

# ELECTRICAL REQUIREMENTS

To ensure you will have an opportunity to use your spa soon after delivery, it is very important that the required electrical service has been installed. Unless otherwise stipulated by your dealer, **THIS IS YOUR RESPONSIBILITY.**

**IMPORTANT:** All electrical circuits must be installed by a qualified, licensed electrician.

**HOT SPRING** spas are manufactured in two different electrical versions. The **GRANDEE, ENVOY, VANGUARD, ARIA** and **SOVEREIGN** models are available with a 230 volt continuous heating system. These spas cannot be converted to 115 volt operation.

The remaining spa model, the **PRODIGY & JETSETTER** are available as 115/230 volt convertible heating systems. This models comes standard from the factory with 115 volt heating systems; however, with the addition of a subpanel and a control box wiring change, they can be converted to 230 volt operation. See the following sections for the electrical requirements for 115 volt operation, 230 volt operation and 230 volt converted operation.

## 115 VOLT OPERATION REQUIREMENTS

The 115 volt spa requires a dedicated 20 amp, 115 volt circuit. This circuit must be properly wired; that is, it must have a 20 amp GFCI breaker in the main electrical service panel, and #12 AWG wire (including ground wire) and the correct polarity throughout the circuit.

**WIRE SPECIFICATION NOTE:** Long electrical runs may require a larger gauge feed wire than stated. We recommend that a maximum voltage drop of 3% be used when calculating the larger wire size.

**NOTE:** The term "dedicated" means that only the spa operates on the circuit.

Each 115 volt model comes equipped with approximately 15 feet of usable power cord. (This is the maximum length allowed by Underwriters Laboratory.) When the spa is installed, the power cord will come out of the bottom of the equipment compartment.

In addition to the dedicated 20 amp, 115 volt GFCI protected circuit, your spa requires a 20 amp single receptacle. This receptacle, which contains an outdoor-rated, weather-resistant receptacle cover plate, will be provided to you. The single receptacle and cover plate should be installed by your electrician prior to the delivery of your spa.

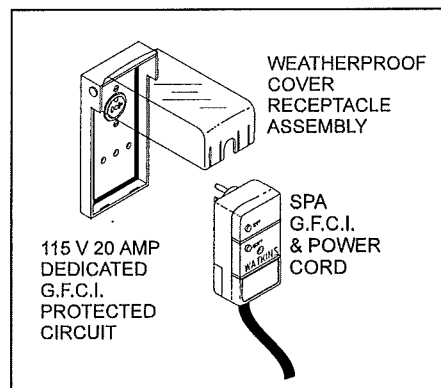
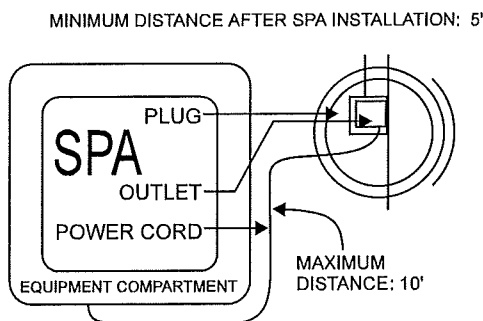
For your safety, when your electrician is installing the electrical outlet, it should be no closer than five (5) feet and no farther than ten (10) feet from the spa. (Reference National Electric Code 680-6a(1) and 680-41a.)

**WARNINGS:** Do not connect your spa to an extension cord!

The 115 volt GFCI switch and the receptacle must be protected from weather and landscape sprinklers—they should never get wet.

**NOTE:** If you require the services of a licensed electrician, your **HOT SPRING** Dealer should be able to suggest one for you.

Your **HOT SPRING** spa has been carefully engineered to provide maximum safety against electric shock. Remember, connecting the spa to an improperly wired circuit will negate many of its safety features.



## 230 VOLT OPERATION REQUIREMENTS

All models require a 50 amp, single phase, 230 volt circuit breaker in the main electrical service panel.

All 230 volt Hot Spring spas must be wired in accordance with applicable local and national electrical codes, all electrical work must be done by a licensed electrician.

**NOTE:** Watkins Manufacturing Corporation REQUIRES THE USE OF A SUBPANEL TO SUPPLY POWER AND PROTECT THE SPA. On the **GRANDEE, ENVOY, VANGUARD, ARIA** and **SOVEREIGN** models, the subpanel containing GFCI breakers is included with the spa. On the 230 volt **PRODIGY & JETSETTER** model, the subpanel containing GFCI breakers must be purchased separately and can be purchased from your **HOT SPRING** dealer.

A licensed electrician should install a four-wire electrical service (two line voltages, one neutral, one ground) from the main electrical service panel to the subpanel, and from the sub-panel to the spa per the appropriate wiring diagram as illustrated below.

The grounding conductor must be at least #10 AWG. Your electrician should mount the subpanel in the vicinity of the spa but it should not be closer than five (5) feet from the spa water edge (NEC 680-38 to 41-A-3).

**INSTALLATION NOTE:** After the spa has been installed by the dealer's delivery crew, your electrician can connect the conduit from the subpanel to the spa's IQ 2020® Control Box and then complete the wiring connections in the control box.

**IMPORTANT NOTE:** Three different wiring diagrams are shown: one for **GRANDEE, ENVOY, VANGUARD & ARIA** models. One for the **SOVEREIGN** model, and one for the **PRODIGY & JETSETTER** models. Always follow the wiring diagram for your specific model.

