

# CONVERTALIFT® & VacuSeal®

## Fully Automatic Installation Manual

A Version with more photos is available at [www.HotTubProducts.com](http://www.HotTubProducts.com)

### WARNING:

**Turn Off Power to Your Spa Before Removing a Cabinet Panel and Installing the ConvertALift Control Box.**

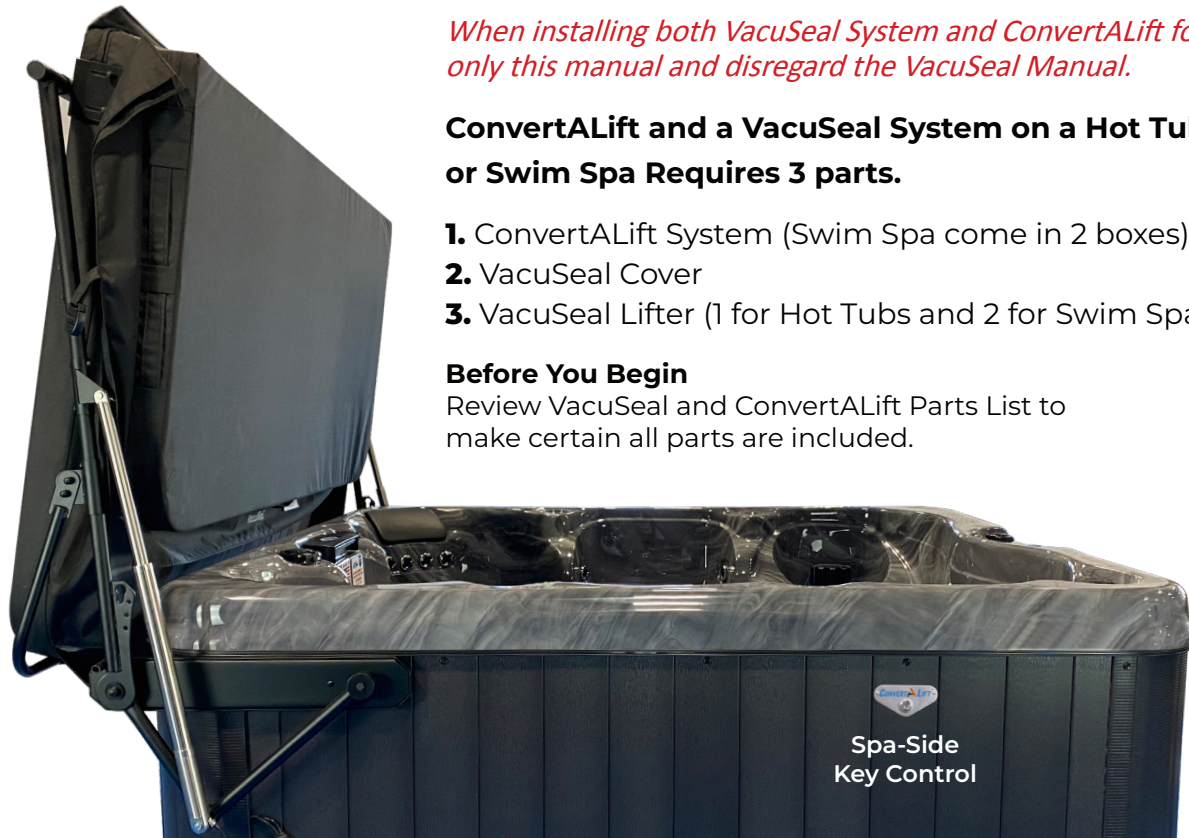
*When installing both VacuSeal System and ConvertALift follow only this manual and disregard the VacuSeal Manual.*

### ConvertALift and a VacuSeal System on a Hot Tub or Swim Spa Requires 3 parts.

1. ConvertALift System (Swim Spa come in 2 boxes)
2. VacuSeal Cover
3. VacuSeal Lifter (1 for Hot Tubs and 2 for Swim Spas)

#### Before You Begin

Review VacuSeal and ConvertALift Parts List to make certain all parts are included.



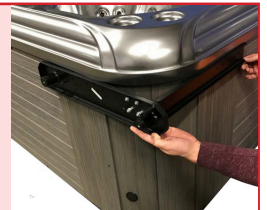
Hot Tub Remote



Swim Spa Remote

#### IMPORTANT:

1. Spas with a radius above 12" and up to 16" require ordering a "VacuSeal Extended Bracket". Fig A
2. Cover in open position requires 9" of space behind the cabinet. Fig B
3. ConvertALift requires 12" of space below spa coping. Fig C
4. If width of cover is more than 96" you have to order a special 50" Extension Tube.



Also be sure to leave about 9" of space for your cover to rest in the open position (See Fig C) and that there is adequate space no less than 18" around the perimeter of the spa to install the VacuSeal and ConvertALift equipment.

Figure A

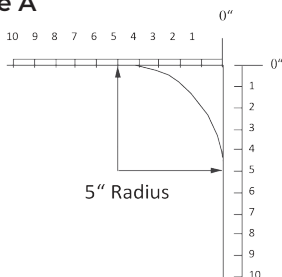


Figure B

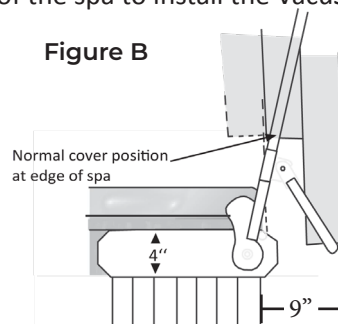
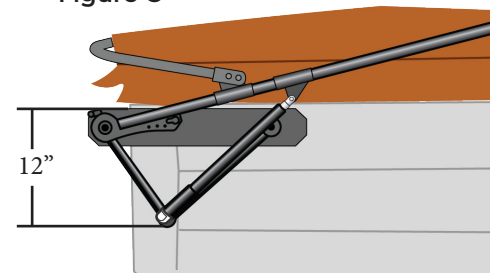


Figure C



**WARNING: UNREGISTERED WARRANTIES WILL NOT BE HONORED**  
 Register Your Warranty: Go to [www.hottubproducts.com/clswarranty/](http://www.hottubproducts.com/clswarranty/)









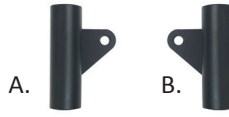

# ConvertALift Parts List for Hot Tubs & Swim Spas

# HT - Quantity for Hot Tub # SS - Quantity for Swim Spas













DESCRIPTION	PART #	# HT	# SS
1 Power Supply / Control Box	CLP-SCNTRL-1	1	1
2 Power Supply Cord	CLPSPLUG-US	1	1
3 Remote Control for Hot Tubs	CLP-SREMOTE-HT	1	0
4 Remote Control for Swim Spas	CLP-SREMOTE-SS	0	1
5 Electronic Linear Actuator	CLP-SACT-1	2	4
6 Key Switch Assembly	CLP-SKEYSWTCH	1	2
7 15' Actuator Extension Cable	CLP-SACTEXT-5M	2	2
30' Actuator Extension Cable	CLP-SACTEXT-10M	0	2
8 15' Key Switch Extension Cable	CLP-SKEYSWTCH	1	2
9A Slide Bracket Left	CLP104-L	1	2
9B Slide Bracket Right	CLP104R	1	2
10 V-Shaped Bracket	CLP103	2	4

