



Portable Spa Pre-Delivery Guide

240V / 60 Hz Installation 230V / 50 Hz Installation

For spas sold after January 1, 2015 in the United States, Canada, and Internationally



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Cal Spas Home Resort™

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This guide is intended for owners of Cal Spas portable spas sold in the United States, Canada and world-wide after January 1, 2015.

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, contact:

**LMS Customer Service Department
1462 East Ninth Street
Pomona, CA 91766.**

Toll Free: 1-800-CAL-SPAS
Fax: 1-909-629-3890

Locating Your Spa

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. Your dealer can provide information on which permits may be required and how to obtain them prior to the delivery of your spa.

Before Delivery	
	Choose a suitable location for the spa
	Plan your delivery route
	Lay a 5 - 8 cm 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.

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 will 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

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.

Prevent dirt and contaminants from being tracked into your spa by placing a foot mat at the spa's entrance where the bathers can clean their feet before entering your spa.

Allow for Service Access

Make sure the spa is positioned so that access to the equipment compartment and all side panels will not be blocked.

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 moved, or lifted off the ground.

Getting the Spa Into Your Yard

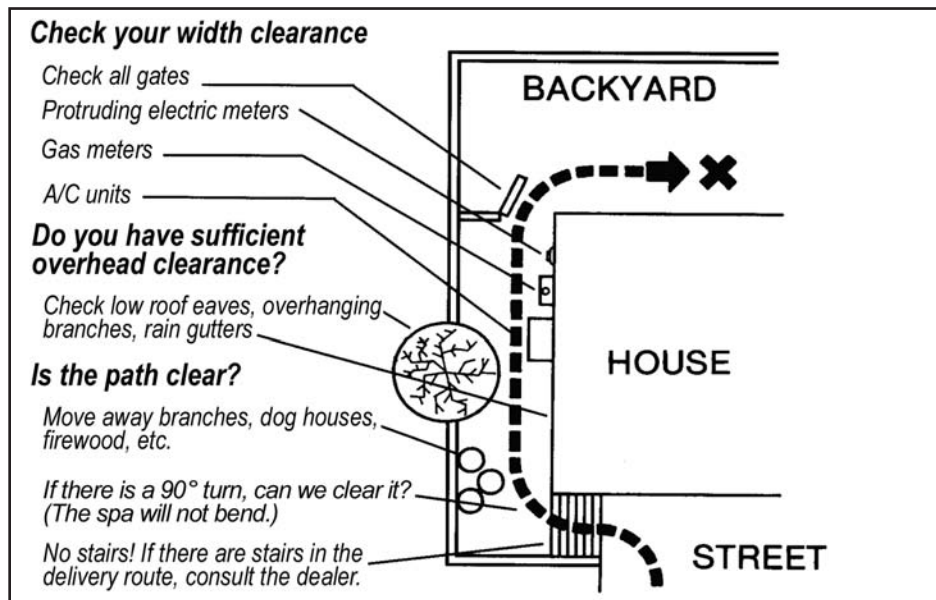
Check the Dimensions of Your New Spa

The specification chart on page 20 lists your spa's model and its dimensions. 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.

Preparing a Good Foundation

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 to 4" / 30 cm 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 (732 kg / m²).

To properly identify the weight of your new spa when full, remember water weighs 8.33 lbs. per gallon, or 1 kg per liter. For example, an average 8' spa holds approximately 500 gallons, or 1892 liters, of water. Using this formula, you will find that the weight of the water alone is 4,165 lbs, or 1892 kg. Combined with the dry weight of the spa you will note that this spa will weigh approximately 5,000 lbs, or 2267 kg, when full of water.



Important: See pages 5 and 6 for planning the stub-up location before the foundation is laid.

Clearance for Service Access

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

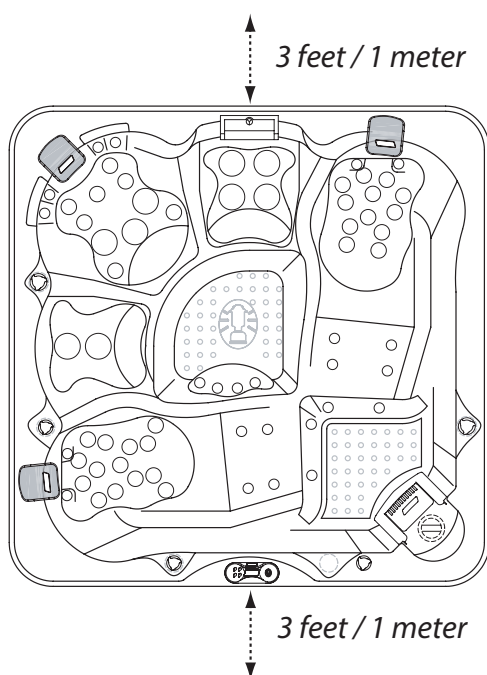
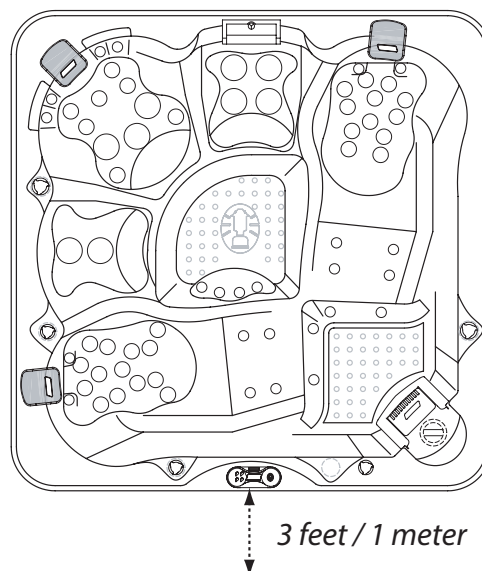
All spa models require a minimum of three feet / one meter access to the front of the spa for periodic service. For this reason, the spa should never be placed in a manner where the front is permanently blocked. Examples include placing the front of the spa against a building, structural posts or columns,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

Most spa models do not require service access to the back and can be placed where you wish. Other spa models require access to both the front and back in case they need service or repair. See the figures below.

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.

- Gen II series
- Zone series
- New Age series
- Connect series
- Escape series without ATS option



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

- Escape series with ATS option
- Platinum
- Fitness series

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 up through the slab. The location of the conduit in the concrete slab is called the stub-up.

You will need to have a contractor lay down a concrete slab before the spa is delivered (as described on page 3). The stub-up needs to be located directly next to the cabinet as shown in the figures below.

