

# Kenmore®



## Residential ducted systems

With a complete line of Kenmore® products to choose from, there's a system perfectly suited to provide optimal comfort, exceptional energy savings and lasting performance for every family.

# HVAC concepts and definitions

Being familiar with these terms means that, together with your contractor, you can make an informed decision about your next heating, ventilation and air conditioning (HVAC) system.



## Heat pumps and air conditioners

A heat pump (HP) is a high-performance air conditioner (AC). It provides heat by using a valve to reverse the refrigeration cycle that provides cool air.

**Did you know?** Installing a heat pump can offset the use of fossil fuels to heat your home which can cut down on your energy bills and is friendlier to the environment. The US federal government has recently extended and enhanced tax credits and rebates for upgrading your outdoor units, particularly with a heat pump.



## Tonnage

Tonnage measures the cooling capacity, or the size, of an outdoor HVAC unit. Your contractor can recommend the appropriate tonnage for optimal comfort and performance in your home.



## Efficiency

Efficiency measures the input — in this case, electrical power — needed to achieve a certain output in heating or cooling.

Extremely energy-efficient HVAC units usually cost more upfront than conventional units. However, they generally achieve more significant reductions in lifetime operating costs. Investigate your local utility rates to discover when you will start to see the savings from a more efficient unit.

**Did you know?** Many localities offer rebates on the purchase of higher efficiency equipment to encourage energy conservation.

## Energy ratings and operational efficiencies

### SEER2

Seasonal Energy Efficiency Ratio (SEER2) is a rating system of AC cooling capacity to power input. The most energy-efficient cooling units have the highest SEER2 ratings.

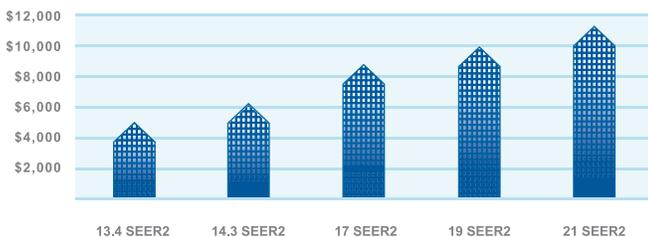
### AFUE

Annual Fuel Utilization Efficiency (AFUE) measures how efficiently a furnace converts gas to heat. This efficiency is expressed as a percentage. The closer this number is to 100%, the more efficient the furnace.

### HSPF2

Heating Seasonal Performance Factor (HSPF2) is another rating given to heat pumps because they provide heating and cooling. HSPF2 calculates the electricity used to generate heat output for a typical heating season. The most energy-efficient heating units have the highest HSPF2 ratings.

20-year average household savings by efficiency level



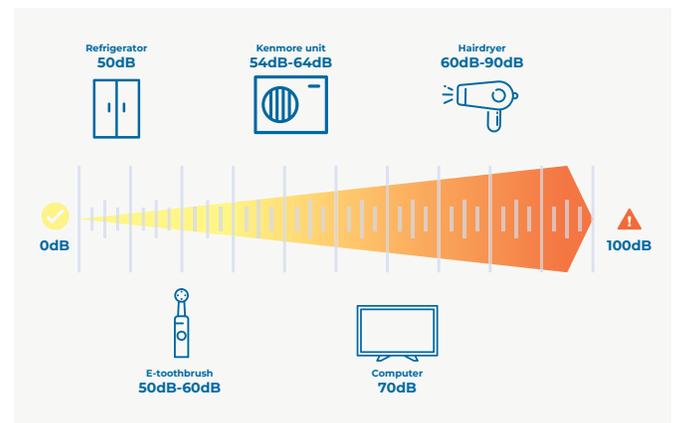
**Note:** Figures represent savings compared to three-ton 10 SEER equipment over 20-year average lifespan, at \$0.14/kWh. National average of unit operation is 2,100 hours. Operating costs vary depending on climate conditions, home characteristics, energy rates and usage patterns. Savings not guaranteed.

### MERV

Minimum Efficiency Reporting Value (MERV) measures the effectiveness of filters at trapping airborne particles.

## Sound levels in HVAC systems

Sound is generated by the HVAC equipment itself or the airflow reverberating through the ductwork of each system. However, most obtrusive noise occurs when HVAC units are switched on and off. Modulating or variable-speed component units can reduce noise and control the system with lower speeds to also reduce unwanted sound from the airflow.



