



WFALL SERIES

NATURAL EFFECT PVC WATERFALLS

V1.0
18/11/2023

INSTALLATION MANUAL

Abstract

INSTALLATION MANUAL

Thank you for choosing our PANDA WFALL series PANDA PVC LED waterfalls.

This instruction manual will guide you through the proper installation of this product. We recommend following the included instructions carefully. Please keep this manual in a safe place for future reference.

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1. INTRODUCTION

The WFALL series line of waterfalls beautifully simulate a natural waterfall, offering a wide variety of models.

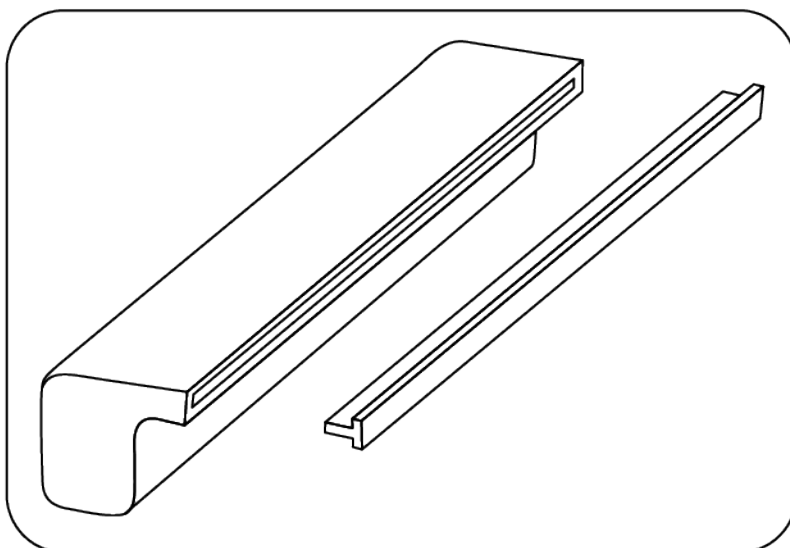
These waterfalls use one gallon per minute of water for every inch of length, which helps us select the correct motor pump for this application.



NOTE

The color of the waterfalls is white with a polished finish.

Each waterfall comes with a tab protector at the water outlet and a protective cap for the water intake, as shown in the following figure.



Ignoring this instruction may cause permanent damage to the waterfall. Additionally, each unit includes an optional mesh that can be installed at the water inlet for better filtration, if desired.

Ignoring this indication may cause permanent damage to the waterfall. In addition, each unit comes with an optional mesh that can be installed at the water inlet for better filtration if desired.

We recommend using the filter mesh to prevent the accumulation of hair or debris, which can affect the performance of the waterfall. It is important to establish a cleaning program for maintenance during installation.

2. SAFETY WARNINGS

Please take the time to read the important information included here. Following these requirements will prevent any damage to your waterfall.



CAUTION

- Before installing this product, read and follow all included warnings and instructions.
- This manual contains important information on the installation, operation, and safe use of this product. We suggest keeping it in a safe place for future reference.
- This appliance is not intended for use by persons (including children) whose physical, sensory, or mental capacities are different or reduced, or who lack experience or knowledge, unless such persons are supervised or trained to operate the appliance by a person responsible for their safety.
- These waterfalls are designed to be used by qualified personnel with experience or knowledge in their installation.
- Do not allow children to use this product.
- Children should be supervised to ensure that they do not use the devices as toys.
- It is recommended that this accessory remain in its original packaging until the installation site is ready.



WARNING

- Make sure that the existing electrical installation complies with all local codes and ordinances before installing.
- The electrician may need to consult with the local building inspector regarding compliance with local codes before installing the waterfall and controller.
- Waterfalls should only operate with filtered water.

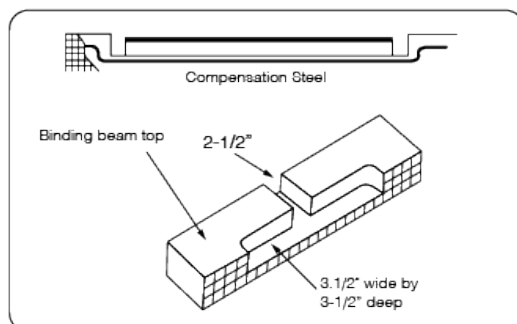


DANGER

- Risk of shock or electrocution.
- Improper installation will create an electrical hazard that could cause serious injury or death to pool users due to electrical shock.
- Always disconnect the power from the circuit breaker or circuit breaker before installing or servicing the equipment.
- If the electrical part of the appliance is damaged, do not attempt to repair it, as there is a risk of electric shock. Discard the product.

3. INSTALLATION

Once the area for installation is determined, mark it using a measuring tape to make the notches and proceed to place the waterfall. When the installation area is steel structures, follow the same procedure. If the structure lacks adaptations for installation, make 3" adaptations so that the lower part of the waterfall rests, adding 1" outside the waterfall's length, as shown.

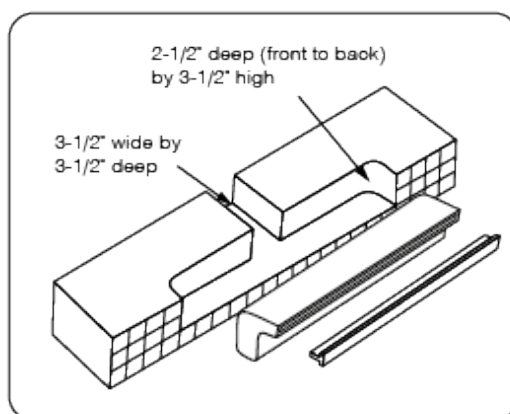


CAUTION

Do not climb, drop, or step on the waterfall.

Cut the notches on the inner edge of the beam or structure for the area selected for waterfall installation. The first notch should be cut 3½" deep by 2½" wide. An additional perpendicular notch must be made at the center to allow water supply connection to a 1½" diameter pipe.

The traced groove should be 3½" wide by 3½" deep. Once the beam or structure is marked, cut the notches to the corresponding sizes as shown.



