

COLDTUB™

Owners Manual



Congratulations!

Your choice of a COLDTUB™ indicates that you are devoted to excellence. The management and staff appreciate your patronage. At COLDTUB™ we believe a good foundation is required to build a superior product, both in design and philosophy. Built in the U.S.A. with the finest materials and advanced technology, COLDTUB™s are made to perform. To safely and effectively make use of your tub, we recommend that you take the time to read this manual before you hook-up and operate the tub. This guide will acquaint you with operating features, hook-up, maintenance and safety procedures, ensuring an enjoyable experience right from the start.

IF YOU REQUIRE ADDITIONAL INFORMATION, PLEASE CONTACT COLDTUB™ TECH SUPPORT.

In most cities and counties, permits will be required for the installation of electrical circuits or the construction of exterior surfaces (decks and gazebos). In addition, some communities have adopted residential barrier codes which may require fencing and/or self-closing gates on the property to prevent unsupervised access to a pool or tub by children under 5 years of age. Your COLDTUB™ is equipped with a locking cover that meets the ASTM F1346-91 Standard for Safety Covers and as a result, is usually exempt from most barrier requirements. As a general practice, your local Building Department will inform you of any applicable barrier requirements at the time a permit is obtained for the installation of an electrical circuit. Your COLDTUB™ Dealer can provide information on which permits may be required.

READ AND FOLLOW ALL INSTRUCTIONS

It is important to inform occasional users of the tub about the

DANGERS, WARNINGS, & CAUTIONS

listed in this manual before they use the tub.

CAUTION!

Indicates a situation in which damage to equipment or material may occur.

DANGER!

Indicates risk of injury.

WARNING!

Indicates information of critical importance.

IMPORTANT!

Indicates information of necessary importance.

Table of Contents

1.1	Important Safety Instructions	1
1.2	Warnings	2
1.3	Tub Specifications	3
1.4	Hypothermia	3
1.5	Installation Instructions	4
1.6	Equipment Compartment & Wiring Diagram	5
1.7	Electrical Installation Instructions	5
1.8	Startup Procedures	6
1.9	Water Maintenance Quick Reference Card	7
1.10	Venturi	11
1.11	Topside Control Panel	11
1.12	Care and Maintenance	12
1.13	Manual Safety Cover	15
1.14	Water Maintenance	16
1.15	Basic Chemical Safety	17
1.16	Quick Reference Guide	19
1.17	Troubleshooting Tub Problems	22
1.18	WiFi Quick Reference Guide	24
2.0	COLDTUB App	25
3.0	COLDTUB PAL Owners Manual	41

1.1 Important Safety Instructions

IMPORTANT!

This manual was written to ensure the proper use and installation of any COLDTUB™.

Any modifications to the procedures outlined may result in your warranty being voided.

Please read this manual to avoid any unnecessary damage to your tub and equipment.

READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY

When installing and using this electrical equipment, basic safety precautions should always be followed, including:

- 1) WARNING:** To reduce the risk of injury, do not permit children to use this product unless they are closely supervised at all times.
- 2) DANGER:** Risk of accidental drowning. Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use this product unless they are supervised at all times.
- 3) DANGER:** Risk of Injury. The suction fittings in this tub are sized to match the specific water flow created by the pump. Should the need arise to replace the suction fittings or the pump, be sure that the flow rates are compatible. Never operate the tub if the suction fittings are broken or missing. Consult your local dealer for assistance in choosing an appropriate replacement suction fitting.
- 4) DANGER:** Risk of electric shock. Install at least 1.5 meters (5 feet), from all metal surfaces. As an alternative, a tub may be installed within 1.5 meters (5 feet) of metal surfaces if each metal surface is permanently connected (bonded) by a minimum No. 8 AWG solid (USA) No. 6 AWG stranded (Canada) copper conductor attached to the wire connector on the grounding lug, inside the equipment compartment on the equipment box.
- 5) DANGER:** Risk of Electric Shock. Do not permit any electrical appliance, such as a light, telephone, radio, television, etc. within 1.5 meters (5 feet) of a tub.
- 6) ELECTRICAL SUPPLY:** The electrical supply for this product must include a suitable circuit breaker to open all ungrounded supply conductors. The disconnect must be readily accessible and visible to the tub occupant but installed at least 1.5 meters (5 feet), from the tub water.
- 7) WARNING To Reduce the Risk of Injury:**
 - a) Before entering the tub, the user should measure the water temperature with an accurate thermometer since the tolerance of water temperature regulating devices may vary as much as $\pm 2^{\circ}\text{C}$ (5°F).
 - b) The use of alcohol, drugs, or medication before or during cold tub use may lead to unconsciousness with the possibility of drowning.
 - c) Persons suffering from obesity or a medical history of heart disease, low or high blood pressure, circulatory system problems, or diabetes should consult a physician before using a COLDTUB™.
 - d) Persons using medication should consult a physician before using a cold tub since some medication may induce drowsiness, while other medication may affect heart rate, blood pressure and circulation.
- 8) A bonding lug bar** is provided on the side of your tub control pack to accommodate grounding of entire tub. To reduce the risk of electric shock, connect the local common bonding grid in the area of the cold tub to these terminals with an insulated or bare copper conductor not smaller than 8.4 millimeter².
- 9) All field-installed metal components** such as rails, ladders, drains or other similar hardware within 3 meters of the tub shall be bonded to the equipment grounding buss with copper conductors not smaller than 8.4 millimeter².
- 10) Use the tub straps** and clip tie downs to secure the cover when not in use. This will help to discourage unsupervised children from entering the tub. There is no representation that the cover, clip tie downs, or actual locks will prevent access to the cold tub.
- 11) Save these instructions**

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1.1 Important Safety Information (Continued)

- **WARNING:** THIS APPLIANCE IS NOT INTENDED FOR USE 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 CONCERNING USE OF THE APPLIANCE BY A PERSON RESPONSIBLE FOR THEIR SAFETY.
- **WARNING:** CHILDREN SHOULD BE SUPERVISED TO ENSURE THAT THEY DO NOT PLAY WITH THE APPLIANCE.
- **WARNING:** CLEANING AND USER MAINTENANCE SHALL NOT BE MADE BY CHILDREN WITHOUT SUPERVISION.

1.2 Warnings

- **WARNING: CHILDREN SHOULD NOT USE TUB.**
- **WARNING:** DO NOT USE TUB UNLESS ALL SUCTION GUARDS ARE INSTALLED TO PREVENT BODY AND HAIR ENTRAPMENT.
- **WARNING:** PEOPLE WITH INFECTIOUS DISEASES SHOULD NOT USE TUB.
- **WARNING:** TO AVOID INJURY, EXERCISE CARE WHEN ENTERING OR EXITING THE TUB.
- **WARNING:** DO NOT USE DRUGS OR ALCOHOL BEFORE OR DURING THE USE OF TUB TO AVOID UNCONSCIOUSNESS AND POSSIBLE DROWNING.
- **WARNING:** PREGNANT OR POSSIBLY PREGNANT WOMEN SHOULD CONSULT A PHYSICIAN BEFORE USING TUB.
- **WARNING:** WATER TEMPERATURE IN EXCESS OF 38°C (100°F) MAY BE INJURIOUS TO YOUR HEALTH.
- **WARNING:** BEFORE ENTERING THE TUB, MEASURE THE WATER TEMPERATURE WITH AN ACCURATE THERMOMETER.
- **WARNING:** PROLONGED IMMERSION IN TUB MAY BE INJURIOUS TO YOUR HEALTH.
- **WARNING:** DO NOT PERMIT ELECTRIC APPLIANCES (SUCH AS LIGHT, TELEPHONE, RADIO, TELEVISION, ETC.) WITHIN 1.5 METERS (5 FEET) OF THIS TUB.
- **CAUTION:** MAINTAIN WATER CHEMISTRY IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- **WARNING:** THE USE OF ALCOHOL OR DRUGS CAN GREATLY INCREASE THE RISK OF FATAL HYPOTHERMIA IN TUBS.

