



54 Audia Court, Unit 2  
Concord, ON L4K 3N5  
(905)-738-1400

## Submittal 25-053-001

PROJECT NAME	PROJECT ADDRESS	DATE SUBMITTED
LCBO - 1090 Queensway 25-053	1090 The Queensway, Toronto ON M8Z 1P7	Aug 6, 2025

TO	FROM
Harshil Sheth	Ray Risto
COMPANY	COMPANY
ROYALTY GENERAL CONSTRUCTION LTD.	Consult Mechanical Inc.
EMAIL	EMAIL
hsheth@royaltygeneral.com	ray.r@consultmechanical.com
ADDRESS	ADDRESS
2580 Matheson Blvd E, Suite 201, Mississauga, ON L4W 4J1	54 Audia Court, Unit 2 Concord, ON L4K 3N5

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### Title

Lennox Roof Top Units - RTU-1,2

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### Description

See attached for review and approval.

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### Package Items

SPEC	SUBSECTION	ITEM	TYPE
	1	RTU-1,2	Shop Drawings



# Lennox National Accounts Project Submittal

**Project Name:** LCBO#426, 1090 The  
Queensway, Etobicoke, ON  
**Project Number:** 890116  
**Project Altitude:** 500  
**Project Location:**  
1090 The Queensway,  
Etobicoke,, Ontario CA

**Date:** 8/6/2025  
**Quote:** 599804  
**Roof Top Units:** 2  
**Split Systems:** 0

**Customer:** Zone Comm Toronto  
**Engineer:** WSP Canada Inc  
**National Account:** Lcbo

## Table of Contents

Tag	Qty	Model	Description
<u>RTU-1</u>	1	LGT092H5E	LGT092H5E-J 7.5T
<u>RTU-2</u>	1	LGT060H5E	LGT060H5E-J 5T
<u>Miscellaneous Items</u>			

Revit® Building Information Modeling (BIM) - [Click here](#)

AutoCAD® Templates - [Click here](#)



# Lennox National Accounts Project Submittal

Tag: RTU-1

Model: LGT092H5E - LGT092H5E-J 7.5T

## UNIT OVERVIEW

Voltage	IEER EER	MCA/MOCP (amp)	Gross Cooling Ttl/Sens (MBH)	Net Cooling Ttl/Sens (MBH)	Supply Air Flow (cfm)	ESP/TSP (in.WC)	EAT DB/WB (°F)	LAT DB/WB (°F)
575V 3Ph 60Hz	16.1 12.3	17 / 20	94.7 / 68.2	91.1 / 64.6	3,000	0.50 / 0.91	80.0 / 67.0	58.0 / 56.5

## COOLING

Cooling Performance			Temperatures (DB/WB °F)		
Gross Cooling (Ttl/Sens)	94.7 / 68.2 MBH	Ambient	95.0		
Net Cooling (Ttl/Sens)	91.1 / 64.6 MBH	Entering	80.0	67.0	
Coil Moisture Removal	24.99 lb/hr	Total Leaving – (Coil)	58.0	56.5	
System Moisture Removal	24.99 lb/hr	Total Leaving – (Unit)	59.2	57.0	

ARI Performance		Compressors		Refrigerant		Condensate Drain	
ARI Cooling	94.0 / 92.0 MBH	Cooling Stages	3.0	Type	R-454B	Qty	1
ARI Power	7,600 W	Compressor Qty	2	Charge	12 LBS. 6 OZ.	Size	1 in.
		Compressor RLA	9.9 amp			Pipe Thread	npt

## HUMIDITROL - HOT GAS REHEAT

Humiditrol Dehumidification Performance			Temperatures (DB/WB °F)		
Gross Cooling - Stage 1(Ttl/Sens)	18.1 / 8.8 MBH	Ambient	95.0		
Gross Cooling - Stage 2 (Ttl/Sens)	52.0 / 31.7 MBH	Entering	80.0	67.0	
Moisture Removal - Stage 1	8.7 lb/hr	Total Leaving – (Stage 1)	77.1	65.2	
Moisture Removal - Stage 2	19.1 lb/hr	Total Leaving – (Stage 2)	69.8	61.6	

## HEATING

Heating Performance		Temperatures (DB/WB °F)		Specifications	
Output (High/Low)	194.0 / 126.4 MBH	Total Leaving	59.9	Heat Stages	2
Input (High/Low)	240.0 / 156.0 MBH			Thermal Efficiency	81.0%
Gas Heat Rise	59.9 °F			Gas Line Size	0.75 in.
				Gas Pressure	7 in.WC

## VENTILATION

Air Flow (cfm)		Supply Fan		Air Resistance (in.WC)	
Supply	3,000	Nominal Power	3.75 hp	Total	0.91
		Required Power	1.13 hp	Ext Supply	0.50
		Drive Type	ECM Direct Drive		
		Required Watts	841 W		

