Identifying Variable Speed Heat Pumps: Quick Guide

This guide can be used to help identify if the outdoor compressor in a ducted air source heat pump is variable speed or inverter-driven, in order to satisfy the manufacturer documentation requirement in the Implementation Manual. AHR does not clearly identify the outdoor compressor type, and manufacturers vary in where and how that information is listed. This guide provides an overview for the top 9 manufacturers from our existing HVAC program. However, the guidance below can apply to any manufacturer.

Documentation includes, but is not limited to: specification sheets, brochures, fact sheets, and screen shots with the family of model numbers (i.e. Trane XV 19). Whichever documentation type you choose should include the following:

- Model number or model family, and
- Language stating that the outdoor compressor is variable speed, variable capacity, or inverter-driven.

Clarifications:

- Manufacturer documentation must be provided. "Variable speed" wording on a customer invoice alone is not adequate.
- Verification can be found on either manufacturer or distributor websites, or on physical print-outs.
- Some manufacturers use the term "variable speed" or "inverter driven" interchangeably.
- Multi-stage, two-stage, and single-stage compressors are not considered variable speed.
- The indoor air handler is not considered. Only the outdoor compressor must be variable speed or inverter-driven.

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American Standard

Website: https://www.americanstandardair.com/products/heating-and-cooling/heat-pumps.html

Navigation:

1. Click on applicable model family
2. The compressor type can be found in the product description
3. Specific model numbers in each model family are listed near the bottom

Documentation suggestions (include the model and language that it is a variable speed heat pump):

- Screen shot
- Brochure
- Specification
Bryant Heating & Cooling Systems


Navigation:
1. Refine by Compressor Type: Variable Speed
2. Click on applicable model family
3. The compressor type can be found in the “Features” or “Specifications” sections

Documentation suggestions (include the model number family (i.e. 280A) and language that it has variable-speed operation):
- Screen shot
- Brochure
- Owner’s Manual
- Specification

Carrier


Navigation:
1. Click on “Products” then click “Heat Pumps”
2. Click on applicable model family
3. Compressor type can be found in the “Overview” and “Standard Features” sections

Documentation suggestions (include the model number family (i.e. 25VNA8) and language that it has variable-speed operation):
- Screen shot
- Specification sheet

Coleman by Johnson Controls


Navigation:
1. Click on the applicable model family
2. Compressor type can be found in the product description and “Product Specs” section

Documentation suggestions (include the model number family (i.e. HC20) and language that it has a variable-capacity compressor):
- Screen shot
- Specification sheet
- Brochure (lists all the model numbers)
Daikin Manufacturing Company

Website: https://daikincomfort.com/products/heating-cooling/whole-house/heat-pumps

Navigation:
1. Click on the applicable model family
2. Compressor type can be found in the product description and “Features” section. “Variable Speed” designation is also called “Swing” in the specification sheet.

Documentation suggestions (include the model number family (i.e. DZ18VC) and language that it has variable-capacity compressor):
- Screen shot
- Specification sheet

Lennox

Website: https://www.lennox.com/products/heating-cooling/heat-pumps

Navigation:
1. Click on the applicable model family
2. Click button to “View Full Product Specifications”
3. Click on the model family of your heat pump
4. Compressor type can be found in the Product Specifications as “Stages of Cooling: Variable-capacity operation”

Documentation suggestions (include the model number family (i.e. XP25) and language that it has variable-capacity operation):
- Screen shot
- Specification sheet

Rheem

Website: https://www.rheem.com/products/residential/heating-and-cooling/heat-pumps/

Navigation:
1. Click on applicable model family
2. Compressor type can be found in the name and overview that it has a Copeland Scroll™ Variable Speed Compressor

Documentation suggestions (include the model number family (i.e. RP20) and language that it has a variable speed compressor):
- Screen shot
- Specification sheet
- Sales Fact Sheet
Trane

Website: https://www.trane.com/residential/p/products.html

Navigation:
1. Click on menu button
2. Select “Outdoor Heat Pumps” then select applicable model family.
3. Compressor type is listed as “Climatuff® Variable Speed inverter compressor” or some variation of that in the description or specification.

Documentation suggestions (include the model number family (i.e. XV20i) and language that it has a variable speed compressor):
- Screen shot

York by Johnson Controls

Website: http://www.york.com/for-your-home/heat-pumps

Navigation:
1. Click on the applicable model family
2. Compressor type is listed as variable-capacity in description

Documentation suggestions (include the model number family (i.e. YZV) and language that it has a variable-capacity compressor):
- Screen shot
- Specification sheet
- Technical Guide
- Brochure (lists all the model numbers)