## Features impacting comfort, efficiency and performance in residential HVAC systems

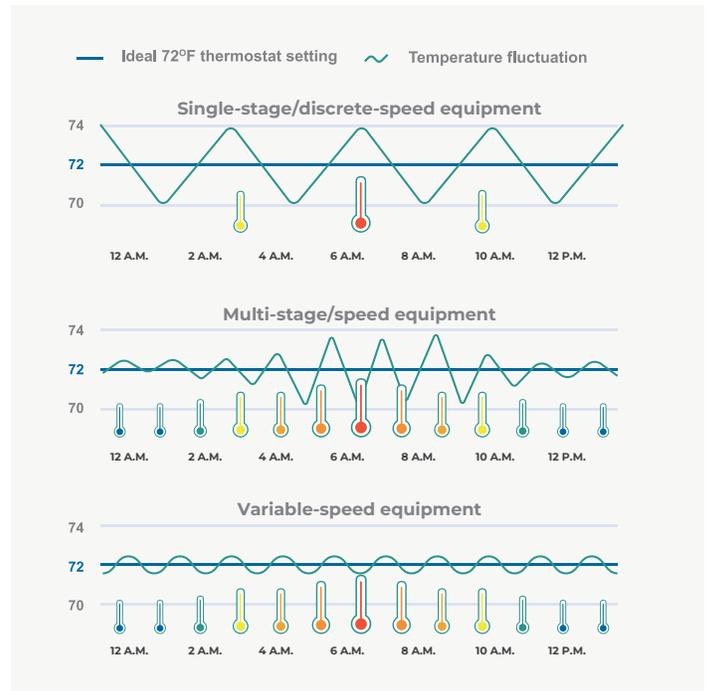
### Staged vs. variable capacity or modulating cooling and heating

Single-stage operation means operating on a simple on/off basis. The two-stage operation can be thought of as low/high/off. Fully modulating or variable capacity means the unit can ramp up or down across the entire heating or cooling capacity range. Each incremental increase in the number of stages allows for improved comfort and performance by minimizing temperature swings and the energy that must be used to overcome them. This contributes to better efficiency, the reduction of annual energy costs and a more comfortable home.

### Discrete-speed vs. variable-speed blower motors

Blower motors are what circulate the warm or cool air throughout your home. Discrete-speed motors operate in an on/off or low/med/high fashion. Variable-speed motors can dial their operation to the exact speed needed, consume less energy over time and contribute to reduced noise levels. This provides for a more comfortable space and more efficient unit operation.

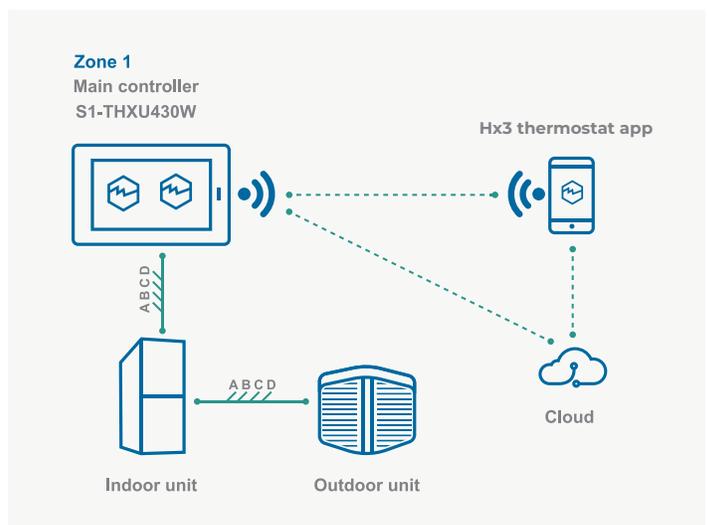
## Equipment performance at 72°F indoor setpoint



## Communications and HVAC systems

Conventional, non-communicating systems operate with basic thermostats and staged/discrete-speed equipment. Though they have some limitations compared to communicating systems, they can adequately meet the comfort needs of a more cost-conscious purchase.

Using communicating thermostats and room monitoring devices is the only way to take full advantage of premium modulating! Variable-speed HVAC equipment, in terms of comfort and higher efficiency, also enables a high level of control with smart devices, comfort zoning and remote monitoring.



