



## **COLEMAN® SPAS PRE-DELIVERY GUIDE**




**Portable Spas and Fitness Spas**  
**United States, Canada, and International**

[www.colemanspas.com](http://www.colemanspas.com)

# Contents

|   |           |
|---|-----------|
| <b>Pre-Delivery Checklist .....</b>                 | <b>1</b>  |
| <b>Planning the Best Location.....</b>              | <b>1</b>  |
| <b>Site Preparation .....</b>                       | <b>3</b>  |
| <i>Placement of Spa for Service Access .....</i>    | <i>4</i>  |
| <i>Electrical Service Stub-up.....</i>              | <i>9</i>  |
| <b>Getting the Spa Into Your Yard.....</b>          | <b>13</b> |
| <b>Electrical Requirements .....</b>                | <b>15</b> |
| <i>Electrical Requirements – US and Canada.....</i> | <i>15</i> |
| <i>240V 60 Hz Electrical Installation .....</i>     | <i>15</i> |
| <i>120V Electrical Installation .....</i>           | <i>20</i> |
| <i>Electrical Installation -- Europe .....</i>      | <i>21</i> |
| <i>230V 50Hz Electrical Installation .....</i>      | <i>21</i> |
| <b>Spa Technical Specifications .....</b>           | <b>25</b> |

Copyright 2009-2012 LMS, Inc. All rights reserved. Duplication without written consent is strictly prohibited.

 ,  , and Coleman® are registered trademarks. Used under license. © 2010 - 2012 The Coleman Company, Inc.

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

LTR50001094, Rev. F  
9/17/12  
100-1158

## CONTACT INFORMATION

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

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

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

**[www.colemanspas.com](http://www.colemanspas.com)**

# 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.

| <b>Before Delivery</b> |  |
|------------------------|--|
|                        | Plan your delivery route               |
|                        | Choose a suitable location for the spa |
|                        | Lay a 3" - 4" concrete slab            |
|                        | Install dedicated electrical supply    |
| <b>After Delivery</b>  |  |
|                        | 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 recommended 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 Coleman® 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.

Other spa models require access to the sides or rear if they ever need service or repair. See the table below and the figures on pages 5 - 8.

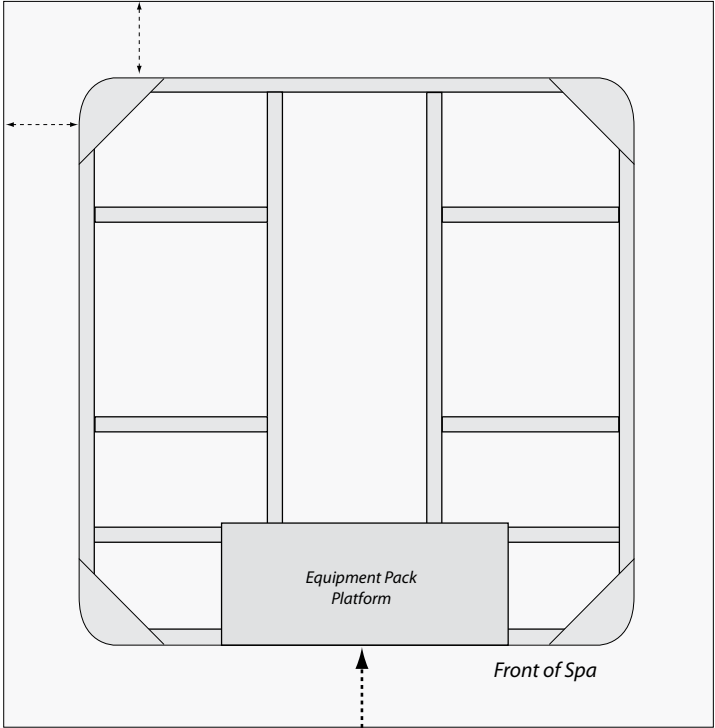
If you are planning to enclose or surround your spa with a deck, make sure there is access for service or repair.

| <b>Spa model</b> | <b>Clearance required</b> |
|------------------|---------------------------|
| CO-518R          | Front only                |
| CO-534L          | Front only                |
| CO-637L          | Front only                |
| CO-756B          | Front only                |
| CO-756L          | Front and right side      |
| CO-866B          | Front and right side      |
| CO-866L          | Front, right and rear     |
| CO-866DL         | Front and rear            |
| CO-1239F         | Front and rear            |
| CO-1439F         | Front and rear            |
| CO-1640F         | Front and rear            |
| CO-1770F         | Front and rear            |