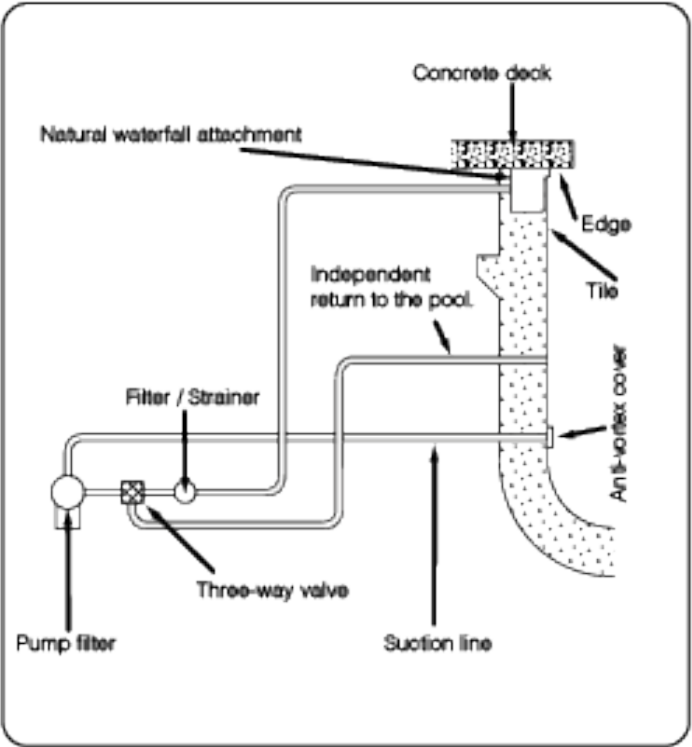
CAUTION

Wash the pipe before installing the waterfall.

Ensure that the concrete has hardened to confirm that the waterfall's hold is firm.

The waterfall should not be exposed to heat or sunlight, as they can deform it.

If multiple waterfalls are installed, it is recommended to use a separate motor pump for each one. This will require a separate line. The connecting pipes to both the motor pump and the waterfall must be adequate. At least two anti-vortex covers should be used to prevent entrapment. It is recommended to mount the 18" anti-vortex cap on the bottom of the pool. Additionally, a filter/strainer should be installed between the motor pump and the waterfall. Installations requiring more than 60 gallons per minute may require two or more filters. A 3-way valve can be used to distribute water between the waterfalls if there are several in the installation.



The pipe diameter for carrying water from the motor pump to the waterfall must have a minimum diameter of 1½" for PVC pipes. The data shown below will help determine the pipe diameter to be installed for the waterfalls.

SUGGESTIONS:

- The cover must be made of concrete.
- Use a minimum diameter of 1½" in PVC tubing.
- For pipe lengths over 60 feet or waterfalls longer than 5 feet, use a minimum pipe diameter of 2".

Recommended maximum flow for pipe diameters:

- In 1½" tubing: 60 GPM
- In 2" tubing: 100 GPM
- In 2½" tubing: 140 GPM
- In 3" tubing: 225 GPM

Approximate performance at 50 ft of load

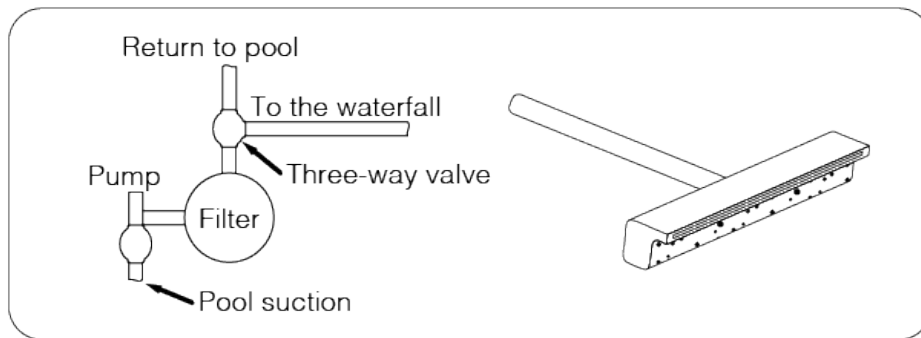
• 1/2 HP = 26 GPM	• 1.5 HP = 93 GPM
• 3/4 HP = 58 GPM	• 2 HP = 106 GPM
• 1 HP = 68 GPM	• 3 HP = 140 GPM



NOTE

Pump power may vary.

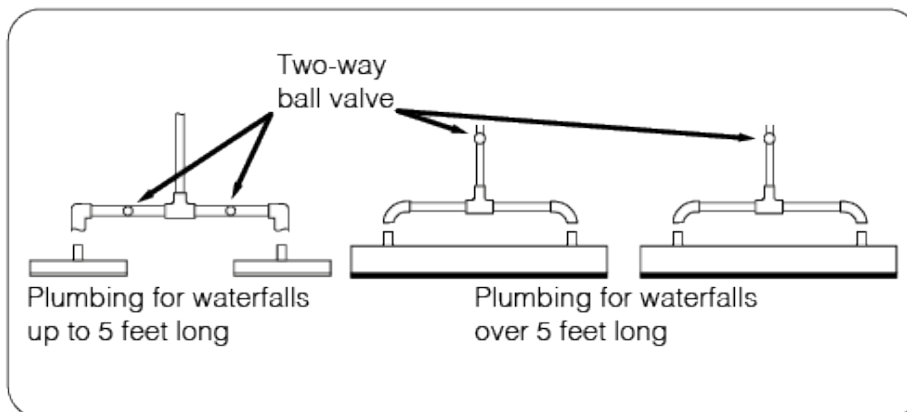
It is recommended to use a 3-way valve, such as a “T”, from the pool’s return line to the waterfall to allow for flow regulation. The recommended location for this valve should be after the filter, near the equipment, as shown in the following figure.



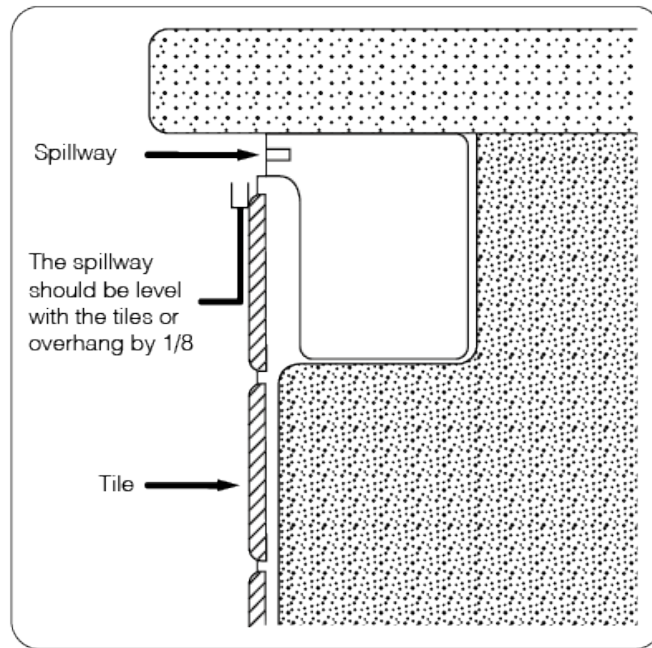
CAUTION

All water passing through the waterfalls must be filtered.

When two or more waterfalls are installed, it is necessary to install additional 2-way valves in the supply pipes to distribute the water flow correctly between the units. The correct placement of the valves is shown in the following figure.