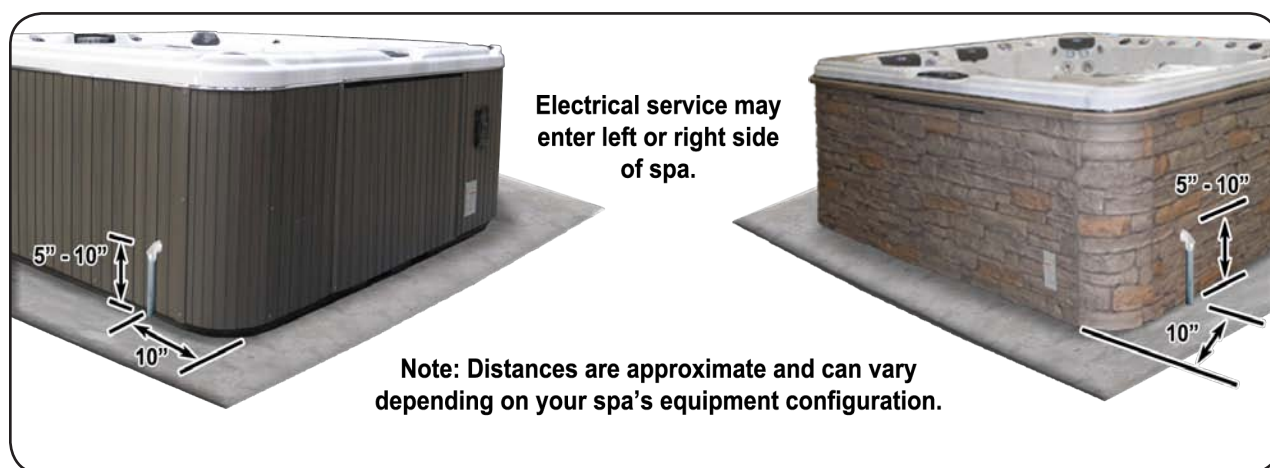
The spa installer or electrician will need to drill a hole in the spa cabinet approximately 5"-10" / 12-25 cm up from the concrete slab. This will be where the conduit will enter the spa equipment area.

Use rigid pipe and a metal elbow outside the spa. You can use flex pipe inside the equipment area to run the electrical wire from the elbow to the control box.

Square and Rectangular Spas

The stub-up should be approximately 10" / 25 cm back from the front of the spa and no higher than 10" / 25 cm above the concrete slab. It can be placed on either the left or right side of the spa.

Note: The swim spa F1770 requires TWO stub ups: one for the front end and a second for back end. They can be placed on either the left or right side as shown below.



Hiding the Stub-up

Some spa owners prefer to locate the stub-up inside the spa cabinet. While this is certainly an option for providing electrical service to your spa, we can not provide the location of the stub-up for your particular spa model. Cal Spas manufactures a large number of different spa models, each with different options and configurations.

If you want to hide the stub-up inside the cabinet, you will have to wait until it is delivered to determine the best location where it will not interfere with the spa equipment.

Triangular and Round Spas

The stub-up for triangular spas can be hidden behind the corner on one side. It can be seen only when you face the rear of the spa (as shown in the figure below). The stub-up should be approximately 10" / 25 cm back from the front of the spa and no higher than 10" / 25 cm above the concrete slab. It can be placed on either the left or right side of the spa.

The stub-up for round spas can be hidden slightly behind the curvature of the spa on the left side (as it is viewed from the back). The stub-up should be no higher than 10" / 25 cm above the concrete slab.



Electrical Requirements

240V 60 Hz Electrical Installation

All 240V spas must be permanently connected (hard wired) to the power supply. See the GFCI and wiring requirements on page 7.

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.

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 below and 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.

GFCI and Wiring Requirements

Applies to all spa models except Ultimate Fitness -- see next page

Control System	GFCI Required	Wires Required	Wiring Diagram
BP501G1 (one pump system)	One 40 amp GFCI	Four #6 AWG copper wires	Use wiring diagram 1 (see page 9)
BP501G1 (two pump system)	One 50 amp GFCI	Four #6 AWG copper wires	
BP501X BP20X			

Applies to all fitness spas except F-1770**Standard configuration with one 5.5 kW heater**

Spa Model	Control System	GFCI Required	Wires Required	Wiring Diagram
F-1222	BP501G1	One 40 amp GFCI	Four #8 AWG copper wires	Use wiring diagram 1 (see page 9)
F-1420	BP501G1	One 40 amp GFCI		
F-1439	BP501X	One 50 amp GFCI		
F-1640	BP20X	One 60 amp GFCI		

Configuration for Option OPT15-200 (auxiliary 5.5 kW heater)

Spa Model	Control System	GFCI Required	Wires Required	Wiring Diagram
F-1222	BP501G1	One 40 amp GFCI and one 30 amp GFCI	Seven #8 AWG copper wires	Use wiring diagram 2 (see page 10)
F-1439	BP501X			
F-1640	BP20X			

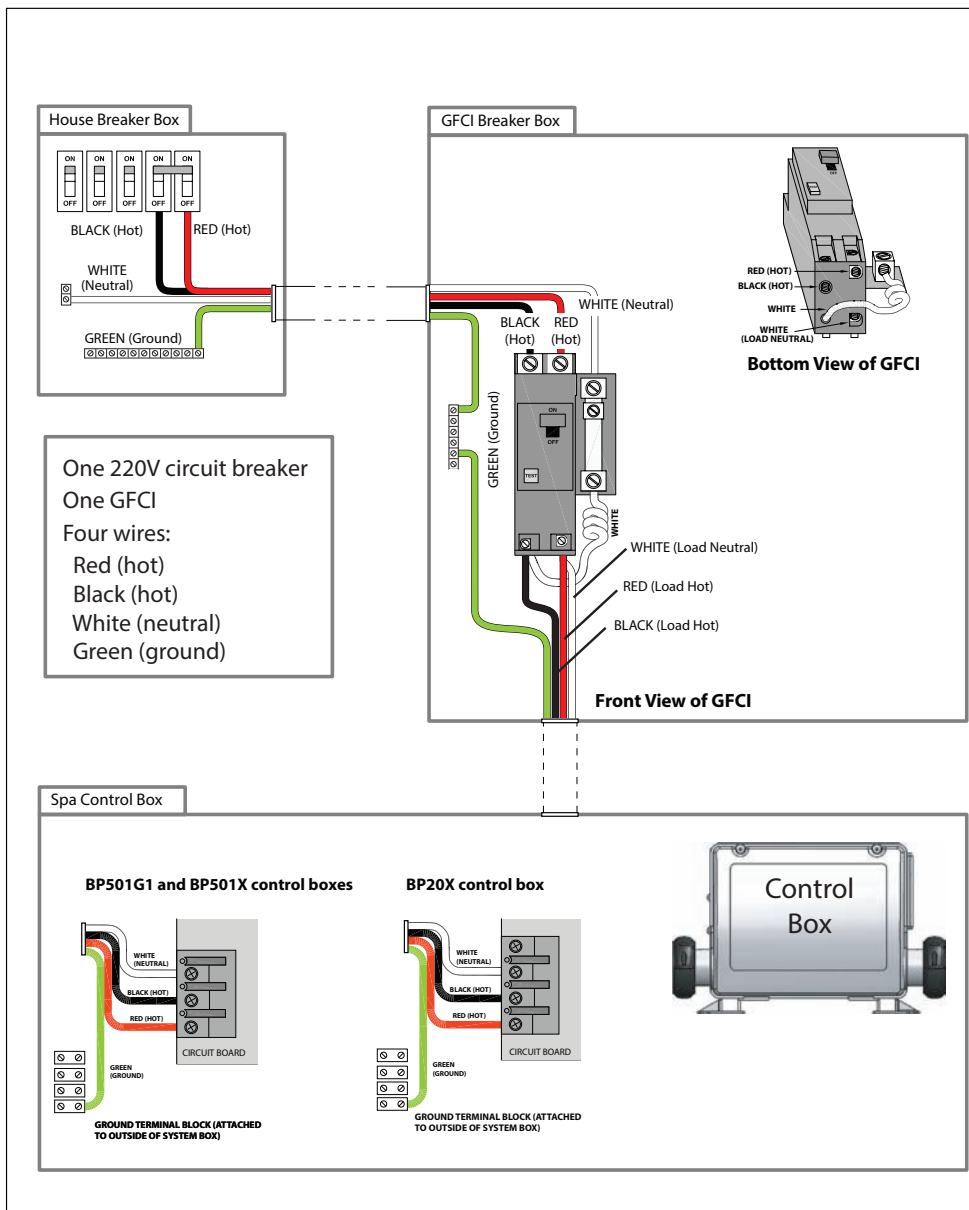
Applies to model F-1770**Standard configuration with one 5.5 kW heater**

