90.1-2022 Section 6.4.3.10 requirements for staged airflow
- All models have FSA approval and are compliant with standard ASCE 7-22 (ASD) and the Florida Building Code Eighth Edition (2023)
- All models are fully charged and run tested to verify unit operation and functionality

WARRANTY

- Stainless Steel Heat Exchange - Limited fifteen years
- Compressors - Limited five years
- Lennox CORE® Unit Controller - Limited three years
- High Performance Economizers (optional) - Limited five years
- All other covered components - Limited one year

FEATURES AND BENEFITS

DUAL-FUEL OPERATION

(Heating Mode)

- Operates the heat pump for 1st stage heating
 - If 1st stage heat settings are not met, 2nd stage activates gas heating (secondary heat source)
- Mechanical heat pump operation automatically terminates on gas heat start-up
- Lennox® CORE Control System automatically changes blower speeds between heat pump heating and gas heating
- Blower operates in high speed during 1st stage (heat pump) operation and terminates during changeover to gas heat operation
- Blower starts when heat exchanger is warm, and runs in high speed during 2nd stage (gas heat) operation
 - If continuous blower operation is available on the thermostat, a change in blower speed automatically occurs during heat pump to gas heat changeover

COOLING/HEATING SYSTEM

- Designed to maximize sensible and latent cooling and heating performance at design conditions
- Mechanical cooling operates from 0°F to 125°F
- Mechanical heating operates down to 35°F ambient (default dual fuel balance point) adjustable 10°F to 65°F
- Mechanical heating operates at ambient temperatures above 10°F
- Gas heating operates from 35°F down to -40°F (default dual fuel balance point) adjustable 10°F to 65°F

NOTE - Optional Low Temperature Vestibule Heater extends gas heat operation down to -60°F.

R-454B Refrigerant

- Low GWP (Global Warming Potential)
- Zero ODP (Ozone Depletion Potential)
- Low Toxicity/Lower Flammability - A2L
- Unit is factory pre-charged

Scroll Compressors

- Cooling system consists of variable capacity scroll compressors (one for 036, 060, 092 and 120 models, two for 180-240 models)

1 Variable-Speed Scroll Compressor

- High performance, reliability and quiet operation
- Operates on a variable-frequency determined to vary capacity based on the cooling load required

Compressor Operation

- Two involute spiral scrolls matched together to generate a series of crescent shaped gas pockets between them
- During compression, one scroll remains stationary while the other scroll orbits around it
- Gas is drawn into the outer pocket, the pocket is sealed as the scroll rotates
- As the spiral movement continues, gas pockets are pushed to the center of the scrolls
- Volume between the pockets is simultaneously reduced

FEATURES AND BENEFITS

COOLING/HEATING SYSTEM (continued)

- When the pocket reaches the center, gas is now at high pressure and is forced out of a port located in the center of the fixed scrolls
- During compression, several pockets are compressed simultaneously resulting in a smooth continuous compression cycle
- Continuous flank contact, maintained by centrifugal force, minimizes gas leakage and maximizes efficiency
- Compressor is tolerant to the effects of slugging and contaminants
- If this occurs, scrolls separate, allowing liquid or contaminants to be worked toward the center and discharged

Compressor Crankcase Heater

- Protects against refrigerant migration that can occur during low ambient operation or during extended off cycles

DC Inverter Control

- Converts AC line voltage into filtered variable DC voltage
- Provides continuous compressor operation, while adjusting the capacity according to discharge air temperature
- Adjusts compressor output in increments as small as 1%
- Prevents frequent changes in capacity and ensures efficient, economical operation
- Two LEDs (red and green) indicate inverter operating status and aid in troubleshooting
- External noise filter reduces unwanted electromagnetic interference (EMI)

2 Thermal Check/Expansion Valves

- Ensures optimal performance throughout the application range
- Removable element head

Reversing Valves

- 4-way interchange reversing valve rapidly changes the direction of refrigerant flow resulting in quick changeover from cooling to heating and vice versa

3 Filter/Drier

- High capacity filter/drier protects the system from dirt and moisture

4 High Pressure Switch

- Protects the compressor from overload conditions such as dirty condenser coils, blocked refrigerant flow or loss of outdoor fan operation

5 High Pressure Transducer

- Monitors the compressor discharge pressures and protects from abnormal conditions

6 Low Pressure Transducer

- Monitors the suction pressures and protects from abnormal conditions

7 Liquid Pressure Transducer

- Monitors the liquid pressures and protects from abnormal conditions

8 Discharge Line Thermistor

- Monitors and protects the compressor from excessive temperatures

Indoor Coil Freeze Protection

- Protects the evaporator coil from damaging ice build-up due to conditions such as low/no airflow, or low refrigerant charge

Outdoor Coil

- Copper tube construction
- Enhanced rippled-edge aluminum fins
- Flared shoulder tubing connections
- Silver soldered construction
- Factory leak tested

Indoor Coil

- Copper tube construction
- Enhanced rippled-edge aluminum fins
- Flared shoulder tubing connections
- Silver soldered construction for improved heat transfer
- Factory leak tested
- Row-split coils on multi-stage air volume models
- Cross row circuiting with rifled tubing optimizes both sensible and latent cooling capacity

Antimicrobial Condensate Drain Pan

- Composite pan, sloped to meet drainage requirements per ASHRAE 62.1
- Anti-Microbial additive prevents growth of mold and mildew, which improves indoor air quality and reduces drain line blockage
- Drain connection extends outside unit

Condensate Drain Trap

- EPDM high density rubber material

9 Variable-Speed ECM Outdoor Coil Fan Motors

- Fan speed is controlled by the Lennox® CORE unit controller
- Thermal overload protected
- Totally enclosed
- Permanently lubricated ball bearings
- Shaft up
- Wire basket mount

Required Selections

Cooling Capacity

- Specify nominal cooling capacity

Options/Accessories

Factory or Field Installed

Drain Pan Overflow Switch

- Monitors condensate level in drain pan
- Shuts down unit if drain becomes clogged

FEATURES AND BENEFITS

LOW GWP REFRIGERANT DETECTION SYSTEM (RDS)

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Factory installed on all units
- Consists of a leak detection sensor(s) and a mitigation control
- Ensures safe operation for systems equipped with R-454B refrigerant
- Sensor(s) monitors indoor coil area for any refrigerant leaks if they occur
- If a leak is detected the refrigerant detection system will prevent compressor and heating operation until a leak is no longer detected
- Refrigeration detection system energizes blower while a leak is detected to mitigate any concentrations of refrigerant from the unit and the system

HEATING SYSTEM

10 Heat Exchanger

- Tubular construction, Stainless steel Heat Exchanger
- Life-cycle tested
- Aluminized steel inshot burners
- Direct spark ignition
- Electronic flame sensor
- Combustion air inducer
- Redundant automatic dual stage gas valve with manual shut-off

Electronic Pilot Ignition

- Electronic spark igniter provides positive direct ignition of burners on each operating cycle
- Permits main gas valve to stay open only when the burners are proven to be lit
- If loss of flame occurs, gas valve closes, shutting off the gas to the burners
- LED indicates status and aids in troubleshooting
- Watchguard circuit on module automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance service calls
- Factory installed in the gas heating compartment

Limit Controls

- Redundant limit controls with fixed temperature setting
- Protects heat exchanger and other components from overheating

Safety Switches

- Flame roll-out switch
- Flame sensor
- Combustion air inducer proving switch
- Protects system operation

Required Selections

NOTE - All gas heating for 036-060 models is only available as Low NOx (40 ng/J).

Gas Input Choice - Order one:

3 ton models

- Standard Gas Heat (2 Stage, Low NOX/40 ng/J)
53,000/70,000 Btuh
- Medium Gas Heat (2 Stage, Low NOX/40 ng/J)
81,000/108,000 Btuh

5 ton models

- Standard Gas Heat (2 Stage, Low NOX/40 ng/J)
53,000/70,000 Btuh
- Medium Gas Heat (2 Stage, Low NOX/40 ng/J)
81,000/108,000 Btuh
- High Gas Heat (2 Stage, Low NOX/40 ng/J)
113,000/150,000 Btuh

7.5 and 10 ton models

- Standard Gas Heat (2 Stage)
84,500/130,000 Btuh
- Medium Gas Heat (2 Stage)
117,000/180,000 Btuh
- High Gas Heat (2 Stage)
156,000/240,000 Btuh

15 and 20 ton models

- Standard Gas Heat (2 Stage)
169,000/260,000 Btuh
- Medium Gas Heat (2 Stage)
234,000/360,000 Btuh
- High Gas Heat (2 Stage)
312,000/480,000 Btuh

NOTE - Natural gas values shown above.

Options/Accessories

Factory Installed

Stainless Steel Heat Exchanger

- Required if mixed air temperature is below 45°F
- CSA certified to allow operation of unit down to -60°F

Field Installed

Combustion Air Intake Extensions

- Recommended for use with existing flue extension kits in areas where high snow drifts can block intake air

Fresh Air Tempering

- Provides heating and cooling as needed to maintain the supply air temperature within a comfort range, regardless of the thermostat demand

NOTE - Requires field installed sensor kit and unit controller parameter change in the field to activate this mode of operation

Low Temperature Vestibule Heater

- Electric heater automatically controls minimum temperature in gas burner compartment when temperature is below -40°F

LPG/Propane Kit

- Conversion kit to field change over units from Natural Gas to LPG/Propane

Vertical Vent Extension Kit

- Exhausts flue gases vertically above unit

FEATURES AND BENEFITS

CABINET

11 Construction

- Heavy-gauge steel panels
- Full perimeter heavy-gauge galvanized steel base rail (provides structural integrity for transportation, handling, and installation)
- Base rails have rigging holes
- Fork slots (two sides on the 3 and 5 ton models, three sides on the 7.5 through 20 ton models)
- Raised edges around duct and power entry openings in the bottom of the unit for water protection

Airflow

- Units are shipped in downflow (vertical) configuration

12 Power/Gas Entry

- Electrical/gas lines can be routed through the unit base or through horizontal access knock-outs

Exterior Panels

- Constructed of heavy-gauge, galvanized steel
- Textured pre-paint with polyurethane finish
- Cyclic salt fog and UV exposure up to 1680 hours per ASTM D5894

13 Insulation

- Fully insulated with non-hygroscopic fiberglass insulation (conditioned areas)
- Unit base is fully insulated
- Base insulation serves as an air seal to the roof curb, eliminating the need to add a seal during installation

14 Hinged Access Panels

- Economizer/filter section
- Blower section
- Compressor/controls/heat section
- Hinges are constructed of galvanized-steel
- Panel seals and quarter-turn latching handles provide a tight air and water seal

15 Grille Guards

- Protects space between outdoor coils and main cabinet

Options/Accessories

Factory Installed

Corrosion Protection

- Completely flexible immersed coating
- Electrodeposited dry film process
- AST ElectroFin E-Coat
- ASTM B117 / DIN 53167 Salt Spray - 15,000+ hours
- ASTM G85 Annex A3 SWAAT Modified Salt Spray - 3000 hours
- VA Master Construction Specification Division 23 for High Humidity Installations
- CID AA-52474A (GSA)

Option 1:

- Coated indoor and outdoor coil assemblies (including tube sheets)
- Painted cabinet interior

Option 2:

- Coated outdoor coil assembly (including tube sheets)

Field Installed

Combination Coil/Hail Guards

- Heavy gauge steel frame
- Painted to match cabinet
- Expanded metal mesh protects outdoor coil

BLOWER

16 DirectPlus™ ECM Direct Drive Blower System with SZVAV Single Zone Variable Air Volume

- High-efficiency, variable-speed ECM (electronically commutated) motor
- Eliminates the need for a separate variable-frequency drive
- SZVAV Single Zone Variable Air Volume control modulates the amount of supply blower airflow according to cooling demand, heating demand, ventilation demand or smoke alarm
- The amount of airflow for each stage can be set according to a parameter in the Lennox® CORE Unit Controller
- Unit is shipped from the factory with preset airflows
- Fully variable speed motor modulates to maximize system efficiency
- Dual blowers on 180/240 models
- Combines the motor and electronics into one unit
- Aerodynamically optimized impeller
- Backward curved blades mounted directly onto the rotor
- Air inlet grill reduces indoor sound levels without affecting air performance



Blower Proving

- Monitors blower operation
- Shuts down unit if blower stops

FEATURES AND BENEFITS

ELECTRICAL

SmartWire™ System

- Advanced wiring connectors
- Keyed and color-coded to prevent miswiring
- Wire coloring scheme is standardized across all models
- Each connection is intuitively labeled to make troubleshooting and servicing quick and easy

Circuit Breakers

- HACR type
- For overload and short circuit protection
- Factory wired
- Current sensitive and temperature activated
- Manual reset
- Mounted in the power entry panel

Electrical Plugs

- Positive connection electrical plugs connect common accessories and maintenance parts for easy removal or installation

GFI Service Outlets (2)

- 115V ground fault circuit interrupter (GFCI) type
- 20 amp non-powered, field-wired (all voltages)

Short-Circuit Current Rating (SCCR)

- Higher short circuit protection up to 35kA

Required Selections

Voltage Choice

- Specify when ordering base unit

Options/Accessories

Field Installed

GFI Weatherproof Cover

- Single-gang cover
- Heavy-duty UV-resistant polycarbonate case construction
- Hinged base cover with gasket

INDOOR AIR QUALITY

Options/Accessories

Factory or Field Installed

17 Standard Air Filters

- MERV 8 (Minimum Efficiency Reporting Value) based on ASHRAE 52.2 efficiency
- Disposable
- 2 inch pleated

Healthy Climate® MERV 13 High Efficiency Air Filters

- MERV 13 (Minimum Efficiency Reporting Value) based on ASHRAE 52.2 efficiency
- Disposable
- 2 inch pleated

Field Installed

Indoor Air Quality (CO₂) Sensor

- Monitors CO₂ levels and reports to unit controller which adjusts economizer dampers as needed
- SZVAV Single Zone Variable Air Volume units with an economizer require a CO₂ sensor to modulate the economizer damper and maintain the desired minimum amount of fresh outdoor air
- CO₂ sensor can be installed in either the occupied zone or the return air duct

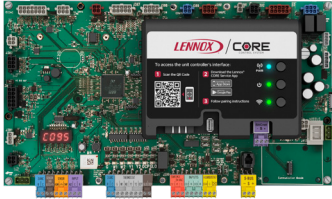
Field Installed

Replacement Filter Media Kit With Frame (180-240 Only)

- Replaces existing pleated filter media
- Includes washable metal mesh screen and metal frame
- Clip holds replaceable non-pleated filter

CONTROL SYSTEM

LENNOX® CORE CONTROL SYSTEM



- 18** The Lennox® CORE Control System is designed to accelerate equipment install and service. Standard with all Strategos® rooftop units, control system integrates key technologies that lower installation costs, drive system efficiency, and protect your investments.