## AIR RESISTANCE - OPTIONS/ACCESSORIES (in.WC)

Wet Coil	Humiditrol	Heat	Economizer	Filters	Diffuser	Exhaust	ERW
0.10	0.03	0.13	0.13	0.02			

## ELECTRICAL

Voltage	575V 3Ph / 60Hz	Compressor RLA	9.9 amp
MCA	17 amp	Condenser FLA	2.0 amp
MOCP	20 amp	Supply Fan FLA	3.4 amp
Oper Range-Nom Volt	+/- 10%	Cooling FLA Total	15.3 amp

## ADDITIONAL DATA

Cabinet	101.25 in. x 60.12 in. x 46.88 in.	Total Weight	1,458 lb
Downflow Supply	20.0 in. x 28.0 in.	Base Unit Net Weight	1,088 lb
Downflow Return	24.0 in. x 27.0 in.	OAS/Econ Weight	86 lb
Filters	(4) 20.0 in. x 25.0 in. x 2.0 in.	Exhaust Weight	8 lb
Sound Rating	88 dBA	Humiditrol Weight	20 lb
		Gas Heat Weight	32 lb
		Coil/Hail Guard Weight	55 lb
		Curb Weight	169 lb





# Lennox National Accounts Project Submittal

**Tag:** RTU-1

## Factory Installed Options

High Performance Economizer Factory Installed  
Single Sensible High Performance Economizer  
Direct Drive  
Unit Orientation Downflow  
Supply Fan: Multi-Speed ECM Direct Drive  
550V/575V/600V 3Phase  
80Amp Non-Fused Disconnect Factory Installed  
Built-in BACnet IP and MS/TP (standard)  
Refrigerant R-454B  
Supply Motor - 3.75 Hp - DirectPlus w/MSAV  
Barometric Relief Damper Factory Installed  
240K S.S. (Dual Stage)  
Combination Coil/Hail Guards Factory Installed  
Hinged Access Doors Factory Installed  
20A GFCI Factory Installed/Field Wired  
Environ Condenser Coil System Factory Installed  
Humiditrol Factory Installed  
2" MERV8 - Filter Factory installed

## Field Installed Accessories

Catalog Number	Qty	Description
11F57	1	24" Downflow - Hybrid Curb Field Installed
76W27	1	Copper Drain Trap Field Installed
Y3355	1	Burglar Bars Field Installed
10C89	1	Weatherproof GFCI Cover Field Installed
17M50	1	Humidity Sensor Kit Field Installed
52W41	4	2" MERV13 - Filter Field Installed
23V86	1	CO2 Sensors - Wall-mount, white plastic cover, no display Field Installed
Y5656	1	HN TH8320R1003 VisionPro RedLink 3H2C
X4131	1	HN C7189U1005 WHITE REMOTE SENSOR

## Product Features

### Cabinet

Hinged Access Panels  
Durable Outdoor Enamel Paint Finish  
Totally Enclosed Outdoor Fan Motor  
PVC Coated Fan Guard  
Corrosion-Resistant Removable, Reversible Drain Pan  
Isolated Compressor Compartment

### Cooling System

Scroll Compressor  
Expansion Valves  
High Capacity Driers  
Crankcase Heater  
System can operate from 0°F to 125°F without any additional controls  
Pre-charged Refrigeration System  
Timed Off Control  
Internal Pressure Relief Valve  
Humiditrol - Hot Gas Reheat Dehumidification System

### Heating System

Redundant Automatic Gas Valve with Manual Shut-off  
Electronic Flame Sensor  
Direct Spark Ignition  
Inshot Burners  
AGA-CGA Certified  
If configured for room sensor control, additional staging may be possible. Refer to performance tables within the EHB

### Control System



# Lennox National Accounts Project Submittal

Fan and Limit Controls  
Overload Protection  
Microprocessor Controls – Lennox® CORE Control System  
Auto reset high & low pressure switch with strike 3 lockout feature in Lennox® CORE Control System  
Built-in BACnet IP & MS/TP  
Phase/Voltage Detection  
Return Air Sensor Factory Installed  
Outdoor Air Sensor Factory Installed  
Factory Installed Discharge Air Sensor  
Refrigerant Detection System (RDS) and mitigation response, per UL safety standard 60335-2-40

## **Compliance**

Components are Bonded for Grounding  
Factory Test Operated  
All models are ASHRAE 90.1 energy efficiency compliant and meet or exceed requirements of Section 6.8  
All models meet DOE 2023 energy efficiency standards  
All models are compliant with and listed to UL standard 60335-2-40

Model meets California Code of Regulations, Title 24 and ASHRAE 90.1-2016 Section 6.4.3.10 requirements for staged airflow  
Model meets HCAI (formerly OSHPD) OSP and Special Seismic Certification (Number: OSP-0596) and meet 2018 International Building Code (IBC), 2019 California Building Code (CBC) ASCE 7, and ICC-ES AC156  
ISO 9001 Registered Manufacturing Quality System  
Only refrigerants in compliance with New York State regulations can be used in the state of New York

