



User Manual

Table of Contents

1.....	Specifications
2.....	Expanded view
4.....	What's included with your Cube tub
5.....	Important Chiller instructions
6-7.....	Important - READ FIRST
8.....	Water chemistry outline
9.....	Water chemistry explained
10-13.....	Start up guide
14.....	To prime Circulation pump
15-18.....	Maintenance protocols
19.....	Residential water maintenance
20-23.....	Safety precautions
24.....	Hypothemia
25.....	Wiring schematic
26.....	Plumbing diagram
27.....	Cold tub water chemistry chart

Specifications

Weight: 200 lbs. empty / 1,420 lbs full

Outside dimensions: 4' wide / 5' 4" long / 35" high

Inner tub dimentions: 34" wide / 42" long / 30" deep

Water volume: 140 ~ 155 Gallons

Insulation: 2 lb closed cell spray foam

Led wiring: 18 gauge

Main power cord: 6ft - 16 gauge - 110/120 v

Voltage: 110-120 Vac

Wattage: 46~93

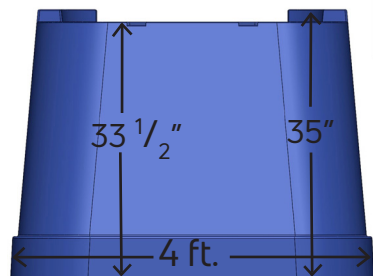
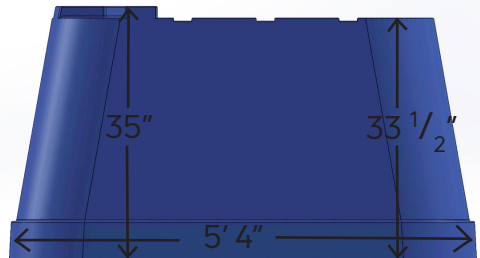
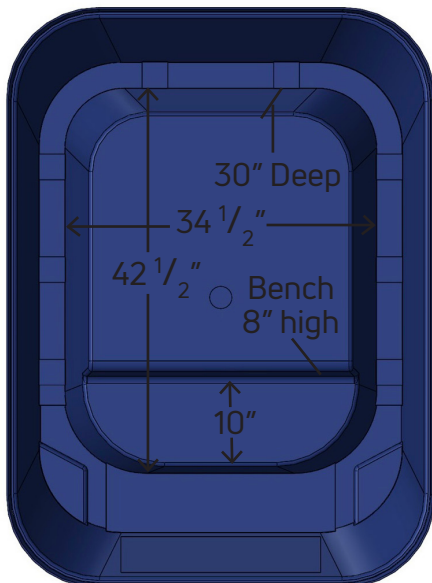
Amperage: .42~.87 A

Materials: Plastic, Wood, PVC, Brass, rubber, plastic, copper, aluminum, steel, polyurethane foam.

