

Use of Furnace as a “Construction Heater”

Commentary

Can or should a new furnace be used as a “construction heater” during the construction of a new home? The question comes up periodically concerning the use of a new furnace as the source of heat to dry-out a structure under construction. We’ve all seen it, a new house being built in the winter (or any other time in Oregon), and the general contractor wants to get the house dried-out. The house has a nice new duct system just sitting there waiting to distribute clean warm air. So the general asks you to install the new furnace so they can get some heat going. What does a mechanical contractor do? If you say no, there’s a possibility this may be the last job you do for this particular contractor. If you say yes, you’ll be shortening the life of the furnace, filling the ductwork with construction debris and possibly voiding the warranty of the appliance. But the general contractor is adamant about getting some heat in the building, he/she has deadlines to meet and is under pressure to get the home dried-out as soon as possible. Then add to the mix, code language that will give the local inspection jurisdiction the authority to turn down the final approval of the mechanical system based on the improper “use” of equipment. Both the 2008 *Oregon Residential Specialty Code* and the 2007 *Oregon Mechanical Specialty Code* have specific language that prohibits the “use” of equipment in violation of its listing, the manufacturer’s installation instructions and the code.

Sections 304.1(C301.3), M1302.1 and G2408.1 require appliances to be installed in accordance with the manufacturer’s installation instructions and the code.

304.1 General. Equipment and appliances *shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer’s installation instructions and this code.* Manufacturer’s installation instructions shall be available on the job site at the time of inspection.

M1302.1 Listed and labeled. Appliances regulated by this code shall be listed and labeled for the application in which they *are installed and used*, unless otherwise approved in accordance with Section R104.11

G2408.1 General. Equipment and appliances *shall be installed as required by the terms of their approval, in accordance with the conditions of the listing, the manufacturer’s installation instructions and this code.* Manufacturer’s installation instructions shall be available on the job site at the time of inspection. Where a code provision is lessetc.

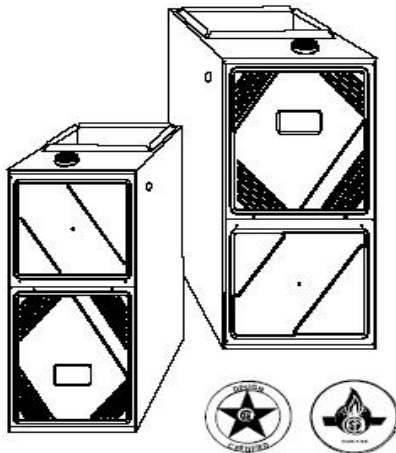
Appeasing a general contractor is a game we've all had to play, so as a mechanical contractor you need to figure out how to play the game smartly. Check manufacturer's installation instructions to verify whether or not the furnace can be used as a "construction heater". If they don't allow this type of use, work with your contractor to find an alternative means of heat.

**Examples of two manufacturer's
(One does not allow it and the other does.)**

**GUI*/GCI*
GAS-FIRED WARM AIR FURNACE
INSTALLATION INSTRUCTIONS**



Installer: Affix all manuals adjacent to the unit.



These furnaces comply with requirements embodied in the American National Standard / National Standard of Canada ANSI Z21.47-CSA-2.3 Gas Fired Central Furnaces.

 **RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.**

 **WARNING**

THIS UNIT MUST NOT BE USED AS A "CONSTRUCTION HEATER" DURING THE FINISHING PHASES OF CONSTRUCTION ON A NEW STRUCTURE. THIS TYPE OF USE MAY RESULT IN PREMATURE FAILURE OF THE UNIT DUE TO EXTREMELY LOW RETURN AIR TEMPERATURES AND EXPOSURE TO CORROSIVE OR VERY DIRTY ATMOSPHERES.



installation, start-up and operating instructions

4-WAY MULTIPOISE
VARIABLE-CAPACITY
CONDENSING GAS FURNACE

355AAV
Series A

Cancels: II 355M-40-14

II 355A-40-1

8-05



NOTE: Read the entire instruction manual before starting the installation.

A93040

NOTE: This furnace can be installed as a **direct vent (2-pipe)** or **non-direct vent (1-pipe)** condensing gas furnace.

This symbol → indicates a change since the last issue.



CAUTION: UNIT DAMAGE HAZARD

This gas furnace may be used for construction heat provided that:

- The furnace is permanently installed with all electrical wiring, piping, air filters, venting and ducting installed according to these installation instructions. A return air duct is provided, sealed to the furnace casing, and terminated outside the space containing the furnace. This prevents a negative pressure condition as created by the circulating air blower, causing a flame rollout and/or drawing combustion products into the structure.
- The furnace is controlled by a thermostat. It may not be "hot wired" to provide heat continuously to the structure without thermostatic control.
- Clean outside air is provided for combustion. This is to minimize the corrosive effects of adhesives, sealers and other construction materials. It also prevents the entrainment of drywall dust into combustion air, which can cause fouling and plugging of furnace components.
- The temperature of the return air to the furnace is maintained between 55°F (13°C) and 80°F (27°C), with no evening setback or shutdown. The use of the furnace while the structure is under construction is deemed to be intermittent operation per our installation instructions.
- The air temperature rise is within the rated rise range on the furnace rating plate, and the firing rate has been set to the nameplate value.
- The filters used to clean the circulating air during the construction process must be either changed or thoroughly cleaned prior to occupancy.
- The furnace, ductwork and filters are cleaned as necessary to remove drywall dust and construction debris from all HVAC system components after construction is completed.
- After construction is complete, verify furnace operating conditions including ignition, input rate, temperature rise and venting, according to the manufacturer's instructions.

For more information relating to this code change or any other issue relating to mechanical installations contact Micheal D. Ewert at 503-373-7529 or mike.d.ewert@state.or.us .