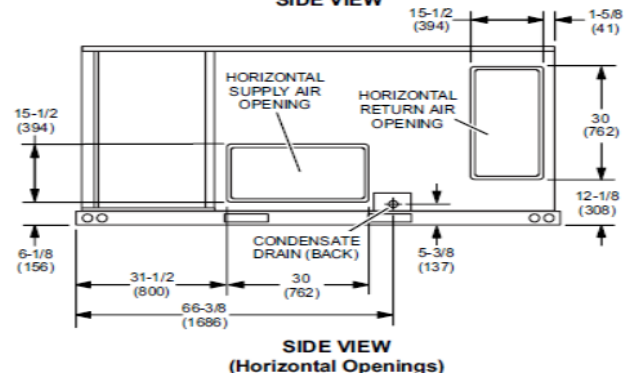
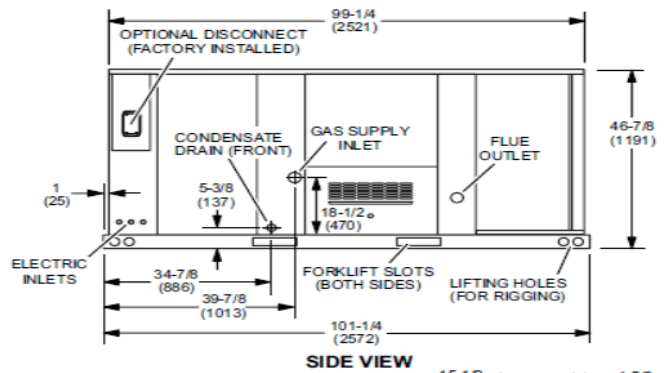
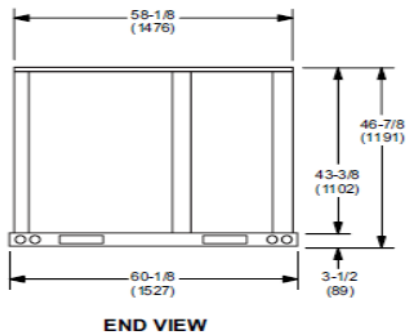
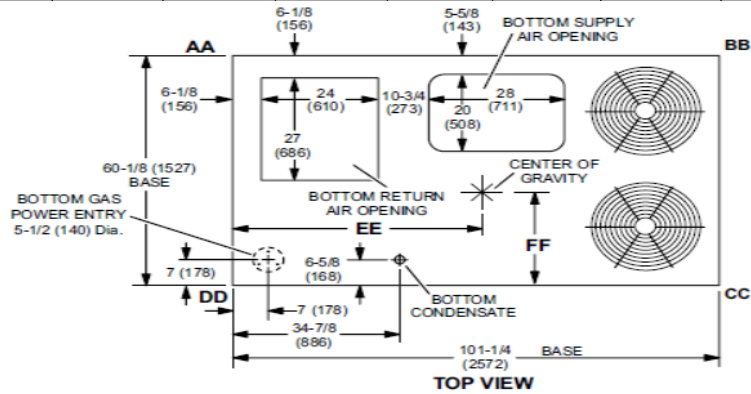
## **Warranty**

Limited warranty on stainless steel heat exchanger of 15 years  
Limited warranty on compressor of 5 years  
Limited warranty on Environ Coil System of 3 years  
Limited warranty on High Performance Economizer of 5 years  
Limited warranty on all other components of 1 year  
Limited warranty on Lennox® CORE Control System of 3 years  
See Limited Warranty Certificate included with unit for details



