



United States, Canada, and International

PORTABLE SPA PRE-DELIVERY GUIDE



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This guide is intended for owners of Cal Spas portable spas.

If you have an in-ground spa, you will need the Cal Spas In-ground Spa Pre-Delivery Guide, available on the Cal Spas web site.

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Due to continuous improvement programs, all models, operation, and/or specifications are subject to change without prior notice.

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CONTACT INFORMATION

For customer service, please contact your authorized dealer immediately. If you need additional information and/or assistance, please contact:

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Pre-Delivery Checklist

Most cities and counties require permits for exterior construction and electrical circuits. In addition, some communities have codes requiring residential barriers such as fencing and/or self-closing gates on property to prevent unsupervised access to the property by children under the age of 5. Your dealer can provide information on which permits may be required and how to obtain them prior to the delivery of your spa.

For additional operating and installation information, please see your selling dealer.

Before Delivery	
	Plan your delivery route
	Choose a suitable location for the spa
	Lay a 3" - 4" concrete slab
	Install dedicated electrical supply
After Delivery	
	Place spa on slab
	Connect electrical components

Planning the Best Location

Safety first

Do not place your spa within 10 feet (3 m) of overhead power lines.

Make sure the spa is positioned so that access to the equipment compartment and all side panels will not be blocked. Be certain that your installation will meet all city and local safety codes and requirements.

Consider how you will use your spa

How you intend to use your spa will help you determine where you should position it. For example, will you use your spa for recreational or therapeutic purposes? If your spa is mainly used for family recreation, be sure to leave plenty of room around it for activity. If you will use it for relaxation and therapy, you'll probably want to create a specific mood around it.

Plan for your environment

If you live in a region where it snows in the winter or rains frequently, place the spa near a house entry. By doing this, you will have a place to change clothes and not be uncomfortable.

Consider your privacy

In a cold-weather climate, bare trees won't provide much privacy. Think of your spa's surroundings during all seasons to determine your best privacy options. Consider the view of your neighbors as well when you plan the location of your spa.

Provide a view with your spa

Think about the direction you will be facing when sitting in your spa. Do you have a special landscaped area in your yard that you find enjoyable? Perhaps there is an area that catches a soothing breeze during the day or a lovely sunset in the evening.

Keep your spa clean

Prevent dirt and contaminants from being tracked into your spa by placing a foot mat at the spa's entrance where the bather's can clean their feet before entering your spa. You may also consider keeping a small water-filled basin nearby for bathers to rinse their feet before entering your spa.

In planning your spa's location, consider a location where the path to and from the house can be kept clean and free of debris.

Allow for service access

Many people choose to install a decorative structure around their spa. If you are installing your spa with any type of structure on the outside, such as a gazebo, remember to allow access for service. It is always best to design special installations so that the spa can still be accessed.

Site Preparation

Your spa needs a solid and level foundation. The area that it sits on must be able to support the weight of the spa, with water and the occupants who use it. If the foundation is inadequate, it may shift or settle after the spa is in place, causing stress that could DAMAGE YOUR SPA SHELL AND FINISH.

Damage caused by inadequate or improper foundation support is not covered by the warranty. It is the responsibility of the spa owner to provide a proper foundation for the spa.

Place the spa on an elevated 3" - 4" concrete slab. Pavers, gravel, brick, sand, timbers or dirt foundations are **not** adequate to support the spa.

We strongly recommend that a qualified, licensed contractor prepare the foundation for your spa.

If you are installing the spa indoors, pay close attention to the flooring beneath it. Choose flooring that will not be damaged or stained.

If you are installing your spa on an elevated wood deck or other structure, it is highly recommended that you consult a structural engineer or contractor to ensure the structure will support the weight of 150 pounds per square foot.

To properly identify the weight of your new spa when full, remember water weighs 8.33 lbs. per gallon. For example, an average 8' spa holds approximately 500 gallons of water. Using this formula, you will find that the weight of the water alone is 4,165 lbs. Combined with the dry weight of the spa you will note that this spa will weigh approximately 5,000 lbs. when full of water.

Your Cal Spas retailer can help you with your foundation and more. Your retailer has a wealth of information and experience about how to get the most out of your spa and can provide you with a full line of accessories that are designed to complement your spa and increase your enjoyment.

Placement of Spa for Service Access

While you are planning where to locate your spa, you need to determine how much access you will need for service.

All spa models require access to the front of the spa for periodic service. For this reason, the spa should never be placed in a manner where the front is permanently blocked. Examples include placing the front of the spa against a building, structural posts or columns, or a fence.

For some spa models, the sides and the back do not require service access and can be placed where you wish, provided the spa is on a 3" - 4" concrete slab. See the figure on the next page.

Other spa models require access to the sides or rear should if they ever need service or repair. See the figure on page 6.