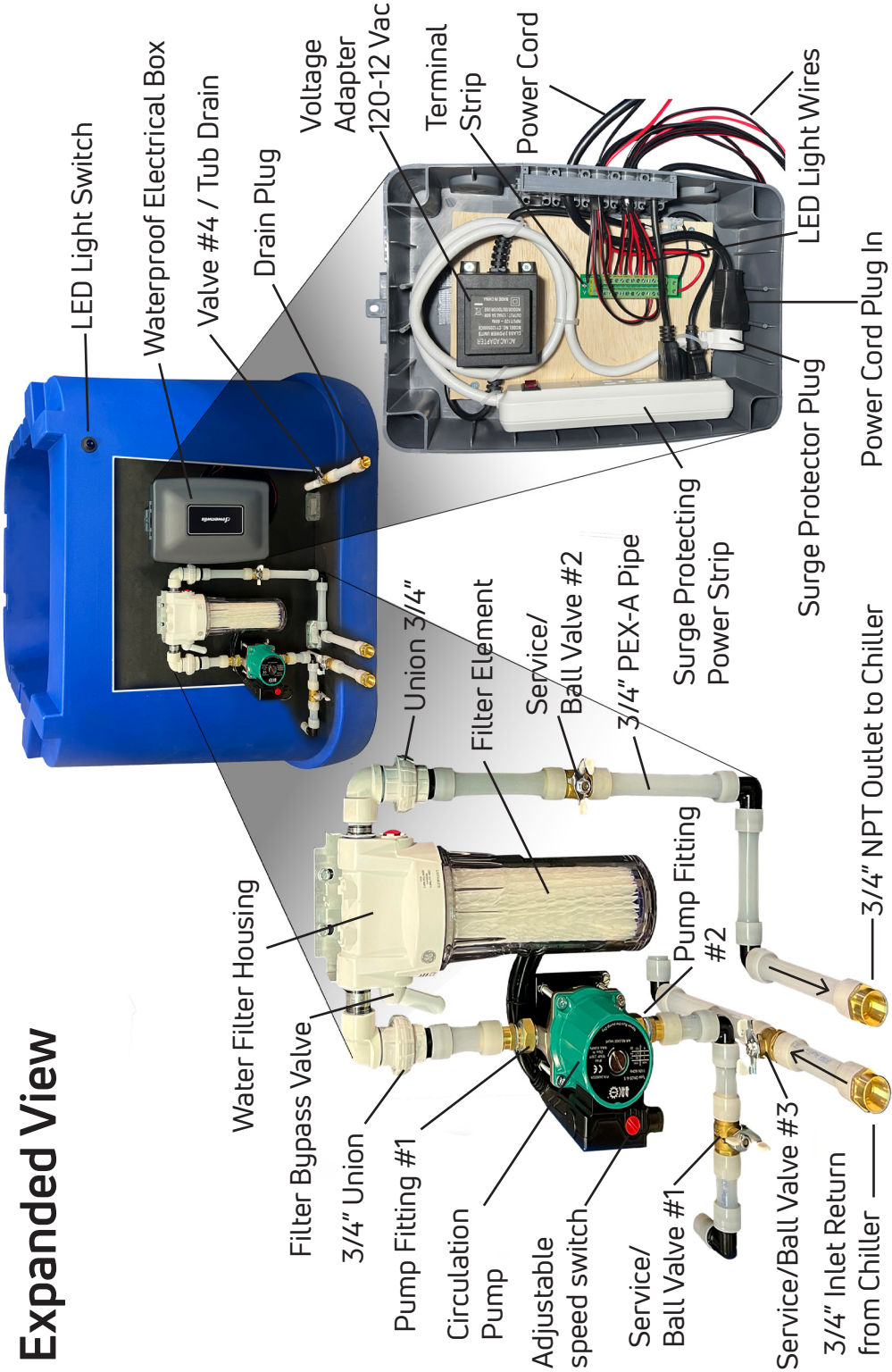
Circulation Pump: Bacoeng, P/N 24062024, Model #DN20-6-S
(see circulation pump manual for details)

Water Chiller Unit: Active Aqua - Hydro culture - 1/4 hp
Model # AACH25HP (see chiller manual for details)

Refrigerant - R134A



Expanded View



Included with your cold therapy tub



Chiller Unit

Extra Filters



Filter Wrench



Skimmer Net

Scoop any floating debris out of your tub.

Carrying Handles

Use these for conveniently picking the tub up and moving it



Water Test Strips

Use these for testing water chlorine, pH, alkalinity, hardness and metals

Tub Cover



Hose Filter

Put this on the end of your hose to filter out impurities. Run water through it before using it to fill The Cube.

Drain Fittings



The Cube Guided Video Content

Access The Cube's guided cold plunge at cubecoldtub.com

Important chiller instructions

We are thrilled for you to begin using your new cold therapy tub. To ensure optimal performance of the chiller, please follow these important instructions:

1. Chiller Positioning

Ensure the chiller is placed in an upright position at all times.

2. Pre-Startup Procedure

Before turning on the chiller, it must remain unplugged for a minimum of one hour after being set in place. This step is crucial as it allows the refrigerant to settle after being shaken during transit and setup.

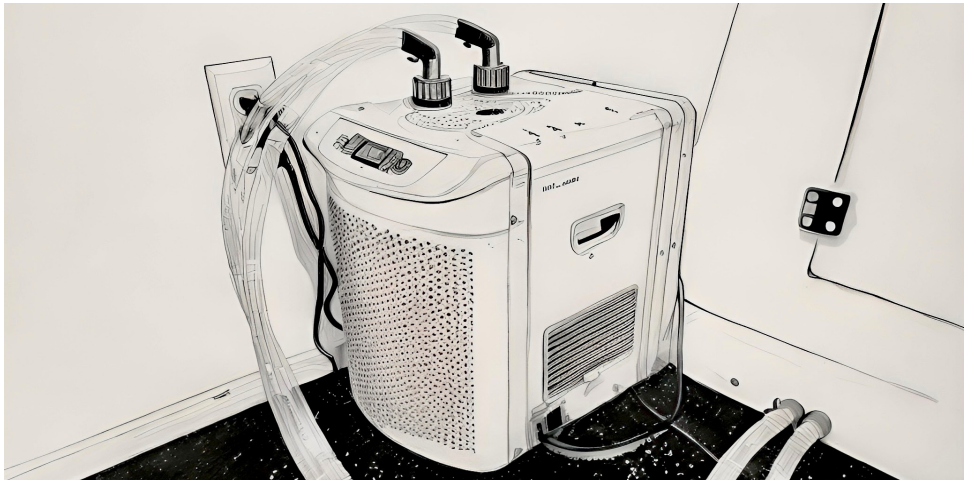
3. Preparation of the Tub

While the chiller is settling, take this time to fill the tub with water. Please add chlorine and set the pH levels accordingly to maintain water quality.

