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.

230 VOLT OPERATION REQUIREMENTS

230 volt models require a 50 or 70 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 Gleam™, Pulse®, Flair® and Glow® models, the 50 amp subpanel containing GFCI breakers is included with the spa. On the converted 230 volt Gleam and Bolt™ models, 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).

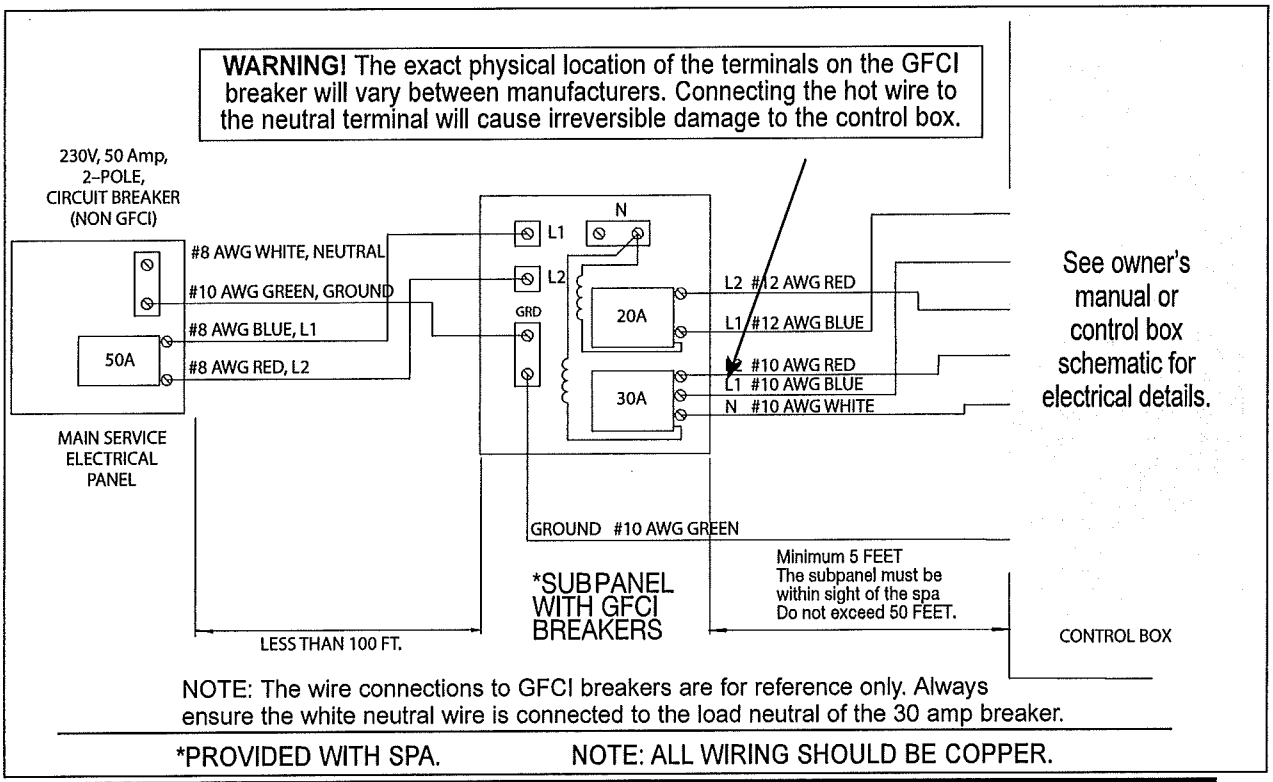
INSTALLATION NOTE: After the spa has been installed by the dealer's delivery crew, your electrician can connect the conduit from the subpanel to the spa's IQ 2020® Control Box and then complete the wiring connections in the control box.

IMPORTANT NOTE: Three different wiring diagrams are shown: one Gleam, Pulse, Flair and Glow models 50 amp, one Gleam 70 amp and one for a Bolt 50 amp model. 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.