If you are planning to enclose or surround your spa with a deck, make sure there is access for service or repair.

These spas require clearance in the front of the spa only.

- Genesis series
- Escape series (except ES864B, which also requires clearance on the RIGHT SIDE)
- Family series (except FA890B with three pumps)

*1' minimum distance from
edge of concrete slab*

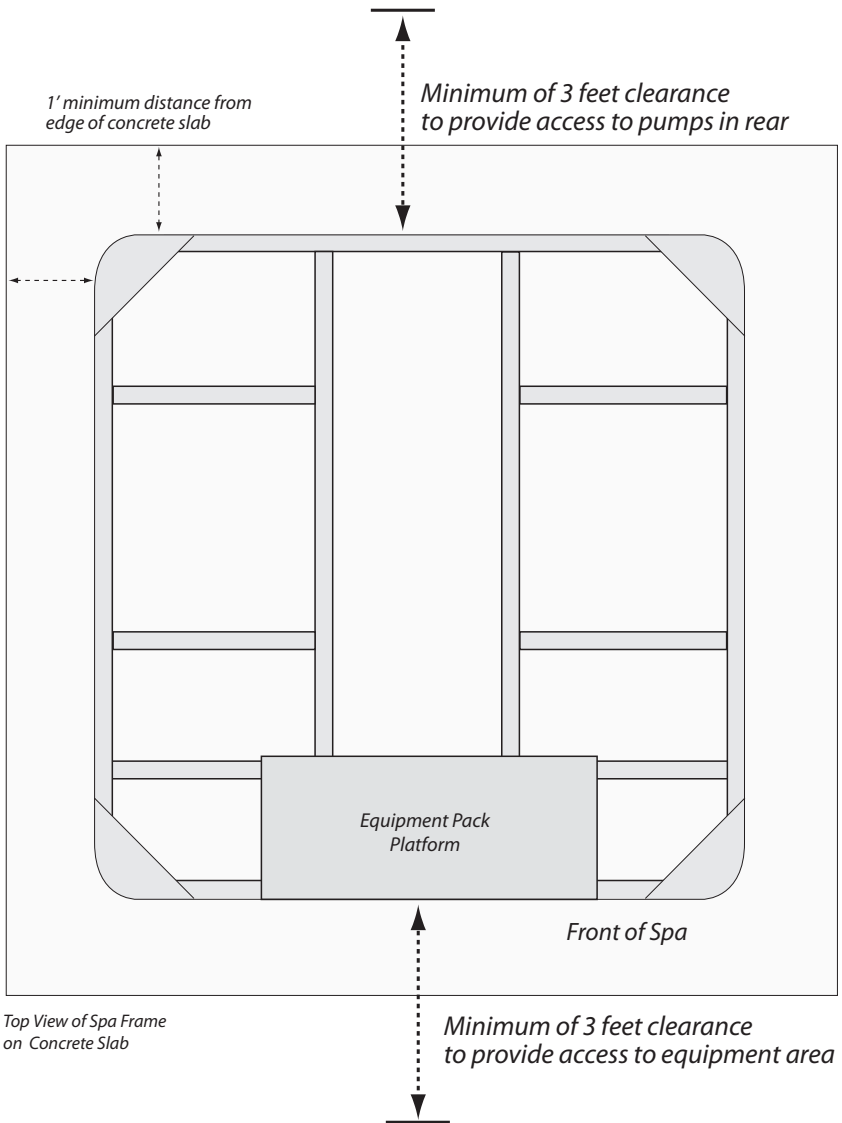


*Top View of Spa Frame
on Concrete Slab*

Not to scale

These spas require clearance in both the front and the rear of the spa.

- Diamond series
- Platinum series
- Fitness series
- FA890B (with three pumps)



Not to scale

Electrical Service Stub-up

The location of the electrical service cable is a decision each spa owner needs to decide. Running the electrical cable lay on top of the slab is visually unappealing and can present a trip hazard.

Most spa owners prefer to bury electrical conduit before the slab is laid and run the cable into the spa cabinet. The location of the conduit in the concrete slab is called the stub-up.

The stub-up location for both 7' and 8' spas should be 8" in from the left of the spa and 13" inches in from the front of the spa. See the drawing on the next page.

We do not recommend the stub-up extending higher than 4" above the concrete slab.

Spas equipped with a pump in the left corner will need to have a hole drilled in the spa's equipment pack platform to allow the electrical wiring to pass through. The hole should be no larger than 3" in diameter.