# Air conditioners



## XC8 | Premium

Up to 18 SEER2  
Variable speed  
Aluminum micro-channel coil  
Communicating/  
conventional thermostat



## XC6 | Efficiency

Up to 17 SEER2  
Up to 13.5 EER2  
Two-stage (2 Ton+)  
Micro-channel coil  
Conventional thermostat



## XC4 | Entry-tier (south)

Up to 16 SEER2  
Up to 13.5 EER2  
Single-stage  
Micro-channel coil  
Conventional thermostat



## XC3 | Entry-tier (north)

13.4+ SEER2  
12+ EER2  
Single-stage  
Micro-channel coil  
Conventional thermostat



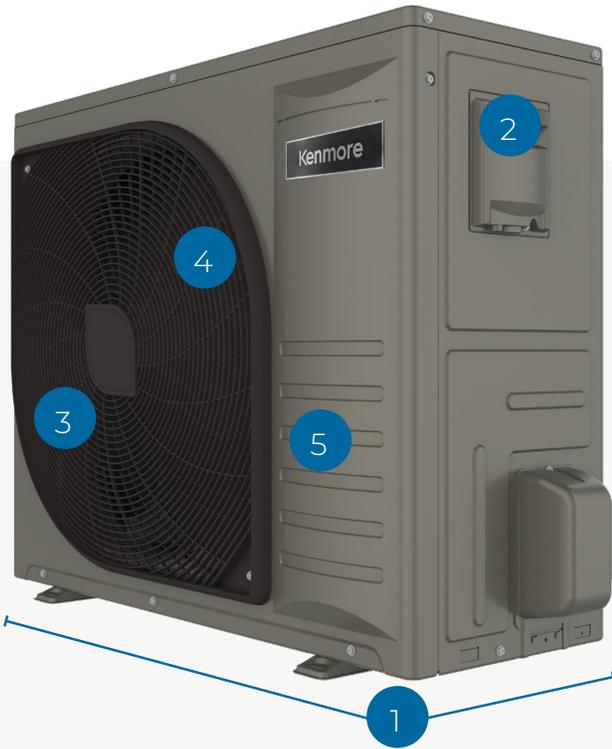
## Features and benefits

1. Coated-steel fan guard is removable for **easy access**
2. Automotive-grade, powder-coat finish – **1,000 hours salt-spray rated**
3. Durable steel coil guard **resists corrosion and rust creep**
4. High-quality micro-channel or tube-in-fin coils for **consistent, reliable performance**
5. **Compact footprint** designed for easy transport and placement
6. Diagonal base valves with **open access** for low-loss fittings
7. Straight-pipe line sets for **more flexibility**
8. Designed with new low global warming potential (GWP) refrigerant, R-454B



All limited warranties are subject to terms, conditions and exclusions set forth in the product's limited warranty statement. See applicable limited warranty statement for details.

# Heat pumps



HH8 model pictured.

## Features and benefits

1. Up to **30%** smaller footprint than traditional equipment
  2. Sleek new paint color
  3. Side-discharge design prevents snow, leaves and other debris entering the unit
  4. Compatible with **conventional 24V** thermostat
  5. Two-stage, inverter-driven compressor **provides variable speed** for consistent comfort
- Dual capacity switches on HH8 models minimize inventory



### Get \$\$\$ back on your installation.

Tax credit- and rebate-eligible matches now available in the US. Check with your Kenmore dealer for more details.

**Note:** 25C eligibility rating is based on CEE Tier 1 criteria as of January 2024. Eligibility is subject to change based on future regulatory changes.

## XH9 | Premium

20+ SEER2  
10+ HSPF2  
Variable speed  
Tube-in-fin coil  
Communicating/  
conventional thermostat



## HH8 | Premium side-discharge

19+ SEER2  
9+ HSPF2  
Variable speed  
Tube-in-fin coil  
Conventional thermostat



