

Tips on how to safely install and maintain a wood stove.

A wood stove should never be connected to a flue that vents an oil burner.



When temperatures get colder, one way to heat a small business is with a wood-burning stove. This can be an attractive heating source because it uses cheap and easily accessible fuel. However, these stoves pose hazardous smoke and fire risks when they're not installed and maintained properly. These guidelines from the National Fire Protection Association (NFPA 211) may help reduce the risk of fires.

Use a chimney appropriate for wood stoves.

For maximum safety, stoves should always be installed according to the manufacturer's specifications. The chimney must be masonry or UL Listed and factory-built, and have its own flue for the wood stove you've chosen. Because not all chimney constructions are suitable for wood stoves, here are a few important tips to keep in mind:

- Unlined, single-brick chimneys are prone to deteriorate and should never be used.
- Unlined, double-brick chimneys may be used, but only after carefully checking for cracked mortar or loose or missing brick.
- Metal sleeves that are UL Listed may be used as chimney liners only if designed for such use.
- Never connect a wood stove to a flue that vents an oil burner. Deadly, unburned vapors from the oil burner could back up into the stove and the room in which it's located.

Wood Stove Safety

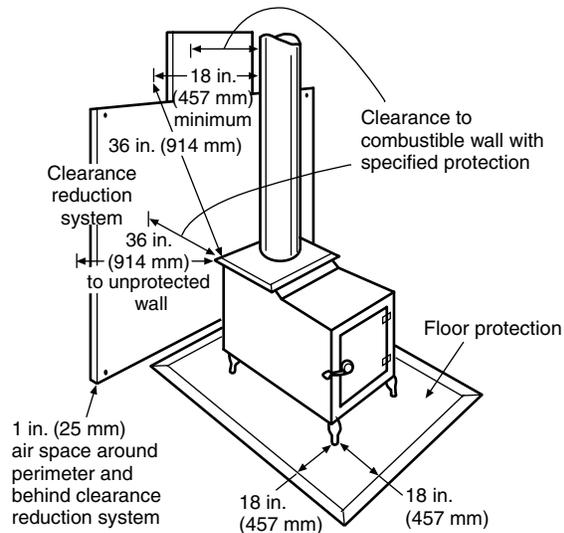


Maintain safe clearance around the stove.

All operating wood stoves and furnaces require specific minimum distances or clearances between the bottom, top, sides, front and back of the stove and any surrounding combustible materials. These required clearances detailed in Figure 1 are the minimums listed in NFPA 211. Without this space, heat produced by the stove could penetrate nearby combustibles and cause a serious fire.

As shown in the table below Figure 1, clearances may be reduced from 36 inches or UL Listed manufactured instructions to the specified lower dimensions by installing a heat shield along the combustible wall.

Figure 1. Distance to combustible wall and floor¹



The National Fire Protection Association is a recognized authority on the safe operation of wood-burning stoves.

TYPE OF HEAT SHIELD	REDUCTION PERCENTAGE	
	Wall Clearance 36"	Ceiling Clearance 18"
24-gauge sheet metal with ventilated air space	66% or 18"	50% or 9"
3 1/2" thick masonry without ventilated air space	33% or 18"	
3 1/2" thick masonry with ventilated air space	66% or 18"	



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Wood Stove Safety

Proper venting will help prevent fires.

Because 90% of all stove-related fires originate within the venting system, it's imperative to follow safe venting practices. The venting system will consist of lengths of 24-gauge or heavier stovepipe that connect the stove to the chimney. To help ensure safety, your vent must:

- Be as short as possible with no more than two right-angle elbows.
- Consist of stovepipe sections fastened with at least three sheet-metal screws or other fasteners, and whose seams overlap and face up on inclined runs.
- Be assembled so the crimped, male ends of the stovepipe sections face down toward the stove.