1.3 Tub Specifications

Model	Outside Dimensions	Heater	Water Capacity	Dry Weight	Weight Per M ²	Electrical Requirement
Icekube (on wheels)	47" x 26" x 34"	N/A	250 Gal 946 L	200 lbs 90.7 kg	171 lbs/ft ² 83 kg/M ²	110V / 15Amp
Icekube Blue	49" x 34" x 35"	N/A	80 Gal 396 L	130 lbs 59 kg		110V / 15Amp
Icepod	29.25" x 59.25" x 40.25"	1125 / 4500	60 Gal 227 L	400 lbs 181 kg	68 lbs/ft ² 332 kg/M ²	110V / 15Amp
Icepod PLUS	71" x 30" x 43"	1125 / 4500	100 Gal 379 L	450 lbs 205 kg		110V / 15Amp
POLARPOOL®	81" x 71" x 30"	1125 / 4500	160 Gal 605 L	670 lbs 300 kg	80 lbs/ft ² 300 kg/M ²	110V / 15Amp 230V 33A
POLARPOOL® Stretch	86.5" x 71" x 39"	1125 / 4500	340 Gal 1287 L	670 lbs 300 kg	80 lbs/ft ² 300 kg/M ²	110V / 15Amp 230V 33A
Icebox	76" x 76" x 30"	1125 / 4500	260 Gal 984 L	810 lbs 367 kg	130 lbs/ft ² 634 kg/M ²	110V / 15Amp 230V 33A
Polarplunge™	106" x 77" x 30"	1125 / 4500	455 Gal 1722 L	959 lbs 431 kg		110V / 15Amp 230V 33A
Iceberg	171.75" x 93" x 50.5"	5500 W	1558 Gal 5900 L	1550 lbs 700 kg	132 lbs/ft ² 644 kg/M ²	110V / 15Amp 230V 33A

*Filled weight includes weight of water and maximum recommended number of people in the tub.
Average weight per person = 80 Kg (176 Lbs)

1.4 Hypothermia

Prolonged immersion in cold water may induce hypothermia.

While it is important to keep our bodies properly warm, it is equally important for us to be able to cool down. But in certain environmental conditions our bodies cool down too much. Our temperatures drop too far when they dip into hypothermic internal temperatures of 95 degrees and lower.

There are four main ways that our bodies give off heat and cool themselves: conduction, convection, radiation and evaporation. Each of these processes helps us sustain healthy internal temperatures. They also give us a better understanding of how hypothermia happens.

When someone's re-warming reactions, like shivering, aren't enough to overcome the cooling process, hypothermia can set in. Look for several important signs indicating the different stages of hypothermia.

- **Mild Hypothermia: shivering, goose bumps, difficulty with complex motor skills**
- **Moderate Hypothermia: violent shivering, sluggish, speech problems, difficulty with fine motor skills**
- **Severe Hypothermia: rigid muscles, dazed, shivering has stopped, blue skin, erratic heart beat, unconscious**

WARNING!

The use of alcohol or drugs can greatly increase the risk of fatal hypothermia in cold tubs.

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WARNING!

We recommend that the COLDTUB™ be installed above ground. Consult a licensed building contractor to design or evaluate your custom decking requirements.

1.5 Installation Instructions

SITE PREPARATION

Make sure you ensure the following:

- Always put your tub on a structurally sound, **LEVEL** surface. A filled tub can weigh a great deal. Make certain that the location you choose can support the weight of your filled tub.
- Position equipment compartment which houses all of the electrical components in a place where you will have easy access for periodic tub care and maintenance.
- Allow adequate access to all other access panels for service.

OUTDOOR GROUND LEVEL INSTALLATION

No matter where you install your new tub, it's important that you have a solid foundation for support. If using patio stones, they should be at least two inches thick and twelve inches square. Even with stones in place, the tub will possibly settle and become uneven, and may require re-leveling over time.

Deck Installation

To be certain your deck can support your tub, you must know the deck's maximum load capacity. Consult a qualified building contractor or structural engineer. To find your tub refer to the Tub Specification chart. This weight per square foot must not exceed the structure's rated capacity, or serious structural damage could result.

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1.6 Equipment Compartment and Wiring Diagram

WARNING!

All electrical hookups (except where cords with built in GFCI are supplied by COLDTUB™) must be performed by a licensed electrician!



1.7 Electrical Installation Instructions

WARNING!

Do not turn on power to the tub until the tub is filled to the required level. Running the pump without water could cause immediate damage and void your warranty!

COLDTUB™ MUST BE WIRED IN ACCORDANCE WITH ALL APPLICABLE LOCAL ELECTRICAL CODES. ALL ELECTRICAL WORK SHOULD BE DONE BY AN EXPERIENCED, LICENSED ELECTRICIAN AND APPROVED BY A LOCAL BUILDING/ELECTRICAL INSPECTION AUTHORITY. WE RECOMMEND THE USE OF APPROPRIATE ELECTRICAL CONDUIT, FITTINGS AND WIRE FOR ALL CIRCUITS.

WARNING: Removing or bypassing any Ground Fault Circuit Interrupter breaker will result in an unsafe tub and will void the tub's warranty.

IMPORTANT: Should you ever find the need to relocate your COLDTUB™, it is essential that you understand and apply these installation requirements. Your Cold-Tub has been carefully engineered to provide maximum safety against electric shock. Remember, connecting the tub to an improperly wired circuit will negate many of its safety features.

1.8 Startup Procedures

CAUTION!

Do not turn on power to the tub until it is filled to the required level. Running the pump without water could cause immediate damage and void your warranty!

IMPORTANT:

YOUR COLDTUB™ HAS BEEN THOROUGHLY TESTED DURING THE MANUFACTURING PROCESS TO ENSURE RELIABILITY AND LONG-TERM CUSTOMER SATISFACTION.

BEFORE FILLING THE TUB, WIPE THE SHELL CLEAN WITH A SOFT RAG.

The following instructions must be followed exactly to ensure a successful start-up or refill.

- 1) Ensure the electrical connections have been made in accordance with this manual.
- 2) Fill the tub with water until water level reaches to half way up the skimmer box. Please watch for any sign of leaks that may have been caused by shipping.
- 3) Once filled to the proper level, turn the power to the tub on by plugging it in and pressing the Reset button on the Ground Fault Circuit Interrupter breaker. Watch the display on the topside control. After power-up, the display will blink until a key is pressed. This feature is to let you know that the set point and other system parameters are at their default settings.
- 4) The jet pump, cooling system and all internal plumbing will achieve a partial prime as the tub is filled. Once the tub is full, turn each pump on to complete prime. Once the jet system is fully operational (as indicated by strong, non-surgings jets), priming of the tub is complete. Weak or surging jets are an indication of a low water level condition or clogged filter cartridges.
- 5) Adjust the chemicals and balance the water according to your dealer's instructions. A guideline is also included in this manual, under the Water Maintenance Section.
- 6) Set the temperature control to the desired temperature (as low as 42°F - 5.5°C), then place the vinyl cover on the tub and allow the water temperature to stabilize (approximately 16 hours). Make sure you secure the cover in place using the cover locks. Periodically check the tub water temperature.

