

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
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Working Space and Clearances

Code: 2017 Electrical Code
Section: 110.26

Date: October 7, 2019

Question 1:

Are the “Working Space” requirements from section 110.26 (A) (1), (2), (3) applicable to outdoor heat pumps or other equipment of such nature? Is “Working Space” applicable to indoor air handlers in an attic?

Answer 1:

110.26 Spaces About Electrical Equipment. Access and working space shall be provided and maintained about all electrical equipment to permit ready and safe operation and maintenance of such equipment.

(A) Working Space. Working space for equipment operating at 1000 volts, nominal, or less to ground and likely to require examination, adjustment, servicing, or maintenance while energized shall comply with the dimensions of 110.26(A)(1), (A)(2), (A)(3), and (A)(4) or as required or permitted else- where in this Code. . . .

Section 110.26 of the State Electrical Code (2017 NEC with State Amendments) applies to all electrical equipment. Section 110.26(A) only applies to electrical equipment that is “likely to require examination, adjustment, servicing, or maintenance while energized”. The State Electrical Division does not consider heat pumps, air handlers, duct heaters, their respective disconnecting means, or similar HVAC accessory devices and equipment as “likely to require examination, adjustment, servicing, or maintenance while energized”.

Therefore, section 110.26(A) is not applicable to heat pumps, air handlers, duct heaters, their respective disconnecting means, and similar HVAC accessory devices and equipment. However, section 110.26 (the parent section) is applicable to “all electrical equipment”; therefore, clearances described in the equipment’s manufacturer’s instructions are the governing rule for “[permitting] ready and safe operation and maintenance” of heat pumps, air handlers, duct heaters, their respective disconnecting means, and similar HVAC accessory devices and equipment. If clearance requirements are not provided by the manufacturer with such equipment, the access to operate the equipment is all that shall be required.

While not an exhaustive list, section 110.26(A) applies to service equipment, switchboards, switchgears, panelboards, and motor control centers. Disconnecting means for HVAC equipment that is also part of service equipment, switchboards, switchgears, panelboards, or motor control centers, must comply with section 110.26(A).

Question 2:

Is the “Entrance to and Egress from Working Space” per section 110.26 (C) applicable to outdoor heat pumps or other equipment of such nature? Is “Entrance to and Egress from Working Space” applicable to indoor air handlers in an attic?

Answer 2:

110.26 Spaces About Electrical Equipment.

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(C) Entrance to and Egress from Working Space.

(1) Minimum Required. At least one entrance of sufficient area shall be provided to give access to and egress from working space about electrical equipment.

(2) Large Equipment. For equipment rated 1200 amperes or more and over 1.8 m (6 ft) wide that contains overcurrent devices, switching devices, or control devices, there shall be one entrance to and egress from the required working space not less than 610 mm (24 in.) wide and 2.0 m (6 1/2 ft) high at each end of the working space.

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(3) Personnel Doors. Where equipment rated 800 A or more that contains overcurrent devices, switching devices, or control devices is installed and there is a personnel door(s) intended for entrance to and egress from the working space less than 7.6 m (25 ft) from the nearest edge of the working space, the door(s) shall open in the direction of egress and be equipped with listed panic hardware.

Section 110.26(C) of the State Electrical Code applies to heat pumps, air handlers, duct heaters, their respective disconnecting means, and similar HVAC accessory devices and equipment.

Section 110.26(C)(1) applies generally and is further detailed by the manufacturer’s installation instructions and other applicable Codes (see the NC Mechanical Code). Crawlspace and attic accesses that meet the provisions of the manufacturer’s instructions and the NC Mechanical Code have then met the standard of compliance for section 110.26(C)(1).

Question 3:

Is “Dedicated Equipment Space” per section 110.26(E)(2)(3)(b) applicable to outdoor heat pumps or other equipment of such nature? Is “Dedicated Equipment Space” per section 110.26(E)(1) applicable to air handlers in an attic?

Answer 3:

110.26 Spaces About Electrical Equipment.

. . .

(E) Dedicated Equipment Space. All switchboards, switchgear, panelboards, and motor control centers shall be located in dedicated spaces and protected from damage. . . .

Section 110.26(E) applies only to switchboards, switchgear, panelboards, and motor control centers. Therefore, section 110.26(E) only applies to the disconnecting means for HVAC equipment that consists of switchboards, switchgears, panelboards, or motor control centers. Section 110.26(E) does not apply to a pull-out or knife-throw type disconnect regardless if such disconnect contains buss fuses. This rule is applicable in an attic as well.