TABLE 3-1 (Continued)

Standard Installation Clearances in Inches for Unlisted Heat-Producing Appliances

COMMERCIAL INDUSTRIAL-TYPE APPLIANCES ANY AND ALL PHYSICAL SIZES EXCEPT AS NOTED[11]	FUEL	APPLIANCE				
		ABOVE TOP OF CASING OR APPLIANCE	FROM TOP AND SIDES OF WARM-AIR BONNET OR PLENUM	FROM FRONT[1]	FROM BACK[10]	FROM SIDES[10]
BOILERS AND WATER HEATERS Over 50 psi (345 kPa) Over 100 cu. ft. (2832 m³)	All Fuels	48		96	36	36
OTHER MEDIUM-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	48	36	96	36	36
INCINERATORS All Sizes		48		96	36	36
INDUSTRIAL-TYPE HIGH-HEAT APPLIANCES HIGH-HEAT INDUSTRIAL APPLIANCES All Sizes	All Fuels	180		360	120	120

Footnotes for Table 3-1

1 The minimum dimension shall be that necessary for servicing the appliance, including access for cleaning and normal care, tube removal, etc.

2 For a listed oil, combination gas-oil, gas, or electric furnace, this dimension may be two (2) inches (51 mm) if the furnace limit control cannot be set higher than 250°F (121°C), or this dimension may be one (1) inch (25.4 mm) if the limit control cannot be set higher than 200°F (93°C), or the appliance shall be marked to indicate that the outlet air temperature cannot exceed 200°F (93°C).

3 The dimension may be six (6) inches (152 mm) for an automatically stoker-fired forced-warm-air furnace equipped with 250°F (121°C) limit control and with barometric draft control operated by draft intensity and permanently set to limit draft to a maximum intensity of 0.13 inch (3.3 mm) water gauge.

4 Unlisted appliances shall be installed on noncombustible floors and may be installed on protected combustible floors. Heating appliances approved for installation on protected combustible flooring shall be so constructed that flame and hot gases do not come in contact with the appliance base. Protection for combustible floors shall consist of four (4) inch (102 mm) hollow masonry covered with sheet metal at least 0.021 inch (0.53 mm) thick (No. 24 manufacturer's standard gauge). Masonry shall be permanently fastened in place in an approved manner with the ends unsealed and joints matched so as to provide free circulation of air through the masonry. Floor protection shall extend twelve (12) inches (305 mm) at the sides and rear of the appliance, except that at least eighteen (18) inches (457 mm) shall be required on the appliance-opening side or sides measured horizontally from the edges of the opening.

5 The forty-eight (48) inch (1219 mm) clearance may be reduced to 36 inches (914 mm) when protection equivalent to that provided by (a)–(g) of Table 3-2 is applied to the combustible construction.

6 Steam pipes and hot water heating pipes shall be installed with a clearance of at least one (1) inch (25 mm) to all combustible construction or material, except that at the points where pipes carrying steam at not over fifteen (15) pounds gauge pressure (103.4 kPa) or hot water that emerge from a floor, wall, or ceiling, the clearance at the opening through the finish floorboards or wall-ceiling boards may be reduced to not less than one-half (1/2) inch (12.7 mm). Each such opening shall be covered with a plate of noncombustible material.

Such pipes passing through stock shelving shall be covered with not less than one (1) inch (25.4 mm) of approved insulation.

Wood boxes or casings enclosing uninsulated steam or hot water heating pipes or wooden covers to recesses in walls in which such uninsulated pipes are placed shall be lined with metal or insulating millboard.

Where the temperature of the boiler piping does not exceed 160°F (71°C), the provisions of this table shall not apply.

Coverings or insulation used on steam or hot water pipes shall be of material suitable for the operating temperature of the system. The insulation or jackets shall be of noncombustible materials, or the insulation or jackets and lap-seal adhesives shall be tested as a composite product. Such composite product shall have a flame-spread rating of not more than twenty-five (25) and a smoke-developed rating not to exceed fifty (50) when tested in accordance with UBC Standard No. 42-1.

7 To combustible material or metal cabinets. If the underside of such combustible material or metal cabinet is protected with insulating millboard at least one-quarter (1/4) inch (6.4 mm) thick covered with sheet metal of not less than 0.013 inch (0.33 mm) (No. 28 gauge), the distance may be reduced to twenty-four (24) inches (610 mm).

8 Clearance above charging door shall be at least forty-eight (48) inches (1,219 mm).

9 If the appliance is encased in brick, the eighteen (18) inch (457 mm) clearance above and at the sides and rear may be reduced to twelve (12) inches (305 mm).

10 If the appliance is encased in brick, the clearance above may be reduced to thirty-six (36) inches (914 mm) and at the sides and rear may be reduced to eighteen (18) inches (457 mm).

11 A central heating boiler or furnace shall be installed in accordance with the manufacturer's instructions and shall be installed on a floor of noncombustible construction with noncombustible flooring and surface finish and with no combustible material against the underside thereof, or on fire-resistive slabs or arches having no combustible material against the underside thereof.

Exception No. 1: Appliances listed for installation on a combustible floor.

Exception No. 2: Installation on a floor protected in an approved manner. [NFPA 54:9.3.3]