

INTRODUCING LENNOX'

# 2025 Compliant Refrigerant



# Table of Contents

<b>4</b>	Letters to our Dealers	<b>10</b>	Best Practices for Safety and Storage
<b>5</b>	Introducing 2025 Compliant Refrigerant	<b>12</b>	General FAQs
<b>6</b>	History of Refrigerant	<b>13</b>	Technical/Safety FAQs
<b>7</b>	Refrigerant Comparison	<b>14</b>	Industry/Homeowner Impact FAQs
<b>8</b>	Future State of Refrigerants	<b>15</b>	Glossary Definitions
<b>9</b>	What's Changing?		







# A Commitment to Innovation & Excellence

## **DEAR LENNOX DEALERS,**

Lennox aims to advance products and technology to meet government requirements and to excel in the industry by supporting our dealers, delivering optimally performing equipment to homeowners, and ensuring the sustainability of overall business operations and products. Looking ahead, Lennox continues to learn and improve based on ongoing dealer and homeowner engagement and relentlessly staying ahead of industry standards.

As we navigate through industry transitions, we want you to know that your success remains at the forefront of our initiatives. After all, we are in the **Business of YOU**. We are dedicated to providing you with the tools, resources, and support needed to thrive in this changing landscape. As a part of that dedication, you can expect:

- Low GWP technical and sales training from our dedicated teams
- Resources and information about new products ahead of launch
- Flexible solutions that provide options to homeowners
- Replacement parts to service and repair R-410A equipment with ease
- 2025 compliant equipment when you need it

**Thank you for your trust in Lennox. Together, let's embrace this industry transition and build a future defined by innovation, sustainability, and shared success.**



