

# COVANA

## HORIZON INSTALLATION MANUAL



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# SAFETY

## *IMPORTANT SAFETY INSTRUCTIONS*

**SAVE THESE SAFETY INSTRUCTIONS AND REVIEW THEM REGULARLY.**

## *READ AND FOLLOW ALL INSTRUCTIONS*

### *Safety information*

The Covana cover was designed, tested and certified to be installed over a swim spa and by following important installation instructions issued by Covana. Any other type of usage will void the warranty and product certification.

The maximum extra load weight provided in the specification section of this manual is a provision for environmental outcomes, such as a small amount of leftover snow or damp leaves that may temporarily accumulate on the cover and are evenly distributed on the surface of the cover.

The Covana cover was not designed to support any additional load or people walking or standing on its lid. Failure to observe this instruction will void the cover's warranty and nullify its certification.

The power safety cover meets the ASTM F1346-91 requirements.

### **⚠ DANGER**

- ◆ To reduce the risk of injury, do not allow children to use this product unless they are supervised at all times.
- ◆ The Covana cover should be fully visible when operating the key switch.
- ◆ Failure to follow all instructions may result in injury or even death.
- ◆ Do not allow people to climb on the cover.
- ◆ Do not allow children to have access to the Covana cover without supervision.
- ◆ Inspect the cover periodically. It should raise smoothly and evenly. Contact your Covana dealer if any unusual mechanical sound is heard during use.
- ◆ Never operate the Covana cover until all people and objects are out of the hot tub.
- ◆ Lower the Covana in extreme wind conditions. Gusts of 20 mph (30 km/h) while in the raised position and upwards of 45 mph (70 km/h) when completely lowered on the hot tub.

### **⚠ WARNING**

- ◆ Be sure to keep the key switch and key out of the reach of children.
- ◆ Do not put any type of fabric or plastic sheet, such as a tarpaulin, on the Covana cover. This could overheat the cover and result in the deformation or delamination of the cover.
- ◆ Inspect the cover periodically. It should raise smoothly and evenly. Contact your Covana dealer if any unusual mechanical sound is heard during use.
- ◆ Never use any type of pressure washer or buffer to clean any surface of the Covana cover. This could result in premature wear or damage.

### **DO**

- ◆ Remove the control key after operating the Covana cover. Store the key in a secure location when not in use. Users must bring the control key in the hot tub with them to prevent any unauthorized operation of the cover.
- ◆ Never leave the key in the keyswitch.
- ◆ Check the cover frequently for signs of deterioration.
- ◆ Have any repairs, adjustments or mechanical work performed by your certified Covana dealer as soon as possible when you notice a malfunction.
- ◆ Close the cover when it is not in use or if the hot tub is not being monitored.
- ◆ Covana cover should only be operated by an adult.
- ◆ Covana cover is not to be used by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction.

### **DO NOT**

- ◆ Operate the unit before all the mechanical and electrical connections have been made.
- ◆ Step on or stack anything on the operator cover.
- ◆ Operate the Covana cover while somebody is in the hot tub.
- ◆ Climb, walk or step on the Covana cover at any time.
- ◆ Leave the Covana cover open for more than 12 hours at a time. This could cause the cover to warp over time.

- ◆ Converge or directly reflect sunlight on the cover. This could cause permanent damage.
- ◆ Wash the cover with harsh chemicals or cleaners.
- ◆ Use a pressure washer to clean any component of the Covana cover. This could result in premature wear or damage.
- ◆ Use an extension cord to connect the Covana cover to its power source. The cord may not be properly grounded and the connection is a shock hazard. An extension cord may cause a voltage drop, which would cause the motor to overheat.

### CAUTION

- ◆ Be sure to follow all the instructions in this manual and only use the accessories and tools approved by Covana.
- ◆ Do not roll the Covana cover onto its side or slide it on its side. This will damage the siding.
- ◆ After removing a part, always place it in a safe place on a clean and level surface to ensure proper functionality.
- ◆ *For ground anchoring model:* Both posts of the Covana cover must be properly anchored to the foundation using the anchoring holes located at the foot of each post.  
*For tub mount model:* Both posts of the Covana cover must be properly anchored to the hot tub frame using the tub mount brackets and arms.
- ◆ This product mainly contains steel, fiberglass, foam, copper (Cu) and die-cast aluminum (Al). The gearbox contains oil and other materials. Please recycle them properly.
- ◆ Both the up and down limit switches are pre-adjusted at the factory. The down-limit switch should never be readjusted. The up-limit switch should be readjusted only to reduce the maximum height of the cover to avoid possible contact with its surroundings. Please refer to the *Limit Switch Adjustment* section in this manual before making any adjustments. An improper adjustment can result in damage to the drive system and/or cover.

## Avoiding the risk of electrocution

### ELECTRICAL DANGER

- ◆ Failure to comply with these instructions may result in death by electrocution or serious injury. Disconnect or turn off and secure the power supply before starting any intervention on the Covana cover.
- ◆ Always have a licensed electrical contractor perform any electrical maintenance or repairs on the Covana cover. The wiring must comply with all the applicable local electrical codes and regulations.
- ◆ The Covana operator must be connected to a circuit that is protected by a dedicated ground fault circuit interrupter (GFCI) that complies with all the applicable local electrical codes and regulations.
- ◆ Install the Covana cover in such a way that drainage directs water away from the electrical & base mechanical components.
- ◆ Do not connect any auxiliary components to the electrical system of the Covana cover unless they have been approved by Covana.
- ◆ Replace electrical components with original components provided or approved by Covana. Ask your dealer for replacement parts.
- ◆ To reduce the risk of electrical shock, replace a damaged cord immediately. Failure to do so may result in death or serious personal injury due to electrocution.
- ◆ Do not bury the power cord. A buried cable may result in death or serious personal injury due to electrocution if direct burial-type cable is not used, or if improper digging occurs.

### ELECTRICAL WARNING

- ◆ To reduce the risk of electric shock, the green-colored terminal or the terminal marked “g,” “gr,” “ground,” “grounding” or with a  $\perp$  symbol that is located inside the supply terminal box or compartment must be connected to the grounding means provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.

- ◆ Two lugs marked “bonding lugs” are provided on the external surface or on the inside of the supply terminal box or its compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the Covana cover. Use terminals with an insulated or bare copper conductor no smaller than No. 6 AWG (13.3 mm<sup>2</sup>).
- ◆ To reduce the risk of electrical shock, replace any damaged cord immediately. Failure to do so may result in serious personal injury or death due to electrocution.
- ◆ All field-installed metal components, such as rails, ladders, drains or other similar hardware, within 10 ft. (3 m) of the hot tub must be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG (13.3 mm<sup>2</sup>). (NEC art. 680.)

#### **WARNING REGARDING DRUG OR ALCOHOL USE**

- ◆ The use of drugs or alcohol while operating the Covana cover is strictly prohibited. The impairment of judgment, vision or hearing might affect the security of other people or result in death.

#### **WARNING REGARDING MODIFICATIONS TO THE COVANA COVER**

- ◆ Any modifications to the Covana cover, such as mechanical, electrical or aesthetic ones, may cause the cover to operate in an unwanted or dangerous way. Furthermore, these modifications are not permitted and might void the warranty and certification.
- ◆ The Covana cover has been designed, tested and certified only for the purpose of covering and securing a spa. **Any installation that differs partly or entirely from this purpose will void the warranty and certification.**

**SAVE THESE INSTRUCTIONS**

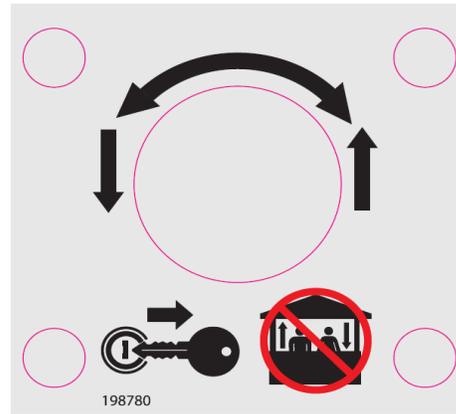
# LABELLING

## ⚠ WARNING

- ◆ Removing any labels from the Covana cover will void product certification. All labels should always remain visible. It is the owners' responsibility to ensure these labels are always visible and should never be removed



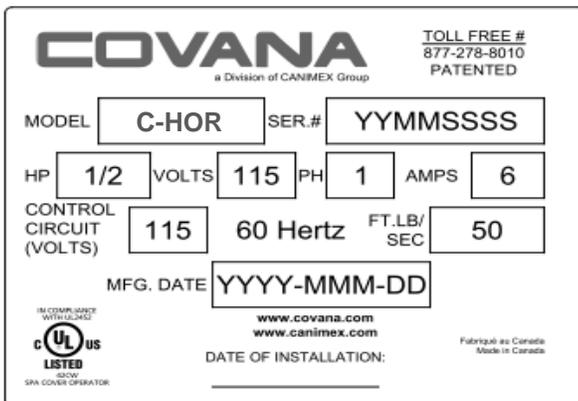
Risk of electrocution warning, located on the operator unit.



Key operating diagram, located on the key switch.

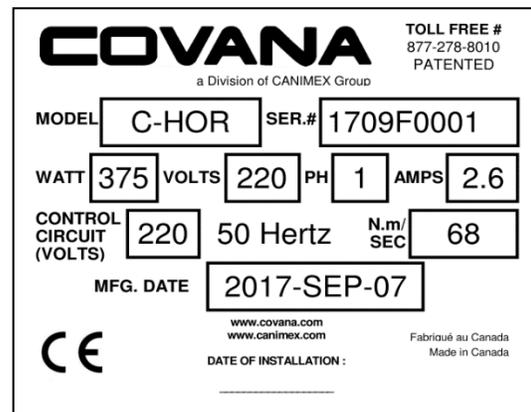


Drowning risk warning, located on the outside of the Covana cover.



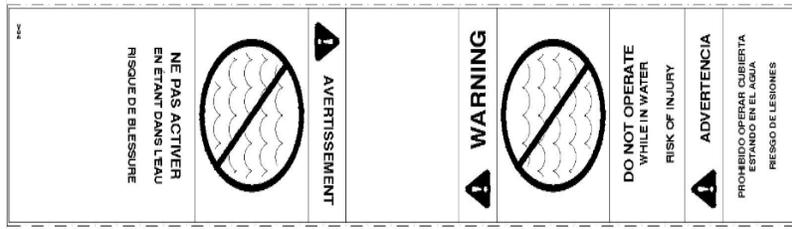
Specification label, located on the operator unit. (North American model)

**Note:** This label provides the serial number



Specification label, located on the operator unit. (European model)

**Note:** This label provides the serial number



Label located on the key switch cable.



200350

Do not step or stand on symbol, located on top of the operator unit.

198782

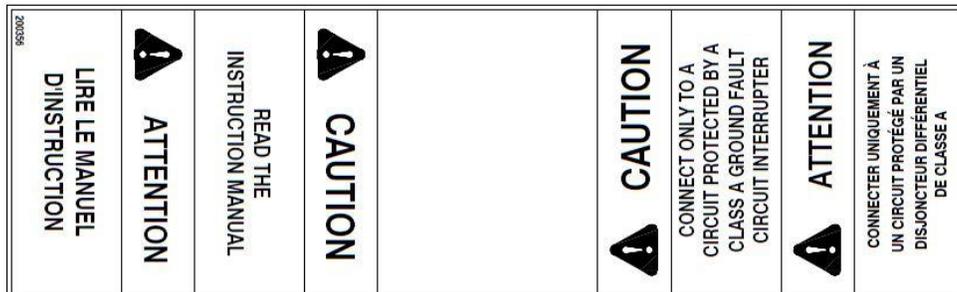
Visit [www.covana.com](http://www.covana.com) for recommended maintenance procedures and videos  
This label not to be removed except by the consumer

Visitez [www.covana.com](http://www.covana.com) pour des conseils et des vidéos sur les procédures d'entretien  
Seul l'utilisateur peut retirer cet autocollant



**MADE IN CANADA  
FABRIQUÉ AU CANADA**

Maintenance information, located on the C-channels.

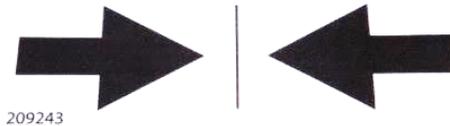


Electrical information, located on the key switch cable.

**DO NOT STEP ON COVER.  
NE PAS MONTER SUR LE COUVERCLE.**

211118

Do not step on cover label, located at the end C-channels of the Covana cover.



Center label, located on the center of the right and left C-channels.  
(remove after installation)



Top label, located on the interior of the I-beams and escape hatch opening  
(hidden when assembled).

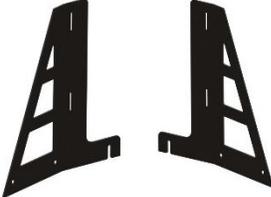
# GLOSSARY

Part	Figure	Function
<b>Post assembly</b>	 <p data-bbox="505 795 581 821">Figure 1</p>	<p>The posts will be fastened to the cover and will allow it to raise or lower.</p>
<b>All weather seal</b>	 <p data-bbox="505 1020 581 1045">Figure 2</p>	<p>The all-weather seal will help protect sleeves from damages due to weather.</p>
<b>Top plate</b>	 <p data-bbox="505 1331 581 1356">Figure 3</p>	<p>The top plate is a cover that is installed on the sleeve assembly. It will protect the lifting mechanism from any debris.</p>
<b>Operator unit</b>	 <p data-bbox="505 1608 581 1633">Figure 4</p>	<p>The operator powers and controls the lifting mechanism of the Covana cover.</p>

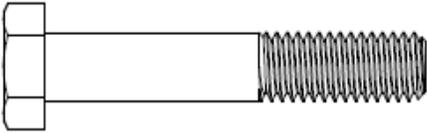
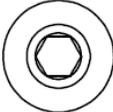
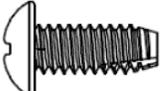
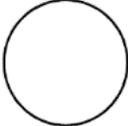
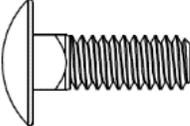
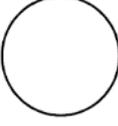
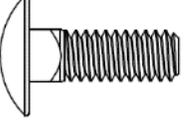
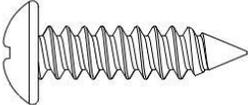
<p><b>Drive shaft</b></p>	 <p>Figure 5</p>	<p>The drive shaft transmits the power between the jack assemblies and the chains connected to the operator unit.</p>
<p><b>U frame (short)</b></p>	 <p>Figure 6</p>	<p>The short U frames protect the mechanical parts that rest on the foundation and connect both posts.</p>
<p><b>Motor-side</b></p>	 <p>Figure 7</p>	<p>The motor-side protect the chains.</p>
<p><b>Pivot arm</b></p>	 <p>Figure 8</p>	<p>Links the cover to the posts assembly.</p>
<p><b>C channel</b></p>	 <p>Figure 9</p>	<p>The C-channel is the outer frame of the cover.</p>
<p><b>I beam</b></p>	 <p>Figure 10</p>	<p>The I-beam is the aluminum extrusion installed between the panels.</p>

<p><b>I to C connection plate (long)</b></p>	 <p>Figure 11</p>	<p>The I to C long connection plate is used to screw the pivot arm to the c channels.</p>
<p><b>I to C connection plate (small)</b></p>	 <p>Figure 12</p>	<p>The I-to-C bracket makes the link between I-beam and C-channels.</p>
<p><b>Key switch</b></p>	 <p>Figure 13</p>	<p>The key switch is used to operate the Covana cover.</p>
<p><b>Corner bracket</b></p>	 <p>Figure 14</p>	<p>The corner brackets link the C-channels on the side to the ones in front and back.</p>
<p><b>Escape hatch</b></p>	 <p>Figure 15</p>	<p>The escape hatch is a removable panel part of the cover.</p>
<p><b>Contour seal</b></p>	 <p>Figure 16</p>	<p>The contour seal ensures uniform contact between the cover and the hot tub.</p>

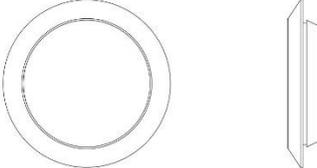
<p><b>Contour seal connector</b></p>	 <p>Figure 17</p>	<p>The seal connector is used to link both ends of the seal. It ensures a strong and effective joint.</p>
<p><b>Contour seal installation clip</b></p>	 <p>Figure 18</p>	<p>Contour seal installation clips are used during the installation process to ensure the seal is installed properly.</p>
<p><b>Wiper bracket</b></p>	 <p>Figure 19</p>	<p>The wiper bracket is attached under the I-beam. This part is required to ensure waterproofing of the Covana cover.</p>
<p><b>Installation foam</b></p>	 <p>Figure 20</p>	<p>The installation foam is used during the installation process to protect the hot tub from direct contact with the cover.</p>
<p><b>Sleeve bracket</b> (for tub mount model only)</p>	 <p>Figure 21</p>	<p>Used for the standard tub mount option to mount the sleeves to the hot tub. It is the part resting against the sleeves.</p>
<p><b>Tub mount support</b> (for tub mount model only)</p>	 <p>Figure 22</p>	<p>The tub mount supports are used to mount the sleeves to the hot tub. It is the part resting against the hot tub.</p>

<p><b>Tub mount arm (short or long)</b> (for tub mount model only)</p>	 <p>Figure 23</p>	<p>The tub mount arms are used for the tub mount option only. They link the sleeve brackets to the tub mount supports.</p>
<p><b>Post brackets</b> (for ground anchoring option only)</p>	 <p>Figure 24</p>	<p>These are assembled with the L brackets, the side supports and the linkage bars. The post brackets allow posts' stability without the need to mount any hardware to the hot tub.</p>
<p><b>L bracket</b> (for ground anchoring option only)</p>	 <p>Figure 25</p>	<p>It is assembled with the post brackets, the side supports and the linkage bars. The L brackets provide posts' stability without the need to mount any hardware to the hot tub.</p>
<p><b>Side support</b> (for ground anchoring option only)</p>	 <p>Figure 26</p>	<p>It is assembled with the L brackets, the post brackets and the linkage bars. The side supports provide posts' stability without the need to mount any hardware to the hot tub.</p>
<p><b>Linkage bar</b> (for ground anchoring option only)</p>	 <p>Figure 27</p>	<p>It is assembled with the L brackets, the side supports and the post brackets. The linkage bars provide posts' stability without the need to mount any hardware to the hot tub.</p>

# HARDWARE IDENTIFICATION TABLE

Quantity	Visual representation		Description
6x			5/16"-18 x 2" hexagonal bolt used to fasten the short and long U-frames.
8x			1/4in. -20 x 1 in. Button hex drive bolt. Used to fix the pivot joint bracket the the cover.
16x			10-24 x 1/2 in. Thread cutting screw. Used on the cover's corner brackets.
4x Ground anchoring 28x Tub mount			1/4 in.-20 x 5/8 in. Carriage bolt. Used for fastening the I-beam assemblies. <b>These bolts are also used for the tub mount option.</b>
16x Ground anchoring			1/4 in.-20 x 3/4 in. Carriage bolt. <b>Only used for the stabilization option.</b>
4x			#8 x1/2 in. Self-drilling screw. Used to fasten the sleeves top plates.
32x Tub mount			#10-12 x 3/4 in. self-tapping screws. <b>Only used for the tub mount option.</b>

<p><b>4x</b> Ground anchoring <b>28x</b> Tub mount</p>		<p>1/4 in. Lock washer used for cover assembly and <b>the tub mount option.</b></p>
<p><b>8x</b> Tub mount</p>		<p>1/4 in. Flat stainless steel washer. <b>Only used for the tub mount option.</b></p>
<p><b>2x</b></p>		<p>5/16 in. Lock washer used to fasten the operator unit to the long U-frame.</p>
<p><b>2x</b></p>		<p>5/16 in. Flat stainless steel washer used to fasten the operator to the long U-frame.</p>
<p><b>8x</b></p>		<p>5/16 in. Flat nylon washer used on the fixations of the short U-frames.</p>
<p><b>4x</b> Ground anchoring <b>28x</b> Tub mount</p>		<p>1/4 in.-20 Hex nut. Used for cover assembly and <b>the tub mount option.</b></p>
<p><b>2x</b></p>		<p>5/16 in.-18 Hex nut. Used to fasten the operator to the long U-frame.</p>
<p><b>6x</b></p>		<p>5/16 in.-18 Nylon insert locknut. Used to fasten the short and U-frame to the long u-frame and to the post.</p>

<p><b>18x</b> Ground anchoring <b>2x</b> Tub mount</p>		<p>1/4 in.-20 Nylon insert locknut. Used with shoulder screw and with ground anchoring option.</p>
<p><b>2x</b></p>		<p>1/4-20-5/16 in. Set screw used on the operator's sprocket.</p>
<p><b>1x</b></p>		<p>3/16-3/16-5/8 in. Square ends key used for the operator's sprocket.</p>
<p><b>1x</b></p>		<p>5/32 in. Hex key. Used for fastening the 1/4in.-20 x 1 in. Button hex drive bolts.</p>
<p><b>2x</b></p>		<p>5/16x1 1/4in. shoulder screw used to lock pivot arm and post together</p>
<p><b>2x</b></p>		<p>1in. diameter black cap. Used to close the end of the pivot arm.</p>

# INSTALLATION PREPARATION

To ensure the safe use of the Covana cover, it must be installed on a properly prepared surface. It is important to adequately prepare the foundation and carefully read the following recommendations.

