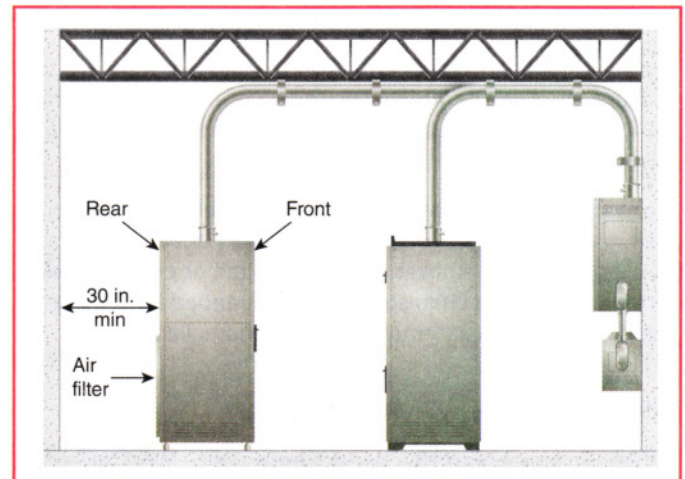
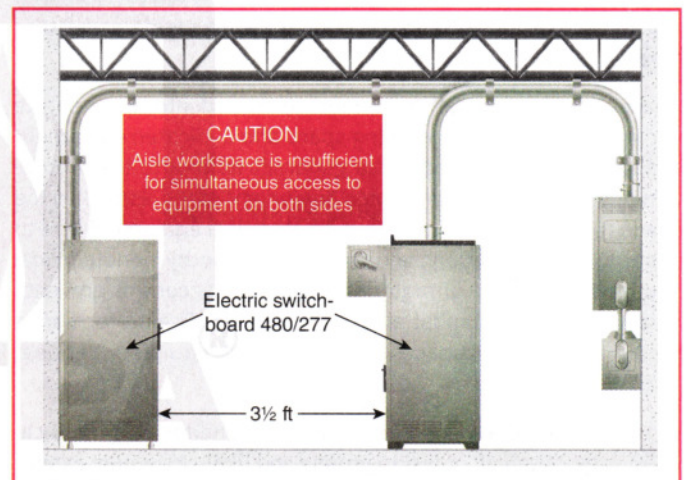


**EXHIBIT 110.11** Distances measured from the live parts if the live parts are exposed or from the enclosure front if the live parts are enclosed.



**EXHIBIT 110.12** An example of the 30-inch minimum working space at the rear of equipment to allow work on nonelectrical parts, such as the replacement of an air filter.



**EXHIBIT 110.13** A permitted reduction from a Condition 3 to a Condition 2 clearance.

In many cases, equipment of “dead-front” assemblies requires only front access. The workspace described in 110.26(A)(1) is required for any side of the equipment from which access to live parts or other maintenance is required. For equipment that requires rear access for nonelectrical maintenance, such as replacing a filter, a reduced working space of at least 30 inches must be provided. Exhibit 110.12 shows a reduced working space of 30 inches at the rear of equipment to allow work on nonelectrical parts.

(b) *Low Voltage.* By special permission, smaller working spaces shall be permitted where all exposed live parts operate at not greater than 30 volts rms, 42 volts peak, or 60 volts dc.

(c) *Existing Buildings.* In existing buildings where electrical equipment is being replaced, Condition 2 working clearance shall be permitted between dead-front switchboards, switchgear, enclosed panelboards, or motor control centers located across

the aisle from each other where conditions of maintenance and supervision ensure that written procedures have been adopted to prohibit equipment on both sides of the aisle from being open at the same time and qualified persons who are authorized will service the installation.

This section permits some relief for existing equipment being replaced if it is not practical to increase the existing work space. Exhibit 110.13 illustrates this relief for existing buildings.

(2) **Width of Working Space.** The width of the working space in front of the electrical equipment shall be the width of the equipment or 762 mm (30 in.), whichever is greater. In all cases, the work space shall permit at least a 90-degree opening of equipment doors or hinged panels.