Control System	Spa Side	GFCI Required	Wires Required	Wiring Diagram
BP20X	Service 1 (swim side)	One 60 amp GFCI	Four #8 AWG copper wires	Use wiring diagram 2 (see page 10)
BP501G1	Service 2 (spa side)	One 40 amp GFCI	Four #8 AWG copper wires	

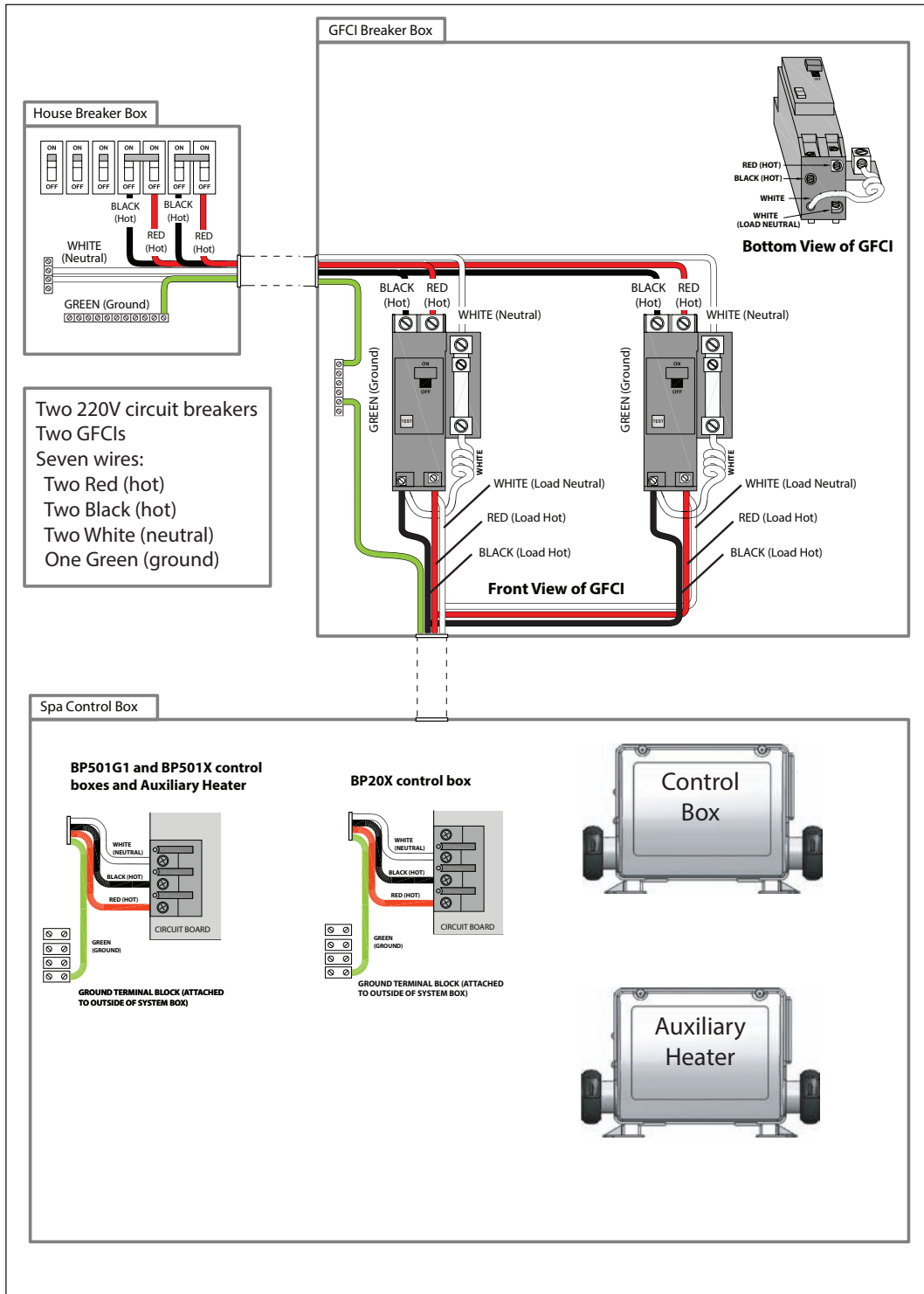
Configuration for Option OPT15-200 (auxiliary 5.5 kW heater)

Control System	Spa Side	GFCI Required	Wires Required	Wiring Diagram
BP20X	Service 1 (swim side)	One 60 amp GFCI	Four #8 AWG copper wires	Use wiring diagram 3 (see page 11)
	Service 2 (swim side)	One 30 amp GFCI	Three #8 AWG copper wires	
BP501G1	Service 3 (spa side)	One 40 amp GFCI	Four #8 AWG copper wires	