The Lennox® CORE Unit Controller is a microprocessor-based controller that provides flexible control of all unit functions.

CORE Mobile Service App

- Guided Setup with progress indicators, detailed help, and exportable summaries to manage simple, trouble-free setup, reducing commissioning times
- Enhanced Test Functionality provides real-time sensor readings, trending, and reports that enable easy troubleshooting
- Ability to set and configure parameters of the CORE Control System to manage sequence of operation
- Economizer test function ensures economizer is operating correctly



Additional Features:

- Built-In 7-Segment Display shows Unit Status and active alarms for easy troubleshooting
- Buttons for test and clearing delays
- SmartWire™ System with keyed and removable screw terminals ensure correct field wiring
- Built-in BACnet MS/TP and IP allow open integration to building management systems.
- Two-port Ethernet Switch enables daisy chaining for BACnet IP and automatic firmware updates

NOTE - Unit Internet Connection required.

- Profile setup copies key settings between units with the same configuration to reduce setup time
- USB port allows a technician to download and transfer unit information to help verify service was performed
- USB software updates on the Lennox® CORE Unit Controller enhance functionality without the need to change components
- Unit Controller Software

Configurable Built-In Functions

- Discharge Air Cooling Control
- Up to three distinct Cooling Airflows in Thermostat Mode
- Programmable independent heating, ventilation and cooling blower speeds

- Discharge Air Heating Control
- Economizer Control Options (See Economizer / Exhaust Air / Outdoor Air sections)
- Exhaust Fan Control Modes for fresh air damper position
- Configurable Morning Warm-up
- Night Setback Mode
- Fresh Air Tempering for Improved Ventilation
- Demand Control Ventilation
- Low Ambient Controls for operation down to 0°F
- Two Defrost Control Methods (demand and timed - heat pumps only)

Component Protection / Unit Safeguards:

- Compressor Time-Off Delay
- Adjustable Blower On/Off Delay
- Return Air Temperature Limit Control
- Safety Switch Input allows Controller to respond to a external safety switch trip
- Service Relay Output
- Thermostat Bounce Delay
- Smoke Alarm Mode has four choices (unit off, positive pressure, negative pressure, purge)
- "Strike Three" Protection
- Gas Valve Time Delay Between First and Second Stage
- Minimum Compressor Run Time

Control Methods / Interfaces:

- DDC and 24V Thermostat
- BACnet MS/TP and IP
- LONTalk (Factory Option)
- Lennox S-BUS
- Zone Temperature Sensor Input
- Dehumidistat and Humidity Sensor Inputs
- Indoor Air Quality Inputs (2)
- Built-in Control Parameter Defaults
- Permanent Diagnostic Code Storage
- Field Adjustable Control Parameters (Over 200 settings)
- Multiple Configurable Digital Inputs
- LED Indicators
- PC Interface connects the Lennox® CORE Unit Controller to a PC with the Lennox Unit Controller Software

NOTE - Lennox® CORE Control System features vary with the type of rooftop unit in which the control is installed.

CONTROL SYSTEM

LENNOX® CORE CONTROL SYSTEM (Continued)

Control Options

Factory Installed

Dirty Filter Switch

- Senses static pressure increase indicating dirty filter condition

Factory or Field Installed

Smoke Detector

- Photoelectric type
- Installed in supply air section, return air section or both sections
- Available with power board and single sensor (supply or return) or power board and two sensors (supply and return)
- Power board located in unit control compartment

Interoperability via BACnet® or LonTalk® Protocols

- Communication compatible with third-party automation systems that support the BACnet Application Specific Controller device profile, LonMark® Space Comfort Controller functional profile, or LonMark Discharge Air Controller functional profile

OPTIONS / ACCESSORIES

19 ECONOMIZER

Factory or Field Installed

- Economizer operation is set and controlled by the Lennox® CORE Unit Controller
- Simple plug-in connections from economizer to unit controller
- All Strategos rooftop units are equipped with factory installed CEC Title 24 approved sensors for outside, return and discharge air temperature monitoring

NOTE - Optional sensors may be used instead of unit sensors to determine whether outdoor air is suitable for free cooling. See Options/Accessories table.

High Performance Economizer Features

- Outdoor air hood is furnished
- Approved for California Title 24 building standards.
- Low leakage dampers are Air Movement and Control Association International (AMCA) Class 1A Certified - Maximum 3 CFM per sq. ft. leakage at 1 in. w.g.
- ASHRAE 90.1-2010 compliant
- Linked damper action
- High torque 24-volt fully-modulating spring return damper motor
- Return air and outdoor air dampers
- Plug-in connections to unit

NOTE - High Performance Economizers are not approved for use with enthalpy controls in Title 24 applications.

NOTE - The Free Cooling setpoint for Title 24 applications must be set based on the Climate Zone where the system is installed. See Section 140.4 "Prescriptive Requirements for Space Conditioning Systems" of the California Energy Commission's 2022 Building Energy Efficiency Standards.

NOTE - Refer to Installation Instructions for complete setup information.

Options / Accessories

Factory or Field Installed

Differential Enthalpy Control (Not for Title 24)

- Order two Single Enthalpy Controls
- One is field installed in the return air section
- One is installed in the outdoor air section
- Allows the economizer control to select between outdoor air or return air, whichever has lower enthalpy

Field Installed

Global Control (Not for Title 24)

- The unit controller communicates with a DDC system with one global sensor (enthalpy or sensible)
- Determines whether outside air is suitable for free cooling on all units connected to the control system
- Sensor must be field provided

OPTIONS / ACCESSORIES

EXHAUST AIR

Factory Installed

- 20** Power Exhaust Fans (180-240 Models)
- Installs internal to 180-240 models with economizer option
 - Provides exhaust air pressure relief
 - Interlocked to run when supply air blower is operating
 - Fan runs when outdoor air dampers are 50% open (adjustable)
 - Fan motor is overload protected
 - Three, 1/3 hp motors
 - 20 in. diameter, five fan blades
 - Total power input - 1200 Watts
 - Total air volume of 10,200 cfm at 0 in. w.g.

Barometric Relief Dampers

- Allows relief of excess air
- Dampers prevent blow back and outdoor air infiltration during off cycle
- Outdoor air hood is furnished with field installed barometric relief dampers for 180-240 models with Power Exhaust
- See Options/Accessories table

OUTDOOR AIR

Factory Installed

Motorized Outdoor Air Dampers (180-240 Models)

- Linked mechanical dampers
- Fully modulating spring return damper motor
- Installed in unit
- Outdoor air hood with bird screen included

Manual Outdoor Air Dampers (180-240 Models)

- Adjustable slide damper
- Installed in unit
- Outdoor air hood with bird screen included

ROOF CURBS

Factory Installed

Curb Alignment (180-240 Models)

- Adapter plate mates new unit to existing roof curb for replacement of older L-Series® (LC/LG*156, 180, 210, and 240) models

NOTE - No adapter plate is required for the original Strategos (SC/SG*240), Emergence, or Enlight (LC/LG*300/302) models.

Field Installed

Hybrid Roof Curbs, Downflow

- Interlocking tabs fasten corners together
- No tools required for assembly
- Can also be fastened together with furnished hardware
- Available in 14 and 24 inch heights
- See Options/Accessories table

OPTIONS / ACCESSORIES

Item Description		Order Number	Size					
			036	060	092	120	180	240
COOLING SYSTEM								
Corrosion Protection	Coated indoor/outdoor coil assemblies, painted cabinet interior	Factory	O	O	O	O	O	O
	Coated outdoor coil assembly	Factory	O	O	O	O	O	O
Drain Pan Overflow Switch		21Z07	OX	OX	OX	OX	OX	OX
HEATING SYSTEM								
Combustion Air Intake Extension		20X99	X	X				
		33W62			X	X		
	Oder two	89L97					X	X
Gas Heat Input	Standard 2 Stage - 53/70 kBtuh input (Low NOx)	Factory	O	O				
	Medium 2 Stage - 81/108 kBtuh input (Low NOx)	Factory	O	O				
	High 2 Stage - 113/150 kBtuh input (Low NOx)	Factory		O				
	Standard 2 Stage - 84.5/130 kBtuh input	Factory			O	O		
	Medium 2 Stage - 117/180 kBtuh input	Factory			O	O		
	High 2 Stage - 156/240 kBtuh input	Factory			O	O		
	Standard 2 Stage - 169/260 kBtuh input	Factory					O	O
	Medium 2 Stage - 234/360 kBtuh input	Factory					O	O
	High 2 Stage - 312/480 kBtuh input	Factory					O	O
LPG/Propane Kits	2 Stage Standard Heat	21Z24	X	X				
	2 Stage Medium and High Heat	21Z23	X	X				
	Standard Heat	14N28			X	X	1 X	1 X
	Medium Heat	14N29			X	X	1 X	1 X
	High Heat	14N30			X	X	1 X	1 X
Stainless Steel Heat Exchanger		Factory	O	O	O	O	O	O
Vertical Vent Extension		31W62	X	X				
		42W16			X	X	1 X	1 X
CABINET								
Combination Coil/Hail Guards		19H54	X	X				
		19H55			X	X		
		13T16					X	X

¹ Order two kits.

NOTE - Order numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description			Order Number	Size					
				036	060	092	120	180	240
CONTROLS									
Commercial Control	LonTalk® Module	Factory	O	O	O	O	O	O	
Dirty Filter Switch		Factory	OX	OX	OX	OX	OX	OX	
² Smoke Detectors	Supply or Return (Power board and one sensor)	10B40	OX	OX					
		10B42			OX	OX	OX	OX	
	Supply and Return (Power board and two sensors)	10B41	OX	OX					
		10B43			OX	OX	OX	OX	
ELECTRICAL									
Voltage 60 hz	460V - 3 phase	Factory	O	O	O	O	O	O	
	575V - 3 phase	Factory	O	O	O	O	O	O	
Weatherproof Cover for GFI Service Outlets		10C89	X	X	X	X	X	X	
INDOOR AIR QUALITY									
Air Filters									
Standard Air Filters	MERV 8 (16 x 20 x 2 - Order 4 per unit)	54W20	OX	OX					
	MERV 8 (20 x 25 x 2 - Order 4 per unit)	50W61			OX	OX			
	MERV 8 (20 x 20 x 2 - Order 12 per unit)	54W21					Ox	OX	
Healthy Climate® High Efficiency Air Filters	MERV 13 (16 x 20 x 2 - Order 4 per unit)	52W37	OX	OX					
	MERV 13 (20 x 25 x 2 - Order 4 per unit)	52W41			OX	OX			
	MERV 13 (20 x 20 x 2 - Order 12 per unit)	52W39					OX	OX	
Replacement Media Filter With Metal Mesh Frame 20 x 20 x 2 Order 12 per unit (includes non-pleated filter media)		44N60					X	X	
Indoor Air Quality (CO ₂) Sensors									
Sensor - Wall-mount, off-white plastic cover with LCD display		77N39	X	X	X	X	X	X	
Sensor - Wall-mount, off-white plastic cover, no display		87N53	X	X	X	X	X	X	
Sensor - Black plastic case, LCD display, rated for plenum mounting		87N52	X	X	X	X	X	X	
Sensor - Black plastic case, no display, rated for plenum mounting		87N54	X	X	X	X	X	X	
CO ₂ Sensor Duct Mounting Kit - for downflow applications		23Y47	X	X	X	X	X	X	
Aspiration Box - for duct mounting non-plenum rated CO ₂ sensors (77N39)		90N43	X	X	X	X	X	X	

² Factory installed smoke detectors must be ordered for use with either 115V or 24V external power supply only.

NOTE - Order numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

OPTIONS / ACCESSORIES

Item Description	Order Number	Size					
		036	060	092	120	180	240
ECONOMIZER							
High Performance Economizer (Approved for California Title 24 Building Standards / AMCA Class 1A Certified)							
Ultra-Low Leak Economizer - Includes Outdoor Air Hood (Global Sensor, field provided, order Barometric Relief Dampers separately)	Factory	O	O	O	O		
	18X87					OX	OX
Economizer Controls							
Differential Enthalpy	Order 2 21Z09	OX	OX	OX	OX	OX	OX
Global Control	Sensor Field Provided Factory	O	O	O	O	O	O
Barometric Relief Dampers							
Barometric Relief Dampers (No Exhaust Hood)	Factory	O	O				
Barometric Relief Dampers Without Power Exhaust Fans (No Exhaust Hood)	Factory			O	O		
Barometric Relief Dampers Without Power Exhaust Fans (Exhaust Hood Furnished)	Factory					O	O
POWER EXHAUST							
Standard Static	Factory					O	O
OUTDOOR AIR							
Motorized Outdoor Air Dampers with Outdoor Air Hood and Bird Screen	18X89					X	X
Manual Outdoor Air Damper with Outdoor Air Hood and Bird Screen	18X88					X	X
ROOF CURBS							
Hybrid Roof Curbs, Downflow, 14 in. height	11F70	X	X				
	11F72			X	X		
	Full Perimeter 11F74					X	X
Hybrid Roof Curbs, Downflow 24 in. height	11F71	X	X				
	11F73			X	X		
	Full Perimeter 11F75					X	X
Curb Alignment (Adapter plate mates new unit to existing roof curb for older unit replacement)	Factory						O

NOTE - Order numbers shown are for ordering field installed accessories.

