

High performance gas furnaces TWO-STAGE FIXED-SPEED AND VARIABLE-SPEED FURNACES 95.1% & 80% AFUE WITH iSEER®

NuTone

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HIGH PERFORMANCE GAS FURNACES

95.1% & 80% AFUE Two-Stage, Fixed- & Variable-Speed

NuTone®'s furnaces are up-to-speed with the expectations of today's comfort-minded and energy-conscious consumer. Providing the latest twostage, fixed- and variable-speed technology, it stands to reason that these furnaces will cost more up-front. But over the lifetime of your initial investment, they'll provide unparalleled comfort, the quietest operation, and significant improvements in indoor air quality.

Likewise, they'll pay back dividends providing energy savings worth hundreds of dollars per year along with reduced maintenance costs.

Two-stage technology that quietly up-stages the rest.

On mild days, which statistically average about 80% of the heating season, a furnace that idles down to a reduced-heating capacity improves comfort and reduces sound.

NuTone's innovative two-stage furnaces with blowers powered by variable-speed motors, are built with this purpose in mind. In the first stage, or low-fire mode, these furnaces use approximately 68% of their total heating capacity running more slowly, quietly and efficiently. Then, during colder extremes–when maximum output is finally needed–a second stage boosts fuel flow while the blower ramps up variably to maximum speed. Ramping gradually through heating cycles increases quiet performance.

Since air is circulated at longer cycles more continuously, room temperatures are balanced and more comfortably mixed. Temperature swings are reduced to barely a couple of degrees and hot and cold spots are minimized.

- Heavy-gauge aluminized steel heat exchanger
- 2 SmartLite® control board programs igniter to adapt to furnace's heat-up characteristics extending igniter life
- 3 Multiport, in-shot burner design and location of inducer and air vents assures cleaner, more-efficient combustion
- 4 Galvanized steel cabinet for added strength and durability

- 5 Fully insulated cabinet and blower compartment for quieter operation
- 6 Silicone-polyurethane finish provides superior scratch and corrosion resistance for looks that last
 - A Variable-speed or multispeed direct-drive motor provides higher torque and operating speeds for improved air flow capacity
 - B Smoother motor operation reduces noise and lowers winding temperatures that help to extend bearing-life of the motor



	Two-Stage	Upflow/ Horizontal	Downflow	Extra Cooling Efficiency	iQ Drive [®] Ready	
95.1% AFUE Variable-Speed	V	V	 ✓ 	Í SEER	\checkmark	\checkmark
80% AFUE Variable-Speed	•	V		Í SEER	\checkmark	
95.1% AFUE Fixed-Speed	V	•	~	Í SEER		
80% AFUE Fixed-Speed	\checkmark	V	~	Í SEER		

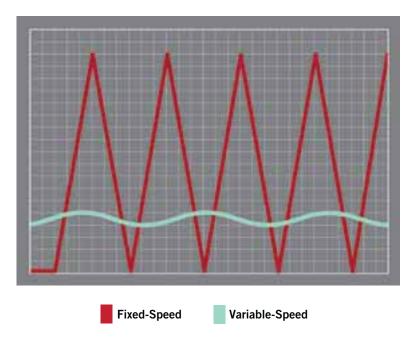
The benefits of variable-speed vs. fixed-speed.

Conventional fixed-speed system shuts on and off at full output only

- Uses more energy
- Creates uncomfortable temperature swings
- Produces hot and cold spots
- · More contaminants in air due to less filtration
- Reduced humidity control

Advanced variable-speed system runs continuously, adjusting output to match conditions

- Uses less energy
- Ramps up gently, eliminating uncomfortable temperature swings
- Eliminates noisy on/off cycles
- Continuous air flow improves filtration and humidity control
- Balances temperatures and minimizes hot and cold spots



Two-stage, variable-speed technology provides maximum efficiency with improved comfort, indoor air quality and humidity control.

iSEER[®] technology.

iSEER increases the energy efficiency of your cooling system. The energy performance of a cooling system is rated by SEER (Seasonal Energy Efficiency Ratio). The higher the SEER, the more energy efficient the product. NuTone Gas Furnaces with iSEER can increase the energy efficiency up to one SEER during the cooling season.