## Location considerations

- ◆ Ensure the future Covana cover location is not subjected to any downpour of water or debris falling from another rooftop.
- ◆ Ensure that the base of the cover is not in a flood zone. Any damage caused by flooding or water accumulation will not be covered under the warranty.
- ◆ Ensure that there are no obstacles, such as branches or electrical power lines, in the operating range of the cover.
- ◆ Refer to section *Technical specifications* for dimensions of cover.
- ◆ Ensure there is safe access to the tub, free of obstacles or debris.
- ◆ All the base components of the Covana cover must be supported by the foundation.
- ◆ Do not concentrate or directly reflect sunlight onto the cover. This could cause permanent damage (e.g. reflection from a window).

- ◆ Ensure the Covana cover is installed on a clean surface free of any vegetation, such as grass, branches, roots or mineral contaminants, such as rocks, dust or sand.
- ◆ The key switch must be permanently mounted and located 5 ft. (1.5 m) away from the hot tub and 5 ft. (1.5 m) above the deck or ground level. Be sure that the user has a clear view of the Horizon cover when operating it. Furthermore, the key switch terminal should be located in a place where no water downpour or debris could fall on it. (Figure 28)

### ⚠ WARNING

- ◆ Failure to permanently install the key switch as indicated could cause serious injury or even death and void the warranty and certification. Only the proper installation of the key switch combined with the suggested procedures and caution will reduce such risks.
- ◆ Do not place the cover in an area prone to snow accumulation or water runoff.

### ⚠ DANGER

- ◆ Failure to properly install the key switch according to these instructions could result in injury or even death.

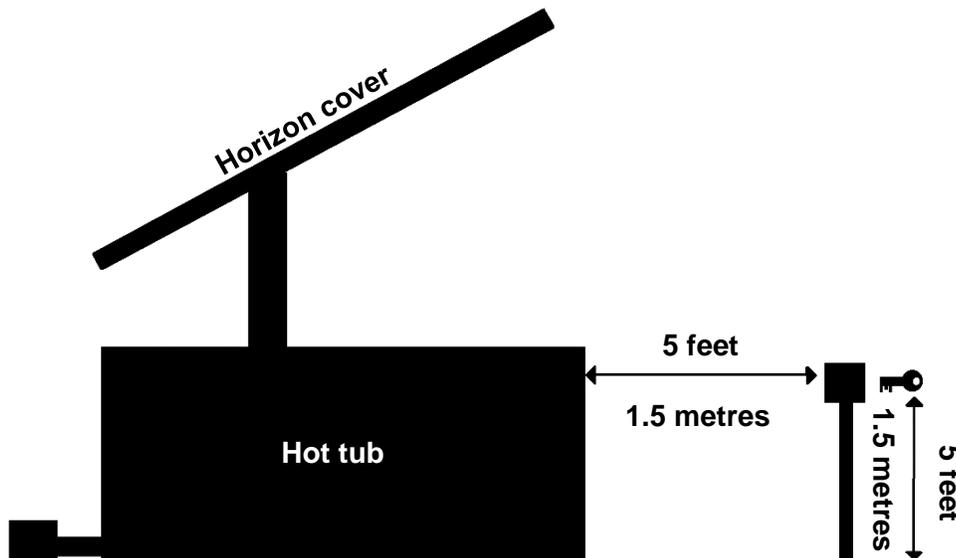


Figure 28

## Foundation preparation

- ♦ The Horizon cover requires a clean, flat and level surface such as an engineered wood deck or a concrete slab.
- ♦ Each of the two jacks of the Covana cover must be properly fastened to the tub frame. It is the installer's responsibility to ensure the Horizon cover is properly fastened in a safe manner. If you cannot meet these requirements, Covana offers the ground anchoring option for the Horizon. It is the installer's responsibility to ensure the Horizon cover is properly anchored to the ground with the proper anchoring hardware.

### **⚠ WARNING**

- ♦ The ground anchoring option should not be used in an excessively windy area.
- ♦ Just like the hot tub, the Horizon cover requires a solid foundation. The foundation for the Horizon cover must be able to support at least 550 lb. (250 kg).
- ♦ The foundation must be levelled with a maximum tolerance of 1 in. (2.5 cm) over a 113 3/4 in. (2.89 m) by 56 1/2 in. (1.44 m) rectangle (Figure 29). Refer to *Frame dimension and foot print section* for information on minimum base size. The annual variation in levelness for the same area cannot exceed 1/4 in. (6 mm).

### **⚠ CAUTION**

- ♦ Damage caused by inadequate foundation construction is not covered by the Covana warranty. It is the owner's responsibility to provide a proper foundation.
- ♦ Failure to follow these guidelines may cause permanent damage or the improper functioning of the Covana cover. Such damage may not be covered by the warranty.

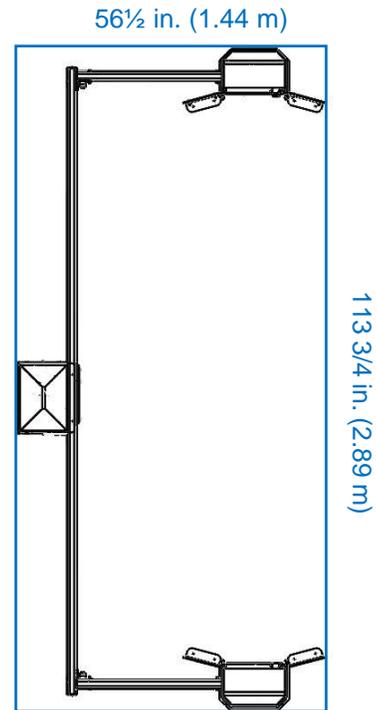


Figure 29

## Installation reference information

Throughout the following installation instructions, we will refer to the front, rear, left and right sides of the cover. Please refer to Figure 30 and Figure 31. The front of the cover is the side with the higher point of the tilt and the back of the cover is the operator's side.



Figure 30

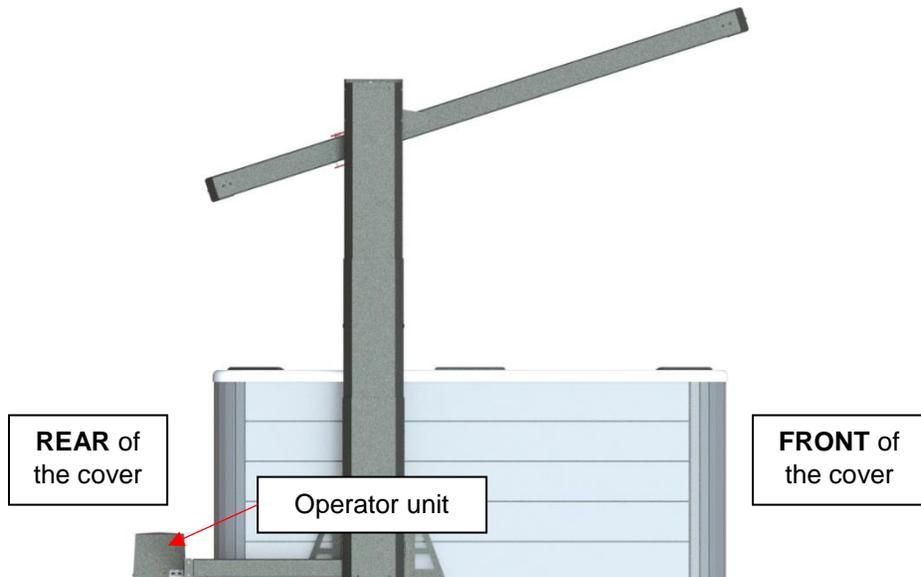


Figure 31

# INSTALLATION

## Required tools for complete installation

- ◆ Scissors or a retractable utility knife
- ◆ Robertson screwdriver
- ◆ Rubber mallet
- ◆ Hammer
- ◆ Phillips screwdriver
- ◆ Stepladder
- ◆ 1/8" (3 mm) Allen key
- ◆ 9/16" (14 mm) socket wrench and spanner
- ◆ 7/16" (11 mm) socket wrench and spanner
- ◆ 1/2" (13 mm) socket wrench and spanner
- ◆ 5/32" (4 mm) Allen key (Supplied)
- ◆ 26' (8 m) measuring tape
- ◆ SAE or metric Socket kit
- ◆ 24 in. (61 cm) level

### **⚠ CAUTION**

- The Covana cover should be installed by a certified Covana installer. Having the Covana cover installed by someone who is not certified will void the warranty. Ask your local Covana dealer for information on certified installers.

## Uncrating

- 1) Before uncrating the unit, ensure there is no visible damage to the crate. In case of any suspicious damage, take pictures first. If any damage is discovered, please call Covana customer service immediately.
- 2) Always stand the crate in the vertical position. Ensure wind conditions allow for this to be done safely.
- 3) Remove the cardboard top. You might need a stepladder to reach it. (Figure 32)
- 4) Unscrew the #8-10 x 1½ in. Robertson screws holding the front cover – 5 screws per side. (Figure 32)
- 5) Remove the front cover and discard. (Figure 32)

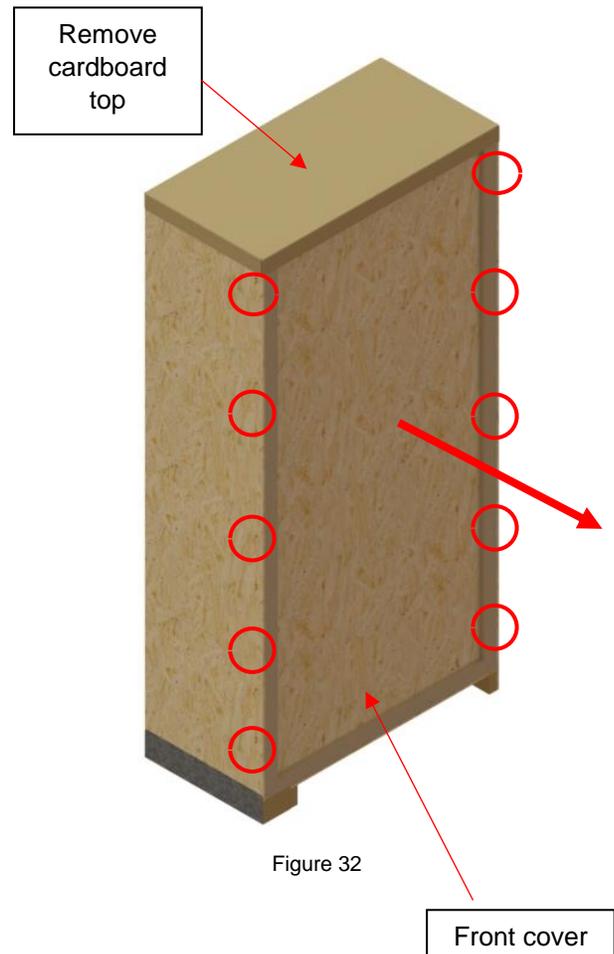


Figure 32

6) Remove the seal, the foam spacers and the optional parts box, either the tub mounting or the ground anchoring hardware, from the bottom of the crate and place them in a safe place. (Figure 33)

7) Carefully cut the tie wrap holding the long U-frame to the stud, remove the motor-side from the crate and place it in a safe place. (Figure 33)

8) Unscrew the two #8-10 x 1½ in. Robertson screws on the operator base plate, remove the operator from the crate and place it in a safe place. (Figure 34)

9) Remove both U-frames at the bottom of the crate and place them in a safe place. (Figure 35)

10) Unscrew the bottom #8-10 x 1½ in. Robertson screws holding the posts assemblies to the crate. There are two bottom screws per post as shown in Figure 35.

**⚠ CAUTION**

- Be careful while handling any painted components to avoid any scratches on the surface.

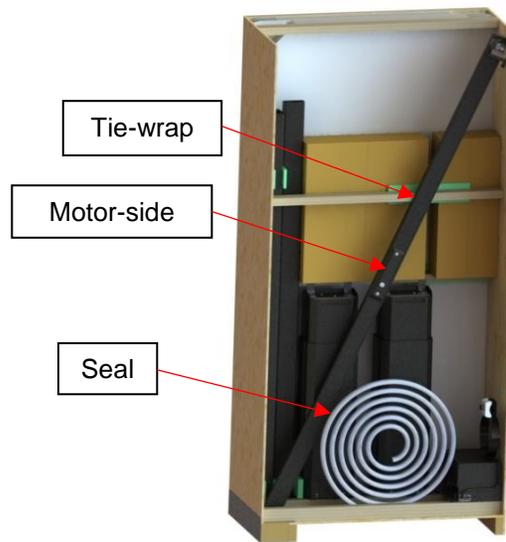


Figure 33

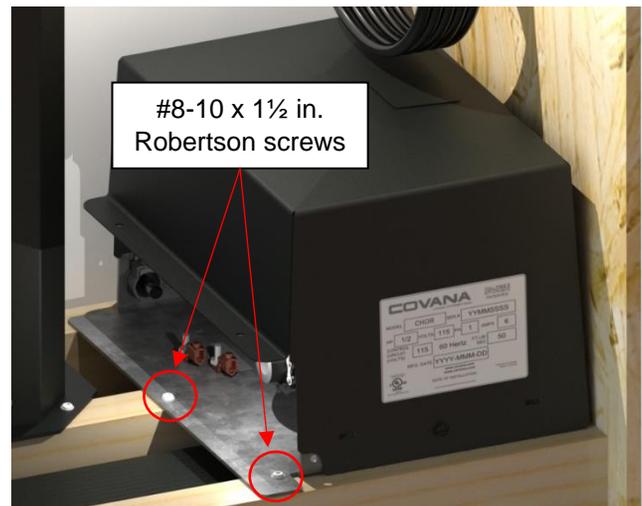


Figure 34

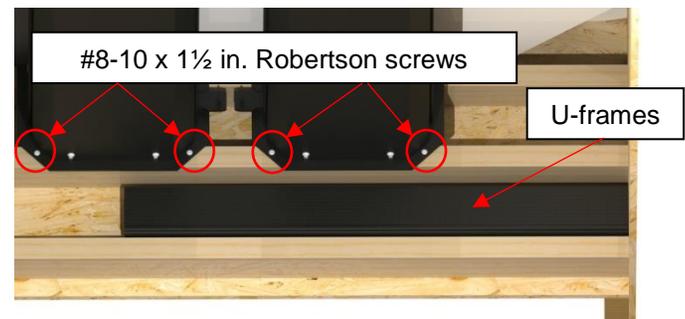


Figure 35

- 11) Unscrew the top #8-10 x 1½ in. Robertson screws holding the posts to the crate as shown in Figure 36.
- 12) Remove both post assemblies from the crate and place them in a safe place.

**⚠ WARNING**

- ◆ The post assemblies are heavy. Two people might be needed to perform this.

- 13) Remove the post support brackets by unscrewing the #8 x 1/2 in. Robertson screws on each bracket (two support brackets per post). (Figure 37)
- 14) With the help of another person, lay the crate horizontally on its back. There should be one person on each side of the crate. (Figure 38)

**⚠ WARNING**

- ◆ The crate is heavy; you may require a third person to rotate the crate.

- 15) Remove the stud over the part boxes and the other components by unscrewing the #8-10 x 1½ in. Robertson screws on both sides of the crate. (Figure 38)
- 16) Remove the part boxes and store them in a safe place.
- 17) Cut the tie-wrap holding the I beam and the C-channels on the middle 2 x 3 in. stud, remove them from the crate and store them in a safe place. (Figure 39)
- 18) Remove the two studs holding the fiberglass panels in the crate. (Figure 39)
- 19) Leave both fiberglass covered foam panels in the crate until they are needed. (Figure 39)

**⚠ WARNING**

- ◆ The panels are fragile, handle them with care so as to ensure that they are not scratched or damaged.

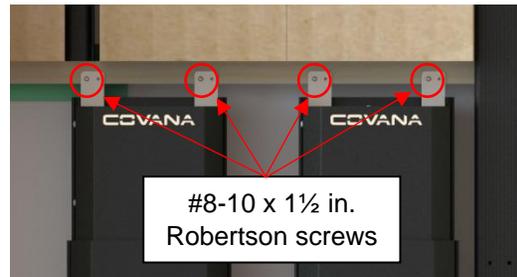


Figure 36

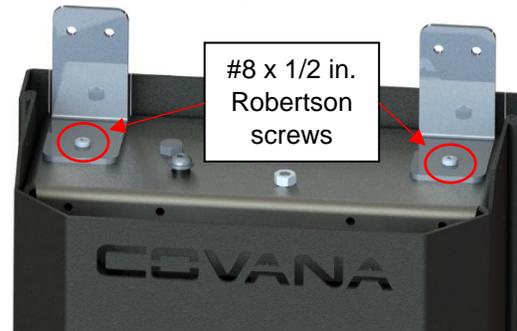


Figure 37



Figure 38

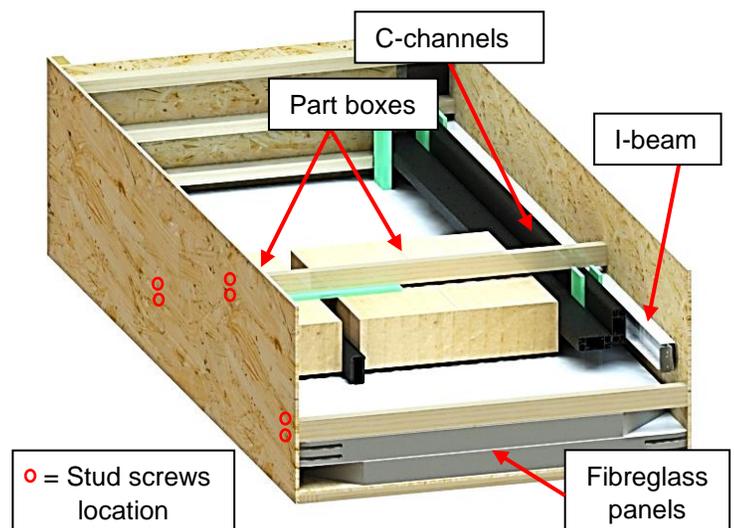


Figure 39

## Cover assembly

### ⚠ WARNING

- ◆ Before assembling the cover, keep in mind not to overtighten bolts. Power tools **must not** be used. The bolts will break or strip under too much torque.