START BY ADDING THIS MUCH SALT

Icepod	460 grams = 1 Pound
Icepod PLUS	766 grams = 1.69 Lbs.
POLARPOOL	1.22 Kg = 2.70 Lbs.
Icebox	1.99 Kg. = 4.39 Lbs. (1 Pail = 4.4 Lbs.)
Polarplunge™	3.48 Kg = 7.69 Lbs.
Iceberg	11.94 Kg = 26.32 Lbs.

7) Fill the tub

- Test total alkalinity (TA)- it should be between 120-150. if it is high use Cold water Rundown to lower the TA. If it is to low use Cold water Balance to raise the TA.
- Test Ph - it should be between 7.2- 7.6. If it is to high use Run Down to lower the Ph. If it is too low use Jump to raise it.
- Add Sodium chloride Dead Seasalt according to this chart.
- Use Cold Water Sanitizer any time the water is "heavily used" or any time it loses clarity.
- Test and adjust sanitizer level (Chlorine ideal 1 - 3 ppm).

- 8) You may raise the water temperature by pressing the TEMP (^) button on the control panel, or lower it by pressing TEMP (v) button. After a few hours, the water temperature will remain within one degree of your selected temperature.

1.9 Water Maintenance QRC

Icepod

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanatizer (Sanitizer Increaser Sodium Dichloro -S-Trianetronnee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Icepod 227 Ltrs/60 Gal	pH Reading	Icepod 227 Ltrs/60 Gal	pH Reading	Icepod 227 Ltrs/60 Gal	Sanitizer ppm Reading	Icepod 227 Ltrs/60 Gal	Sodium Chloride Reading	Icepod 227 Ltrs/60 Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	5	7.7	1	7.1	2	1ppm or less	2	1500ppm	115
70	9	7.8	2	7.0	3			0000ppm	460
55	19	7.9	4	6.9	4	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.	Small Adjustments 11 Grams = 50ppm Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
40	28	8.0	6	6.8	4				
25	37	8.1	7	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.					
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	9						
		8.2	11						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grams = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

Icepod Plus

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanatizer (Sanitizer Increaser Sodium Dichloro -S-Trianetronnee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Icepod Plus 379Ltrs /100Gal	pH Reading	Icepod Plus 379Ltrs /100Gal	pH Reading	Icepod Plus 379Ltrs /100Gal	Sanitizer ppm Reading	Icepod Plus 379Ltrs /100Gal	Sodium Chloride Reading	Icepod Plus 379Ltrs /100Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	10	7.7	2	7.1	5	1ppm or less	6	1500ppm	191
70	19	7.8	4	7.0	6			0000ppm	766
55	38	7.9	8	6.9	8	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.	Small Adjustments 20 Grams = 50ppm Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
40	58	8.0	12	6.8	9				
25	77	8.1	15	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.					
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	19						
		8.2	23						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grams = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

1.9 Water Maintenance QRC (Continued)

Polarpool

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanitizer (Sanitizer Increaser Sodium Dichloro -S-Triantetronee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Polarpool 605 Ltrs/160 Gal	pH Reading	Polarpool 605 Ltrs/160 Gal	pH Reading	Polarpool 605 Ltrs/160 Gal	Sanitizer ppm Reading	Polarpool 605 Ltrs/160 Gal	Sodium Chloride Reading	Polarpool 605 Ltrs/160 Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	15	7.7	2	7.1	7	1ppm or less	8	1500ppm	306
70	30	7.8	4	7.0	10			0000ppm	1226
55	61	7.9	8	6.9	12	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		Small Adjustments 30 Grams = 50ppm	
40	91	8.0	12	6.8	15				
25	121	8.1	15	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.					
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	19	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.		Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
		8.2	23						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grms = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

Polarpool Stretch

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sana- tizer (Sanitizer Increaser Sodium Dichloro -S-Triantetronee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Polarpool Stretch 1287 Ltrs/340 Gal	pH Reading	Polarpool Stretch 1287 Ltrs/340 Gal	pH Reading	Polarpool Stretch 1287 Ltrs/340 Gal	Sanitizer ppm Reading	Polarpool Stretch 1287 Ltrs/340 Gal	Sodium Chloride Reading	Polarpool Stretch 1287 Ltrs/340 Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	32	7.7	6	7.1	15	1ppm or less	16	1500ppm	651
70	64	7.8	13	7.0	21			0000ppm	2605
55	129	7.9	26	6.9	26	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		Small Adjustments 65 Grams = 50ppm	
40	193	8.0	39	6.8	31				
25	257	8.1	51	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.					
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	64	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.		Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
		8.2	77						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grms = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

1.9 Water Maintenance QRC (Continued)

Icebox

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanatizer (Sanitizer Increaser Sodium Dichloro -S-Trianetronnee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Icebox 984 Ltrs/260 Gal	pH Reading	Icebox 984 Ltrs/260 Gal	pH Reading	Icebox 984 Ltrs/260 Gal	Sanitizer ppm Reading	Icebox 984 Ltrs/260 Gal	Sodium Chloride Reading	Icebox 984 Ltrs/260 Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	25	7.7	5	7.1	12	1ppm or less	12	1500ppm	498
70	50	7.8	10	7.0	16			0000ppm	1992
55	99	7.9	20	6.9	20	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Small Adjustments 50 Grams = 50ppm	
40	149	8.0	30	6.8	24			Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	
25	198	8.1	40	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.				Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	50					Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.	
		8.2	59						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grams = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

Polarplunge

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanatizer (Sanitizer Increaser Sodium Dichloro -S-Trianetronnee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Polarplunge 1722 Ltrs/455 Gal	pH Reading	Polarplunge 1722 Ltrs/455 Gal	pH Reading	Polarplunge 1722 Ltrs/455 Gal	Sanitizer ppm Reading	Polarplunge 1722 Ltrs/455 Gal	Sodium Chloride Reading	Polarplunge 1722 Ltrs/455 Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	43	7.7	9	7.1	21	1ppm or less	22	1500ppm	871
70	86	7.8	17	7.0	28			0000ppm	3486
55	172	7.9	34	6.9	34	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	Small Adjustments 85 Grams = 50ppm	
40	259	8.0	52	6.8	41			Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.	
25	345	8.1	69	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.				Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.	
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	86					Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.	
		8.2	103						
		Note: 3 Grams = 1/2 Tea Spoon. 6 Grams = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.							