OX - Configure To Order (Factory Installed) or Field Installed

O = Configure To Order (Factory Installed)

X = Field Installed

SPECIFICATIONS		3 TON 5 TON	
Model		SDH036U5E	SDH060U5E
Nominal Tonnage		3	5
Efficiency Type		Ultra-High	Ultra-High
Blower Type		DirectPlus™ ECM Direct Drive with SZVAV	DirectPlus™ ECM Direct Drive with SZVAV
Cooling Performance	Gross Cooling Capacity (Btuh)	37,000	60,000
	¹ Net Cooling Capacity (Btuh)	35,000	57,000
	¹ AHRI Rated Air Flow (cfm-high/low)	1400/1030	1800/900
	¹ SEER2 (Btuh/Watt)	17.0	17.0
	¹ EER2 (Btuh/Watt)	12.1	11.2
	Total Unit Power (kW)	2.9	5.1
Heating Performance	¹ Total High Heating Capacity (Btuh)	34,000	56,000
	¹ AHRI Rated Air Flow (cfm)	1500	1900
	¹ HSPF2 (Region IV)	7.6	7.6
	HSPF2 (Region V)	6.1	6.4
	¹ COP	3.3	3.2
	Total Unit Power (kW)	3.0	5.1
	¹ Total Low Heating Capacity (Btuh)	28,000	41,000
	¹ COP	1.8	2.2
	Total Unit Power (kW)	4.6	5.4
Refrigerant	Refrigerant Type	R-454B	R-454B
	Charge furnished	19 lbs. 4 oz.	16 lbs. 9 oz.
Gas Heat Available		See page 18	
² Sound Rating Number		80	85
Compressor Type (number)		Variable Speed Scroll	Variable Speed Scroll
Outdoor Coils	Net face area - ft. ²	19.0	19.0
	Rows	3	3
	Fins - in.	20	20
Outdoor Coil Fans	Motor HP (number and type)	(2) 1/3 (ECM)	(2) 1/3 (ECM)
	Rpm	235-685	440-880
	Watts	70-240	80-440
	Diameter (Number) - in.	(2) 24	(2) 24
	Blades	3	3
	Total Air volume - cfm	5030	6300
Indoor Coils	Net face area - ft. ²	7.8	7.8
	Tube diameter - in.	3/8	3/8
	Rows	4	4
	Fins - in.	14	14
	Condensate drain size (NPT) - in.	(1) 1 NPT	(1) 1 NPT
Expansion device type		Balance Port TXV, non-removable head	
³ Indoor Blower	Nominal motor HP	1.5 (ECM)	1.5 (ECM)
	Blower wheel diameter x width - in.	(1) 14 x 5	(1) 14 x 5
Filters	Type of filter	MERV 8 or equivalent	
	Number and size - in.	(4) 16 x 20 x 2	(4) 16 x 20 x 2
Line voltage data (Volts-Phase-Hz)		460-3-60, 575-3-60	

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ AHRI Certified to AHRI Standard 210/240:

Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

² Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270-95.

SPECIFICATIONS		7.5 TON 10 TON	
Model		SDH092U5E	SDH120U5E
Nominal Tonnage		7.5	10
Efficiency Type		Ultra-High	Ultra-High
Blower Type		DirectPlus™ ECM Direct Drive with SZVAV	DirectPlus™ ECM Direct Drive with SZVAV
Cooling Performance	Gross Cooling Capacity (Btuh)	94,500	123,000
	¹ Net Cooling Capacity (Btuh)	89,000	116,000
	¹ AHRI Rated Air Flow (cfm-high/low)	3400	4000
	¹ IEER (Btuh/Watt)	21.0	20.5
	¹ EER (Btuh/Watt)	12.1	11.9
	Total Unit Power (kW)	7.3	9.7
Heating Performance	¹ Total High Heating Capacity (Btuh)	85,000	114,000
	¹ AHRI Rated Air Flow (cfm)	3400	4600
	¹ COP	3.6	3.5
	Total Unit Power (kW)	6.7	9.6
	¹ Total Low Heating Capacity (Btuh)	51,500	72,000
	¹ COP	2.4	2.4
Refrigerant	Total Unit Power (kW)	6.3	8.9
	Refrigerant Type	R-454B	R-454B
Circuit 1		26 lbs. 3 oz.	24 lbs. 0 oz.
Gas Heat Available		See page 18	
² Sound Rating Number		dBA	89
Compressor Type (number)		Variable Speed Scroll	Variable Speed Scroll
Outdoor Coils	Net face area - ft. ²	23.5	23.5
	Rows	3	3
	Fins - in.	20	20
Outdoor Coil Fans	Motor HP (number and type)	(3) 1/3 (ECM)	(3) 1/3 (ECM)
	Rpm	945/500	945/500
	Watts (total)	184-1030	184-1030
	Diameter (Number) - in.	(3) 24	(3) 24
	Blades	3	3
	Total Air volume - cfm	9000	9000
Indoor Coils	Net face area - ft. ²	13.5	13.5
	Tube diameter - in.	3/8	3/8
	Rows	4	4
	Fins - in.	14	14
	Condensate drain size (NPT) - in.	(1) 1 NPT	(1) 1 NPT
	Expansion device type	Balance Port TXV, non-removable head	
³ Indoor Blower	Nominal motor HP	3.75 (ECM)	3.75 (ECM)
	Blower wheel diameter x width - in.	(1) 22 x 9	(1) 22 x 9
Filters	Type of filter	MERV 8 or equivalent	
	Number and size - in.	(4) 16 x 20 x 2	(4) 16 x 20 x 2
Line voltage data (Volts-Phase-Hz)		460-3-60, 575-3-60	

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ AHRI Certified to AHRI Standard 340/360:

Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

² Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270-95.

SPECIFICATIONS		15 TON 20 TON	
Model		SDH180U5E	SDH240U5E
Nominal Tonnage		15	20
Efficiency Type		Ultra-High	Ultra-High
Blower Type		DirectPlus™ ECM Direct Drive with SZVAV	DirectPlus™ ECM Direct Drive with SZVAV
Cooling Performance	Gross Cooling Capacity (Btuh)	175,000	238,000
	¹ Net Cooling Capacity (Btuh)	170,000	230,000
	¹ AHRI Rated Air Flow (cfm-high/low)	5600	7100
	¹ IEER (Btuh/Watt)	21.0	20.0
	¹ EER (Btuh/Watt)	12.1	11.1
	Total Unit Power (kW)	14.2	20.7
Heating Performance	¹ Total High Heating Capacity (Btuh)	172,000	230,000
	¹ AHRI Rated Air Flow (cfm)	5600	7500
	¹ COP	3.4	3.4
	Total Unit Power (kW)	15.2	20.1
	¹ Total Low Heating Capacity (Btuh)	100,000	132,000
	¹ COP	2.1	2.1
Refrigerant	Total Unit Power (kW)	13.8	17.9
	Refrigerant Type	R-454B	R-454B
	Circuit 1	25 lbs. 8 oz.	28 lbs. 0 oz.
	Circuit 2	24 lbs. 0 oz.	26 lbs. 8 oz.
Gas Heat Available		See page 18	
² Sound Rating Number		90	90
Compressor Type (number)		Variable Speed Scroll (2)	Variable Speed Scroll (2)
Outdoor Coils	Net face area - ft. ²	55.1	55.1
	Rows	2	2
	Fins - in.	20	20
Outdoor Coil Fans	Motor HP (number and type)	(6) 1/3 (ECM)	(6) 1/3 (ECM)
	Rpm	176-947	176-947
	Watts	222-2400	222-2400
	Diameter (Number) - in.	(6) 24	(6) 24
	Blades	3	3
	Total Air volume - cfm	24300	24300
Indoor Coils	Net face area - ft. ²	26.0	26.0
	Tube diameter - in.	3/8	3/8
	Rows	4	4
	Fins - in.	14	14
	Condensate drain size (NPT) - in.	(1) 1 NPT	(1) 1 NPT
Expansion device type		Balance Port TXV, non-removable head	
³ Indoor Blower	Nominal motor HP	(2) 5 (ECM)	(2) 5 (ECM)
	Blower wheel diameter x width - in.	(2) 22 x 9	(2) 22 x 9
Filters	Type of filter	MERV 8 or equivalent	
	Number and size - in.	(4) 16 x 20 x 2	(4) 16 x 20 x 2
Line voltage data (Volts-Phase-Hz)		460-3-60, 575-3-60	

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ AHRI Certified to AHRI Standard 340/360:

Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.

High Temperature Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F entering indoor coil air.

Low Temperature Heating Ratings - 17°F db/15°F wb outdoor air temperature and 70°F entering indoor coil air.

² Sound Rating Number rated in accordance with test conditions included in AHRI Standard 270-95.

SPECIFICATIONS - GAS HEAT 3 TON | 5 TON

Model		036 060	036 060	060
Heat Input Type		Standard (2 Stage)	Medium (2 Stage)	High (2 Stage)
Input Btuh	1st Stage	53,000	81,000	113,000
	2nd Stage	70,000	108,000	150,000
Output Btuh		57,000	87,000	121,000
Temperature Rise Range - °F		15-45	25-55	40-70
¹ Thermal Efficiency		81%	81%	81%
Gas Supply Connections		3/4 in. NPT	3/4 in. NPT	3/4 in. NPT
Rec. Gas Supply Pressure - Nat./ LPG		7 in. w.g. / 11 in. w.g.		
Gas Supply Pressure Range	Min./Max. (Natural)	4.5 - 10.5 in. w.g.		
	Min./Max. (LPG)	10.8 - 13.5 in. w.g.		

NOTE - See page 27 for Minimum Air Volume Required for use with Gas Heat.

¹ Thermal Efficiency at full input.

SPECIFICATIONS - GAS HEAT 7.5 TON | 10 TON

Model		092 120		
Heat Input Type		Standard (2 Stage)	Medium (2 Stage)	High (2 Stage)
Input Btuh	1st Stage	85,000	117,000	156,000
	2nd Stage	130,000	180,000	240,000
Output Btuh		105,000	146,000	194,000
Temperature Rise Range - °F		15-45	30-70	40-70
¹ Thermal Efficiency		81%	81%	81%
Gas Supply Connections		3/4 in. NPT	3/4 in. NPT	3/4 in. NPT
Rec. Gas Supply Pressure - Nat. / LPG		7 in. w.g. / 11 in. w.g.		
Gas Supply Pressure Range	Min./Max. (Natural)	4.7 - 10.5 in. w.g.		
	Min./Max. (LPG)	10.8 - 13.5 in. w.g.		

NOTE - See page 27 for Minimum Air Volume Required for use with Gas Heat.

¹ Thermal Efficiency at full input.

SPECIFICATIONS - GAS HEAT 15 TON | 20 TON

Model		180 240		
Heat Input Type		Standard (2 Stage)	Medium (2 Stage)	High (2 Stage)
Input Btuh	1st Stage	169,000	234,000	312,000
	2nd Stage	260,000	360,000	480,000
Output Btuh		211,000	292,000	389,000
Temperature Rise Range - °F		15-45	30-70	40-70
¹ Thermal Efficiency		81%	81%	81%
Gas Supply Connections		1 in. NPT	1 in. NPT	1 in. NPT
Rec. Gas Supply Pressure - Nat. / LPG		7 in. w.g. / 11 in. w.g.		
Gas Supply Pressure Range	Min./Max. (Natural)	4.7 - 10.5 in. w.g.		
	Min./Max. (LPG)	10.8 - 13.5 in. w.g.		

NOTE - See page 27 for Minimum Air Volume Required for use with Gas Heat.

¹ Thermal Efficiency at full input.

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 2000 ft. above sea level without any modifications.

At altitudes above 2000 ft. units must be derated to match information in the table shown.

036-060 Models - At altitudes above 4500 ft. unit must be derated 2% for each 1000 ft. above sea level.

120-240 Models - At altitudes above 4500 ft. unit must be derated 4% for each 1000 ft. above sea level.

NOTE - This is the only permissible derate for these units.

Model	Heat Input Type	Altitude Feet	Gas Manifold Pressure - in. w.g. (min./max.)		Input Rate Natural Gas Btuh (min./max.)	Input Rate LPG/Propane Btuh (min./max.)
			Natural Gas	LPG/Propane		
036 060	Standard (2 Stage)	0 - 2000	2.0/3.5	5.9/10.5	53,000 / 70,000	53,000 / 70,000
		2001 - 4500	1.7/3.0	5.1/9.0	49,000 / 65,000	49,000 / 65,000
	Medium (2 Stage)	0 - 2000	2.0/3.5	5.9/10.5	81,000 / 108,000	81,000 / 108,000
		2001 - 4500	1.7/3.0	5.1/9.0	75,000 / 100,000	75,000 / 100,000
060 only	High (2 Stage)	0 - 2000	2.0/3.5	5.9/10.5	113,000 / 150,000	113,000 / 150,000
		2001 - 4500	1.7/3.0	5.1/9.0	104,000 / 139,000	104,000 / 139,000
092 120	Standard (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	85,000 / 130,000	94,000 / 130,000
		2001 - 4500	1.6/3.1	5.5/8.9	85,000 / 120,000	85,000 / 120,000
	Medium (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	117,000 / 180,000	130,000 / 180,000
		2001 - 4500	1.6/3.1	5.5/8.9	117,000 / 166,000	117,000 / 166,000
	High (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	156,000 / 240,000	173,000 / 240,000
		2001 - 4500	1.6/3.1	5.5/8.9	156,000 / 221,000	156,000 / 221,000
180 240	Standard (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	169,000 / 260,000	187,000 / 260,000
		2001 - 4500	1.6/3.1	5.5/8.9	169,000 / 239,000	169,000 / 239,000
	Medium (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	234,000 / 360,000	259,000 / 360,000
		2001 - 4500	1.6/3.1	5.5/8.9	234,000 / 331,000	234,000 / 331,000
	High (2 Stage)	0 - 2000	1.6/3.7	5.5/10.5	312,000 / 480,000	346,000 / 480,000
		2001 - 4500	1.6/3.1	5.5/8.9	312,000 / 442,000	312,000 / 442,000

COOLING / HEATING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Product Data section.