- 1) Attach the foam spacers to the top of the hot tub near each corner using the masking tape provided in the seal pack. There must be at least two foam spacers per side. Do not stack two pieces of foam. (Figure 40)

### ⚠ CAUTION

- The foam pieces must be placed on the flat top surface of the hot tub.

- 2) Place the escape hatch panel on the rear end of the hot tub. (Figure 41)

### ⚠ CAUTION

- Ensure that the seal around the escape hatch opening is on top and that the “top” label located in the panel’s hole is pointing upwards.
- If you have colored panels, make sure the colored side is on top and the white side is on the foam pieces.

- 3) Pre-assemble the I to C long connection plate with 1/4-20 x 1 in. button head screws and 1/4 washers on the 91 11/16 in. (233 cm) C-channel. (Figure 42) Repeat for the second 91 11/16 in. (233 cm) C-channel.

### ⚠ CAUTION

- Do not completely tighten the screws.

- 4) Assemble these C-channels over the previously placed fiberglass panel so that the screws on the C-channels are offset toward the rear of the hot tub. Use the center label to align the center of C-channel with the edge of the panel. (Figure 43)

**Note:** It is recommended to slightly engage the top flange before the bottom flange when sliding the C-channel onto the foam panel. (Figure 43)

### ⚠ WARNING

- ◆ When assembling the C-channel onto the panel, be careful not to delaminate the fiberglass.

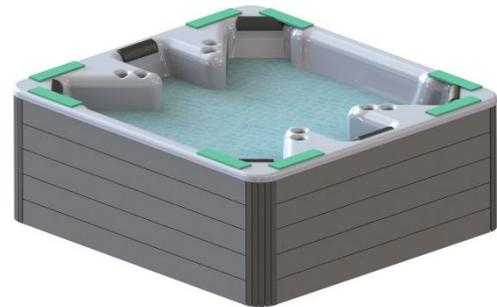


Figure 40

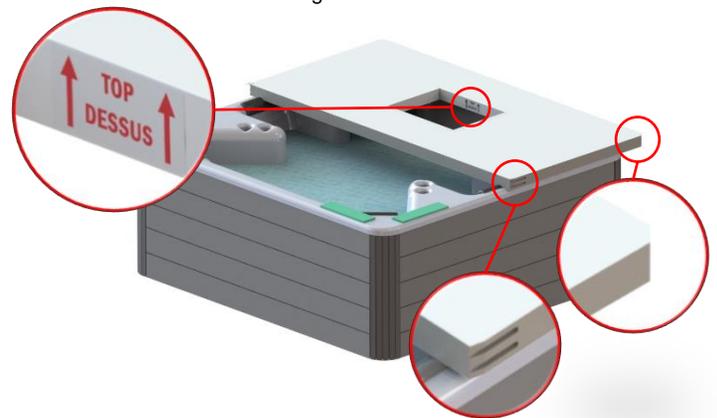


Figure 41

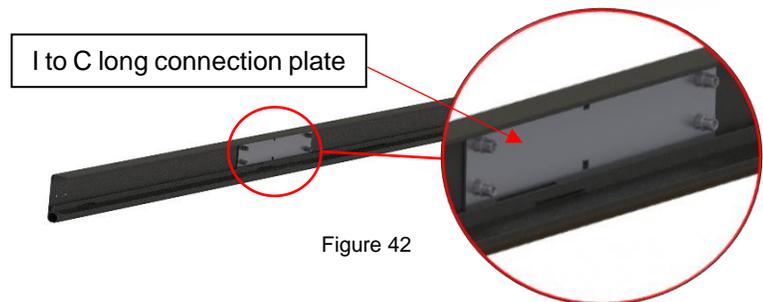


Figure 42

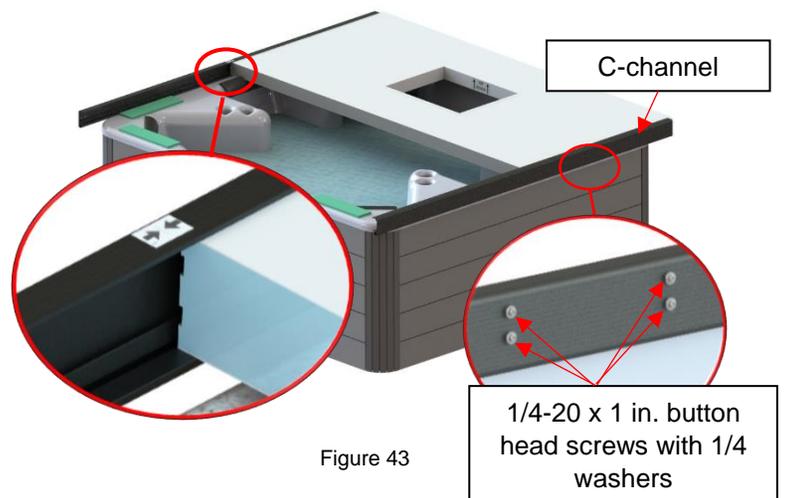


Figure 43

- 5) Install the I to C small connection plate to the I-beam by using 1/4 in.-20 x 5/8 in. carriage bolts, 1/4 in. lock washers, 1/4 in.-20 nuts and 7/16 (11 mm) socket wrench and spanner. Leave a 1/4 in. (6 mm) gap in-between the I to C connection plate and the I to C bracket. (Figure 43)

**CAUTION**

- The I to C small connection plate must be installed at both ends of the I-beam.
- Ensure these bolts and nuts are slightly untightened, leave a **1/4 in. (6 mm) gap** between the I to C-bracket and plate.

- 6) Slide the I-beam with the I to C connection plates into the C-channels as shown in Figure 48. Place the I-beam in such a manner where the I to C bracket is pointing outwards. (Figure 47) Ensure it fits snug with the foam panel. Ensure the label in the I-beam is pointing upwards. (Figure 45)

**CAUTION**

- ◆ Ensure the upright position of the I-beam.
- Ensure the proper insertion of the small connection plate in the C-channel. (Figure 48)
- When inserting the I-beam into the fiberglass foam panel, be careful not to damage the fiberglass.
- Make sure the I-beam has cleared the bottom and top section.

CARRIAGE BOLT	1/4 in. lock washer	1/4-20 hex nut
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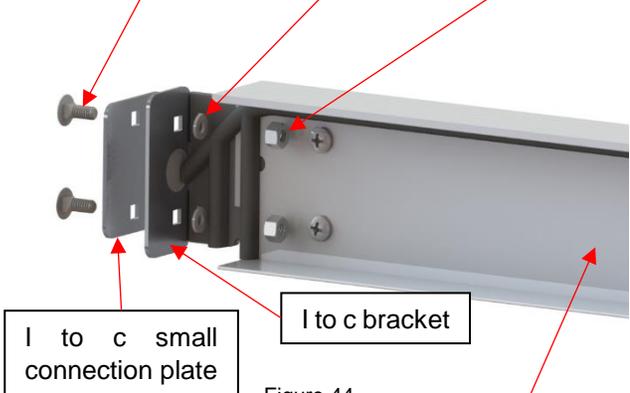


Figure 44



Figure 45

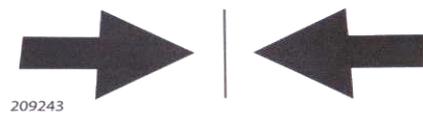


Figure 46

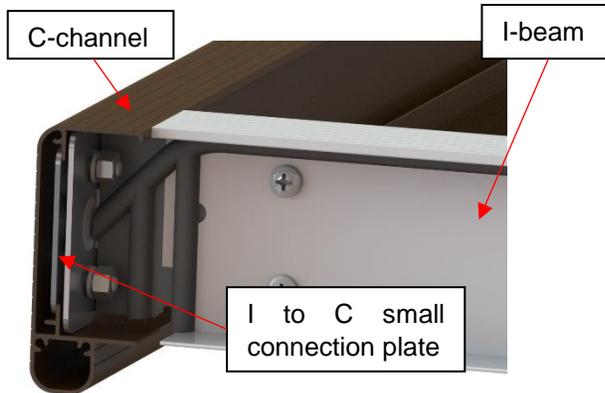


Figure 48

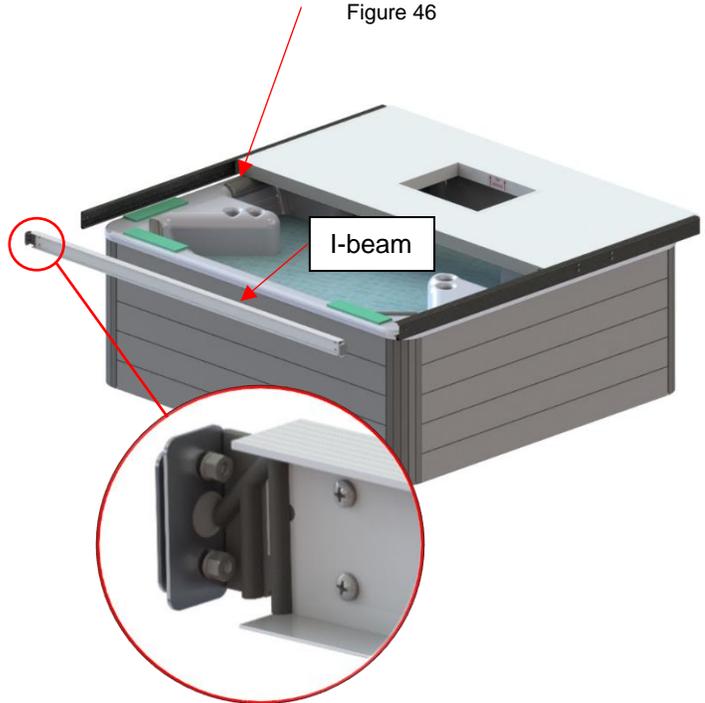


Figure 47

- 7) Once the I-beam is properly centered into the C-channels using the center label (Figure 49), lock it in place by tightening the four nuts and carriage bolts on both ends of the I-beam (two on each end). (Figure 50)

**⚠ WARNING**

- ◆ Do not overtighten the bolts. Power tools must not be used. The bolts will break or strip under too much torque.

- 8) Slide the remaining panel into the C channels and press it slightly against the I-beam. (Figure 51)

**⚠ CAUTION**

- Be careful not to delaminate or otherwise damage the panel while sliding it into the C-channels.
- If you have colored panels, make sure the colored side is on top and the white side is on the foam pieces

- 9) Pre-assemble two corner brackets on the 93 7/16in. (237cm) long C-channels using the 10-24x1/2in. thread cutting screws. (Figure 52) Repeat for the second C-channel

**⚠ WARNING**

- ◆ Do not overtighten the screws as they could strip.

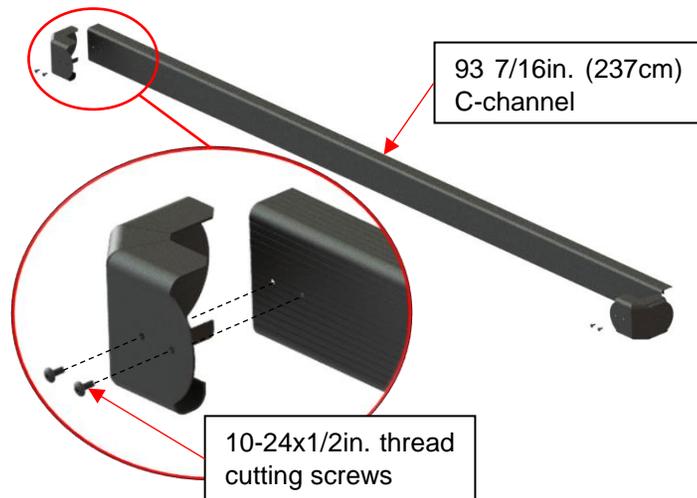


Figure 52

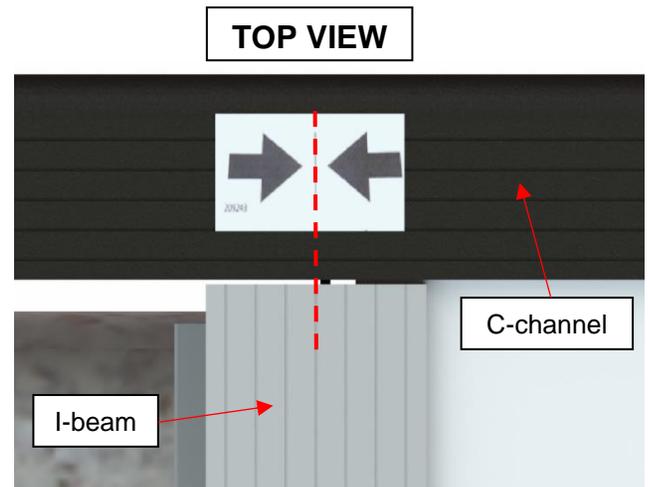


Figure 49

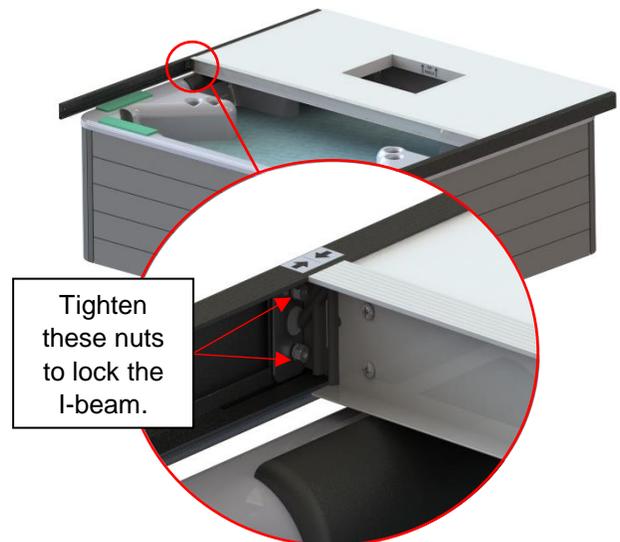


Figure 50

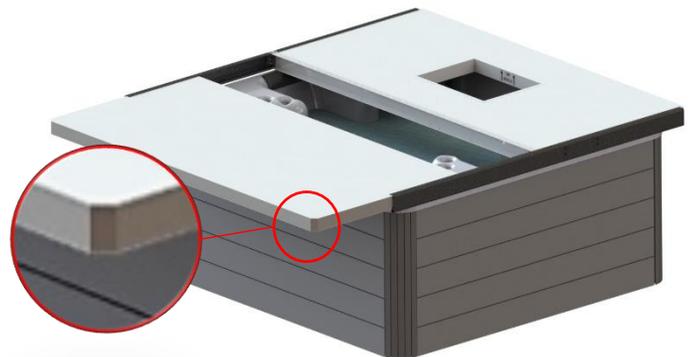


Figure 51

- 10) Slide on one of the 93 7/16in. (237 cm) C-channel previously assembled with the corner brackets on the end of the front panel. (Figure 53)
- 11) Screw in the phillips #10-24 x 1/2in. screws in the pre-drilled holes of the C-channel through the corner brackets holes. (two on each side of the cover) (Figure 54)
- 12) Repeat steps 10 and 11 for the rear side of the cover. (Figure 55 and Figure 56)

**⚠ WARNING**

- ◆ Do not to overtighten screws. Power tools must not be used. The bolts will break or strip under excessive torque.
- ◆ You might need the help of someone else to squeeze the cover to reach the predrilled holes.



Figure 53

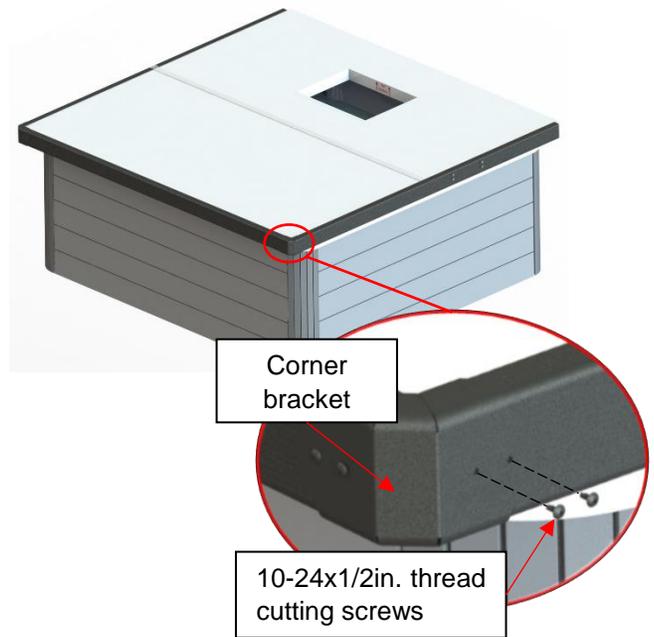


Figure 54

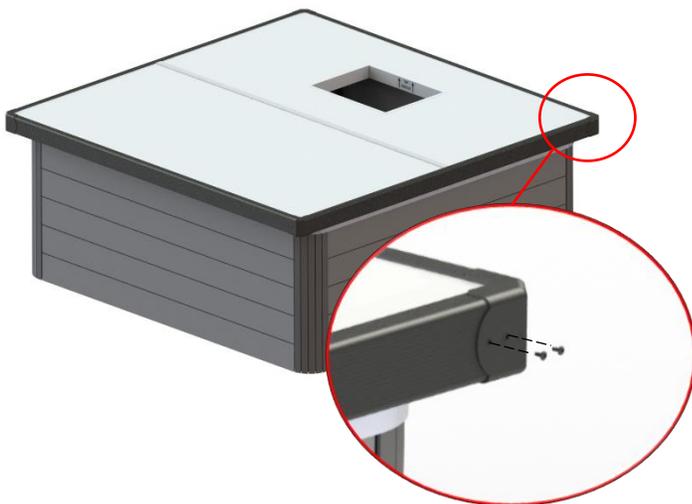


Figure 56



Figure 55

- 13) Turn the escape hatch handle to retract the arms and install it into the escape hatch opening of the panel. (Figure 57)

**⚠ CAUTION**

- Verify the functionality of the escape hatch's release mechanism prior to installation and before use. Please ensure that the hatch's arms are retracted when open and extended when closed. (Figure 58)

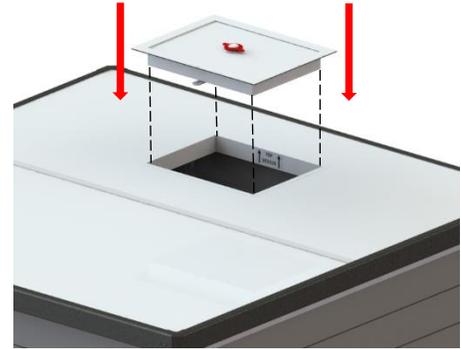


Figure 57

**⚠ WARNING**

- ◆ Failure to install the escape hatch properly may impede performance of the Covana cover such as vapor leakage, water infiltration and unwanted access to hot tub.
- ◆ All security risks such as drowning, injury or undesired entry due to an open Covana cover without an escape hatch installed are not approved by Covana and product certification will be void.

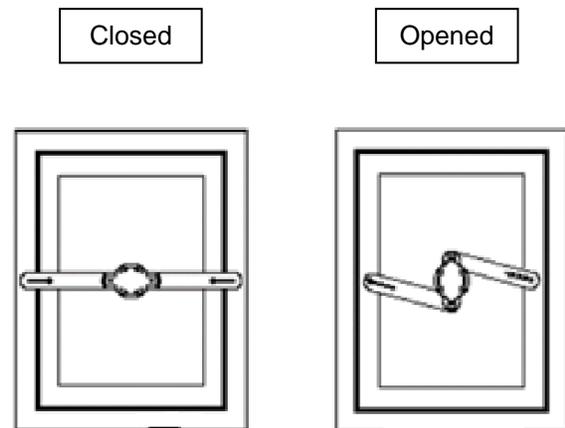


Figure 58

## Tub mount assembly

**Note:** If the cover was supplied with the ground anchoring option, skip to the *ground anchoring assembly section*.

- 1) Loosen the four top 1/4-20 x 1/2 in. Phillips screws so you have an approx. 1/4 in. (6.35 mm) gap between the heads of the screws and the outer sleeve. (Figure 59)

### ⚠ CAUTION

- Do not fully remove the screws. Failure to follow this instruction will cause damage to the post assemblies.