1.9 Water Maintenance QRC (Continued)

Iceberg

Cold Water Balance (TA Increaser Sodium Bicarbonate)		Cold Water Run Down (pH Decreaser Sodium Bisulphate)		Cold Water Jump (pH Increaser Sodium Carbonate)		Cold Water Sanitizer (Sanitizer Increaser Sodium Dichloro -S-Triantetronee)		Cold Water Dead Sea Salt (Dead Sea Salt increases Sodium Chloride)	
TA ppm Reading	Iceberg 5900Ltrs/1558Gal	pH Reading	Iceberg 5900Ltrs/1558Gal	pH Reading	Iceberg 5900Ltrs/1558Gal	Sanitizer ppm Reading	Iceberg 5900Ltrs/1558Gal	Sodium Chloride Reading	Iceberg 5900Ltrs/ 1558Gal
	Grams to add		Grams to add		Grams to add		Grams to add		Gr. to add
120-150	Nil	7.2 - 7.6	Nil	7.2 - 7.6	Nil	2-3ppm	Nil	2000ppm	Nil
85	148	7.7	30	7.1	71	1ppm or less	74	1500ppm	2983
70	296	7.8	59	7.0	95			0000ppm	11937
55	592	7.9	118	6.9	118	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		Small Adjustments 85 Grams = 50ppm	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon. 275 Grams = 1 Cup.
40	888	8.0	178	6.8	142				
25	1183	8.1	237	Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.					
Note: 2.5 Grams = 1/2 Tea Spoon. 5 Grams = 1 Tea Spoon.		8.2	296	Note: 3 Grams = 1/2 Tea Spoon. 6 Grms = 1 Tea Spoon. Caution: pH Decreaser also decreases TA ensure TA is in the desired range 120-150 before decreasing pH.		Caution: Do not enter water if Chlorine is above 5ppm. Do not enter water if Chlorine is below 1ppm.			
		8.2	355						

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1.10 Venturi Controls

The Venturi Controls allow you to control the intensity of the massage at each jet by adjusting the mixture of air and water. Simply turn the venturi control lever counter clockwise for a stronger flow and clockwise for a softer flow. (Not available on Icecube or Icepod models)

1.11 Topside Control Panel

IMPORTANT: BEFORE PERFORMING ANY SERVICE ON THE TUB. MAKE A VISUAL INSPECTION OF THE TUB TO GET AN UNDERSTANDING OF WHAT CONDITION IT MAY BE IN AND IF ANYTHING LOOKS OUT OF THE ORDINARY. IF ANY PART APPEARS TO BE DAMAGED, LOOSE OR MISSING, DO NOT PROCEED. CONTACT TECH SUPPORT IMMEDIATELY.

Your tub control has been specifically designed so that by simply connecting the tub to its properly grounded source, and following the start-up procedures in this manual, the tub will automatically cool to the set temperature. You can adjust the set temperature by pressing the up or down arrows on your control panel to the desired temperature.

TEMPERATURE DISPLAYED IN FAHRENHEIT OR CELSIUS

Press and hold the Light Key for 5 seconds to toggle between Fahrenheit and Celsius.

The topside control panel has buttons which you press to set the temperature, initiate the filtration cycle, turn the light on, and activate or deactivate the pump(s). The topside control panel display responds to let you know you have pressed a button, and that the selected function has been performed.

SETTING WATER TEMPERATURE



Use Up or Down arrow key to regulate water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.



The "Set Point" symbol indicates the desired temperature, NOT the current water temperature. Water temperature can be adjusted by 1- degree increments from 42-104F (5.5 - 40°C).

1.12 Care and Maintenance

YOUR COLDTUB™ IS MANUFACTURED FROM THE HIGHEST QUALITY, MOST DURABLE MATERIALS AVAILABLE EVEN SO, THE CARE AND MAINTENANCE PROGRAM YOU DEVELOP WILL ULTIMATELY DETERMINE HOW LONG YOUR TUB AND ITS INDIVIDUAL COMPONENTS WILL LAST. REGULAR MAINTENANCE ACCORDING TO THE ADVICE IN THIS SECTION WILL HELP YOU TO PROTECT YOUR INVESTMENT.

DRAINING THE WATER

Detergent residues and dissolved solids from bathing suits and chemicals will gradually accumulate in your tub's water. Normally, in about three months the water will become difficult to balance and should be replaced. Showering without using soap prior to entering the tub or using only the rinse cycle when laundering your bathing suit will help to reduce detergent residue in the tub water. However, foam problems are more likely to be caused by a build up of organic pollutants in the tub—mostly by body oils. If you're using your tub frequently with a high bather load the water will need to be replaced more often. Water gradually loses quality because of build ups of unfilterable pollutants.

TO DRAIN YOUR TUB

1. Trip the Ground Fault Circuit Interrupter breaker located in the sub panel or the quick disconnect.
2. All COLDTUB™s have an external drain that can be attached to a typical garden hose for convenient draining. Simply locate the drain on the side of the floor, pull the nozzle out, remove cap, and attach your hose. Once the hose is attached, push the nozzle in slightly to open the internal valve and the tub will start draining.

■ **Note: All COLDTUB™ models will drain almost completely through the drain. Equipment such as the pump(s) and water cooler will drain. Any water remaining in the plumbing or equipment after draining will only need to be removed if the tub is being winterized.**

3. When empty, inspect the shell and clean as required.
4. Close the drain valve.
5. Refill BEFORE restoring power.

IMPORTANT!

Replace your filters every couple weeks when in use. Disposable filters can last a maximum of 3 months under minimal usage.

Replacement filters can be purchased on line at www.coldtub.com/supplies/

IMPORTANT!

Remember to change your water every three to four months.

1.12 Care and Maintenance (Continued)

IMPORTANT!

The use of clarifiers and foam inhibitors is not recommended with disposable filters!

FILTRATION SYSTEM

COLDTUB™s are equipped with balanced filtration, meaning that the filter cartridges are sized to meet the needs of the pump system. As with any water filtering system, the filter cartridge may become clogged, resulting in reduced water flow. It is important to maintain a clean, unobstructed filter system. We recommend replacing your filter regularly depending on usage.

FILTER CARTRIDGE REMOVAL AND INSTALLATION

1. Shut the tub down using the on/off button on the topside control panel. Wait until all pumps have stopped completely (this may take up to 3 minutes).
2. Remove the filter basket.
3. Remove the filter cartridge.
4. Clean any debris out of the skimmer basket.
5. To reinstall the new filter cartridge, reverse the order of steps in which it was removed.

CARE OF THE SHELL

Your COLDTUB™ has a reinforced, cast acrylic shell. Stains and dirt generally will not adhere to your tub's surface. A soft cloth or sponge should easily remove most dirt. Most household chemicals are harmful to your tub's shell, do not use them. Baking soda or vinegar can also be used for minor surface cleaning. Always thoroughly rinse off any tub shell cleaning agent with fresh water.

SERVICE NOTE:

The use of alcohol or any household cleaners other than those listed to clean the shell surface is NOT recommended. DO NOT use any cleaning products containing abrasives or solvents since they may damage the shell surface. Damage to the shell by the use of harsh chemicals is not covered under the warranty.

1.12 Care and Maintenance (Continued)

LED LIGHT REPLACEMENT

ALL COLDTUB™S COME EQUIPPED WITH A BLUE LED (LIGHT EMITTING DIODE) LIGHT FOR NIGHT-TIME USE. THE OPTIONAL UPGRADE LIGHT COMES WITH A MULTI COLOURED LED. SHOULD YOU WISH TO CHANGE EITHER LIGHT, FOLLOW THESE SIMPLE STEPS:

1. Make sure the light is turned off, by checking the topside to see if the light icon is not showing.
2. Remove the screws securing the equipment access doors; remove the doors.
3. Locate the lamp assembly, which is secured into the light housing. Carefully rotate the lamp assembly counter-clockwise until it comes off the light housing.
4. Remove the LED assembly from the socket and replace with a new assembly. Contact tech support for part number. Reconnect the cable(s).

NOTE: TAKE CARE TO INSERT THE PLUG IN THE CORRECT ORIENTATION, OR YOU MAY DAMAGE THE CONNECTORS.

5. To reinstall, rotate the lamp assembly clockwise onto the light housing until secure.

VACATION CARE INSTRUCTIONS

If you plan to be away for 7 - 14 days, follow these instructions to ensure that the water quality of your tub is maintained.

1. Adjust pH as needed.
2. Ensure you have sufficient sanitizer to last until you return.
3. Shock the tub with a tablespoon of Cold Water Sanitizer and oxidizer.
4. Lower the temperature to between 45°F and 55° F.