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

**CO-518R CO-534L CO-637L CO-756B**

*1' minimum distance from edge of concrete slab*



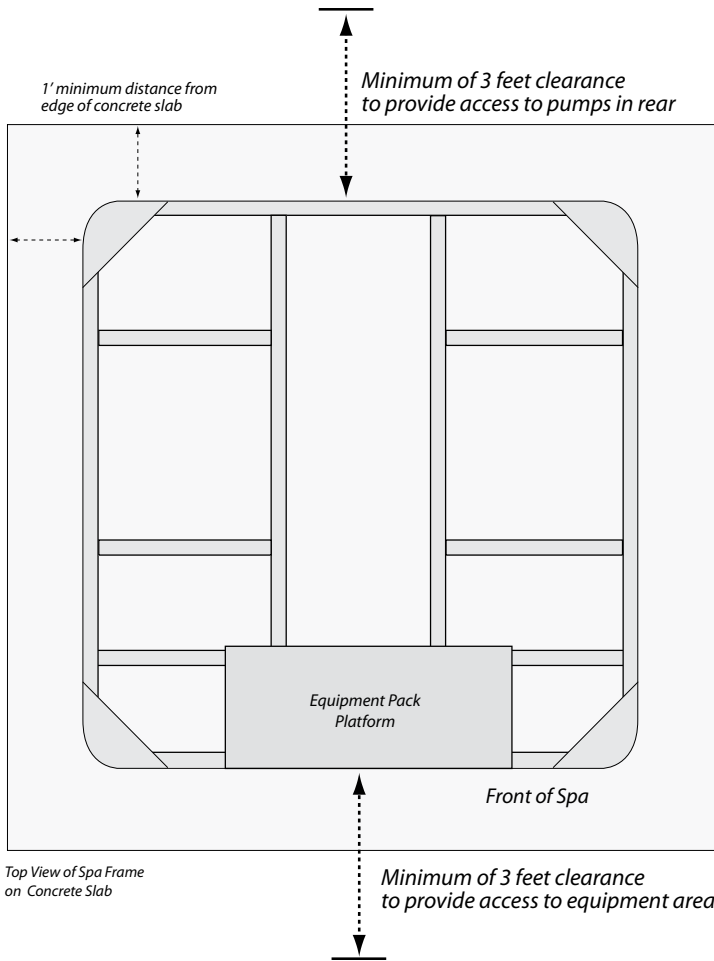
*Top View of Spa Frame on Concrete Slab*

*Minimum of 3 feet clearance to provide access to equipment area*

Not to scale

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

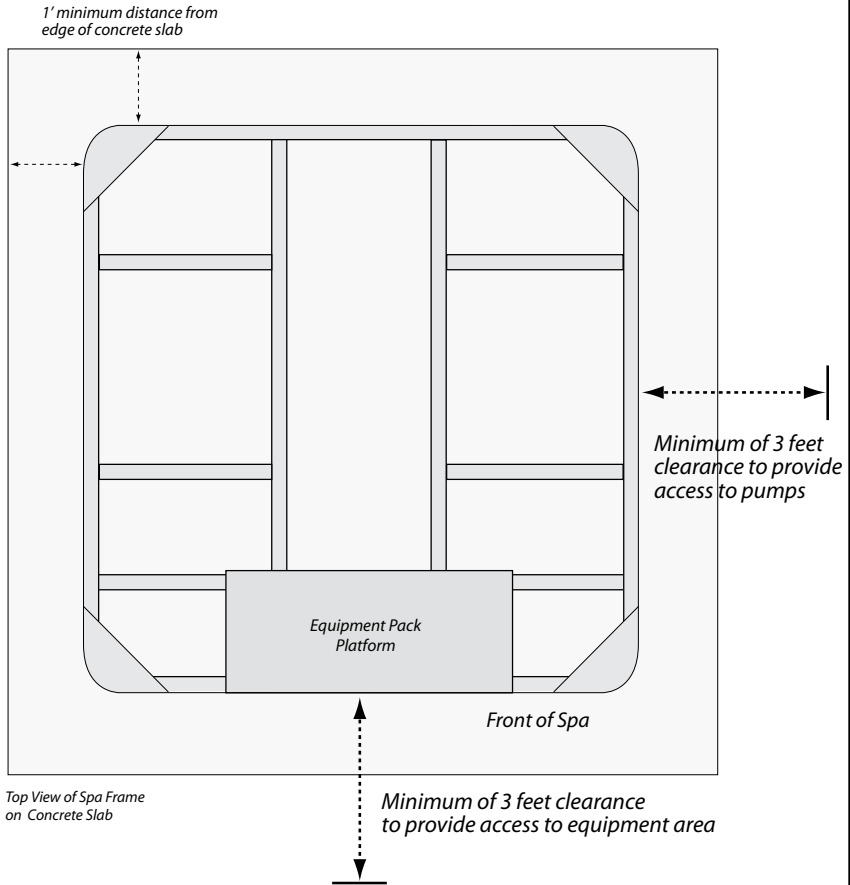
**CO-866DL CO-1239F CO-1439F CO-1640F CO-1770F**