- 2) Untighten the two bottom 1/4-20 x 1/2 in. Phillips screws to have an approx. 1/4 in. (6.35 mm) gap between the heads of the screws and the sleeve. (Figure 59)

### ⚠ CAUTION

- Do not fully remove the screws. Failure to follow this instruction will cause damage to the post assemblies.

- 3) Slide both the top and bottom sleeve brackets on the appropriate screws. Ensure the sleeve brackets are well centered with the post assembly. (Figure 59)

- 4) Tighten all six screws. (Figure 60)

### ⚠ WARNING

- ◆ Do not overtighten any hardware. Failure to follow this instruction might damage the paint or the hardware itself.

- 5) Repeat steps 1 to 4 for the second post assembly.

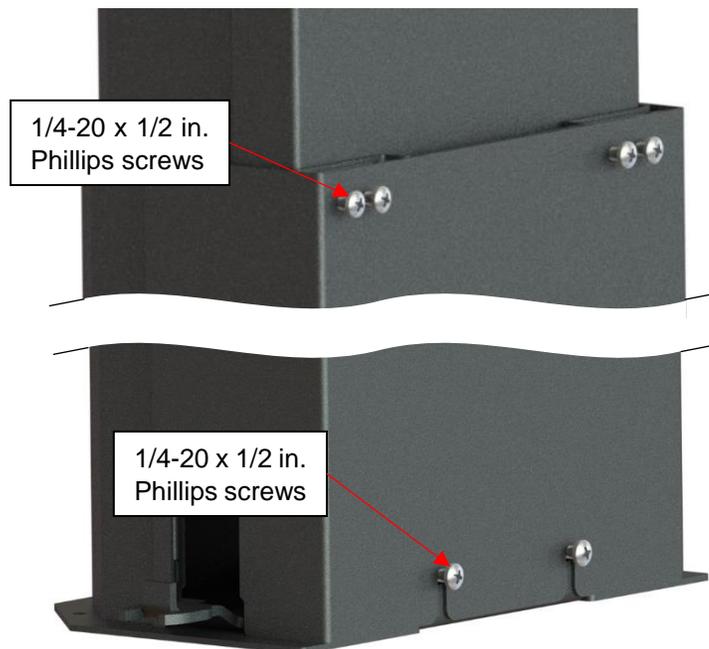


Figure 59

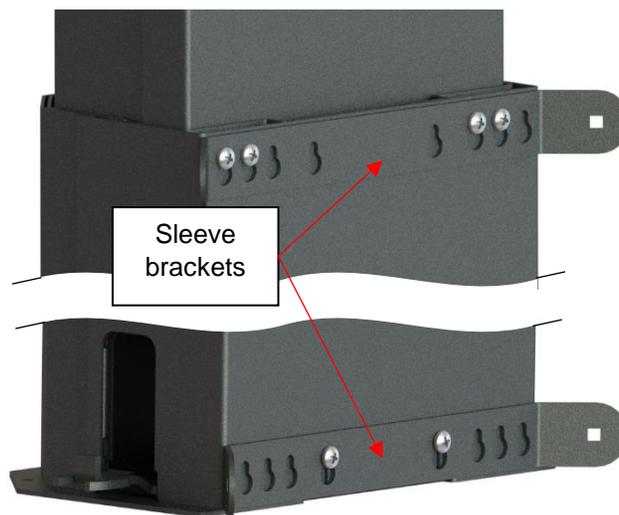


Figure 60

## Ground anchoring assembly (optional)



Figure 61

- 1) Attach the L bracket on the post bracket with included 1/4-20 x 3/4 in. carriage bolts and 1/4-20 nylon hex lock nuts. (Figure 62) Repeat for all four post brackets.

**Note:** Depending on the space between the hot tub and the posts, the location chosen for the cover and the supporting surface construction, the L brackets can be fastened on any side of the post bracket. See Figure 61 to see all four possible configurations.

### **⚠ WARNING**

- ◆ Do not overtighten any hardware. Failure to follow this instruction may damage the paint or the hardware itself.

- 2) Carefully lay the post assembly on the ground on a clean surface that is free of any debris, then remove the two 1/4-20x1/2in. Phillips screws. (Figure 63)

**Note:** do not discard this screws.

### **⚠ WARNING**

- ◆ The post assemblies are heavy. Two people might be needed to perform this.
- ◆ Be careful while handling the post assemblies. They are heavy and damage or injury may occur if they are dropped.

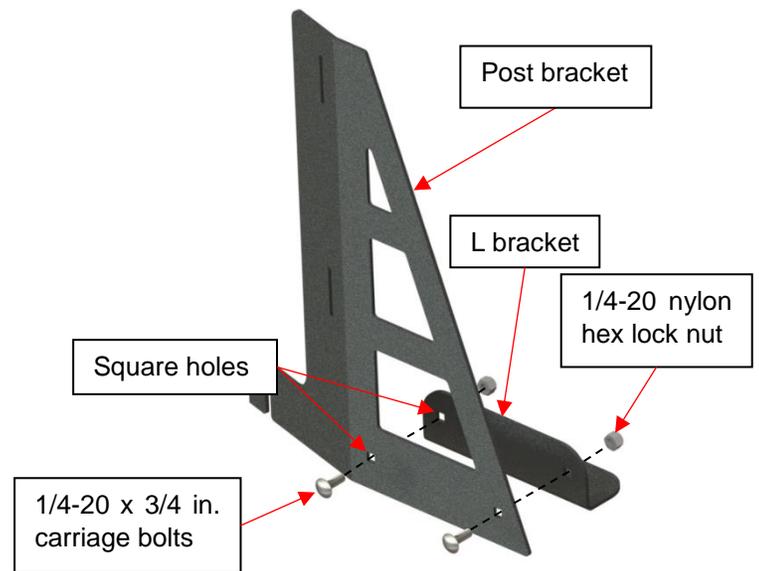


Figure 62

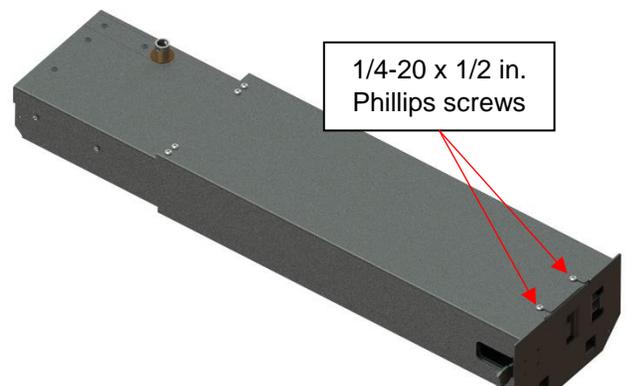


Figure 63

- 3) Insert the side support bracket hook in the notch of the outer sleeve. (Figure 64)
- 4) Slide on the post bracket on the side support bracket using the slots as guide. (Figure 64)
- 5) Place the 1/4-20 x 3/4 in. carriage bolts hanging in their square holes as it will be harder to do later. (Figure 65)
- 6) Repeat steps 3 to 6 for the other side of the sleeve.
- 7) Reinstall the 1/4-20 x 1/2in. Phillips screws removed in step 2, this will hold the brackets in place while remaining pieces are installed. (Figure 63)

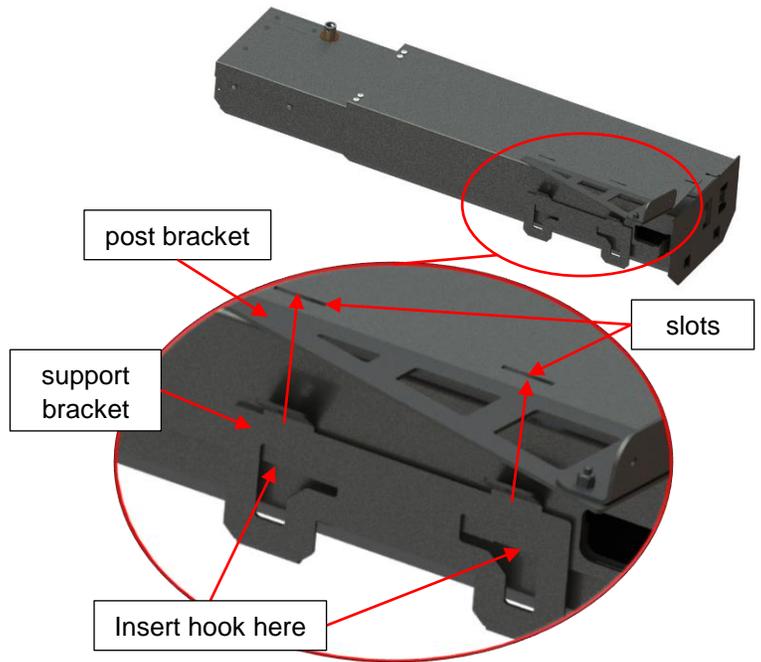


Figure 64

- 8) Link the right and left support brackets with the linkage bar with the included 1/4-20 nylon hex lock nuts and carriage bolts already installed. Leave these untightened. (Figure 66)
- 9) Repeat steps 2 to 8 for second assembly.
- 10) Tighten all bolts and nuts installed from steps 3 to 8 for both post assemblies. (Figure 67)
- 11) Flip both posts back on their feet.

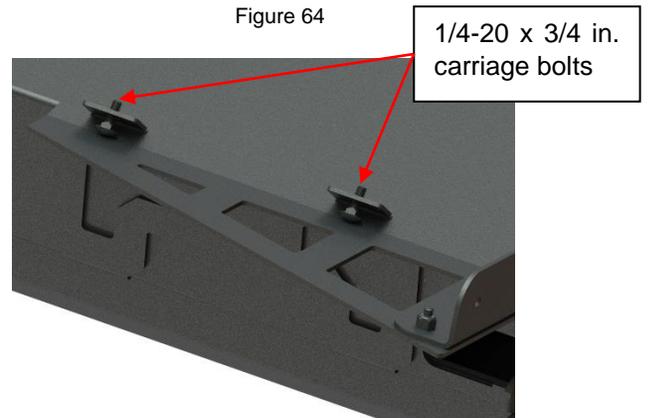


Figure 65

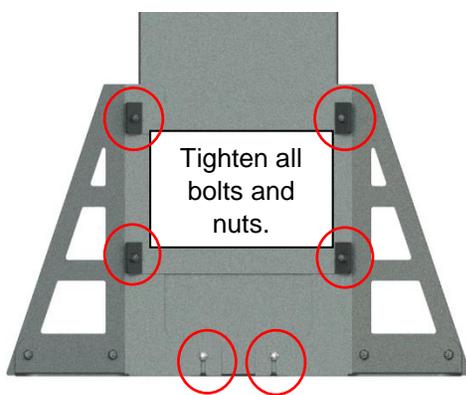


Figure 67

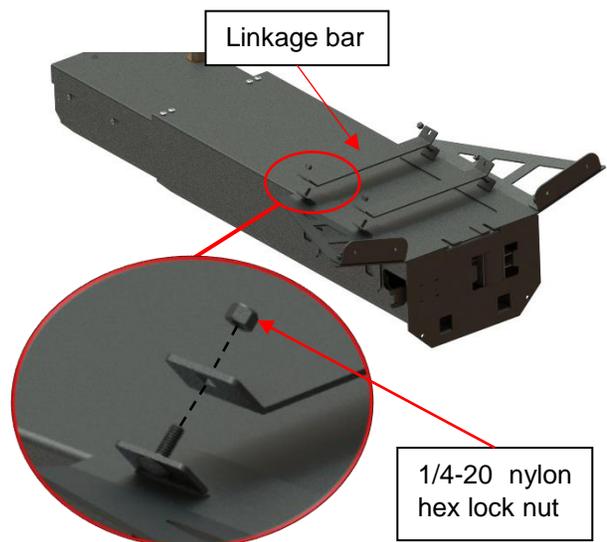


Figure 66

## Post assembly

- 1) Insert the pivot arm on the tube on top of the first post assembly. For hot tubs 36 in. (91.4 cm) high or less, place the pivot arm flat side facing down. For hot tubs above 36 in. (91.4 cm) high, place the pivot arm flat side facing up. (Figure 69)
- 2) Install the 5/16 X 1 1/4in. shoulder screw through the pivot arm and the pivot tube to lock them together. (Figure 70)
- 3) Put the 1in. diameter black cap in the pivot arm to prevent dirt from getting into the mechanism. (Figure 70)

### ⚠ CAUTION

- Improper installation reduces the lifespan of the mechanical lifting components.

- 4) Repeat steps 1 to 3 for the second post assembly.
- 5) Place the two post assemblies at the required position next to the hot tub and vertically align the holes in the pivot arms with those on the sides of the C-channels. (Figure 71) Both openings for the drive shafts at the bottom of the posts should be pointing toward the rear side of the cover. (Figure 68)

**Note:** There may be a difference in height between the pivot arms and the cover frame. It will be adjusted at a later step. Only the vertical alignment is important at this point.

### ⚠ CAUTION

- The posts are heavy, be careful while handling them.

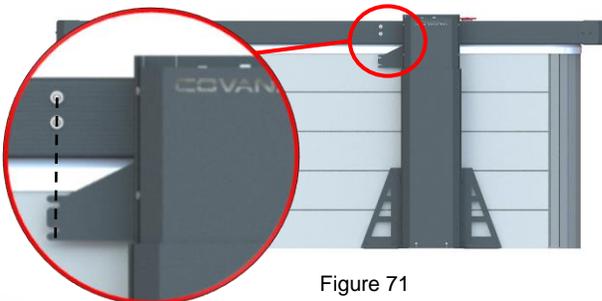


Figure 71

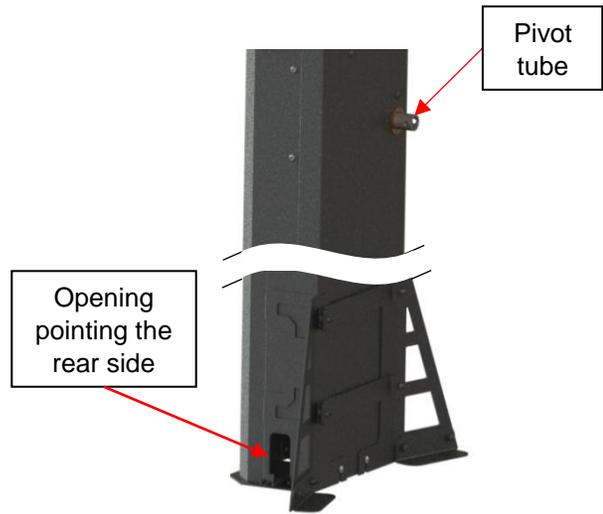


Figure 68

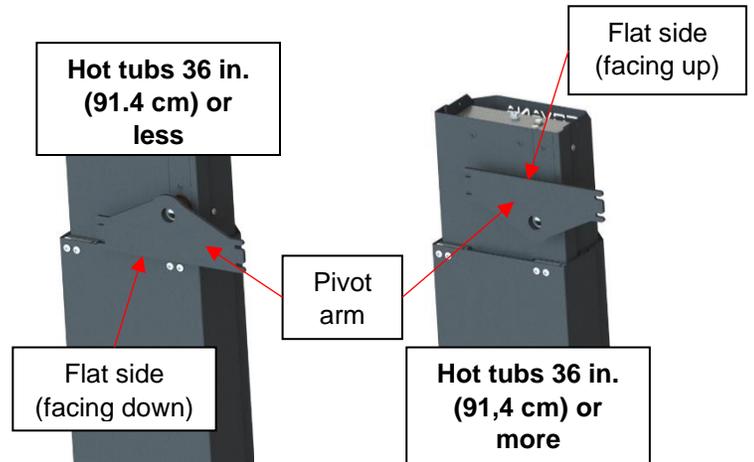


Figure 69

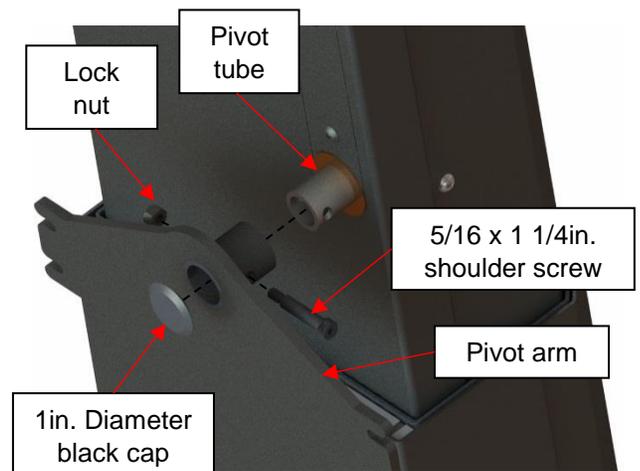


Figure 70

## Lifting mechanism assembly

- 1) Insert the square drive-shaft over the square shaft on the bottom of the jack through the opening in the bottom of the post and push it as far as possible. (Figure 72)
- 2) Slide a short U-frame over the first square drive-shaft and push it in as deep as possible into the opening at the bottom of the post. (Figure 72)

**Note:** The U-frame end that has one hole must go toward the post assembly and the end that has 2 holes must go toward the rear of the cover. (Figure 73)

### ⚠ CAUTION

- Be sure the U-frame is fully inserted into the post so the length sticking out is 25 in. (63.5 cm).
  - Be sure the U-frame's extrusion is well inserted in the footplate insert as shown in the detailed view of Figure 75.
  - Be careful not to damage the paint on the U-frame or the outer sleeve while inserting the U-frame into the post.
- 3) Secure it in place by putting a 5/16-18-2 hex cap screw through the hole, put a 5/16-18 nylon nut from the other side and 5/16 nylon washers on both sides. (Figure 74).

### ⚠ WARNING

- ◆ Be sure the U-frame is properly locked in place by the 5/16-18 x 2 in. hex cap screw, as shown in Figure 75, by pulling it.

### ⚠ CAUTION

- Do not overtighten the screws or use any power tools as it could break the U-frame or the hardware itself.

- 4) Repeat step 1 to 3 for the second post.



Figure 75

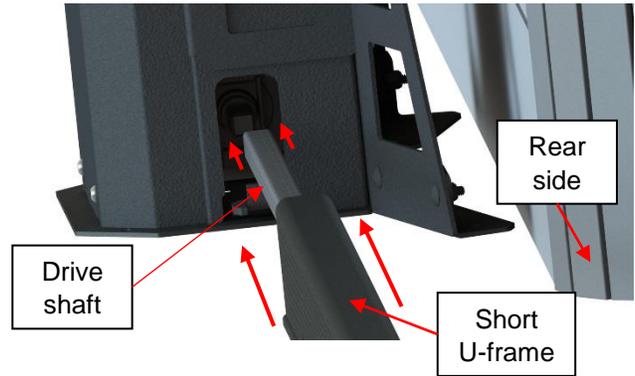


Figure 72

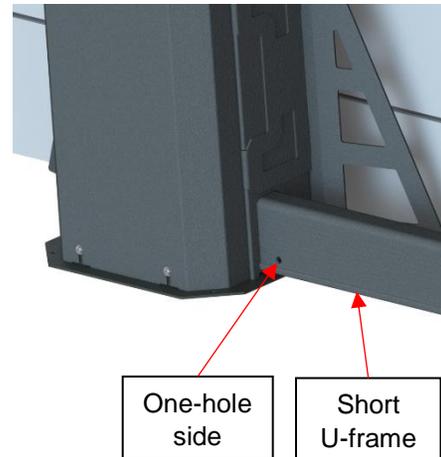


Figure 73

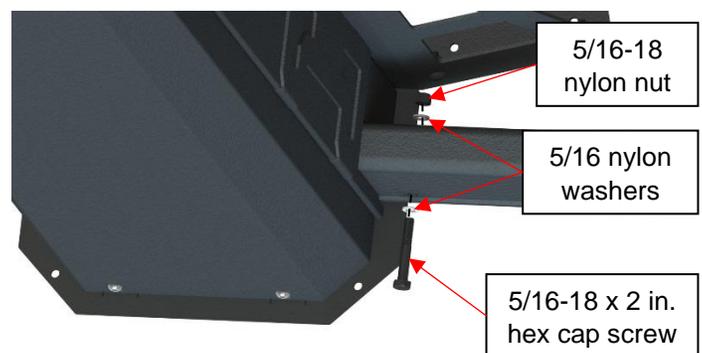


Figure 74

- Place the motor-side along the rear of the cover with each end close to the two square drive-shafts that were installed previously. (Figure 76)

**⚠ CAUTION**

- Ensure the input shaft in the middle of the U frame is pointing outwards from the cover. (Figure 76)
- Ensure the keyway of the motor-side's input shaft is pointing upwards.