## XH6 | Efficiency

16 SEER2  
8+ HSPF2  
Two-stage (2 Ton+)  
Tube-in-fin coil  
Conventional thermostat



## XH5 | Efficiency

15.2 SEER2  
8+ HSPF2  
Two-stage (2 Ton+)  
Tube-in-fin coil  
Conventional thermostat



## XH4 | Entry-tier

14.3 SEER2  
7.5 HSPF2  
Two-stage (2 Ton+)  
Tube-in-fin coil  
Conventional thermostat



# Condensing gas furnaces



## Z9VT | Premium

97%+ AFUE  
Two-stage  
Variable-speed ECM  
40-120 MBH



## Z9ET | Efficiency

Up to 97% AFUE  
Two-stage  
Multi-speed CT ECM  
40-120 MBH



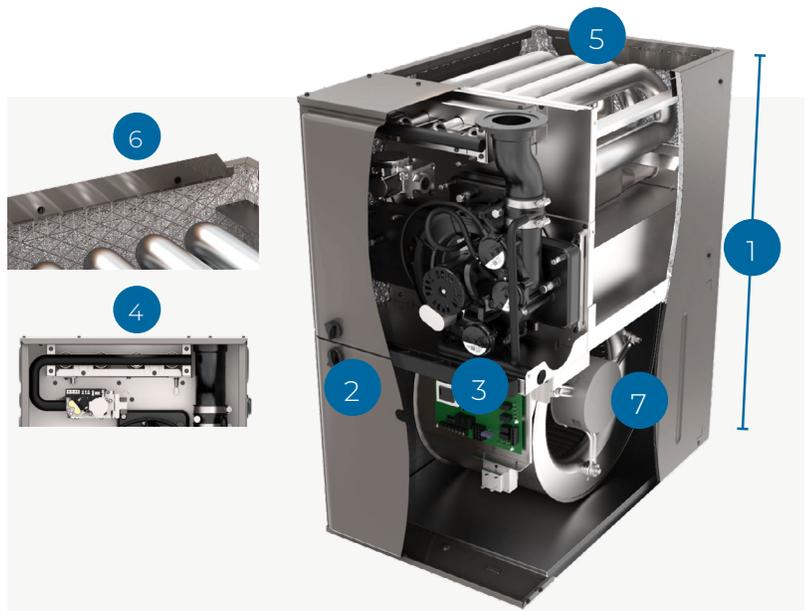
## Z9ES | Entry-tier

96% AFUE  
Single-stage  
Multi-speed CT ECM  
26-120 MBH



## Z9HS\*U | Entry-tier

96% AFUE  
Ultra-low NOx  
Single-stage  
Multi-speed CT ECM  
40-120 MBH



## Features and benefits

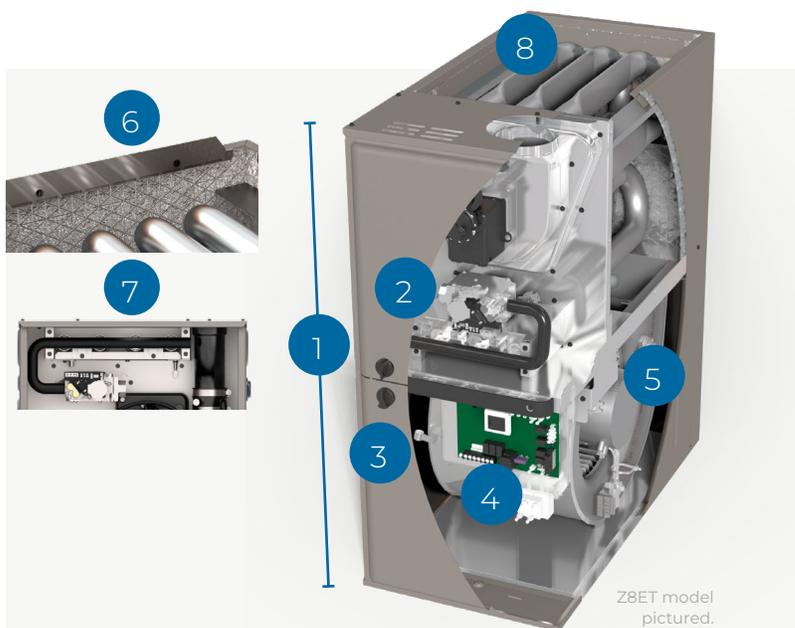
Meet the industry's most serviceable unit!