**These spas require clearance in the front and right of the spa.**

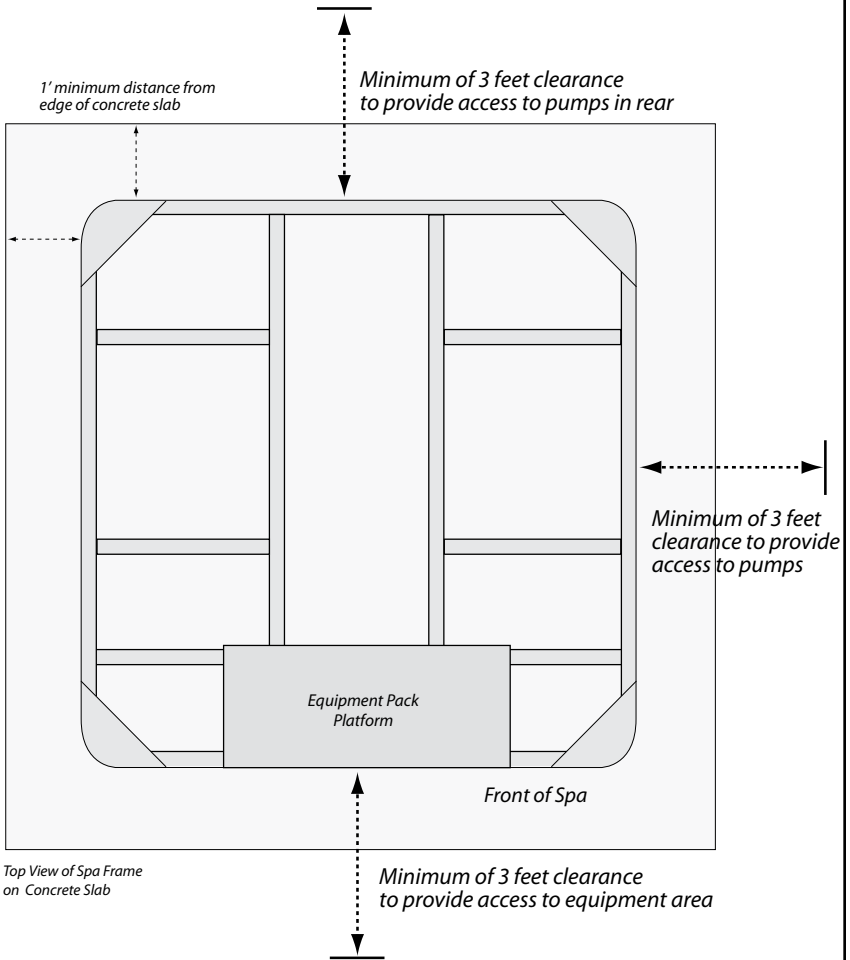
**CO-756L CO-866B**



Top View of Spa Frame on Concrete Slab

Not to scale

**Spa model CO-866L requires clearance in the front, rear, and right side of the spa.**



Top View of Spa Frame on Concrete Slab

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 13" in from the left of the spa and 8" inches in from the front of the spa. See the drawing on the next page.