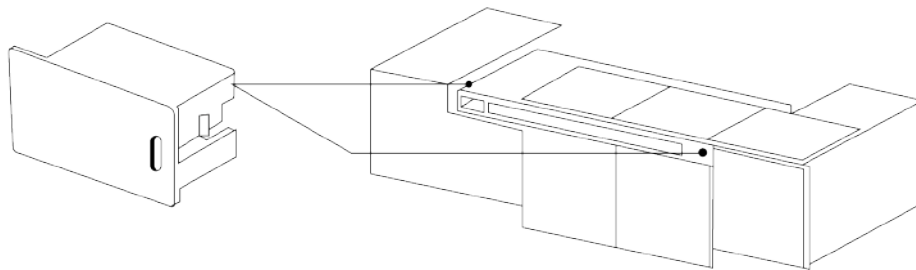


The waterfall must be installed before it is covered with concrete. When using tile wedges, ensure the top of the waterfall contacts the beam or structure to avoid leaving gaps in the installation. If there are empty spaces around the waterfall, fill them with concrete or the material used for fixing.



NOTE

In the case of the WFALL LED SERIES WATERFALLS, ensure that the final finish of the waterfall, whether using tiles, rock, or other substrate, does not cover the covers where the power cable exits and access to the electrical components. These areas are required for the electrical maintenance that the LED waterfall may need.



4. CHANGING THE POWER CABLE FOR THE LED WATERFALLS

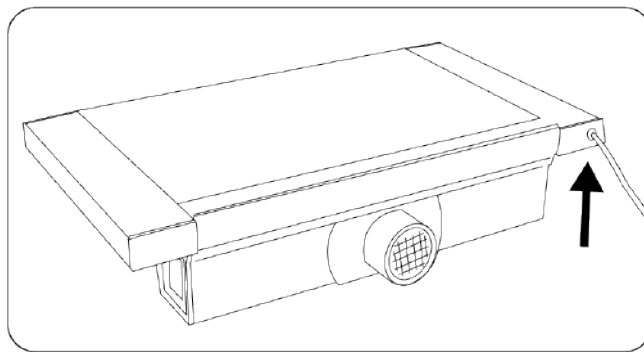


NOTE

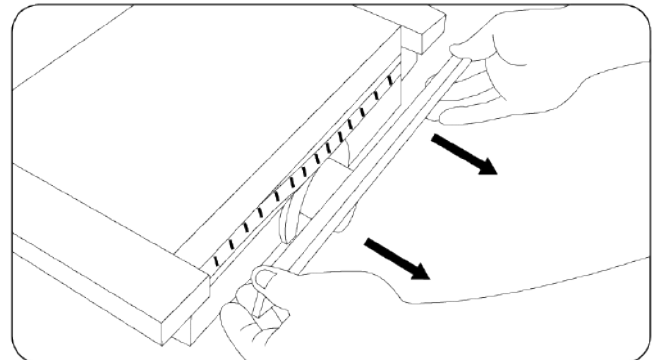
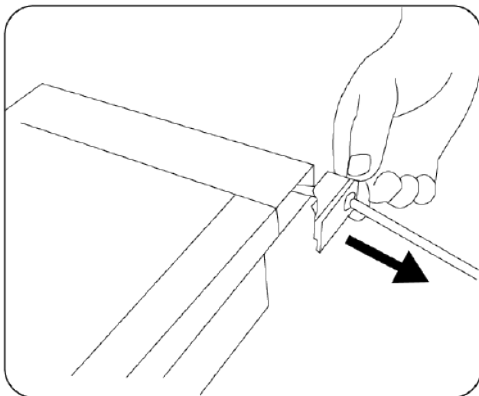
Inside the product packaging, there is an additional connection cable with a length of 98.4 feet (30 meters).

To change the connection cable for the LED strip power supply, follow these steps:

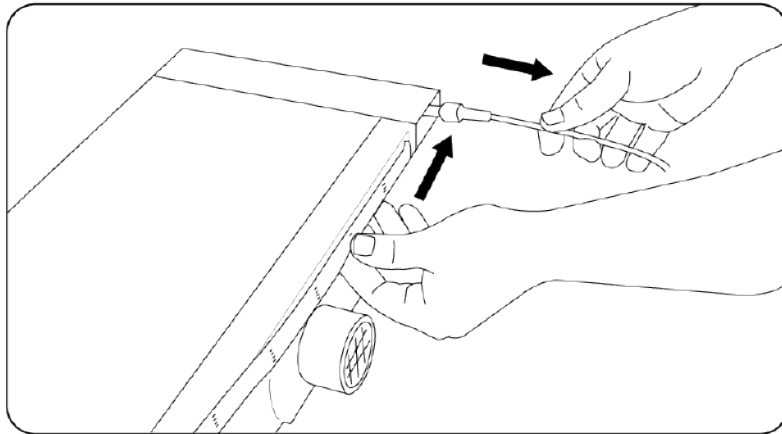
1. One of the protective covers of the power cable is located on the back of the LED cascade.



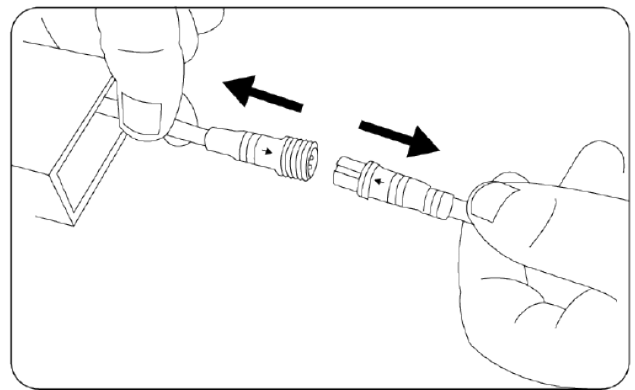
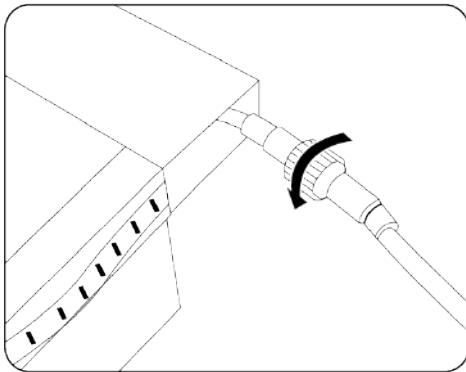
Carefully remove the power protection cover and then the cover that protects the LED strip.



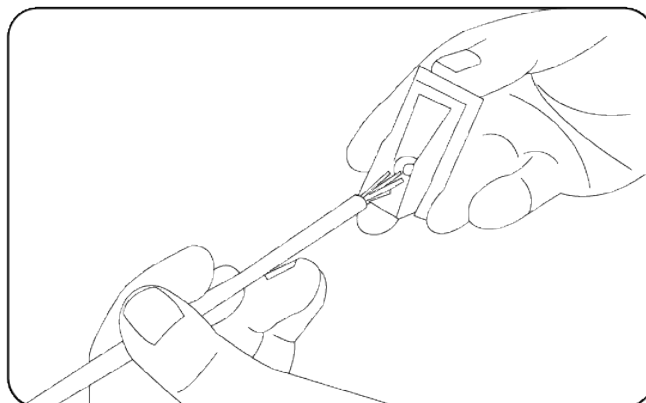
2. Stretch the power cable out while moving the LED strip so that the quick connection can be seen.