This applies to all portable spas except:

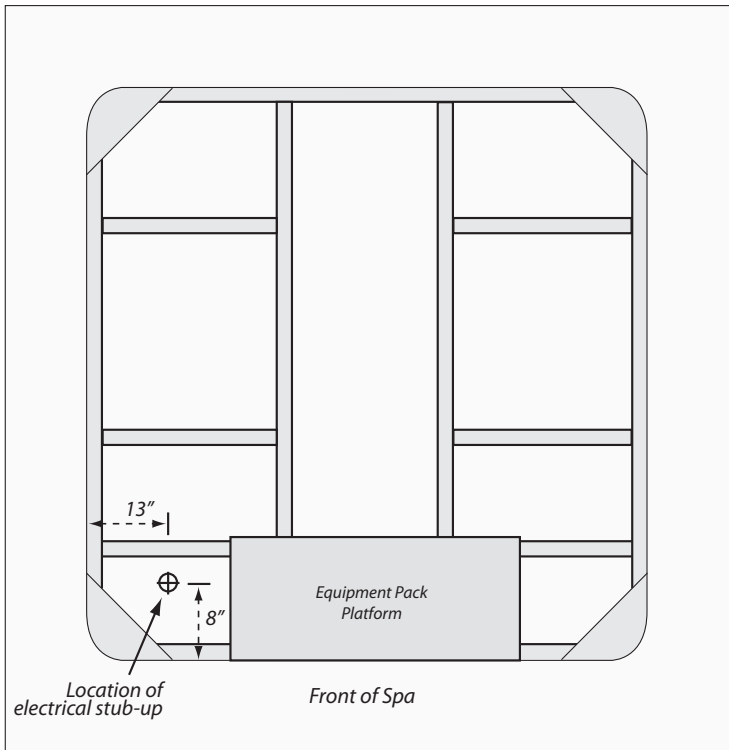
- Models ES534L, ES625T, FA581R, FA520L, G418T, and G318R

For these spas, the stub-up can be located in the left or right front corner without interference with spa equipment.

- FP4700

See the following page for electrical stub-up information for this model.

*Top View of Spa Frame
on Concrete Slab*

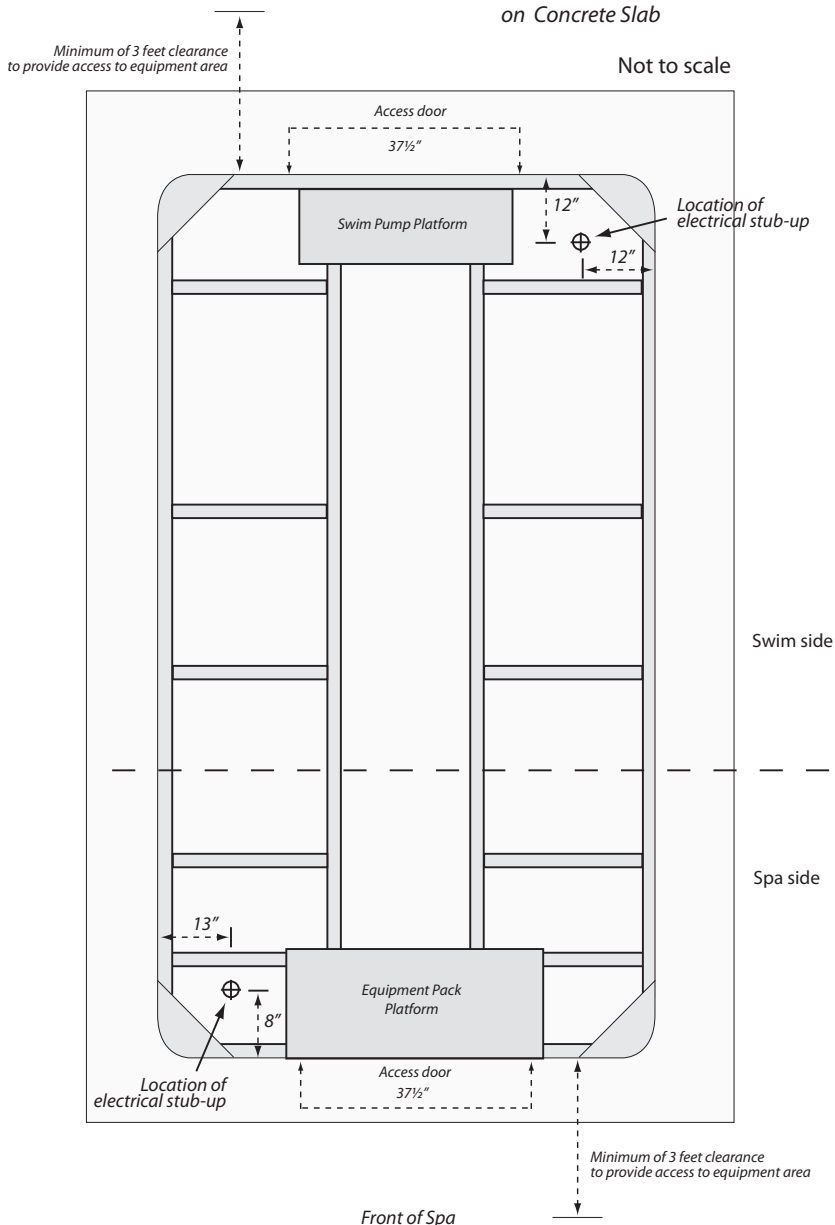


Not to scale

This applies to FP4700 spa only.