## HARDWARE PACKAGE CONTENTS

DESCRIPTION	PART #	# HT	# SS
11 1/2" Hex Bolt 2"	CLP108	2	4
12 Clevis Pin	CLP111	2	4
13 2" Black Metal Washer	CLP106	2	4
14 1/2" Hex Bolt .75" Long	VS124	2	4
15 Female Spade Connectors	CLP114	3	3
16 Bushing Sleeve	CLP105	2	4
17 Cotter Pin	CLP107	2	4
18 5/8" Self Tapping Screw	VS113	8	16
19 Key Switch Screws 3/4"	CLP109	2	4
20 Ring Terminal Connector	CLP115	1	1
21 Large Plastic Caps	VS117	2	4
22 Small Plastic Caps	VS118	8	16

<p>1) Power Supply /Control Box</p> 	<p>2) Power Cord</p> 	<p>3) Hot Tub Remote</p> 	<p>4) Swim Spa Remote</p> 	<p>5) Electronic Linear Actuator</p> 
<p>6) Key Switch Assembly</p> 	<p>7) 15' or 30' Actuator Extension Cable</p> 	<p>8) 15' Key Switch Extension Cable</p> 	<p>9A &amp; 9B) ConvertALift Adjustable Brackets Left(A) &amp; Right(B)</p> 	<p>10) V-Bar</p> 

## HARDWARE PACKAGE CONTENTS:

<p>11) 1/2" Hex Bolt 2" #18</p> 	<p>12) Clevis Pin</p> 	<p>13) 2" Black Metal Washer</p> 	<p>14) 1/2" Hex Bolt .75" Long</p> 
<p>15) Female Spade Connectors</p> 	<p>16) Bushing Sleeve</p> 	<p>17) Cotter Pin</p> 	<p>18) #10 5/8" Self Tapping Screw</p> 
<p>19) Key Switch Screws #4 3/4"</p> 	<p>20) Ring Terminal Connector</p> 	<p>21) Small Plastic Caps</p> 	<p>22) Large Plastic Caps</p> 

## Tools Required:

- Screw Gun
- Wrenches:
  - 1/2"
  - 5/16"
- Drill Bits:
  - 9/64"
  - 1/8"
- Hole Saws:
  - 5/8" (Optional)
  - 1 1/8"
- Tape Measure
- Phillips Screwdriver
- Template

**Recommended:**  
 Cable Running Rods  
 (or any long pole)  
 Wood Clamp  
 Tube Cutter  
 Electrical Tape

# VacuSeal Parts List

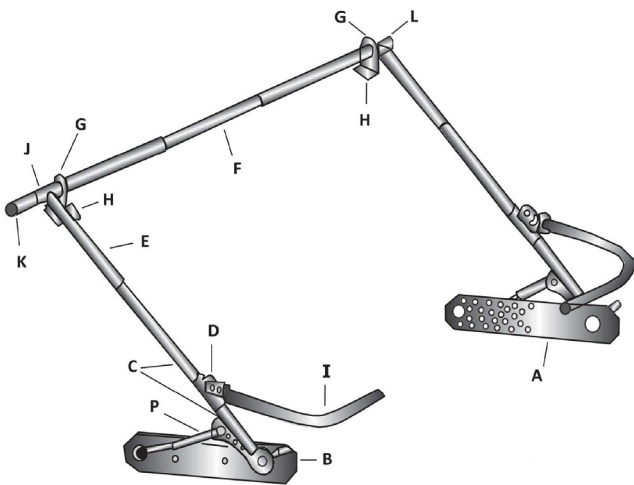
# HT - Quantity for Hot Tub # SS - Quantity for Swim Spas

## HARDWARE:

DESCRIPTION	PART #	# HT	# SS
A Mounting Bracket L/R	VS128	2	4
B Cover Plate	VS133	2	4
C Swing Arm	VS129	2	4
D VacuSeal Adjustable Bracket	VS134	2	4
E Crossover Bar	VS130	2	4
F Extension Tube 40"	VS135	1	2
G Upper Clamp	VS131	2	4
H Lower Clamp	VS136	2	4
I Rear Support Bar	VS132	2	4
J&K Handle Bar w/Foam Grip	VS137, VS110	1	2











DESCRIPTION	PART #	# HT	# SS
L Plastic Plugs 1-Lg 2-Sm	VS119	3	6
M Black Fender Washer - 1.5"	VS119	2	4
N Lock Washer	VS125	2	4
O Ball Studs 5/16" -18	VS116	2	4
P Gas Springs	VS115	2	4
Q Hex Bolts 1/4"-20x1/2"	VS121	4	8
R Nylon Lock Nuts 1/4"-20	VS122	8	16
S Hex Bolts 5/16"-18	VS124	2	4
T Nylon Lock Nuts 5/16"-18	VS123	2	4
U Wood Screws #12x2	VS120	28	56
V Self Tapping Screws #10x5/8"	VS113	20	40
W Machine Screws #10-32x1/2"	VS120	4	8
X Large Screw Caps	VS111	2	4
Medium Screw Caps	VS118	8	16
Small Screw Caps	VS117	20	40
Y Rubber Safety Stops		2	4
Z Teflon Washer		4	8

\* If width of cover is more than 96" you will need a 50" Extension Tube


















### Note:

Tube Cutter may be required to cut aluminum tube on spas with a cover length less than 18" long or a cover width less than 66"

<b>A) Mounting Bracket</b> VS128 	<b>B) Cover Plate</b> VS133 	<b>C) Swing Arm</b> VS129 	<b>D) VacuSeal Adjustable Bracket</b> VS134 	<b>E) Crossover Bar</b> VS130 
<b>F) Extension Tube 40"</b> VS135  Spa Covers wider than 96" require a 50" Extension Tube	<b>G) Upper Clamp</b> VS131 	<b>H) Lower Clamp</b> VS136 	<b>I) Rear Support Bar</b> VS132 	<b>J&amp;K) Handle Bar w/Foam Grip</b> VS137, VS110 

## HARDWARE:

<b>L) Plastic Plugs 1-Lg 2-Sm</b> 	<b>M) 1.5" Black Fender Washer</b> 	<b>N) Lock Washer</b> 	<b>O) Ball Studs 5/16"-18</b> 	<b>P) Gas Springs</b> 
<b>Q) Hex Bolts 1/4"-20x1/2"</b> 	<b>R) Nylon Lock Nuts 1/4"-20</b> 	<b>S) Hex Bolts 5/16"-18</b> 	<b>T) Nylon Lock Nuts 5/16"-18</b> 	<b>U) Wood Screws #12x2</b> 
<b>V) Self Tapping Screws #10x5/8"</b> 	<b>W) Machine Screws #10-32x1/2"</b> 	<b>X) Screw Caps S,M,L</b> 	<b>Y) Rubber Safety Stop</b> 	<b>Z) Teflon Washer</b> 

# Before Installing ConvertALift & VacuSeal System Together

## Pre-Installation Instructions

For the purpose of this installation, the “Service Panel” is the side where your spa pac is located. The opposite side we will call the “Rear Panel” and the others will be the “Right” and “Left Side Panels”.

**Before beginning the installation, you need to:**

1. Choose the direction of the cover.
2. Select how to power your system.
3. Decide where to install the Power Supply.

### CHOOSING COVER DIRECTION

We recommend having cover open away from the Service Panel where all of the spa equipment is located. See Fig 1 This eliminates having to remove mounting brackets if service is needed in the future.

### SELECTING POWER SYSTEM

#### 1. Wire Direct to Your Spa Pack

Recommend installing within 5' of the Spa Pac. See Fig 2

**IMPORTANT: Must be done by a Licensed Electrician or a Certified Spa Technician.**

#### 2. Dedicated 110V Line from Home

Running a Dedicated 110 Volt Line from your home’s electrical panel and wiring it directly to the Power Supply using a waterproof junction box. See Fig 3

**IMPORTANT: Must be done by a Licensed Electrician in accordance with local codes.**

#### 3. Plugging into a Standard 110V 15 Amp Outlet

Attach Power Supply Cord (CLP-PSHT) to Power Supply, then using any approved outdoor extension cord plug into any 110 Volt GFCI protected outlet.