# Introducing 2025 Compliant Refrigerant

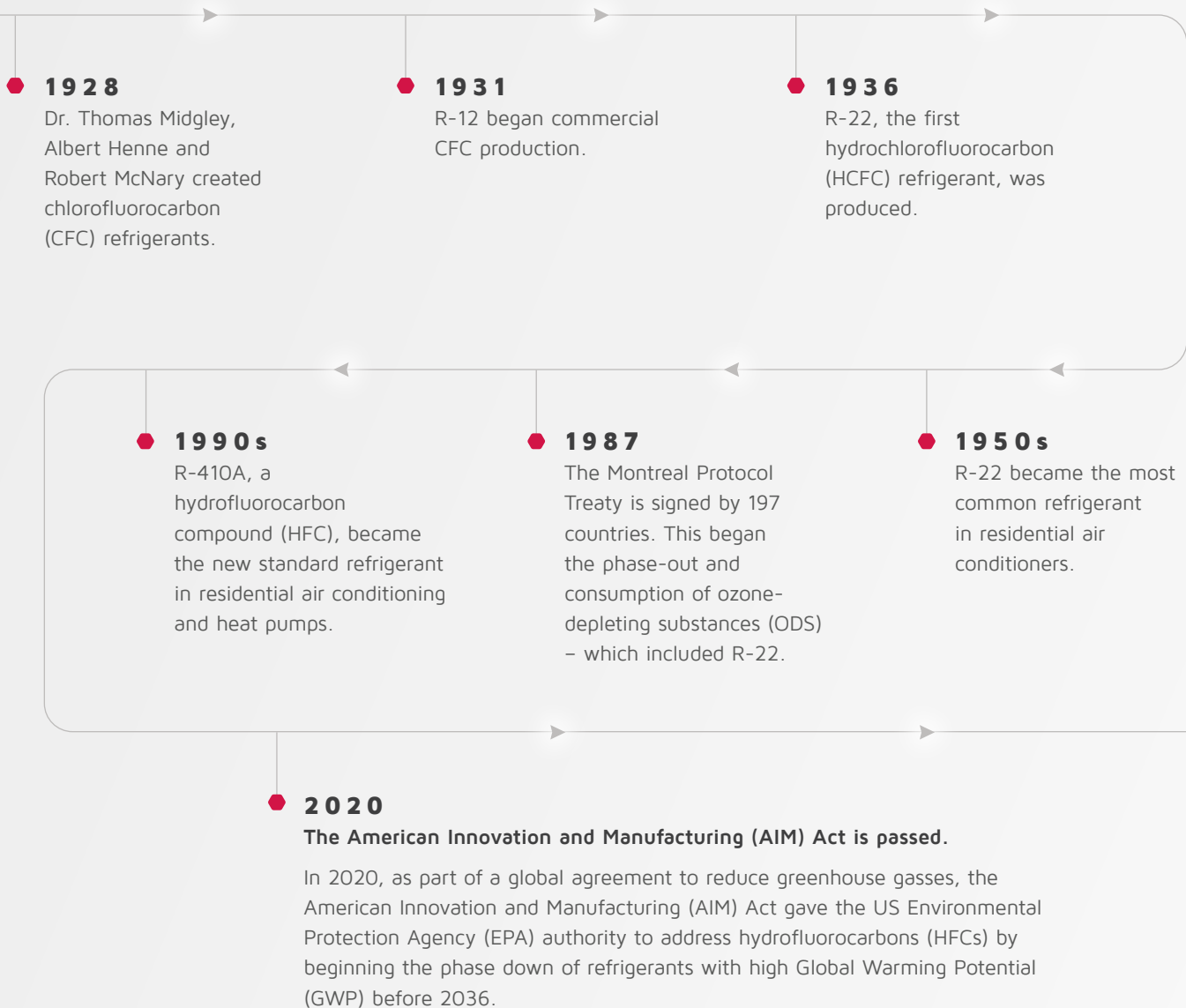
## **YOU CAN COUNT ON LENNOX**

to make decisions that are good for dealers, good for homeowners and good for the environment. That's why we've updated our entire product lineup to use 2025 Compliant Refrigerants R-454B for whole-home systems and R-32 for ductless mini-split systems.

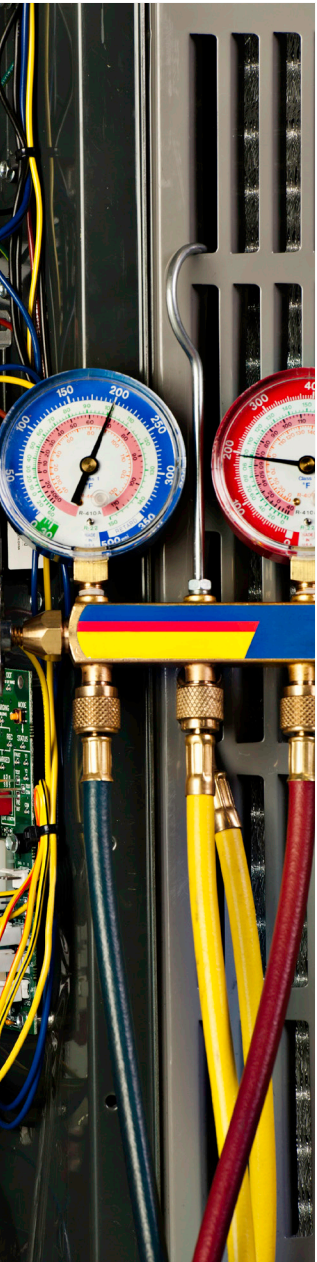
With substantially lower global warming potential (GWP) than previous refrigerants, these alternatives comply with updated EPA regulations and are formulated to provide excellent, reliable performance for years to come.





# History of Refrigerant



# Refrigerant Comparison



When selecting a new refrigerant, Lennox considered ease of installation, service, safety, performance, environmental impact and more. For whole-home systems, we chose 2025 Compliant Refrigerant R-454B due to its excellent performance for ducted systems and zero ozone depletion potential. For mini-splits, we selected R-32, designed to optimize efficiency and reliability in ductless systems. Our engineers worked to maximize equipment performance with these refrigerants, while minimizing changes to installation requirements.