UPON YOUR RETURN

1. Shock the tub with a tablespoon of Cold Water Sanitizer and oxidizer.
2. Ensure you have sufficient sanitizer for regular use and adjust PH as needed.
3. Return the temperature to its original setting. You can use your tub once the residual sanitizer level falls within the ideal range.

WINTERIZING

If you plan to leave your tub unused in severely cold weather, you should drain the tub and add RV antifreeze to avoid accidental freezing. For assistance contact tech support. Damage due to freezing is not covered under and can void warranty.

TO RESTART TUB

Reinstall the filter cartridges; close the drain valve. Follow the Start-up and Refill procedures.

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1.13 Manual Safety Cover



ATTENTION: The cover is a manual safety cover that meets or exceeds all prevailing requirements of ASTM Standards for safety covers when installed and used correctly as of the date of manufacture. Non-secured or improperly secured covers are a hazard. Always open the cover to its fully open position before use. Be sure to inspect the cover for premature wear or deterioration. Over time, with use, there is a chance of normal cover wear and deterioration. To properly maintain your cover see directions below.

VINYL COVER

The vinyl tub cover is an attractive, durable foam insulation product. Monthly cleaning and conditioning are recommended to maintain its beauty.

To clean and condition the vinyl cover:

1. Remove the cover from the tub and gently lean it against a wall.
2. With a garden hose, spray the cover to loosen and rinse away dirt or debris.
3. Using a large sponge and/or a soft bristle brush, and a very mild soap solution or baking soda, scrub the vinyl top in a circular motion. Do not let the vinyl dry with a soap film on it before it can be rinsed clean.
4. Scrub the cover's perimeter and side flaps. Rinse clean with water.
5. Rinse off the underside of the cover with water only (use no soap), and wipe it clean with a dry rag.

1.14 Water Maintenance

It's important to have clean water. Water maintenance is one of the least understood, yet most important areas of tub ownership. Your dealer can guide you through the process of achieving and maintaining perfect water in your tub, given your local conditions. Your program will depend on your water's mineral content, how often you use the tub and how many people use it.

General Information

There are three fundamental areas of water maintenance. They are (1) Water Filtration, (2) Water Sanitation, and (3) Chemical Balance/pH Control.

Although your filter system is working several hours a day to remove particles from your water, it does not remove bacteria or viruses. Water sanitation is the responsibility of the owner. It can be achieved through the regular and periodic (daily, if necessary) addition of an approved sanitizer. The sanitizer will chemically control the bacteria and viruses present in the tub water. Bacteria and viruses can grow quickly in poorly under sanitized water.

The water's chemical balance and pH control are also the responsibility of the owner. You will have to add chemicals to maintain proper levels of Total Alkalinity (TA) and pH. Proper water balance and pH control will minimize scale buildup and corrosion of metals, extend the life of the tub, and allow the sanitizer to work at maximum efficiency.

Methods For Testing Water

You will be required test and balance the water in this order.

First adjust the Total Alkalinity within 80 and 120ppm using Cold Water Balance to raise the TA, and Cold Water Run Down to lower the TA.

Second you will adjust the pH to between 7.2 and 7.6. use Cold Water Jump to raise the pH and Cold Water Run Down to lower the pH.

Once you have balanced the TA and pH you will be able to accurately test and adjust the sanitizer level. you will want a Chlorine level between 1 and 5ppm. To instantly raise the Chlorine level add Cold Water Sanitizer. Use Tablespoon measurements to slowly increase the Chlorine in the COLDTUB.

For using the automated Sea Salt Sanitize system add 1/2 a cup of Dead Sea Salt for every 50gal of water in the tub. Only add the salt to fresh water when the tub is filled from empty or refilled from a large amount of water loss. Test the salt content of the water using test strips and adjust to between 2200 and 2500ppm. If the salt gets over 3000ppm you will need to drain some water and refill to dilute the concentration as not to corrode metal components.

IMPORTANT!

Always read and carefully follow the directions included with the test kit or test strips to ensure the accuracy of the test results.

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1.15 Basic Chemical Safety

When using chemicals, read the labels carefully and follow directions precisely. Though chemicals protect you and your tub when used correctly, they can be hazardous in concentrated form. Always observe the following guidelines:

- ALWAYS KEEP CHEMICALS OUT OF CHILDREN'S REACH.
- NEVER MIX CONCENTRATED CHEMICALS TOGETHER.
- ALWAYS THOROUGHLY RINSE ANY CONTAINER USED TO MIX CHEMICALS AFTER USE.
- ALWAYS RINSE OUT ANY EMPTY CHEMICAL STORAGE CONTAINER BEFORE DISPOSAL.
- Accurately measure the quantities specified. Do not overdose your tub. Amount required will vary depending on water condition, quantities to be used are only guidelines.
- Store chemicals in a cool, dry, well-ventilated place.
- Always keep chemical containers closed when not in use.
- Do not inhale fumes or allow chemicals to come in contact with your eyes, nose or mouth.
- **Wash your hands immediately after use.**
- Follow the emergency advice on the product label in case of accidental contact.
- Never smoke around chemicals. Some fumes can be highly flammable.
- Do not store any chemicals in the equipment compartment.

ADDING CHEMICALS TO THE TUB

We recommend all chemicals be premixed in a bucket of water to ensure they dissolve. Then pour the solution into the COLDTUB and run for 10 minutes before retesting.

IMPORTANT "SUPER CHLORINATION/OXIDIZER SHOCK TREATMENT"

NOTE: After adding chlorine or oxidizer to your tub, leave the cover open for a minimum of 20 minutes to allow the gasses to vent. Oxidizer gas may eventually cause discolouration or vinyl degradation to the bottom of the cover and other components around the lip of the tub. This type of damage is considered chemical abuse and not covered under warranty.

The COLDTUB Water Maintenance Program

Following the COLDTUB water maintenance program will save you time and frustration and ensure clear, clean tub water.

As water evaporates from your tub and new water is added, the amount of dissolved minerals will increase. The water may eventually become "hard" (Hardness too high) enough to damage the heater by calcifying its surface.

BALANCE THE TOTAL ALKALINITY (TA)

- The recommended Total Alkalinity (TA) for your tub water is 80-120 ppm.
- Total Alkalinity is a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water. TA is referred to as the water's "pH buffer". In other words, it's a measure of the ability of the water to resist changes in pH level.
- If the Total Alkalinity is too high, the pH level will tend to be high and may be difficult to bring down. It can be lowered by using Cold Water Run Down.
- Once the TA is balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.
- When the Total Alkalinity is within the recommended range, proceed to the next step.

BALANCING THE PH

- We recommend a pH range for your water of 7.2-7.6.
- The pH level is the measure of acidity and alkalinity. Values above 7 are alkaline; those below 7 are acidic. Maintaining the proper pH level is extremely important for:
 - Optimizing the effectiveness of the sanitizer.
 - Maintaining water that is comfortable for the user.
 - Preventing equipment deterioration.
- If the water's pH level is too low, the following may result:
 - The sanitizer will dissipate rapidly.
 - The water may become irritating to users.
 - The equipment may corrode.

If the pH is too low, it can be increased by adding Jump to the water.

- If the pH level is too high, the following may result:
 - The sanitizer will become less effective.
 - Scale will form on the shell surface and the equipment.
 - The water may become cloudy.

If the pH is too high, it can be decreased by adding Run Down to the water.

- It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.
- When the pH is within the recommended range, proceed to the final step.

SANITIZE THE TUB

Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms from growing in the tub. At the same time, you don't want too high a sanitizer level, or it can irritate your skin, lungs and eyes.