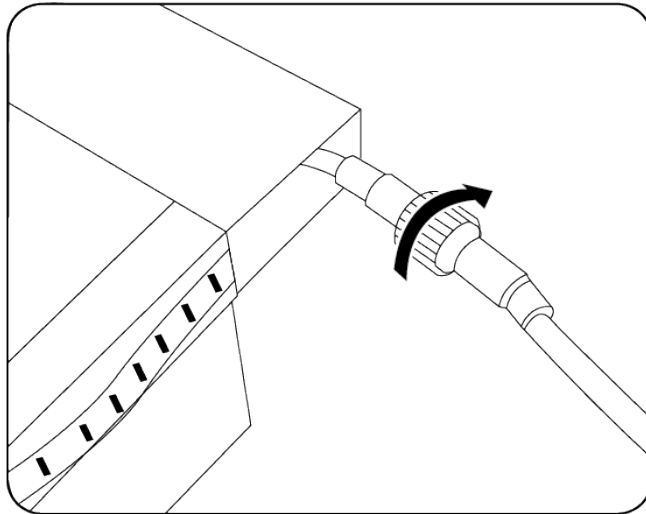
3. Unscrew the quick connection, then remove the factory connection cable and remove the rear protective cover of the cable.



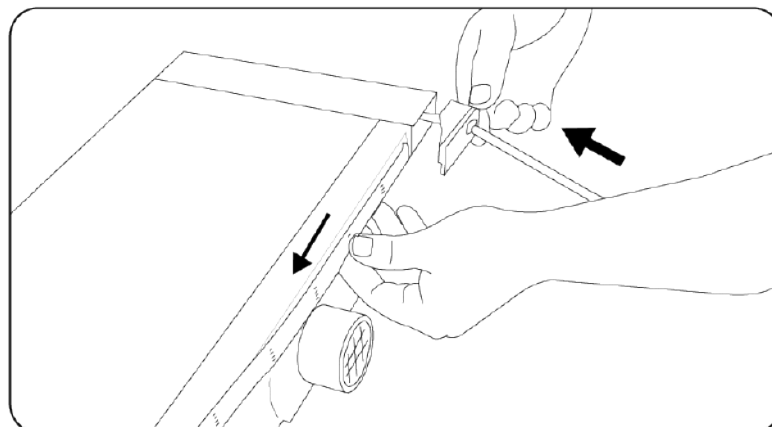
4. Once the previous steps have been carried out, proceed to install the new connection cable. To do this, insert the rear protection cover into the cable starting from the tip with the connection cables to the controller, up to 5.9 inches (15 cm) before reaching the quick connection, as shown in the following figure.



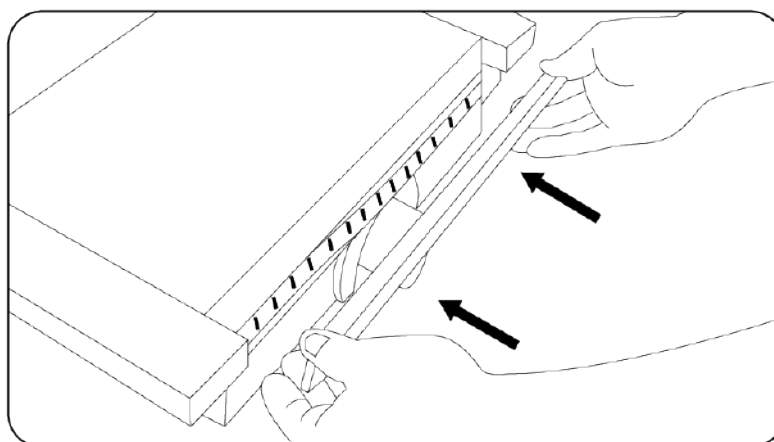
5. Connect the male and female connectors, ensuring that the groove of the male connector matches the internal notch of the female connector. Then, screw in the quick connection.



6. Carefully insert the LED strip and the quick power connection back in and replace the cable protection cover.



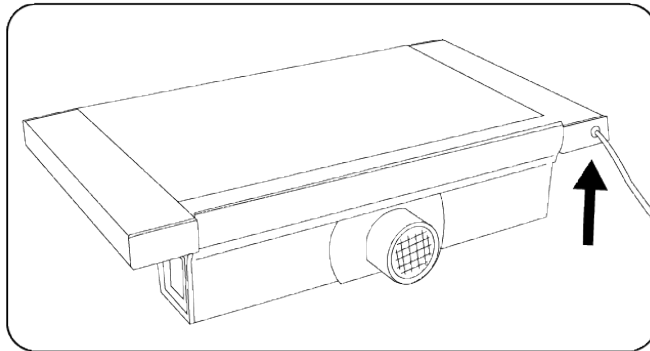
7. Finally, replace the cover that protects the LED strip.



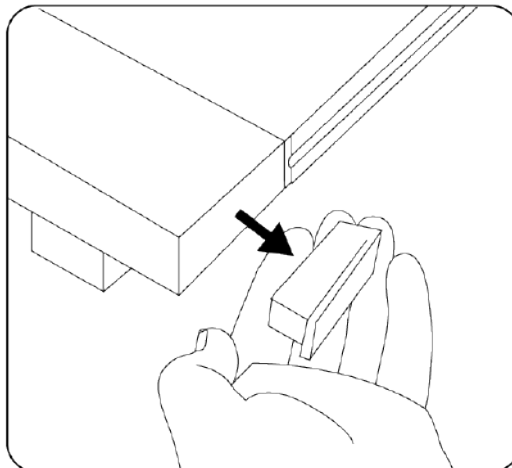
5. CHANGE OF LOCATION OF THE WATERFALL POWER CABLE CONNECTION

The LED strip is pre-installed from the factory. If, due to installation, it is necessary to change the location of the connection (from one side to the other), follow these steps:

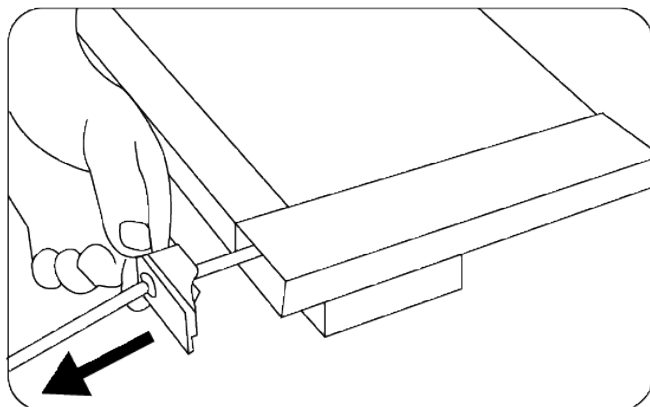
1. One of the protective covers of the power cable is located on the back of the LED waterfall.