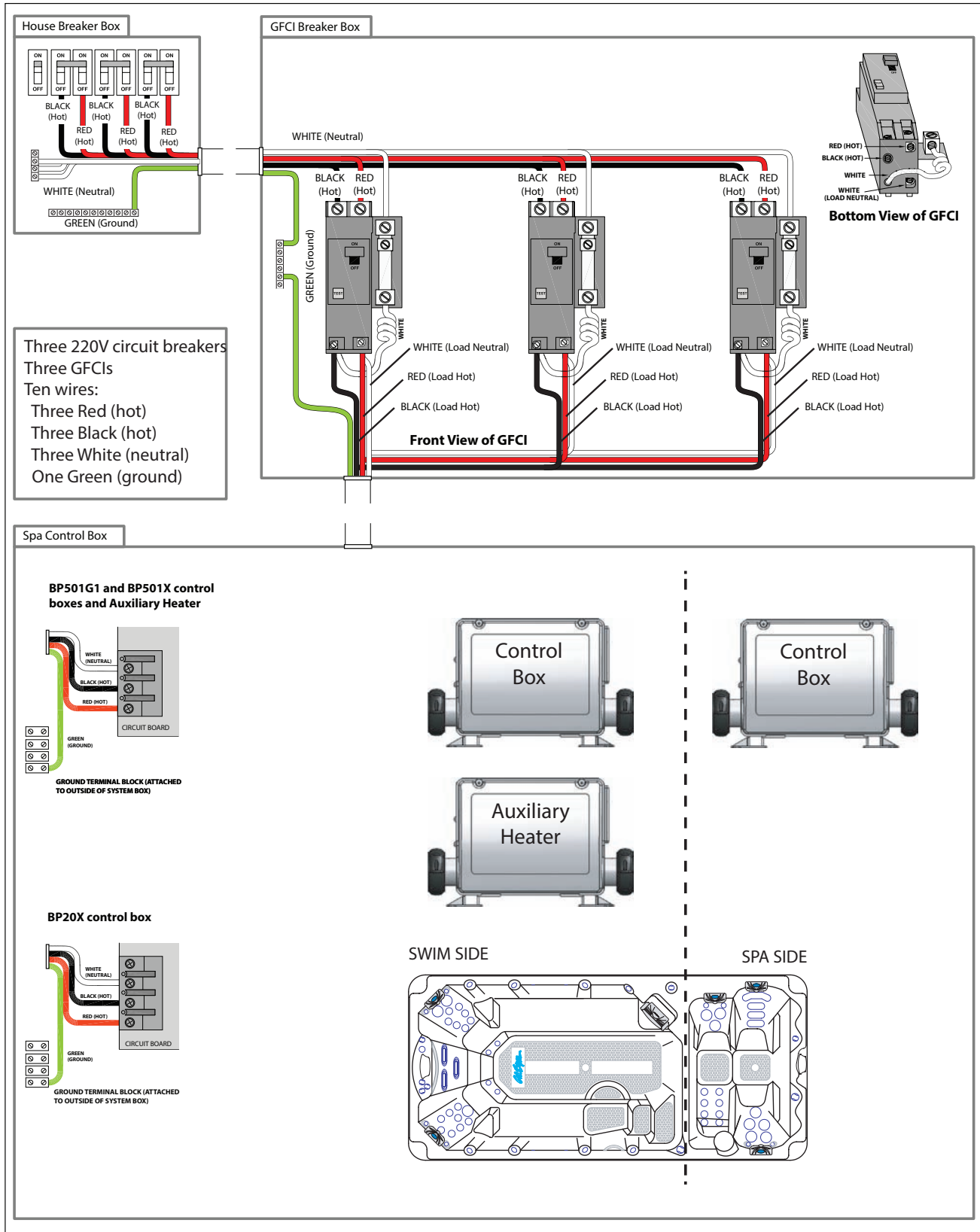
GFCI Wiring Diagram 1



GFCI Wiring Diagram 2



GFCI Wiring Diagram 3



120V 60 Hz Electrical Installation

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

Use only a dedicated electrical line with a 15-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 15-amp GFCI connection. Do not use extension cords!

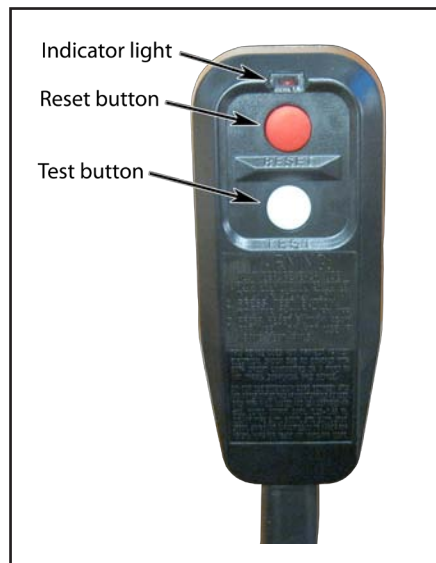
Always use a weatherproof-covered receptacle.

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 15-amp GFCI receptacle or a GFCI cord and plug kit as shown below (CKIT110 - P/N ELE09700086).



230V 50 Hz 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 requirements below and wiring diagrams on page 14 through page 19.

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.

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 tables below to determine your RCD 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 25 meters must increase wire gauge to the next lower number. For example: A normal 50 amp RCD with three #8 AWG copper wires run over 25 meters would require you to go to three #6 AWG copper wires.

RCD and Wiring Requirements

Note: SINGLE PHASE ONLY!

Three phase power requires 400V.
Only use 230V.

Use this table to determine your wiring configuration.

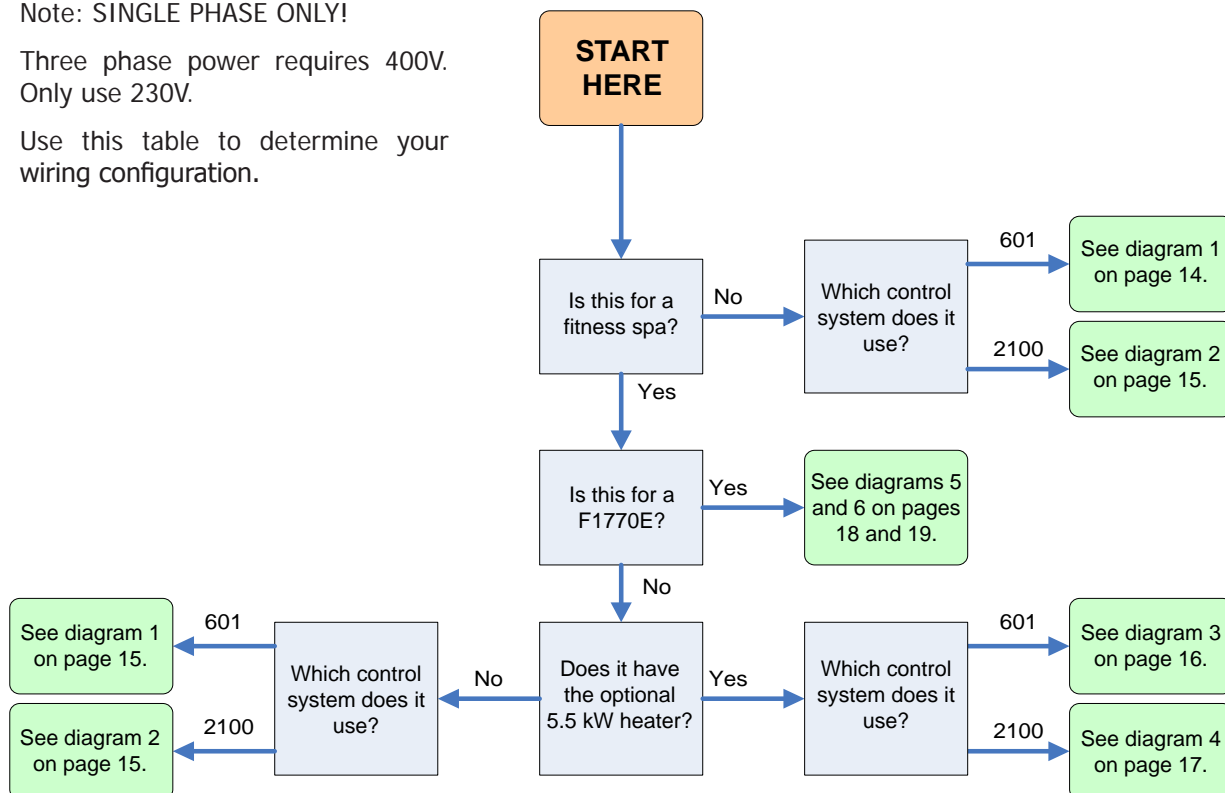
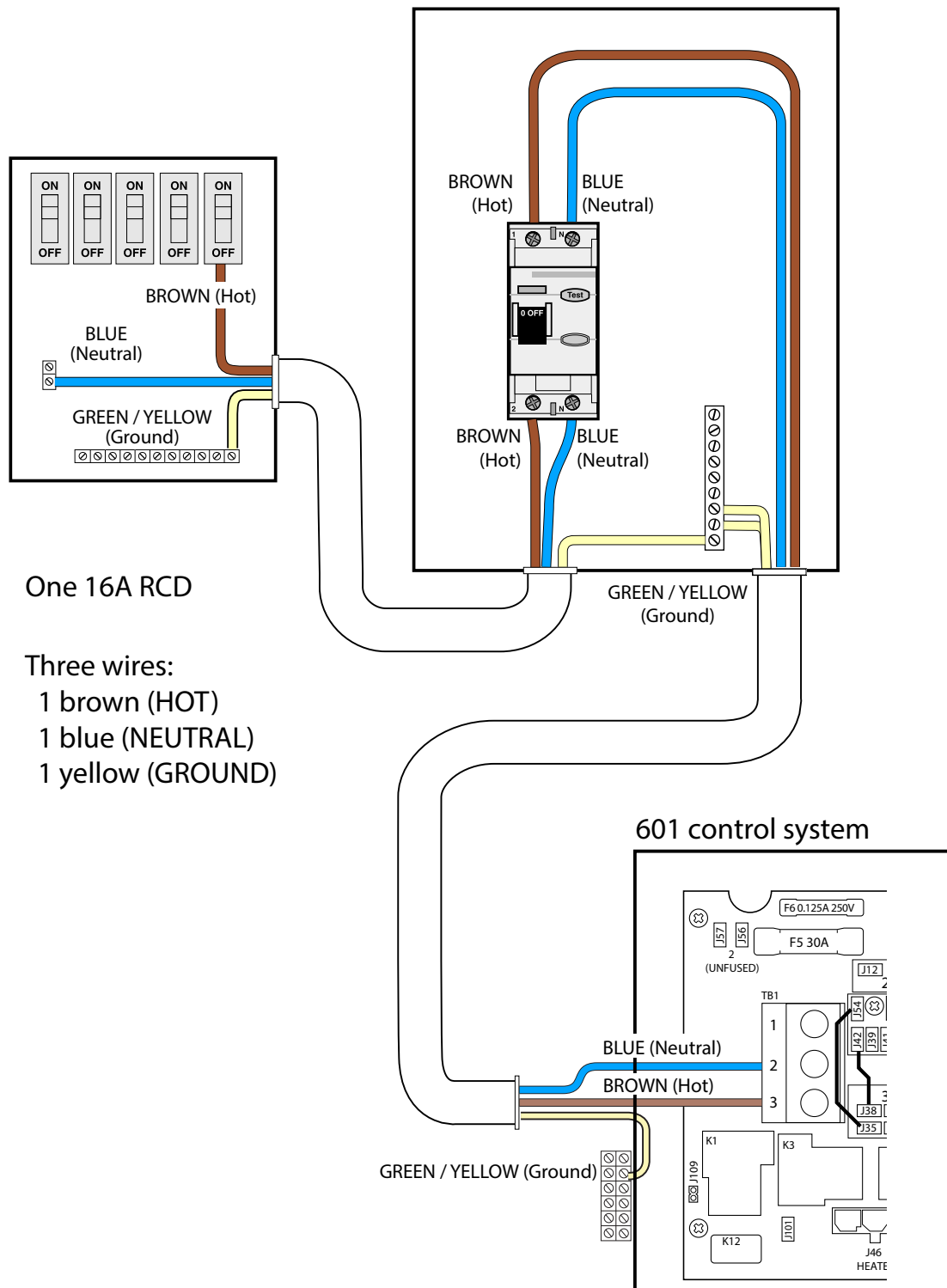