# Lennox National Accounts Project Submittal

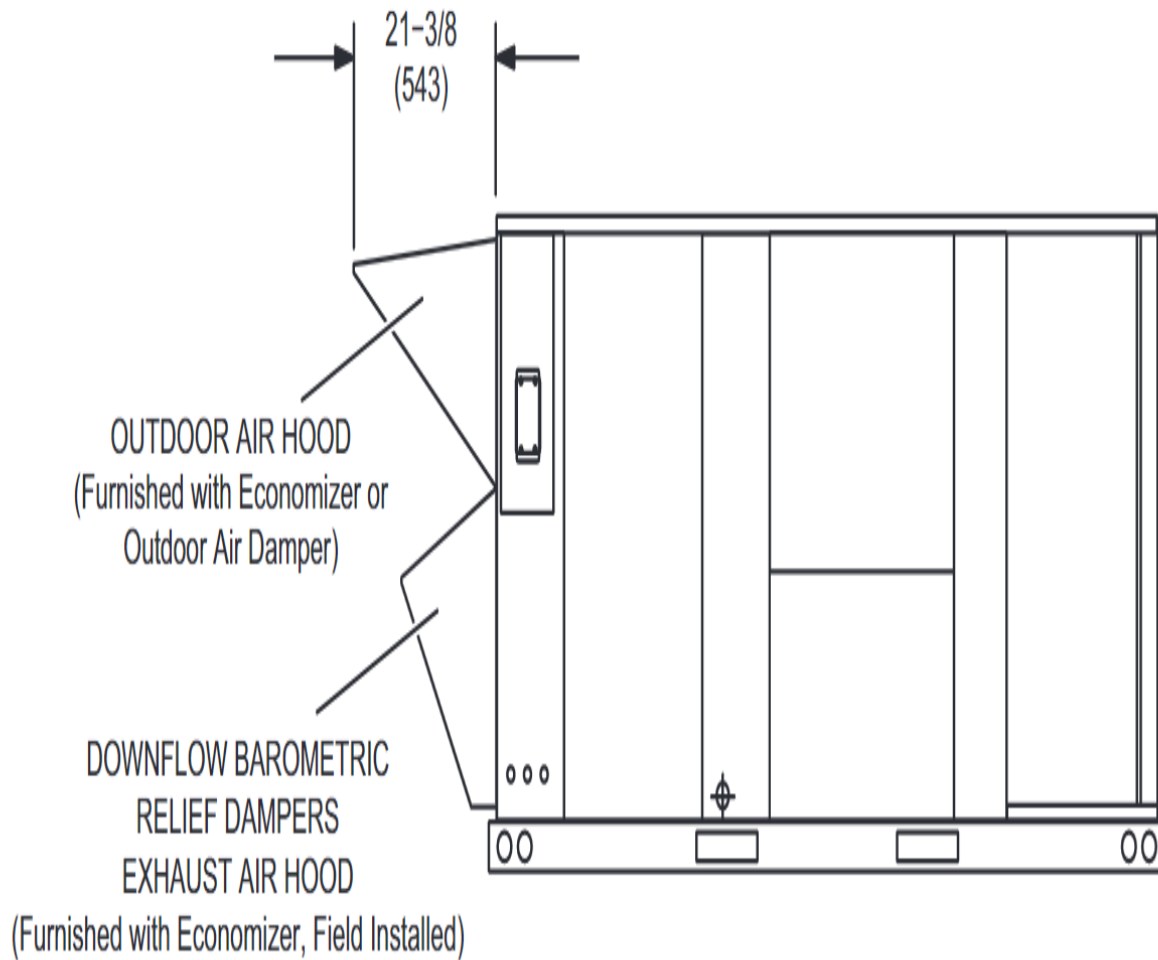
Corner Weights (lb)						Center of Gravity (in.)					
AA		BB		CC		DD		EE		FF	
Base	Max	Base	Max	Base	Max	Base	Max	Base	Max	Base	Max
293	338	263	295	286	316	326	370	46.50	45.50	24.50	25.50





# Lennox National Accounts Project Submittal

## OUTDOOR AIR HOOD DETAIL







Isometric view of a rectangular curb with dimensions and labels for supply and return openings.

Dimensions (inches) and (millimeters):

- Top Left: 95-3/8 (2423)
- Top Right: 54-1/4 (1378)
- Right Side: 21-3/4 (552)
- Bottom Right: 8 (203), 14 (356), 18 (457), 24 (610)
- Bottom Right (Inner): 50-3/4 (1289)
- Bottom Left: 29-3/4 (756)
- Left Side: 26-3/4 (679)
- Top Left (Inner): 91-7/8 (2334)
- Top Left (Inner): 29-3/4 (756)
- Top Left (Inner): 8-1/2 (216)

Labels:

- SUPPLY OPENING
- RETURN OPENING

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

Diagram illustrating the components of a roof edge assembly:

- BASE BOTTOM
- PACKAGED UNIT
- FIBERGLASS INSULATION (Furnished)
- COUNTER FLASHING (Field Supplied)
- NAILER STRIP (Furnished)
- ROOF CURB (Extends around entire perimeter of unit)
- CANT STRIP (Field Supplied)
- ROOFING MATERIAL
- RIGID INSULATION (Field Supplied)

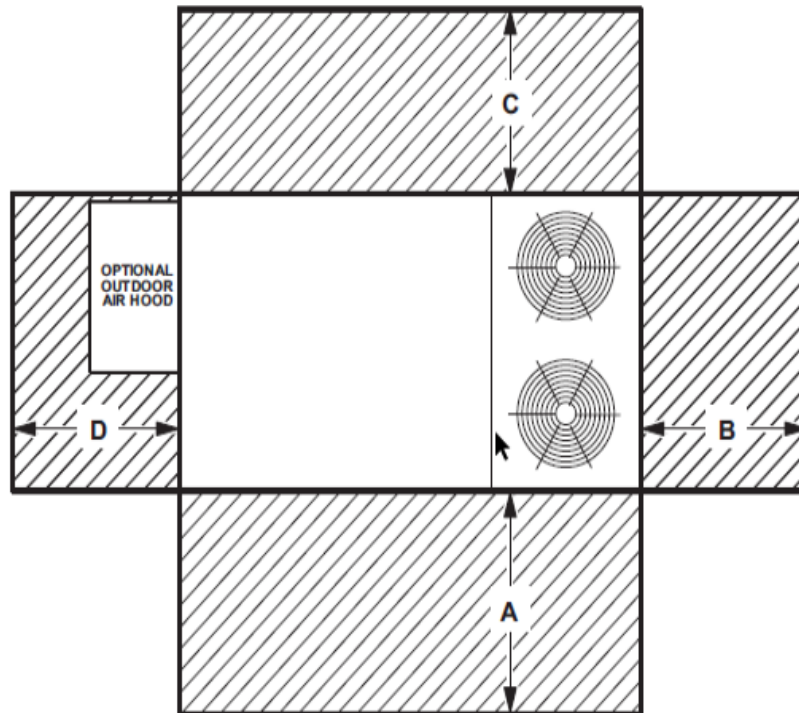
Diagram illustrating the dimensions for the factory-installed perimeter wood nailer strip:

- Top width: 1-3/4 (44)
- Top height: 1/2 (13)
- Strip height options: 8 (203), 14 (356), 18 (457), 24 (610)
- Bottom width: 1-3/4 (44)
- Label: FACTORY INSTALLED PERIMETER WOOD NAILER STRIP



# Lennox National Accounts Project Submittal

## UNIT CLEARANCES



<sup>1</sup> Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
<b>Service Clearance</b>	60	1524	36	914	36	934	60	1524	Unobstructed
<b>Clearance to Combustibles</b>	36	914	1	25	1	25	1	25	
<b>Minimum Operation Clearance</b>	36	914	36	914	36	914	36	914	

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

<sup>1</sup> 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.



# Lennox National Accounts Project Submittal

Tag: RTU-2  
Model: LGT060H5E - LGT060H5E-J 5T

## UNIT OVERVIEW

Voltage	SEER2 EER2	MCA/MOCP (amp)	Gross Cooling Ttl/Sens (MBH)	Net Cooling Ttl/Sens (MBH)	Supply Air Flow (cfm)	ESP/TSP (in.WC)	EAT DB/WB (°F)	LAT DB/WB (°F)
575V 3Ph 60Hz	16.4 12.5	10 / 15	65.6 / 49.2	61.3 / 44.9	2,000	1.40 / 1.69	80.0 / 67.0	56.2 / 56.0

## COOLING

Cooling Performance			Temperatures (DB/WB °F)		
Gross Cooling (Ttl/Sens)	65.6 / 49.2 MBH	Ambient	95.0		
Net Cooling (Ttl/Sens)	61.3 / 44.9 MBH	Entering	80.0	67.0	
Coil Moisture Removal	15.46 lb/hr	Total Leaving – (Coil)	56.2	56.0	
System Moisture Removal	15.46 lb/hr	Total Leaving – (Unit)	58.3	56.8	

ARI Performance		Compressors		Refrigerant		Condensate Drain	
ARI Cooling	61.6 / 60.0 MBH	Cooling Stages	2.0	Type	R-454B	Qty	1
ARI Power	4,600 W	Compressor Qty	1	Charge	4 LBS. 13 OZ.	Size	1 in.
		Compressor RLA	4.8 amp			Pipe Thread	npt

## HUMIDITROL - HOT GAS REHEAT

Humiditrol Dehumidification Performance		Temperatures (DB/WB °F)	
Gross Cooling - Stage 1(Ttl/Sens)	13.5 / 13.5 MBH	Ambient	95.0
Moisture Removal - Stage 1	lb/hr	Entering	80.0
		Total Leaving – (Stage 1)	73.5

## HEATING

Heating Performance		Temperatures (DB/WB °F)		Specifications	
Output (High/Low)	121.0 / 92.0 MBH	Total Leaving	55.6	Heat Stages	2
Input (High/Low)	150.0 / 113.0 MBH			Thermal Efficiency NOX	81.0%
Gas Heat Rise	55.6 °F			Gas Line Size	0.5 in.
				Gas Pressure	7 in.WC

## VENTILATION

Air Flow (cfm)		Supply Fan		Air Resistance (in.WC)	
Supply	2,000	Nominal Power	1.50 hp	Total	1.69
		Required Power	1.35 hp	Ext Supply	1.40
		Drive Type	MSAV Direct Drive		
		Required Watts	1,004 W		

## AIR RESISTANCE - OPTIONS/ACCESSORIES (in.WC)

Wet Coil	Humiditrol	Heat	Economizer	Filters	Diffuser	Exhaust	ERW
0.10	0.03	0.06	0.05	0.05			

## ELECTRICAL

Voltage	575V 3Ph / 60Hz	Compressor RLA	4.8 amp
MCA	10 amp	Condenser FLA	1.1 amp
MOCP	15 amp	Supply Fan FLA	2.3 amp
Oper Range-Nom Volt	+/- 10%	Cooling FLA Total	8.2 amp

## ADDITIONAL DATA

Cabinet	85.25 in. x 47.00 in. x 46.88 in.	Total Weight	791 lb
Horizontal Supply	20.0 in. x 19.5 in.	Base Unit Net Weight	630 lb
Horizontal Return	29.0 in. x 11.0 in.	OAS/Econ Weight	84 lb
Filters	(4) 20.0 in. x 20.0 in. x 2.0 in.	Humiditrol Weight	27 lb
Sound Rating	82 dBA	Gas Heat Weight	19 lb
		Coil/Hail Guard Weight	31 lb