3 TON COOLING SDH036U5E (1 COMPRESSOR)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F				
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F					
63°F	960	33.4	1.98	.67	.83	.99	30.4	2.28	.67	.85	1.00	27.5	2.60	.68	.87	1.00	24.3	2.95	.69	.90	1.00				
	1200	36.1	1.97	.74	.93	1.00	32.9	2.29	.75	.96	1.00	29.5	2.62	.77	1.00	1.00	26.3	2.97	.79	1.00	1.00				
	1440	38.2	1.97	.82	1.00	1.00	34.9	2.29	.84	1.00	1.00	31.8	2.63	.87	1.00	1.00	28.6	3.00	.91	1.00	1.00				
67°F	960	36.7	1.97	.53	.66	.79	33.5	2.29	.52	.66	.81	30.3	2.62	.51	.66	.83	26.7	2.98	.50	.67	.86				
	1200	39.1	1.97	.58	.72	.90	35.5	2.29	.57	.74	.93	32.1	2.63	.57	.76	.96	28.7	3.00	.57	.78	1.00				
	1440	40.6	1.96	.62	.80	1.00	37.2	2.29	.62	.82	1.00	33.7	2.64	.63	.86	1.00	30.1	3.01	.63	.89	1.00				
71°F	960	39.8	1.96	.41	.52	.64	36.6	2.29	.39	.52	.65	33.2	2.64	.37	.51	.65	29.8	3.01	.34	.50	.66				
	1200	42.4	1.95	.44	.57	.71	38.9	2.29	.42	.57	.72	35.5	2.65	.41	.57	.74	31.7	3.02	.39	.57	.76				
	1440	44.2	1.95	.46	.62	.79	40.6	2.29	.46	.63	.81	37.0	2.65	.44	.63	.84	33.1	3.03	.43	.64	.88				

3 TON HEATING SDH036U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
960	27.1	1.1	26.8	1.4	23.6	1.9	22.5	2.6	20.6	3.4
1200	31.8	1.3	33.8	1.8	29.1	2.4	27.2	3.3	20.6	3.4
1440	38.8	1.6	38.8	2.1	35.3	3.1	30.6	3.8	20.6	3.4

5 TON COOLING SDH060U5E (1 COMPRESSOR)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																			
		85°F					95°F					105°F					115°F				
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)		
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb		
cfm	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	
63°F	1600	57.3	3.49	.68	.83	.99	53.5	3.97	.69	.85	1.00	49.0	4.47	.70	.88	1.00	45.0	5.03	.71	.91	1.00
	2000	60.8	3.52	.74	.94	1.00	56.9	4.00	.76	.97	1.00	52.4	4.52	.78	1.00	1.00	48.0	5.08	.81	1.00	1.00
	2400	63.8	3.53	.82	1.00	1.00	60.0	4.03	.84	1.00	1.00	55.6	4.57	.87	1.00	1.00	51.6	5.15	.91	1.00	1.00
67°F	1600	61.9	3.52	.54	.66	.80	57.7	4.01	.54	.67	.82	53.4	4.54	.54	.68	.84	48.6	5.09	.54	.69	.88
	2000	65.3	3.54	.58	.72	.90	60.7	4.04	.59	.74	.93	56.2	4.57	.59	.76	.97	51.3	5.14	.60	.79	1.00
	2400	67.5	3.55	.62	.80	1.00	63.0	4.06	.63	.82	1.00	58.4	4.60	.64	.85	1.00	53.4	5.18	.65	.90	1.00
71°F	1600	66.8	3.55	.42	.54	.65	62.3	4.05	.42	.54	.66	57.8	4.60	.41	.54	.66	53.1	5.17	.40	.54	.68
	2000	70.5	3.56	.45	.58	.71	65.8	4.08	.45	.58	.72	61.0	4.63	.44	.59	.74	56.0	5.22	.44	.60	.77
	2400	73.2	3.57	.47	.62	.78	68.4	4.10	.47	.63	.80	63.1	4.66	.47	.64	.84	57.9	5.25	.47	.66	.88

5 TON HEATING SDH060U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
1600	44.2	2.0	45.4	3.3	39.5	3.3	36.4	4.4	32.2	5.3
2000	54.1	2.5	56.6	4.0	49.3	4.4	46.7	5.8	32.2	5.2
2400	63.6	3.2	65.3	3.3	56.6	5.2	48.1	5.9	32.2	5.2

COOLING / HEATING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Product Data section.

7.5 TON COOLING SDH092U5E (1 COMPRESSOR)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F				
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F					
63°F	2400	83.9	4.53	.71	.87	1.00	80.3	5.20	.72	.91	1.00	77.4	5.93	.74	.93	1.00	73.8	6.72	.75	.97	1.00				
	3000	87.9	4.55	.77	1.00	1.00	84.6	5.25	.79	1.00	1.00	81.0	5.99	.82	1.00	1.00	77.6	6.80	.86	1.00	1.00				
	3600	91.9	4.58	.86	1.00	1.00	88.7	5.30	.89	1.00	1.00	85.1	6.07	.93	1.00	1.00	81.8	6.89	.97	1.00	1.00				
67°F	2400	89.1	4.56	.57	.69	.83	85.6	5.26	.57	.70	.86	82.0	6.01	.58	.72	.89	78.2	6.81	.59	.73	.92				
	3000	93.3	4.60	.60	.75	.96	89.8	5.31	.62	.77	.99	85.3	6.07	.63	.80	1.00	81.5	6.88	.64	.83	1.00				
	3600	96.0	4.62	.64	.83	1.00	92.0	5.34	.66	.87	1.00	88.2	6.11	.67	.90	1.00	84.0	6.94	.69	.94	1.00				
71°F	2400	94.6	4.61	.44	.55	.67	91.0	5.33	.44	.56	.68	87.3	6.10	.45	.57	.70	83.5	6.92	.45	.58	.71				
	3000	99.1	4.64	.47	.60	.72	95.1	5.38	.47	.61	.75	91.0	6.17	.47	.62	.76	86.5	7.00	.48	.64	.80				
	3600	102.3	4.67	.48	.65	.81	98.1	5.42	.49	.65	.84	93.4	6.20	.50	.67	.87	88.9	7.05	.51	.68	.92				

7.5 TON HEATING SDH092U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
2400	66.3	2.7	65.7	3.4	59.2	5.0	53.9	7.2	43.8	8.8
3000	81.9	3.4	82.9	4.5	72.9	6.7	65.7	9.6	43.9	8.7
3600	96.8	4.2	97.3	5.5	84.3	8.4	66.1	9.4	43.9	8.7

10 TON COOLING SDH120U5E (1 COMPRESSOR)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
cfm	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F	kBtu/h	kW	75°F	80°F	85°F					
63°F	3200	112.7	6.50	.68	.85	1.00	109.1	7.37	.70	.87	1.00	104.2	8.31	.71	.91	1.00	99.2	9.35	.73	.95	1.00				
	4000	118.0	6.54	.74	.98	1.00	113.7	7.42	.76	1.00	1.00	109.0	8.37	.79	1.00	1.00	104.1	9.44	.83	1.00	1.00				
	4800	122.5	6.58	.83	1.00	1.00	119.0	7.48	.85	1.00	1.00	113.9	8.45	.89	1.00	1.00	109.3	9.53	.93	1.00	1.00				
67°F	3200	119.2	6.55	.55	.66	.80	114.9	7.44	.56	.67	.83	110.4	8.40	.56	.70	.86	105.2	9.45	.58	.71	.90				
	4000	124.7	6.60	.58	.72	.93	120.0	7.49	.60	.74	.97	115.0	8.46	.60	.76	1.00	109.7	9.53	.62	.80	1.00				
	4800	128.9	6.63	.62	.80	1.00	123.8	7.53	.64	.83	1.00	118.5	8.50	.65	.87	1.00	111.9	9.56	.66	.92	1.00				
71°F	3200	126.4	6.61	.43	.54	.65	121.8	7.51	.44	.55	.66	117.0	8.48	.44	.56	.67	111.6	9.56	.44	.58	.70				
	4000	132.2	6.66	.44	.58	.71	126.2	7.55	.45	.59	.72	120.7	8.53	.46	.60	.74	115.0	9.61	.47	.62	.78				
	4800	135.2	6.68	.46	.62	.78	129.7	7.58	.48	.64	.81	123.9	8.57	.50	.65	.85	117.8	9.66	.50	.65	.89				

10 TON HEATING SDH120U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
3200	87.1	3.6	86.0	4.6	78.1	6.9	76.2	11.0	65.3	13.3
4000	110.6	5.0	112.0	6.4	98.2	9.5	93.9	14.4	65.0	13.2
4800	134.1	6.5	133.5	8.1	117.5	12.6	95.3	14.5	65.1	13.2

COOLING / HEATING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Product Data section.

15 TON COOLING SDH180U5E (2 COMPRESSORS)

Entering Wet Bulb Tem- perature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F				
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F					
63°F	4480	164.8	8.84	.74	.89	1.00	157.6	10.15	.75	.91	1.00	150.9	11.55	.77	.93	1.00	143.1	13.07	.79	.95	1.00				
	5600	172.8	8.87	.80	.97	1.00	165.4	10.20	.82	.99	1.00	158.8	11.63	.84	1.00	1.00	152.1	13.20	.86	1.00	1.00				
	6720	181.2	8.88	.86	1.00	1.00	174.6	10.25	.88	1.00	1.00	167.7	11.71	.90	1.00	1.00	160.8	13.30	.93	1.00	1.00				
67°F	4480	176.2	8.87	.58	.71	.85	168.4	10.22	.59	.73	.87	160.9	11.65	.59	.74	.89	153.3	13.21	.61	.76	.91				
	5600	184.0	8.89	.61	.77	.93	176.2	10.26	.62	.79	.95	168.4	11.72	.63	.81	.98	160.0	13.30	.65	.83	1.00				
	6720	189.7	8.89	.65	.84	1.00	181.7	10.28	.66	.85	1.00	173.1	11.76	.68	.88	1.00	164.6	13.35	.69	.90	1.00				
71°F	4480	187.1	8.89	.43	.56	.69	179.4	10.27	.44	.57	.70	171.7	11.75	.44	.58	.72	163.7	13.34	.44	.59	.74				
	5600	195.7	8.90	.45	.60	.75	187.5	10.31	.45	.61	.77	179.4	11.82	.46	.62	.79	170.7	13.44	.46	.64	.81				
	6720	201.5	8.91	.46	.64	.81	193.0	10.35	.47	.65	.83	184.3	11.87	.47	.67	.85	175.3	13.49	.48	.68	.88				

15 TON HEATING SDH180U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
4480	118.9	4.7	120.7	6.6	107.6	9.8	109.0	15.5	88.7	16.8
5600	151.1	6.1	151.3	8.8	130.9	12.8	127.1	19.3	88.9	16.1
6720	182.3	7.8	175.3	10.6	157.0	16.9	129.7	18.6	89.0	15.7

20 TON COOLING SDH240U5E (2 COMPRESSORS)

Entering Wet Bulb Temperature	Total Air Volume	Outdoor Air Temperature Entering Outdoor Coil																							
		85°F						95°F						105°F						115°F					
		Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)			Total Cool Cap.	Comp. Motor Input	Sensible To Total Ratio (S/T)						
				Dry Bulb					Dry Bulb					Dry Bulb					Dry Bulb						
				75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F			75°F	80°F	85°F				
cfm	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F	kBtuh	kW	75°F	80°F	85°F					
63°F	5680	219.1	14.49	.71	.85	.97	210.5	16.28	.73	.86	.99	199.8	18.27	.74	.89	1.00	190.3	20.51	.76	.91	1.00				
	7100	229.2	14.59	.77	.92	1.00	219.9	16.45	.78	.94	1.00	209.5	18.41	.80	.96	1.00	198.2	20.66	.82	.99	1.00				
	8520	236.8	14.65	.82	.99	1.00	227.6	16.52	.84	1.00	1.00	218.4	18.56	.86	1.00	1.00	208.7	20.84	.88	1.00	1.00				
67°F	5680	232.3	14.62	.56	.69	.81	222.4	16.47	.57	.70	.83	212.9	18.48	.58	.72	.85	202.5	20.73	.59	.73	.87				
	7100	243.5	14.71	.59	.74	.89	233.5	16.59	.60	.76	.91	222.0	18.65	.61	.78	.93	210.3	20.86	.63	.80	.96				
	8520	250.4	14.76	.63	.80	.95	239.4	16.65	.64	.81	.98	228.0	18.73	.65	.84	1.00	215.7	20.96	.67	.86	1.00				
71°F	5680	246.1	14.73	.43	.55	.66	236.3	16.61	.43	.55	.68	225.0	18.69	.43	.56	.69	214.5	20.93	.44	.57	.71				
	7100	257.6	14.81	.44	.58	.72	246.7	16.72	.44	.59	.73	234.9	18.82	.45	.60	.75	222.2	21.10	.45	.62	.77				
	8520	265.2	14.87	.45	.61	.77	253.7	16.79	.46	.63	.79	241.6	18.90	.46	.64	.82	228.1	21.19	.47	.66	.84				

20 TON HEATING SDH240U5E

Indoor Coil Air Volume 70°F Dry Bulb cfm	Air Temperature Entering Outdoor Coil									
	65°F		45°F		25°F		5°F		-15°F	
	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input	Total Heating Capacity	Comp. Motor Input
	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW	kBtuh	kW
5680	158.6	6.4	153.4	8.6	143.3	13.3	140.5	19.3	132.6	24.9
7100	190.0	7.8	198.1	11.9	183.7	18.7	179.6	26.6	128.3	24.1
8520	219.5	9.2	220.5	13.4	221.7	24.7	188.2	27.6	126.9	23.8

BLOWER DATA

SDH036U5E / SDH060U5E BLOWER PERFORMANCE

NOTE - Blower Table Includes Resistance For Base Unit With Wet Indoor Coil And Air Filters In Place.

See page 26 for Factory Installed Options/Accessory Air Resistance Data.

See page 27 for Minimum Air Volume Required For Use With Gas Heat.

EXTERNAL STATIC PRESSURE - In. w.g.