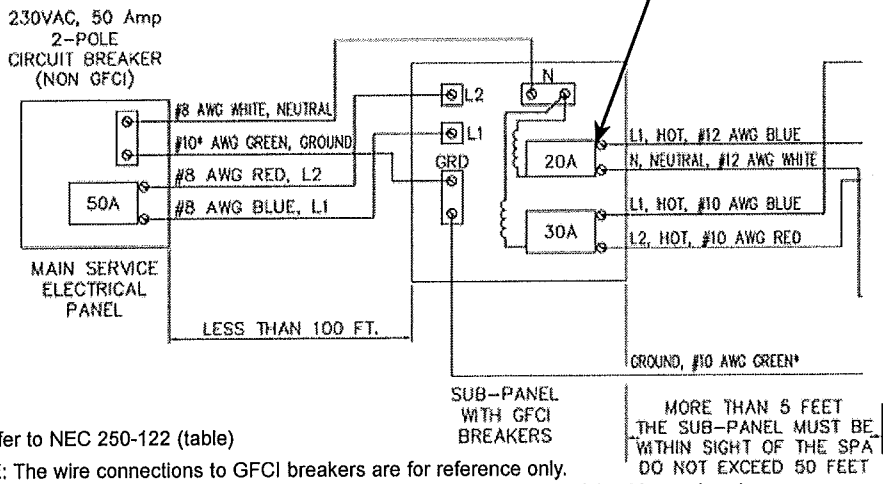
WIRE SPECIFICATION NOTE: Long electrical runs may require a larger gauge feed wire than stated. We recommend that a maximum voltage drop of 3% be used when calculating the larger wire size.

Refer to the Wiring Diagrams below for the electrical requirements of the 230 volt Pluse, Flair and Glow models.



Bolt™ (Model BLT)
230 volt converted model

IMPORTANT! 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 details.

** Refer to NEC 250-122 (table)

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. IMPORTANT: ALL WIRING SHOULD BE COPPER.

115/230 VOLT CONVERTIBLE MODEL

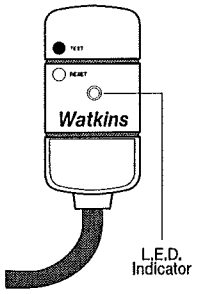
(BOLT™ MODEL)

This model can be converted to 230 volt operation with the addition of a subpanel and a control box wiring change. Consult your dealer before attempting to convert from 115 volt operation to 230 volt operation. Any damage to the spa from improper conversion is not covered under the warranty.

115 VOLT GFCI

The Ground Fault Circuit Interrupter (GFCI) is a safety device that is designed to detect as little as 5 milliamps (±1mA) of electrical current leakage to ground. Watkins Manufacturing Corporation recommends that the GFCI be tested prior to each use to ensure it is functioning correctly. With the spa connected to the power supply, push the "Test" button. The spa should stop operating and the GFCI power indicator will go out.

GFCI



Wait 30 seconds and then reset the GFCI by pushing the Reset button. The GFCI power indicator will turn on, restoring power to the spa. If the interrupter does not perform in this manner, it is an indication of an electrical malfunction and the possibility of an electric shock. Disconnect the plug from the receptacle until the fault has been identified and corrected.

IMPORTANT: Failure to wait 30 seconds before resetting the GFCI may cause the spa's Power indicator (on the control panel) to blink. If this occurs, repeat the GFCI test procedure. Never use the GFCI as a means to disconnect power to the spa (always unplug it). If the GFCI is tripped while the spa is plugged in, and a power outage occurs, when power returns the GFCI will automatically reset and power will flow to the spa.

