SUGGESTED PROCEDURE FOR INSTALLATION OF WOOD BURNING STOVES

PASSING THROUGH WALLS OR FLOORS

IF AT ALL POSSIBLE AVOID GOING THROUGH WALLS OR CEILINGS.

WALLS: A CORRECT THIMBLE MUST BE USED.

PREFERABLY USE AN ALL FUEL FIRE STOP SPACER, THIMBLE OR CONNECTOR.

CEILINGS: WHEN YOU MUST PASS THROUGH A CEILING, THE ALL FUEL CONNECTOR OR FIRE STOP SPACER MUST BE USED AND INSTALLED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS.

CONNECTING THE STOVE PIPE TO A CHIMNEY, THROUGH A WALL

CUT WALL BACK THREE TIMES THE SIZE OF THE PIPE. EXAMPLE: 6" PIPE — 3 X 6" = 18"

FRAME HOLE WITH 2" X 4" AND LINN EXPOSED SIDE OF 2" X 4" WITH 22 GA. TO 26 GA. SHEET METAL.

IF A THIMBLE IS TO BE BUILT, IT MUST BE THREE TIMES THE DIAMETER OF THE PIPE AND WELL VENTILATED TO ALLOW AIR MOVEMENT.

LINE INSIDE FRAMING WITH SHEET METAL.

USE A THIMBLE AT CHIMNEY

Pipes Must be kept 3 times pipe diameter away from combustibles.

EXAMPLE
6" Pipe
3 X 6" = 18"

ALL STOVE LEGS SHOULD BE 4" TO 6" LONG, STOVE MUST BE ON A STOVE BOARD.

MINIMUM DISTANCE FROM COMBUSTIBLES UNPROTECTED 20'

STOVE: 3/4" Asbestos Covered with

BASIC TYPE OF STOVES

FRANKLIN

BOXWOOD

PARLOR

POT BELL
FIGURE 9-6.2.1(a) Clearance reduction system — fastener location.

- Do not use spacers directly behind appliance or connector.
- Combustible wall
- Noncombustible spacers
- Noncombustible fasteners around the perimeter
- Leave 1-in. (25.4-mm) clearance to floor, adjacent walls, ceiling, for air circulation

FIGURE 9-6.2.1(b) Distance to combustible wall/floor.

- Clearance to combustible wall with protection as specified in Table 6-5.1.2 or Table 9-6.1(b)
- Clearance reduction system
- 18 in. (457 mm) floor protection
- 1-in. (25.4-mm) air space around perimeter and behind clearance reduction system
- 18 in. (457 mm)

FIGURE 9-6.2.1(c) Masonry clearance reduction system.

- 1-in. (25.4-mm) min. air space between masonry and combustible wall
- 4-in. (102-mm) nominal brick wall
- Bottom and top course of brick staggered for ventilation
- A strip of heavy-gauge steel can be used for added support
- Note: Do not place masonry wall ties directly behind appliance or connector.

FIGURE 9-6.2.1(d) Fastener detail.

- Masonry wall tie
- Clearance reduction system
- 1-in. (25.4-mm) noncombustible spacer such as stacked washers, small-diameter pipe, tubing, or electrical conduit
- Masonry walls can be attached to combustible walls using wall ties. Do not use spacers directly behind appliance or connector.
Chapter 9 Solid Fuel-Burning Appliances

1. Appliances. Solid fuel-burning appliances shall be listed and installed in accordance with the terms of their listing.

Exception: Unlisted appliances approved by the authority having jurisdiction shall be installed as specified in this chapter. Such installations also shall be in accordance with the manufacturer's installation instructions if such instructions specify the use of increased protection or greater clearances than specified in this chapter. This exception shall not apply to mobile home installations.

2. Location of Appliances.

2.1 Every appliance shall be located with respect to building construction and other equipment to allow access to the appliance. Sufficient clearance shall be maintained to allow cleaning of surfaces; the replacement of air filters, blowers, motors, controls, and chimney connectors; the lubrication and servicing of moving parts; and the adjustment and servicing of stokers, if provided.

2.2 Solid fuel-burning appliances shall not be installed in alcoves or enclosed spaces less than 112 ft². The space or room shall be of ample size to allow adequate circulation of heated air. Appliances shall be so located as not to interfere with the proper circulation of air within the heated space.

Exception: Solid fuel-burning appliances listed for installation in enclosed spaces or alcoves less than 512 ft³ shall be installed in accordance with the requirements of the listing and the manufacturer's instructions.

2.3 Solid fuel-burning appliances shall not be installed in any location where gasoline or any other flammable vapors or gases are likely to be present.