	R-410A	 R-454B	 R-32
ASHRAE Safety Classification	A1	A2L	A2L
Ozone Depletion Potential	0	0	0
Global Warming Potential (GWP)	2,088	466	675
Flammability	No Flame Propagation	Mildly Flammable	Mildly Flammable
Refrigerant Leak Safety Control	None	Required	Required



Our 2025 compliant systems are equipped with a Refrigerant Detection System (RDS) that will dissipate a refrigerant leak if detected, ensuring safe operation and peace of mind.

# Future State of Refrigerants

The EPA, as part of the global agreement to phase down greenhouse gases, has put together a schedule for the reduction of HFCs including the refrigerant that we use across our product lines, R-410A. For air conditioners and heat pumps, the first phase down will occur in 2025 and drop from a global warming potential of 2100 to less than 700. It is projected that this reduction will meet the requirements for the phase down until 2034.

The following EPA Phasedown Schedule is an estimated timeline as outlined in the AIM Act. Actual targets will be dependent on execution of the phase down and increases in refrigerant recovery to reduce the amount leaked into the atmosphere.

	Consumption & Production Caps as a percentage	Consumption & Production Caps in MMTEVe*
<b>Baseline</b>		Consumption: 302.5 MMTEVe Production: 382.5 MMTEVe
<b>2020 - 2023</b>	90%	Consumption: 273.5 Production: 344.3
<b>2024 - 2028</b>	60%	Consumption: 181.5 Production: 229.5
<b>2029 - 2033</b>	30%	Consumption: 90.8 Production: 114.8
<b>2034 - 2035</b>	20%	Consumption: 60.5 Production: 76.5
<b>2036 &amp; After</b>	15%	Consumption: 45.4 Production: 57.4

\* Baselines and caps are expressed in million metric tons of exchange value equivalent (MMTEVe), which is numerically equivalent to million metric tons of CO<sub>2</sub> equivalent (MMTCO<sub>2</sub>e). The baselines and annual caps listed in the table above reflect adjustments to the production and consumption baselines finalized in July 2023.





# What's Changing?

## FLAMMABILITY:

While these 2025 Compliant Refrigerants have an A2L classification of mildly flammable, Lennox has incorporated additional safety features such as a Refrigerant Detection System (RDS) that will dissipate a refrigerant leak if detected, ensuring safe operation and peace of mind.

## SAFETY:

For nearly 130 years, Lennox has built our brand on doing what's right by providing innovative HVAC products to efficiently deliver perfect air to homeowners and to ease the installation and service of the product for dealers. It also includes top-notch training and support to ensure we are with you every step of the way. This industry change is no different. We will be ready together.



The minimum fire protection for the storage facility of flammable refrigerants where the aggregate capacity is less than **1,000 liters** (water capacity) is a **water hose connected and ready for use**.

## REFRIGERANT DETECTION SYSTEM:

There are new safety features in the equipment, like a Refrigerant Detection System, that will ventilate the equipment should a refrigerant leak occur. This prevents the refrigerant from “pooling” and safe from ignition sources.

## TOOL CHANGES:

Dealers and technicians should ensure that all tools (recovery machines, vacuum pumps, etc.) are certified for use with an A2L refrigerant. However, it is recommended to have separate gauges and recovery tanks to avoid cross-contamination.

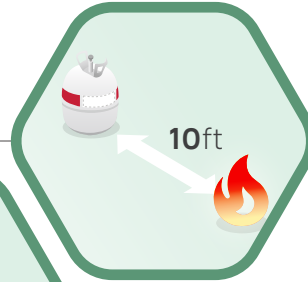
## PROCEDURAL CHANGES:

Rest assured, this transition won't create a heavy burden for installers and technicians. Systems will continue to match up as before, service practices will remain the same, and because our 2025 Compliant Refrigerants have similar properties to the current R-410A refrigerant, there will be limited changes to installation requirements. Lennox recommends following safe installation and service practices due to the mildly flammable classification of the refrigerant.

# Best Practices for Safety and Storage

## DOS:

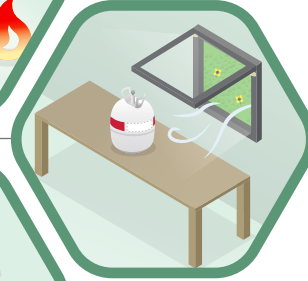
1. Keep ignitable material at least 10 feet from cylinders.



