



INTERIOR SOLID-FUEL BURNING FURNACES, BOILERS, AND STOVES

LOSS CONTROL BULLETIN

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All interior heating systems located within buildings that Grinnell Mutual insures or reinsures must be tested, listed, and approved by a nationally recognized organization following established recognized safety standards (UL 391 and UL 1482). Nationally recognized organizations include UL, CSA International, Warnock Hersey, and OMNI-Test Labs.

The unit must be specifically designed for interior installations. Installing a heating system that was designed, tested, listed, and/or approved for exterior installation inside of a building or enclosure is NOT acceptable.

The heating system must be installed in accordance with the manufacturer's recommendations about clearances around combustibles and the type of flooring required. This would include distances to combustibles from the sides, back, top, and front of the unit, as well as the distance of the chimney connector to combustibles.

Like all heating appliances, solid-fuel burning appliances must be used only to burn the type of fuels recommended by the manufacturer. Heating appliances are tested, listed and/or approved to burn only specific types of fuel (i.e. shelled corn, wheat, sorghum, wood pellets, etc).

Solid-fuel burning appliances should be vented in accordance with manufacturers' recommendations. Unlisted single wall steel pipes are not an acceptable method of venting any interior heating appliance at a one- or two-family residential property, based on NFPA 211.



Solid-fuel burning appliances should be vented into a factory-built chimney tested and approved to UL 103 or UL 103 HT Standards; or a clay tile-lined masonry chimney.

All heating appliance chimneys should be installed following the 10-foot, 2-foot, 3-foot rule: The chimney or vent pipe must penetrate the roof of the building or enclosure where the heating appliance is located and extend 3 feet above the roof line. The vent or chimney should extend a minimum of 2 feet above the roof ridge or any part of a roof within 10 feet of the chimney or vent pipe.

Always check with your local fire marshal for codes specific to your area.

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If mechanical work **IS** being performed within a residential garage, machine shed, or commercial building and the heating system for the building is an:

- 1. Interior forced-air furnace**, the installation requirements are as follows:
 - Furnace should be installed in a separate room with one-hour fire rated construction and the entry door should open into the room from the outside of the building.
 - Hot air ducts into the building should terminate not less than 8 feet above the floor.
 - Cold air returns to the furnace should not draw air at less than 18 inches above the floor.
 - Air for combustion should be obtained from the exterior of the building, NOT from the building being heated.
 - Cold air returns to the furnace should draw air at not less than 8 feet above the floor.
- 2. Interior hot water boiler**, the installation requirements are:
 - Hot water boiler should be installed in a separate room with one-hour fire rated construction and entry door should open into the room from the outside of the building.
 - Air for combustion should be obtained from the exterior of the garage or machine shed, NOT from the building being heated.
 - Hot water pipes should be located within the concrete floor or should be connected to radiators or convectors located not less than 8 feet above the floor.

NOTE: Interior free-standing stoves are NOT acceptable in a repair area where there is the possibility of flammable or combustible liquids being present.

PREVENTION IS EVERYONE'S BUSINESS. TRUST IN TOMORROW.® CONTACT YOUR AGENT TODAY TO LEARN ABOUT OUR LOSS PREVENTION PROGRAMS.

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If mechanical work is **NOT** being performed within the building (and there is no storage or transfer of flammable or combustible liquids) **AND** the heating system for the building is an interior forced-air furnace **OR** a hot water boiler, the installation requirements are:

- Furnace or hot water boiler should be installed in a separate room with one-hour fire rated construction and the entry door should open into the room from the outside of the building.
- Heat ducts into the building may be located 18 inches above floor level.
- Air for combustion should be obtained from the exterior of the garage or machine shed, NOT from the building being heated.

The interior heating appliance and chimney/vent pipes of the interior unit must be maintained and cleaned in accordance with the manufacturer's recommendations. At a minimum, the chimney/vent pipe on any type of solid-fuel burning appliance should be inspected and cleaned annually by a professional chimney sweep.

Homeowners operating solid-fuel burning appliances should have at least one 10-pound ABC Dry Chemical portable fire extinguisher available in a visible and easily accessible location in the home or building. Also, smoke detectors should be installed near each sleeping room and at the bottom of each stairway of the home. Consider installing at least one carbon monoxide detector in all buildings or structures where a solid-fuel burning appliance is present. (Illinois law requires that at least one operable carbon monoxide alarm be located within 15 feet of every room used for sleeping purposes within a "dwelling unit.")