2.4 Solid fuel-burning appliances shall not be installed in any residential garage.

3. Air for Combustion and Ventilation. Solid fuel-burning appliances shall be installed in a location and manner so as to provide adequate ventilation and combustion air supply to allow satisfactory combustion of fuel, proper chimney draft, and maintenance of safe temperatures. Where buildings are so tight that normal infiltration does not provide the necessary air, outside air shall be introduced.


4.1 Chimney Connection. All solid fuel-burning appliances shall be connected to chimneys in accordance with Chapter 6. The chimney provided shall be in accordance with Table 2.2.1.

4.2 Clearance. The clearance of chimney connectors to combustible material shall be as specified in Table 6.5.1.1.

4.3 Inspection and Cleaning Access. Connectors and chimneys for solid fuel-burning appliances shall be designed, located, and installed to allow ready access for internal inspection and cleaning.

4.4* Flue Cross-Sectional Area. For residential-type solid fuel-burning appliances, the cross-sectional area of the flue shall not be less than the cross-sectional area of the appliance flue collar. The cross-sectional area of the flue shall not be more than three times the cross-sectional area of the appliance flue collar.

4.5 Connection to Masonry Fireplaces. A solid fuel-burning appliance such as a stove or insert shall be permitted to a masonry fireplace flue where the following conditions are met:

Exception: Listed fireplace accessories shall be permitted to serve a masonry fireplace flue.

1. There is a connector that extends from the appliance to the flue liner.

2. The cross-sectional area of the flue is no more than three times the cross-sectional area of the flue collar of the appliance.

3. If the appliance vents directly through the chimney wall above the smoke chamber, there shall be a noncombustible seal below the entry point of the connector.

4. The installation shall be such that the chimney system can be inspected and cleaned.

5. Means shall be provided to prevent pilferage of combustible products in the chimney flue with air from the habitable space.

4.6 Existing Flue Use. Another solid fuel-burning appliance shall not be installed using an existing flue serving a factory-built fireplace unless the appliance is specifically listed for such installation.

5. Mounting.

5.1 Mounting for Residential-Type Appliances.

5.1.1 General Requirements.

5.1.1.1 Residential-type solid fuel-burning appliances that are tested and listed by a recognized testing laboratory for installation on floors constructed of combustible material shall be placed on floors in accordance with the requirements of the listing and the conditions of approval. Such appliances that are not listed by a recognized testing laboratory shall be provided with floor protection in accordance with the provisions of 9.5.1.2 or 9.5.1.3.

Exception: Residential-type solid fuel-burning appliances shall be permitted to be placed without floor protection in any of the following manners:

(a) On concrete bases adequately supported on compacted in-crushed rock, or gravel.

(b) On concrete slabs or masonry arches that do not have combustible materials attached to the underside.

(c) On approved assemblies constructed of only noncombustible materials and having a fire resistance rating of not less than 2 hours with floors constructed of noncombustible material.

(d) On properly stabilized ground that can support the load of the appliance.

5.1.1.2 Any floor assembly, slab, or arch shall extend not less than 18 in. (457 mm) beyond the appliance on all sides.

5.1.1.3 In lieu of the requirements for floor protection specified herein, a floor protector listed by a recognized testing laboratory and installed in accordance with the installation instructions shall be permitted to be employed.

5.1.1.4 Concrete bases, concrete slabs, masonry arches, floor-ceiling assemblies and their supports shall be designed and constructed to support the appliances.

5.1.2 Room Heaters, Fireplace Stoves, Room Heater/Flame Combustion, and Ranges.

5.1.2.1 Room heaters, fireplace stoves, room heater/insert stove combinations, or ranges that are set on legs or pedestals that provide not less than 6 in. (152 mm) of ventilated open space beneath the fire chamber or base of the appliance.
(b) On floors constructed of noncombustible materials and having a fire resistance rating of not less than 2 hours; this construction shall extend not less than 3 ft (0.92 m) beyond the appliance on all sides and 8 ft (2.45 m) beyond the front or side where ashes are removed.

(c) On properly stabilized ground that can support the load of the appliance.

9.5.3.2 Concrete bases, concrete slabs, and floors shall be designed and constructed to support the appliances.

9.5.3.3 Medium-heat nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide not less than 24 in. (610 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is protected with one course of hollow masonry units not less than 4 in. (102 mm) in thickness. The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry. The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness. The floor protection shall extend not less than 3 ft (0.92 m) beyond the appliance on all sides and 8 ft (2.45 m) beyond the front or side where ashes are removed.