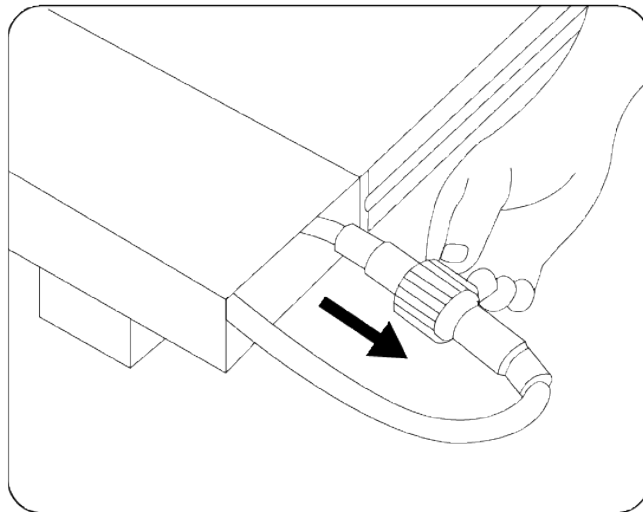
2. Carefully remove the power protection covers.



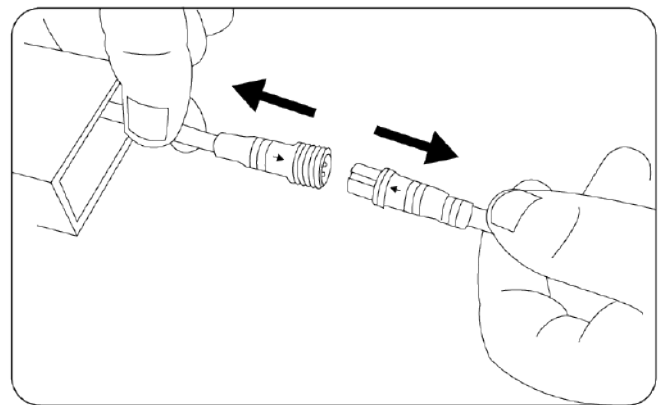
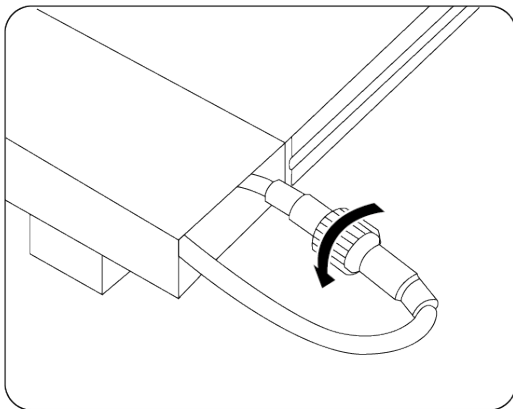
3. Stretch the cover backward, leaving a large length (approximately 19.7 inches) of cable outside the waterfall.



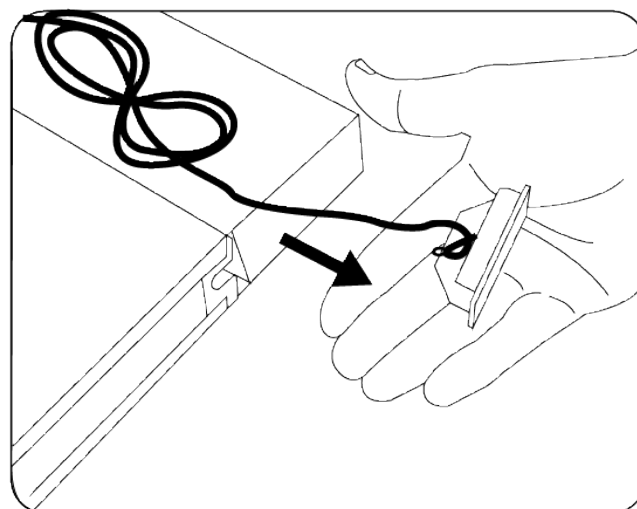
4. Then, stretch the cable out to the front side until the quick connection of the LED strip and the power cable is visible.



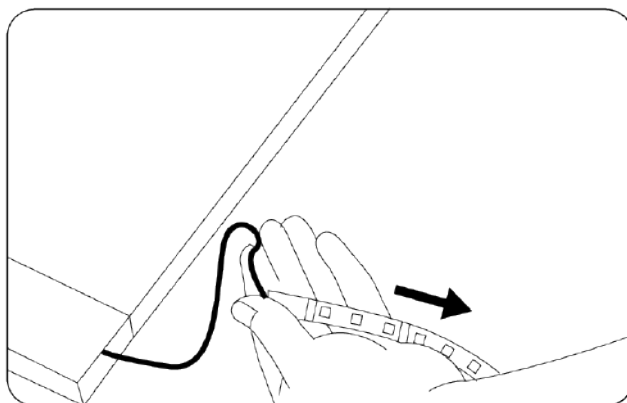
Unscrew the quick connection and remove the cable.



5. On the opposite side of where the power cable outlet was located, remove the other cover in front of the LED waterfall to remove the support wire and untie it from the cover.



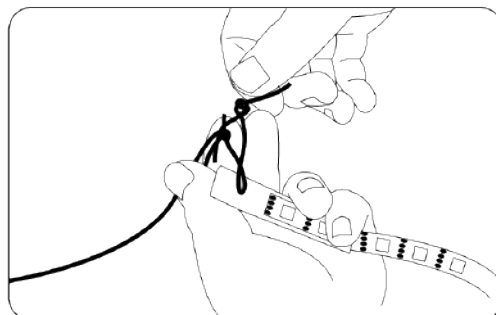
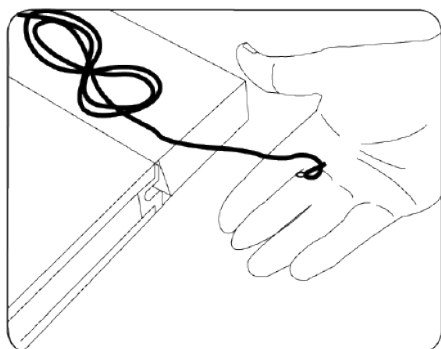
6. Remove the LED strip. To do this, position yourself on the side where the quick connection of the LED strip is located, hold the quick connection, and gently pull to remove the LED strip.



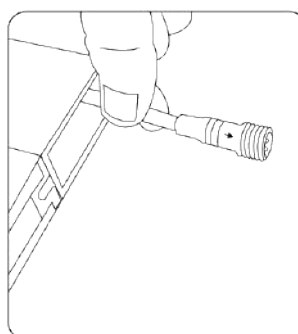
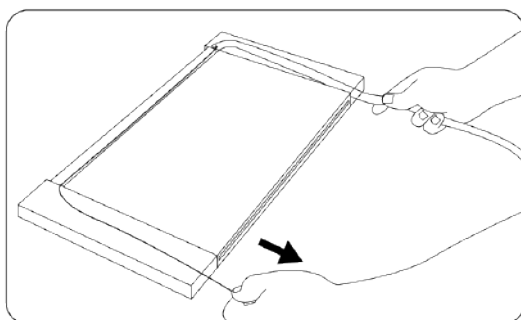
NOTE

If you have difficulties removing the LED strip, we recommend removing the back cover of the LED strip and handling it as needed.