Diagram 1



One 16A RCD

Three wires:

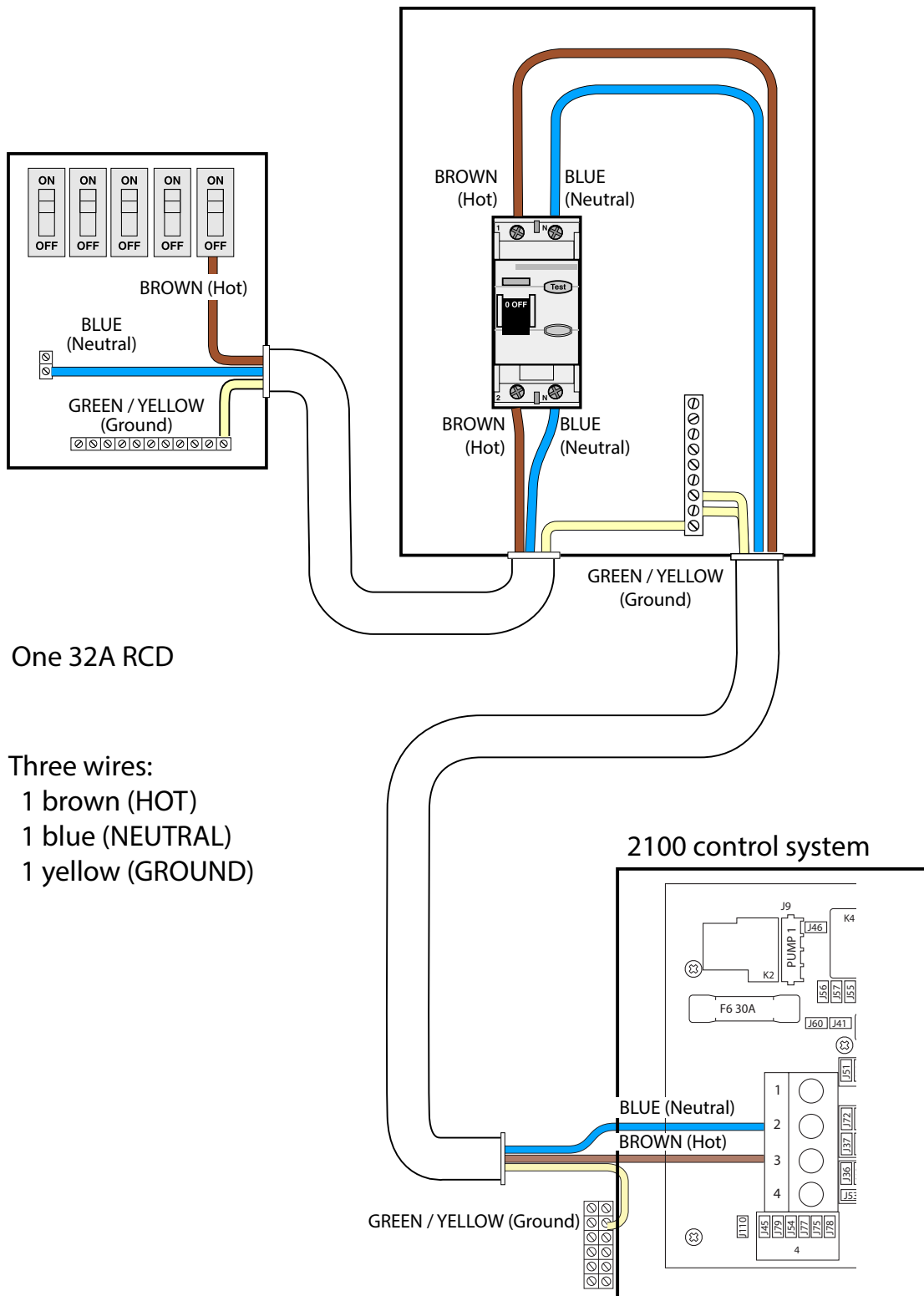
1 brown (HOT)

1 blue (NEUTRAL)

1 yellow (GROUND)