Air Volume cfm	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8		0.9		1.0	
	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts
900	1163	129	1253	148	1341	165	1428	181	1512	191	1587	206	1653	232	1714	266	1775	301	1835	333
1000	1315	129	1396	152	1475	174	1552	195	1626	216	1692	242	1752	277	1810	316	1870	351	1928	382
1100	1463	131	1531	164	1599	197	1666	229	1730	261	1791	295	1850	331	1907	367	1964	400	2021	432
1200	1576	173	1640	210	1705	247	1769	283	1832	319	1893	353	1952	387	2010	420	2067	452	2124	485
1300	1683	225	1749	263	1814	300	1878	337	1941	372	2002	407	2061	441	2119	474	2176	507	2235	538
1400	1796	279	1862	317	1927	354	1991	391	2054	427	2114	463	2173	497	2231	530	2289	563	2345	595
1500	1912	332	1977	371	2042	409	2105	446	2168	482	2228	517	2287	552	2345	585	2401	618	2453	652
1600	2037	368	2100	410	2163	452	2224	492	2284	532	2343	570	2399	607	2454	643	2507	679	2553	716
1700	2161	403	2221	453	2280	502	2338	548	2393	594	2445	637	2496	678	2545	718	2592	757	2633	798
1800	2271	463	2329	519	2384	574	2437	625	2487	674	2533	721	2578	765	2621	808	2663	851	2701	892
1900	2372	545	2429	602	2482	657	2533	709	2579	758	2623	805	2665	850	2705	893	2745	936	2782	977
2000	2475	631	2530	687	2582	741	2631	792	2676	840	2718	886	2758	930	2797	973	2836	1015	2872	1056
2100	2582	719	2635	774	2684	827	2731	876	2774	923	2814	968	2853	1011	2892	1054	2928	1095	2964	1136
2200	2694	811	2742	863	2789	914	2833	962	2874	1007	2913	1051	2951	1094	2987	1136	3023	1176	3058	1216
2300	2807	904	2852	954	2896	1002	2937	1048	2976	1093	3013	1136	3050	1177	3085	1218	3119	1258	3153	1298
2400	2921	998	2963	1045	3003	1091	3042	1136	3079	1179	3114	1220	3149	1261	3183	1301	3216	1341	3249	1379
Air Volume cfm	1.1		1.2		1.3		1.4		1.5		1.6		1.7		1.8		1.9		2.0	
	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts
900	1892	364	1946	393	1997	422	2047	449	2095	476	2141	501	2186	524	2229	546	2271	569	2313	592
1000	1983	413	2036	442	2086	471	2136	498	2184	525	2232	550	2278	575	2322	600	2364	625	2403	653
1100	2076	462	2128	492	2179	521	2229	549	2279	576	2328	603	2375	630	2418	659	2456	689	2489	721
1200	2180	516	2233	546	2285	575	2336	604	2386	632	2434	660	2477	690	2515	721	2547	755	2574	791
1300	2291	569	2343	600	2392	632	2437	663	2482	694	2524	726	2562	759	2595	793	2623	829	2648	866
1400	2397	628	2440	663	2477	701	2511	739	2549	775	2585	810	2619	845	2651	880	2680	916	2709	952
1500	2496	690	2529	732	2554	776	2580	820	2614	858	2648	895	2682	931	2715	965	2747	1000	2779	1034
1600	2589	758	2616	803	2638	851	2662	895	2696	932	2735	958	2775	977	2814	996	2852	1018	2887	1046
1700	2667	841	2694	886	2720	931	2747	974	2782	1008	2825	1022	2870	1026	2913	1035	2951	1056	2982	1096
1800	2736	933	2769	974	2801	1014	2833	1054	2869	1087	2911	1102	2952	1115	2988	1143	3015	1195	3031	1277
1900	2818	1017	2852	1055	2887	1094	2921	1132	2955	1167	2991	1197	3023	1238	3045	1303	3055	1400	3053	1529
2000	2907	1095	2942	1134	2976	1173	3010	1211	3043	1248	3072	1295	3092	1366	3100	1469	3094	1608	3076	1780
2100	2999	1175	3033	1214	3067	1252	3100	1290	3132	1330	3155	1394	3163	1494	3156	1635	3134	1817	3100	2032
2200	3092	1255	3125	1294	3158	1331	3191	1369	3222	1411	3238	1492	3235	1622	3213	1801	3175	2026	3124	2283
2300	3186	1336	3218	1373	3250	1411	3283	1448	3312	1493	3321	1590	3307	1750	3270	1967	3215	2234	3147	2535
2400	3280	1417	3311	1453	3342	1490	3374	1526	3402	1574	3405	1689	3379	1878	3327	2134	3256	2443	3171	2787

BLOWER DATA

7.5 TON | 10 TON

SDH092U5E / SDH120U5E BLOWER PERFORMANCE

NOTE - Blower Table Includes Resistance For Base Unit With Wet Indoor Coil And Air Filters In Place.

See page 26 for Factory Installed Options/Accessory Air Resistance Data.

See page 27 for Minimum Air Volume Required For Use With Gas Heat.

Air Volume cfm		EXTERNAL STATIC PRESSURE - In. w.g.											
		0.1		0.2		0.3		0.4		0.5		0.6	
		RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts
2000	731	241	292	775	292	820	342	865	392	910	443	954	494
2200	772	289	342	818	342	863	395	908	447	953	500	996	554
2400	819	344	398	865	398	910	453	955	508	998	563	1040	620
2600	871	403	460	916	460	960	516	1003	574	1046	632	1086	692
2800	926	466	525	969	525	1012	584	1054	645	1095	706	1134	770
3000	982	534	596	1024	596	1066	659	1106	723	1145	788	1182	856
3200	1040	610	676	1081	676	1121	743	1159	811	1197	881	1232	953
3400	1099	697	767	1138	767	1177	838	1214	911	1249	985	1283	1061
3600	1158	796	870	1196	870	1233	946	1268	1023	1302	1101	1334	1180
3800	1219	908	986	1255	986	1290	1065	1323	1146	1355	1228	1385	1311
4000	1280	1034	1114	1314	1114	1346	1196	1377	1280	1407	1365	1436	1451
4200	1340	1171	1254	1372	1254	1402	1339	1431	1425	1459	1513	1486	1602
4400	1400	1318	1404	1429	1404	1457	1491	1484	1580	1509	1670	1534	1762
4600	1457	1473	1562	1484	1562	1509	1652	1534	1743	1558	1835	1582	1927
4800	1511	1635	1726	1536	1726	1559	1818	1582	1910	1605	2002	1628	2095
Air Volume cfm	RPM	0.8		0.9		1.0		1.1		1.2		1.3	
		Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM
		Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM
2000	1040	602	1080	660	1119	720	1156	782	1192	844	1227	904	1227
2200	1079	668	1118	730	1155	794	1191	859	1226	924	1260	988	1260
2400	1120	741	1158	807	1193	875	1228	943	1261	1010	1294	1077	1294
2600	1163	820	1199	889	1233	959	1267	1030	1299	1101	1330	1171	1330
2800	1207	905	1242	976	1275	1050	1307	1123	1338	1198	1369	1272	1369
3000	1253	998	1286	1072	1318	1148	1348	1225	1379	1303	1408	1381	1408
3200	1300	1102	1331	1179	1362	1258	1391	1338	1421	1419	1449	1501	1449
3400	1347	1217	1377	1298	1407	1380	1435	1463	1464	1548	1491	1634	1491
3600	1395	1343	1424	1427	1452	1513	1480	1599	1507	1688	1533	1778	1533
3800	1443	1480	1470	1567	1497	1656	1524	1746	1550	1838	1575	1930	1575
4000	1490	1628	1516	1718	1542	1809	1567	1902	1592	1995	1617	2088	1617
4200	1537	1784	1562	1876	1587	1969	1611	2062	1636	2155	1660	2248	1660
4400	1583	1947	1607	2040	1631	2132	1655	2225	1679	2316	1703	2407	1703
4600	1629	2112	1652	2204	1676	2296	1699	2386	1723	2475	1747	2564	1747
4800	1674	2277	1698	2367	1721	2457	1745	2545	1768	2632	1791	2719	1791

BLOWER DATA

15 TON | 20 TON

SDH180U5E / SDH240U5E BLOWER PERFORMANCE

NOTE - Blower Table Includes Resistance For Base Unit With Wet Indoor Coil And Air Filters In Place.

See page 26 for Factory Installed Options/Accessory Air Resistance Data.

See page 27 for Minimum Air Volume Required For Use With Gas Heat.

Air Volume cfm	EXTERNAL STATIC PRESSURE - In. w.g.															
	0.1		0.2		0.3		0.4		0.5		0.6		0.7		0.8	
	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts	RPM	Watts
2000	475	38	524	144	574	249	626	352	676	451	723	536	768	608	813	667
2200	486	64	535	170	586	275	637	379	688	479	735	565	781	637	827	697
2400	499	91	548	197	598	303	650	408	700	508	748	595	795	668	840	729
2600	512	118	561	225	612	332	663	437	713	538	762	626	809	699	855	761
2800	525	147	575	255	626	362	677	468	727	570	776	658	824	732	870	794
3000	540	178	590	286	641	394	692	500	742	602	791	691	839	765	885	829
3200	556	209	606	318	657	427	708	534	758	637	807	726	865	800	902	866
3400	572	242	622	352	673	462	724	569	774	672	824	762	872	837	918	904
3600	589	276	640	388	691	498	742	606	792	709	841	799	889	875	936	943
3800	608	313	659	425	710	536	760	644	810	747	859	837	907	914	953	984
4000	627	352	678	464	729	575	779	683	829	787	878	877	925	955	972	1027
4200	648	393	699	505	749	616	799	724	848	828	897	918	945	997	990	1071
4400	670	436	720	548	770	659	820	767	868	870	917	961	964	1040	1010	1118
4600	695	469	744	581	794	693	843	802	890	906	938	998	985	1081	1029	1163
4800	725	476	773	592	821	707	868	819	915	928	961	1026	1007	1116	1050	1208
5000	758	470	804	591	850	711	896	830	940	945	985	1052	1029	1153	1071	1256
5200	792	459	836	587	880	715	923	841	966	964	1009	1082	1051	1195	1091	1311
5400	826	451	868	587	910	724	951	859	992	992	1033	1120	1072	1247	1111	1374
5600	859	453	899	598	938	743	978	887	1016	1030	1055	1170	1093	1308	1130	1446
5800	890	470	928	623	965	777	1003	930	1040	1082	1077	1233	1113	1380	1149	1525
6000	918	504	954	665	990	827	1026	987	1062	1148	1097	1307	1133	1462	1167	1611
6200	944	559	978	725	1013	892	1048	1060	1083	1226	1117	1392	1152	1551	1186	1701
6400	967	633	1000	803	1034	973	1068	1144	1103	1315	1137	1483	1171	1643	1205	1793
6600	987	723	1021	894	1055	1065	1089	1237	1123	1408	1157	1575	1191	1734	1225	1882
6800	1008	817	1041	988	1075	1159	1109	1331	1144	1502	1178	1668	1212	1825	1246	1971
7000	1028	912	1062	1083	1096	1255	1131	1427	1166	1597	1200	1762	1234	1917	1267	2062
7200	1049	1008	1083	1180	1118	1351	1153	1522	1188	1692	1222	1855	1256	2009	1289	2154
7400	1071	1106	1106	1277	1141	1448	1176	1617	1211	1785	1246	1947	1279	2100	1312	2247
7600	1093	1204	1129	1374	1164	1543	1200	1711	1235	1877	1269	2038	1302	2192	1335	2341
7800	1117	1302	1152	1470	1188	1637	1224	1803	1259	1968	1293	2128	1326	2284	1358	2436
8000	1141	1399	1177	1565	1213	1730	1248	1895	1283	2058	1317	2219	1349	2378	1381	2535
8200	1166	1494	1202	1658	1238	1822	1273	1986	1308	2150	1341	2313	1373	2475	1403	2638
8400	1192	1589	1228	1752	1264	1915	1298	2079	1332	2244	1365	2410	1396	2577	1426	2748
8600	1218	1684	1254	1847	1289	2011	1324	2176	1357	2344	1389	2514	1419	2687	1448	2864
8800	1245	1781	1280	1945	1315	2111	1349	2280	1381	2451	1412	2626	1442	2805	1471	2990
9000	1272	1881	1307	2048	1341	2218	1373	2390	1405	2565	1436	2745	1465	2931	1493	3123
9200	1299	1985	1333	2155	1366	2329	1398	2505	1429	2686	1459	2872	1488	3065	1515	3264
9400	1326	2093	1360	2267	1392	2445	1423	2627	1454	2814	1482	3007	1510	3206	1538	3412
9600	1354	2205	1386	2384	1418	2567	1448	2755	1478	2949	1506	3149	1533	3355	1560	3567

BLOWER DATA

FACTORY INSTALLED OPTIONS/FIELD INSTALLED ACCESSORY AIR RESISTANCE - in. w.g.

Air Volume cfm	Gas Heating			Economizer	Filters MERV 13
	Standard Heat	Medium Heat	High Heat		
036, 060 Models					
800	0.02	0.02	0.02	0.04	0.05
1000	0.02	0.02	0.02	0.04	0.07
1200	0.02	0.02	0.02	0.04	0.07
1400	0.02	0.02	0.03	0.04	0.07
1600	0.02	0.03	0.04	0.04	0.07
1800	0.03	0.04	0.05	0.05	0.07
2000	0.03	0.04	0.06	0.05	0.08
092, 120 Models					
2000	0.07	0.05	0.06	0.06	0.03
2500	0.09	0.10	0.11	0.11	0.05
3000	0.11	0.12	0.13	0.13	0.06
3500	0.12	0.16	0.17	0.15	0.07
4000	0.14	0.21	0.22	0.19	0.08
4500	0.15	0.26	0.32	0.22	0.09
5000	0.16	0.34	0.43	0.29	0.10
5500	0.18	0.44	0.54	0.34	0.12
6000	0.2	0.54	- - -	0.52	0.13
180, 240 Models					
3000	0.03	0.04	0.05	0.00	0.00
3500	0.03	0.05	0.06	0.00	0.00
4000	0.04	0.06	0.07	0.00	0.00
4500	0.05	0.07	0.09	0.00	0.00
5000	0.05	0.09	0.11	0.00	0.00
5500	0.06	0.10	0.13	0.01	0.01
6000	0.07	0.12	0.15	0.01	0.02
6500	0.08	0.13	0.17	0.01	0.02
7000	0.09	0.15	0.19	0.02	0.03
7500	0.10	0.17	0.21	0.02	0.04
8000	0.11	0.19	0.24	0.02	0.04
8500	0.12	0.20	0.26	0.03	0.04
9000	0.13	0.23	0.29	0.04	0.04
9500	0.14	0.25	0.32	0.04	0.06

BLOWER DATA

POWER EXHAUST FANS STANDARD STATIC PERFORMANCE

180, 240 Models

Return Air System Static Pressure	Air Volume Exhausted
in. w.g.	cfm
0	10,200
0.05	9700
0.10	9200
0.15	8600
0.20	8100
0.25	7600
0.30	6900
0.35	6000
0.40	5000
0.45	4150

MINIMUM AIR VOLUME REQUIRED FOR USE WITH GAS HEAT

Size	Gas Heat	Minimum cfm
036	Standard	1175
	Medium	1475
060	Standard	1175
	Medium	1475
	High	1625
092, 120	Standard	2175
	Medium	2250
	High	2575
180, 240	Standard	4350
	Medium	4500
	High	5150

ELECTRICAL DATA 3 TON | 5 TON

Model		SDH036U5E		SDH060U5E	
¹ Voltage - 60Hz		460V-3ph	575V-3ph	460V-3ph	575V-3ph
Compressor (Inverter)	Rated Load Amps	6.5	5.2	7.8	6.2
	Locked Rotor Amps	23	18	23	18
Outdoor Fan Motor	Full Load Amps (2 ECM)	1.2	1.2	1.2	1.2
	Total	2.4	2.4	2.4	2.4
Service Outlet 115V GFI (Amps)		20	20	20	20
Indoor Blower Motor	HP	1.5	1.5	1.5	1.5
	Type	Direct (ECM)	Direct (ECM)	Direct (ECM)	Direct (ECM)
	Full Load Amps	2.3	2.3	2.3	2.3
² Maximum Overcurrent Protection (MOCP) Unit Only		15	15	15	15
³ Minimum Circuit Ampacity (MCA) Unit Only		13	12	15	13

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 35kA.