- iSEER variable-speed motor with built-in speed and torque controls adjust to meet airflow requirements more efficiently and quietly
- Variable-speed motor's efficiency can save hundreds of dollars annually compared to blowers with standard induction motors
- Variable-speed motors provide longer, trouble-free operation preventing excessive motor wear caused by abrupt stop/start-up cycles
- Variable-speed motors maintain factory-calibrated airflow capacity automatically compensating for reduced duct volume, dirty air filters, zoning changes, obstructed supply register, etc.





NuTone[®] iQ Drive[®] Ready furnaces.

iQ Drive Ready furnaces can work with a NuTone iQ Drive air conditioner or heat pump right out of the box – no additional kits are needed. If you would like to dramatically lower your electric bills in the summer, consider one of these iQ Drive outdoor units. They achieve the industry's highest cooling efficiencies and are incredibly quiet. Your NuTone contractor can tell you more.





What AFUE means to your bottom line.

AFUE stands for Annual Fuel Utilization Efficiency and measures the amount of heat actually delivered to your house compared to the amount of fuel supplied to the furnace. For example, a furnace that has an 80% AFUE rating converts 80% of the fuel to heat – the other 20% is lost through the chimney. The higher the rating, the better the energy efficiency.

Most systems older than 10 years are rated around 65% AFUE. Upgrading to a NuTone iQ Drive modulating furnace rated at 97% AFUE can save around \$560 a year on energy costs. And of course, as the cost of natural gas rises, so will your savings.

Dollar amounts computed at \$.092 ccf, for 2,000 full-load heating hours and a system rated at 60,000 Btuh. Actual savings may vary depending on climate conditions, fuel rates, and patterns of usage according to individual lifestyle.

3-Year Heating Savings 97+% AFUE unit vs. 65% AFUE unit.

Motor comparisons at a glance.

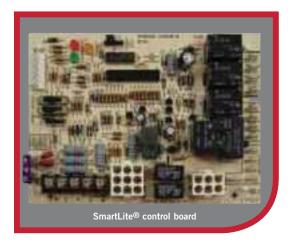
Standard PSC Motor	Fixed-Speed iSEER Motor	Standard PSC Motor	Variable-Speed iSEER Motor (includes fixed-speed benefits)	
Minimal speed ranges.	16 heating speeds and 16 cooling speeds.	Runs at one speed and cycles on and off.	Automatically changes its speed and makes adjustments to maintain constant airflow.	
Lower efficiencies.	Highly efficient; can boost outdoor unit SEER by up to one point.	Poor dehumidification.	Helps control humidity levels, and improves dehumidification.	
	Uses less electricity during heating and cooling cycles than conventional blower motor.	Creates hot and cold spots in home.	Helps mix air to reduce hot and cold spots while reducing stagnation.	
No programmable features.	Can program speeds to match home's unique needs.	Noisy. Runs more often at higher, louder speeds and makes an abrupt change in sound when system cycles on and off.	Quiet. Motor design produces very low torque wave. Motor ramps up to speed, minimizing abrupt sound changes.	

The inside story.

NuTone[®] gas furnaces with SmartLite[®] control boards provide extended life to igniters in furnaces using hot surface ignition technology. They are programmed to learn the heat-up characteristics of the igniter, then adapt the ignition time to the characteristics of the furnace so the igniter is energized appropriately.

NuTone employs hot surface ignition systems (HSI) in our residential furnace products. These use an igniter which, when energized, rapidly generates an intense heat sufficient to ignite the fuel gas.

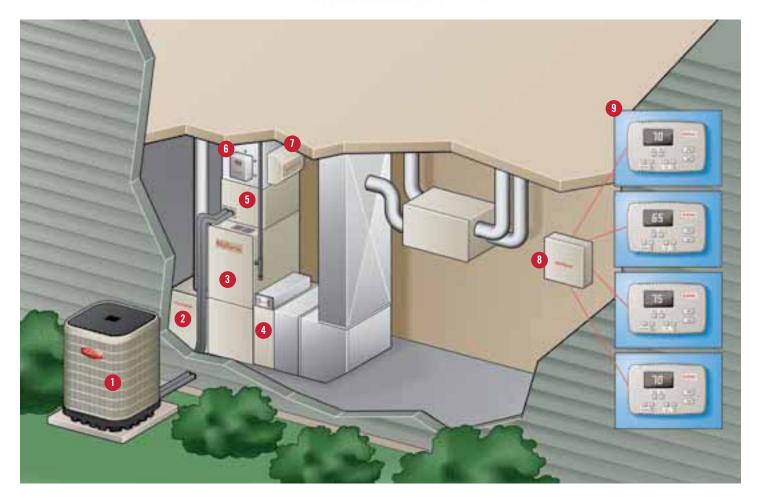
The SmartLite control board contains a program that varies the igniter heat-up time interval. It learns the heat-up characteristics of the igniter in the furnace by searching for the threshold of ignition failure. It then adjusts the heat-up interval on the next trial accordingly. This is accomplished by microchip software reprogramming.







