NuTone®



Fully modulating to fully separate you from the competition.



iQDrive

Modulating Gas Furnaces
Technical Overview for HVAC Contractors

ENERGY STAR ecoLogic® iSEER®

iQ Drive

Offer your customers the very best in home comfort.

The 97+% AFUE iQ Drive® fully modulating gas furnace by NuTone is the epitome of comfort, convenience and quiet. It continuously adjusts its heat output to exactly match the needs of the home – maximizing energy efficiency while delivering constant comfort. And when you pair this furnace with the NuTone iQ Drive up to 20-SEER air conditioner or NuTone iQ Drive up to 19-SEER/10.0 HSPF heat pump, you've got an ultra-high efficient system as a high-end product offering for your customers. Other contractors may present good, better and best, but with the NuTone iQ Drive furnace and air conditioner or heat pump, you can offer ultra-best.



Better gas valve design.

NuTone's modulating gas valve uses a stepper motor, a superior technology that performs more consistently and accurately.

NuTone modulating technology: Pretty darn close to rocket science.

The NuTone iQ Drive furnace operates anywhere from 15% to 100% of its capacity, based on the home's needs. The furnace modulates between 50% and 100% of capacity in 5% increments. If modulation below 50% is needed, the furnace responds with time proportioning based on 15-minute cycles. For example, if the home heating load necessitates that the furnace run at 25% of full capacity, the furnace will fire at 50% for half of the 15-minute cycle time (50% x 50% = 25%).

The furnace reevaluates the heat load every 60 seconds and adjusts its percentage of modulation based on the difference between the set point and actual room temperature. Through this process, the NuTone iQ Drive furnace "learns" the home's needs and operates in the most efficient way possible for that particular home – exactly offsetting the load while maintaining very tight temperature control.

Through modulation and time proportioning, a 100,000 BTU furnace can perform like a 60,000 BTU model, or even like a 15,000 BTU model.

ENERGY STAR ecoLogic®





iQ Drive® controller: The brains of the operation.

What sets the NuTone iQ Drive furnace apart from other modulating furnaces is the use of the iQ Drive controller. Technically it's a thermostat, but "power center" would be a more appropriate name. The iQ Drive controller maintains the time proportioning aspect of the modulation and allows the furnace to modulate down to 15% of full capacity. The controller also gives you these benefits:

- Complete system monitoring with service notifications, error codes and on-board diagnostics. The thermostat will flash red if the system needs to be serviced. Once at the home, you can use the thermostat to identify the furnace error, saving time on the call.
- Ability to control a whole-home humidifier.
- Programmable comfort schedules for the homeowner.
- Maintenance reminders for the homeowner that you can set.



It's important to note that although the furnace uses an iQ Drive thermostat, it does not require an iQ Drive air conditioner. The furnace works with any split-system air conditioner or heat pump.



iSEER® motor: So efficient, even the outdoor unit gets a boost.

The heart of the NuTone iQ Drive furnace is its iSEER motor. This brushless DC technology is so efficient, it increases cooling efficiency by up to 1 SEER point on 13- and 14-SEER matched outdoor units – a great selling feature for homeowners.

iSEER offers you benefits beyond efficiency. The moisture-resistant controller is easy to access. Unlike other ECM motors, iSEER has its electronic controller separate from the motor to increase serviceability.

Here are some other important features of NuTone's iSEER furnaces:

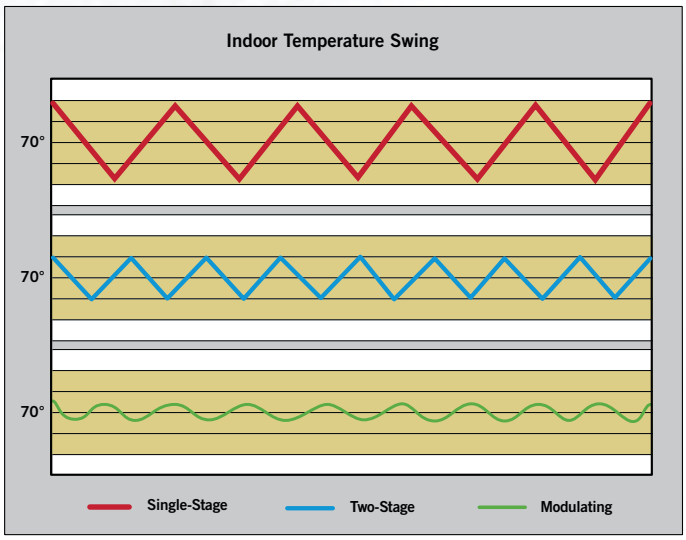
- **Sound reduction** – the iSEER three-phase motor design produces very low sound levels. Because the motor ramps up to speed, it minimizes the abrupt change in sound found when an induction (PSC) motor cycles on and off.
- **Self-adapting airflow** – on variable-speed models, NuTone's constant flow technology (patent pending) can be modified to deliver constant airflow into a broad range of external pressures in an air distribution system. And with iSEER, there is no need for external sensors.
- **Improved air distribution** – with the constant airflow provided by variable-speed iSEER, air distribution is improved throughout the static pressure range, which helps compensate for restrictive ducts.
- **Improved indoor air quality** – when run on low-speed constant fan and in combination with high efficiency air filters, variable-speed iSEER models reduce hot and cold spots in the home.

How to explain modulating technology.

To help homeowners understand modulating technology, just tell them to think of their cars. A modulating furnace operates much like cruise control, constantly making small adjustments to keep the car at its desired speed. It's a fuel-efficient way to drive, and also more comfortable than the lurching that comes with rapid acceleration and deceleration.

A single-stage system shuts on and off at full output only, similar to driving with either a lead foot or completely off the accelerator.

A two-stage system lets you drive with two pressure amounts, but is still not as comfortable as a modulating system.





SmartLite® Control Board for extended igniter life.

NuTone iQ Drive® furnaces feature the SmartLite Control Board for hot-surface ignition systems. 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, and then adjusts the heat-up interval accordingly.



Small but mighty.

The NuTone iQ Drive furnace is just under 35 inches tall, making it easy to install and better sized for larger, high-SEER coils.

Targeting the green market? Then this is your furnace.

At 97+% AFUE, the NuTone iQ Drive modulating furnace is one of the most efficient furnaces available today. Because of its ultra efficiency and smart control boards, it qualifies for our ecoLogic® green seal. As a NuTone contractor, you have marketing and merchandising materials available to help you promote your ecoLogic products to the environmentally conscious homeowner.

ENERGY STAR® Certified.
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. To qualify, gas furnaces must have an AFUE of 95% or higher.

NuTone®

Heating and Cooling Products

www.nutonehvac.com

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