*Top View of 4700 Swim Spa Frame
on Concrete Slab*

Not to scale



Getting the Spa Into Your Yard

Check the Dimensions of Your New Spa

The specification chart on page 22 lists your spa's model and its dimension as it sits on the delivery cart. During delivery, the spa must remain on the delivery cart at all times. Compare the dimensions to the width of the gates, sidewalks, and doorways along the delivery route. It may be necessary for you to remove a gate or partially remove a fence in order to provide an unobstructed passageway to the installation location.

Plan the Delivery Route

Consider the following when planning your delivery route:

- Check the width of gates, doors and sidewalks to make sure your spa will pass through unobstructed. You may have to remove a gate or part of a fence to allow for adequate width clearance.
- Are there low roof eaves, overhanging branches or rain gutters that could be an obstruction to overhead clearance?
- 8' spas need at least 42" wide gate and 9' height clearance.
- If the delivery route will require a 90° turn, check the measurements at the turn to ensure the spa will fit.
- Are there protruding gas meters, water meters or A/C units on your home which will cause obstructions along the delivery path to your yard?
- Are there stairs in your delivery route? If so, you must consult your Cal Spas dealer prior to delivery to make adequate preparations.

Special Circumstances

The use of a crane for delivery and installation may become necessary if you are unable to provide an adequate delivery route. It is used primarily to avoid injury to your spa, your property or to delivery personnel. Your Cal Spas dealer may be able to assist you with the arrangements. If your spa delivery requires the use of a crane, the cost of a crane is generally not included in the standard delivery service.

Check your width clearance

- Check all gates
- Protruding electric meters
- Gas meters
- A/C units

Do you have sufficient overhead clearance?

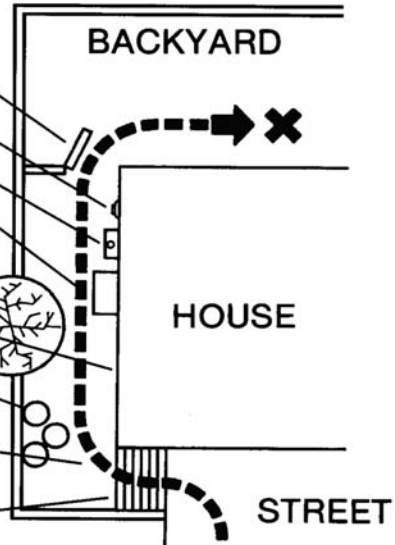
Check low roof eaves, overhanging branches, rain gutters

Is the path clear?

Move away branches, dog houses, firewood, etc.

If there is a 90° turn, can we clear it?
(The spa will not bend.)

No stairs! If there are stairs in the delivery route, consult the dealer.



Electrical Requirements

Electrical Requirements – US and Canada

240 Volt Electrical Installation

All 240V spas must be permanently connected (hard wired) to the power supply. See the wiring diagram on page 15.

These instructions describe the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty and may result in serious injury.

When installed in the United States, the electrical wiring of this spa must meet the requirements of NEC 70 and any applicable local, state, and federal codes.

The electrical circuit must be installed by an electrical contractor and approved by a local building or electrical inspector.

Failure to comply with state and local codes may result in fire or personal injury and will be the sole responsibility of the spa owner.

240V GFCI and Wiring Requirements

The power supplied to the spa must be on a dedicated GFCI protected circuit as required by NEC 70 with no other appliances or lights sharing the power.

Use copper wire with THHN insulation. Do not use aluminum wire.

Use the table on the next page to determine your GFCI and wiring requirements.

Wire runs over 85 feet must increase wire gauge to the next lower number. For example: A normal 50 amp GFCI with four #6 AWG Copper wires run over 85 feet would require you to go to four #4 AWG copper wires.

All 5100DV and 6200DV control systems are set at the factory to run on the low power setting for 40 amp operation. This is the default setting. Spa owners can have their installer change this setting so the spa will run on high power for 50 amp operation. **See configuration instructions on page 16.**

Warning: Never set a spa to run on high power without installing a properly rated GFCI.