4. Patience Appreciated

We understand your eagerness to start using the tub; however, this waiting period is essential for ensuring the chiller operates correctly upon startup.

Thank you for your cooperation! We share your excitement and look forward to getting you into the tub soon!



READ FIRST BEFORE SETTING UP THE CUBE!

Important Warranty Information

Water needs to circulate in system 24-7

If the water in the system stops circulating and filtering for any reason for more than 12 hours, you must empty The Cube, the filter canister, and the chiller.

This is very important for three reasons:

1. Stagnant water in the tub and system is not sanitary. Bio-matter can form inside the pipes and requires a good cleaning and flushing with hot water to fix this issue. This can also occur if sanitation is not done properly. Please adhere to the maintenance protocol in this manual.
2. If the chiller is on but no water is circulating, ice will form inside the chiller unit which will crack and break the chiller unit.
If water is not flowing through it, you will need to turn the chiller off immediately!
3. If the ambient temperature where the tub is located drops below freezing and water isn't circulating, the plumbing, circulation pump, filter etc. will freeze and break. (This would not be covered by the warranty)
You will need to monitor you tub daily to make sure water is flowing through the system, especially if the ambient temperature is below freezing. If you tub doesn't have the heater option and temp is below 32 deg. F for more than 12 hours, you must drain the tub, plumbing, filter, pump and the chiller unit.

Read the safety precautions on pages 21-23 before setting up the tub.

Important warranty information

Please note: Damage to the tub, it's plumbing, mechanical components and the chiller caused by freezing conditions or improper water chemistry is not covered under our warranty.

- You must monitor your tub daily when outside temperatures drop below freezing.
- Ensure constant flow and that the circulation pump is working properly
- If your plunge doesn't have a heater and the temp is below 32°F for 12 hours you must entirely drain the water from the tub, filter, plumbing, and the chiller unit to prevent the tub and its components from breaking due to freezing water.

Using Extention cord outdoors

If you are planning on using an extension cord, it needs to be 12 gauge to give the tub and chiller unit sufficient power (up to 25 feet)
Please refer to NEC requirements for you jurisdiction.

If you set up your tub outdoors and use an extension cord, you will need to use proper safety precautions and will need to use a weatherproof connection box along with an indoor/outdoor electrical power cord enclosure to protect the extension cord.



Water chemistry Outline

To help maintain chemical balance with the water in the tub it is recommended for the user to shower prior to use. This is especially important if you have on tanning oils, sunscreen, massage oils, lotion, have been sweating, etc.



If well water is to be used when filling tub, It is critical that an ion exchange or carbon filter be used as the well water contains high levels of iron, calcium and minerals.

High levels of calcium will damage the circulation pump over time and will leave white rings in the tub at the water line.

If the tub is going to be kept outdoors, the cover should be kept on when not being used to avoid the effects of UV rays shortening lifespan of chemicals. Keeping the tub outdoors will increase the amount of organic material entering the water, thus user will need to visually inspect the filter and change it more often as needed.

It's important to monitor and manage the quality of the water routinely. Improper water chemistry can lead to skin infections, ear infections, and urinary tract infections.

Colder water temperatures stabilize pH levels but slow down chemical reactions, making frequent monitoring essential. Total alkalinity in cold water can be affected by slower chemical reactions, necessitating closer attention to buffering capacity to prevent sudden pH changes.

Maintaining calcium hardness is crucial to prevent scaling, which is more likely in cold water due to the lower solubility of calcium compounds.

Chlorine's effectiveness decreases in cold water, requiring regular adjustments to ensure proper sanitation. High TDS levels, which reduce sanitizer effectiveness and cloud the water, should also be regularly checked.

Cold tub owners can expect to add a teaspoon (5 grams) of chlorine a week to ensure that the water is clear and sanitized.

Water Chemistry explained

Total Chlorine: This includes both free chlorine and combined chlorine (which is formed when chlorine reacts with contaminants like sweat or oils)

To make sure your pool is sanitized, your free chlorine should remain higher than your combined chlorine.

When the Total Chlorine number is more than 0.3 ppm above your Free Chlorine level, you have too much Combined Chlorine.

Add Chlorine Free Shock to break down the Combined Chlorine.

Total chlorine ideal range -0.3 ppm above your Free Chlorine level

Free Chlorine: This is the active, sanitizing form of chlorine that is effective at killing bacteria and other microorganisms.

Maintaining a free chlorine level between 1.0 and 3.0 ppm ensures effective sanitization without causing excessive irritation or damage.

Free Chlorine -Ideal range 1.0-3.0 ppm

pH: Water pH level measures how acidic or alkaline water is.