¹ NOTE - Extremes of operating range are plus and minus 10% of line voltage.

² HACR type breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

ELECTRICAL DATA 7.5 TON | 10 TON

Model		SDH092U5E		SDH120U5E	
¹ Voltage - 60Hz		460V-3ph	575V-3ph	460V-3ph	575V-3ph
Compressor 1 (Inverter)	Rated Load Amps	12.3	9.8	14.9	11.9
	Locked Rotor Amps	23	18	31	27
Outdoor Fan Motors	Full Load Amps (2 ECM)	1.36	1.36	1.36	1.36
	Total	4.1	4.1	4.1	4.1
Service Outlet 115V GFI (Amps)		20	20	20	20
Indoor Blower Motor	HP	3.75	3.75	3.75	3.75
	Type	Direct (ECM)	Direct (ECM)	Direct (ECM)	Direct (ECM)
	Full Load Amps	4.2	3.6	4.2	3.6
² Maximum Overcurrent Protection (MOCP) Unit Only		25	20	30	25
³ Minimum Circuit Ampacity (MCA) Unit Only		24	20	27	23

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 35kA.

¹ NOTE - Extremes of operating range are plus and minus 10% of line voltage.

² HACR type breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

ELECTRICAL DATA			15 TON 20 TON			
Model			SDH180U5E		SDH240U5E	
¹ Voltage - 60Hz			460V-3ph	575V-3ph	460V-3ph	575V-3ph
Compressor 1 (Inverter)	Rated Load Amps		11.0	8.8	16.0	11.9
	Locked Rotor Amps		23	18	31	27
Compressor 2 (Inverter)	Rated Load Amps		11.0	8.8	16.0	11.9
	Locked Rotor Amps		23	18	31	27
Outdoor Fan Motors	Full Load Amps (6 ECM)		1.36	1.36	1.36	1.36
	Total		8.2	8.2	8.2	8.2
Power Exhaust (3) 0.33 HP	Full Load Amps		1.3	1	1.3	1
	Total		3.9	3	3.9	3
Service Outlet 115V GFI (Amps)			20	20	20	20
Indoor Blower Motor	HP (Total)		5	5	5	5
	Type		Direct (ECM)	Direct (ECM)	Direct (ECM)	Direct (ECM)
	Full Load Amps (Total)		5	4	5	4
² Maximum Overcurrent Protection (MOCP)	Unit Only		40	35	50	40
	With (3) 0.33 HP Power Exhaust		45	35	60	45
³ Minimum Circuit Ampacity (MCA)	Unit Only		38	32	50	39
	With (3) 0.33 HP Power Exhaust		42	35	54	42

NOTE - All units have a minimum Short Circuit Current Rating (SCCR) of 35kA.

¹ NOTE - Extremes of operating range are plus and minus 10% of line voltage.

² HACR type breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

FIELD WIRING NOTES

- For use with copper wiring only
- Field wiring not furnished
- All wiring must conform to NEC or CEC and local electrical codes
- For specific wiring information, please refer to the installation instructions

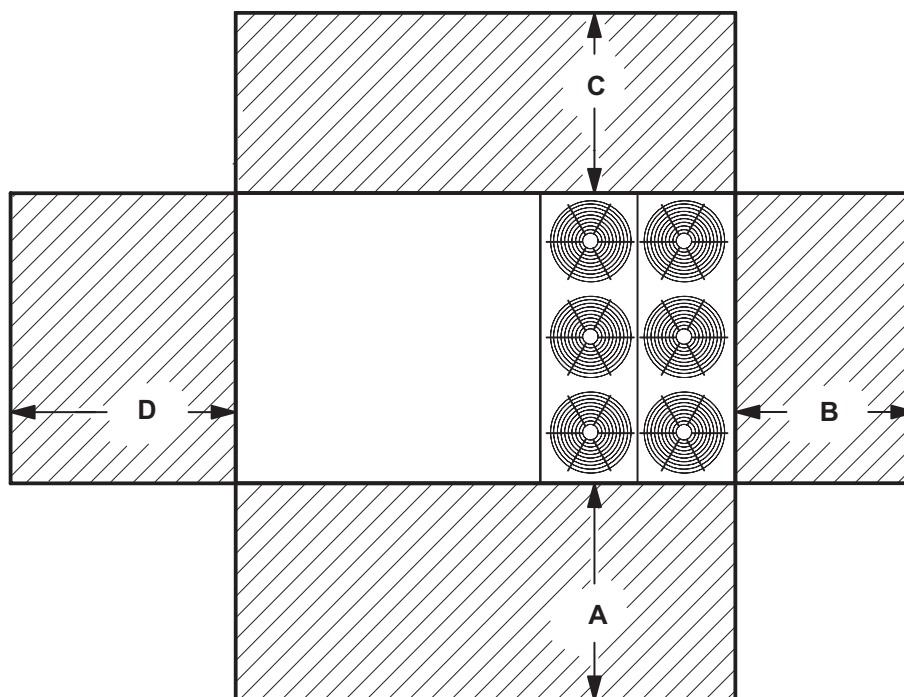
OUTDOOR SOUND DATA

Size	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts Center Frequency - HZ							¹ Sound Rating Number dBA
	125	250	500	1000	2000	4000	8000	
036	72	75	76	69	65	60	65	80
060	61	72	76	74	71	71	65	85
092	72	80	85	84	79	74	67	89
120	72	80	85	84	79	74	67	89
180	73	81	86	84	78	73	67	90
240	73	81	86	84	78	73	67	90

Note - The octave sound power data does not include tonal corrections.

¹ Sound Rating Number according to AHRI Standard 270-95 or AHRI Standard 370-2001 (includes pure tone penalty). Sound Rating Number is the overall A-Weighted Sound Power Level, (LWA), dB (100 Hz to 10,000 Hz).

UNIT CLEARANCES



¹ Unit Clearance		A		B		C		D		Top Clearance
		in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	036, 060	48	1219	36	914	60	1524	60	1524	Unobstructed
	092, 120	60	1524	36	914	60	1524	60	1524	Unobstructed
	180, 240	72	1829	36	914	60	1524	96	2438	Unobstructed
Clearance to Combustibles	All	36	914	1	25	1	25	1	25	Unobstructed
Minimum Operation Clearance	All	36	914	36	914	36	914	36	914	Unobstructed

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

¹ Service Clearance - Required for removal of serviceable parts.

Clearance to Combustibles - Required clearance to combustible material.

Minimum Operation Clearance - Required clearance for proper unit operation.

WEIGHT DATA

Model	Net		Shipping	
	lbs.	kg	lbs.	kg
SDH036 Base Unit	1016	461	1063	482
SDH036 Max Unit	1109	503	1156	524
SDH060 Base Unit	1014	460	1061	481
SDH060 Max Unit	1123	510	1170	531
SDH092 Base Unit	1580	717	1627	738
SDH092 Max Unit	1735	787	1782	808
SDH120 Base Unit	1578	716	1625	737
SDH120 Max Unit	1733	786	1780	807
SDH180 Base Unit	2701	1225	2751	1248
SDH180 Max Unit	3091	1402	3141	1425
SDH240 Base Unit	2699	1224	2749	1247
SDH240 Max Unit	3087	1400	3137	1423

NOTE - Base Unit is with Standard Gas Heat, NO OPTIONS.

NOTE - Max. Unit is the unit with ALL INTERNAL OPTIONS Installed. (High Gas Heat, Economizer, Standard Static Power Exhaust Fans, Controls, etc.). Does not include accessories EXTERNAL to unit.

FACTORY/ FIELD INSTALLED OPTIONS AND ACCESSORIES - NET WEIGHTS

Description		lbs.	kg
CABINET			
Combination Coil/Hail Guards	036 or 060	24	11
	092, 120	25	11
	180, 240	50	23
ECONOMIZER / OUTDOOR AIR / EXHAUST			
Economizer	036 or 060	50	23
	092, 120	70	32
	180, 240	138	63
Outdoor Air Dampers	180, 240	68	31
Power Exhaust	180, 240	99	45
HEAT EXCHANGER			
	036-060 Medium Heat	8	4
	060 High Heat	19	9
	092-120 Medium Heat	9	4
	092-120 High Heat	32	15
	180-240 Medium Heat	18	8
	180-240 High Heat	64	29
ROOF CURBS			
Hybrid Roof Curbs, Downflow 14 in. height	036-060	70	32
	092-120	80	36
	180-240 (full perimeter)	115	52
Hybrid Roof Curbs, Downflow 24 in. height	036-060	105	48
	092-120	120	54
	180-240 (full perimeter)	170	77

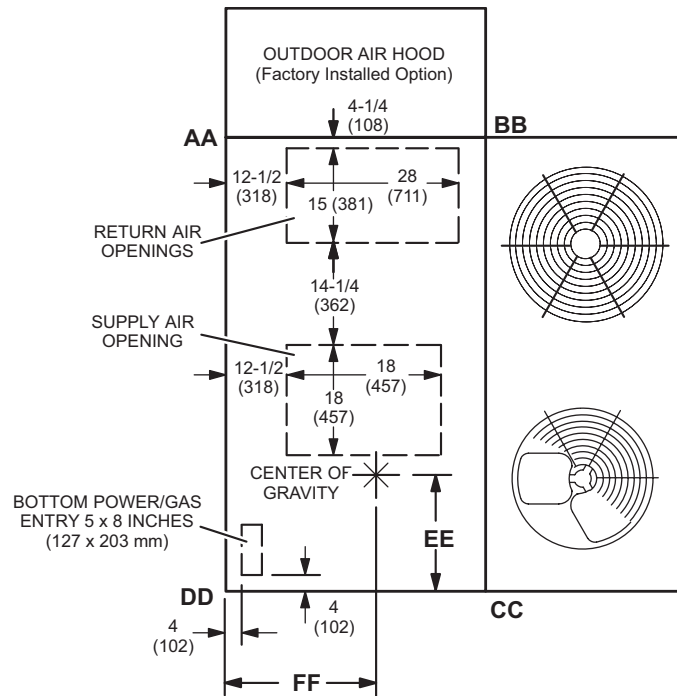
DIMENSIONS - UNIT

SDH036U | SDH060U

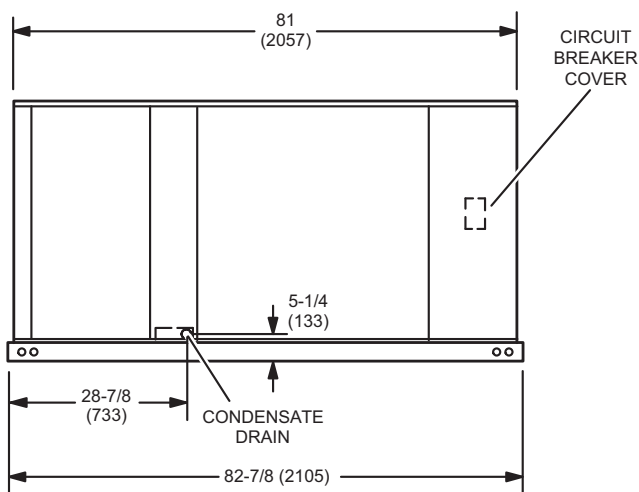
CORNER WEIGHTS

Model	AA		BB		CC		DD		CENTER OF GRAVITY		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
SDH036U Base Unit	177	80	294	133	340	154	205	93	38.25	972	33.25	845
SDH036U Max. Unit	192	87	319	145	369	167	222	101	38.25	972	33.25	845
SDH060U Base Unit	177	80	293	133	339	154	204	93	38.25	972	33.25	845
SDH060U Max. Unit	194	88	323	147	374	170	225	102	38.25	972	33.25	845

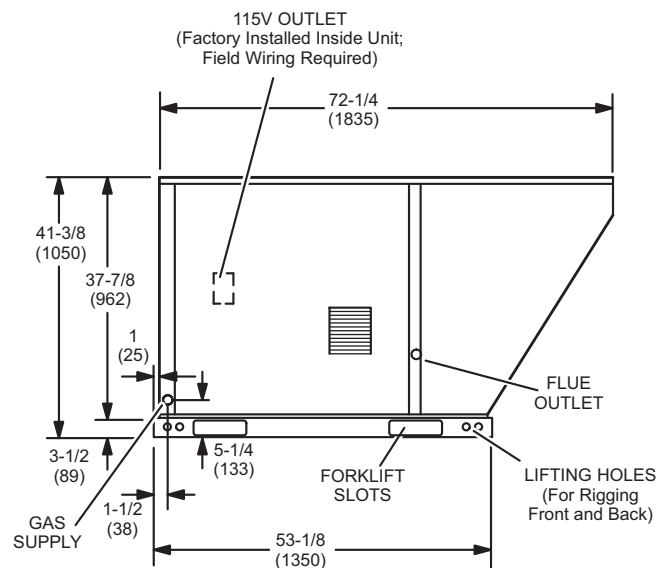
Max. Unit - The Base Unit with ALL OPTIONS Installed. (Economizer and controls)