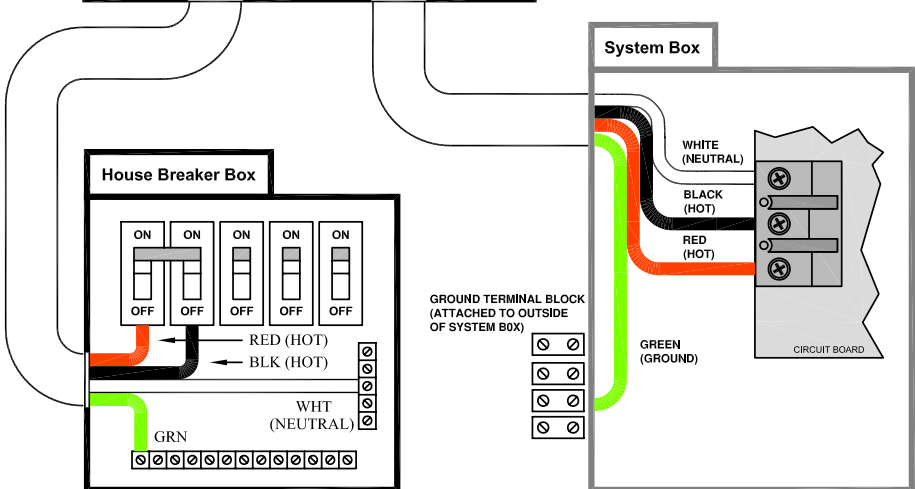
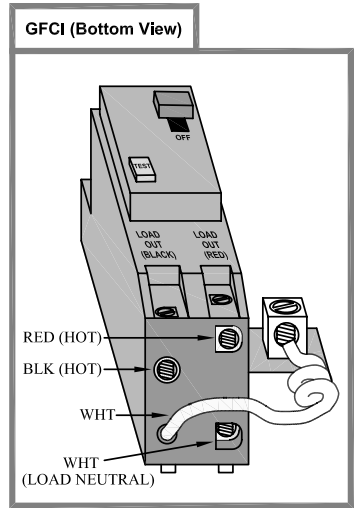
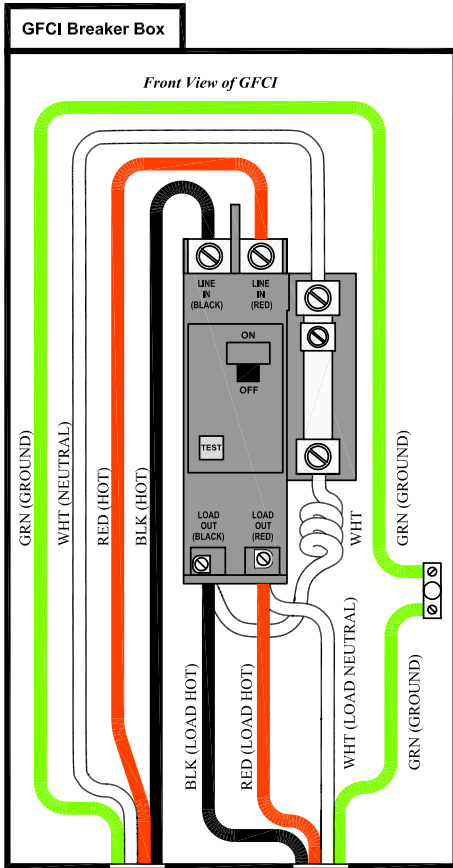
All Portable Spas (except Ultimate Fitness -- see next page)

Control System	Power Setting	GFCI Required	Wires Required
VS300	Standard	One 40 amp GFCI	Four #8 AWG copper wires
5100DV 6200DV	Power saver mode (This is the factory default setting.)	One 40 amp GFCI	Four #8 AWG copper wires
	High power setting See configuration instructions on page 16.	One 50 amp GFCI	Four #6 AWG copper wires
6300DV	Power saver mode	One 50 amp GFCI	Four #6 AWG copper wires
	Default high power setting See configuration instructions on page 16.	One 60 amp GFCI	Four #6 AWG copper wires
9800 (except Ultimate Fitness spas -- see next page)	Standard	One 50 amp GFCI	Four #6 AWG copper wires

Ultimate Fitness Spas

Spa Model		GFCI Required	Wires Required	GFCI Required	Wires Required
		Standard configuration (5.5 kW heater)		Configuration for Option 499 (11 kW heater) and Option 157 (swim jets with Speck pump)	
F1255	Service 1	One 50 amp GFCI	Four #8 AWG copper wires	One 60 amp GFCI	Four #8 AWG copper wires
	Service 2			One 30 amp GFCI	Three #8 AWG copper wires
FP1455 FP1655 FP2400 FP2500	Service 1	One 50 amp GFCI	Four #8 AWG copper wires	One 60 amp GFCI	Four #8 AWG copper wires
	Service 2	One 50 amp GFCI	Four #8 AWG copper wires	One 30 amp GFCI	Three #8 AWG copper wires
FP4700	Service 1 (swim side)	One 50 amp GFCI	Four #8 AWG copper wires	One 60 amp GFCI	Four #8 AWG copper wires
	Service 2 (swim side)	One 30 amp GFCI	Three #8 AWG copper wires	One 30 amp GFCI	Three #8 AWG copper wires
	Service 3 (spa side)	One 40 amp GFCI	Four #8 AWG copper wires	One 40 amp GFCI	Four #8 AWG copper wires

