



## ENERGY STAR<sup>®</sup> Program Requirements for Furnaces

### Eligibility Criteria

Below is the product specification (Version 1.3) for ENERGY STAR qualified furnaces. A product must meet all of the identified criteria if it is to be labeled as ENERGY STAR by its manufacturer.

- 1) Definitions: Below is a brief description of a furnace and other terms as relevant to ENERGY STAR.
  - A. Furnace: A heating unit whose function is the combustion of fossil fuel for space heating with forced hot air. Unit must include burner(s), heat exchanger(s), blower(s) and connections to heating ducts. A heating unit that meets this definition and also provides hot water for domestic or other use may be considered a furnace for purposes of this agreement.
  - B. AFUE: The Annual Fuel Utilization Efficiency ("AFUE") measures the amount of fuel converted to space heat in proportion to the amount of fuel entering the furnace. This is commonly expressed as a percentage. For purposes of this agreement, the efficiency of a furnace shall be measured using AFUE. Test procedures have been developed to test AFUE by the Department of Energy (DOE). These procedures are specified in 10 Code of Federal Regulations part 430, Appendix N.
  - C. Manual J Calculation: A calculation performed to determine the heating load for a residence or small commercial building. The calculation includes site-specific characteristics such as regional weather data, building framing materials, building insulation levels, building air infiltration levels and window area. The calculation follows procedures and protocols developed by the Air Conditioning Contractors of America.<sup>1</sup>
  - D. Manufacturer Limited Warranty: For purposes of this agreement, a manufacturer limited warranty is an assurance by the Partner that purchased system equipment and components are warranted by the manufacturer for a period of time. The period of time is typically expressed in numbers of years.<sup>2</sup> The exact terms of the limited warranty shall be determined by the Partner.
- 2) Qualifying Products: Any furnace that meets the definition in Section 1A is eligible for the ENERGY STAR label.
- 3) Energy-Efficiency Specifications for Qualifying Products: Only those products listed in Section 2 that meet the following criteria may qualify as ENERGY STAR:
  - A. Partner agrees to introduce furnace models that meet or exceed 90% AFUE energy-efficiency ratings.
  - B. Partner will include a manufacturer limited warranty with its qualified furnace models.
  - C. Partner will consider using high efficiency electric blower motors with its qualified furnace models.
- 4) Test Criteria: Manufacturers are required to perform tests and self-certify those product models that meet the ENERGY STAR guidelines. Partner agrees to measure a furnace model's energy-efficiency using the AFUE for space heating as determined by DOE using test procedures specified in 10 Code of Federal Regulations (CFR) Part 430, Appendix N.

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<sup>1</sup> Air Conditioning Contractors of America (ACCA), 2800 Shirlington Road, Suite 300, Arlington, VA 22206.

<sup>2</sup> At the time of writing, a manufacturer limited warranty is typically 20 years for the heat exchanger(s).

- 5) Effective Date: The date that manufacturers may begin to qualify products as ENERGY STAR will be defined as the *effective date* of the agreement. The ENERGY STAR Furnace specification is effective immediately.
- 6) Future Specification Revisions: ENERGY STAR reserves the right to change the specification should technological and/or market changes affect its usefulness to consumers, industry, or the environment. In keeping with current policy, revisions to the specification are arrived at through industry discussions.