

Δ **(B) Listed Units.** If so marked, a listed self-contained unit or a listed packaged equipment assembly that includes integral GFCI protection for all electrical parts within the unit or assembly (pumps, air blowers, heaters, lights, controls, sanitizer generators, wiring, and so forth) shall be permitted without additional ground-fault protection.

Δ **(C) Gas-Fired Water Heaters.** Circuits serving gas-fired spa and hot tub water heaters operating separately from the spa or hot tub they serve, and operating at voltages above the low-voltage contact limit, shall be GFCI protected.

680.45 Permanently Installed Immersion Pools. Electrical installations at permanently installed immersion pools, whether installed indoors or outdoors, shall comply with the provisions of Part I, Part II, and Part IV of this article except as modified by this section and shall be connected by the wiring methods of Chapter 3. With regard to provisions in Part IV of this article, an immersion pool shall be considered to be a spa or hot tub.

Exception No. 1: The equipotential bonding requirements in 680.26(B) shall not apply to immersion pools that incorporate no permanently installed or permanently connected electrical equipment, and that are installed with all portions located on or above a finished floor.

Exception No. 2: The equipotential bonding requirements for perimeter surfaces in 680.26(B)(2) shall not apply to nonconductive perimeter surfaces, such as steps, treads, and walking surfaces made of fiberglass composite.

(A) Cord-and-Plug Connections. To facilitate the removal or disconnection of the unit(s) for maintenance, storage, and repair, self-contained portable packaged immersion pools with integral pumps and/or heaters, including circulation heaters, rated 120 volts and 20 amperes or less shall be permitted to be cord-and-plug-connected with a cord not shorter than 1.83 m (6 ft) and not longer than 4.6 m (15 ft) and shall be GFCI protected. The cord shall ground all non-current-carrying metal parts of the electrical equipment. If the GFCI is provided as an integral part of the cord assembly, it shall be located at the attachment plug or in the power-supply cord within 300 mm (12 in.) of the attachment plug.

Δ **(B) Storable and Portable Pumps.** A cord-connected storable or portable pump used with, but not built-in or permanently attached as an integral part of, a permanently installed immersion pool shall be identified for swimming pool and spa use. It shall incorporate an approved system of double insulation or its equivalent and shall be provided with means for grounding only the internal and nonaccessible non-current-carrying metal parts of the appliance. Cord-connected pool filter pumps shall be provided with a GFCI that is an integral part of the attachment plug or located in the power-supply cord within 300 mm (12 in.) of the attachment plug.

(C) Heaters. Heaters used with permanently installed immersion pools shall comply with either 680.45(C)(1) or (C)(2).

(1) Permanently Installed Heaters. A permanently installed heater, including immersion heaters, circulation heaters, and combination pump-heater units, built-in or permanently attached as an integral part of a permanently installed immersion pool, rated 120 volts or 250 volts, shall be identified for swimming pool and spa use; shall be grounded and bonded; and heaters supplied by branch circuits rated 150 volts or less to ground shall be provided with GFCI protection. Permanently installed immersion heaters, rated 120 volts and 20 amperes or less or 250 volts and 30 amperes or less, single phase, are permitted to be cord-and-plug-connected with a cord not shorter than 1.83 m (6 ft) and not longer than 4.6 m (15 ft), shall be GFCI protected, and shall be provided with means for grounding all non-current-carrying metal parts of the appliance. If the GFCI is provided as an integral part of the cord assembly, it shall be located at the attachment plug or in the power-supply cord within 300 mm (12 in.) of the attachment plug.

Δ **(2) Storable and Portable Heaters.** A cord-connected storable or portable heater, including immersion heaters, circulation heaters, and combination pump-heater units, used with, but not permanently installed or attached as an integral part of a permanently installed immersion pool, rated 120 volts and 20 amperes or less or 250 volts and 30 amperes or less, single phase, shall be identified for swimming pool and spa use; shall be cord-and-plug-connected with a cord not shorter than 1.83 m (6 ft) and not longer than 4.6 m (15 ft), heaters supplied by branch circuits rated 150 volts or less to ground shall be provided with Class A ground-fault circuit-interrupter protection, and shall be provided with means for grounding all non-current-carrying metal parts of the appliance. If the ground-fault circuit interrupter is provided as an integral part of the cord assembly, it shall be located at the attachment plug or in the power-supply cord within 300 mm (12 in.) of the attachment plug.

(D) Audio Equipment. Audio equipment shall not be installed in or on a permanently installed immersion pool. All audio equipment operating at greater than the low-voltage contact limit and located within 1.83 m (6 ft) from the inside walls of a permanently installed immersion pool shall be connected to the equipment grounding conductor and GFCI protected.

Part V. Fountains

Part V applies to permanently installed decorative fountains and reflecting pools in the ground, partially in the ground, or in a building. These units are primarily for aesthetic value and are not intended for swimming or wading.

See also

Article 682 for installations in natural lakes, rivers, or ponds, which are not covered in Part V

Δ **680.50 General.** Part I and Part V of this article shall apply to all permanently installed fountains.