GFCI Wiring Diagram



High Power Configuration

DIP Switch Definitions for 5100DV, 6200DV, and 6300DV systems

OFF Position (Down)		ON Position (Up)
Test Mode OFF	◀ A1	Test mode (normally OFF)
Standard / Economy / Sleep Mode changes allowed	◀ A2	Standard Mode only
Use Digital Duplex or Light Duplex plane	◀ A3	Use Mini Panel
Pump 2 enabled	◀ A4	Pump 2 disabled
Single voltage heating (240VAC only)	A5 ▶	Dual voltage heating enabled
Safety Suction (must be OFF)	◀ A6	
See table at right	A7 ▶	See table at right
Temperature displayed in Fahrenheit	◀ A8	Temperature displayed in Celsius
No circ pump; Pump 1 is two-speed	◀ A9	Circ pump acts like Pump 1 low speed (filter cycle, polling); Pump 1 is one-speed
See table at right	◀ A10	See table at right

Note: Arrow indicates factory default setting.

Number of high speed pumps that can be run before heater is disabled (A5 OFF)

OR

before heater runs at 120VAC (A5 ON)

No. of Pumps	A7	A10
0	OFF	OFF
1	ON	OFF
2	OFF	ON
3	ON	ON

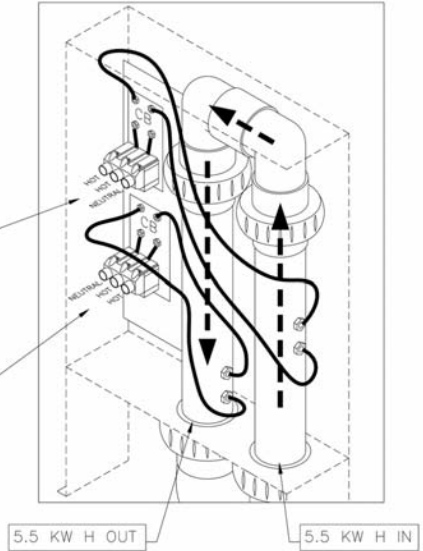
Electrical Installation for 11 kW Heater

This applies to Fitness spas with the 11 kW heater only.

Two electrical services are required to heat the swim side of the Fitness Spa.

SOURCE #2
INPUT POWER 30AMPS
3 WIRES
HOT, HOT, GROUND
AWG #8

SOURCE #1
INPUT POWER 60 AMPS
4 WIRES
HOT, HOT, NEUTRAL GROUND
AWG #8



Testing the GFCI Breaker

Test the GFCI plug prior to first use and periodically when the spa is powered. To test the GFCI plug version, follow these instructions. (Spa should already be plugged in and operational.)

1. Press the TEST button on the GFCI. The GFCI will trip and the spa will stop operating.
2. Press the RESET button on the GFCI. The GFCI will reset and the spa will turn back on.

The spa is now safe to use.

If the GFCI trips while the spa is in use, press the RESET button. If the GFCI does not reset, unplug the spa and call your local Cal Spas dealer for service. **DO NOT USE THE SPA!**

120 Volt Electrical Installation

Always follow applicable local, state and federal codes and guidelines.

Use only a dedicated electrical line with a 20-amp breaker.

Cord-and-plug connections may not use a cord longer than 15 ft (4.6 m) and must be plugged into a dedicated 20-amp GFCI connection. Do not use extension cords!

Always use a weatherproof-covered receptacle.

Receptacle shall be located not less than 5 ft (1.5 m) from and not exceeding 10 ft (3.0 m) from the inside wall of the spa.

Do not bury the power cord.

If your cord becomes damaged, replace it before next usage.

All 120V spas must have a GFCI. This can be either a 20-amp GFCI receptacle or a GFCI cord and plug kit as shown at right (CKIT110 - P/N ELE09700086).



Electrical Installation -- Europe

230 Volt Electrical Installation

All 230V spas must be permanently connected (hardwired) to the power supply. These instructions describe the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty and may result in serious injury.

This is the only acceptable electrical wiring procedure. Spas wired in any other way will void your warranty. See the wiring diagram on page 21.

The electrical wiring of this spa must meet the requirements of any applicable local, state, and federal codes. The electrical circuit must be installed by an electrical contractor and approved by a local building / electrical inspector.