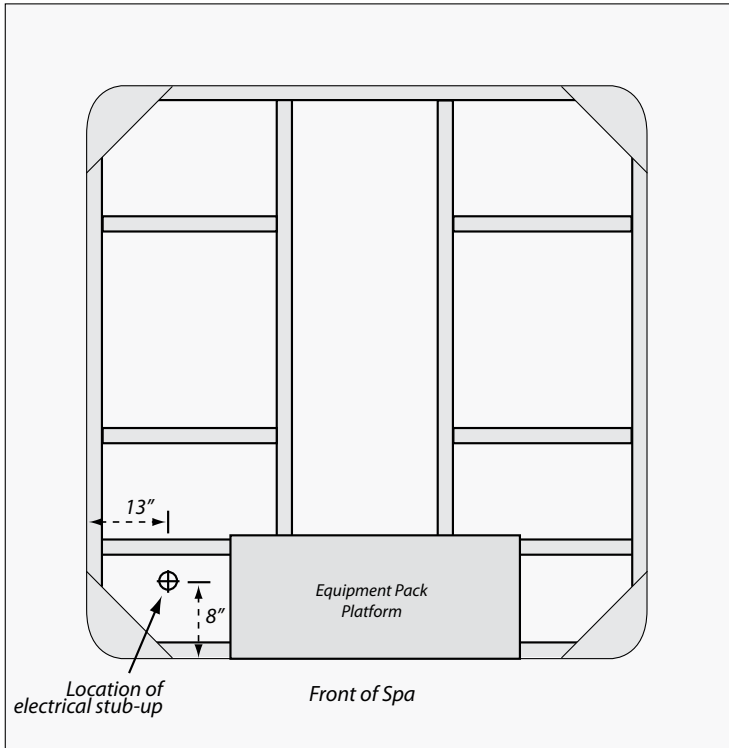
We do not recommend the stub-up extending higher than 4" above the concrete slab.