601 control system

Diagram 2



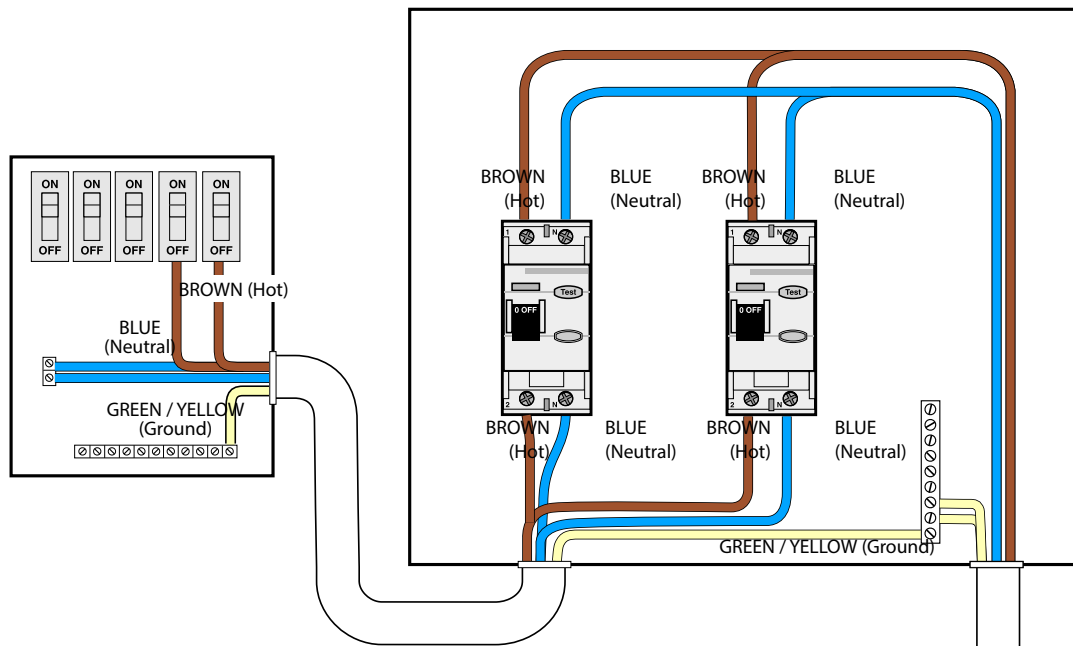
One 32A RCD

Three wires:

- 1 brown (HOT)
- 1 blue (NEUTRAL)
- 1 yellow (GROUND)

2100 control system

Diagram 3



Two 16A RCDs

Six wires:

- 2 brown (HOT)
- 2 blue (NEUTRAL)
- 2 yellow (GROUND)

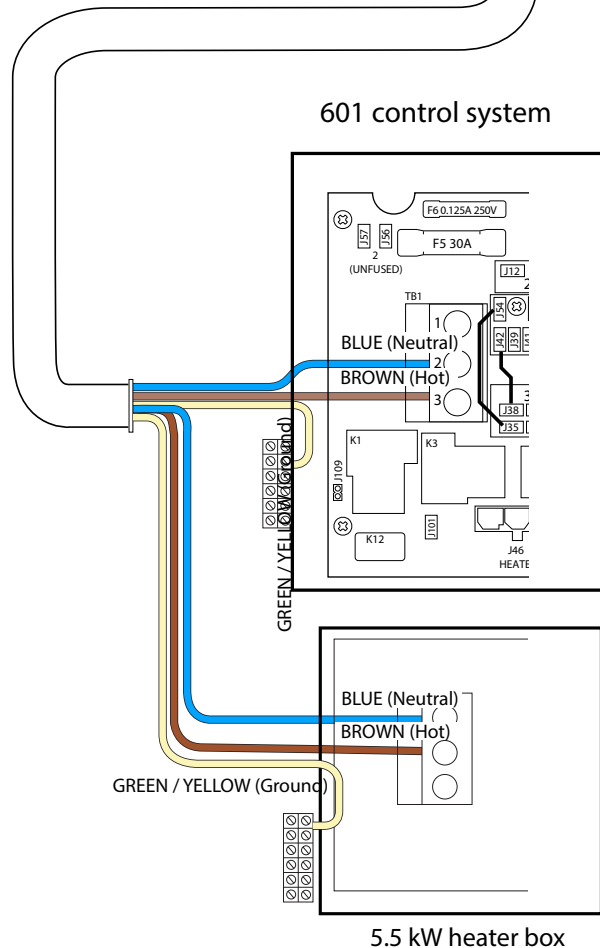
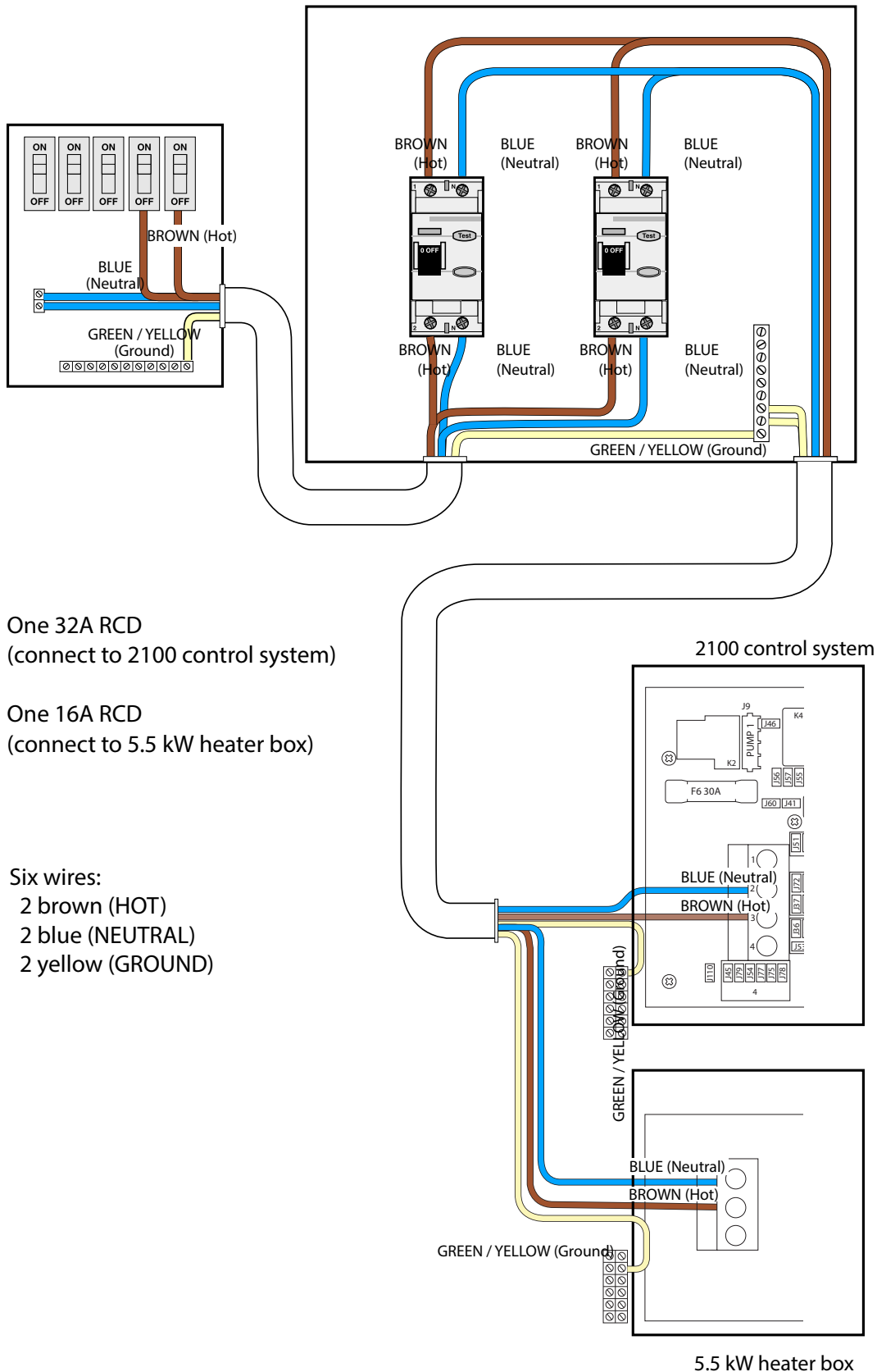