- Slide the open end of the left square drive-shaft over the square shaft located at the end of the motor-side. (Figure 76)

**⚠ CAUTION**

- Do not pull on the drive shaft, otherwise it will slip off the jack.

**Note:** You might need to rotate the output shaft of the motor-side assembly so both output shaft and drive shaft align with each other.

**⚠ CAUTION**

- Do not turn the shaft more than a 1/8" [3.175 mm] of a turn. Failure to follow this instruction might break components from the post assemblies.

- Repeat step 6 for the right side.
- Be sure that the holes on the short U-frame are aligned with those on the long u-frame corner bracket. (Figure 77)
- Be sure that everything is locked in place by sliding a 5/16-18-2 hex cap screw with a 5/16 nylon washer through each of the two holes of the short U-frame and put a 5/16-18 hex lock nut from the other side of each bolts. (Figure 77)

**⚠ CAUTION**

- Do not overtighten the bolts or use any power tools as it could damage the U-frame, the paint or the hardware itself.

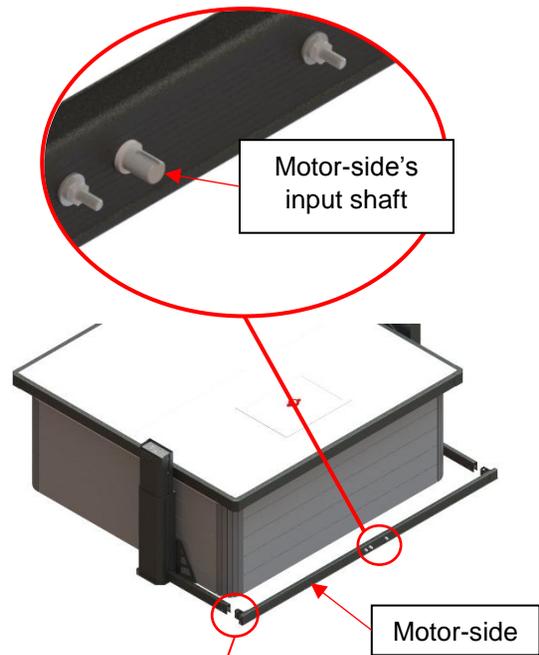


Figure 76

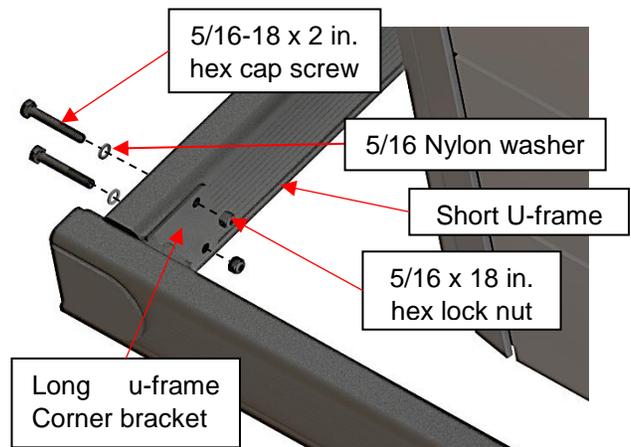
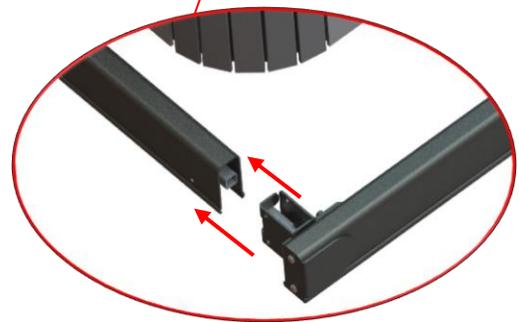


Figure 77

- 10) Repeat steps 8 and 9 on the opposite side.
- 11) Remove the four slotted screws at the bottom of the operator and remove the cover. Do not discard these screws. (Figure 78)
- 12) Install the 3/16-3/16 x 5/8 in. square key into the motorside's input shaft's keyway. (Figure 79)
- 13) Remove the tape on the operator's sprocket.
- 14) Untighten the set screws of the operator's sprocket. (Figure 80)
- 15) Align the keyways of the input shaft and operator's sprocket together by turning the hex shaft of the gearbox. (Figure 79)

**⚠ WARNING**

- ◆ Do not turn more than 20 turns. If more turns are required, the lower limit switch will have to be reset. See *Limit switch adjustment section*.

- 16) Insert the motor-side's input shaft into the sprocket. (Figure 79)
- 17) Fasten the operator to the two bolts from the motorside with two 5/16 in. flat washers, 5/16 in. lock washers and 5/16-18 hex nuts. (Figure 80)
- 18) Tighten both set screws in the sprocket. (Figure 80)

**⚠ CAUTION**

- Do not overtighten the set screws or use any power tools as it could damage some components.

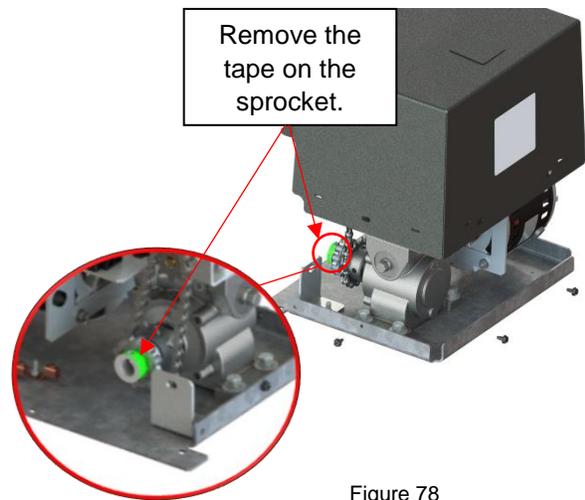


Figure 78

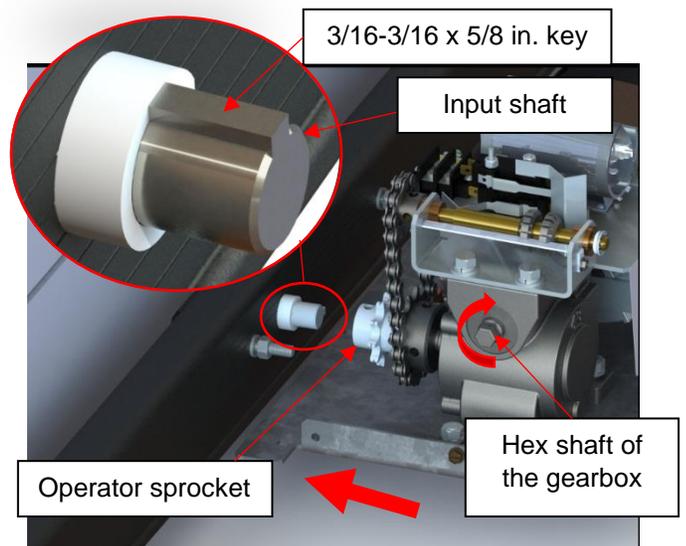


Figure 79

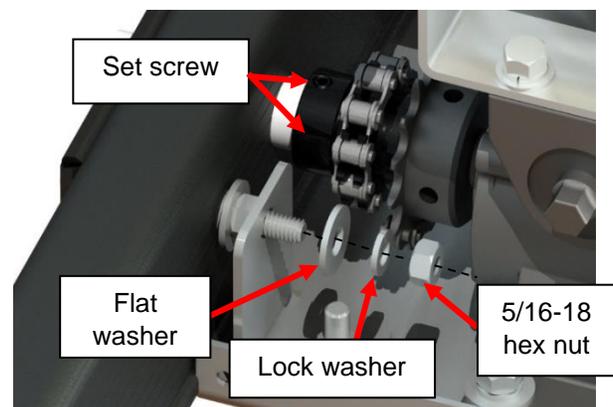


Figure 80

19) Once the operator is properly installed, remove the jack lock screws from the posts and put them in the extra holes on top of the posts (Figure 81).

**⚠ CAUTION**

- Never remove the jack lock screw if the operator and the drive shafts are not completely and properly installed.
- DO NOT remove the threaded rod's screw.

**⚠ WARNING**

- ◆ Be sure to remove the jack lock screw once the operator is secured. Failure to remove the jack lock screw will damage the lifting mechanism.

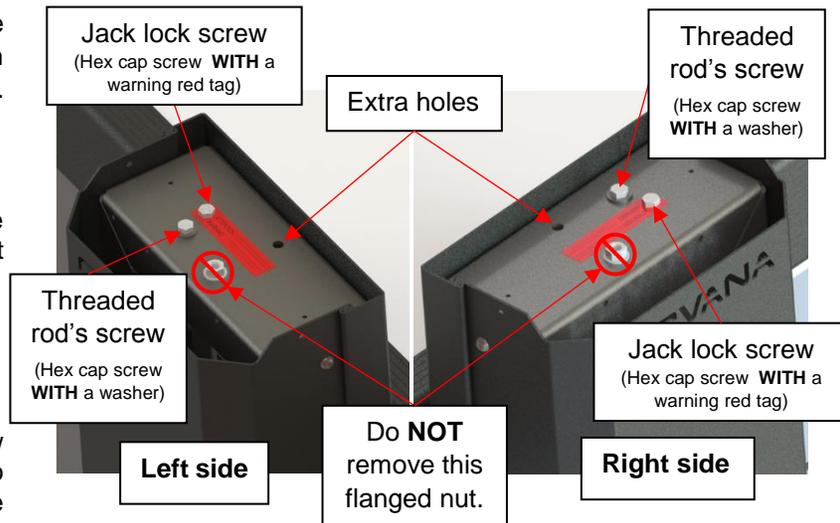


Figure 81

20) Remove the two 1/4-20 x 1 in. screws and washers toward the front of the cover on both sides (Figure 82). **Do not discard these screws.**

**⚠ WARNING**

- ◆ **DO NOT** remove the rear ones. (Figure 83)

21) With the help of another person, slide the cover approx. 4 in. (10.16 cm) toward the rear of the hot tub. (Figure 83)

**⚠ CAUTION**

- A second person is required so as to not damage the acrylic surface of the hot tub.

22) Ensure the two back 1/4-20 x 1 in. screws on both sides of the cover are loose but DO NOT remove them. Leave a 1/2 in. (12.7 mm) gap between the screws' heads and the C-channel. (Figure 83)

**⚠ CAUTION**

- Never unscrew the four screws of the cover at the same time (Figure 82 and Figure 83). You must leave the two rear screws in and slide them into the pivot arms' screw slots so that the two front screws will be easier to re-install.



Figure 82

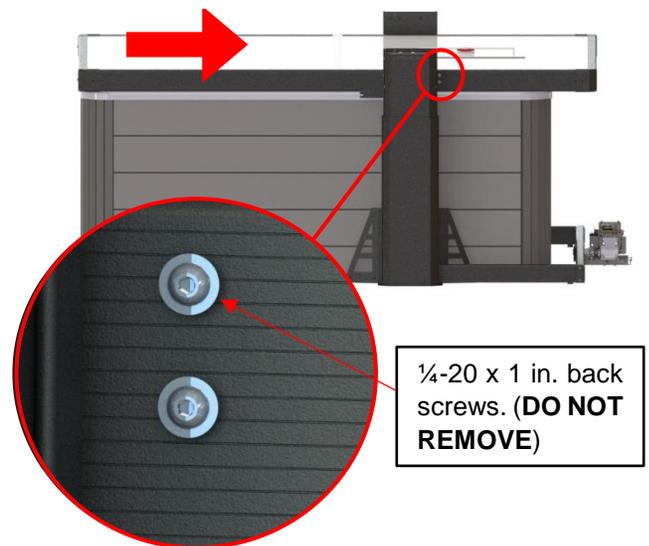


Figure 83

- 23) Use the threaded rod screws (Figure 81) on both posts to align the pivot arms' screw slots with the screw on the cover. Raise the post by turning the threaded rod screw counter clockwise and lower the post by turning the threaded rod screw clockwise.

**⚠ CAUTION**

- ◆ The maximum height that can be obtained with the threaded rod is 23 in. (58.4 cm). **DO NOT** unscrew the threaded rod more than this height. Failure to follow this instruction will damage the post assemblies (Figure 84).

- 24) Screw the two front 1/4-20 x 1 in. button head screws and 1/4 in. flat washers on both sides of the cover and pivot arms as shown in Figure 85.
- 25) Tighten the two back 1/4-20 x 1 in. screws on both sides of the cover. (Figure 84)
- 26) Fasten the top plates at the top of each post assembly using the two #8-1/2 in. painted screws. (Figure 86)
- 27) For both post assemblies, slide the all-weather seals down. Ensure they are properly resting on the outer sleeves' top. Push down on the seal as shown. (Figure 87)

**Note:** The black seal flap of the all-weather seal should be facing downwards when pushing down.

**⚠ WARNING**

- ◆ Improper installation of the all-weather seal could impede performance and reduce the lifespan of the mechanical lifting components.
- ◆ Improper installation of the all-weather seal could cause damage to the lifting mechanism.

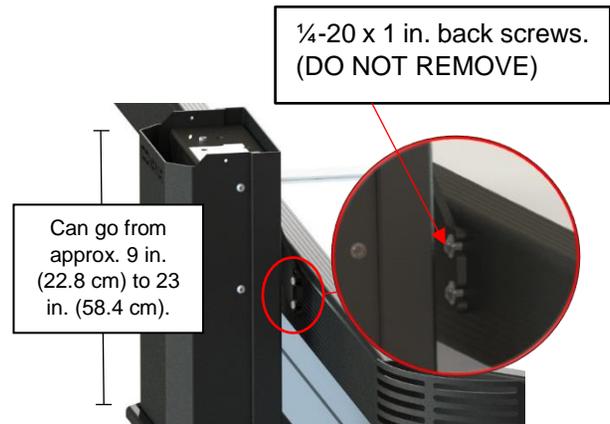


Figure 84

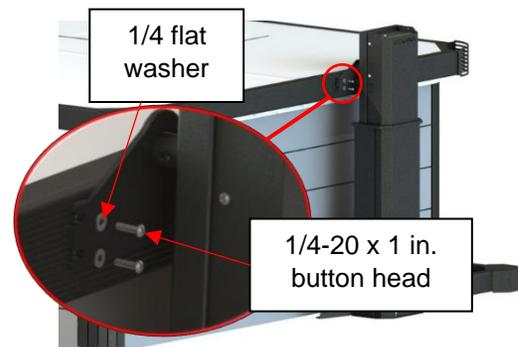


Figure 85

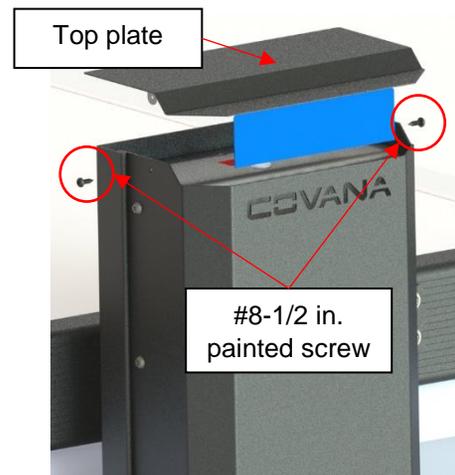


Figure 86

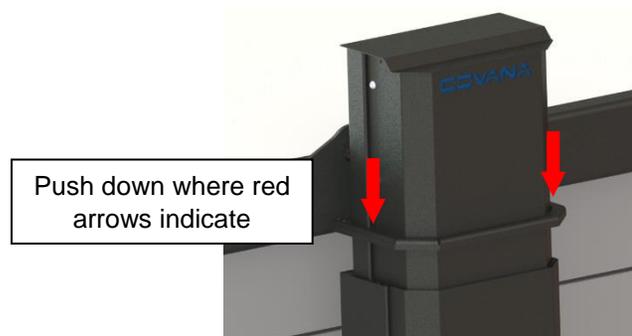


Figure 87

## Tub mounting

**Note:** If the cover was supplied with the ground anchoring option, skip to the *ground anchoring mounting section*.

- 1) Ensure the system is well positioned around the hot tub and the cover is lying flat and centered on the hot tub.

### ⚠ CAUTION

- It is important to verify that the assembly is well centered and positioned before mounting it. Failure to follow this instruction will cause permanent damage to the hot tub.
- ◆ Use a 24 in. (61 cm) level to ensure both post assemblies are perfectly straight.

**Note:** Regardless of the tub size, the tub mount arms need to be mounted to the tub using the provided tub mount supports. Depending on the tub size, long, short or both tub mount arms might be used. The angle at which these arms will be fastened also depends on the size of the hot tub.

- 2) Depending on the height and the width of the hot tub, fasten the arms (either short or long arms) to the sleeve brackets using 1/4-20 x 5/8 in. carriage bolts, 1/4-20 hex nuts and 1/4 lock washers. Keep these loose for now. (Figure 88)

- 3) If the arm still doesn't reach the skirt of the hot tub, add the other tub mount arms and fasten them with 1/4-20 x 5/8 in. carriage bolts, 1/4 flat washers, 1/4 lock washers and 1/4-20 hex nuts. Keep these loose for now. (Figure 89)

**Note:** Adjust the angle of the arms so the top tub mount supports are as close to the acrylic as possible, but without touching it, and the bottom mount supports are as close to the bottom of the tub as possible.