7. Proceed to untie the thread from the LED strip, swap the places where the thread was tied with the cover, and tie it again.



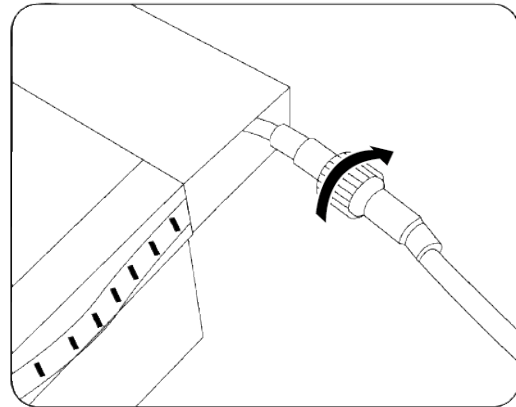
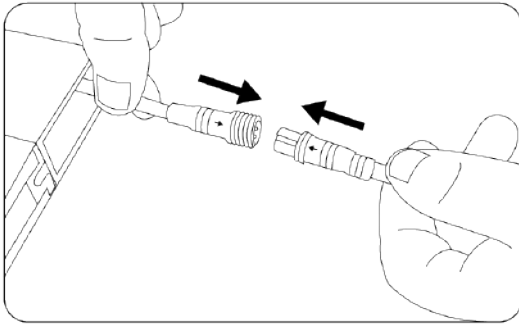
8. Reposition the LED strip inside the waterfall, ensuring that the quick connection part remains outside the waterfall to allow for the connection to the power cable.



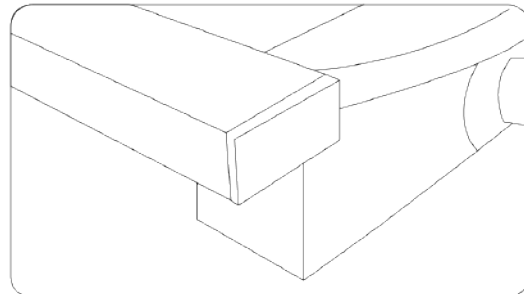
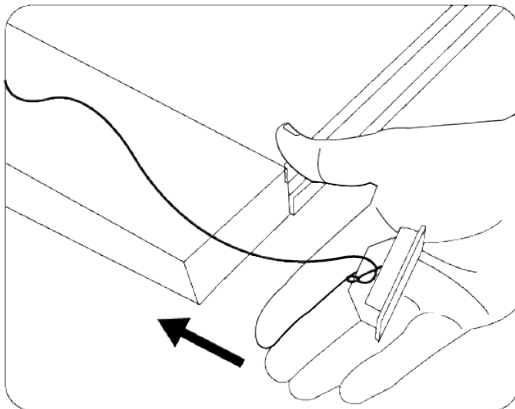
NOTE

If you have difficulties inserting the LED strip, we recommend removing the back cover of the LED strip and handling the LED strip as needed based on your judgment.

9. Reconnect the quick connection.



10. Reattach the protective covers, ensuring the thread is securely tied back to the corresponding cap.

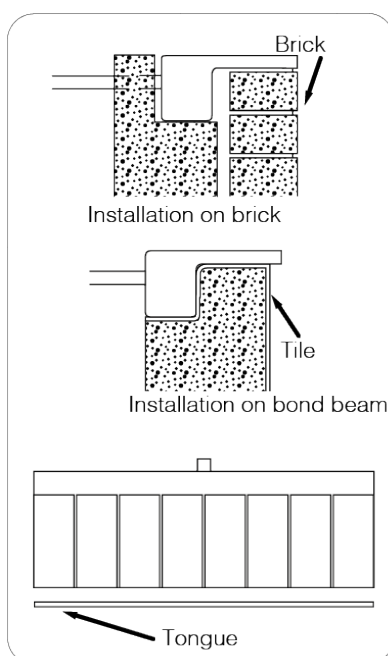


6. EXTENDED LIP MODELS (NOT APPLICABLE FOR LED WATERFALLS)

Some applications require the use of waterfalls with an extended lip (e.g., when using brick, blocks, etc.). The standard lip is 1", while the extended version measures 6". The installation process for the extended version follows the same steps as indicated in the previous instructions. However, the dimensions of the notch in the beam or joining structure may vary. It is important to ensure that the entire arch of the extended lip is supported by a suitable support structure during installation.

The extended lip model can be custom-cut to fit different applications. To do this, determine the amount of lip to remove. Ensure there is space for the thin-layer tile, and we recommend that the lip be at the same level as the tiles or extend slightly beyond them.

Before cutting the lip, remove the tab, but make sure to replace it if the installation is not yet completed. After cutting, a minimum of 1½" of lip length should remain. Measure and cut the edge carefully using a blade tool with coarse teeth to avoid serrated edges.



Once the cut is made, use a finishing tool to smooth out any ribs or sharp edges. After achieving the desired finish, remove any chips that may remain in the waterfall to prevent malfunction. Once these steps are completed, replace the tab and proceed with the standard installation.