**IMPORTANT: Not recommended as a permanent installation.**

### WHERE TO INSTALL POWER SUPPLY

The Power Supply can be installed anywhere within the spa cabinet unless you plan to Wire it Directly to the Spa Pac.

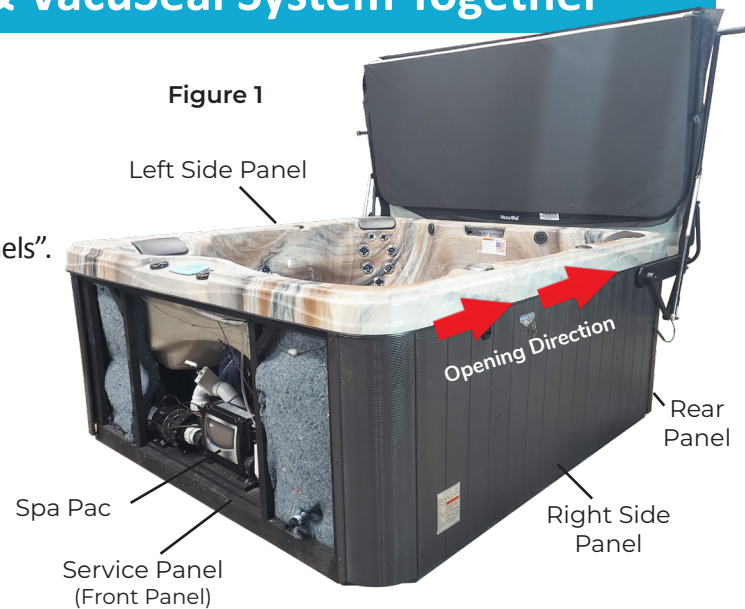
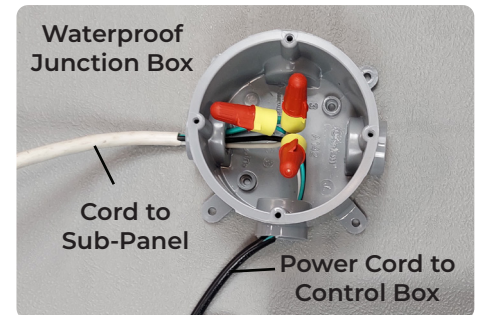


Figure 1

Figure 2



Figure 3



## IMPORTANT: FOR SWIM SPAS ONLY

The Swim Spa Remote allows you to raise either cover independently or both at the same time. Installation on Hot Tubs and Swim Spas is identical.

### IMPORTANT CHANGES:

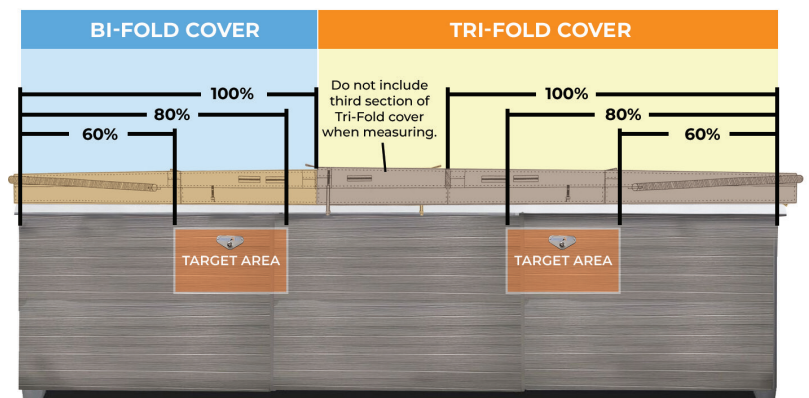
Position both covers firmly together on the swim spa and squarely on each corner.

Install one cover fully then push the second cover tightly against the first already installed cover. Be sure to install second cover at that exact position.

The VacuSeal System will always return both covers to their originally installed position.

This prevents a gap between the covers, helping prevent rain water from entering and heat to escape.

Determining Key Switch location on Swim Spas.



# Installing ConvertALift & VacuSeal System Together

## Step 1: Turn Power Off and Position Cover(s) on Spa

Position cover(s) squarely on the spa, checking each corner. Remember on Swim Spas to fully install ConvertALift on one cover first, then position 2nd cover tightly against the first before installing second cover.

## Step 2: Install Control Box within the Spa Cabinet

If possible install at an elevated position protecting it if any ground water should enter the cabinet. See Fig 4 Secure Control Box if spa is to be transported post install.

**WARNING:** On installations outside of North America be sure to request a Power Cord that meets each countries electrical requirements.

The Control Box will adapt to virtually all international electrical requirements but requires the proper cord attachment.

Improper Power Cords will damage the Control Box and possibly the Actuators. This damage is not covered by the warranty.

## Step 3: Attach All Extension Cables to Control Box

All Extensions Cables are directional so both ends have male connectors. For Hot Tubs use only A,B & C (D,E & F for Swim Spas). See Fig 5

**MOST COMMON ERROR IS CONNECTING CABLES INCORRECTLY!**

Be Very Careful and make sure the arrows match up on cable ends. See Fig 6  
Actuator Cables have 6 Pin Connections and Key Switch Cables have 3 Pin. See Fig 7,8  
Leave all cables accessible with the panel remaining off. See Fig 9

## Step 4: Install Key Switch Assembly

4.1 Check that the wires and the rear Lock Nut are secure on the Key Switch

Assembly (CLP-SKEYSWTCH). Do not remove the adhesive paper behind the plate.  
NOTE: If any wires have become disconnected attach the 2 Yellow Wires to either of the two center connections labeled 1 and 8. And the Red and Black Wires to outside connections labelled 2 & 7(Numbers are next to connection point). See Fig 10

4.2 Key Switch should be installed on the side you would normally enter your spa.

The same side you also will be eventually installing a Mounting Bracket.  
Position at a height convenient for operation and anywhere from 60% to 80% from the end of the cabinet where the cover will sit when opened. See Fig 11

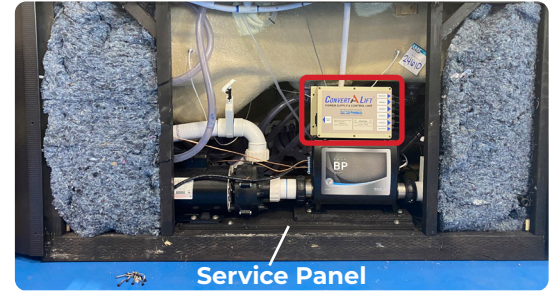
4.3 Use "Key Switch Installation Template(p.16)" and make certain hole will be at least 1.5" down from spa coping.

4.4 Mark position and drill hole into cabinet using using a 1 1/8" Hole Saw. Make certain there is no internal obstruction (remove panel if necessary to view).

4.5 Run Key Switch Extension Cable internally to and through the hole.  
Using Cable Running Rods or long pole makes running all cables easier.  
Then attach the Extension Cable to the Key Switch Assembly, make certain connection is secure. See Fig 12

4.6 Position Key Switch w/Plate on the cabinet and attach one Key Switch Screw(CLP109). Then make certain Plate is level and then attach second screw.