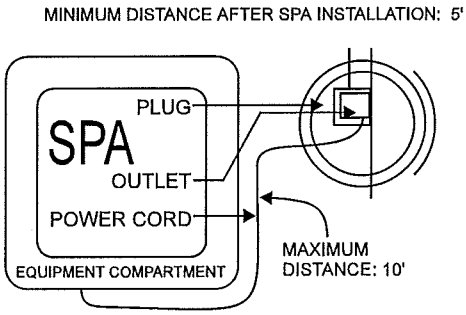
115 VOLT OPERATION (60Hz ONLY)

The spa must be connected to a dedicated 115 volt, 20 amp, GFCI protected, grounded circuit. The term "dedicated" means the electrical circuit is not being used or shared for any other electrical items (patio lights, appliances,

garage circuits, etc.). If the spa is connected to a non-dedicated circuit, overloading will result in "nuisance tripping" at the main panel. This requires frequent resetting of the breaker switch at the house electrical breaker panel and introduces the possibility of damage or failure of spa equipment. The dedicated circuit must be properly wired; that is, it must have a 20-amp GFCI circuit breaker in the house breaker panel, #12 AWG or larger wire (including the ground wire) and the correct polarity throughout the circuit.

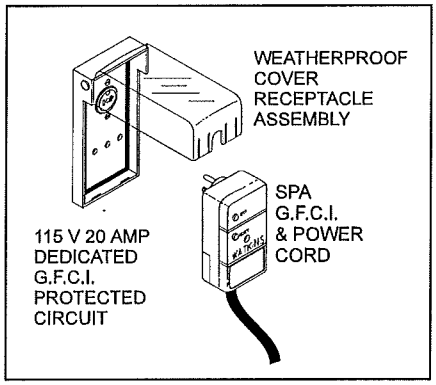
NEVER CONNECT THE SPA TO AN EXTENSION CORD!

A pressure wire connector is provided on the exterior surface of the control box, inside the spa. This is to permit the connection of a ground bonding wire between this point and any metal equipment, enclosures, reinforced concrete pad, pipe, or conduit within 5 feet of the spa (if needed to comply with local building code requirements). The bonding wire must be at least a #10-AWG solid copper wire.
Bond the spa to all exposed metal equipment or fixtures, handrails, and concrete pad per N.E.C. Article 680 and all local codes.



INSTALLATION INSTRUCTIONS

The 115 volt Bolt™ spa model comes equipped with approximately 15 feet of useable power cord (this is the maximum length allowed by Underwriters Laboratory and the National Electric Code). When the spa is installed, the power cord will come out of the bottom of the equipment compartment door. For your safety, when the electrician is installing the 20 amp single electrical outlet and waterproof cover, the outlet should be no closer than 5 feet (1.5 meters) and no farther than 10 feet from the spa [reference National Electrical Code 680-6a(1) and 680-41a].



The Ground Fault Circuit Interrupter (GFCI) is located at the end of the power cord. This device is for your protection. It is very important to protect it from rain and other moisture. Test once a month, with the plug connected to the power supply,

1. Push the "TEST" button on the GFCI breaker. The spa should stop operating and the GFCI power indicator will go out.
2. Wait 30 seconds, then push the "RESET" button. Power will be restored to the spa and the GFCI power indicator will turn on.

If the GFCI fails to operate in this manner, your spa may have an electrical malfunction, and you may be risking electrical shock. Turn off all circuits and do not use the spa until the problem has been corrected by an authorized service agent.

⚠ **WARNING:** Removal of the GFCI from the spa's power cord will result in an unsafe spa and will void the spa's warranty.

IMPORTANT: Should you ever find the need to move or relocate your Hot Spring® spa, it is essential that you understand and apply these installation requirements. 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.

ADVANTAGE TO HAVING YOUR SPA CONVERTED

In the 115 volt configuration, either the heater, or the jet pump can operate, but they can't work at the same time. In a 115 volt system, as long as the jet pump is activated, the heater will not turn on. On the other hand, when the spa is converted to operate in the 230 volt configuration, the heater and jet pump can operate simultaneously.

The heater will operate at 1500 watts when the spa is configured as a 115 volt cord-and-plug connected model, and at 6000 watts when the spa is configured as a 230 volt converted model heating your spa water faster.