9.5.3.4 Medium-heat nonresidential solid fuel-burning appliances that are set on legs or pedestals that provide 18 in. to 24 in. (457 mm to 610 mm) of ventilated open space beneath the fire chamber or base of the appliance shall be permitted to be placed on floors of combustible construction, provided the floor under the appliance is protected with two courses of hollow masonry units, each not less than 4 in. (102 mm) in thickness. The masonry units shall be laid with ends unsealed and joints matched in such a way as to provide a free circulation of air through the core spaces of the masonry. The top surface of the masonry shall be covered with a steel plate not less than 3/16 in. (4.8 mm) in thickness. The floor protection shall extend not less than 3 ft (0.92 m) beyond the appliance on all sides and 8 ft (2.45 m) beyond the front or side where ashes are removed.

9.5.3.5 Medium-heat nonresidential solid fuel-burning appliances with legs or pedestals that provide less than 18 in. (457 mm) of ventilated open space beneath the fire chamber or base of the appliance shall not be placed on floors of combustible construction.

9.5.4 Mounting of High-Heat Nonresidential Appliances.

9.5.4.1 High-heat nonresidential solid fuel-burning appliances shall be placed in one of the following manners:

(1) On concrete bases adequately supported on compacted soil, crushed rock, or gravel.

(2) On floors constructed of noncombustible materials and having a fire resistance rating of not less than 2 hours; this construction shall extend not less than 10 ft (3.1 m) beyond the appliance on all sides and not less than 30 ft (9.2 m) beyond the front or side where hot products are removed.

(3) On properly stabilized ground that can support the load of the appliance.

9.5.4.2 Concrete bases and floors shall be designed and constructed to support the appliances.

9.5.4.3 High-heat nonresidential solid fuel-burning appliances shall not be placed on floors of combustible construction.

9.6 Clearances from Solid Fuel-Burning Appliances.

9.6.1 Solid fuel-burning appliances shall be installed so that their use cannot create a hazard to persons or property. The clearance shall be not less than specified in Table 9-6.1.

Exception No. 1: Appliances listed for installation with clearances less than specified in Table 9-6.1 shall be permitted to be installed in accordance with the terms of their listing and the manufacturer’s instructions.

Exception No. 2: Heating furnaces and boilers and water heaters specifically listed for installation in spaces such as closets shall be permitted to be so installed in accordance with the terms of their listing, provided the specified clearance is maintained regardless of whether the enclosure is of combustible or noncombustible material.

These clearances shall apply to appliances installed in rooms that are large in comparison with the size of the appliances. For reduced clearances, see Table 9-6.2.1.

### Table 9-6.1 Standard Clearances for Solid Fuel-Burning Appliances

<table>
<thead>
<tr>
<th>Kind of Appliance</th>
<th>Above Top of Casing or Appliance</th>
<th>From Front</th>
<th>From Back</th>
<th>From Sides</th>
<th>From Sides</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Above Top and Sides of Furnace Plessum or Bonnet</td>
<td>[in.]</td>
<td>[mm]</td>
<td>[in.]</td>
<td>[mm]</td>
</tr>
<tr>
<td><strong>Residential Appliances</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Steam boilers — 15 psi (108 kPa)</td>
<td>6</td>
<td>152</td>
<td>48</td>
<td>1219</td>
<td>6b</td>
</tr>
<tr>
<td>Water boilers — 250°F (121°C) max.</td>
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<td></td>
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<tr>
<td>Water boilers — 200°F (93°C) max.</td>
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<tr>
<td>All water walled or jacketed</td>
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<td></td>
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<tr>
<td><strong>Furnaces</strong></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Gravity and forced air</td>
<td>18</td>
<td>457</td>
<td>48</td>
<td>1219</td>
<td>18</td>
</tr>
<tr>
<td><strong>Room Heaters, Fireplace Stoves, Fireplace Inserts, Combinations</strong></td>
<td>36</td>
<td>914</td>
<td>36</td>
<td>914</td>
<td>36</td>
</tr>
<tr>
<td><strong>Ranges</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lined fire chamber</td>
<td>36</td>
<td>762</td>
<td>36</td>
<td>914</td>
<td>24</td>
</tr>
<tr>
<td>Unlined fire chamber</td>
<td>36</td>
<td>762</td>
<td>36</td>
<td>914</td>
<td>36</td>
</tr>
</tbody>
</table>

*To combustible material or metal cabinets. If the underside of such combustible material or metal cabinet is protected with sheet metal of not less than 24 gauge (0.024 in. (0.61 mm)) spaced out 1 in. (25.4 mm), the distance shall be permitted to be reduced to not less than 24 in. (610 mm).

b Adequate clearance for cleaning and maintenance shall be provided.

c Provisions for fuel storage shall be located at least 36 in. (914 mm) from any side of the appliance.

d For clearances from air ducts, see NFPA 90B, Standard for the Installation of Warm Air Heating and Air-Conditioning Systems.

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