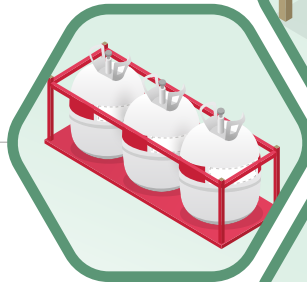
2. Keep away from sparks and flames.



3. Use only with adequate ventilation.



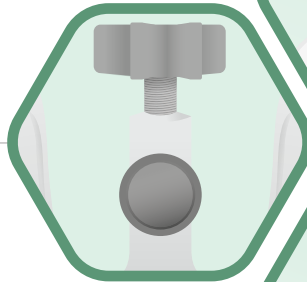
4. Temperatures during transportation and storage should not exceed 125° F.



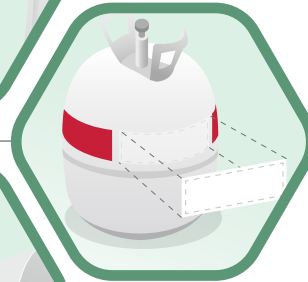
5. Protect cylinders from physical damage (store upright, never roll and secure to prevent falling).



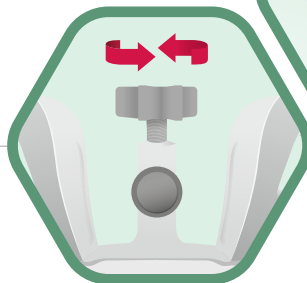
6. Monitor cylinders for leakage.



7. Ensure all cylinders are properly labeled.



8. Close the valve after each use and when empty.



## SAFE STORAGE FOR PEACE OF MIND

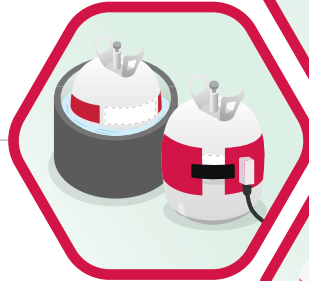
Proper refrigerant storage is crucial to ensure the safe and efficient operation of equipment. Improper storage can pose risks of fire, explosions, and negative impacts on health and the environment. Ensuring secure cylinders, proper ventilation, and temperature control are necessary measures for safe storage.

### DON'TS:

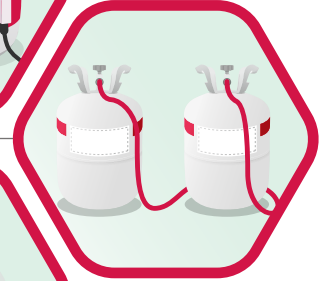
1. Do not throw empty cylinders in the trash.



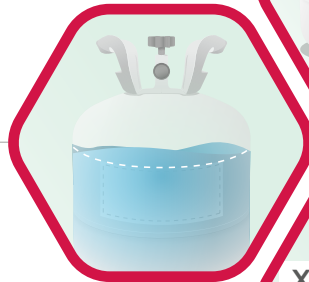
2. Never use water or an electric blanket exceeding 100° F.



3. Never refill single-trip (disposable) cylinders.



4. Never fill a recovery cylinder more than 80% full.



5. Never use a recovery cylinder past its retest date.



6. Never expose cylinders to a corrosive environment.



7. Don't mix refrigerants in recovery cylinders.



# General FAQs

## 1. What is a refrigerant?

It is a chemical compound that changes temperature as it transitions between liquid and gas form – cooling as it vaporizes, and heating up as it condenses. It is this property that facilitated a system's ability to heat and cool.

## 2. What does low GWP mean?

Global Warming Potential (GWP) refers to a formula used to measure how much a substance contributes to global warming over a period of time. Specifically, it represents how much heat a substance traps when compared to CO<sub>2</sub>. Low-GWP refrigerants have much lower GWP values, making them a more environmentally friendly choice.

