

# HOT TUBS & SPAS - ELECTRICAL WIRING REQUIREMENTS

## 2014 National Electrical Code

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**SPA OR HOT TUB.** A HYDROMASSAGE POOL, OR TUB FOR RECREATIONAL OR THERAPEUTIC USE, NOT LOCATED IN HEALTH CARE FACILITIES, DESIGNED FOR IMMERSION OF USERS, AND USUALLY HAVING A FILTER, HEATER, AND MOTOR-DRIVEN BLOWER. THEY ARE INSTALLED INDOORS OR OUTDOORS, ON THE GROUND OR SUPPORTING STRUCTURE, OR IN THE GROUND OR SUPPORTING STRUCTURE. GENERALLY, A SPA OR HOT TUB IS NOT DESIGNED OR INTENDED TO HAVE ITS CONTENTS DRAINED OR DISCHARGED AFTER EACH USE.

### 1) Hot Tub / Spa Wiring Method and Receptacles (Outlets)

- a. Maintenance Disconnect - A disconnect is required for all ungrounded electrical wires (except for lighting). It must be at least 5' but not more than 50' from the water's edge, readily accessible, and within sight of the Hot Tub / Spa.
- b. The outlet(s) that supply a Hot Tub / Spa must be Ground-Fault Circuit Interrupter (GFCI) protected.
- c. Indoors Hot Tubs & Spas
  - i. At least one (1) convenience receptacle must be located between 6' and 10' from the inside wall of the Hot Tub / Spa and be GFCI Protected (Existing receptacle OK and wired with any approved wiring method).
- d. Outdoors Hot Tubs & Spas
  - i. At least one (1) convenience receptacle must be located between 6' and 20' from the inside wall of the Hot Tub / Spa and be GFCI Protected (Existing receptacle OK and wired with any approved wiring method).
  - ii. Liquidtight flexible metal or nonmetallic conduit is permitted in lengths of not more than 6'.
  - iii. A listed packaged hot tub / spa installed outdoors that is GFCI protected shall be permitted to be cord and plug-connected provided that such cord does not exceed 15 feet in length.
  - iv. Outdoor receptacles must have a weatherproof cover where exposed to the weather (In-use type cover required on used, unattended, receptacles in wet locations).

### 2) Bonding The Hot Tub / Spa

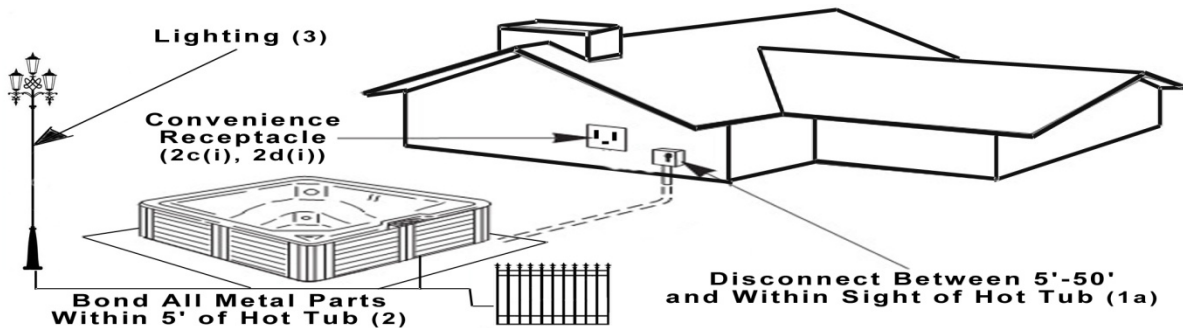
- a. All metal parts & surfaces within 5' of the Hot Tub / Spa must be bonded together using a #8 (or larger) solid copper wire and connections must be non-corrosive.
  - b. Outdoor Hot Tubs / Spas with nonconductive shells must have a #8 (or larger) solid, bare copper wire 18"-24" from the inside hot tub wall under the perimeter surface 4"-6" below the final grade and connected to a metal part of the pump motor.\*
- \* Exception: All must apply; 1) Hot tub must be listed for aboveground use, 2) Listed for outdoor use, 3) Installed on or aboveground, 4) The top rim of the hot tub must be at least 28" above the perimeter surfaces within 30" horizontally.

### 3) Lighting (other than underwater applications) (if any)

- a. All non-GFCI protected lights and ceiling fans within 5' of the inside wall of the Hot Tub / Spa must be at least 12' above the maximum water level of the Hot Tub / Spa.
- b. All GFCI protected lights and ceiling fans within 5' of the inside wall of the Hot Tub / Spa must be at least 7 1/2' above the maximum water level of the Hot Tub / Spa.
- c. Exception - Lights that are within 5' of the inside wall of the Hot Tub / Spa and less than 7 1/2' above the water level are only acceptable if they meet the following:
  - i. Recessed Lights - GFCI protected with a glass or plastic lens, nonmetallic or electrically isolated metal trim, and suitable for damp locations.
  - ii. Surface-Mounted Lights - GFCI protected with a glass or plastic globe, a nonmetallic body, or a metallic body isolated from contact, and suitable for damp locations.

### 4) Other

- a. Building Permits are required. Always secure a Building Permit from your municipality prior to beginning work.
- b. Indoor Hot Tubs / Spas wall switches must be a minimum 5' from the inside wall of the Hot Tub / Spa.
- c. Outdoor Hot Tubs check for overhead wires within 10' of the Hot Tub. (Must be 22 1/2' above water level & not allowed in many towns)
- d. All Hot Tubs / Spas, other than in a single family residence, must have an emergency shutoff between 5'-50' & within sight.



PLEASE CONTACT YOUR LOCAL INSPECTOR IF YOU HAVE ANY QUESTIONS

**NEW YORK ELECTRICAL INSPECTION AGENCY**

Fritz Gunther – Chief Electrical Inspector

2767 Dewey Avenue \* Rochester, New York 14616 ~ (585) 436-4460 \* www.NYEIA.com

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