Keep in mind that the stovepipe must:

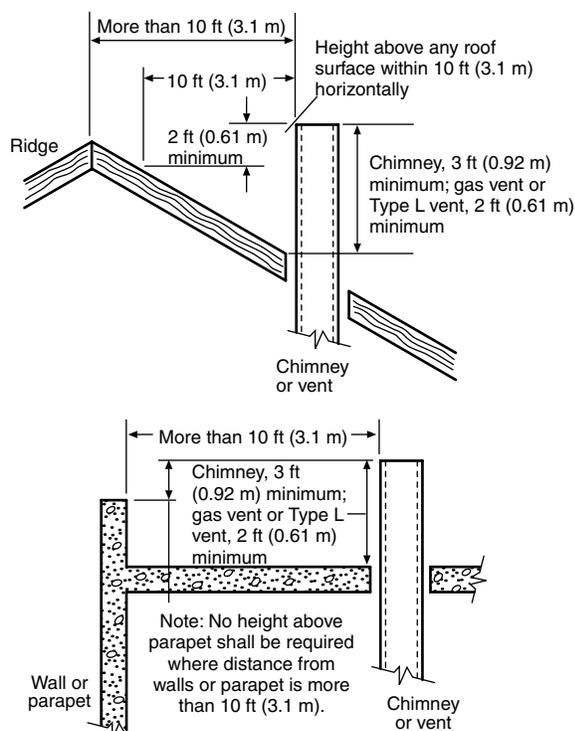
- Never pass through an interior wall, floor or ceiling.
- Go directly into a lined masonry or UL Listed, factory-built chimney, as illustrated in Figure 2, whenever possible.
- Never act as a chimney itself, because exposure will cause it to rust and deteriorate.

If the stovepipe must pass through an exterior wall to reach the chimney, it should maintain a minimum 18-inch clearance to all combustibles. Consult fire codes and use metal thimbles designed for this purpose to assist your installation.



The venting system consists of lengths of 24-gauge or heavier stovepipe that connect the stove to the chimney.

Figure 2. Venting your wood-burning stove¹



Questions? Contact
Nationwide Loss Control
Services: 1-866-808-2101
or LCS@nationwide.com.

Wood Stove Safety

Safety tips for maintaining your stove.

- **Use proper fuel.** Hardwoods such as maple, beech, ash, hickory or oak should be cut, split and air-dried for at least a year before burning. If possible, store wood under cover to help it dry faster.
- **Avoid creosote buildup.** Slow burning fires, such as those found in a modern, airtight stove damped way down, produce a flue temperature in the 100-200°F range. Any unburned, combustible gases will not sufficiently carry into the atmosphere, but will condense along the walls of the stovepipe and the chimney as creosote. This substance is highly combustible and if ignited will burn intensely.
- **Hire a certified chimney sweep.** Cleaning and inspection should be performed annually, or more often based on the frequency of use and on creosote buildup noticed in the past.
- **Disassemble metal chimneys after a fire to check for damage.** Discoloration of the exterior may indicate a breakdown of the insulating material. Any questionable section should be replaced and inspected.

If your stove manufacturer's or local code requirements differ from the requirements in this bulletin, the stricter requirements should be followed. Check with your local fire department or building inspector for additional guidance.

WHAT TO DO IF A FIRE OCCURS

1. Call the fire department
2. Close dampers
3. Alert others in the building
4. Evacuate

Everyone in the building should be prepared in case of a fire. They should know the locations of fire extinguishers, how to use them and all emergency escape routes.

If a combustible material near your wood burner or venting system is too hot to touch, a serious and potentially dangerous situation exists.



Annual or more frequent cleaning and inspection must be performed by a certified chimney sweep. To find a professional near you, go to the National Chimney Sweep Guild website at ncsg.org.

Providing solutions
to help our members
manage risk.®



For your risk management and safety needs, contact Nationwide Loss Control Services: 1-866-808-2101 or LCS@nationwide.com.