Figure 4



### Control Box Connections:

- A. Keyswitch 1 (Hot Tubs)
- B. Actuator A (Hot Tubs)
- C. Actuator B (Hot Tubs)
- D. Actuator C (Swim Spas Only)
- E. Actuator D (Swim Spas Only)
- F. Keyswitch 2 (Swim Spas Only)

Figure 5

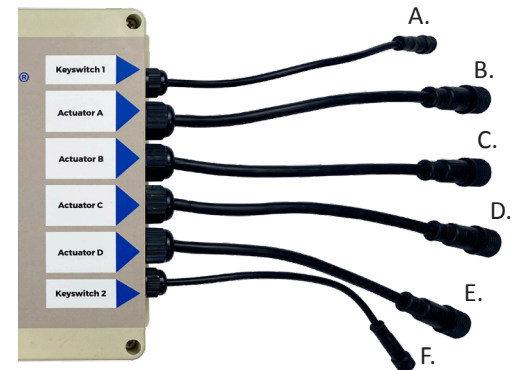


Figure 6

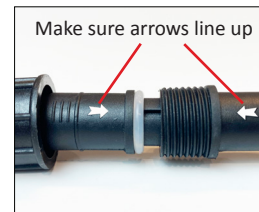


Figure 7 & 8

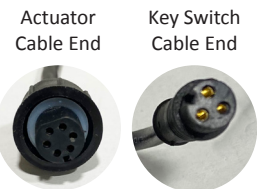


Figure 9



Figure 10

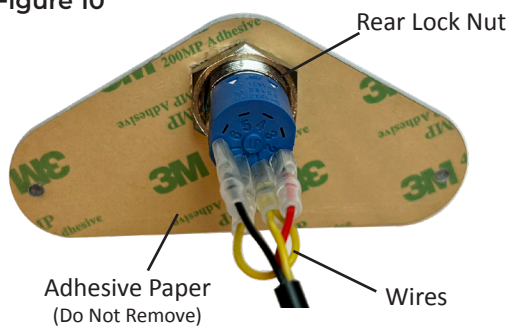
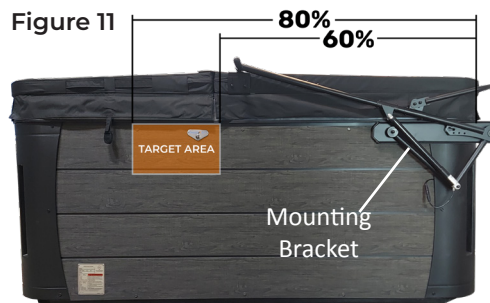


Figure 11



Determining Key Switch location on Hot Tubs.

Figure 12



## Step 4 - Installing Key Switch Assembly (Continued)

**USING THE TEMPLATE:** Cut along the dotted line and then tape Section A at the bottom of the shell coping and B along the top of the cabinet. (See Fig 13) Then remove the cabinet panel. This helps you determine the horizontal position of the hole. See Fig 14 Be certain the hole is at least one and a half inches from top of cabinet then mark the position of the hole. See Fig 15

Template Cut & Taped to Coping & Cabinet

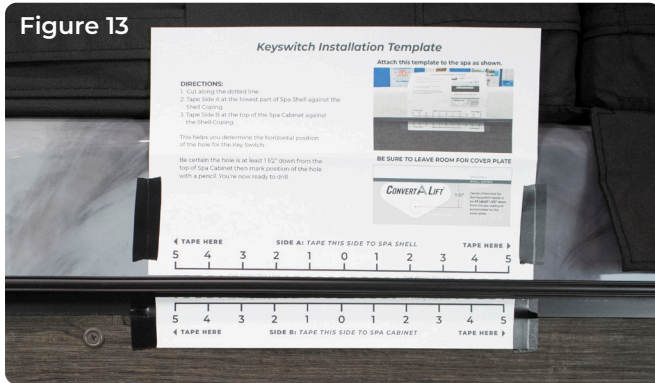


Figure 13

Panel Removed

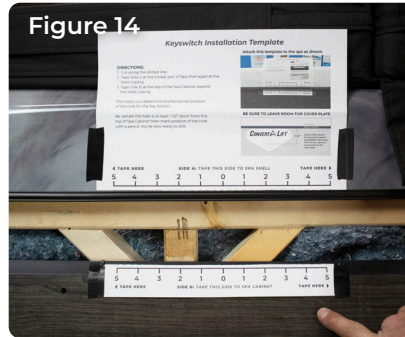


Figure 14

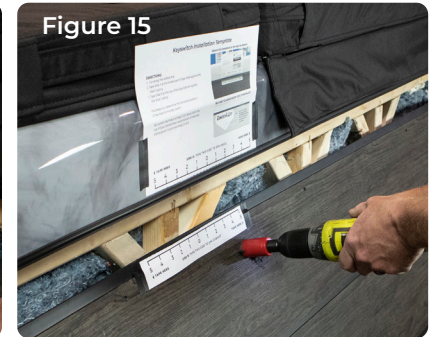


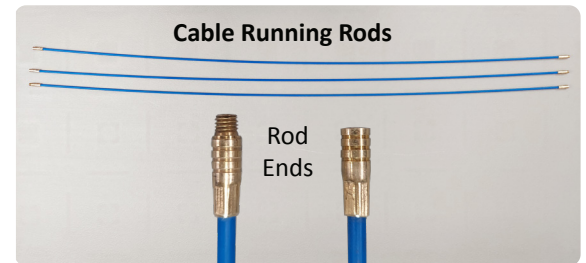
Figure 15

Figure 16

**4.3 Using a 1 1/8" Hole Saw drill a hole in the cabinet panel.** See Fig 15

**4.4 Position Key Switch Extension Cable in Target Area.**

**NOTE:** We recommend using Cable Running Rods. We make available a package of three, 3' Foot rods, that can be screwed together to extend up to 9 Feet. See Fig 16



### There Are Two Ways Run the Cable to the Target Area

**4.4A Feeding Key Switch Cable from Control Box**



Figure 17

**4.4A Feeding Key Switch Cable From Control Box**

With the Side Panel removed, you may be able to simply hand feed the cable from Control box and then grab the cable and pull it through the hole. Having a removable Corner Panel on the cabinet also makes it more accessible. See Fig 17

**4.4B Snaking a Cable Rod Through Hole**

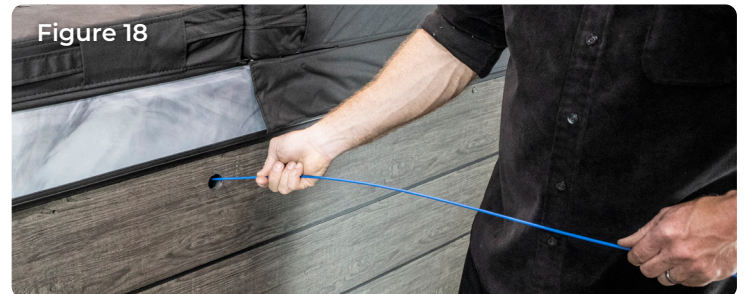


Figure 18

**4.4B Snaking a Cable Rod Thru the Hole**

Re-attach the Side Panel with the hole already drilled, and snake a Cable Running Rod through the hole towards the control box. (See Fig 18) Securely tape the Key Switch Extension Cable to the Cable Running Rod. (See Fig 20) and then pull the Rod through the hole until you can grab onto the cable. See Fig 21

**4.5 Connect the Key Switch Pigtail to the Extension Cable.**

Make sure the wiring is secure then place the key switch through the hole then secure the Key Switch Plate with one screw. Check to be certain the Plate is level and then secure with the second screw. See Fig 19