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 these models:**

- CO-518R
- CO-1640FE
- CO-1770F
- CO-1770FE

*Top View of Spa Frame  
on Concrete Slab*

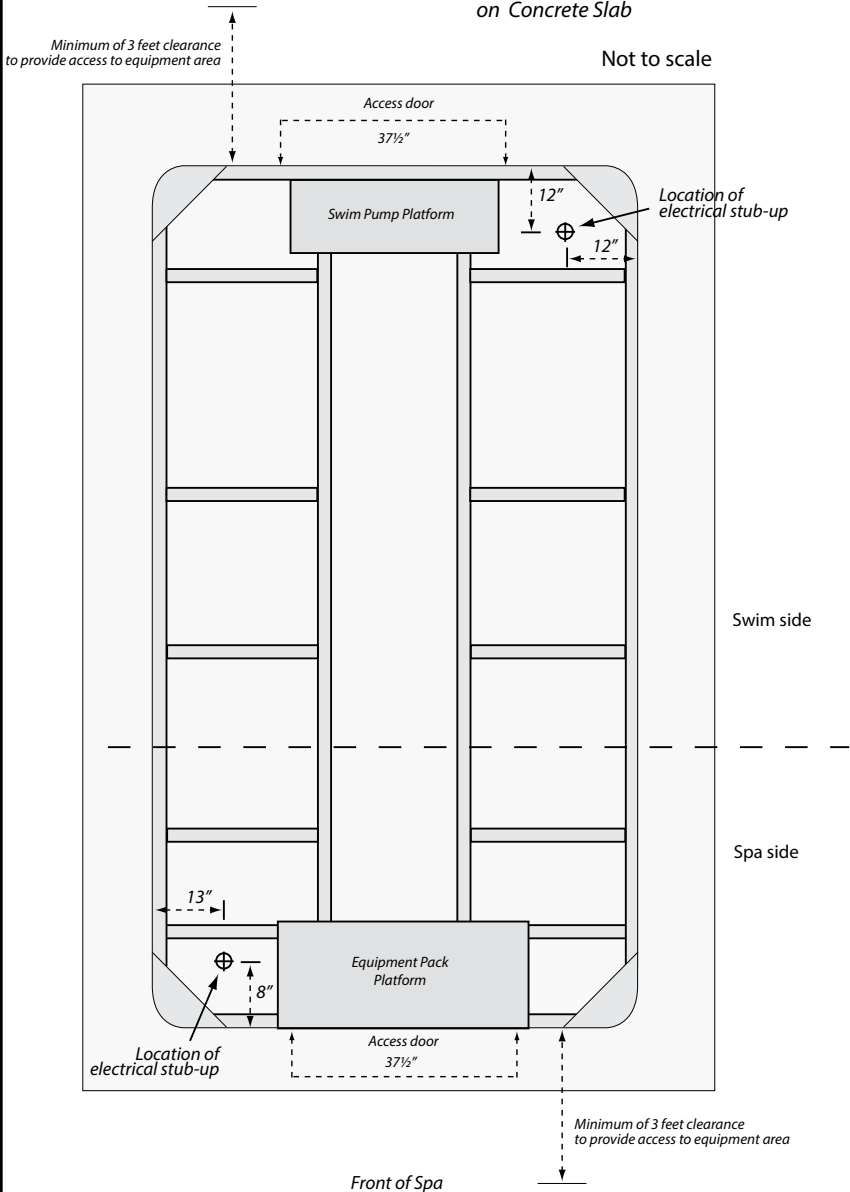


Not to scale

**This applies ONLY to spa model CO-1770F and CO-1770FE.**

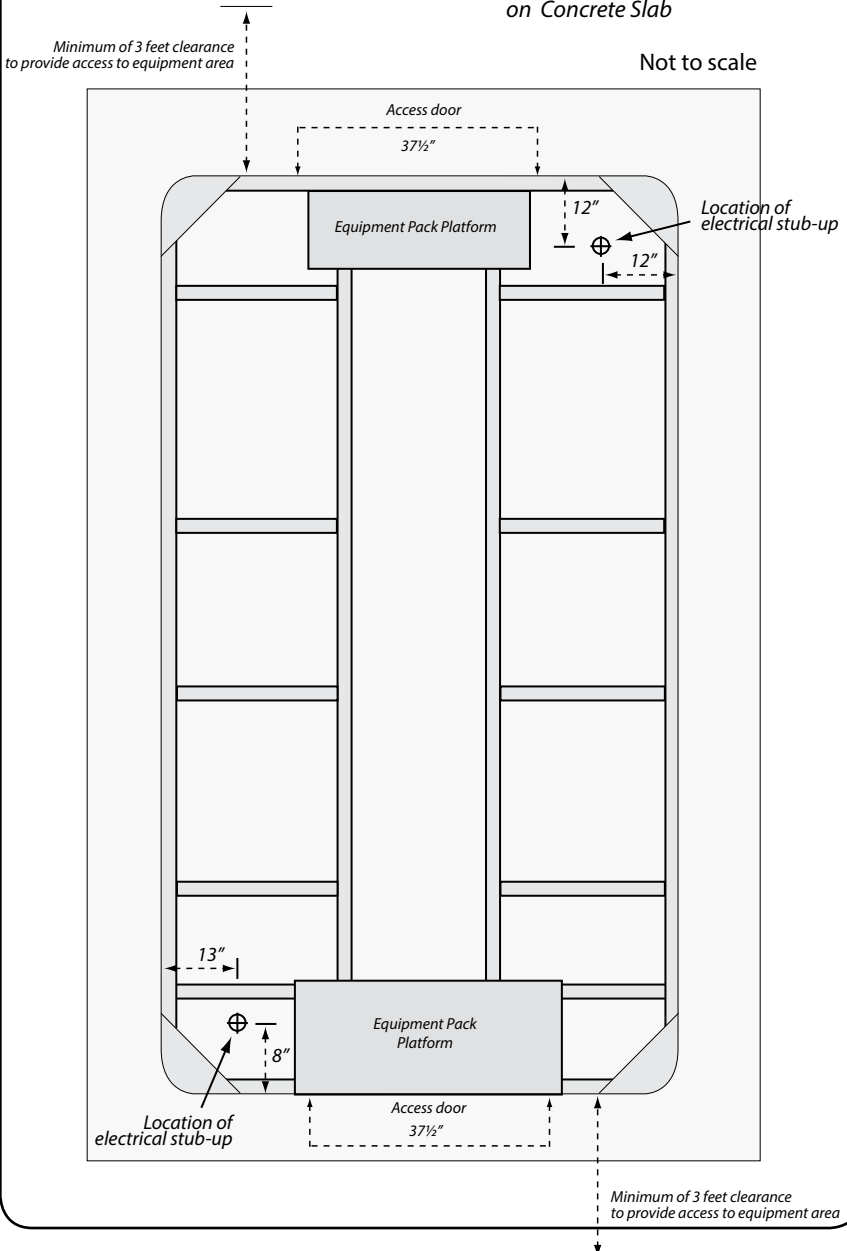
*Top View of 1770F Swim Spa Frame  
on Concrete Slab*

Not to scale



**This applies ONLY to spa model CO-1640FE.**

*Top View of 1640FE Swim Spa Frame  
on Concrete Slab*



# Getting the Spa Into Your Yard

## Check the Dimensions of Your New Spa

The specification chart on page 25 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 38" 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 Coleman® 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 Coleman® 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?**

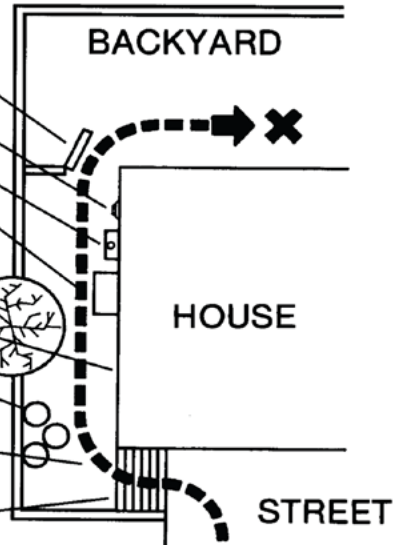
Check low roof eaves, overhanging branches, rain gutters

**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

### 240V 60 Hz Electrical Installation

All 240V spas must be permanently connected (hardwired) to the power supply. See the wiring diagram on page 18.