# Lennox National Accounts Project Submittal

**Tag:** RTU-2

## Factory Installed Options

High Performance Economizer Factory Installed  
Single Sensible High Performance Economizer  
Direct Drive  
Unit Orientation Horizontal  
Supply Fan: Multi-Speed ECM Direct Drive  
550V/575V/600V 3Phase  
80Amp Non-Fused Disconnect Factory Installed  
Built-in BACnet IP and MS/TP (standard)  
Refrigerant R-454B  
Supply Motor - 1.5 Hp ECM - w/ MSAV  
150K S.S. (Dual Stage)  
Low Nox Factory Installed  
Combination Coil/Hail Guards Factory Installed  
Hinged Access Doors Factory Installed  
20A GFCI Factory Installed/Field Wired  
Phase/Voltage Detection Factory Installed  
Environ Evaporator and Condenser Coil System Factory Installed  
Humiditrol Factory Installed  
2" MERV8 - Filter Factory installed

## Field Installed Accessories

Catalog Number	Qty	Description
17W45	1	Horizontal Econ Conversion Kit Field Installed
19F01	1	Horiz Barometric Relief Dampers Field Installed
76W27	1	Copper Drain Trap Field Installed
10C89	1	Weatherproof GFCI Cover Field Installed
17M50	1	Humidity Sensor Kit Field Installed
52W39	4	2" MERV13 - Filter Field Installed
23V86	1	CO2 Sensors - Wall-mount, white plastic cover, no display Field Installed
Y5656	1	HN TH8320R1003 VisionPro RedLink 3H2C
X4131	1	HN C7189U1005 WHITE REMOTE SENSOR

## Product Features

### Cabinet

Hinged Access Panels  
Durable Outdoor Enamel Paint Finish  
Totally Enclosed Outdoor Fan Motor  
PVC Coated Fan Guard  
Corrosion-Resistant Removable, Reversible Drain Pan  
Isolated Compressor Compartment

### Cooling System

Scroll Compressor  
Expansion Valves  
High Capacity Driers  
Crankcase Heater  
System can operate from 0°F to 125°F without any additional controls  
Pre-charged Refrigeration System  
Timed Off Control  
Internal Pressure Relief Valve  
Humiditrol - Hot Gas Reheat Dehumidification System

### Heating System

Redundant Automatic Gas Valve with Manual Shut-off  
Electronic Flame Sensor  
Direct Spark Ignition  
Inshot Burners  
AGA-CGA Certified  
If configured for room sensor control, additional staging may be possible. Refer to performance tables within the EHB



# Lennox National Accounts Project Submittal

## Control System

Fan and Limit Controls  
Overload Protection  
Microprocessor Controls – Lennox® CORE Control System  
Auto reset high & low pressure switch with strike 3 lockout feature in Lennox® CORE Control System  
Built-in BACnet IP & MS/TP  
Return Air Sensor Factory Installed  
Outdoor Air Sensor Factory Installed  
Factory Installed Discharge Air Sensor  
Refrigerant Detection System (RDS) and mitigation response, per UL safety standard 60335-2-40

## Compliance

Components are Bonded for Grounding  
Factory Test Operated  
All models are ASHRAE 90.1 energy efficiency compliant and meet or exceed requirements of Section 6.8  
All models meet DOE 2023 energy efficiency standards  
All models are compliant with and listed to UL standard 60335-2-40

Model meets California Code of Regulations, Title 24 and ASHRAE 90.1-2016 Section 6.4.3.10 requirements for staged airflow  
Model meets HCAI (formerly OSHPD) OSP and Special Seismic Certification (Number: OSP-0596) and meet 2018 International Building Code (IBC), 2019 California Building Code (CBC) ASCE 7, and ICC-ES AC156  
ISO 9001 Registered Manufacturing Quality System  
Only refrigerants in compliance with New York State regulations can be used in the state of New York