1. **Compact cabinet size** designed to fit residential installations in a basement, closet, alcove, attic, recreation room or garage
2. Redesigned **1/4-turn knobs** for easy and quick door removal
3. New safety features include **100% shut-off** for main gas valve and blower door safety switch
4. Front-facing screws reduce **installation and service times**
5. **Stainless-steel** secondary heat exchanger
6. Fold-up duct flanges for **easier and faster connection**
7. Five-speed, direct-drive ECM blower **motor improves SEER2** ratings, while using less electrical power
8. **Less than 2%** airflow leakage in performance testing conditions



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# Non-condensing gas furnaces



## Features and benefits

- 1. Compact cabinet size** designed to fit residential installations in a basement, closet, alcove, attic, recreation room or garage
- 2. Flexible configuration** for upflow, downflow and horizontal applications
- 3.** Redesigned **1/4-turn knobs** for easy and quick door removal
- 4.** Built-in, **high-level self-diagnostics** with easy-to-read fault code display
- 5.** Five-speed, direct-drive ECM blower motor improves SEER2 ratings, while using **less electrical power**
- 6.** Fold-up duct flanges for **fast and easy installation**
- 7.** Front-facing screws **reduce** installation and service time
- 8.** Sturdy aluminized-steel heat exchanger for **long-lasting performance**



### Get \$\$\$ back on your installation.

Tax credit- and rebate-eligible matches now available in the US. Check with your Kenmore dealer for more details.

**Note:** 25C eligibility rating is based on CEE Tier 1 criteria as of January 2024. Eligibility is subject to change based on future regulatory changes.

## Z8VT | Premium

80% AFUE  
Two-stage  
Variable-speed ECM  
60-120 MBH



## Z8ET | Comfort

80% AFUE  
Two-stage  
Multi-speed CT ECM  
60-120 MBH



## Z8ES | Entry-tier

80% AFUE  
Single-stage  
Multi-speed CT ECM  
40-130 MBH



## Z8HS\*U | Entry-tier

80% AFUE  
Ultra-low NOx  
Single-stage  
Multi-speed CT ECM  
60-100 MBH



\* Compliant for regions with ultra-low NOx emissions standards.

# Air handlers

Single-piece and modular



## JHV | Premium

Variable-speed ECM  
Single-piece  
Multi-position  
Factory-installed EEV



## JHC | Efficiency

Variable-speed ECM  
Single-piece  
Multi-position  
Factory-installed TXV  
New JSC 'short' cabinet option for 4 & 5 Ton models. Upflow only. 57in. max. height



## JHE | Entry-tier

Multi-speed CT ECM  
Single-piece  
Multi-position  
Factory-installed TXV  
New JSE 'short' cabinet option for 4 & 5 Ton models. Upflow only. 57in. max. height



## JMC | Efficiency

Variable-speed ECM  
Modular  
Multi-position  
Factory-installed TXV



## JME | Entry-tier

Multi-speed CT ECM  
Modular  
Multi-position  
Factory-installed TXV



JHC model pictured.

## Features and benefits

1. Rigid case construction and interior bracing provide solid **structural support** for all applications
2. Thermostat drain pan is **corrosion- and UV-resistant** with a positive slope for drainage
3. Improved variable-speed (JHV/JHC/JMC), or nine-speed (JHE/JME) blower **provides greater installation, flexibility and comfort**
4. **New low global warming potential refrigerant** coils with factory-installed RDS system
5. Compact 21in. casing depth allows for **ease of access** in attics and applications where space is limited
6. **Multi-position design** for upflow, downflow and horizontal applications
7. Integrated fold-up duct flanges are part of the casing for **faster installation**



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# Packaged units

Cooling	Heating	15.2 SEER2			13.4 SEER2		Warranties
Air Conditioners	Electric heat	PC5	Two-stage Single-phase New constant CFM		PC3	Single-stage Single- and three-phase	10-Year Compressor Limited 10-Year Parts Limited
	Gas heat	PG5	Two-stage Single- and three-phase New constant CFM		PG3	Single-stage Single- and three-phase Ultra-low NOx option available	Lifetime Heat Exchanger Limited** 10-Year Compressor Limited 10-Year Parts Limited
Heat Pumps	Electric heat	PH5*	7.2 HSPF2 Two-stage Single- and three-phase New constant CFM		PH3	6.7 HSPF2 Single-stage Single- and three-phase	10-Year Compressor Limited 10-Year Parts Limited
	Gas heat	PD5*	7.2 HSPF2 Two-stage Single-phase New constant CFM		—	—	Lifetime Heat Exchanger Limited 10-Year Compressor Limited 10-Year Parts Limited
Tonnage and Thermostat		2-5 Tons and Conventional 24V					



PC5  
PG5  
PH5  
PD5  
PC3  
PG3  
PH3

\* 25C eligible for southern region only. \*\* 20-Year Heat Exchanger Limited on ultra-low NOx model.

**Note:** 25C eligibility rating is based on CEE Tier 1 criteria as of January 2024. Eligibility is subject to change based on future regulatory changes.

