

Field Checklist for Certification Approval as a Ft. Collins HVAC Specialist

Contractor Name _____

Company Name _____

Date	Initials*	Skill
TIER I		
Furnace Installation and Commissioning		
		Measured indicated total system air flow in ducting system at high heat speed setting for single stage furnaces, and high and low heat fan speeds for multi-stage furnaces. Air flow can be determined by any of following ACCA approved methods: heat rise, hot wire, flow grid, or duct tester method. Specify method used: _____.
		Converted indicated airflow to volumetric airflow by adjusting for altitude
		Perform a combustion analysis test using a electronic flue gas analyzer; measure and adjust to OEM specifications: <input type="checkbox"/> CO <input type="checkbox"/> O2 <input type="checkbox"/> Flue-gas Temp <input type="checkbox"/> Steady State Efficiency <input type="checkbox"/> Draft.
		Measure supply and return duct static pressure and analyze for problems. Is total external static pressure near OEM specs at high fan speed? Identify possible causes and how to correct if it is not.
		Measure temperature rise at high heat fan speed for single stage furnace, and at high and low heating fan speed for multi-stage furnaces
		Measure furnace manifold gas pressure at high fan speed for single stage and high & low heat for multi-stage furnaces
		Verified firing rate is with +/- 5% of altitude derated nameplate BTUH output for gas equipment at high fire fan speed: Furnace BTUH Output = CFM x Temp Rise x sensible Constant of .90
		Intake and exhaust pipes are properly sized and terminations meet OEM clearance specifications on installation instructions installed per OEM installation instructions.
		Verified remaining natural draft appliances vent connector and B-vent are properly sized and configured per GAMA venting tables, and have adequate combustion air per IRC.
		Properly completed Home Efficiency Program Standard Commissioning Form
Combustion Safety Testing		
		Conduct a HEP "Worst Case" spillage test on all natural draft combustion appliances
		Perform or discuss "Natural" spillage test if appliance failed "Worst Case" combustion safety test.
TIER II		
Proper Sizing of Equipment		
		Reviewed Block Load building heat loss/gain calculations with ACCA approved software.
		Reviewed the sizing of equipment: Furnace within 100% - 140% (furnace shall be the minimum size required to satisfy heating requirement unless dictated by the cooling equipment selection).
Blower Door Test (do be demonstrated in you will be doing Duct leakage to outside tests)		
		Set-up and conduct a single-point blower door test, and confirm your house tightness value is within 10% of the house tightness value found in the audit data tables.
Duct Sealing (only ducts outside the thermal boundary qualify)		
		Set-up and conduct an initial duct air leakage to outdoors test to establish a baseline leakage to outside value (must be at least 20% of system airflow), then conduct a final duct air leakage to outdoors to test to measure leakage value after duct sealing (final value must be < 10% of system airflow).
		Proper use of mastic and mesh tape
		Verify air sealing work did not increase ESP above standards (0.5 IW or 0.9 IW)
		Insulated ductwork outside conditioned space to minimum R-8 (2009 IECC Standards)
Mechanical Ventilation		
		Verify ventilation system provides air flow dictated by ASHRAE 62.2 (positive pressure or balanced pressure only for homes with negative draft combustion appliances including fire places)
		Verify controls are programmed to appropriate settings to ensure proper cycling times

*Initials indicate the Mentor is verifying that the item has been acceptably done WITHOUT the contractor needing help from the Mentor.

Final Certification- Mentor Signature: _____ **Date:** _____