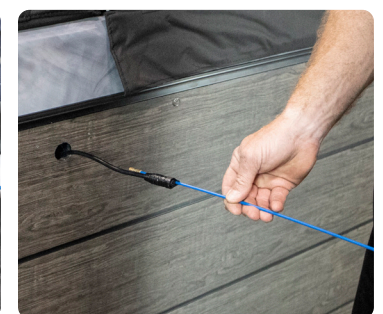


Figure 19

Figure 20



Figure 21

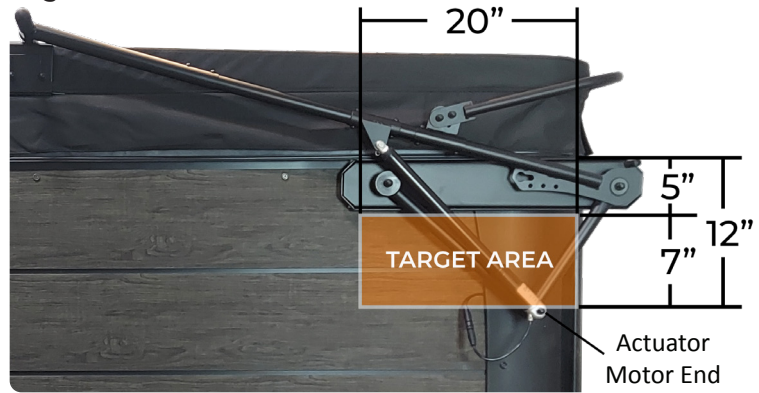


## Step 5 - Installing the Actuator Cables

**NOTE:** Installing the Actuator Cables often (but not always) requires two steps.

1. Running the Extension Cables to the Corners of the Cabinet. See 5.1
2. Positioning the Cable Ends in the Target Area. See Step 5.2 and Fig 22

Figure 22



### HELPING YOU DETERMINE LOCATION OF THE POWER SUPPLY

Figures 23 & 24 demonstrate that installing the Actuator Cables is easiest when the Power Supply is on the side closest to the Mounting Brackets. **BUT NOTE:**

1. The location of the Mounting Brackets determine the side where the Cover opens to and it is preferred (not required) to have the Control Panel opposite the cover so that it is convenient to access it when the cover is closed.
2. Control Panels on most hot tubs are located on the same side as the Spa Pac. And if you are attaching the Power Supply to the Spa Pac, they must be within 5 feet each other.

Figure 23

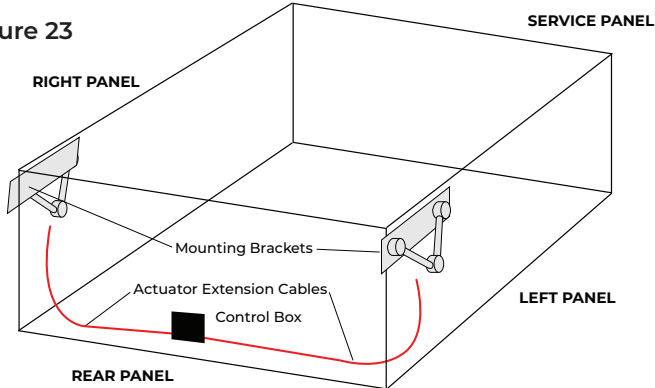
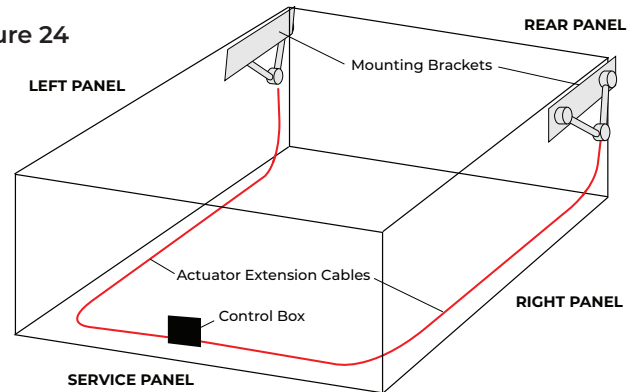


Figure 24



### 5.1 Running the Extension Cables to Corners of Cabinet

There are 3 methods to choose from to run the Cables to the Corners of the Cabinet:

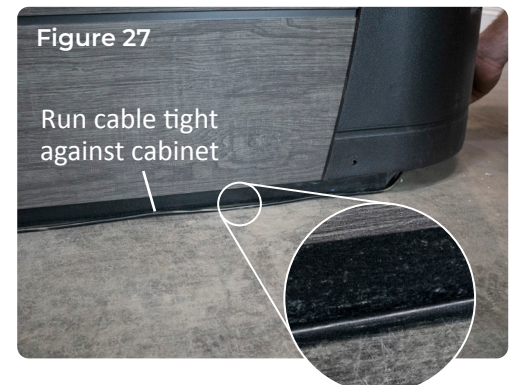
#### 5.11 Snaking the Cables Through the Cabinet Interior



#### 5.12 Positioning Cables Behind Cabinet Side Panels



#### 5.13 Running Cables Along Cabinet Lower Perimeter



Detailed Instructions for Each of These Methods on the Next Page

**IMPORTANT:** Careful Not to Pinch Cables or to Bend Them at Less Than a 1" Radius.

## Step 5 - Installing the Actuator Cables (Continued)

### 5.11 Snaking the Cables Through the Cabinet Interior (Continued)

Remove the Corner Panels where the Mounting Brackets are to be installed. If they are not removable, remove the Rear Panel. Then tape the end of the Extension Cable to a long pole (like a broom stick) or Cable Running Rod and feed it through the interior of the cabinet from that panel, towards the Control Box where the Actuator extension cables are located. See Fig 28

Make sure to leave enough of the Cable Rod to grab onto. See Fig 29

Go to the Control Box, capture the Cable Rod and securely tape it to the Actuator Ext Cable. See Fig 30

Then go back to Corner Panel, grab hold of Cable Rod and pull it through the spa's interior until you can capture the taped end of the extension cable. See Fig 31

**NOTE:** This procedure can also be done with a broom handle just not as easily.



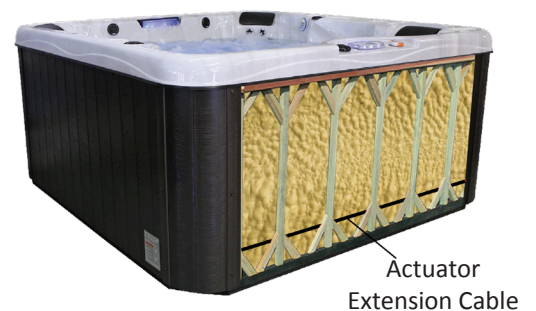
### 5.12 Running the Cables Behind the Side Panels

Remove the Side Panels and position the Actuator Extension Cable behind the Panels. If the interior of the spa is fully foamed the Extension Cables are thin enough to go between the panels and the insulation. If necessary, position cables behind any framing material. See Fig 32

### 5.13 Running Cables Along Cabinet Lower Perimeter

The easiest method of running the Actuator Extension Cable is positioning them along the lower perimeter of the cabinet. (See Fig 33). If you choose this method then it is strongly recommended to secure the cable somehow, either with a cover board or removing the screws on the bottom of cabinet and securing them inside along the bottom of the cabinet. Left unsecured, the cable will become loose and open for damage. See Fig 34

Figure 32



**REPEAT YOUR CHOSEN METHOD  
ON THE OTHER SIDE(5.11, 5.12 or 5.13)**

Figure 33



Figure 34





## Step 5 - Installing the Actuator Cables (Continued)

### 5.2 Positioning Cable Ends in the Target Area

There are 3 methods to choose to position Cable Ends in Target Area

#### 5.2.1 Behind the Corner Panel



*Most Preferred Method*

**5.2.1** Remove the Corner Panel where the Mounting Bracket would be installed. Then Slide the Cable to a point where it is within the Recommended Target Area. Then reinstall the Corner Panel to secure the Cable. See Fig 35

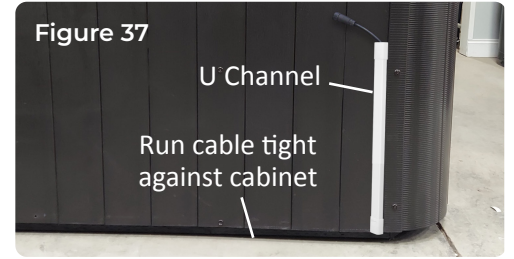
#### 5.2.2 Through a Hole in the Cabinet



**5.2.2** Drill a 5/8" Hole in the Target Area. See Fig 36

**Note:** Be sure there is no obstruction behind the cabinet panel and feed the Extension Cable through it. This may require removing the Side Panel.