Water with a pH below 6.5 can be corrosive and may contain higher levels of dissolved metals. Water with a pH above 8.5 can have an unpleasant taste and may lead to the formation of scale in pipes.

The pH level of the water should be maintained within a safe range,

pH -ideal range 7.2 and 7.8

Total Alkalinity: Alkalinity helps buffer pH swings and should be maintained at a level that prevents pH from fluctuating too much.

To lower alkalinity, you must bring down the pH levels.

Total alkalinity -ideal range 80-120 ppm

Calcium Hardness: This refers to the amount of calcium in the water, which can affect the effectiveness of the sanitizers and can cause scaling.

Calcium hardness -ideal range 200-400 ppm

Cyanuric Acid: This is a stabilizer that helps protect chlorine from being broken down by sunlight.

Cyanuric Acid -ideal range 30-60 ppm



Start-up Guide

Startup guide



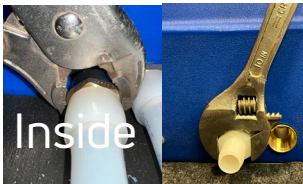
1. Place the cube tub on a flat surface that can support at least 1,500 pounds and 5 feet from any appliance. Position the chiller unit where convenient, allowing 12 inches of space behind and in front of the chiller for proper airflow and operation.



As previously stated, the chiller must rest for one hour before turning it on to avoid failure. Do not plug in the electrical for the tub or chiller until instructed to do so later in the startup guide. (Failure to follow this may lead to chiller and pump failure and will not be covered under warranty.)



2. Wrap the threads of the provided 3/4 inch hose barb fittings with four to five wraps of Teflon tape, making sure to wrap threads clockwise on threads or the tape will peel off while threading in the fittings, resulting in poor sealing and water leakage.



3. While holding the three-quarter inch brass fitting on the inside of the tub with channel-locking pliers, thread the hose barb fittings into the brass fittings on the tub and tighten the fittings securely.



4. Place the hose clamp on the clear three-quarter-inch plastic hose then push it onto the hose barb fitting. The right fitting goes out to the chiller. The left fitting is in from the chiller.



5. Next attach 3/4 inch hose fittings provided with chiller to the in and out fittings on top of the chiller.

6. Connect the hose from the tub outlet fitting to the chiller inlet fitting.



7. Connect the hose from the tub inlet fitting (on the left) to the chiller outlet fitting. (Double-check to make sure hoses are hooked up properly)



8. Tighten hose clamps securely with the proper size socket or screwdriver.



9. Shut all four 3/4 brass inch ball valves in the service compartment. (Refer to exploded view on page 2)



10. Attached the provided filter to the hose and fill the tub to just below the inlet return fittings inside the tub (12 inches from the top of the tub) (This is crucial to ensure that the circulation pump primes properly.)



11. Flip the valve on the filter to bypass position.

12. Set the Red selector switch on the circulation pump to position three.

Refer to exploded view on page 2

13. Open brass ball valves in the service compartment in this order: first bottom left valve from chiller to tub, then ball valve after the filter, then valve before the circulation pump (at this point you will hear water flowing to the pump through the plumbing to the filter and out of the tub towards the chiller unit).



14. Once water is observed flowing through the tube, exiting the tub, and going to the chiller unit, you can plug the tub in.



15. Ensure that water is flowing through the chiller unit and into the tub on the inlet return fittings.



If water is not flowing, unplug the electrical cord to the tub immediately, as running the pump dry will damage it.

16. If the pump fails to prime, you will have to follow an alternative priming procedure in the section below.



17. Once water is flowing back into the tub through inlet return fittings, the filter valve can be flipped down into the filtering position.

18. The tub is now up and running. You may fill the tub to the desired level or at least above the inlet return fittings.



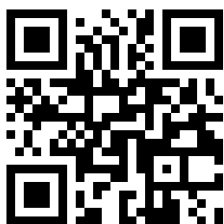
19. **Check for water leaks**, Make sure that all hose clamps are tight and that the fittings on the chiller are tightened securely. (the fittings are plastic, be careful not to over-tighten, crack, or break them.



20. Plug in the chiller unit and turn it on.

21. Read the manual for the chiller unit for further instructions, settings, and operation.

22. See the maintenance protocols section for Initial water chemical treatment.



Use this Q.R. code to watch a guided Start-up video on our websight.

See additional video content on our websight for service, maintenance, repairs, etc.

If the pump fails to prime

If the circulation pump fails to prime and no water is flowing to and from the chiller, you must unplug the tub immediately to avoid circulation pump damage. Follow the procedure to prime the pump. You will need to pull water through the system, using a clean wet-dry shop vac with a new filter in it.

