be installed with clearances per the terms of their listing and the manufacturer's instructions.

(B) Unlisted chillers shall be installed with clearances from combustible material not less than 46cm (18 in.) above the equipment and at the sides, front, and rear; and 23cm (9 in.) from the draft hood.

Unlisted chillers installed in rooms that are large in comparison with the size of equipment shall be provided with clearances to combustible material in accordance with the following requirements:

(1) A clearance of not less than 46cm (18 in.) shall be provided above and along the sides of the furnace plenum.

(2) A clearance of not less than 46cm (18 in.) shall be provided along the top of the boiler.

(3) A clearance of not less than 46cm (18 in.) shall be provided along the sides and rear of the jacket.

(4) The front of the chiller shall be provided with a clearance of not less than 46cm (18 in).

(5) The draft hood and barometric draft regulator shall be provided with a clearance of not less than 46cm (18 in.).

(6) The single-wall vent connector shall be provided with a clearance of not less than 46cm (18 in).

(C) Chillers (listed and unlisted) installed in rooms that are large in comparison with the size of the equipment shall be permitted to be installed with reduced clearances to combustible material provided the combustible material or equipment is protected.

(D) Listed chillers shall have the clearance from supply ducts within 90cm (3 ft.) of the furnace plenum be not less than that specified from the furnace plenum. No clearance is necessary beyond this distance. [NFPA 54:9.2.3]

510.6 Electrical. Electric motors shall comply with NEMA Standards. High-efficiency motors shall comply with NEMA Standards, Numbers MG 1, 2, 3, 10, and 11 or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

510.6.1 Wiring. Electrical wirings that are provided during the manufacture and installation stages shall comply with the requirements of NFPA 70, *National Electrical Code* or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

510.6.2 Control Panels. The following controls shall be provided for individual chillers:

(1) Power controls for starter.

(2) Compressor starter relay.

(3) Reset relay.

(4) Control wiring terminal strip, including accessory and interlocks for automatic temperature control.

(5) Control power transformer for 115V control voltage.

(6) Pump-down control relay.

(7) Non-recycling compressor overload relay.

(8) High and low pressure cutouts.

(9) Low temperature cutout.

(10) Oil pressure cutout, low oil pressure compressor systems are exempt from this requirement.

(11) Chilled water temperature controller.

(12) Chilled water reset interface.

510.6.3 Accessories. The following accessories shall be provided:

(1) Suction and discharge gauges.

(2) Load limit thermostat.

(3) Vapor proof chilled water flow switch.

(4) Oil pressure gauges, hermetic compressors are exempt from this requirement.

510.6.4 Enclosure. The control board and electrical wirings shall be protected by a weathertight metal enclosure. Metal enclosures shall have an outdoor rating and shall comply with NEMA Standard 250 or equivalent International Standard(s) approved by the Authority Having Jurisdiction.

510.6.5 Inspections. Wiring diagrams shall be provided to the Authority Having Jurisdiction for inspections. The wiring diagram shall include power, accessory, interlock, and control wiring and shall clearly indicate a factory or field installation. The chiller shall not be started without the issuance of a permit by the Authority Having Jurisdiction.

510.7 Transfer. The chiller shall be delivered to the project site as a complete factory assembled protective structure, with a covering and proper fasteners. Hangers, such as eyebolts, shall be provided by the manufacturer for the ease of movement.

510.8 Locations. An adequate structure shall be provided to support the chiller and its accessories where the chiller is located above grade. Where the chiller is located on a building structure, additional supportive structural loads shall be considered in the building's design and approved by the Authority Having Jurisdictions.

510.8.1 Base. Concrete pads having a thickness of not less than 10cm (4 in.) shall be provided as