Diagram 4



One 32A RCD
(connect to 2100 control system)

One 16A RCD
(connect to 5.5 kW heater box)

Six wires:
2 brown (HOT)
2 blue (NEUTRAL)
2 yellow (GROUND)

Diagram 5

With 3.0 kW heater only

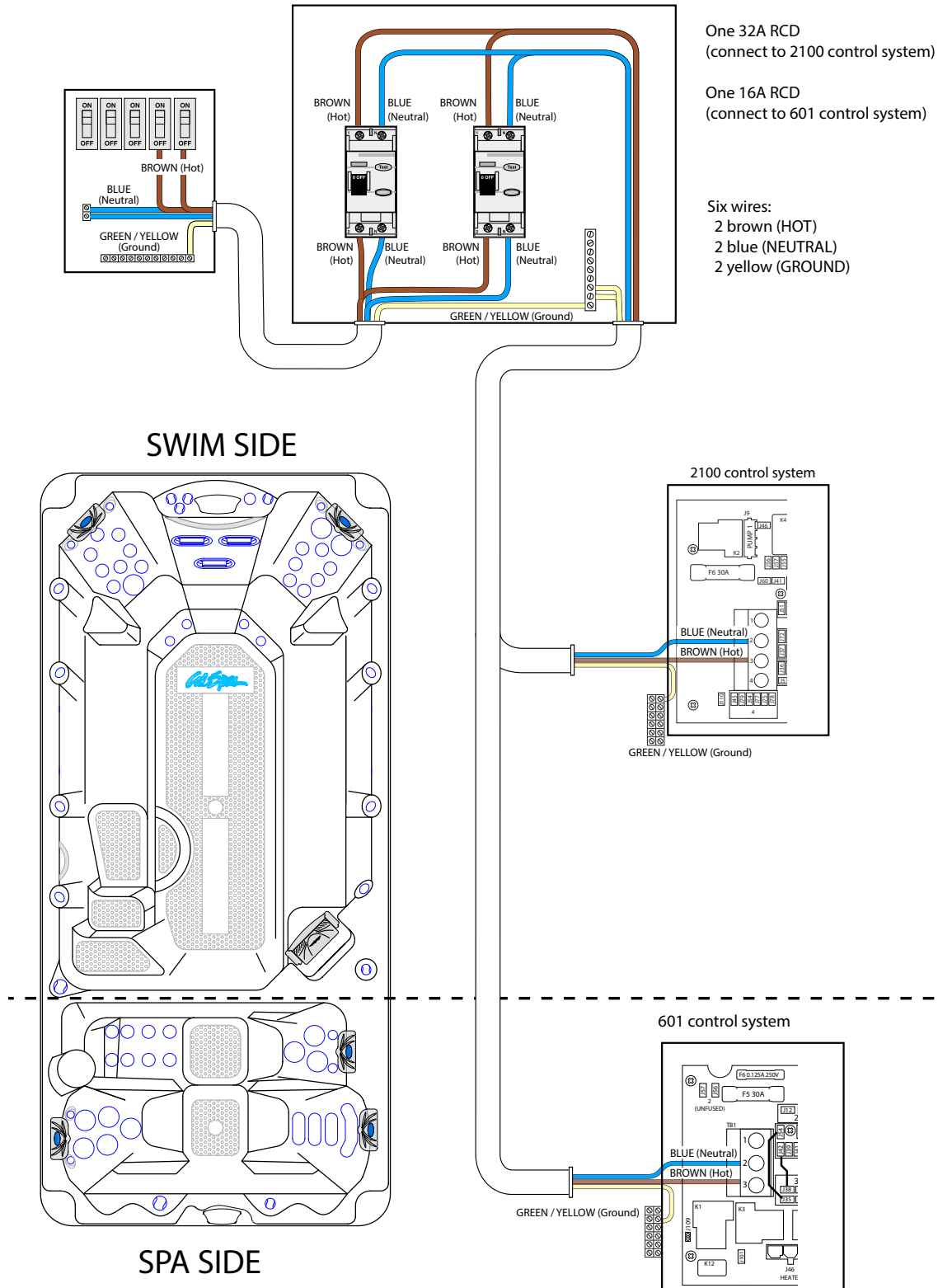
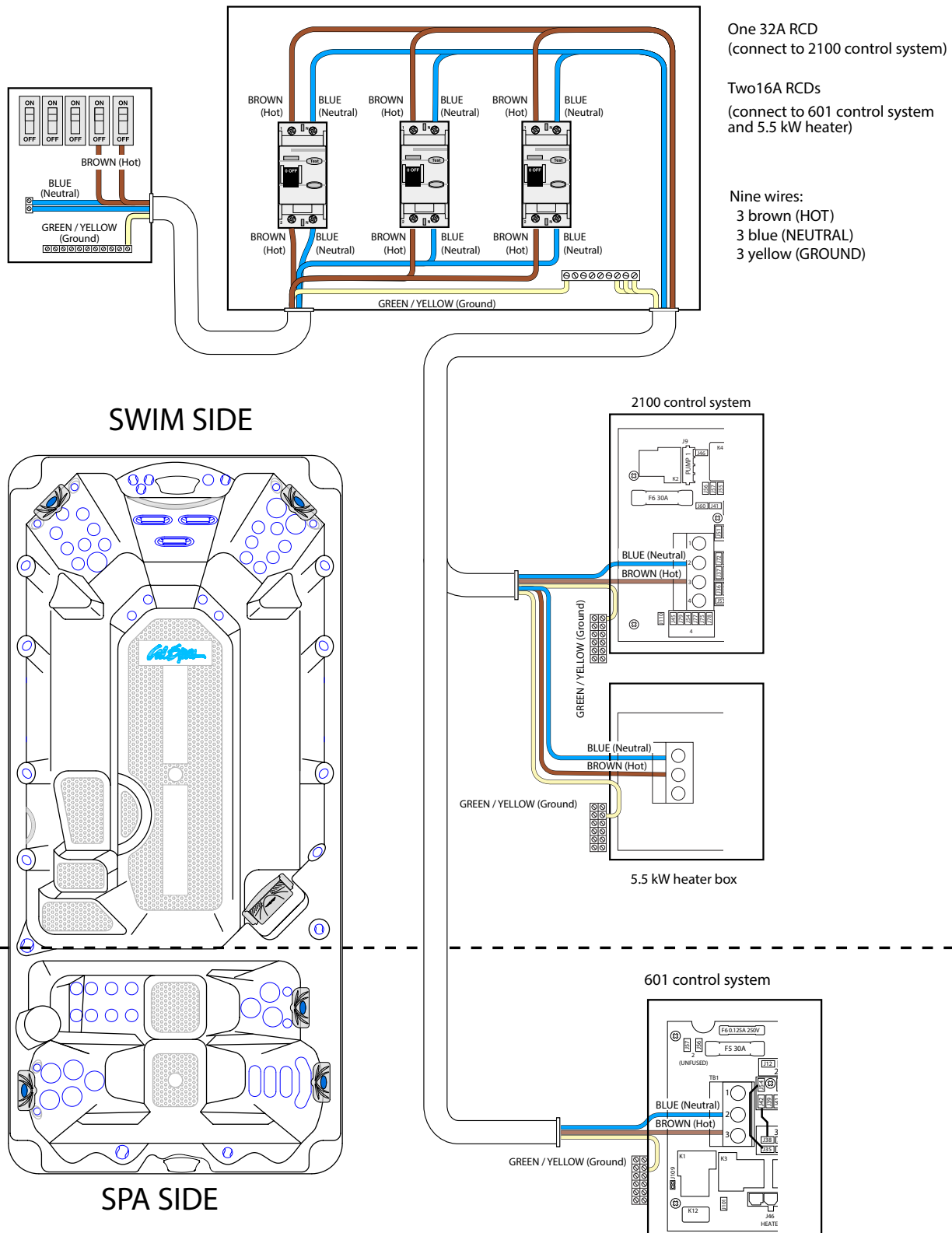