There are two ways to prime the Pump

First Way- Place vacuum hose over the water inlet return fitting in the tub & draw water through the system while plugging the return fitting on the opposite side. This will pull the water through the system. Once you see a constant flow to & from the chiller unit plug the tub in.

If water flows into tub the pump is primed and tub may remain plugged in and running.

Second Way- Shut the valve off inside the service compartment (bottom left) where water enters the tub.

Remove the return tube from the fitting on the outside of the tub.

Wrap a rag or wash cloth tightly around the end of the tube & attach it to the vacuum hose. Draw water through the system with vacuum, once it's flowing through the chiller unit and into the vacuum tube, hold the return tube over tub body and plug the tub in. If water continues to flow the pump is now primed.

Unplug the tub, drain the water from the return tube into a small bucket then reattach the hose onto the barbed fitting and tighten the hose clamp.

Open the return valve inside the service compartment, plug the back tub in. If water is flowing through system the circulation pump is primed. You may leave the tub plugged in and running.



Maintenance Protocols

Maintenance Protocols

Initial water chemical treatment

You will need to stop at a pool supply store, Walmart, etc., and buy a small bottle of chlorine granuals and pH down to treat the water.



The chlorine helps to keep water sanitized, killing bacteria, microorganisms and preventing algae. You will also need to set the pH level. Most well and tap water have high pH and calcium levels, which will cause white calcium rings to develop in the tub and can harm tub components.



After treating water with the recommended amount of chlorine (per container instructions) and allowing 2 hours for chlorine granules to dissolve and circulate, stir the water in the body of the tub, then use the provided test strips to test chlorine and pH levels.

A PH level of 7.2 is ideal but again follow the recommendations on the product label.

Cold tub owners can expect to add around one teaspoon (5 grams) of chlorine a week to maintain ideal chlorination levels and to ensure that the water is clear, and sanitized.

Initial fill / Water quality

It is important to use the provided filter attached to the hose used when filling the tub with water.

Especially if filling with well water.

Well water has high levels of calcium, iron and many more minerals. Keep in mind that water chemistry will be different based on the quality of your water. Water maintenance is important to do routinely alongside regular recommended maintenance.

(Refer to water chemistry details on page 9)



Weekly maintenance



1. Test water

It is important to inspect the chemicals in the water on a regular basis.

To test the water simply dip the test strip about a foot down into the tub hold for two seconds then remove, lightly shake excess water off and compare colors to chart on container.

Add chemicals as required or drain, refill, and re-treat water if necessary.

2. Inspections



Visually inspect the drain for debris, visually inspect filter element, inspect inside of service compartment for excessive moisture due to condensation on cold plumbing, inspect for leaks, cracks, damage, check to make sure ball valves are fully open and that water is circulating properly through the system.

Monthly maintenance

1. Change your filter



To replace the filter element simply flip the valve (white lever on the filter housing) up to the bypass setting, place a small container to catch water under the filter bowl then use the provided wrench to loosen the filter bowl, unscrew the bowl, dump water out, replace filter element, make sure black O-ring is in its groove, reinstall bowl and tighten using the provided filter wrench.

2. Test water using the pool chemical test strips. (Refer to weekly Maintenance)

Bi-Annually or As Needed

(depending on conditions and usage)

Deep clean plumbing, circulation pump, and filter housing.

1. Hot water must be used to deep clean the plumbing.

-Hot & cold tubs can be turned to 104°

-cold only tubs will need to use an immersion heater.

2. Turn off the chiller unit (cold only units) Bring tub water temp up to 104°

3. Put in the recommended amount of plumbing and jet cleaner. Many options are available in various spa stores, online, and on Amazon.

Ex: SpaGuard system Flush (24) Ounces

4. Circulate for between 15 and 30 minutes depending on product instructions.

5. Turn off power to the tub and chiller unit.

6. Completely drain the water from the tub.

7. Refill using a hose filter like the one provided with the tub sale.

8. Re-introduce pool chemicals, set chlorine pH levels accordingly

Clean chiller screens

There are two mesh screens on the cabinet of the chiller unit which will need to be blown out using compressed air or vacuumed off using brush vacuum attachment.

(do not use water to clean chiller screens while installed in the chiller)

See the instruction manual for the chiller unit for detailed instructions

Residential Water maintenance

There are many options available when it comes to chemicals and treating the water in your cold tub, some of which are developed to be used in cold plunges that have stagnant water and do not have plumbing, circulation and filtration etc..

One example of these products is Pure 55 by PetraMax which is a cold plunge water treatment.

It is recommended that you educate yourself on how to treat pool, spa, cold plunge water, what chemicals are used, what they do and how to safely use them.

Basic chemicals needed for cold tub: Chlorine granuals, Chlorine tablets (with a floater), Ph down (decreaser), or Alkalinity increaser depending on test results.