**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 National Electric Code, ANSI/NFPA 70-2008 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.**

### GFCI and Wiring Requirements

The power supplied to the spa must be on a dedicated GFCI protected circuit as required by ANSI/NFPA 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 #8 AWG Copper wires run over 85 feet would require you to go to four #6 AWG copper wires.

## 240V 60 Hz GFCI and Wiring Requirements

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

All VS-300 and VS500 control systems are set at the factory to run on the low power setting for low amperage 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 or 60 amp operation.

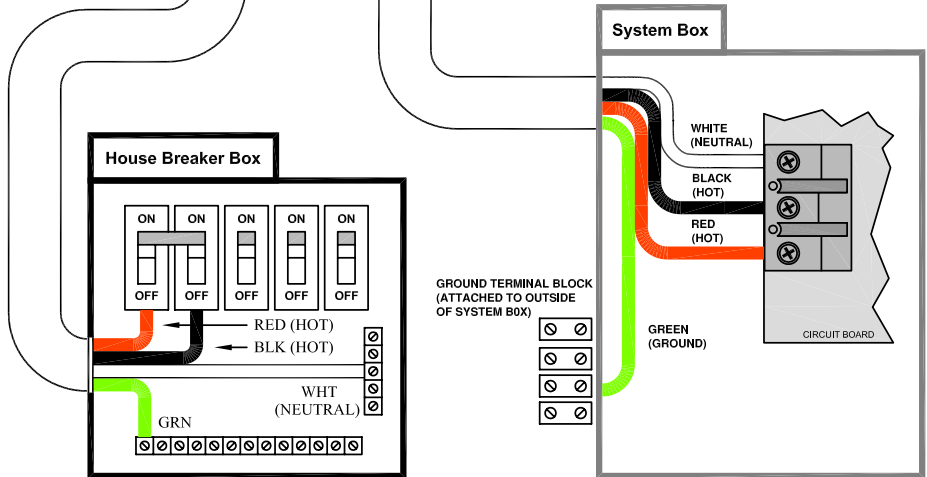
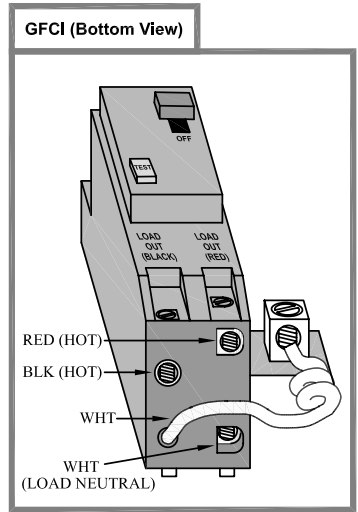
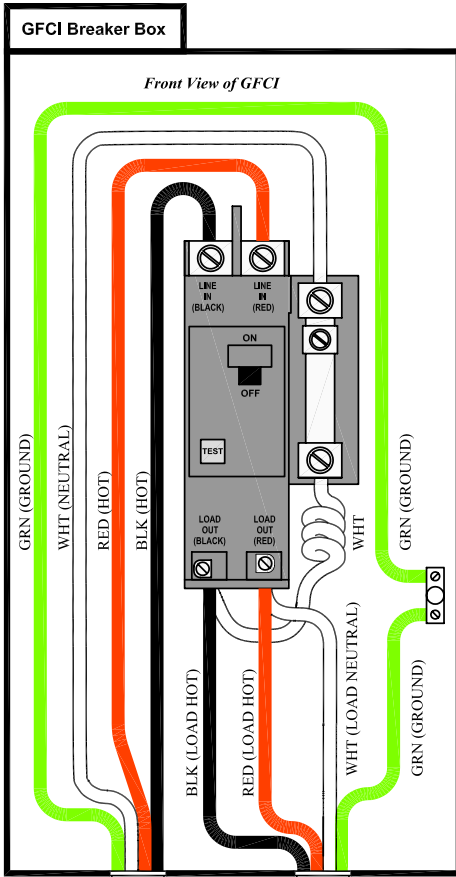
**Warning: Never set a spa to run on high power without installing a properly rated GFCI.**