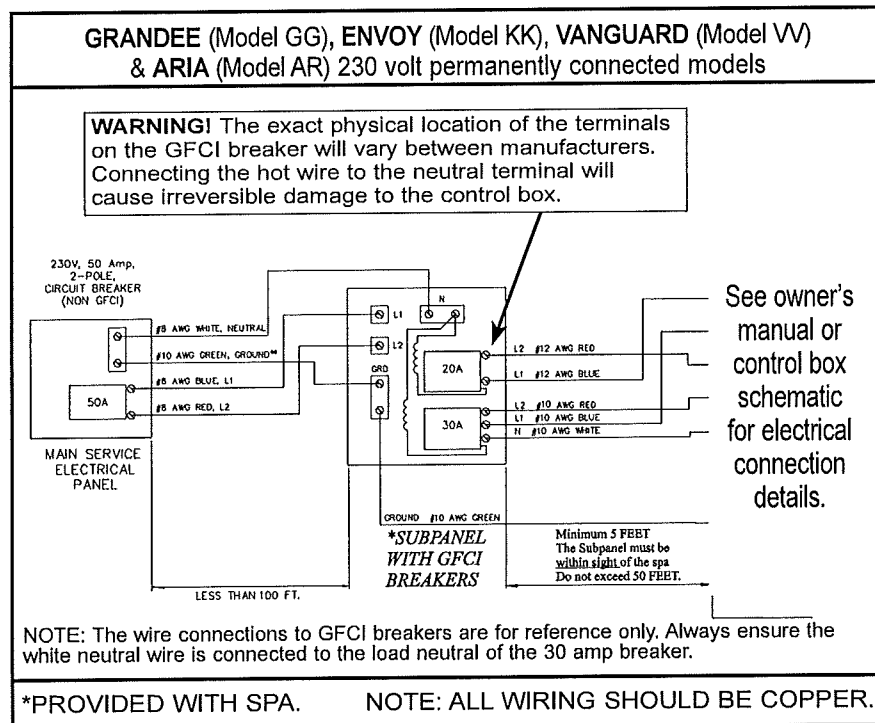
**NOTE:** Complete step-by-step Installation and Wiring Instructions for all 230 volt Hot Spring models are included in the Owner's Manual and with each sub-panel, which can be obtained from your dealer.

**WARNING:** Removing or bypassing the GFCI breakers in the subpanel at any time will result in an unsafe spa and will void the warranty.

**WIRE SPECIFICATION NOTE:** Long electrical runs may require a larger gauge feed wire than stated. We recommend that a maximum voltage drop of 3% be used when calculating the larger wire size.

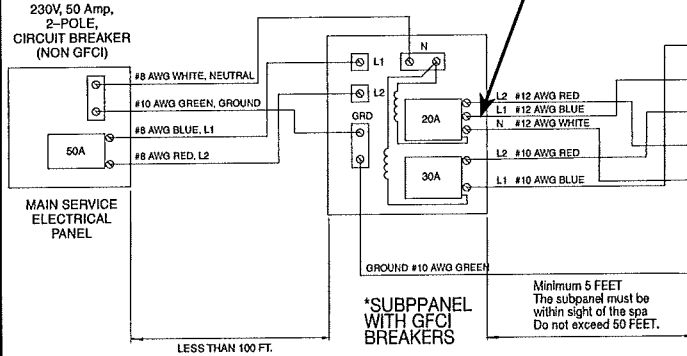
Refer to the Wiring Diagrams to the right for the electrical requirements of the 230 volt models.

When connecting the supply conduit to the bottom of the IQ 2020 box, use a 3/4" liquid-tight flex conduit fitting.



**SOVEREIGN (Model II)**  
230 volt permanently connected models

**WARNING!** The exact physical location of the terminals on the GFCI breaker will vary between manufacturers. Connecting the hot wire to the neutral terminal will cause irreversible damage to the control box.



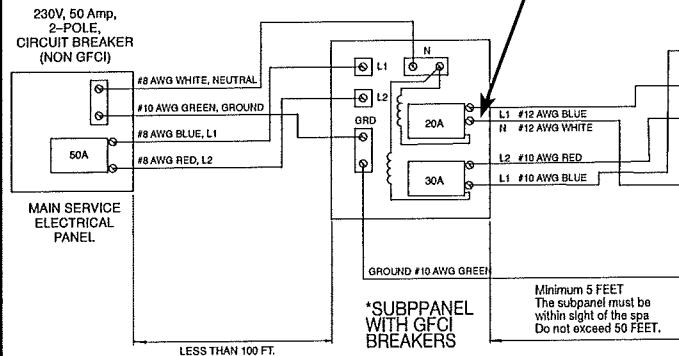
See owner's manual or control box schematic for electrical connection details.

NOTE: The wire connections to GFCI breakers are for reference only. Always ensure the white neutral wire is connected to the load neutral of the 20 amp breaker.

\*PROVIDED WITH SPA. NOTE: ALL WIRING SHOULD BE COPPER.

**PRODIGY (Model H) & JETSETTER (Model JJ)**  
230 volt converted models

**WARNING!** The exact physical location of the terminals on the GFCI breaker will vary between manufacturers. Connecting the hot wire to the neutral terminal will cause irreversible damage to the control box.



See owner's manual or control box schematic for electrical conversion and connection details.

NOTE: The wire connections to GFCI breakers are for reference only. Always ensure the white neutral wire is connected to the load neutral of the 20 amp breaker.

\*AVAILABLE FROM DEALER. NOTE: ALL WIRING SHOULD BE COPPER.