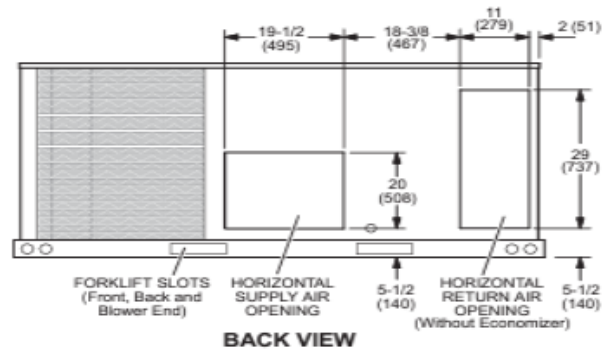
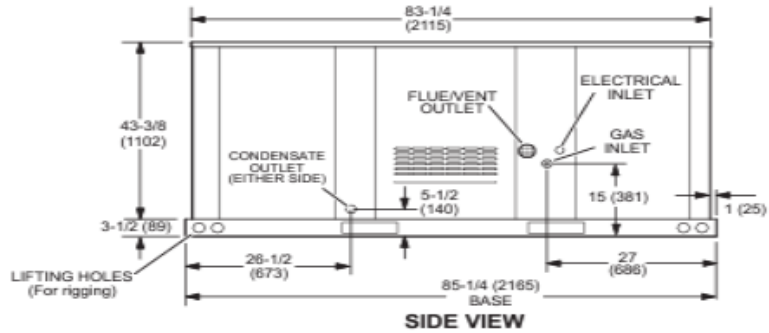
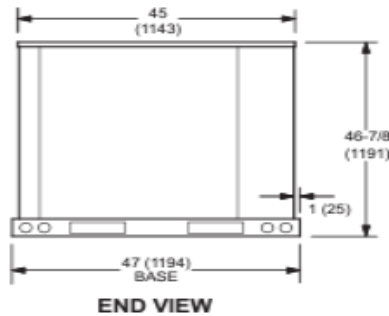
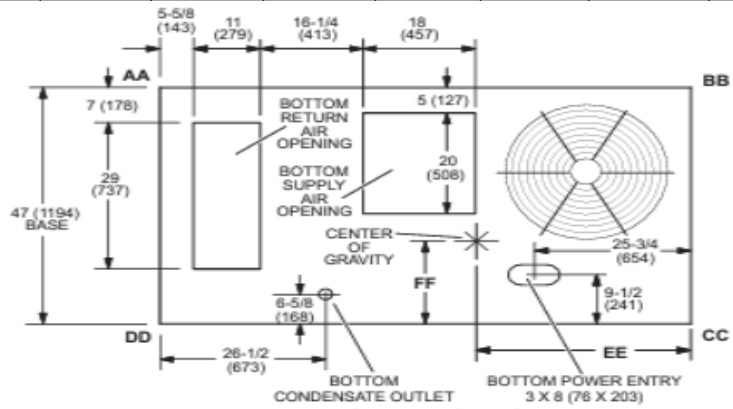
## Warranty

Limited warranty on stainless steel heat exchanger of 15 years  
Limited warranty on compressor of 5 years  
Limited warranty on Environ Coil System of 3 years  
Limited warranty on High Performance Economizer of 5 years  
Limited warranty on all other components of 1 year  
Limited warranty on Lennox® CORE Control System of 3 years  
See Limited Warranty Certificate included with unit for details



# Lennox National Accounts Project Submittal

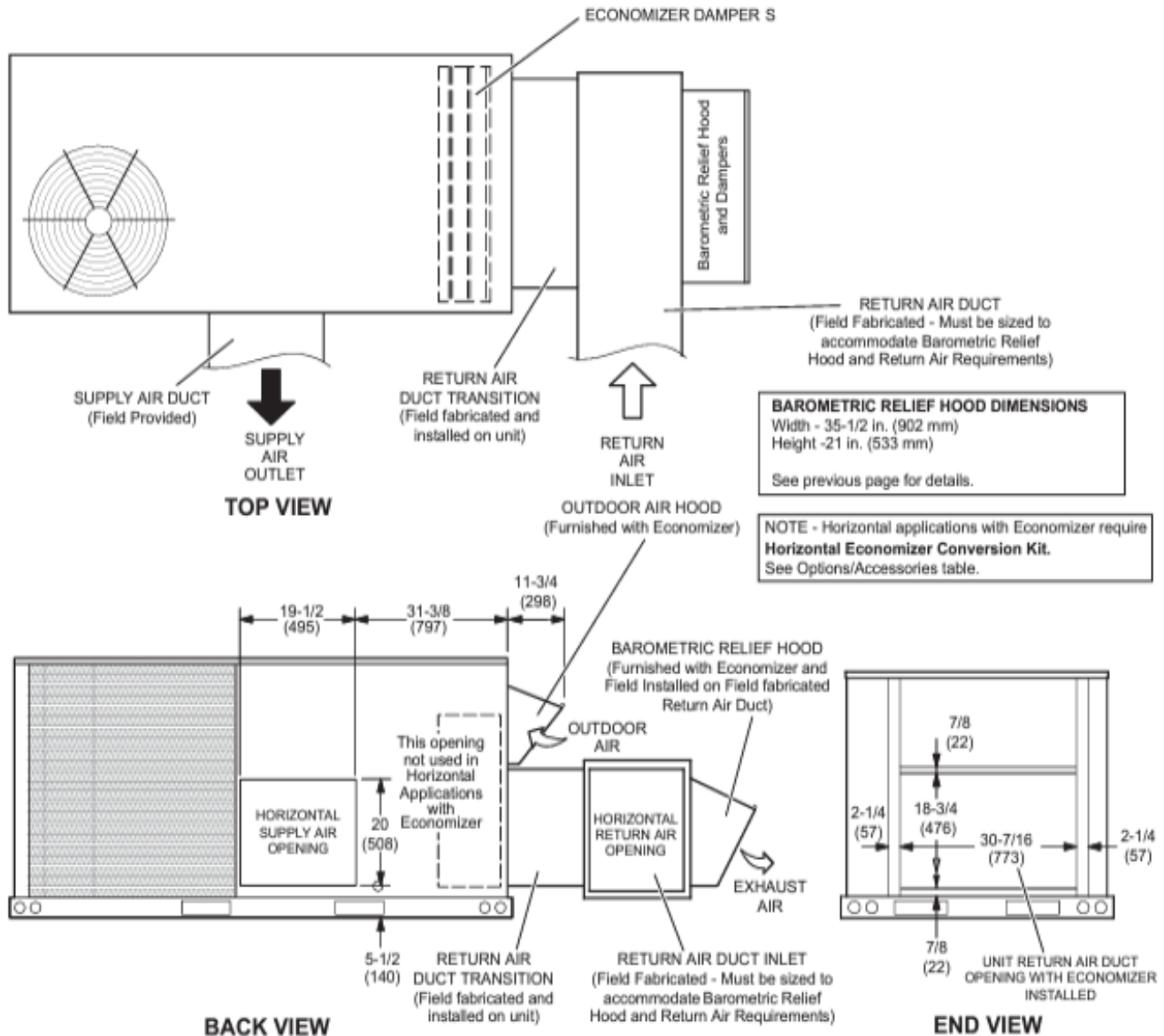
Corner Weights (lb)						Center of Gravity (in.)					
AA		BB		CC		DD		EE		FF	
Base	Max	Base	Max	Base	Max	Base	Max	Base	Max	Base	Max
131	169	161	208	220	284	179	231	38.25	39.75	19.88	19.88