- Always maintain the sanitizer level in your tub at the recommended level for each type of sanitizer.

IMPORTANT: Sanitizers are acidic and will decrease the TA. Regular testing, removal and changing of TA is extremely important with these products.

IMPORTANT: Always remove the floating dispenser while the tub is in use. Remove dispensers with a plastic bucket and store out of reach of children until tub use has ended.

IMPORTANT!

Cold water oxidizer significantly reduces pH and TA. One hour after adding cold water oxidizer test and adjust TA and pH as needed.

1.16 Quick Reference Guide



STARTING PUMP

Press the Pump key to turn Pump on at low speed. Press a second time to turn Pump to high speed. A third time turns Pump off. A built-in timer will shut Pump off.



The Pump indicator lights up when Pump is on a high speed. It flashes when Pump is on at low speed.



SETTING WATER TEMPERATURE



Use Up or Down arrow key to regulate water temperature. The temperature setting will be displayed for 5 seconds to confirm your new selection.

The "Set Point" symbol indicates the desired temperature, NOT the current water temperature!



Water temperature can be adjusted by 1-degree increments from 42° to 104°F (5.5° to 40°C).



AUTOMATIC WATER COOLER START

When water temperature is 1°F (0.5°C) higher than the Set Point, the chiller will automatically turn on until water temperature reaches Set Point minus 1°F (0.5°C).



TEMPERATURE UNIT

Press and hold Light key for 5 seconds to toggle between °F and °C.



TURNING THE LIGHT ON

Press the Light key to turn light on. Press a second time to turn light off. A built in timer automatically turns the light off after 2 hours, unless it has been manually deactivated.



The light indicator is displayed when light is on.



STANDBY MODE

Press and hold **Standby** key for 5 seconds to turn the system down (i.e. to set it to standby mode) for 30 minutes. The "STbY" message is displayed. All keys are then disabled, unless you push and hold the Standby key for 5 seconds again to reactivate the system before the expiration of the 30-minute delay. If the system is turned down using the **Standby key** while the cooler is on, Pump will run for an additional 3 minutes.

PAD LOCKOUT

Full or partial. Full lock means that all the key pad functions have been locked. Partial lock means that only the basic functions of the spa will remain accessible (pumps, blower, light).

When control pad is locked, the "Lock" icon will be displayed. Locking your digital control pad: Press and hold **Pump 1** key for 5 seconds. The display will show "LocP", with "P" representing Partial lock. Release the key and the key pad will be in Partial lock mode. Keep key pressed down for 5 more seconds if you want to be in **Full** lock mode. The "LocF" message will then be displayed. When the control pad is locked, all automatic functions of the system run as usual. If a key is pressed down, a "LocP" or "LocF" message will be displayed for 1 second. To unlock the keypad, simply press and hold **Pump 1** key again for 5 seconds.

IMPORTANT!

This manual and its contents are subject to change without notice. Although COLDTUB™ has prepared this manual as accurately and precisely as possible, COLDTUB™ will not be liable for loss, injury or damages caused by improper servicing or by use of tub (improper or otherwise).

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WWW.COLDTUB.COM

1.16 Quick Reference Guide (Continued)

PROGRAMMING THE SETTINGS

During a filter cycle:

- Pump runs at low speed for the programmed number of hours (see below)



Press the Settings button to enter into your filtration options. Your display will show "Sett" and from here you will be able to choose your settings.



Press your Settings button again. Your display will now show the settings for your Filter Duration.



Use your arrow keys to select your Filter Duration in hours. You can select from 0 to 6 hours.

Use your arrow keys to select your Salt water sanitizer Cycle Duration. You can select from 1 to 24 hours per day. (longer duration equals more sanitizer in the water).



Press your Settings button again. Your display will now show the settings for your Filter Cycle Frequency.



Use your arrow keys to select your Filter Cycle Frequency from 1 to 4 times per day.



Press Settings again, your display will say CP (COLDTUB PAL), followed by a number. "0" indicates the Salt System is automated and will run on its own. Numbers 1-24 are an override to manually run the Salt System corresponding to the hours in a day. "1" = 1 hour, "24" = 24 hours a day.

PLEASE NOTE:

You can move backwards through the settings by pressing the standby button. The Pump button will allow you to exit without saving any changes. When you get to the end of the options, press the filter key one last time to save changes and begin a filter cycle immediately. If you do not press the filter key again your changes will be saved and the filter cycle will begin when you have programmed it to do so.

CP in Settings stands for COLDTUB PAL, but should be stated that it can be referred to as Chlorine Production.

45 Minute filter cycle time-out:







If you turn a pump or light on during a filter cycle, the cycle will be interrupted and will only resume 45 minutes after you (or the system) have turned the last active output off.

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IMPORTANT!

Possible air lock, if not clear in 2 minutes, contact service.

TROUBLE SHOOTING

	<p>"HL" error message is displayed.</p> <p>"HL" error message is flashing.</p>	<p>The system has shut the heater down because the temperature at the heater has reached 119°F (48°C). Do not enter the water! Remove COLDTUB™ cover and allow the water to cool down, then reset the breaker to reset the system.</p> <p>The system has shut down because the water temperature in the COLDTUB™ has reached 112°F (44°C). Do not enter the water! Remove spa cover and allow the water to cool down to 109°F (43°C). Call your dealer or service supplier if problem persists.</p>
	<p>"FLO" error message is displayed.</p>	<p>The system detects no water pressure while a pump is running. Check and open water valves. Check water level. Clean filter or replace. Contact tech support if problem persists.</p>
	<p>"FLC" error message is displayed.</p>	<p>A problem has been detected with the pressure switch. Contact tech support.</p>
	<p>"Prr" error message is displayed.</p>	<p>A problem has been detected with the temperature probe. Contact tech support.</p>
	<p>4 dashes are displayed.</p>	<p>The Processor has been damaged...DO NOT ENTER THE WATER... this is usually caused by abnormal power fluctuations, Contact tech support.</p>
	<p>"PH" error message is flashing.</p>	<p>The PH in the water is high and PH reducer needs to be added.</p>

1.17 Troubleshooting

PROBLEM	POSSIBLE CAUSES
CLOUDY WATER	<ul style="list-style-type: none"> A. Poor Filtration B. Suspended particles C. Organic contaminants build up D. TA high E. pH high F. Combined chlorine in the water G. High dissolved solids
COLORED WATER	<ul style="list-style-type: none"> A. Dissolved metals from water source B. Low chlorine levels C. Fragrance
FOAMING	<ul style="list-style-type: none"> A. High concentration of oils and organics being agitated by the jets
SCALE DEPOSITS	<ul style="list-style-type: none"> A. High Calcium level, high pH, high alkalinity
ODOR	<ul style="list-style-type: none"> A. High level of organic contaminants, combined with chlorine
EYE/SKIN IRRITATION	<ul style="list-style-type: none"> A. pH too low B. Combined chlorine due to high concentration of organic contaminants C. Allergic reaction to sanitizer D. Bacterial contamination
NO CHLORINE	<ul style="list-style-type: none"> A. High concentration of contaminants using up sanitizers B. Test kit reagents ineffective

■ SOLUTIONS

- A. Dirty filter, increase Filter cycle.
- B. Add Cold Water Clear (not with disposable filter)
- C. Shock treatment with Cold Water Oxidizer.
- D. Add Cold Water Run Down to adjust TA level to 100-130 ppm.
- E. Add Cold Water Run Down until PH level reads 7.2-7.6.
- F. Cold Water Oxidizer treatment until combined chlorine is eliminated (see container instructions).
- G. Empty tub and refill.