- 4) Install the tub mount supports on the arms. If it is possible, fasten the tub mount supports to the absolute extremities of the arms. Use 1/4-20 x 5/8 in. carriage bolts, 1/4 lock washers and 1/4-20 hex nuts. (Figure 90)

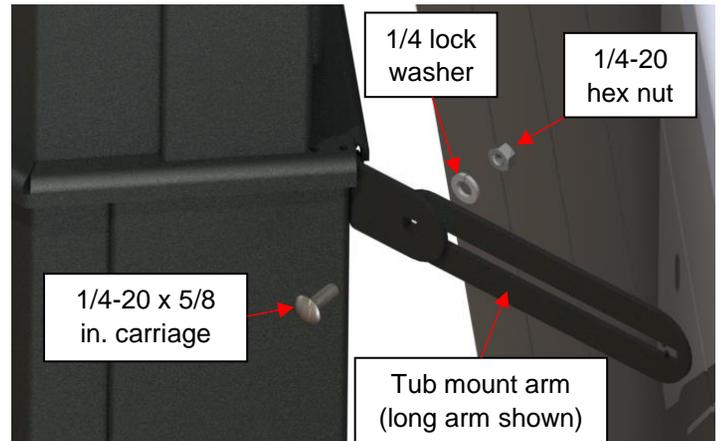


Figure 88

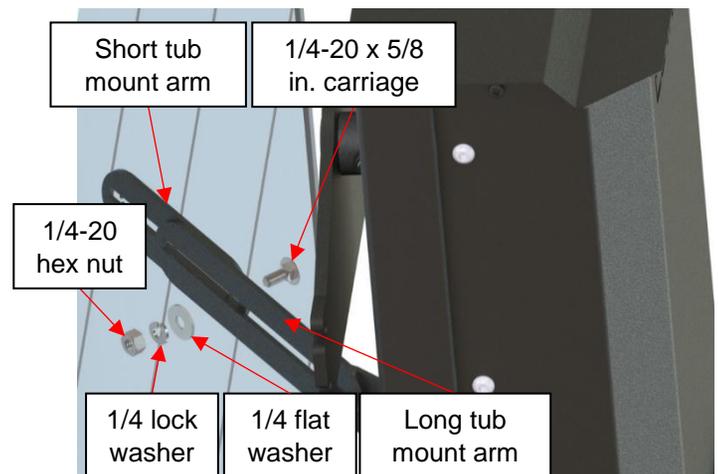


Figure 89

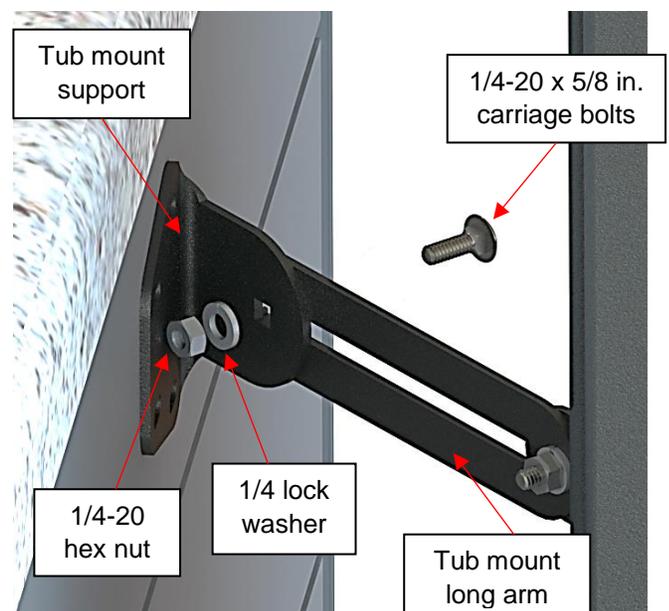


Figure 90

- 5) Tighten all the bolts and ensure the tub mount supports are lying flat on the surface of the tub.

**⚠ WARNING**

- ◆ Do not overtighten any hardware. Failure to follow this instruction could damage the paint or the hardware itself.
- ◆ Ensure the arms' angle is as minimal as possible. Failure to follow this instruction will cause permanent damage to the hot tub.

- 6) Screw the tub mount supports to the tub using the four appropriate size screws per tub mount support. (Figure 91)

**⚠ WARNING**

- ◆ Make sure the screws for the tub mount supports are installed on a solid portion of the tub's frame.

- 7) Repeat steps 1 to 6 for the other post.
- 8) Insert the four outer sleeve gaskets in the cut outs (two on each side) to prevent dirt or water from getting into the sleeve. (Figure 93) Repeat for other post assembly.
- 9) Once the Horizon cover is properly mounted to the hot tub, anchor both U-frame's corner brackets to the ground using at least 1/4x2 in. screws. (Figure 94)

**⚠ WARNING**

- ◆ The minimum anchoring screw size is 1/4x2 in. Failure to follow this instruction could cause damage to some components or serious injuries.

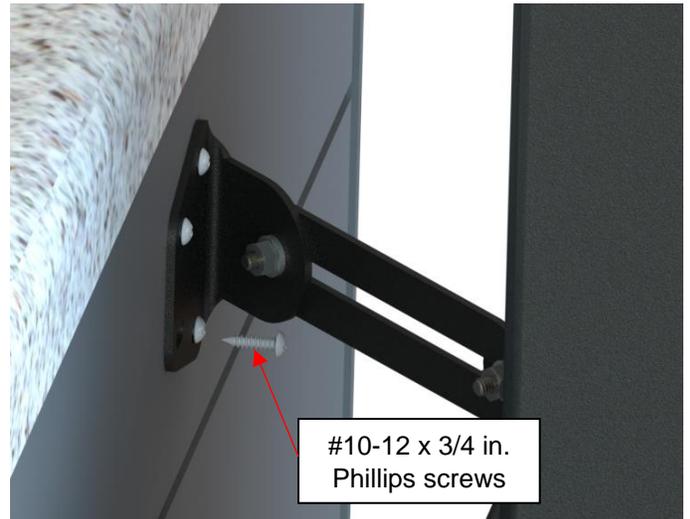


Figure 91



Figure 92

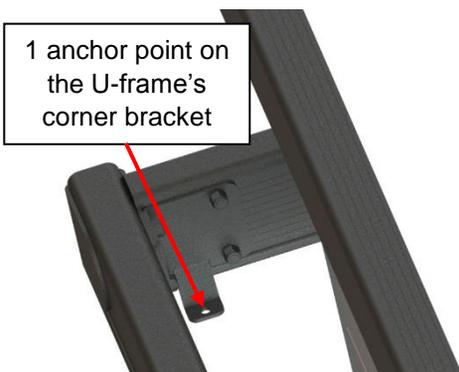


Figure 94

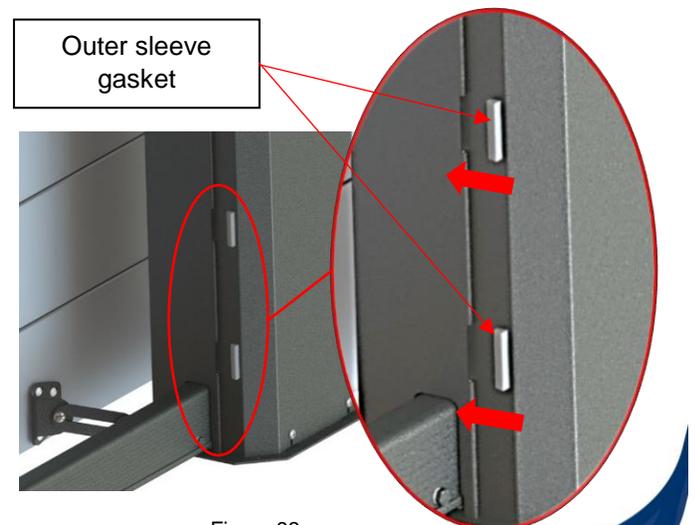


Figure 93

## Ground anchoring mounting (optional)

- 1) Ensure the system is well positioned around the hot tub and the cover is lying flat and centered.
- 2) Check whether the posts are still level before anchoring. Use a 24in. (61 cm) level.

### ⚠ CAUTION

- It is important to verify that the assembly is well centered and positioned before anchoring it. Failure to follow this instruction will cause permanent damage to the deck or the chosen surface.

- 3) Secure the system to the ground with 14 screws (7 on each side).

**Note:** As shown in Figures 96, 97 and 98, there are two anchor points on each foot plate, four anchor points on the L brackets for each post assembly and one anchor point per U-frames' corner brackets.

### ⚠ WARNING

- ◆ The minimum anchoring screw size is 1/4-2 in. Failure to follow this instruction could cause damage to some components or serious injuries.

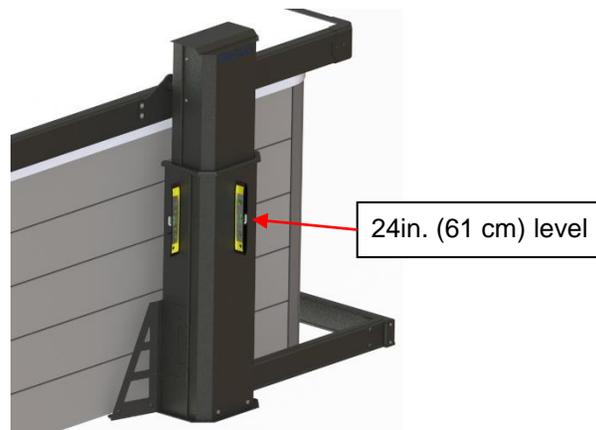


Figure 95

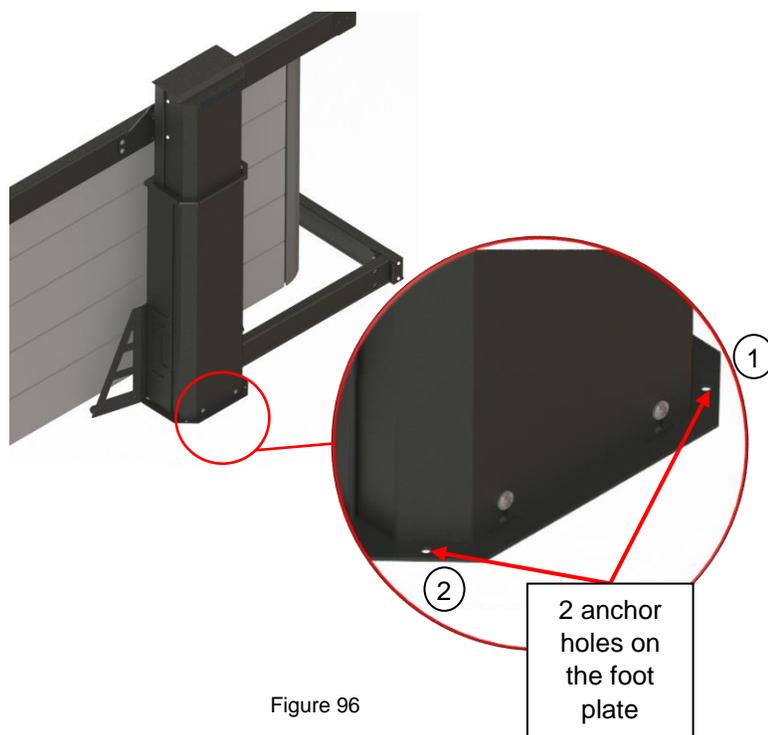


Figure 96

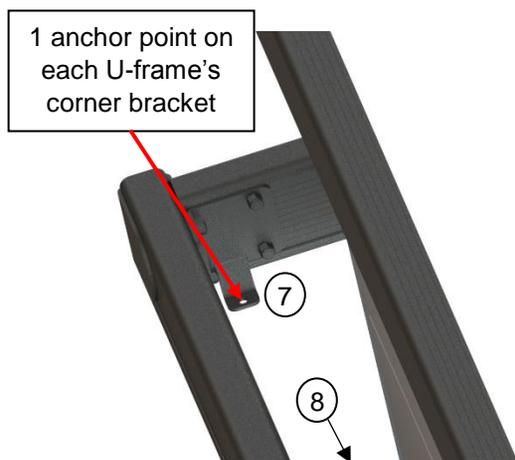


Figure 98

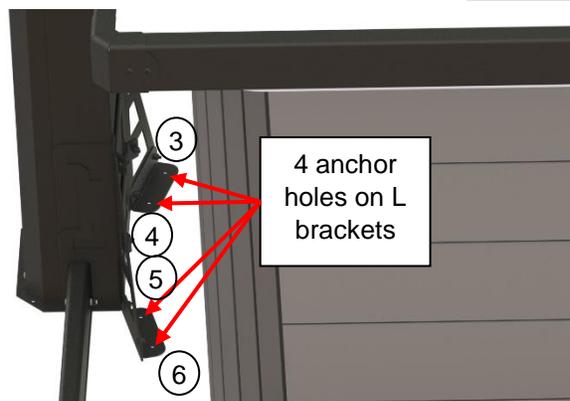


Figure 97

## Testing the Horizon cover

- 1) Plug in the Covana cover. **(Have a certified electrician complete the electrical hook-up (see *Electrical hook-up section*) and refer to the *Electrical Diagrams section* in the *Appendix*).**

### WARNING

- ◆ All electrical connections must be done by a certified electrician.

- 2) Ensure there is no object directly above the cover or in its lifting path while performing this test. Refer to the instructions in the *Limit Switch Adjustment* section if adjustments are required.
- 3) Use the key switch to lift it approx. 10 in. (25.4 cm) and stop. Ensure the cover is lifting equally (there are no post higher than the other).

**Note:** The cover will not tilt at this height.

- 4) Lower the cover down completely and make sure the cover is touching the pieces of foam all around the hot tub perimeter.
- 5) Lift the cover all the way up and listen for any unusual sounds (metal screeching or knocking). Ensure the cover tilts at approx. 25°. If not, consult the *Troubleshooting section* or contact your local Covana dealer.
- 6) Lower the cover and ensure it stops at the point of contact with all the foam spacers on the hot tub.
- 7) For the *ground anchoring option*, check whether the posts are still level before anchoring. Use a 24" (61 cm) level. Refer to *Ground anchoring mounting* section to see all (8) anchoring points.

### WARNING

- ◆ The ground anchoring option can only be used in areas with low winds.

- 8) Both jacks on the Covana cover must be properly anchored to the foundation using at least one of the pre-drilled holes located on the roof of each post. Note that the anchors are not supplied. Use a 1/4 in. (6 mm) concrete anchor for concrete pads or a 1/4 in. (6 mm) lag bolt for wood foundations and insert a minimum of 1 1/4 in. (30 mm) deep.

- 9) Permanently mount the key switch. The key switch must be located 5 ft. (1.5 m) away from the hot tub and 5 ft. (1.5 m) above the ground or deck level. Ensure the user has a clear view on the Covana cover when operating it. (See Figure 28) **Cut the power when installing the key switch.**

### CAUTION

- When operating, the user must have a clear view of the Covana cover and its surroundings at all times.

### WARNING

- ◆ Failure to permanently install the key switch as indicated could cause serious injury or even death and void the warranty and certification. Only the proper installation of the key switch combined with the suggested procedures and caution will reduce such risks.
- ◆ Do not place the key switch in an area prone to snow accumulation or water runoff.

## Wiper brackets installation

Lift the cover halfway up to proceed to the next steps. The next steps are important for minimizing water intrusion.

### ⚠ CAUTION

- ◆ Ensure the I-beam end is dry and clean.
- ◆ Ensure ambient temperature is between 70°F to 100°F (21°C to 38°C) for the ideal application temperature.

- 1) Locate the two wiper brackets that are provided in the plastic bag. (Figure 99)
- 2) Remove the siding on the double-sided tape of one wiper bracket. (Figure 99)
- 3) Under the Covana cover locate the I-beam and orient the wide flap of the wiper bracket outwards of cover. (Figure 100)
- 4) Stick the wiper bracket on the middle of the I-beam by holding it in place with pressure for at least 60 seconds. This ensures a proper bond to the I-beam. **Ensure to place the wiper bracket flap at the edge of the I-beam directly into the gap between the I-beam and the C-channel.** (Figure 101)

### ⚠ WARNING

- ◆ Failure to properly install the wiper bracket impedes performance
  - ◆ Failure to install each wiper bracket properly can result in excessive cover leakage.
- 5) Repeat steps 1 to 4 for the other side of the I-beam.

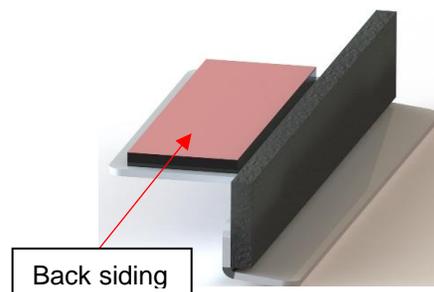


Figure 99

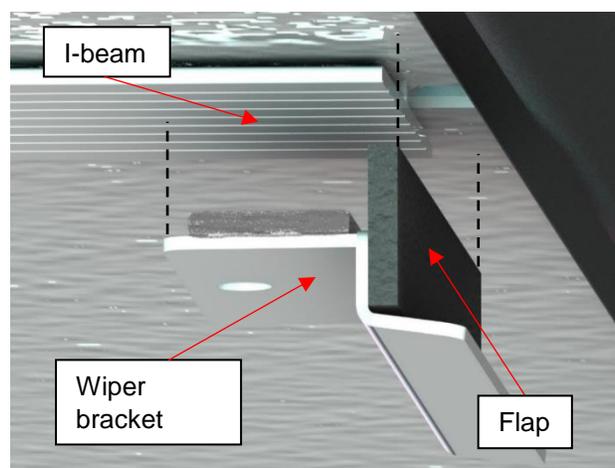


Figure 100

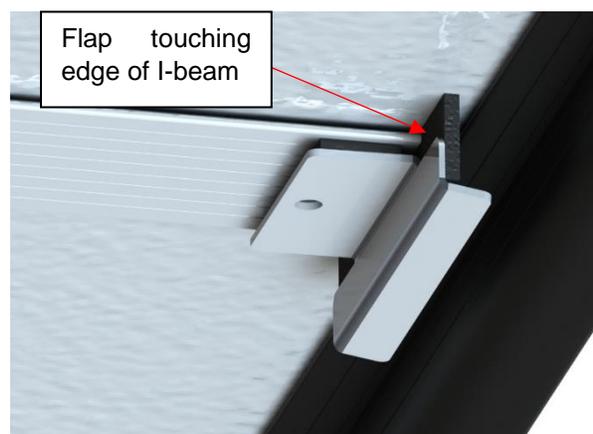


Figure 101

## Seal application

- 1) Once the Covana cover has been fully assembled, raise the cover and remove the foam spacers and tape. Lower the cover and walk around the entire perimeter of the hot tub, observing where the inside surface of the cover will make contact with the hot tub. This will determine the best location to apply the seal.
- 2) Dry the hot tub edge and the underside of the cover with a clean cloth. Wait until it is dry.

### ⚠ CAUTION

- ◆ Remove all dirt, oil and moisture for a proper seal adhesion. The use of mild detergent can clean the surface. Refer to the hot tub manufacturer's recommendations.

- 3) Apply the provided masking tape around the hot tub where the seal will be installed. The masking tape will ensure the seal is straight when pulled corner to corner. The ideal location for the seal is closer to the hot tub's interior edge, but on a flat surface (Figure 102). The minimum turn radius for the seal is 4 in (10 cm).

### ⚠ WARNING

- ◆ The use of masking tape is recommended since it will protect the acrylic tub from the clips' glue. Furthermore, pulling the masking tape from one corner to the next will ensure straightness.

- 4) Apply the provided seal clips parallel on the masking tape around the hot tub and ensure to put more in the corners and on any tight turns, filters, etc., keeping in mind that a limited number of clips are provided. (Figure 102)
- 5) Start installing the seal joint at the opposite side from the entrance of the hot tub (halfway in a clip), with the adhesive layer facing up toward the cover. (Figure 103 and 104)

### ⚠ CAUTION

- Do not install the seal joint near a control system or the critical components of the spa.

- 6) When the seal is installed around the entire hot tub, you must cut the extra length as straight as possible for the best joint finishing results.