# Lennox National Accounts Project Submittal

## OUTDOOR AIR HOOD DETAIL WITH OPTIONAL ECONOMIZER AND BAROMETRIC RELIEF DAMPERS (Horizontal Applications)

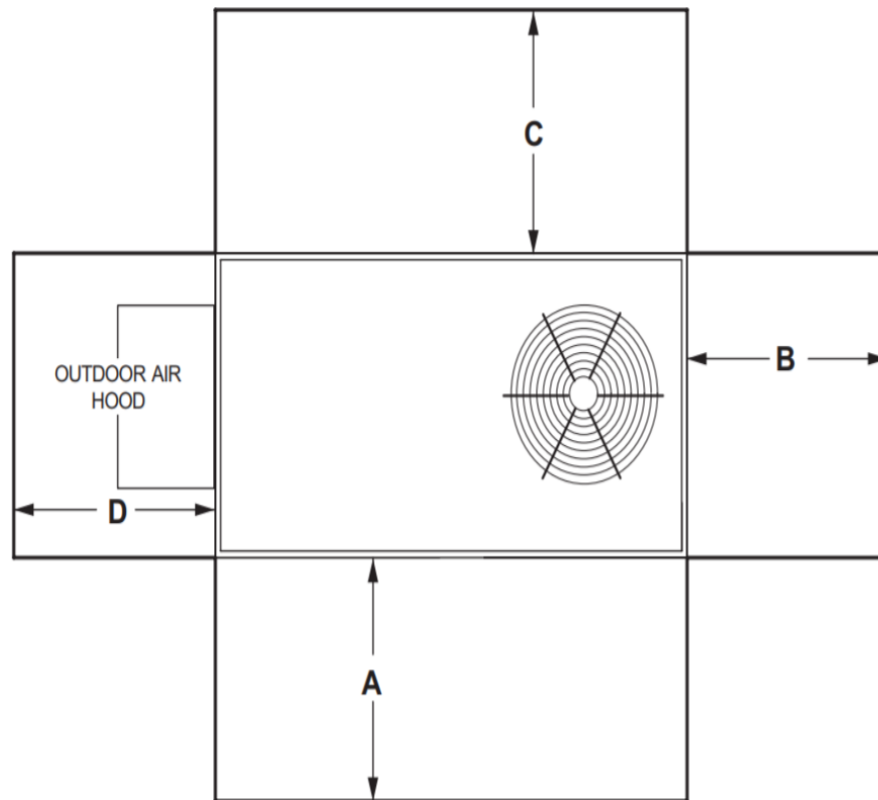


**NOTE - Return Air Duct and Transition must be supported.**



# Lennox National Accounts Project Submittal

## UNIT CLEARANCES



<sup>1</sup> Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	48	1219	36	914	36	934	36	914	Unobstructed
Clearance to Combustibles	36	914	1	25	1	25	1	25	
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

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

<sup>1</sup> **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.





# Lennox National Accounts Project Submittal

**Tag:** Miscellaneous Items

## Miscellaneous Items

Tag	Catalog Number	Qty	Description
EOC			
	COMSD	1	(2) Equipment Operation Check
COMMISSIONING			
	COMSD	1	(2) RTU COMMISSIONING