## 3. Can anyone purchase the new refrigerant?

No. The EPA requires specific certification under Section 608 or Section 609 in order for technicians to purchase refrigerants. Lennox' BuildATech® training course offers EPA Section 608 testing. To find out more about the Lennox Learning Solution courses, visit [LennoxPros.com](http://LennoxPros.com) under the My Learning tab.

## 4. Will a new EPA Exam be required?

There is no new EPA exam required to use the new products. The 608 exam is the only certification needed for this new refrigerant.

## 5. Do Low GWP refrigerants perform better than R-410A?

Lennox' 2025 Compliant Refrigerants provide comparable performance to R-410A. New low GWP systems will be designed to provide similar levels of comfort, efficiency, and safety as current R-410A systems.

## 6. Can a homeowner keep their old furnace and evaporator coil?

To be compatible with the 2025 compliant

refrigerant, a refrigerant detection system will be required and a new, 2025 compliant evaporator coil will be required. While homeowners could potentially keep their furnace, the refrigerant detection system must be installed. Homeowners should consult a comfort advisor for the best options.

## 7. Will a 2025 compliant refrigerant system use the same amount of refrigerant as an R-410A system?

While there may be some exceptions, most Lennox 2025 Compliant Refrigerant systems will use 5-10% less refrigerant than a comparable R-410A system.

## 8. When will this change take place for the Lennox product line-up?

In preparation for the required use of a low GWP refrigerant in newly manufactured products on January 1, 2025, Lennox will launch our 2025 Compliant Refrigerant products in the second half of 2024. As always, whenever new regulations go into effect, Lennox is here to provide you support, training and educational resources that make it easy to sell, install and service the new equipment.

To help drive awareness of 2025 Compliant Refrigerant and designate information regarding these products, Lennox has created an icon that will be easily recognizable in product information and materials.



**2025 COMPLIANT  
REFRIGERANT**



# Technical/Safety FAQs

## 1. What is A2L refrigerant?

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) created a subgroup of refrigerants called A2L. "A" refers to non-toxic, "2" refers to the flammability level, and "L" refers to the low burning velocity. You can see this new subgroup compared to other refrigerant classifications in the referenced chart.

The chart is a 4x2 grid. The vertical axis is labeled 'Increasing Flammability' with an upward arrow. The horizontal axis is labeled 'Increasing Toxicity' with a rightward arrow. The rows are: 'Higher Flammability', 'Flammable', 'Lower Flammability', and 'No Flame Propagation'. The columns are: 'Lower Toxicity' and 'Higher Toxicity'. The cells contain the following classifications: (Higher Flammability, Lower Toxicity) is A3; (Higher Flammability, Higher Toxicity) is B3; (Flammable, Lower Toxicity) is A2; (Flammable, Higher Toxicity) is B2; (Lower Flammability, Lower Toxicity) is A2L; (Lower Flammability, Higher Toxicity) is B2L; (No Flame Propagation, Lower Toxicity) is A1; (No Flame Propagation, Higher Toxicity) is B1.

Higher Flammability	A3	B3
Flammable	A2	B2
Lower Flammability	A2L	B2L
No Flame Propagation	A1	B1
	Lower Toxicity	Higher Toxicity

## 2. Is A2L the same as a low GWP?

A2L refrigerants are not the same as low GWP. The subgroup A2L is the refrigerant safety classification the HVAC industry is using in the 2025 refrigerant transition. Low GWP refers to the Global Warming Potential of the emissions of the refrigerant.

## 3. How flammable is 2025 compliant refrigerant? Is this class of refrigerants dangerous?

Refrigerants in the A2L class are considered "mildly flammable" but no more dangerous than many other household products. An A2L refrigerant is very safe when handled properly and when best practices and safety guidelines are applied during installation and service. As part of the HVAC industry transition, low GWP systems, which utilize A2L refrigerants, require a refrigerant leak detection sensor and mitigation control to ventilate the area when refrigerant is detected. All products with more than 4 lbs of an A2L refrigerant will have additional safety requirements.

