

# ENERGY STAR HVAC Commissioning Checklist: 4. Air Balancing of Supply Registers & Return Grilles (recommended but not required)

When certifying a home to [ENERGY STAR Certified Homes, Version 3.0/3.1 \(Rev. 08\)](#) [1], the HVAC Installer completes the [HVAC Commissioning Checklist](#) [1] to document information about the contractor and house, refrigerant charge, HVAC fan air flow, and air balancing. One HVAC Commissioning Checklist is completed for each system installed. The HVAC installation contractor must make copies of the HVAC Commissioning Checklist available to the builder, the rater responsible for certifying the home, and the HVAC oversight organization, upon request.

This page shows the checklist requirement for Section 4. Air Balancing of Supply Registers and Return Grilles and applicable footnotes.

For information on installing HVAC equipment, see installation guides linked to the HVAC section of the [Rater Field Checklist](#) [1].

For information on air balancing of supply registers and return registers see ACCA's ANSI/ACCA 5 QI - 2015 [HVAC Quality Installation Specification](#) [2].



## HVAC Commissioning Checklist <sup>1, 2</sup> ENERGY STAR Certified Homes, Version 3 / 3.1 (Rev. 08)

### HVAC Commissioning Contractor Responsibilities:

- The commissioning contractor must be credentialed by an HVAC oversight organization to complete this checklist. One checklist must be completed and signed by the commissioning contractor for each HVAC system that is commissioned.
- The completed checklist for each commissioned system, along with the corresponding HVAC Design Report, shall be retained by the contractor for quality assurance purposes. Furthermore, the contractor shall provide the completed checklist to the builder, the Home Energy Rater responsible for certifying the home, and the HVAC oversight organization upon request.
- Visit [www.energystar.gov/newhomeshvac](http://www.energystar.gov/newhomeshvac) for information about the credential requirement and this checklist.

### 4. Air Balancing of Supply Registers & Return Grilles (Recommended, but not Required) <sup>4</sup>

4.1 Balancing report attached with room-by-room design airflows from Item 5.5 on HVAC Design Report, and contractor-measured airflow using ANSI / ACCA 5 QI-2015 protocol	<input type="checkbox"/>	<input type="checkbox"/>
4.2 Room-by-room airflows verified by contractor to be within the greater of ± 20% or 25 CFM of design airflow	<input type="checkbox"/>	<input type="checkbox"/>

Checklist revised 09/15/2015. Required for homes permitted starting 07/01/2016.<sup>5</sup>

### Footnotes:

1. This Checklist is designed to align with the requirements of [ANSI / ACCA's 5 QI-2015](#) [2] protocol, thereby improving the performance of HVAC equipment in new homes when compared to homes built to minimum code. However, these features alone cannot prevent all ventilation, indoor air quality, and HVAC problems (e.g., those caused by a lack of maintenance by occupants). Therefore, this Checklist is not a guarantee of proper ventilation, indoor air quality, or HVAC performance. This Checklist applies to split air conditioners, unitary air conditioners, air-source heat pumps, and water-source (i.e., geothermal) heat pumps up to 65 kBtuh with forced-air distribution systems (i.e., ducts) and to furnaces up to 225 kBtuh with forced-air distribution systems (i.e., ducts). All other permutations of equipment (e.g., boilers, mini-split / multi-split systems) and distribution systems are exempt.
2. For a home certified in the State of ID, MT, OR, or WA, the following alternatives and exemptions apply:
  - a. For a home with an air-source heat pump up to 65 kBtuh with a forced-air distribution system (i.e., ducts), the contractor is permitted to complete the 2011 PTCS® Commissioned Heat Pump Certificate and Startup Form in lieu of this Checklist.
  - b. For a home with a split air conditioner or unitary air conditioner up to 65 kBtuh with a forced-air distribution system (i.e., ducts), the contractor is permitted to complete the Northwest Central AC Commissioning & Startup Form in lieu of this Checklist.
  - c. For a home in a location with < 600 CDD, the completion of this Checklist is recommended, but not required.
4. Air balancing of supply registers and return grilles is highly recommended to improve the performance of the HVAC system and comfort of the occupants, but is not required at this time for certification. When air balancing is completed, balancing dampers or proper duct sizing shall be used instead of looped or coiled ductwork to limit flow to diffusers. When balancing dampers are used, they shall be located at the trunk to limit noise unless the trunk will not be accessible when the balancing process is conducted. In such cases, Opposable Blade Dampers (OBD) or dampers located in the duct boot are permitted to be used.
5. This Revision of the HVAC Commissioning Checklist is required to certify all homes permitted after 07/01/2016, but is allowed

to be used for any home permitted or completed prior to this date. The Home Energy Rater certifying the home may define the 'permit date' as either the date that the permit was issued or the date of the contract on the home. In cases where permit or contract dates are not available, Providers have discretion to estimate permit dates based on other construction schedule factors.

**Contributors to this Guide:** ENERGY STAR Certified Homes, Pacific Northwest National Laboratory

## More Info.

Access to some references may require purchase from the publisher. While we continually update our database, links may have changed since posting. Please contact our [webmaster](#) if you find broken links.

None Available

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