| Spa Model                   |  | GFCI Required   | Wires Required           |
|-----------------------------|--|-----------------|--------------------------|
| CO534L                      | VS-300 systems   | One 40 amp GFCI | Four #8 AWG copper wires |
| CO756B<br>CO756L            | 4050 control box -- VS-500 two pump systems<br>Standard power mode   | One 40 amp GFCI | Four #8 AWG copper wires |
|                             | 4050 control box -- VS-500 two pump systems<br>High power setting -- <b>See configuration instructions below</b>   | One 50 amp GFCI | Four #6 AWG copper wires |
| CO866B<br>CO866L<br>CO866DL | 4050 control box -- VS-500 three pump system<br>Standard power mode  | One 50 amp GFCI | Four #6 AWG copper wires |
|                             | 4050 control box -- VS-500 three pump systems<br>High power setting -- <b>See configuration instructions below</b> | One 60 amp GFCI | Four #6 AWG copper wires |

## Fitness Spas

| Spa Model           |   | GFCI Required   | Wires Required           |
|---------------------|---|-----------------|--------------------------|
| CO-1239F            | Standard power (default setting)                  | One 50 amp GFCI | Four #8 AWG copper wires |
| CO-1439F<br>CO1640F | High power (see configuration instructions below) | One 60 amp GFCI | Four #6 AWG copper wires |
| CO-1770F            | Service 1 (swim side)                             | One 60 amp GFCI | Four #6 AWG copper wires |
|                     | Service 2 (spa side)                              | One 40 amp GFCI | Four #8 AWG copper wires |

# GFCI Wiring Diagram





# 120V Electrical Installation

## Applies to the CO518R

This product is a cord-connected spa with a pump heater, lighting fixture, and spa side control. The operating power is 120V AC.

A licensed electrician may be required to upgrade your standard receptacle and/or circuit breaker. Always follow applicable local, state and federal codes and guidelines.

The spa is equipped with a 15 amp GFCI cord and plug kit.

Plug the spa into a dedicated electrical line with a 15 amp breaker.

Always use a weatherproof-covered receptacle. Receptacle shall be located not less than 5 feet (1.5 m) from and not exceeding 10 feet (3.0 m) from the inside wall of the spa (NEC 680.43(A)).

Do not use extension cords. Using an extension cord will void your warranty.

Do not bury the power cord. If your cord becomes damaged, replace it before next usage.

If you need to replace your cord, replace it with a 15 amp GFCI connection. The cord may not be longer than 15 feet (4.6 m).



## 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 Coleman® Spas dealer for service. **DO NOT USE THE SPA!**

# **Electrical Installation -- Europe**

## **230V 50Hz 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 23.

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.

## Wiring and RCD requirements

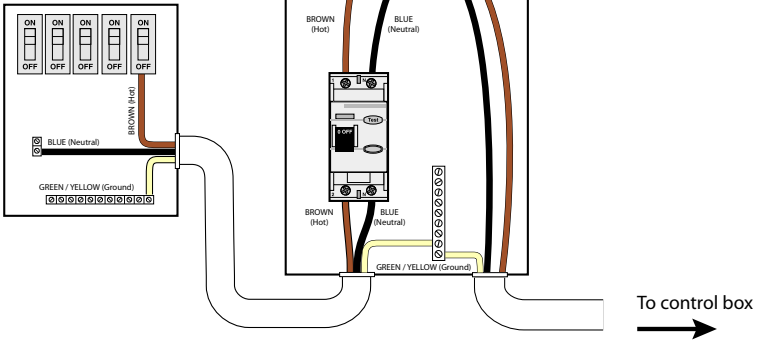
| <b>RCD Required</b> | <b>Wires Required</b>      |
|---------------------|----------------------------|
| For one 32 amp RCD  | Three #10 AWG copper wires |
| For two 16 amp RCDs | Five #10 AWG copper wires  |

Note: The CO-1640F and CO-1770F fitness spas have two control boxes. Each spa requires two separate electrical services.