#### 5.2.3 Installing Cable within U Channel



**5.2.3** Installing Cable within a 5/8" or larger U Channel on the cabinet. Install the U Channel from the bottom of the cabinet to the point in the Target Area. See Fig 37

**Note:** This is not the most attractive method but ideal for customers with cabinets that have no Removable Corner Panel or for those not wanting to drill a hole in their cabinet.

## Step 6 - Installing the Mounting Bracket

**REMINDER** If the Radius of your cover is greater than 12" and less than 16" you need to use our optional "Extended Bracket". To install the Mounting Bracket requires attaching an Extended Bracket to each of the Mounting Brackets. Once attached, simply position them squarely on each corner and use that position to secure each Mounting Bracket. More detailed instructions are within the package. If your Radius is greater than 16" then our product will not properly attach to your spa. See Fig 38

OPTIONAL EXTENDED BRACKET FOR LARGE RADIUS SPAS



**NOTE:** Mounting Brackets are to be installed on each Side Panel and to the rear of the spa, where the cover is intended to be positioned when open.

- 6.1** Measure 22" back from the furthest point on the spa cabinet and mark with a pencil. See Fig 39
- 6.2** If unknown to you, check to see if there is a solid structure to screw into. If necessary, install supports to the spa frame, usually short 2x4 material works fine.
- 6.3** Position the Mounting Bracket at your pencil line, flush under the spa coping. Make sure the safety stop is at the top and rear of the spa. Fig 40
- 6.4** The mounting bracket must sit flush on the cabinet. If it doesn't, remove any protruding screws and add a wood spacer to level the area off. Fig 41
- 6.5** Hold bracket in position and pre-drill two holes with a 1/64" drill bit to prevent splitting wood. See Fig 42
- 6.6** Secure the 2 holes with Wood Screws. Secure the Mounting Bracket with a minimum of 8 Wood Screws, though more is better. See Fig 43, 44

**NOTE:** On spas with STEEL FRAMES use a Metal Bit to Pre-drill all holes and then securing with Wood Screws will work just fine.

Figure 39



Figure 40



Figure 41



Figure 42



Figure 43



Figure 44



## Step 7 - Installing the Cover Plate

- 7.1 Position Cover Plate over Mounting Bracket and secure with 2 machine screws using a hand-held Phillips Screwdriver. See Fig 45

## Step 8 - Installing the V-bar

- 8.1 Slide the V-Bar over the 2 Bosses on the Mounting Bracket with the short side closest to the rear of the spa. See Fig 46
- 8.2 Place a 2" Black Metal Washer on the Mounting Bracket Boss furthest from the rear of spa and attach with a Short 1/2" Hex Bolt. See Fig 47 & 48

Figure 46

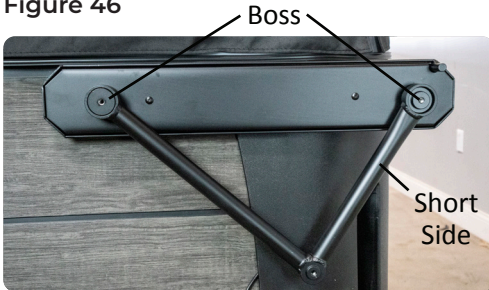


Figure 47



Figure 45



Figure 48



**REPEAT STEPS 6 – 8 ON THE OTHER SIDE**

## Step 9 - Installing the Swing Arm

- 9.1 In your hand hold a Short 1/2" Hex Bolt and place a locking washer over it, then add a Black Machine Washer, followed by a Teflon washer. See Fig 49
- 9.2 Then place a separate Teflon washer over the Boss closest to the end of the spa. See Fig 50
- 9.3 With the other hand position the swing arm on the Boss with the flat extended plate pointing down. Rest Swing Arm down. See Fig 51
- 9.4 Install Hex Bolt assembly in your hand, keeping washers even, then firmly tighten with a 1/2" wrench until lock washer is compressed.

Figure 49

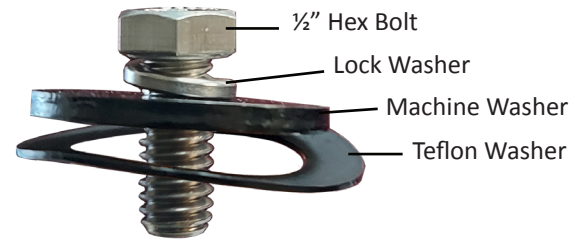


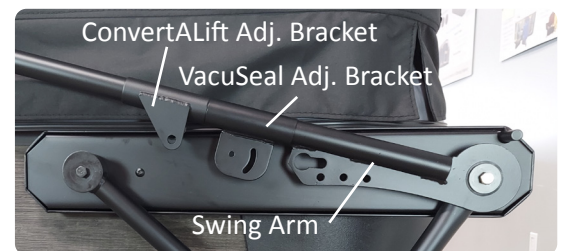
Figure 50



## Step 10 - Installing VacuSeal and ConvertALift Adjustable Brackets

- 10.1 Raise the Swing Arm and then slide a VacuSeal Adjustable Bracket over it with the flat extension towards the rear of the spa and the "smiley faced" hole at the bottom. See Fig 51
- 10.2 Then slide the ConvertALift Adjustable Bracket on the Swing Arm with the flat triangular plate positioned furthest from the spa and the short side toward the rear of spa. See Fig 51

Figure 51



**LEAVE BOTH BRACKETS UNSECURED**

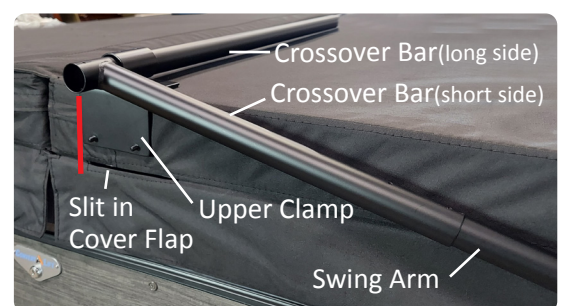
## Step 11 - Sliding Crossover Bar onto Swing Arm

- 11.1 Slide the longer side of a "Crossover Bar" through the Upper Clamp and the shorter side over the Swing Arm. Then lay the longer side of the Crossover Bar on the cover. See Fig 53
- 11.2 Position Upper Clamp over the slit in the cover flap and leave Crossover Bar unsecured. See Fig 52

Figure 52



Figure 53



**IMPORTANT:** If cover is less than 78" long you will have to cut both Swing Arms with a tube cutter for the Upper Clamp to sit over the cover slit. If you cut the Swing Arms be sure it remains visible through the pre-drilled holes in the Crossover Bar.