Diagram 6

With 3.0 kW heater and 5.5 kW heater



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.

Imperial Units

For spa specifications in metric units, see page 23.

GenII Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
GII-511R	78	Round	36	300	350	2855
GII-516L	54	78	32	278	430	2745
GII-616T	72	72	35	130	600	1686
GII-620L	76	84	36	340	740	3577
GII-720L	84	84	36	425	800	4340
GII-720B	84	84	36	425	800	4340

Patio Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
Z-524L	54	78	32	278	430	2745
Z-628T	72	72	35	130	600	1686
Z-536L	64	84	35	226	535	2423
Z-630L	78	84	35	340	740	3577
Z-630B	78	84	35	340	740	3577
Z-731L	84	84	35	425	800	4340
Z-731B	84	84	35	425	800	4340

New Age Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
N-741B-S	84	84	39.5	425	800	4340
N-741L-S	84	84	39.5	425	800	4340
N-741B-VP-S	84	84	39.5	425	800	4340
N-741L-VP-S	84	84	39.5	425	800	4340

Connect Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
C-737B	84	84	39.5	425	800	4340
C-737L	84	84	39.5	425	800	4340
C-751L	84	84	39.5	425	800	4340
C-751B	84	84	39.5	425	800	4340
C-751L-S	84	84	39.5	425	800	4340
C-751B-S	84	84	39.5	425	800	4340
C-837L	93	93	39.5	450	900	4650
C-836B	93	93	39.5	450	900	4650
C-850L	93	93	39.5	450	900	4650
C-850B	93	93	39.5	450	900	4650

Escape Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
E-700DL	87	87	39.5	425	850	4395
E-751L	84	84	39.5	425	800	4345
E-751B	84	84	39.5	425	800	4345
E-800L	93	93	39.5	450	900	4650
E-862-S	93	93	39.5	450	900	4650
E-864B	93	93	39.5	450	900	4650
E-864L	93	93	39.5	450	900	4650
E-864B-S	93	93	39.5	450	900	4650
E-864L-S	93	93	39.5	450	900	4650
E-947E	93	131	39.5	900	900	8406
E-948L	93	130	39.5	800	1200	7872

Platinum Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
P-760L	84	84	39.5	425	850	4390
P-760B	84	84	39.5	425	850	4390
PL-854L-S	87	87	39.5	425	850	4390
P-860L	93	93	39.5	450	900	4648
P-860B	93	93	39.5	450	900	4648
P-880L	93	93	39.5	450	900	4648
P-880B	93	93	39.5	450	900	4648
P-880L-S	93	93	39.5	450	900	4648
P-880B-S	93	93	39.5	450	900	4648

Fitness Series

Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
F-1222	93	141	42	1500	1600	14100
F-1420	93	171	51	1800	1800	18260
F-1439	93	171	51	1500	1600	14095
F-1640	93	200	51	1800	1800	18260
F-1770	93	200	51	2500	2000	22825

Special Series

Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
SE-858B-S	93	93	39.5	450	900	4653
SE-858L-S	93	93	39.5	450	900	4653

Metric Units

GenII Series						
Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
GII-511R	198	Round	91	1134	159	1298
GII-516L	137	198	81	1051	195	1248
GII-616T	183	183	89	491	273	766
GII-620L	193	213	91	1285	336	1626
GII-720L	213	213	91	1607	364	1973
GII-720B	213	213	91	1607	364	1973

Patio Series						
Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
Z-524L	137	198	81	1051	195	1248
Z-628T	183	183	89	491	273	766
Z-536L	163	213	89	854	243	1101
Z-630L	198	213	89	1285	336	1626
Z-630B	198	213	89	1285	336	1626
Z-731L	213	213	89	1607	364	1973
Z-731B	213	213	89	1607	364	1973

New Age Series						
Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
N-741B-S	213	213	100	1607	364	1973
N-741L-S	213	213	100	1607	364	1973
N-741B-VP-S	213	213	100	1607	364	1973
N-741L-VP-S	213	213	100	1607	364	1973

Connect Series

Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
C-737B	213	213	100	1607	364	1973
C-737L	213	213	100	1607	364	1973
C-751L	213	213	100	1607	364	1973
C-751B	213	213	100	1607	364	1973
C-751L-S	213	213	100	1607	364	1973
C-751B-S	213	213	100	1607	364	1973
C-837L	236	236	100	1701	409	2114
C-836B	236	236	100	1701	409	2114
C-850L	236	236	100	1701	409	2114
C-850B	236	236	100	1701	409	2114

Escape Series

Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
E-700DL	221	221	100	1607	386	1998
E-751L	213	213	100	1607	364	1975
E-751B	213	213	100	1607	364	1975
E-800L	236	236	100	1701	409	2114
E-862-S	236	236	100	1701	409	2114
E-864B	236	236	100	1701	409	2114
E-864L	236	236	100	1701	409	2114
E-864B-S	236	236	100	1701	409	2114
E-864L-S	236	236	100	1701	409	2114
E-947E	236	333	100	3402	409	3821
E-948L	236	330	100	3024	545	3578

Platinum Series

Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
P-760L	213	213	100	1607	386	1998
P-760B	213	213	100	1607	386	1998
PL-854L-S	221	221	100	1607	386	1998
P-860L	236	236	100	1701	409	2115
P-860B	236	236	100	1701	409	2115
P-880L	236	236	100	1701	409	2115
P-880L	236	236	100	1701	409	2115
P-880L	236	236	100	1701	409	2115
P-880L	236	236	100	1701	409	2115

Fitness Series						
Model	Width (cm)	Length (cm)	Height (cm)	Capacity (liters)	Dry Weight (kg)	Filled Weight (kg)
F-1222	236	358	107	5670	727	6409
F-1420	236	434	130	6804	818	8300
F-1439	236	434	130	5670	727	6407
F-1640	236	508	130	6804	818	8300
F-1770	236	508	130	9450	909	10375

Special Series						
Model	Width (inches)	Length (inches)	Height (inches)	Capacity (gallons)	Dry Weight (pounds)	Filled Weight (pounds)
SE-858B-S	236	236	100	1701	409	2115
SE-858L-S	236	236	100	1701	409	2115



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