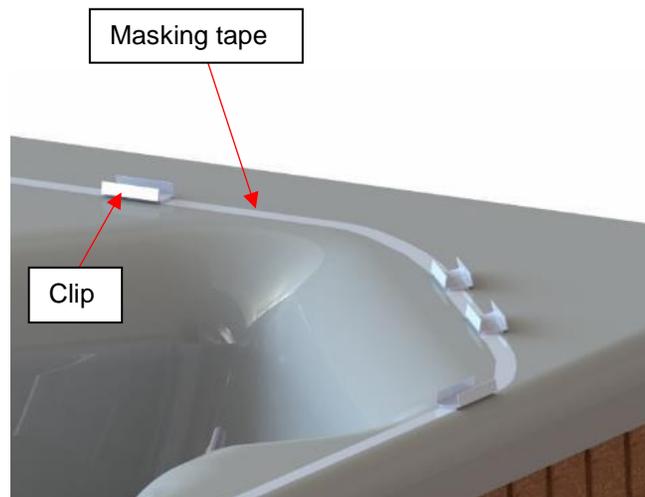


Figure 102

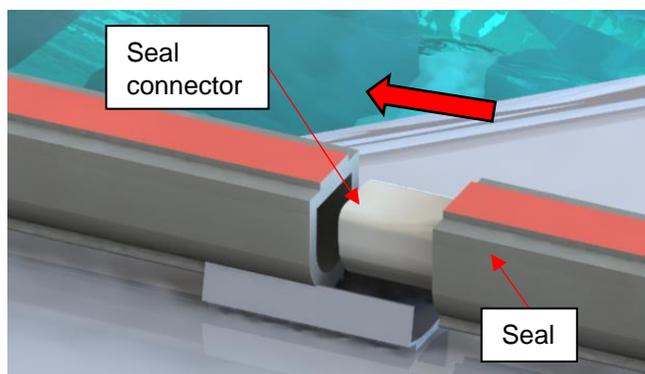


Figure 103



Figure 104

- 7) Use the supplied seal connector and insert it in both ends of the seal. It is recommended to use masking tape to hold the two ends tightly together. (Figure 103)

**⚠ WARNING**

- ◆ At this point, if the ambient air temperature is below 32°F (0°C), a temporary heater must be placed inside the hot tub for 10 to 15 minutes. Once the heater is in the hot tub, lower the cover until it touches the seal to increase the air temperature. After 10 to 15 minutes, remove the heater and continue with the seal installation. The rubber seal should not be overheated; the maximum temperature it can withstand is 150°C (302°F). Do not directly heat the acrylic and seal, as this may cause permanent damage. Example, do not place the heater too close to the acrylic surface, as the surface could melt or catch fire. Place the heater on a pedestal or spacers to avoid directly placing it on the acrylic tub.
- 8) Test the seal placement by lowering the cover about 1/4 in. (6 mm) over the seal to ensure that the entire perimeter **will make contact** with the seal. If you are satisfied, raise the cover and remove the red plastic backing off the seal.

**⚠ CAUTION**

- ◆ Ensure the underside of the cover is completely dry before adhering the seal.
  - ◆ Make sure the seal remains tightly in the clips to ensure its proper positioning.
- 9) Completely lower the cover onto the seal. Leave the cover in this position for **at least 5 minutes** to ensure proper seal-to-cover adhesion.

**⚠ WARNING**

- ◆ At least **5 minutes** is necessary to ensure proper adhesion of the seal at 70°F (21°C). Less than **5 minutes** could cause the seal to release after a short period of time.

- 10) Slowly raise the cover no more than a 1/4 in. (6 mm). and leave the cover in this position for about 10 seconds, as this will allow the seal to slowly and fully release from the seal clips. You can also use a non-abrasive plastic tool or your fingers to help release the seal.

- 11) Once satisfied that the seal is released, raise the cover 36 in (91 cm) high. Apply pressure on the seal to properly bond the adhesive to the underside. To apply pressure to the seal, simply push it against the Covana cover with your hands.
- 12) Remove the seal clips and tape from the hot tub's edge.
- 13) Completely lower the Covana cover completely and leave it there for **at least another five minutes**. This will ensure the seal is properly bonded.

**⚠ WARNING**

- ◆ At least **5 minutes** is necessary to ensure proper adhesion of the seal at 70 °F (21 °C). Less than **5 minutes** could cause the seal to release after a short period of time.
- 14) Raise the Covana cover again to approx. 6 in. (15 cm) and stop.
  - 15) Make sure the cover is flat and there are no corners higher than the others.
  - 16) Lower the cover again, and make sure the seal is touching the hot tub all around and there is no steam leaking.
  - 17) Lift the cover all the way up and pay attention for any unusual sounds. (screeching or knocking) If so, refer to *Troubleshooting* section or call your local dealer.
  - 18) The installation process is almost done. **There is a checklist for the installer and the customer at the end of this manual.** Check the sections to ensure everything has been done properly. **It is very important to sign both copies and tear off the installer's copy.**

# ELECTRICAL HOOK-UP

---

## *Avoiding the risk of electrocution*

### **⚠ CAUTION**

- All electrical work should be done by a qualified electrician, otherwise the certification and warranty will be voided. Furthermore, any modifications to the electrical components will also void the warranty.

### **⚠ ELECTRICAL DANGER**

- ♦ Failure to comply with these instructions may result in serious injury or death by electrocution. Disconnect or turn off and secure all power supplies before starting any intervention on the Covana cover.
- ♦ Always have a licensed electrical contractor perform any electrical maintenance or repairs on the Covana cover. The wiring must comply with all applicable local electrical codes and regulations.
- ♦ The Covana operator must be connected to a circuit that is protected by a dedicated GFCI that complies with all applicable local electrical codes and regulations.
- ♦ Install the Covana cover in such a way that water drainage is directed away from the electrical components.
- ♦ Do not connect any auxiliary components to the electrical system of the Covana cover unless they have been approved by Covana.
- ♦ Replace electrical components with original components provided or approved by Covana. Ask your dealer for replacement parts.

### **⚠ ELECTRICAL WARNING**

- ♦ To reduce the risk of electric shock, the green-colored terminal or the terminal marked “g,” “gr,” “ground,” “grounding” or with the  $\equiv$  symbol that is located inside the supply terminal box or compartment must be connected to the grounding that is provided in the electric supply service panel with a continuous copper wire equivalent in size to the circuit conductors supplying the equipment.
- ♦ Two lugs marked “bonding lugs” are provided on the external surface or on the inside of the supply terminal box or compartment. To reduce the risk of electric shock, connect the local common bonding grid in the area of the Covana cover. Use terminals with an insulated or bare copper conductor not smaller than No. 6 AWG (13.30 mm<sup>2</sup>).

### **⚠ ELECTRICAL CAUTION**

- All field-installed metal components, such as rails, ladders, drains or other similar hardware, within 10 ft. (3 m) of the hot tub, must be bonded to the equipment grounding bus with copper conductors no smaller than No. 6 AWG (13.30 mm<sup>2</sup>).

## Grounding and power supply connection

- 1) Remove the four screws on the bottom side of the Covana operator and remove the cover. (Figure 108)
- 2) Refer to the complete wiring diagrams for the European model and North American model in the appendix.

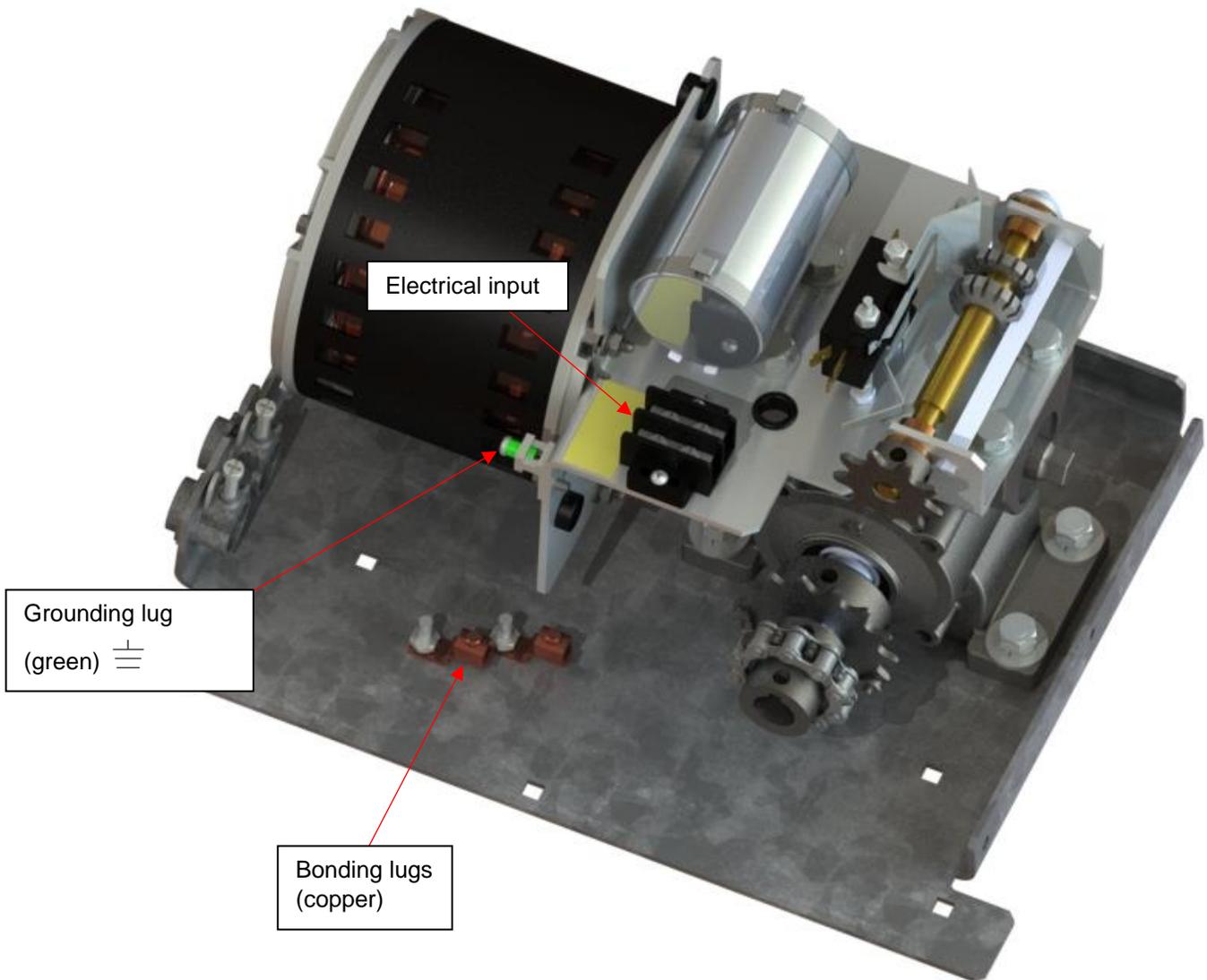


Figure 105

# TECHNICAL SPECIFICATIONS

## Side elevation dimensions

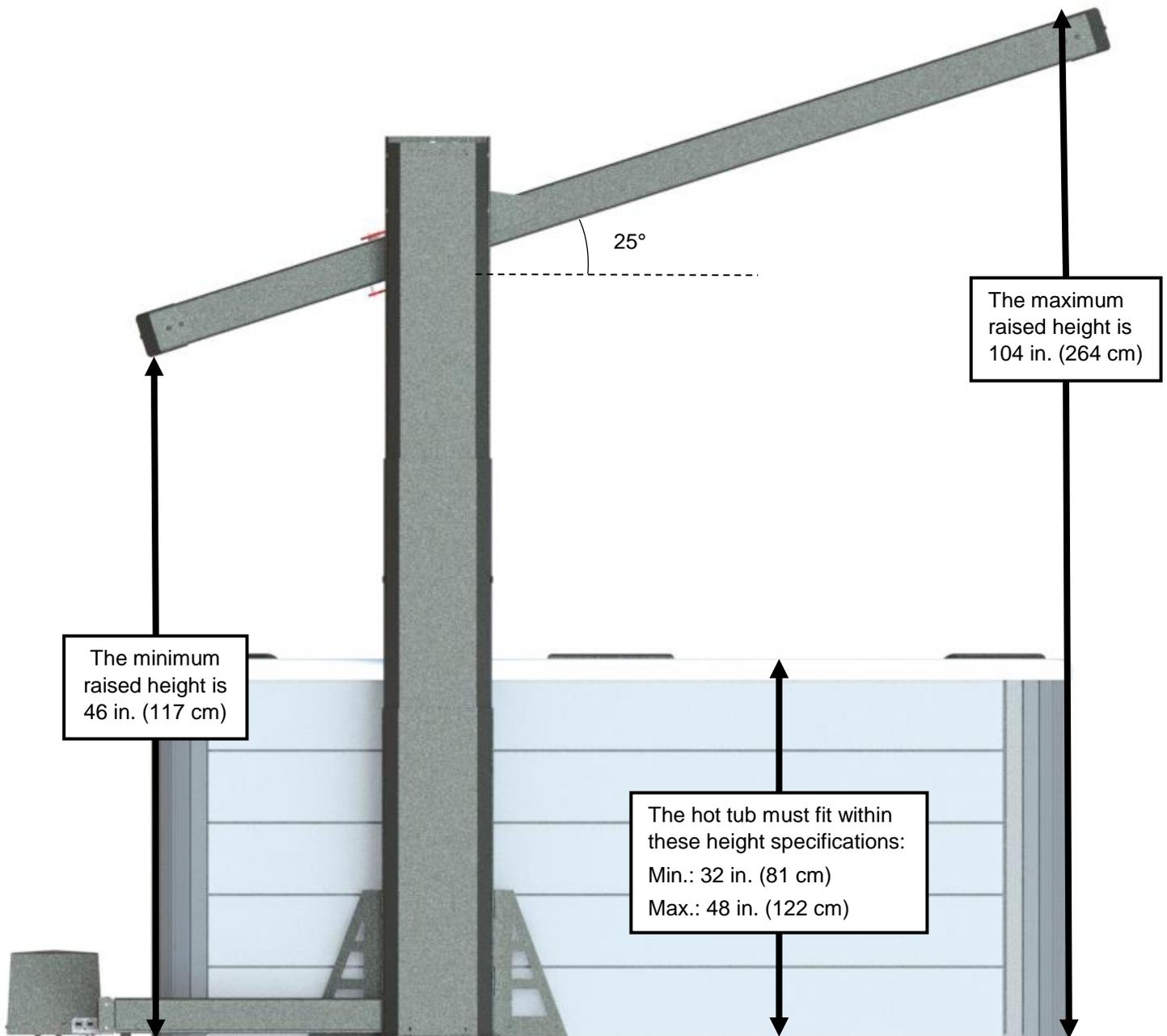


Figure 106

# Frame dimensions and footprint

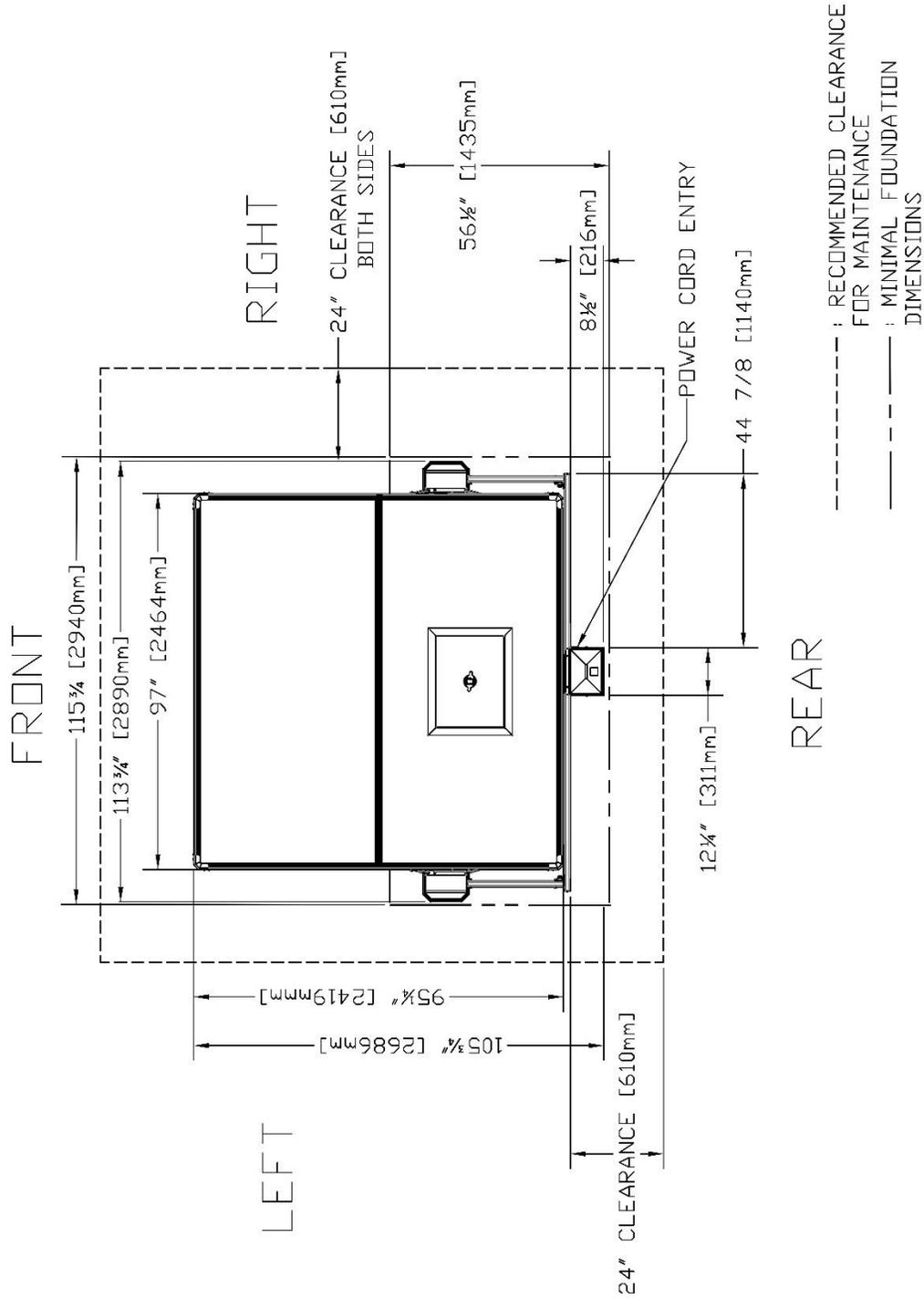


Figure 107

Dimensions do not include required access to service hot tub.  
 Do not scale drawing.  
 Dimensions are in inches [mm].

## Electrical specifications

- 3) The Covana cover requires a dedicated single-phase 115 VAC (North America) or 220 VAC (European) hard-wired power supply.
- 4) The Covana cover must be installed in accordance with and comply with all the applicable local codes and regulations. All wiring and connections should be performed by a qualified electrician.
- 5) Wires and conduits should be sized according to the local codes and regulations.

North American requirements:

<b>Voltage</b>	115 V, 60 Hz (1 hot, 1 neutral, 1 ground)
<b>GFCI</b>	15 A single-pole GFCI (not included)
<b>Current draw</b>	Max. 12 A

European requirements:

<b>Voltage</b>	220 V, 50 Hz (1 hot, 1 neutral, 1 ground)
<b>GFCI</b>	10 A single-pole GFCI (not included)
<b>Current draw</b>	Max 6 A

## Operating limitations

### **WARNING**

- 6) The Covana cover should never be used if the following conditions are reached.

<b>Maximum wind</b>	Gusts of 20 mph (30 km/h) while in the raised position and 45 mph (70 km/h) when completely lowered on the hot tub.
<b>Maximum weight on the cover (evenly distributed)</b>	120 lb. (54 kg)

## General specifications

<b>Lifting speed</b>	2.5 in./s (6.35 cm/s)
<b>Total weight</b>	530 lb. (240 kg)
<b>Stock key switch cable</b>	25 ft. (7.6 m)

# LIMIT SWITCH ADJUSTMENT

## ELECTRICAL WARNING

- ◆ Disconnect or turn off the power supply before starting any work on the Covana cover. Additionally, all electrical work should be performed by a qualified electrician.

**Note:** The up and down limit switches have been factory-adjusted and there should be no need to re-adjust them. If adjustments are required to ensure the Covana cover does not come in contact with surrounding obstacles while being raised, the maximum height may be reduced. Never change the factory settings of the down limit nor increase the up limit beyond the factory setting. Failing to do so may result in equipment damage and/or injury.