RCD and Wiring Requirements

The power supplied to the spa must be on a dedicated RCD protected circuit with no other appliances or lights sharing the power.

Use copper wire with THHN insulation. Do not use aluminum wire.

Use the table on the next page to determine your GFCI and wiring requirements.

When wires larger than #6 AWG are required, install a junction box near the spa and use #6 AWG wire between the junction box and the spa.

Wire runs over 85 feet must increase wire gauge to the next lower number. For example: A normal 50 amp RCD with four #8 AWG copper wires run over 85 feet would require you to go to four #6 AWG copper wires.



Testing the RCD Breaker

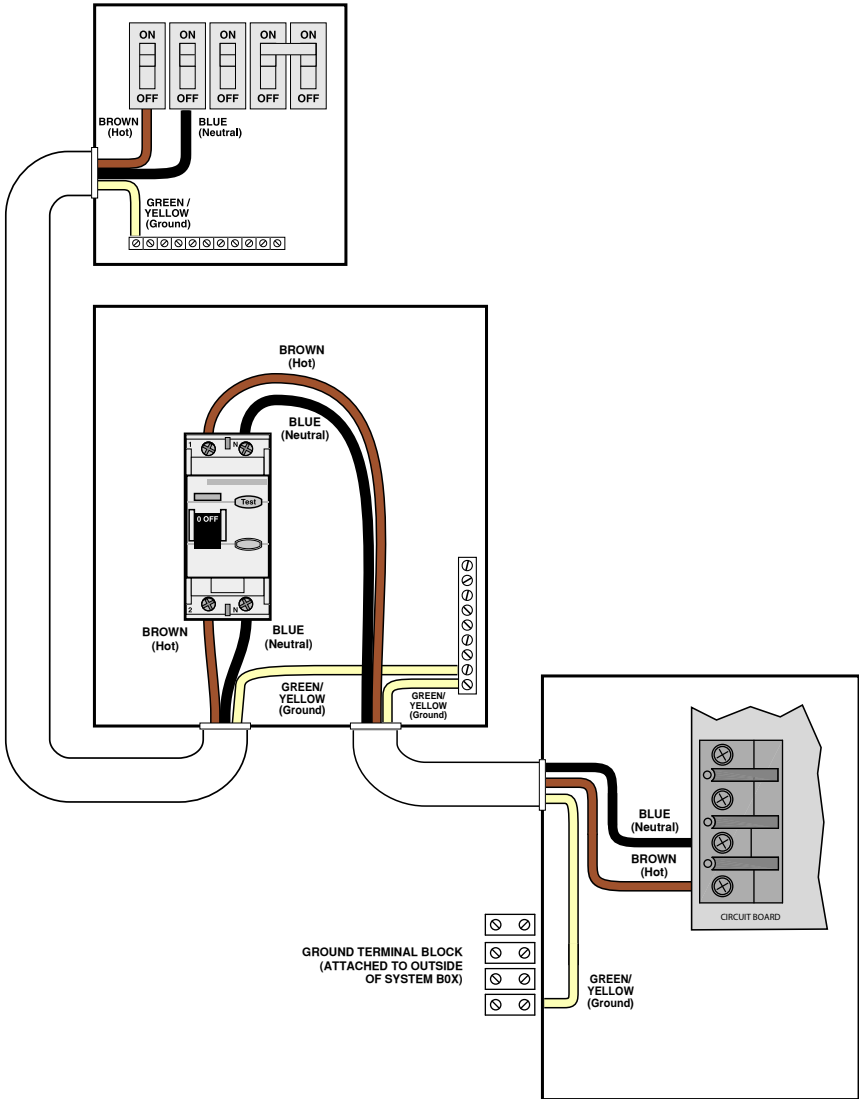
Test the RCD breaker prior to first use and periodically when the spa is powered. To test the RCD breaker follow these instructions (spa should be operating):

1. Press the TEST button on the RCD. The RCD will trip and the spa will shut off.
2. Reset the RCD breaker by switching the breaker to the full OFF position, wait a moment, then turn the breaker back on. The spa should have power again.