NOTE

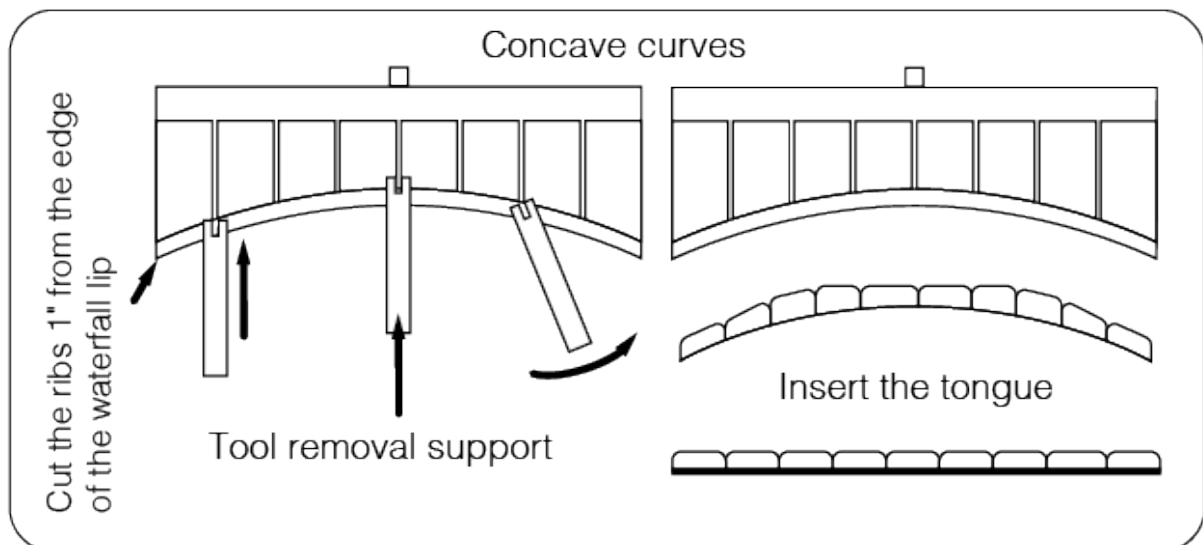
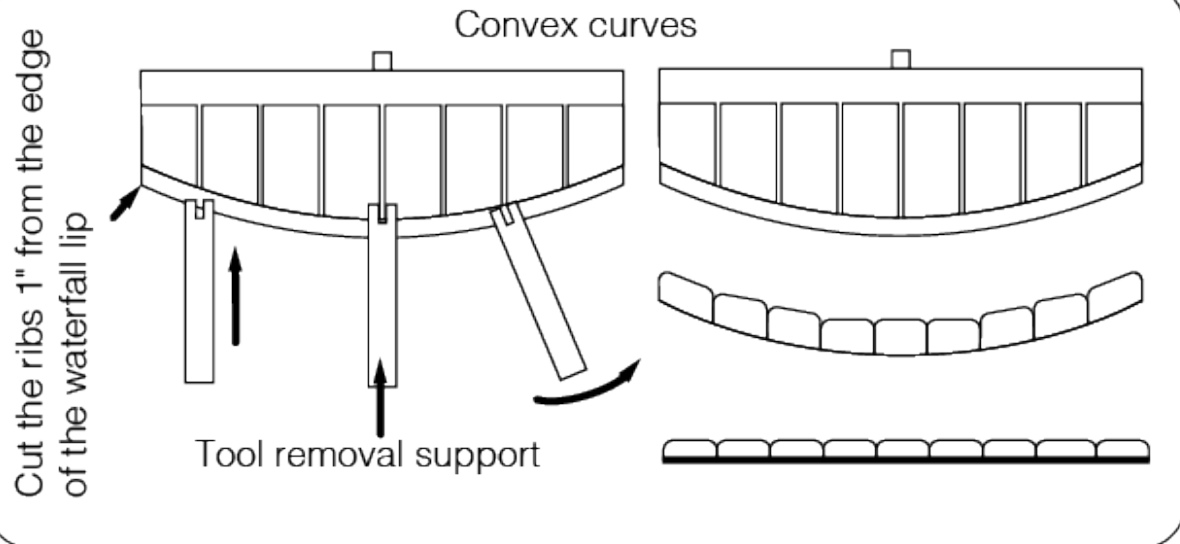
Each extended lip model comes with two tabs to ensure the appropriate length after cutting.

When making curved cuts on the waterfall, you will also need to cut the tabs. Be sure to fully close the lip opening with the tabs.



WARNING

NOT APPLICABLE TO LED WATERFALLS



7. INSTRUCTIONS FOR USE

Once the waterfall installation is complete, remove the protective tab. Ensure everything is properly installed and proceed to test the waterfall. If your pool system is configured correctly, with the motor pump rotating in the proper direction and the components connected in the correct sequence, it will take approximately 5 minutes to expel any air trapped in the pipes. After the air is expelled, open the control valve and gradually adjust the water flow until a smooth, sheet-like drop of water is achieved.

If the waterfall is installed with a separate motor pump, open all valves and ensure the pipe is free of air. Turn on the motor pump and allow water to flow through the system for 5 minutes to clear any air in the pipes and remove any debris that may have entered during installation. Once the specified time has passed, slowly adjust the valve to the desired flow rate.

The piping system should be designed to allow water to be easily drained to prevent damage from freezing. These waterfalls are designed to minimize the amount of water left inside the unit when not in use, provided the system is properly connected. During the winter season or when temperatures drop significantly, leave all water lines empty to prevent damage to your system, ensuring continued use.

8. CONTROLLER WITH REMOTE CONTROL (DIRECT CURRENT)

The controller with direct current remote control is available in one model, with a power rating of 180 W. It features a connection for LED lamps and/or WFALL LED waterfalls (the maximum number of LED lamps and/or WFALL LED waterfalls depends on the power capacity of the controller, which is 180 W).



NOTE

The connection between LED lamps (DELUX Series, LUMINUS, both in direct current versions) and/or WFALL LED waterfalls is possible, provided that the guidelines mentioned in this manual are followed.

Specifications:

CODE	POWER	INPUT VOLTAGE	OUTPUT VOLTAGE
CTRL-180-12D	180 W	12 VDC	12 VDC



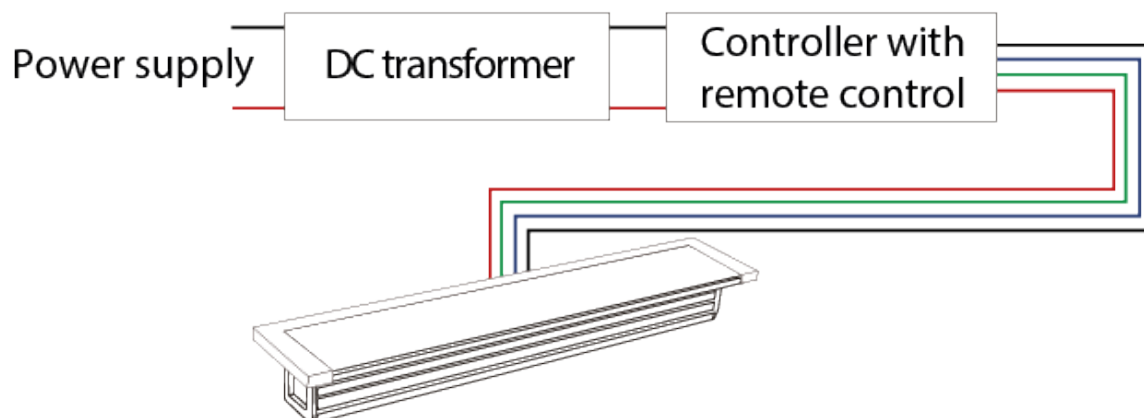
CAUTION

- The transformer must be installed by a licensed electrician or qualified personnel.
- The transformer must be installed in a dry, humidity-free environment.