- A. pH has gone to high. Empty tub and refill.
- B. Add Cold Water Sanitizer treatment to raise chlorine levels and test chlorine levels.
- C. Stop the use of fragrance.

Cold Water Bubble Remover on foam. (not with disposable filter)

Empty tub,clean,refill and correct Alkalinity to 80-130ppm then pH to 7.2 - 7.6

- A. Check pH and adjust as required.
- B. Shock with Oxidizer, add Sanitizer
- C. Dilution of water will reduce contaminants and odor.
- D. Check if ozone system is operational.

- A. High concentration of contaminants using up sanitizers.
- B. Test kit reagents ineffective.

- A. Add sanitizers until levels are up to the recommended levels.
- B. Replace test kits at least once a year.
- C. Chlorine level very high and is bleaching test reagent, Allow sanitizer levels to recede by opening cover and running jets.

1.18.1 Wi Fi Connect

For All Coldtub Models Shipped After May 01, 2023

Overview:

COLDTUB™ 2023 WIFI VIDEO for setup

<https://www.youtube.com/watch?v=tcNNsp9q5Zk>

New tubs purchased in 2023 come out of the crate in Access Point Mode. This means that your COLDTUB™ will make its own networks.

Indicators:

When the decimal moves over one place in between the numbers it means your tub is connecting to COLDTUB™ servers.



Slow flash of downward arrow above the symbol that looks like a sun means your tub is trying to connect to the internet.



Decimal point to the far left of numbers on the topside control means the COLDTUB™ is trying to login to the router.



Steps to get Connected:

1. Force your COLDTUB™ into access point mode by press and holding the “hidden” button third from the left on the top row of buttons topside display and letting go when it says “AP”. Let go and wait 30-40 seconds until your topside display reads “APUP” which means your access point is up. It will read AP->”51”->APUP



2. Launch COLDTUB™ App

a. <https://apps.apple.com/ca/app/cold-tub-brand-therapy-pool/id1146179578>

b. Once in app:

i. Click “set up new tub” in the bottom corner

ii. (You can create a COLDTUB™ account now or after you log your tub into the WIFI)

iii. Yes, continue in app

iv. Set up WIFI connection

- c. Then go to your Iphone settings->WIFI->Connect to “MyarcticspaAP” or “MycoldtubAP”
 - d. Password: 1234567890
 - e. A checkmark will appear next to “MyarcticspaAP” or “MycoldtubAP”
 - f. Might say “no internet connection”, this is fine.
 - g. Go back to your COLDTUB™ App
 - h. Join your local WIFI home network (SSID).
 - i. Type in your home WIFI network password.
 - j. Press continue and it will start a countdown of 60 seconds or less.
3. Look back at your topside display
- a. The decimal should be to the far left
 - b. Flashing downward arrow above the button that looks like waves or air means the tub is trying to login to your WIFI network.
 - c. Decimal will move to the far right when it is trying to connect to the server.
 - d. Downward indicator light above the symbol that looks like a sun will go solid when you are connected to internet



4. Go back to the COLDTUB™ App.
- a. Create Account if you haven't already
 - b. If you have an account, click “already have an account”
 - c. Enter Username and Password you created or
 - d. Create login
5. Now the App will scan for COLDTUB™'s on your network
- a. Serial number found on metal plate on your COLDTUB™
 - b. Hold down the third button from the left on the top row of buttons until your display reads “REG” (It will say AP-keep holding until REG appears) and then it will display your registration code.



Login to your account and your COLDTUB™ is Connected!

1.18.2 Wi Fi Connect

For All Coldtub Models Shipped Before May 01, 2023

Overview:

WiFi Connect lets you use your iphone, ipod touch, or ipad to control your COLDTUB. Put it in the waterproof case and you have the most advanced COLDTUB remote available. You can turn the lights on, check and adjust the temperature, check and adjust filtration settings, make sure there are no error codes etc...

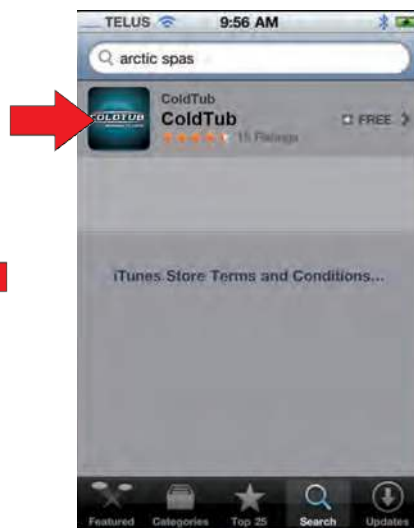
COLDTUB Functions: The functions are controlled using Wi-Fi signals. The COLDTUB creates its own wifi network (no internet connection is needed). When you join the Wi-Fi network of the COLDTUB and launch the app you will be able to control the functions of the COLDTUB.

Downloading the App:

To download the app make sure you are connected to the Internet and launch the Apple "App Store" app



From the main screen find and click on the "App Store" Icon



Click on "Search" on the bottom tab and type in "ColdTub", the app will appear

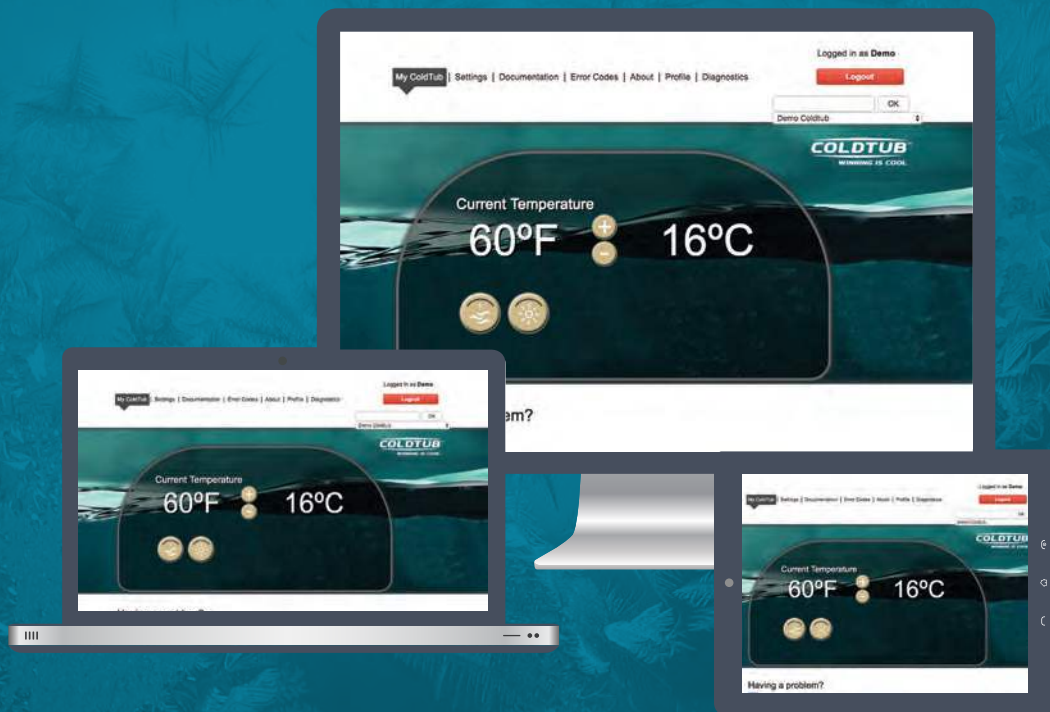


Click the word "Free", then "Install" to begin downloading the free app. Its that easy!