	Spa Model	GFCI Required	Wires Required
Portable Spas	All 230V spas except spas with 6205 control box and Ultimate Fitness spas	One 32 amp RCD or two 16 amp RCDs	Three #10 AWG copper wires
	Spas with the 6205 control box	One 32 amp RCD or two 16 amp RCDs	Four #10 AWG copper wires

Ultimate Fitness Spas	Fitness spa with 5.5 kW heater <i>F1257, FP2400</i>	One 32 amp RCD or two 16 amp RCDs	Four #10 AWG copper wires
	Fitness spa with one 5.5 kW heater and one 3 kW heater <i>F1257, F1455, FP1655, FP2500, FP2400</i>	Service 1: One 32 amp RCD or two 16 amp RCDs Service 2: One 32 amp RCD	Service 1: Three #10 AWG copper wires Service 2: Two #10 AWG copper wires
	Fitness Pro 4700 spa	Service 1 (swim side): One 32 amp RCD Service 2 (swim side): One 32 amp RCD Service 3 (spa side): One 32 amp RCD	Service 1: Three #10 AWG copper wires Service 2: Three #10 AWG copper wires Service 3: Three #10 AWG copper wires

RCD Wiring Diagram



Spa Technical Specifications

All sizes on this chart represent outside dimensions. Due to our continuous improvements, specifications, size and pricing are subject to change without prior notice.

Diamond and Platinum Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
DI750B / PL750B	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI750L / PL750L	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI760B / PL760B	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI760L / PL760L	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI770B / PL770B	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI770L / PL770L	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI780B / PL780B	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI780L / PL780L	84"	84"	39½"	425	850 Lbs.	4390 Lbs.
DI850B / PL850B	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI850L / PL850L	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI860B / PL860B	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI860L / PL860L	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI870B / PL870B	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI870L / PL870L	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI880B / PL880L	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI880L / PL880B	93"	93"	39½"	450	900 Lbs.	4648 Lbs.
DI970A	93"	130"	39½"	800	1200 Lbs.	7864 Lbs.
DI970N	93"	130"	39½"	800	1200 Lbs.	7864 Lbs.

Escape Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
ES536L	84"	64"	32"	226	535 Lbs.	2418 Lbs.
ES628T	72"	72"	35"	130	600 Lbs.	1683 Lbs.
ES732B	84"	84"	39½"	425	800 Lbs.	4340 Lbs.
ES732L	84"	84"	39½"	425	800 Lbs.	4340 Lbs.
ES748B	84"	84"	39½"	425	800 Lbs.	4340 Lbs.
ES748L	84"	84"	39½"	425	800 Lbs.	4340 Lbs.
ES848B	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES848L	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES861B	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES861L	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES864B	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES864L	93"	93"	39½"	450	900 Lbs.	4650 Lbs.
ES938L	93"	130"	39½"	800	1200 Lbs.	7864 Lbs.
ES947E	93"	138"	39½"	900	1250 Lbs.	8747 Lbs.

Fitness and Fitness Pro Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
F1255	93"	141"	51"	1500	1600 Lbs.	14095 Lbs.
FP1455	93"	171"	51"	1800	1800 Lbs.	16794 Lbs.
FP1655	93"	189"	51"	2100	2000 Lbs.	19493 Lbs.
FP2400	93"	166"	51"	2000	1600 Lbs.	18260 Lbs.
FP2500	93"	200"	51"	2500	2000 Lbs.	22825 Lbs.
FP4700	93"	199"	51"	2000 / 285	2950 Lbs.	21985 Lbs.

Family Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
FAi518	83"	43"	31"	230	250 Lbs.	2165 Lbs.
FA518R	78"	Round	36"	300	350 Lbs.	2849 Lbs.
FA520L	54"	78"	32"	125	430 Lbs.	1471 Lbs.
FA625T	72"	72"	34"	130	600 Lbs.	1682 Lbs.
FA630B	84"	76"	34"	325	735 Lbs.	3442 Lbs.
FA630L	84"	78"	32"	340	740 Lbs.	3572 Lbs.
FA736B	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA736L	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA750L	90"	84"	35"	425	800 Lbs.	4340 Lbs.
FA760B	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA760L	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA770B	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA770L	84"	84"	35"	425	800 Lbs.	4340 Lbs.
FA850B	90"	90"	35"	450	900 Lbs.	4648 Lbs.
FA850L	90"	90"	35"	450	900 Lbs.	4648 Lbs.
FA890B	90"	90"	35"	450	900 Lbs.	4648 Lbs.
FA890L	90"	90"	35"	450	900 Lbs.	4648 Lbs.

Genesis Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
G318R	90"	Round	32"	300	500 Lbs.	3000 Lbs.
G418T	87"	115"	32"	130	600 Lbs.	1683 Lbs.
G518B	89"	89"	32"	325	735 Lbs.	3442 Lbs.
G518L	90"	90"	32"	325	650 Lbs.	3357 Lbs.

Gen II Series						
Model	Width	Length	Depth	Gallons	Dry Weight	Filled Weight
GII-511R	78"	Round	36"	300	350 Lbs.	2850 Lbs.
GII-621T	72"	72"	35"	130	600 Lbs.	1683 Lbs.
GII-730B	84"	84"	35"	425	800 Lbs.	4340 Lbs.
GII-730L	84"	84"	35"	425	800 Lbs.	4340 Lbs.



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