TOP VIEW



SIDE VIEW



FRONT VIEW

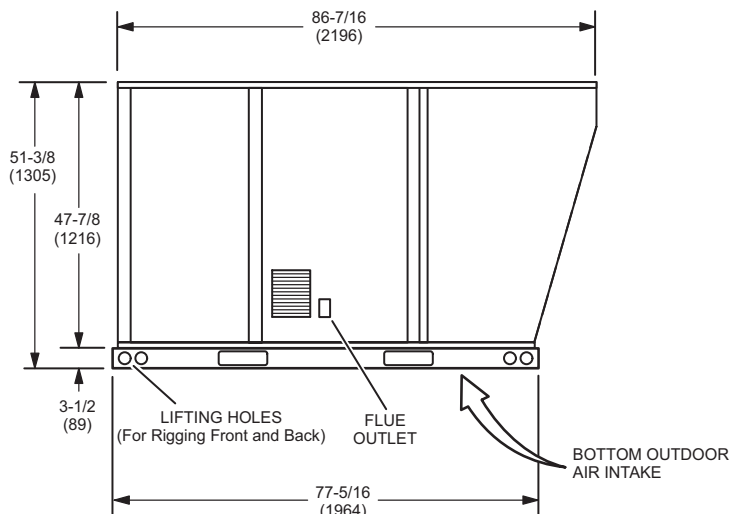
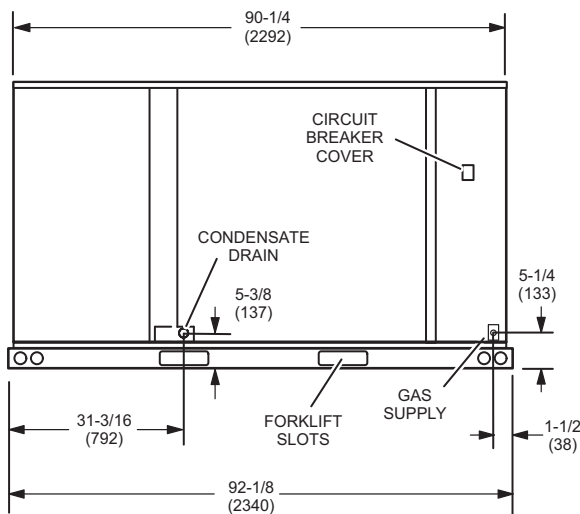
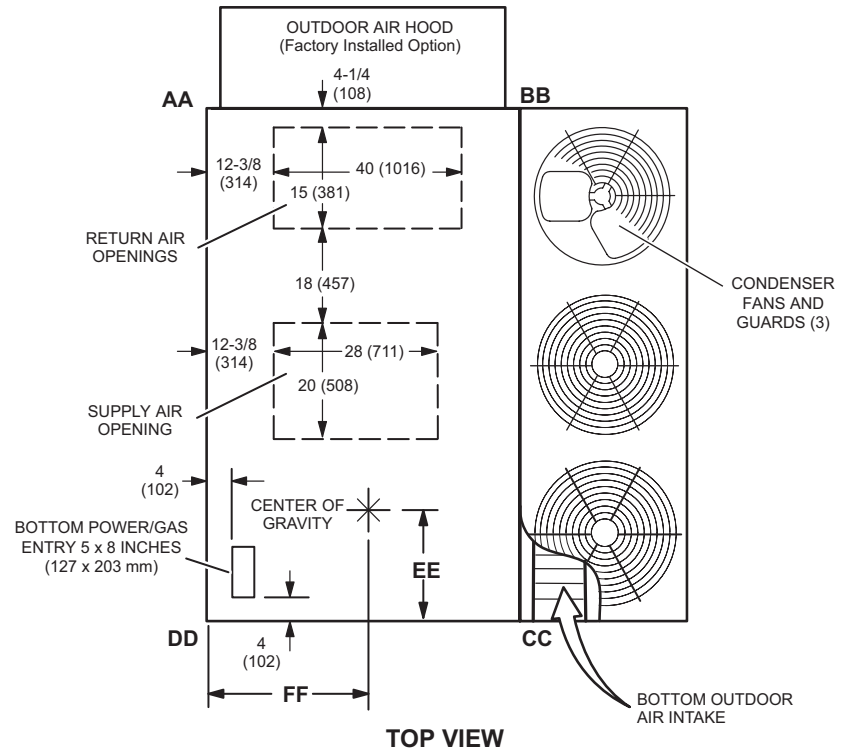
DIMENSIONS - UNIT

SDH092U | SDH120U

CORNER WEIGHTS

Model	AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
SDH092U Base Unit	350	159	374	170	442	200	414	188	42.25	1073	40	1016
SDH092U Max. Unit	385	175	410	186	485	220	455	206	42.25	1073	40	1016
SDH120U Base Unit	350	159	373	169	441	200	414	188	42.25	1073	40	1016
SDH120U Max. Unit	384	174	410	186	485	220	454	206	42.25	1073	40	1016

Max. Unit - The Base Unit with ALL OPTIONS Installed. (Economizer and controls)



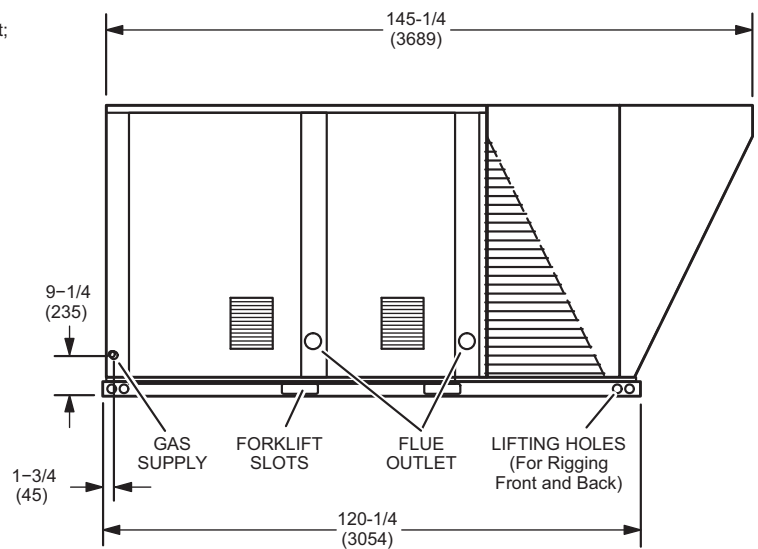
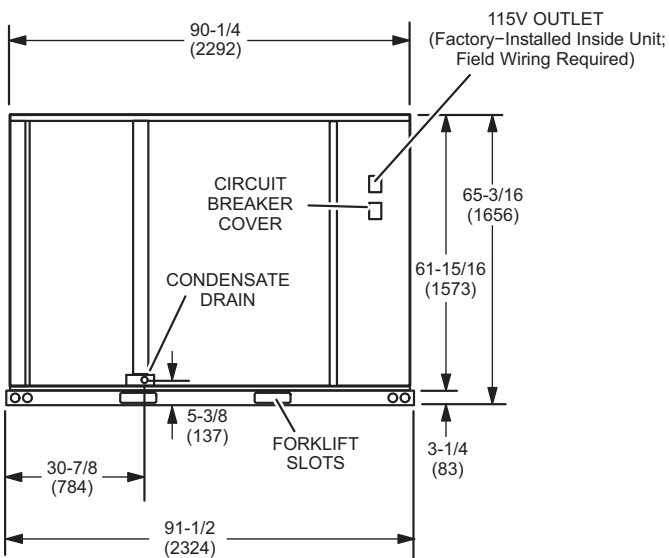
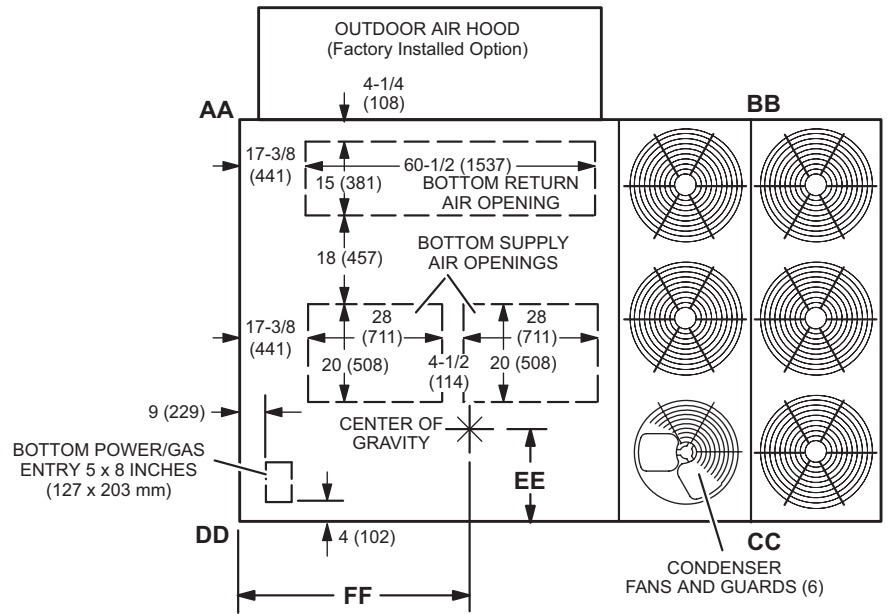
DIMENSIONS - UNIT

SDH180U | SDH240U

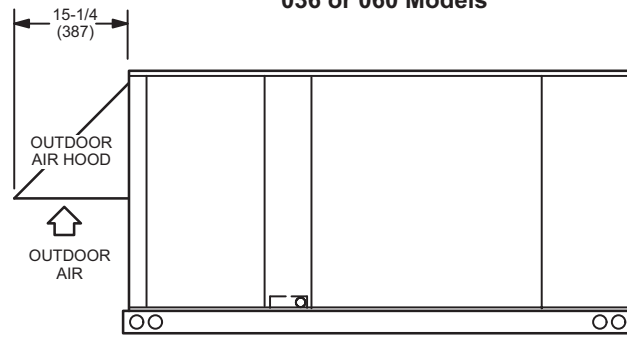
CORNER WEIGHTS

Model	AA		BB		CC		DD		CENTER OF GRAVITY			
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	in.	mm	in.	mm
SDH180U Base Unit	553	251	621	282	808	367	719	326	39.75	1010	63.75	1619
SDH180U Max. Unit	632	287	710	322	925	420	823	373	39.75	1010	63.75	1619
SDH240U Base Unit	552	250	620	281	808	366	719	326	39.75	1010	63.75	1619
SDH240U Max. Unit	632	286	710	322	924	419	822	373	39.75	1010	63.75	1619

Max. Unit - The Base Unit with ALL OPTIONS Installed. (Economizer and controls)

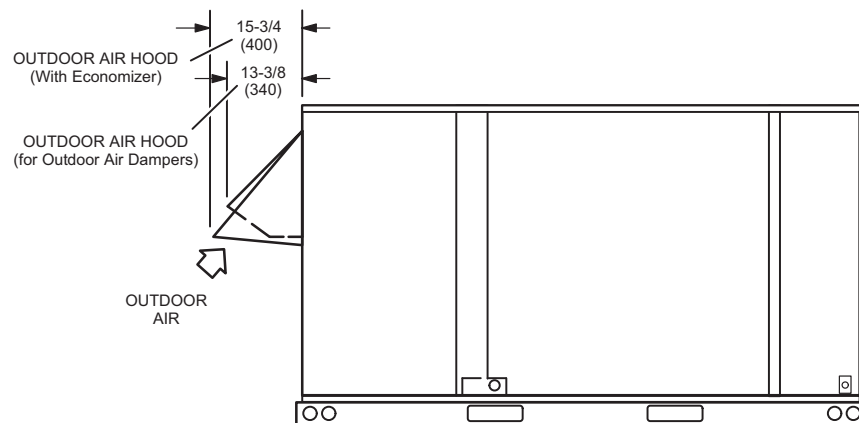


OPTIONAL OUTDOOR AIR HOOD DETAIL 036 or 060 Models



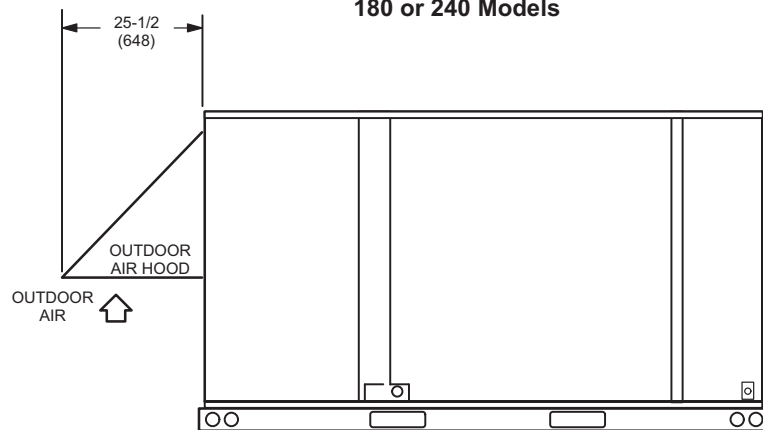
SIDE VIEW

OPTIONAL OUTDOOR AIR HOOD DETAIL 092 or 120 Models



SIDE VIEW

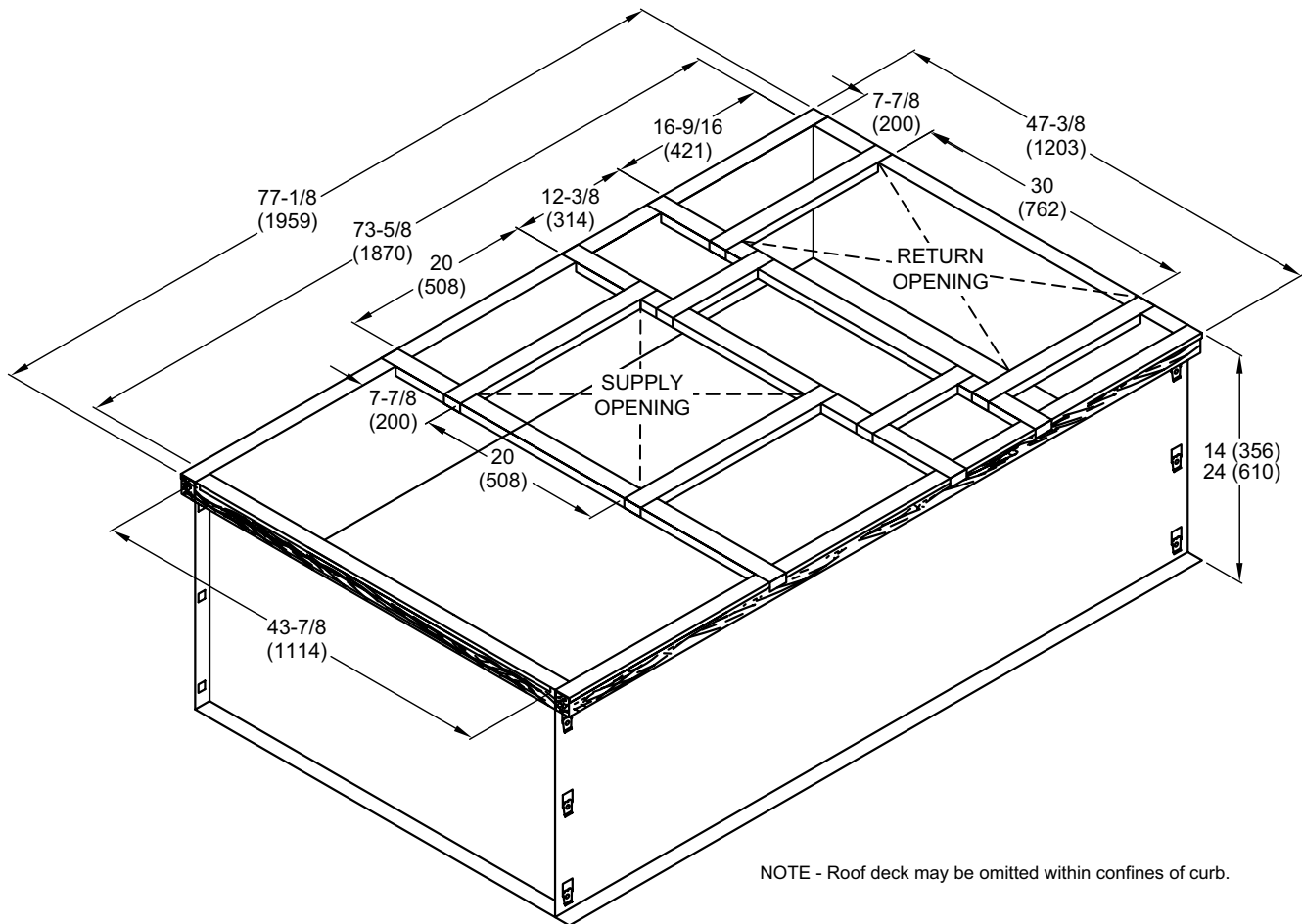
OPTIONAL OUTDOOR AIR HOOD DETAIL 180 or 240 Models