## Options to meet regional homeowner needs

AC and HP with electric or gas heat models are available.

## Flexible application

Meets both residential and light-commercial applications with single-phase and three-phase models available.



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# Indoor evaporator coils



Control panel

RDS

CTF model pictured.

## All cased coils feature:

- Factory-installed refrigerant detection system (RDS), designed to detect refrigerant leaks and shut down equipment for safety
- Factory-installed TXV
- Multi-position coils have factory-installed EEV option (for variable-capacity systems)
- Fold-up duct flanges for easy, quick installation

## Cased

### CTF

Upflow | downflow  
Aluminum tube-in-fin coil  
Factory-installed TXV only



### CXF

Upflow | downflow  
Aluminum micro-channel coil  
Factory-installed TXV only

## Multi-position

### CTM

Aluminum tube-in-fin coil  
Factory-installed TXV or EEV  
(for variable-capacity systems)



## Uncased

### CTU

Aluminum tube-in-fin coil  
Field-installed TXV only



# Electrification and decarbonization

## Environmentally friendly, cost-effective comfort

Reducing the impact of energy consumption to the homeowners' wallet, the grid and our environment is the issue. Heat pumps are the answer. These units can work alone or in tandem with hybrid systems to save on energy costs while lowering our reliance on fossil fuels.



Heat pumps can reduce energy, service and maintenance bills.



Heat pumps can be used for both heating and cooling a home.