After filling tub, treat water with the recommended amount of chlorine (per container instructions) allow the chlorine granules to dissolve and circulate in the system for two hours, then stir the water in the body of the tub to mix the water thoroughly.

Use the provided test strips to test the chlorine and pH levels.

If pH is high, add pH down per container recommendations. (This is important in preventing calcium rings from developing at the water line in the tub and from calcium buildup in the circulation pump.

The fewer chemicals introduced to your water, the easier it will be to keep your tub water balanced. Every time you add chemicals that your water doesn't need, you run the risk of potential chemistry, clarity, and safety problems. In order to have a sparkling clean, sanitized and well-balanced tub, you will have to ensure that the water chemistry levels stay within the following ideal ranges:

Total Chlorine	1~3 ppm
Free Chlorine:	1~3 ppm
pH:	7.2-7.8
Total Alkalinity:	80-120 ppm
Total Hardness:	200-400 ppm
Cyanuric Acid:	30-60 ppm
Bromine:	2~4 ppm



Safety Precautions

Safety Precautions

WARNING: Children should not be allowed to use this product unless they are supervised by a responsible adult at all times.

DANGER: RISK OF ACCIDENTAL DROWNING

To avoid accidental drowning, make sure that children are not allowed access to this tub without close adult supervision.

DANGER: Risk of electric shock. Install at least 5 feet (1.5 meters) from all electrical devices.

DANGER: Risk of electric shock. Do not permit any electrical appliance, such as a light, telephone, charging cords, radios, televisions, etc. within 5 feet (1.5 meters) of the tub.

ELECTRICAL SUPPLY: The electrical supply for this product should incorporate an appropriate circuit breaker and must be paired with a ground fault circuit interrupter (GFCI). The power cord and plug should be easily accessible and in sight of the person using the tub. Additionally, the outlet or plug should be positioned at least 5 feet (1.5 meters) away from the tub and any water.

WARNING: Always connect your tub to a GFCI outlet. If a GFCI outlet is not available, a licensed electrician must install one before you use your tub.

WARNING: Removing or bypassing any ground fault circuit interrupter breaker (GFCI) will result in unsafe operation for the tub which could lead to injury or death.

WARNING: Removing or bypassing any ground fault circuit interrupter breaker (GFCI) will void the tub's warranty.

WARNING: All electrical supply to the tub must be performed by a licensed electrician.

WARNING: The cover on this tub is for insulation purposes only and will not prevent unsupervised children from entering the tub. There is no representation that the cover will prevent access to the tub.

WARNING: This product is not intended for use by individuals, including children, who have reduced physical, sensory, or mental abilities, unless they are supervised or instructed on how to use the tub by someone responsible for their safety.

WARNING: Children should always be supervised to ensure that they do not play with the tub warning. Cleaning and maintenance should not be done by children without adult supervision.

WARNING: Children should not use this cold tub.

WARNING: People with infectious diseases should not use this tub.

WARNING: To avoid injury, please use caution when entering or exiting the tub

WARNING: If you are pregnant or suspect that you may be pregnant you should consult a physician before using this tub.

WARNING: Do not turn on the power to the tub until the tub is filled to the proper level and the startup guide in the manual has been read. Running the pump without water or not primed could cause immediate damage to a circulation pump and will void the warranty.

WARNING: Do not turn the power on to the chiller until water is flowing through it. See start-up in this manual. Running chiller with no water flowing through it, will cause damage to the unit and void the warranty.

WARNING: If water leaks or spills over the edges of the tub it could damage structures and could also lead to mold growth. If tub is to be set up indoors take extra caution to not let water leak from the tub, spill over sides, etc. Set it up where leakage won't cause damage. Use towels around the tub and wipe up spilled water immediately after use. **The Cube LLC is not responsible for water damage no matter the cause of leak or spillage.**

WARNING TO AVOID INJURY: Before entering the tub the user should check the water temperature with an accurate thermometer to make sure it's at the desired temperature. Tub Temperatures can fluctuate +/- 5°F (2°C) Water temperature above 100°F or (38°C) may be harmful to your health. Prolonged immersion in cold water can cause hypothermia and may be injurious to your health. (See next section on Hypothermia)

DANGER: The use of drugs, prescription, and medication or alcohol before or during use of this product may lead to unconsciousness with the possibility of drowning or injury.

WARNING: People suffering with obesity or those who have a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using this tub.

WARNING: Persons using medication should consult a physician before using this cold tub since some medications may induce drowsiness while other medication's may affect heart rate, blood pressure, and circulation. The use of alcohol & drugs in cold water immersion tubs can greatly increase the risk of hypothermia which can be fatal.

TUB PLACEMENT WARNING: The Cube tub needs to be placed on a solid level surface that can support a minimum of 1,500 lbs (680 kg) Patio pavers must be at least two inches thick and one foot square. The tubs weight may even cause the ground to settle and become uneven. If this happens the tub will have to be drained and the surface re-leveled.