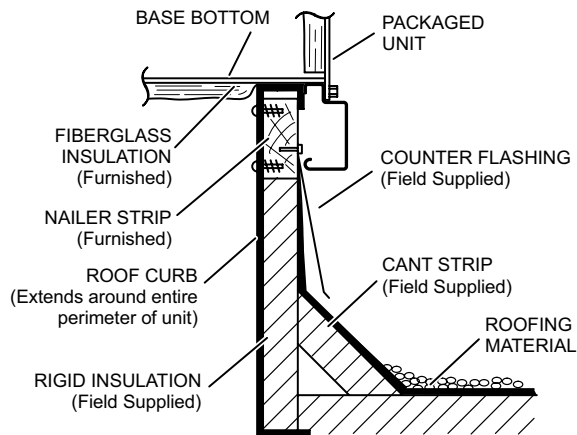
SIDE VIEW

DIMENSIONS - ACCESSORIES

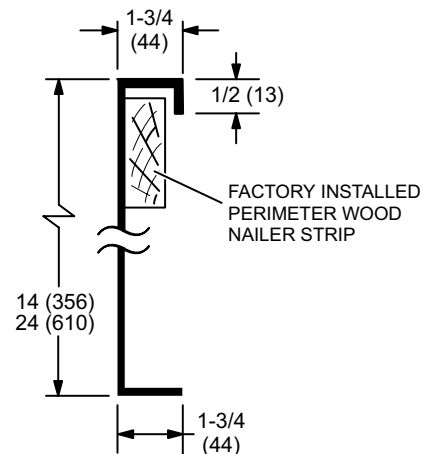
HYBRID ROOF CURBS - 036-060 MODELS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

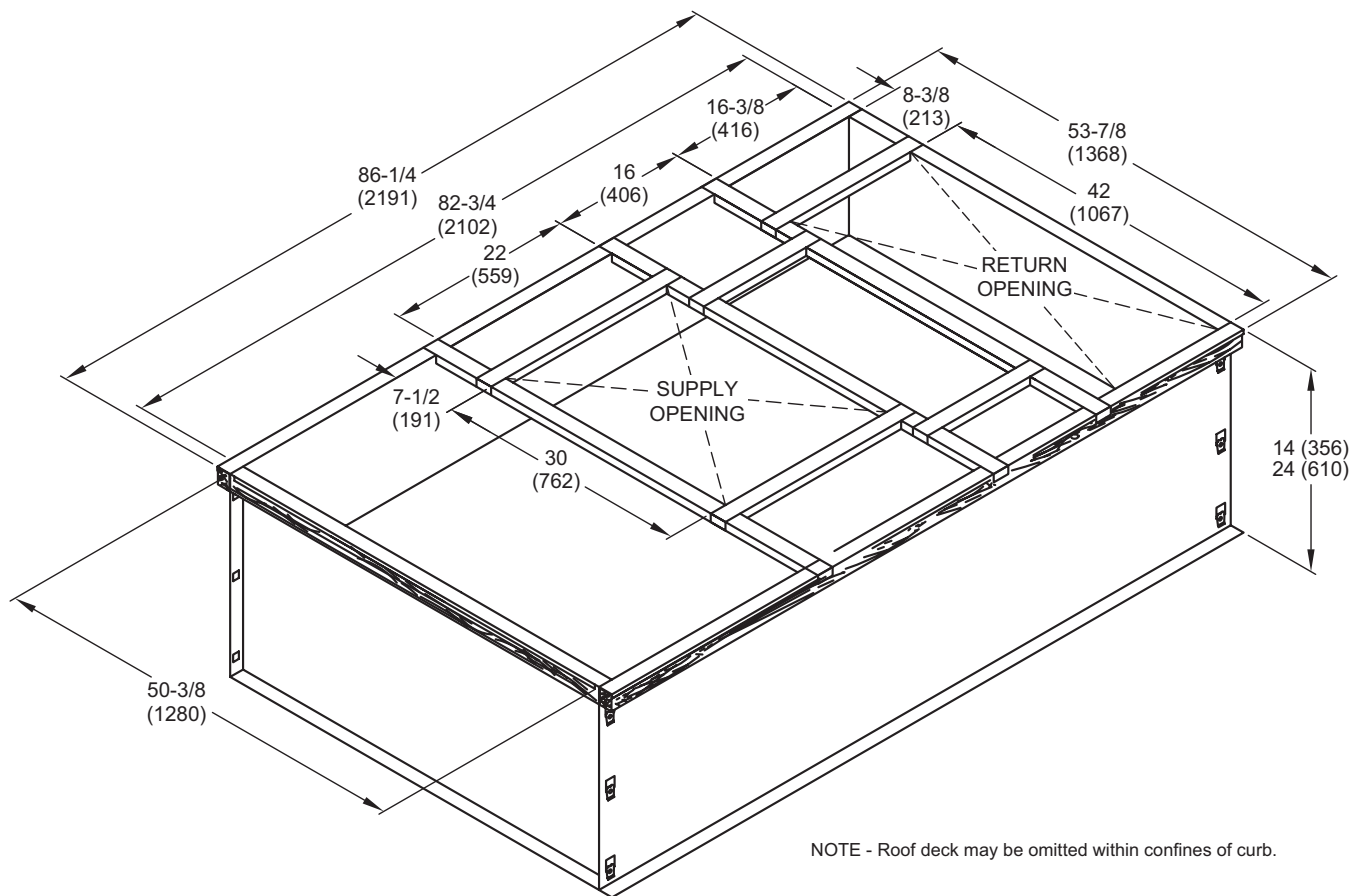


DETAIL ROOF CURB

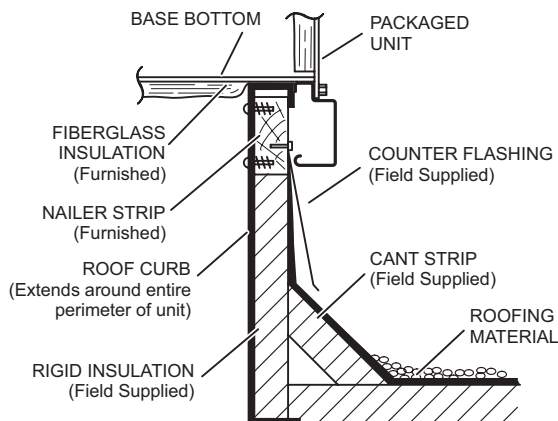


DIMENSIONS - ACCESSORIES

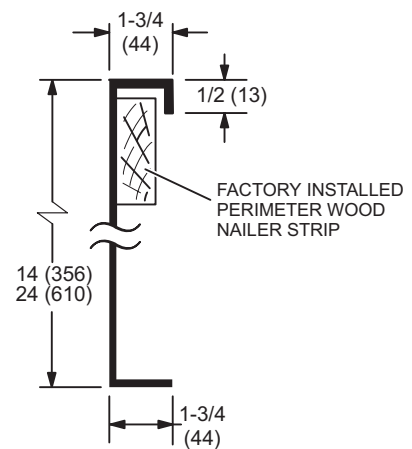
HYBRID ROOF CURBS - 092 AND 120 MODELS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

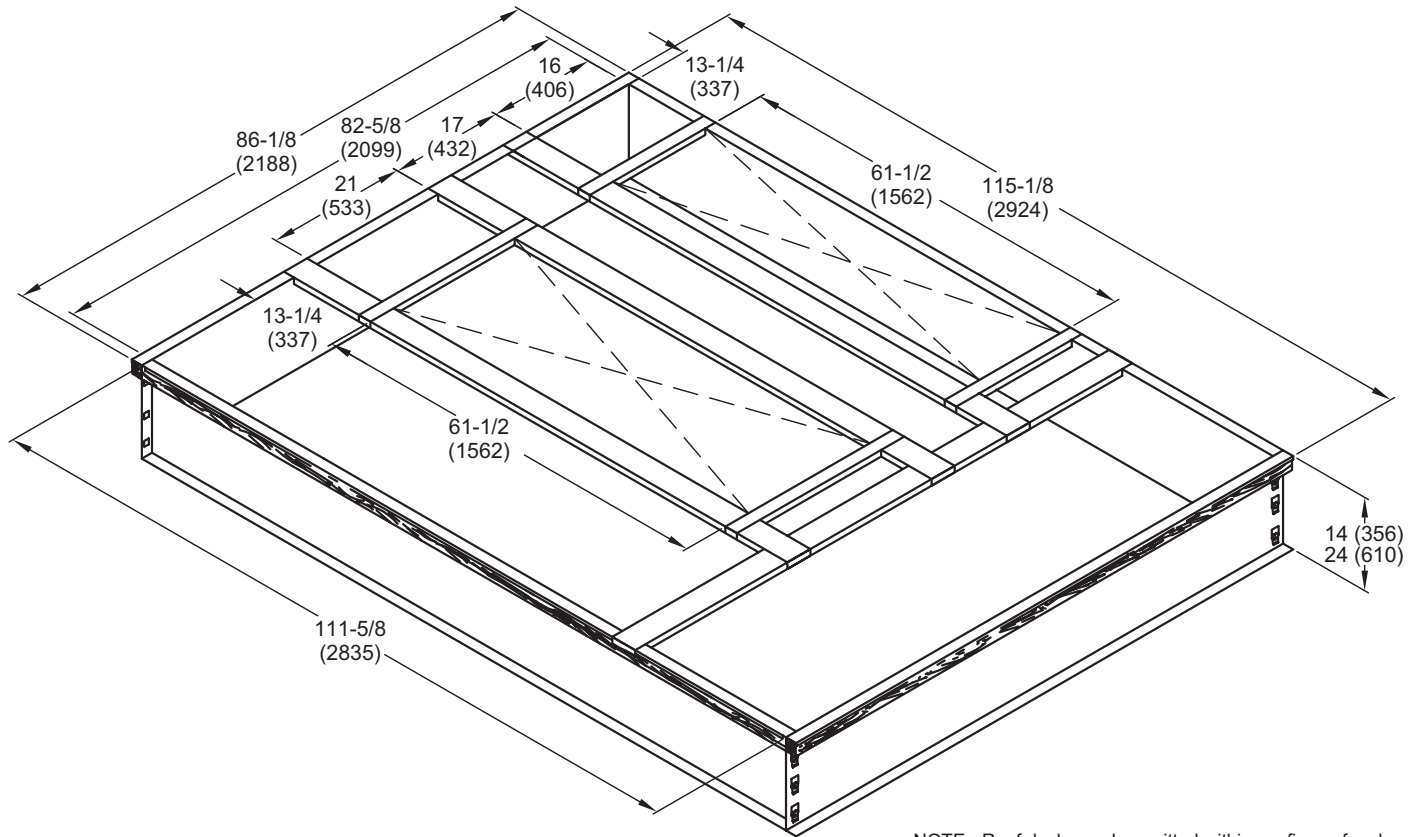


DETAIL ROOF CURB



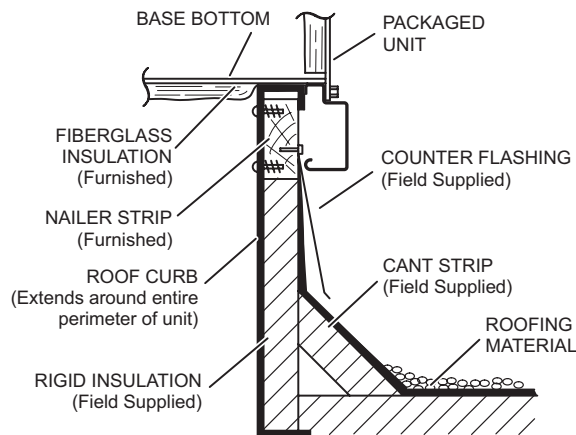
DIMENSIONS - ACCESSORIES

HYBRID ROOF CURBS - 180 AND 240 MODELS - FULL PERIMETER - DOUBLE DUCT OPENING

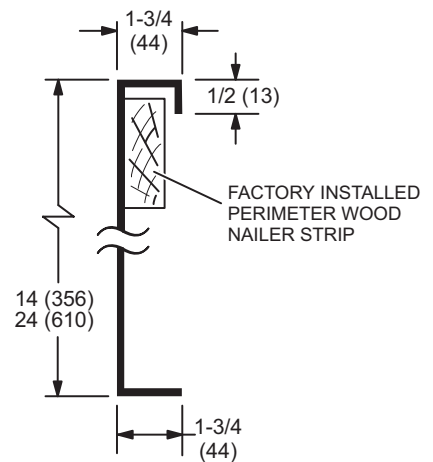


NOTE - Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB



DETAIL ROOF CURB



REVISIONS

Sections	Description of Change
Options / Accessories	Removed Power Exhaust option for 092-120 models.



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