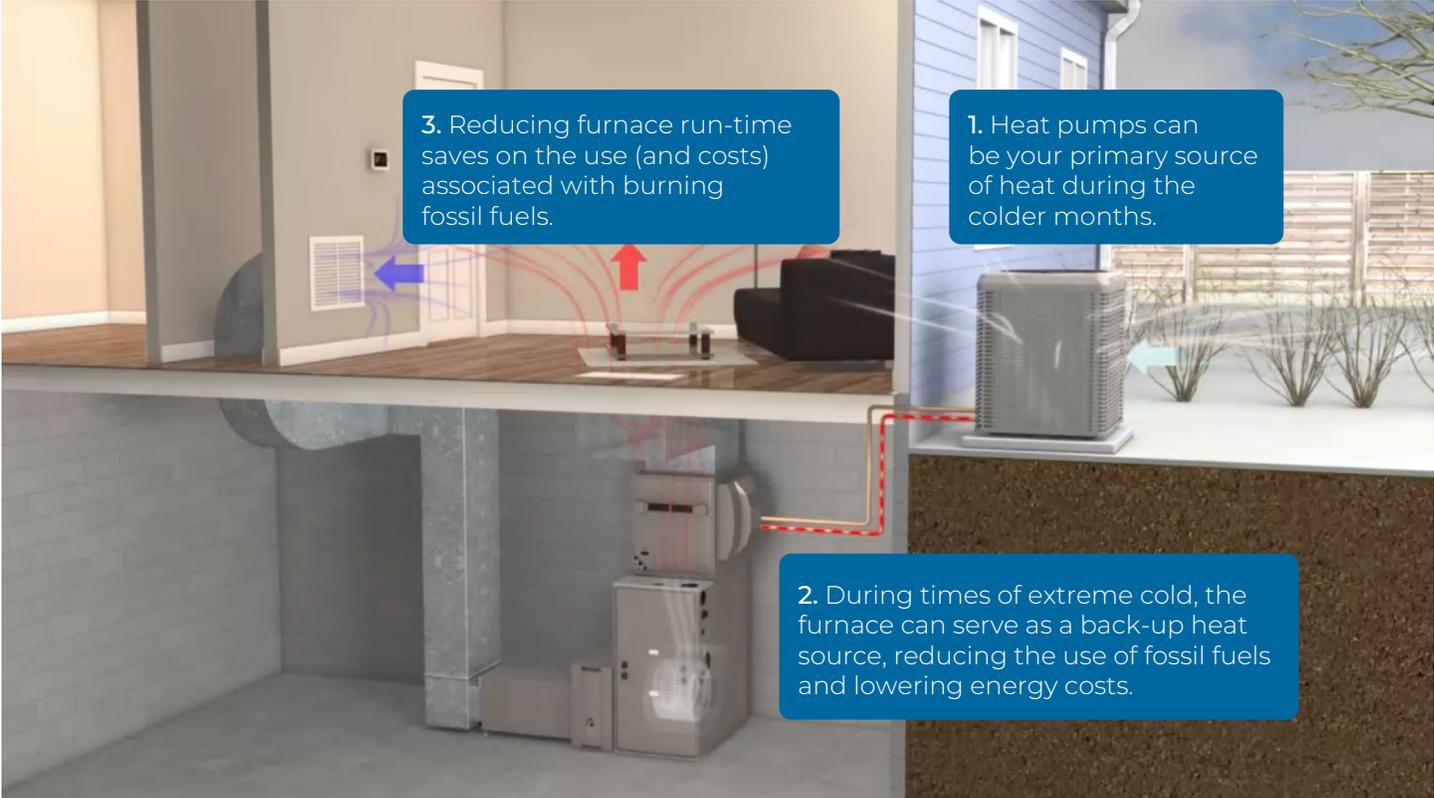


Heat pumps use electricity to circulate energy instead of burning additional fossil fuel, resulting in reduced carbon emissions.



Homeowners can take advantage of tax credits and incentives to offset installation costs and lower payback time and bills, while reducing operating and maintenance costs.

## Benefits of having a hybrid comfort system



1. Heat pumps can be your primary source of heat during the colder months.

2. During times of extreme cold, the furnace can serve as a back-up heat source, reducing the use of fossil fuels and lowering energy costs.

3. Reducing furnace run-time saves on the use (and costs) associated with burning fossil fuels.

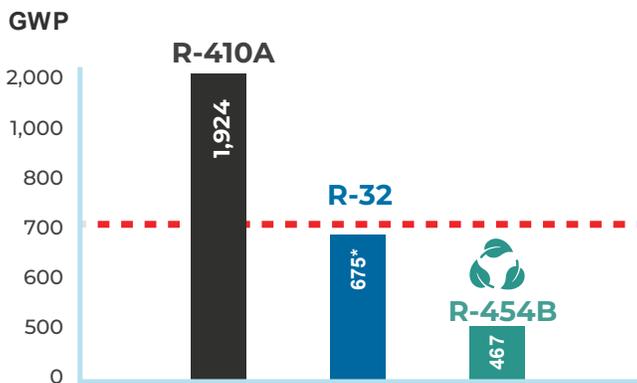
# R-454B – the friendliest refrigerant

## What's behind the move to low-GWP refrigerant?

**1987:** Montreal Protocol on Substances that Deplete the Ozone Layer was signed, establishing the phaseout of chemicals such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs).

**2016:** The Kigali Amendment to the Montreal Protocol updated the scope of substances covered to now include the phasing down of hydrofluorocarbons (HFCs), which are potent greenhouse gases.

**2020:** Congress passed the American Innovation in Manufacturing (AIM) Act in 2020, codifying the Kigali Amendment HFC phasing down and granting EPA authority to regulate HFCs. The Senate ratified the Kigali Amendment in 2022.



\* Per the sixth assessment report from the Intergovernmental Panel on Climate Change (IPCC), R-32 has a GWP of 771. However, the American Innovation and Manufacturing (AIM) Act, which regulates HFCs at the federal level, still uses the GWP measurements from the fourth IPCC report. This currently allows R-32 to stay within the 750 cut-off generally accepted as the minimum GWP value for low-GWP refrigerants used in air conditioning.

## Why did we choose R-454B?

Opteon™ XL41 (generally known as R-454B) has been selected as the refrigerant replacement for R-410A in all Kenmore residential, light commercial and commercial ducted HVAC applications. Why?

- R-454B has the lowest GWP with the best outlook for long-term viability. This reduces the likelihood that another refrigerant transition will be necessary with a future regulatory change
- R-454B temperatures and pressures are much like R-410A, resulting in similar system designs and a reduced learning curve for equipment service technicians
- R-454B provides up to a 78% reduction in GWP while still enabling the opportunity for optimized unit efficiency and decreased energy use

## What's the difference between A1 and A2L refrigerants?

In simple terms, not much. The characteristics between R-454B and R-410A are very similar and safe.

To help mitigate any concerns regarding refrigerant leaks, we have installed RDS on all relevant equipment.

Some additional training and equipment may be required. Check with your local building codes and regulatory bodies for specific requirements.

Flammability increasing ↑	Higher flammability	A3	B3
	Flammable	A2	B2
	Lower flammability	A2L	B2L
	No flame propagation	A1	B1
		Lower toxicity	Higher toxicity
		Increasing toxicity →	

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