## 4. Does the vacuum pump need to be rated with low GWP refrigerants?

Most new vacuums are already rated for both R-410A and A2L refrigerant, however, older ones may not be. Be sure to check your vacuum's rating and replace it if it is not compatible with A2L refrigerants.

## 5. Will press fittings need to be different?

Press fittings are determined by the line set diameter. Lennox' 2025 Compliant Refrigerant equipment will have service valves that can accept either brazed or press fitting braze free installations. Lennox R-454B equipment will be designed with a bell for brazing but also have proper clearance so an installer can choose to use a press fitting by cutting off the swage. There will be enough stub clearance and tool clearance after removing the swage to use a press fitting.

## 6. Will there be a change to the threading on service valves?

Service valves on Lennox' 2025 Compliant Refrigerant systems will be right-hand threaded which is the same as R-410A systems. However, service valves on A2L refrigerant cylinders will be left-hand threaded.

## 7. What happens if the wrong refrigerant gets into the system?

2025 Compliant Refrigerant is not a drop in refrigerant and should not be added to an existing R-410A system. For safety purposes, if this were to occur, recover the refrigerant and re-charge the system with the proper new refrigerant for that system.

# Industry/Homeowner Impact FAQs

## **1. What should I do with the old refrigerant when installing a new Low GWP system?**

To help ensure continuity of service, Lennox has teamed up with Hudson Technologies for the Lennox Reclaim Program, a simple, hassle-free solution that pays you for recovered R-22 and R-410A refrigerant. In addition to recovering and reclaiming previous refrigerants to allow for their reuse, the Lennox Reclaim Program will help to continue circulation of the current refrigerant to sustain servicing homeowners in a way that reduces the overall environmental impact of refrigerants.

## **2. If a homeowner needs a new system, should they buy one now or wait until the new models are available?**

Whether it is an emergency replacement or a planned replacement, every homeowners' situation will look different. Homeowners should discuss their system replacement options with their dealers to understand which system will best suit their unique needs. We know our dealers will be well suited to help the homeowner make an educated decision when the time is right for them.

## **3. If I install a system with R-410A refrigerant, how will Lennox support or service that system?**

After the transition, Lennox will continue to offer R-410A repair components, parts and R-410A refrigerant for servicing units.

## **4. Will new systems cost more to operate?**

Lennox' 2025 Compliant Refrigerant products will be more cost effective over the life of the unit, as previous refrigerants phase out and become more costly to maintain.



# Glossary



---

## **Refrigerant**

A chemical that produces a cooling effect when vaporizing and a heating effect with condensing. Its commonly used in air conditioners and heat pumps.

---

## **R-22 Refrigerant**

The old standard for residential air conditioners, now phased out by the U.S. EPA.

---

## **R-410A Refrigerant**

The current standard for residential air conditioners and heat pumps which is currently in the process of phasing out by the U.S. EPA.

---

## **R-32 Refrigerant**

Alternative refrigerant that has a GWP of 675, which is 68% lower GWP than R-410A.

---

## **R-454B Refrigerant**

Alternative refrigerant that has a GWP of 466, which is 78% lower GWP than R-410A.

---

## **ASHRAE**

American Society of Heating, Refrigerating, and Air Condition Engineers is a global society working to advance heating, ventilation, air condition and refrigeration (HVAC&R) systems design and construction.

---

## **A2L**

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) created a subgroup of refrigerants called A2L. "A" refers to non-toxic, "2" refers to the flammability level, and "L" refers to the low burning velocity.

---

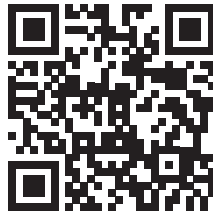
## **The AIM Act**

The American Innovation and Manufacturing (AIM) Act gave the US Environmental Protection Agency (EPA) authority to regulate hydrofluorocarbons (HFCs) and begin the phase down of refrigerants with high HFCs by 2036.

**SCAN TO LEARN MORE**



2025 Compliant Refrigerant Hub



Learning Solutions Courses



**2025 COMPLIANT  
REFRIGERANT**