The transformer powers the controller via the terminals marked V+ and V-. To connect the WFALL LED lamp and/or waterfall to the controller, follow the appropriate connection sequence. The connection configuration will depend on the color of the cables in your LED waterfall. The different connection configurations are illustrated below:

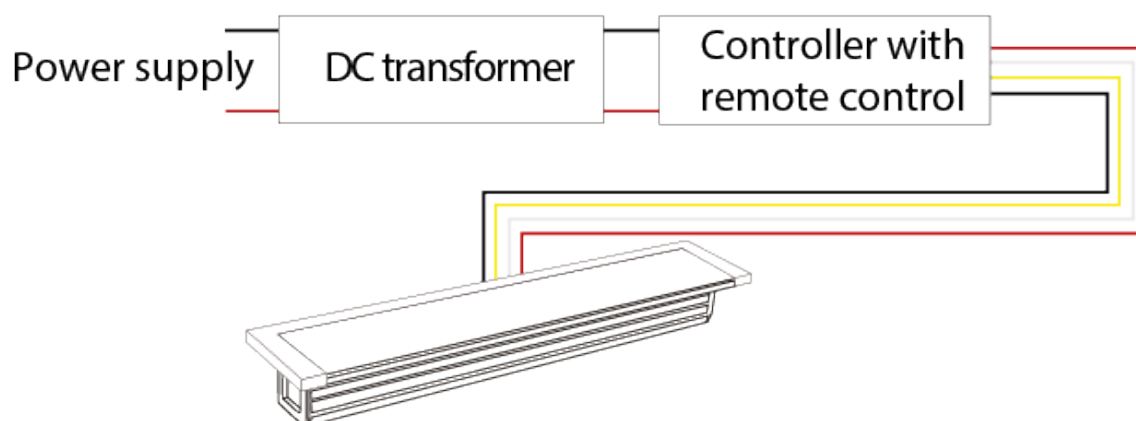
1. Setup 1

CONTROLLER	LED LAMP AND/OR WATERFALL
"+" TERMINAL	BLACK CABLE
"R" TERMINAL	RED CABLE
"G" TERMINAL	GREEN CABLE
TERMINAL "B"	BLUE CABLE



2. Configuration 2

CONTROLLER	LED LAMP AND/OR WATERFALL
"+" TERMINAL	RED CABLE
"R" TERMINAL	BLACK CABLE
"G" TERMINAL	YELLOW CABLE
TERMINAL "B"	WHITE CABLE



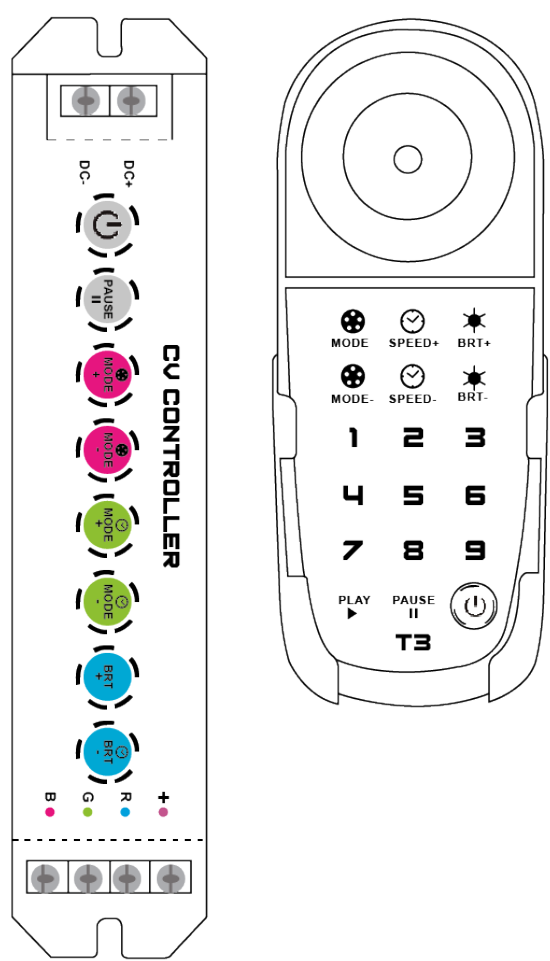
9. OPERATION

1. To turn on the LED and/or WFALL LED waterfalls, activate the main switch.
2. In color models, synchronization allows all the LED lamps and/or waterfalls to display the same color. To do this, ensure all lamps are connected to the same controller.
3. Use the remote control to select the desired color or show by following the color and show sequence provided below.
4. To turn off the LED lamps and/or WFALL LED waterfalls, either disconnect the main switch or press the "OFF" button on the controller or remote control.

10. SEQUENCE OF COLORS AND SHOWS (DIRECT STREAM)

#	MODE	#	MODE
1	Static red	17	Fading and radiant cyan
2	Static green	18	Fading and radiant white
3	Static blue	19	Show of fading and radiant colors
4	Static yellow	20	Red/Green soft color
5	Static purple	21	Red/Blue soft color
6	Static Cyan	22	Green/Blue soft color
7	Static white	23	Red/Yellow soft color
8	Salto de Colores	24	Green/Cyan soft color
9	Seven-color jump	25	Blue/Purple soft color
10	White strobe	26	Green/Yellow soft color
11	7-color strobe	27	Blue/Cyan soft color
12	Fading and radiant red	28	Red/Purple soft color
13	Fading and radiant green	29	Blue/White soft color
14	Fading and radiant blue	30	Yellow/Purple/Cyan soft color
15	Fading and radiant yellow	31	Red/Green/Blue soft color
16	Fading and radiant purple	32	All colors in soft

All programming is done through the remote control of the controller, some functions are described below (you can consult the complete information in the controller manual):



BUTTON	FUNCTION
ON:	Turning on the LED lamps and/or CASCADA WFALL LED
OFF:	Turning off the LED lamps and/or CASCADA WFALL LED
MODE +:	Change the light show forward
MODE -:	Change the light show backwards
SPEED+:	Speed up the light show
SPEED -:	Slow down the light show
BRT +:	Increase the intensity of the LED light
BRT -:	Decreases the intensity of the LED light
CIRCULAR TOUCH PANEL:	Change the color according to the customer's selection on the panel.

11. POSSIBLE ANOMALIES, CAUSES AND SOLUTIONS

Before attempting to resolve any potential issues, ensure that the motor pump has been running and that all air has been expelled from the pipes.

ANOMALY	CAUSE	SOLUTION
The water pattern is not uniform and has gaps in the water sheets.	Remnants of chips may be present at the opening of the cascade.	Use a plastic card or a fine tool to carefully clear the falling water. Gently slide the tool through the opening to remove any debris that may have accumulated.
A waterfall has a higher fall flow than others installed in the same pool.	The water supply is not properly distributed.	To ensure an equal flow from each waterfall unit, adjust the valves at each water drop until the desired flow is achieved.

12. USES AND PROHIBITIONS

USES

Designed to simulate a natural waterfall

They can be installed on concrete, steel, or other structures adapted for this purpose.

Installation in water gardens or artificial fountains.

PROHIBITIONS

Not for use by children or unsupervised individuals.

Do not place under direct sunlight or high temperatures for prolonged periods.

Avoid stepping on, dropping, or leaning on the waterfall.

Do not use with liquids other than water.

Do not cover the water outlet with decorative objects or temporary obstructions.