ELECTRICAL INSTALLATION REQUIREMENTS: The Cube must be installed following all relevant local electrical regulations. It is essential that all electrical work is performed by a qualified, licensed electrician and receives approval from the local building or electrical inspection authority. We advise using suitable electrical conduit, fittings, wiring, and outlets for all circuits and power supply to the cube tub.

PLEASE SAVE THESE SAFETY PRECAUTIONS: It is recommender that these safety precautions be displayed in close vecinity to the tub.

Hypothermia

Common causes of Hypothermia include exposure to cold weather or immersion in cold water.

Hypothermia is a condition in which the body's core temperature drops below 95°F (35°C). This can occur when the body loses heat faster than it can produce it, typically due to prolonged exposure to cold temperatures or immersion in cold water.

Hypothermia is a medical emergency that can lead to serious health complications or death if not treated promptly.

When body temperature drops, the heart, nervous system, and other organs can't work as well as they usually do. Left untreated, hypothermia can cause the heart and respiratory system to fail and eventually can lead to death.

Hypothermia symptoms include:

- Shivering
- Slurred speech or mumbling.
- Slow, shallow breathing.
- weak pulse.
- Clumsiness or lack of coordination.
- Drowsiness or very low energy.
- confusion or memory loss.
- loss of consciousness.
- In infants and small children, bright, red, cold skin.

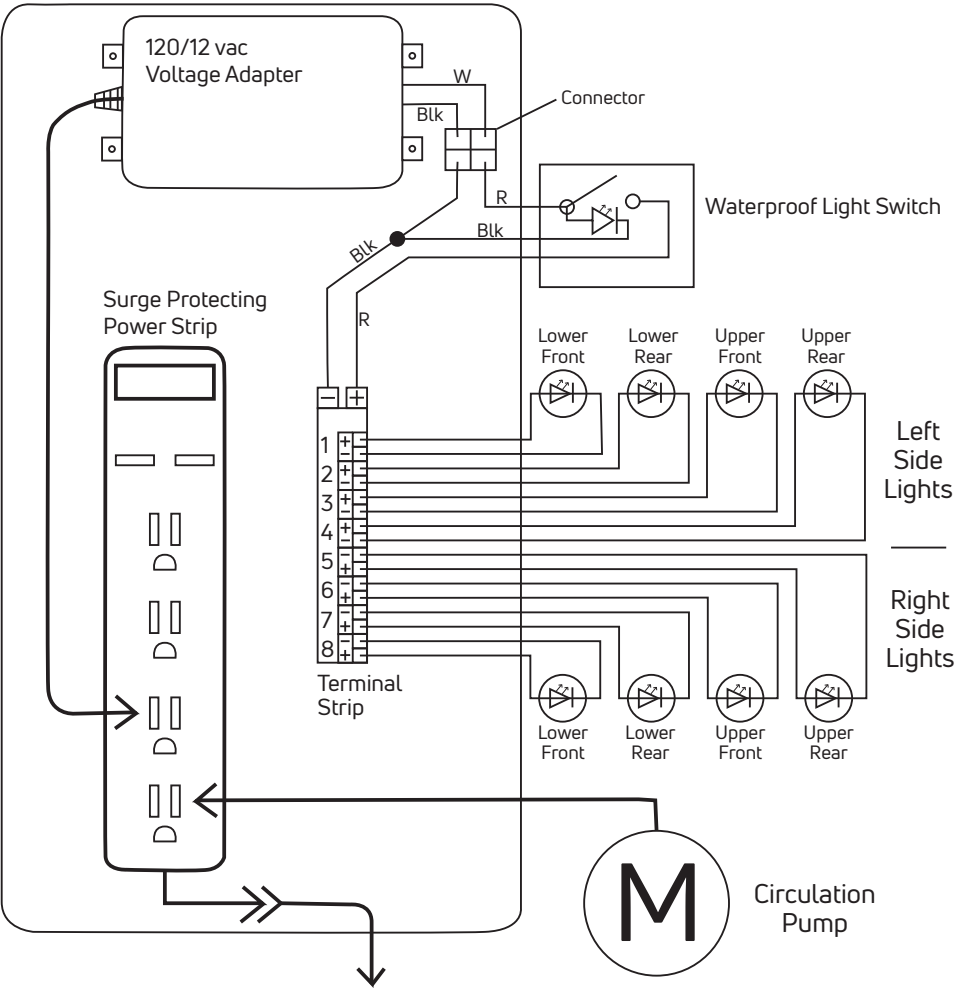
People with hypothermia usually aren't aware of their condition. Symptoms often begin gradually. Also, the confused thinking associated with hypothermia prevents self awareness. The confused thinking can also lead to risk-taking behavior.