## Step 12: Slide Extension Tube into Crossover Bar

Pencil mark the center of Extension Tube(VS135) to keep it centered and slide it partially into Crossover Bar. **Leave it Unsecured.**

## Step 13: Install Second Crossover Bar

Repeat Step 11 on opposite side.

Slide long side through Upper Clamp then into Extension Tube, **Leave Unsecured.**  
**NOTE:** If cover width is less than 66" you need to cut both sides of the Crossover Bars.

## Step 14: Install Second Swing Arm

Repeat Step 9 & 10 on opposite side.

- 14.1 Repeat Step 10 (Install Adjustable Brackets)
- 14.2 Slide Swing Arm(VS129) into Crossover Bar(VS130)
- 14.3 Repeat Step 9 (Secure Swing Arm to Boss)

## Step 15: Installing Rear Support Bar

- 15.1 Insert long side into back sleeve of cover keeping it parallel and flat against the cover. See Fig 54 & 55
- 15.2 Position other side against outer side of the VSL Adjustable Bracket and align the two holes. See Fig 56
- 15.3 Secure the first hole with a Hex Bolt (VS123) and Nylon Lock Nut with a 5/16" wrench.
- 15.4 Check that long side is sitting flat against cover and the short side is parallel with the Swing Arm, then secure the second hole identically as the first hole.

**IMPORTANT: keep long side flat and short side parallel.**

**REPEAT THIS ON THE OTHER SIDE**

## Step 16: Installing Lower Clamps

- 16.1 Lift cover slightly and slide in Lower Clamp(VS136) over Upper Clamp (VS131). Make sure Clamps are as close to the cover fold as possible. See Fig 57
- 16.2 Loosely install both Nylon Lock Nuts (VS123).
- 16.3 Hand Squeeze clamps together(Use a wood clamp if available) then securely tighten Lock Nuts with a 5/16" wrench. See Fig 58

**REPEAT THIS ON THE OTHER SIDE**

## Step 17: Installing the Handle

- 17.1 Slide Handle Bar (VS137) fully into the Crossover Bar(VS130) that is on the same side as the Key Switch and leave unsecured.

## Step 18: Secure Crossover Bars to Swing Arms

- 18.1 **MAKE CERTAIN** cover sits evenly on each corner.
- 18.2 **MAKE CERTAIN** the distance from the end of the open tube on the Swing Arm to its connection point on Crossover Bar is exactly the same on both sides. Shift cover if necessary. See Fig 59

Figure 54



**Correct:** Rear Support Bar is Straight & Aligned with Cover

Figure 55



**Incorrect:** Rear Support Bar is Not Aligned with Cover

Figure 56



Figure 57

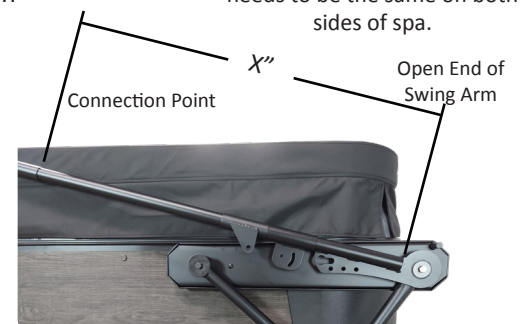


Figure 58



Figure 59

**IMPORTANT:** Measurement "X" needs to be the same on both sides of spa.



## Step 18: Secure Crossover Bars to Swing Arms (Continued)

- 18.3 **MAKE CERTAIN** both sides are running parallel and that there is clear, even space between Swing Arm and the cover so that it will open without any obstruction. See Fig 60
- 18.4 Secure Crossover Bar to Swing Arm by Pre-drilling holes in the Crossover Bar with 5/32" drill bit and secure with self-tapping screws. Secure all holes.

**REPEAT THIS ON THE OTHER SIDE**

## Step 19: Secure Upper Clamps to Crossover Bar

See Fig 61 & 62  
Pre-drill holes with 5/32 drill bit, then secure with self-taping screws.

**REPEAT THIS ON THE OTHER SIDE**

## Step 20: Secure Crossover Bars to Extension Tube

**DO NOT LEAVE ANY HOLES UNSECURED**

**WARNING:** Make certain to use a hard, protective material to protect from drilling into cover. Damage is not covered under warranty. See Fig 63  
Pre-drill holes using a 5/32" drill bit, then secure with Self-Tapping Screws.

## Step 21: Installing Linear Actuators

- 21.1 Slide Bushing Sleeve (CLP105) over 2" Long Hex Bolt (VS108) then slide the bolt into bottom hole of Actuator. Make sure Actuator Cable is pointing down. See Fig 64
- 21.2 Secure Actuator tightly on bottom of V-Shaped Bracket (CLP103) using a 1/2" wrench.
- 21.3 Position other side of the Actuator over Adjustable Bracket (CLP104) w/plate furthest from spa. Line up holes, and slide in Clevis Pin (CLP111).
- 21.4 Secure Clevis Pin with Cotter Pin (CLP107) into first notch. See Fig 65
- 21.5 Attach Actuator Extension Cable to Pigtail Cord on actuator leaving short loop to prevent rainwater from running into Actuator Motor End.

## Step 22: Secure Adjustable Brackets to Swing Arms

- 22.1 Secure CLS Adjustable Bracket to Swing Arm with self-tapping screws into the two top holes. Bottom holes to be secured later. See Fig 66
- 22.2 Secure VSL Adjustable Bracket with self-tapping screw into top accessible hole. Non-accessible top hole will not require a screw. See Fig 67

**REPEAT STEPS 21 & 22 ON THE OTHER SIDE**

## Step 23: Testing ConvertALift System w/Extension Cord

- 23.1 Attach Power Supply Cord (CLP-PSHT) to Power Supply, then using any approved outdoor extension cord plug into any 110 Volt GFCI protected outlet.
- WARNING:** Make Certain No Cover Straps are Attached to the Cabinet. If Attached, it can Cause Damage to the Spa and/or the Cover and Neither are Covered Under the Warranty. See Fig 68
- 23.2 Use Key Switch to raise cover. Leave cover in open position. If cover does not open, check all connections.  
This is not our recommended installation but ideal for testing your system.

## Step 24: Securing the Bottom Holes on Adjustable Brackets

**IMPORTANT:** With cover up, SECURE ALL Lower holes in bottom of both VSL Adjustable and CLS Slide Brackets with self-tapping screws. Do not leave holes unsecured. see Fig 69

**REPEAT THIS ON THE OTHER SIDE**

Figure 60



Figure 61



Figure 62

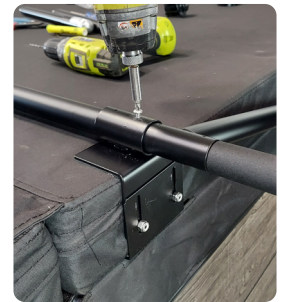


Figure 63



Figure 64



Figure 65

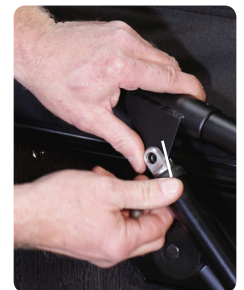


Figure 66



Figure 67

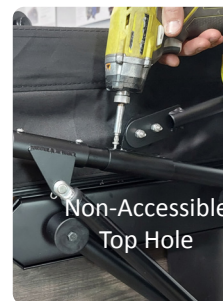


Figure 68



## Step 25: How to Properly Close the VacuSeal Cover

**TO CLOSE:** Turn the Key with one hand and guide the short side of the cover down with the other. See Fig 70

Guiding cover prevents it from getting caught on top of spa or on any raised areas along the top of spa coping (pillows, controls, etc.).

