



EarthCraft House™ and ENERGY STAR® Manual- J Load Calculation Requirements

All EarthCraft House homes receiving a pre-drywall inspection after March 31, 2007 will also be required to be ENERGY STAR certified. In addition to EarthCraft House requirements, ENERGY STAR has specific standards for sizing heating and cooling systems.

ENERGY STAR and EarthCraft House standards require that a load calculation be performed on **every** home in accordance with the latest version of ACCA Manual J (currently version 8). ENERGY STAR requires that the following inputs be used for the Manual J:

- Maximum allowable duct leakage is 6 cfm to outdoors / 100 sq. ft.(6%) of conditioned floor area if certified by Performance Path (HERS Rating) or 4 cfm to outdoors / 100 sq. ft.(4%) of conditioned floor area if certified by Builder Option Package (BOP).
 - If software allows for grades of duct tightness, choose “tight” or the equivalent term.
- Outdoor temperatures shall be the 99.0% design temperatures as published in the ASHRAE Handbook of Fundamentals for the home’s location or most representative city for which design temperature data are available.
 - In Atlanta, the temperatures are 23°F in winter and 91°F in summer.
- House infiltration shall be based on EarthCraft House maximums (0.5 CFM50/SFBE) or shall use the software choice of “tight” or the equivalent term.
- Must use actual house orientation and location.
- Must use actual window, insulation and door specifications.
- Indoor temperatures shall be 75 °F for cooling and 70 °F for heating.

The results of the Manual J **must be used** when sizing and installing equipment. ENERGY STAR requires the following sizing guidelines:

- Maximum over sizing limit for air conditioners and heat pumps is 15%
- In specifying equipment, the next available size may be used.
- The indoor and outdoor coils shall be matched in accordance with ARI standards. Provide the ARI “Certificate of ARI-Certified Performance” (from www.aridirectory.org) or manufacturer’s performance data to the EarthCraft House inspector.

Builders must submit the completed Manual J documentation to EarthCraft House

- Documentation must show that all above requirements have been met.

This document is designed to help the Builder and the HVAC Contractor in sizing and selecting equipment for EarthCraft Homes. These requirements **MUST** be followed in order to receive approval for certification. EarthCraft House will not be responsible for homes not receiving approval for certification due to failure to follow these guidelines. EarthCraft House strongly recommends builders provide this document to their HVAC contractors to ensure the systems are sized, selected and installed properly.

For questions, please contact EarthCraft House at (404)604-3636 or echinfo@earthcrafthouse.org.