Treatment for hypothermia includes methods to warm the body back to a regular temperature. If you suspect someone has hypothermia call 911 immediately.

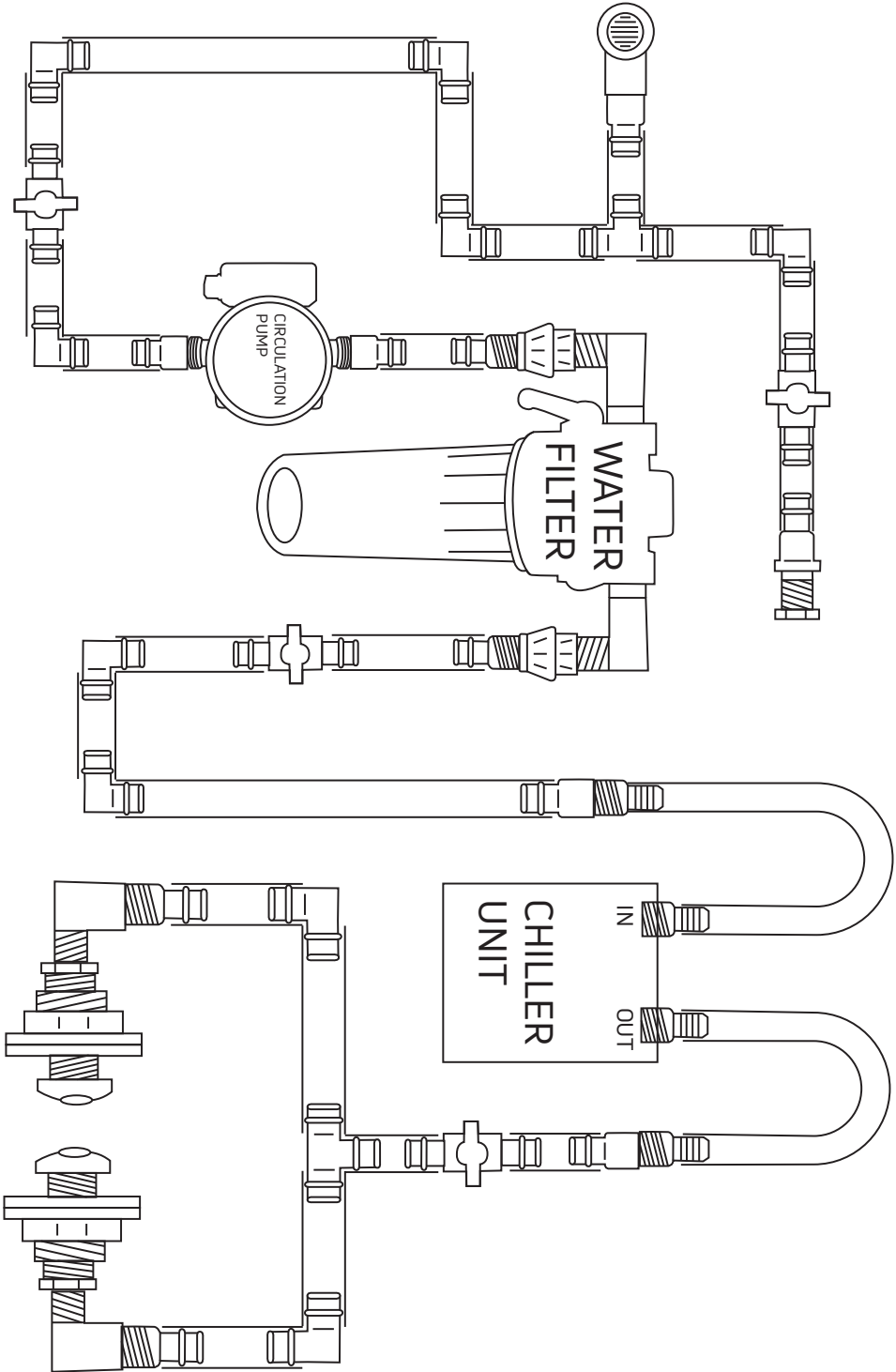
While waiting for emergency help to arrive, gently move the person to a warm place if possible. Jarring movements can trigger dangerous, irregular heartbeats. Carefully remove any wet clothing and replace it with warm, dry clothes, coats, or blankets.

-Mayo Clinic-

Wiring Schematic



Plumbing Diagram



the **cube**

cold therapy tub



Cold tub water chemistry



Total Chlorine	1.0 - 3.0ppm/+.03
Free Chlorine	1.0 - 3.0 ppm
pH	7.2 - 7.8
Total Alkalinity	80-120 ppm
Calcium Hardness	200 - 400 ppm
Cyanuric Acid	30 - 60 ppm
Bromine	2 - 4 ppm



TheCubeTub.com