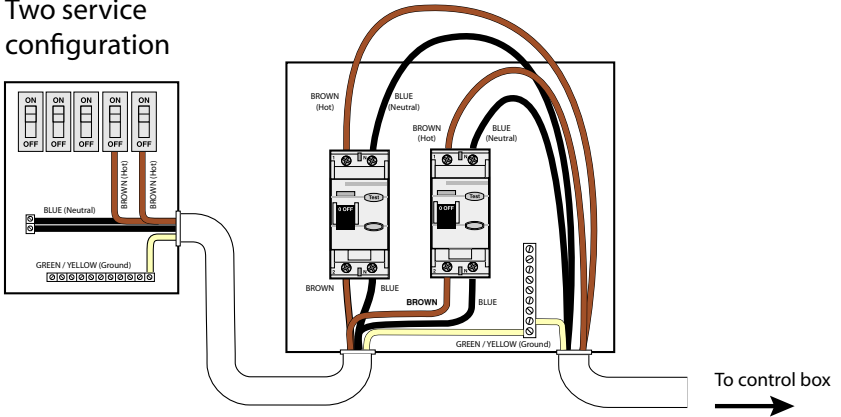


# RCD Wiring Diagram

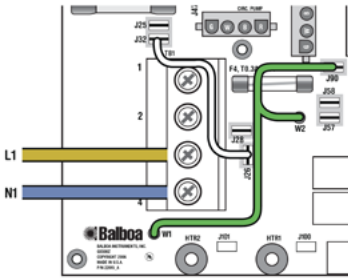
## One service configuration



## Two service configuration



# Circuit Board Connection



## Single Service (1 x 16 Amp or 1 x 32 Amp)

This option is configured and shipped as the default.  
*All equipment (pumps, blower, and heater) runs on service line L1.*

Systems using only 1 DIP switch (A10) for heat disable:

For 1 x 16 Amp Service:

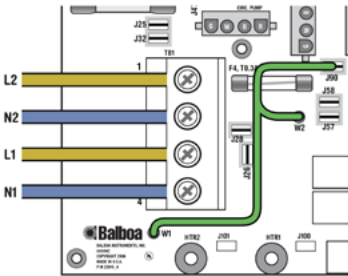
DIP Switch A10 must be ON.

For 1 x 32 Amp Service:

Set DIP Switch A10 such that total system amperage draw never exceeds rated service input.

Systems using multiple DIP switches for heat disable:

Refer to system Hot Sheet DIP Switch Definition page and set the switches shown in Table 1 such that total system amperage draw never exceeds rated service input.



## Dual Service Option (2 x 16 Amp)

*The heater runs on service line L1, while all other equipment, such as pumps and blowers, run on service line L2.*

Completely remove the white wire from J26 and J32.

*Note: J32 and J25 are electrically identical. The white wire may be attached to either terminal before removal.*

Systems using only 1 DIP switch (A10) for heat disable:

DIP Switch A10 must be OFF.

Systems using multiple DIP switches for heat disable:

Refer to system Hot Sheet DIP Switch Definition page and set both switches shown in Table 1 to ON positions.

# 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.

## Portable Spas

| Model    | Width | Length | Depth | Gallons | Dry Weight | Filled Weight |
|----------|-------|--------|-------|---------|------------|---------------|
| CO-518R  | 78"   | Round  | 36"   | 300     | 350 Lbs.   | 2850 Lbs.     |
| CO-534L  | 84"   | 64"    | 35"   | 352     | 600 Lbs.   | 3532 Lbs.     |
| CO-637L  | 74"   | 84"    | 35"   | 375     | 700 Lbs.   | 3823 Lbs.     |
| CO-756B  | 84"   | 84"    | 35"   | 425     | 800 Lbs.   | 4340 Lbs.     |
| CO-756L  | 84"   | 84"    | 35"   | 425     | 800 Lbs.   | 4340 Lbs.     |
| CO-866B  | 93"   | 93"    | 35"   | 500     | 900 Lbs.   | 5065 Lbs.     |
| CO-866L  | 93"   | 93"    | 35"   | 500     | 900 Lbs.   | 5065 Lbs.     |
| CO-866DL | 93"   | 93"    | 35"   | 500     | 900 Lbs.   | 5065 Lbs.     |

## Fitness Spas

| Model    | Width | Length | Depth | Gallons       | Dry Weight | Filled Weight |
|----------|-------|--------|-------|---------------|------------|---------------|
| CO-1239F | 93"   | 141"   | 51"   | 1500          | 1600 Lbs.  | 14095 Lbs.    |
| CO-1439F | 93"   | 171"   | 51"   | 1800          | 1800 Lbs.  | 16800 Lbs.    |
| CO-1640F | 93"   | 200"   | 51"   | 2500          | 2000 Lbs.  | 22825 Lbs.    |
| CO-1770F | 93"   | 200"   | 51"   | 2000 /<br>285 | 2950 Lbs.  | 21985 Lbs.    |



[www.colemanspas.com](http://www.colemanspas.com)