NUTONE® COMFORT SYSTEM



- Air conditioner or heat pump
- 4 HEPA air cleaner
- **3** Gas furnace or air handler
- Electronic air cleaner
- Evaporator coil
- UV air purifier

- Humidifier
- Zone control panel
- Programmable thermostat

Breathe Easy, Save Big

Running a furnace continuously on a thermostat's "fan setting" has obvious benefits. Besides optimizing indoor air comfort, NuTone[®]'s furnaces, use 80% less electricity over conventional furnaces. Ultimately, this can add up to hundreds of dollars in savings each year. So you can breathe easier, especially when utility bills come due.

Helping to save Mother Earth.

Awarded by the U.S. Department of Energy and the Environmental Protection Agency for helping to conserve energy, promote cleaner air and prevent global warming.





With even more stringent efficiency requirement than ENERGY STAR[®], the ecoLogic[®] seal is your sign of environmentally friendly, high-efficiency heating and cooling products. Only the most energy-efficient, most environmentally responsible units receive our ecoLogic seal of quality. To learn more about the ecoLogic seal and what it means to you in terms of efficiency, comfort and energy savings, visit www.ecoLogicComfort.com.

Energy definitions.

AFUE – Annual Fuel Utilization Efficiency

It measures the amount of heat actually delivered to your house compared to the amount of fuel that you must supply to the furnace. Thus, a furnace that has an 80% AFUE rating converts 80% of the fuel that you supply to heat – the other 20% is lost out of the chimney.

SEER—Seasonal Energy Efficiency Ratio

Measures cooling performance on air conditioners, heat pumps and gas/electric package product.

As ratings increase, so does unit efficiency.

NuTone® 10-Year Limited Warranty

10-Year All Parts

When a product is truly built to exacting standards of quality and durability, the manufacturer's confidence is reflected in its warranty. NuTone heating and cooling products offer one of the best warranties in the business— 10 years on all parts when product is registered. See warranty details for more information.

10-Year NuTone Quality Pledge

If the heat exchanger (the major component of your furnace) or the compressor (the most important part of your air conditioner and heat pump) fails within the first 10 years when registered, we'll replace the product with like product under the NuTone Quality Pledge program. A matched system is required to qualify for the NuTone Quality Pledge.

Limited Lifetime Heat Exchanger Warranty

When you register your new NuTone furnace or gas/electric packaged system, we will also extend the heat exchanger warranty from 20 years to the limited lifetime heat exchanger warranty.

10-Year on Air Handlers & Coils

When you install and register your new NuTone air handler or coil with your new NuTone system, we will also extend the warranty to the 10-Year Limited Parts Warranty.

10-Year on Indoor Air Quality Products & Zoning Products

When you install and register any of our NuTone Indoor Air Quality or Zoning with your new NuTone system, we will also extend the accessory warranties to the 10-Year Limited Parts Warranty.

Commercial Applications

Equipment utilized in commercial applications carries a 1-Year parts warranty, 5-Year compressor warranty and a 10-Year heat exchanger warranty.

Warranty Registration

To assure you take advantage of these longer warranties, register your system within 60 days of installation (or within 60 days of occupancy of a new residentially constructed home with these products) at www.nutonehvac.com. See warranty details for more information.

Extended Warranty Protection

While your NuTone warranty covers parts, it does not cover the cost of labor charged by your contractor for service and repair. However, extended labor protection plans are available to cover labor costs associated with repairs. Your contractor may offer various coverage plans; we recommend you look for the Contractors' Preferred Protection Plan brand approved for NuTone.



* Warranties not registered default to 5 years.

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PUBLICATION SERIAL #785D-1015 Specifications and illustrations subject to change without incurring obligation. Pictured installation varies per household.





