

13 NCAC 13 .0413 CLEARANCES

(a) All boilers and pressure vessels shall be located so that adequate space is provided for proper operation, including visibility of all gauges, for the inspection of all surfaces, tubes, waterwalls, economizers, piping, valves and other equipment, and for maintenance and repair, including replacement of tubes. Boiler clearances shall remain free of all items, including temporarily stored items, other than boiler piping and trim. Boiler piping and trim shall not impede access to the boiler.

(b) Adequate clearance for boilers and pressure vessels installed prior to January 1, 2009 shall not be less than the following:

- (1) Three feet of clearance shall be provided between the boiler or pressure vessel on all service sides, and clearances as recommended by the manufacturer on all other sides. Service side shall be interpreted as any side, including the top, of a boiler or pressure vessel on which clearance is necessary to access operating controls, safety devices, drain and blowoff valves, or inspection openings.
- (2) Cabinet mounted boilers, such as those used primarily for process or cooking, and having a maximum input of 400,000 Btu/hr need only be provided with the unobstructed clearances recommended by the manufacturer.

(c) Adequate clearance for boilers and pressure vessels installed after January 1, 2009 shall not be less than the following:

- (1) High-pressure steam boilers that exceed 5,000,000 Btu/hr input (1465 kW), 5,000 pounds of steam per hour capacity or a 1,000-square-foot heating surface shall have a minimum unobstructed clearance of seven feet from the top of the boiler to the ceiling.
- (2) The following types of boilers and pressure vessels shall have a minimum unobstructed clearance of three feet from the top of the boiler to the ceiling:
 - (A) Steam-heating boilers and hot-water-heating boilers that exceed 5,000,000 Btu/hr input (1465 kW), 5,000 pounds of steam per hour capacity or a 1,000-square-foot heating surface;
 - (B) High-pressure steam boilers that do not exceed 5,000,000 Btu/hr input (1465 kW), 5,000 pounds of steam per hour capacity or a 1,000-square-foot heating surface; and
 - (C) All boilers with manholes on top of the boiler.
- (3) Package boilers, steam-heating boilers and hot-water-heating boilers without manholes on top of the shell that do not exceed 5,000,000 Btu/hr input (1465 kW), 5,000 pounds of steam per hour capacity or a 1,000-square-foot heating surface shall have a minimum unobstructed clearance of two feet from the ceiling.

(d) When boilers or pressure vessels are installed or replaced, unobstructed clearance shall be provided to allow access for inspection, maintenance and repair. Passageways around all sides of boilers and pressure vessels shall have an unobstructed width of not less than 18 inches, unless otherwise recommended by manufacturer's installation instructions.

*History Note: Authority G.S. 95-69.11; 95-69.14;
Eff. May 29, 1981;
Recodified from 13 NCAC 13 .0409 Eff. January 1, 1995;
Amended Eff. February 1, 2009; January 1, 1995;
Pursuant to G.S. 150B-21.3A, rule is necessary without substantive public interest Eff. July 22, 2018.*