It also assists in customer safety. Releasing the key will stop the cover, allowing you to adjust the flap. The only function for the flap is to keep debris from entering the fold. The Key Switch can also be used for opening the cover by simply turning the key in the opposite direction.

**NOTE:** The VacuSeal Cover bottom hinge helps prevent heat loss and allows you to open your cover in one motion.

To meet safety regulations we do not provide a remote function for closing the cover.

## Step 26: Installing Plastic Caps and Plugs

Install Rubber Safety Stop on Mounting Bracket and all plastic caps and plugs where appropriate to protect the hardware and give your spa a finished look.

## Step 27: Programming & Operating Remote

27.1 Unplug Power Cord to the Power Supply, wait at least 10 seconds, and plug in.

27.2 Then within the next 15 seconds press any key on the remote and hold it down for at least 5 seconds.

27.3 With the cover closed press any button twice. Not too quickly, within half a second apart. To test battery in remote check to see if light appears on remote when any button is pressed. Remote uses standard CR2032 batteries.

## Step 28: Selecting & Powering the ConvertALift

*There are 3 choices in powering the ConvertALift:*

### 28.1 DIRECT WIRE TO THE SPA PAC

Requires installing Control Box within 5' of Spa Pac.

This is the most common method because it eliminates having to run an electrical cord from your home. Cut the end off of the Power Cord, strip the wires, attach the Female Spade Connectors (included), and attach them to a 110-Volt, Non-Switched Source on the hot tubs internal Spa Pac. It's low amperage draw should not interfere with the Spa Pac's permitted amperage requirements. Recommend following Step 23 and testing the installation first.

**WARNING:** Should ONLY be done by a Licensed Electrician or a Certified Spa Technician. Testing requires turning on the power to your spa.

### 28.2 DEDICATED 110V FROM YOUR HOME

Run an independent dedicated 110 Volt line to your Power Supply from either the main electrical panel in your home or from the external sub panel for your spa. Cut and strip the lines of your Power Cord and these lines to the Dedicated 110 Volt line from your home. Attach these lines within a Weatherproof Box kept within the interior of your spa.

**WARNING:** Should ONLY be done by a Licensed Electrician in accordance with local codes.

### 28.3 PLUGGING INTO A STANDARD 110V 15 AMP OUTLET

Attach an approved outdoor extension cord, plug the Power Supply Cord into the Control Box. Then attach an approved outdoor extension cord and plug into any 110 Volt GFCI protected outlet. This is mostly used for retail showroom displays or for testing the installation as described in Step 23.

**WARNING:** Keep all electrical cords protected and not available for anyone to trip or machinery, lawn mowers, etc. to damage.

## Step 29: Final Test

Turn on power to spa, test both the Remote Control and the Key Switch again. If either is not operational go to "Trouble Shooting Guide". If both are operational close and secure all cabinet panels and Enjoy Your Spa. Complete the warranty online at [www.hottubproducts.com/clswarranty/](http://www.hottubproducts.com/clswarranty/)

Figure 69

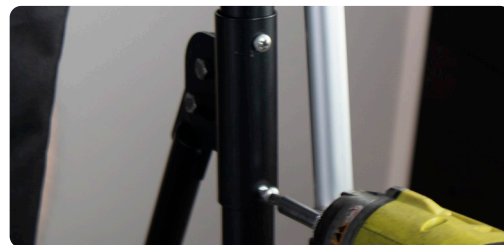


Figure 70



Figure 71

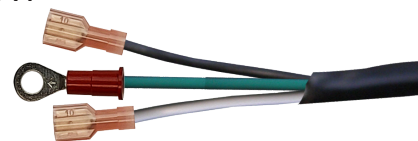
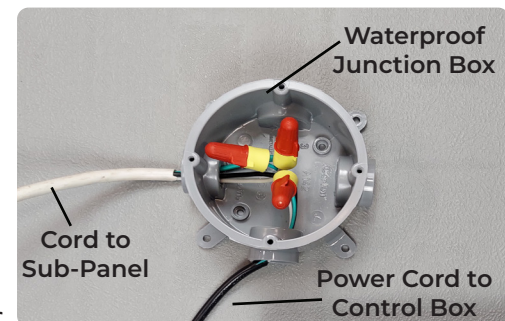


Figure 72



Figure 73



# TROUBLE SHOOTING GUIDE

## 1. If the Key Switch is covered with ice, how can I use it?

Use a hair dryer or douse it with a little hot water, just as we did with automobiles when the key area was frozen.

## 2. I hooked up the system with an Extension Cord to an outlet at my home and the power would not activate.

Check to be certain the Power Cord is firmly attached to the Control Box along with the extension cord connection. Lastly check that there is not a tripped breaker on the outlet you chose. Possibly the extension cord is faulty.

## 3. The System activated when I plugged it into an outlet in my home, but not when installed on the Spa Pac.

Check that the power to the spa is on. If it is, then it must be the connection from the Control Box to the Spa Pac (check all connections).

## 4. The System is installed, the power is on, but neither the Key Switch nor the Remote is working.

Make certain the Power Cord is firmly attached to the Control Box.

Check all connections from the Control Box to both Actuators. MAKE CERTAIN that the arrows match up on all cable connections. This is the most common cause of failures. If the arrows do not match up exactly it will cause an operational failure.

## 5. The System is installed, the Key Switch works fine, but the Remote does not?

Reprogram the Remote and try again.

If the light does not go on the remote, then the battery needs replacing.

## 6. The System is installed, the Remote Control works fine, but Key Switch does not work?

1 First check to see that the Extension Cable connection to the pig tail connection on the Control Box is the correct pig tail.

2. Check to see if the cable connections are secure and that the arrows MATCH UP.

3. Disconnect the 2 small screws on the Key Switch Plate and gently pull it out.

First check that none of the connections came loose on the rear Key Switch.

Then check that the connection to the extension cable is secure and that the arrows MATCH UP.

## 7. Can I have the Key Switch work in the opposite direction?

Yes, disconnect the 2 small screws on the Key Switch, gently pull out the Key Switch and reverse the 2 (Red & Black) outside wire connections.

## 8. The system has worked fine for a while and now it rises very slowly and/or needs some assistance.

Most common cause of this is that none or some of the required Teflon Washers were not installed in the original installation. Check to see if they were all installed by disconnecting the swing arm(s).

## 9. The Actuator on one side is working and the other is not.

You may have one bad actuator which is easily verified by swapping the two actuator cables at the Control Box. If the same side still does not work, you have a bad actuator? If the opposite side does not work, then you have either a bad cable or a malfunctioning Control Box.

a. Check to see the cables are not tightly wrapped

b. Check to see that any cord or extension cable is not pinched

## 10. One Side of the Cover is opening on an angle, how to correct it.

Most common cause is in installation. (See Step 18 in Manual) Make certain that the distance between the end of the open tube on the Swing Arm and the connection point on the Crossover Bar on both sides is identical. Also make certain attachments of the Clamps on the cover are equal on both sides.

# Keyswitch Installation Template

Attach this template to the spa as shown.

- DIRECTIONS:**
1. Cut along the dotted line.
  2. Tape Side A at the lowest part of Spa Shell against the Shell Coping.
  3. Tape Side B at the top of the Spa Cabinet against the Shell Coping

This helps you determine the horizontal position of the hole for the Key Switch.

Be certain the hole is at least 1 1/2" down from the top of Spa Cabinet then mark position of the hole with a pencil. You're now ready to drill.



**BE SURE TO LEAVE ROOM FOR COVER PLATE**