- 1) Disconnect or turn off the power and lock out the power source.
- 2) Remove the four slotted screws at the bottom of the operator and remove the cover. (Figure 108)
- 3) Remove the slotted retaining screw and slide the cam plate out from operator frame. (Figure 109) (Be careful not to move the cam wheels.)
- 4) To reduce the amount of travel in the upward direction, turn the up cam wheel counter clockwise viewed from the cam plate as shown. (Figure 110) When turning counter-clockwise, for each cam wheels' lot travel (approx. 4°), the upper cover limit will be reduced by approximately 5/32 in. (4 mm).
- 5) Once the height is set to the desired position, return the cam plate to its original position and ensure that it is properly inserted in the slot of each cam. **Never operate the system without the cam plate and retaining screw.** (Figure 109)
- 6) Reinsert the slotted retaining screw to prevent the cam plate from coming out.
- 7) Reinstall the operator cover.
- 8) Turn the power on and test the system.
- 9) Screw the cover back on using the 4 slotted screws. (Figure 108)

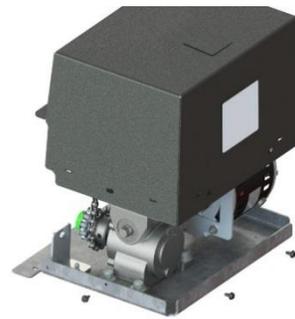


Figure 108

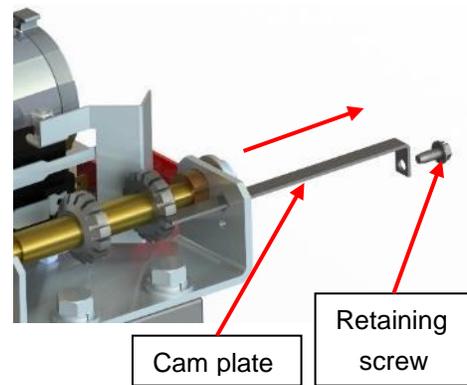


Figure 109

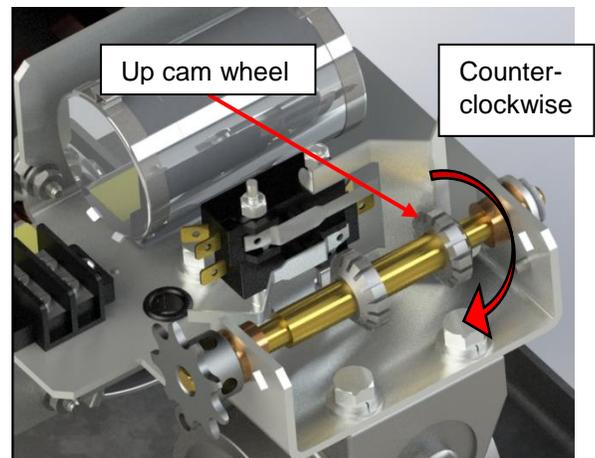


Figure 110

# TROUBLESHOOTING

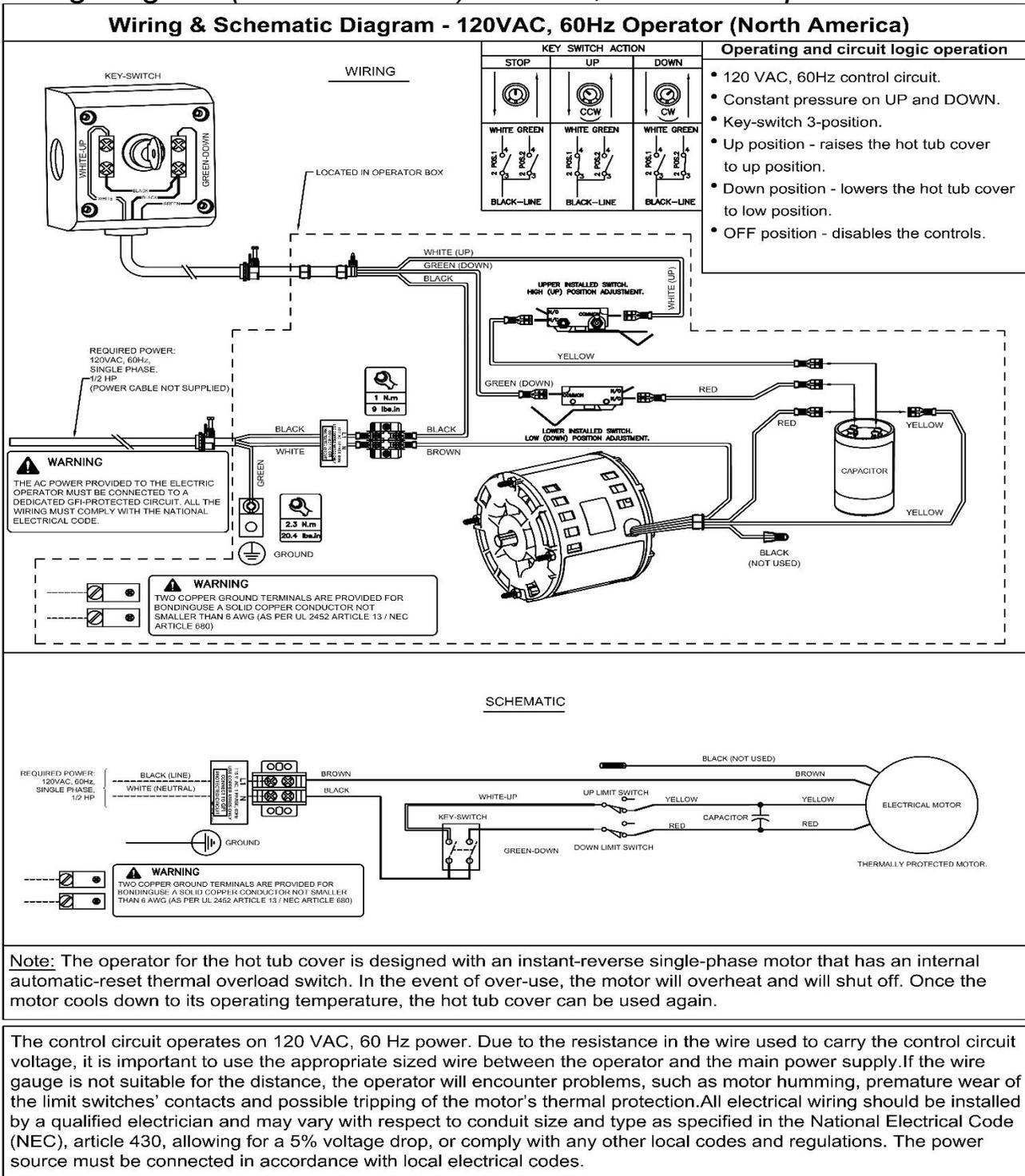
Problem	Probable Causes	Solutions
<b>The Covana cover will not raise or lower. (Silent motor and no movement)</b>	<ul style="list-style-type: none"> <li>◆ The GFCI is tripped.</li> <li>◆ The power source is disconnected.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Reset the GFCI.</li> <li>◆ Verify that the power source is enabled.</li> <li>◆ Check the breaker panel.</li> <li>◆ Review the manual lifting procedure section.</li> <li>◆ Verify if any cables are damaged or pinched.</li> </ul>
<b>The Covana cover will not raise or lower. (Motor humming and some visible movement)</b>	<ul style="list-style-type: none"> <li>◆ Posts are frozen.</li> <li>◆ Debris is caught on the cover.</li> <li>◆ Jack assemblies are jammed.</li> <li>◆ The motor is obstructed.</li> <li>◆ Posts are obstructed.</li> <li>◆ The debris on the cover is too heavy.</li> <li>◆ Power source is disconnected.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Remove excessive debris from top of the Covana cover.</li> <li>◆ Verify if any posts are obstructed.</li> <li>◆ Use methanol to free ice buildup on posts.</li> <li>◆ Grease the post assemblies again.</li> <li>◆ Refer to <i>Foundation preparation section</i> to verify the relative position of the four posts.</li> <li>◆ If all previous attempts failed, contact your local dealer.</li> </ul>
<b>The middle sleeve has fallen.</b>	<ul style="list-style-type: none"> <li>◆ Posts are frozen.</li> <li>◆ The stopper kit is broken/missing.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Verify that the all-weather seal is on the inner post and at the proper position.</li> <li>◆ Check whether the stopper kit is broken/missing.</li> <li>◆ If all previous attempts failed, contact your local dealer for the reassembly procedure.</li> </ul>
<b>The cover rises unequally.</b>	<ul style="list-style-type: none"> <li>◆ The chain is broken.</li> <li>◆ A spring pin is broken.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Contact your local dealer.</li> </ul>
<b>The cover rises, but does not lower.</b>	<ul style="list-style-type: none"> <li>◆ The cam plate is missing.</li> <li>◆ The key switch is faulty.</li> <li>◆ Limit switches are stuck.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Only a <i>certified electrician</i> can open the operator and check for faulty up and down limit switches.</li> <li>◆ Verify whether there is any corrosion on the terminals. If yes, clean the terminals.</li> <li>◆ Open the key switch terminal and check for faulty switches.</li> <li>◆ Verify whether any wires are cut/pinched.</li> </ul>

<p><b>The cover lowers, but does not rise.</b></p>	<ul style="list-style-type: none"> <li>◆ The cam plate is missing.</li> <li>◆ The key switch is faulty.</li> <li>◆ Limit switches are stuck.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Only a <i>certified electrician</i> can open the operator and check for faulty up and down limit switches.</li> <li>◆ Verify whether there is any corrosion on the terminals. If yes, clean the terminals.</li> <li>◆ Open the key switch terminal and check for faulty switches.</li> <li>◆ Verify if any wires are cut/pinched.</li> </ul>
<p><b>The contour seal seems contaminated.</b></p>	<ul style="list-style-type: none"> <li>◆ The seal has accumulated mold.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Clean the affected areas with bleach and a soft brush.</li> </ul>
<p><b>Cover no longer tilts</b></p>	<ul style="list-style-type: none"> <li>◆ Brass shear pin in tilt mechanism is broken.</li> <li>◆ Gas spring is weak.</li> <li>◆ Too much snow/ice on cover.</li> </ul>	<ul style="list-style-type: none"> <li>◆ Replace shear pin as per instructions.</li> <li>◆ Remove snow/ice.</li> <li>◆ If all previous attempts failed, contact your local dealer.</li> </ul>
<p><b>Cover tilts but will not return to flat position when lowering</b></p>	<ul style="list-style-type: none"> <li>◆ Gas spring is faulty</li> <li>◆ Pivot mechanism is jammed</li> </ul>	<ul style="list-style-type: none"> <li>◆ Replace pivot assembly gas springs.</li> <li>◆ If possible, manually pivot the cover to vertical position by pulling down on front of cover while lowering – no more than 50 lbs</li> <li>◆ Call your local dealer</li> </ul>

# APPENDIX

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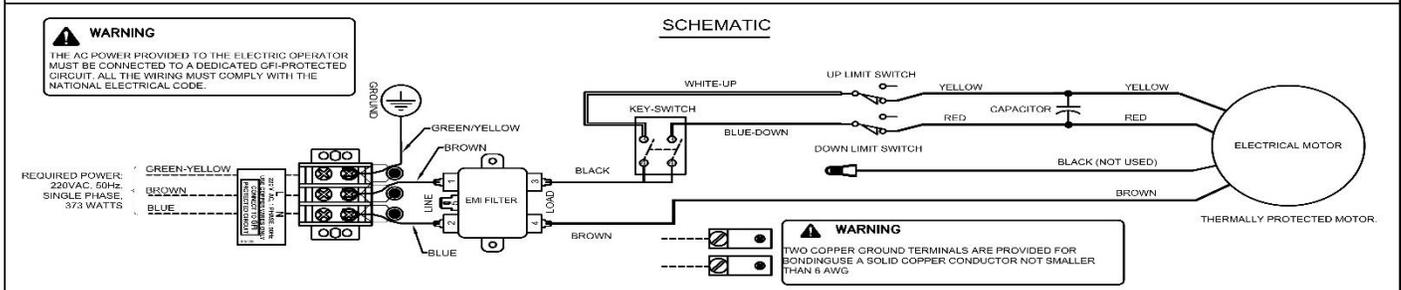
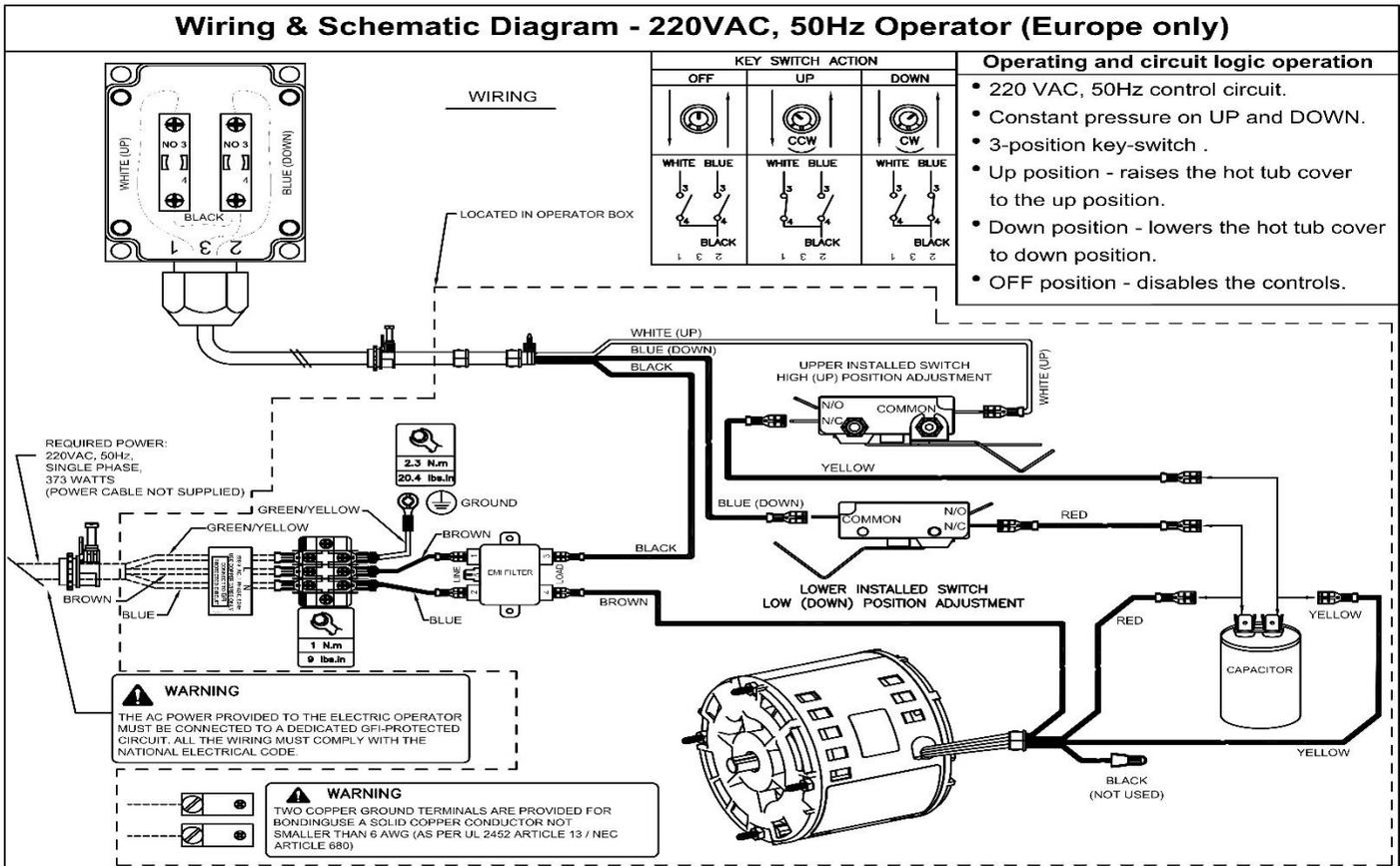
# Wiring diagram (North America) – 60 Hz, 120 VAC Operator



P-24343-R5  
C.A.: 200826

Brevet en instance / Patent Pending  
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# Wiring diagram (Europe) – 50 Hz, 220 VAC Operator



**Note:** The operator for the hot tub cover is designed with an instant-reverse single-phase motor that has an internal automatic-reset thermal overload switch. In the event of over-use, the motor will overheat and will shut off. Once the motor cools down to its operational temperature, the hot tub cover can be used again.

The control circuit operates on 220 VAC, 50 Hz power. Due to the resistance in the wire used to carry the control circuit voltage, it is important to use the appropriate sized wire between the operator and the main power supply. If the wire gauge is not suitable for the distance, the operator will encounter problems, such as motor humming, premature wear of the limit switches' contacts and possible tripping of the motor's thermal protection. All electrical wiring should be installed by a qualified electrician and may vary with respect to conduit size and type as specified in the National Electrical Code (NEC), article 430, allowing for a 5% voltage drop, or comply with any other local codes and regulations. The power source must be connected in accordance with local electrical codes.



# INSTALLATION CHECKLIST (Customer copy)

---

To ensure proper installation, you must carefully read this checklist and verify that you have completed every step of the installation. The customer must receive a completed copy of this checklist.

(Please check each box when verified)

- The base preparation steps have been done correctly. **(Location and foundation preparation sections)**
- The installation steps have been done correctly. **(Uncrating, cover assembly, lifting mechanism and ground anchoring or tub mount assembly section)**
- The seal is properly installed and there is no steam leaking out around the cover. **(Seal application section)**
- The wiper brackets are properly installed to ensure the cover is watertight. **(Wiper brackets installation section)**
- The key switch is **permanently mounted** and located 5 ft. (1.5 m) away from the hot tub and 5 ft. (1.5 m) above the deck or ground level.
- The electrical portion of the installation was done by a certified electrician. **(Electrical hook-up, limit switch adjustment sections)**
- All the parts that came with the Covana cover have been installed.
- The start-up procedure was completed. **(The key sequence responds correctly)**
- The all-weather seal functions properly. **(Lay flat against the outer sleeves while fully closed)**

Serial number: \_\_\_\_\_

Signature of installer: \_\_\_\_\_

Name of installer: \_\_\_\_\_

Signature of customer: \_\_\_\_\_

Name of customer: \_\_\_\_\_

Date (YYYY/MM/DD): \_\_\_\_\_

Dealer's name: \_\_\_\_\_

Owner's address: \_\_\_\_\_



Contact your dealer for all related service issues.

Made in Canada by Covana, a division of the Canimex group  
[www.covana.com](http://www.covana.com)

**PATENTED**

CANADA 2,532,429  
US 11/162,557  
UK 0515168.3  
AUSTRALIA 2006200251

The information in this manual was accurate at the time of print. The manufacturer reserves the right to change or improve its product without prior notice.

# INSTALLATION CHECKLIST (Installer copy)

---

To ensure proper installation you must carefully read this checklist and verify that you have completed every step of the installation. The customer must receive a completed copy of this checklist.

(Please check each box when verified)

- The base preparation steps have been done correctly. **(Location and foundation preparation sections)**
- The installation steps have been done correctly. **(Uncrating, cover assembly, lifting mechanism and ground anchoring or tub mount assembly section)**
- The seal is properly installed and there is no steam leaking out around the cover. **(Seal application section)**
- The wiper brackets are properly installed to ensure the cover is watertight. **(Wiper brackets installation section)**
- The key switch is **permanently mounted** and located 5 ft. (1.5 m) away from the hot tub and 5 ft. (1.5 m) above the deck or ground level.
- The electrical portion of the installation was done by a certified electrician. **(Electrical hook-up, limit switch adjustment sections)**
- All the parts that came with the Covana cover have been installed.
- The start-up procedure was completed. **(The key sequence responds correctly)**

The all-weather seal functions properly. **(Lay flat against the outer sleeves while fully closed)**

Serial number: \_\_\_\_\_

Signature of installer: \_\_\_\_\_

Name of installer: \_\_\_\_\_

Signature of customer: \_\_\_\_\_

Name of customer: \_\_\_\_\_

Date (YYYY/MM/DD): \_\_\_\_\_

Dealer's name: \_\_\_\_\_

Owner's address: \_\_\_\_\_



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