COLDTUB App and Web Connect to mycoldtub.com

User Guide



For COLDTUBs Configured with WIFI Capability.



** Apps available for iPhone & iPad.*

Table of Contents

2	COLDTUB App and Web Connect User Guide	27
2.1	COLDTUBs App?	27
2.2	What is Web Connect?	27
2.3	What is WIFI Extender?	27
2.4	What is a Network Connection Through LAN Cable?	28
2.5	What does Web Connect Do?	28
2.6	What is mycoldtub.com?	28
2.7	Web Connect Interface Through WIFI Extender	29
2.8	Web Connect Interface Through LAN Cable	29
2.9	COLDTUB App QRC Through WIFI Extender Flowchart	30
2.10	COLDTUB App QRC Through LAN Cable Flowchart	31
2.11	How to connect Your COLDTUB to the My COLDTUBs Server Flowchart	32
2.12	My COLDTUB	33
2.12.1	Home Page	34
2.12.2	New User Registration	34
2.12.3	Login First Time	35
2.12.4	Register a COLDTUB	36
2.12.5	Login	36
2.12.6	My COLDTUB - Logged In	37
2.13.1	Settings	37
2.13.2	Documentation	37
2.13.3	Error Codes	38
2.13.4	About	38
2.13.5	Profile	38
2.13.6	Diagnostics	39
2.13.7	Logout	39
2.14	Connect with the NETGEAR Installation Assistant	40

2 COLDTUB App and Web Connect User Guide

This User Guide provides the COLDTUB owner information on how to connect their COLDTUB to their network and the My COLDTUB Server allowing the COLDTUB owner access to the full benefits of COLDTUB App, Web Connect and owning a COLDTUB.

There are three steps involved in the complete connection process:

1. Download the free COLDTUBs App from your App Store.
2. Connect your network to your COLDTUB by WIFI Extender or LAN Cable. Once this is achieved COLDTUB App will function through your device allowing you to control your COLDTUB with your device locally (within your network WIFI range).
3. Connect your COLDTUB to the My COLDTUB Server through Web Connect which is achieved by opening a free User Account on the mycoldtub.com Web Page and registering your COLDTUB against the User Account raised. Once this is achieved, COLDTUB App will function through your device or computer allowing you to control your COLDTUB with your device or computer anywhere in the world where you have internet connection.

Note: If your COLDTUB is not optioned with WIFI capability for COLDTUB App, any COLDTUB can be upgraded to have the required COLDTUB App components installed. Please contact COLDTUB with the Serial Number of your COLDTUB.

2.1 COLDTUBs App?

The COLDTUB App provides total control of your COLDTUB remotely.

Allows you to:

- Activate the jets, lights.
- Check and adjust water temperature, filtration, salt water sanitizing system
- View your COLDTUBs power consumption detail.
- Play Music.
- Lock controls.
- Access COLDTUB owner manuals, quick reference cards, user guides and lots more.
- Access new features as added.

2.2 What is Web Connect?

Web Connect is the most ambitious extension of the COLDTUB App system, allowing an EcoPack equipped COLDTUB to establish a connection directly to the Internet. In doing so, the COLDTUB owner can log into the COLDTUB anywhere there is an Internet connection, and from the convenience of a smartphone, tablet or computer can monitor and adjust all major functions of the COLDTUB. Web Connect allows the user to have choice within this functionality, connect via the Cloud, WiFi or via the mycoldtub.com website.

Note: Before you can utilise Web Connect you must first connect your COLDTUB to your Network by WIFI Extender or LAN Cable.

2.3 What is WIFI Extender?

A Wi-Fi Extender, sometimes called a range expander, is a type of wireless repeater used to expand the reach of a wireless LAN.

2.4 What is a Network Connection Through LAN Cable?

An Ethernet cable which is directly connected to the RJ45 Port on your COLDTUBs Processor Card and the other end connected to an RJ45 Port on your Router. Where a new power cable needs to be run to your COLDTUB, it is also a good opportunity to run an Ethernet cable to your COLDTUB at the same time. Doing so achieves the best method of connecting your network to your COLDTUB.

2.5 What Does Web Connect Do?

- Adjust basic COLDTUB functions, such as:
 1. Turn pumps on or off
 2. View current status:
 - a. Chilling
 - b. Heating cycle
 - c. Filtration cycle
 3. View current, and adjust temperature
 4. Turn lighting systems on/off
- Adjust Higher level functions such as:
 1. Adjust filtration cycle frequency and duration
 2. Adjust Salt Water system output.
 3. Monitor your COLDTUBs power consumption
- Reference Functions, such as access:
 1. Owners Manuals.
 2. Troubleshooting Guide, brochures and Quick Reference Cards (QRC).

2.6 What is mycoldtub.com?

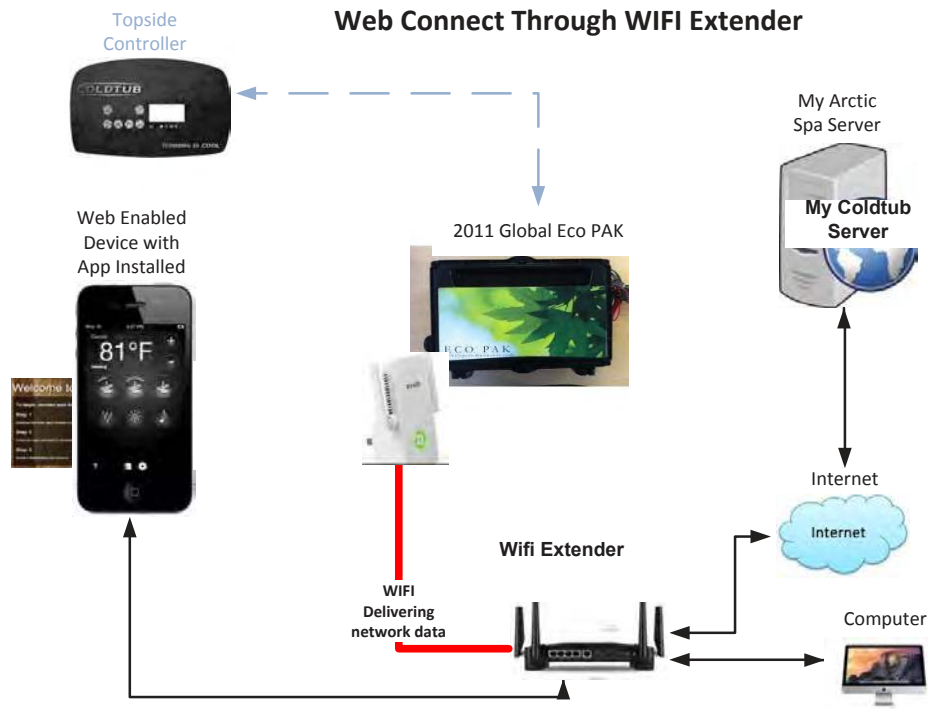
Mycoldtub.com is a Web based after sales support system designed and built by COLDTUB especially for COLDTUB owners that are utilising the COLDTUB App.

Mycoldtub.com through Web Connect allows the COLDTUB owner to log into their COLDTUB anywhere in the world where they have Internet connection, and from the convenience of a smartphone, tablet or computer can monitor and adjust all major functions of the COLDTUB. Web Connect allows the user to have choice within this functionality, connect via the Cloud, WiFi or via the mycoldtub.com website.

Web Address is: www.mycoldtub.com

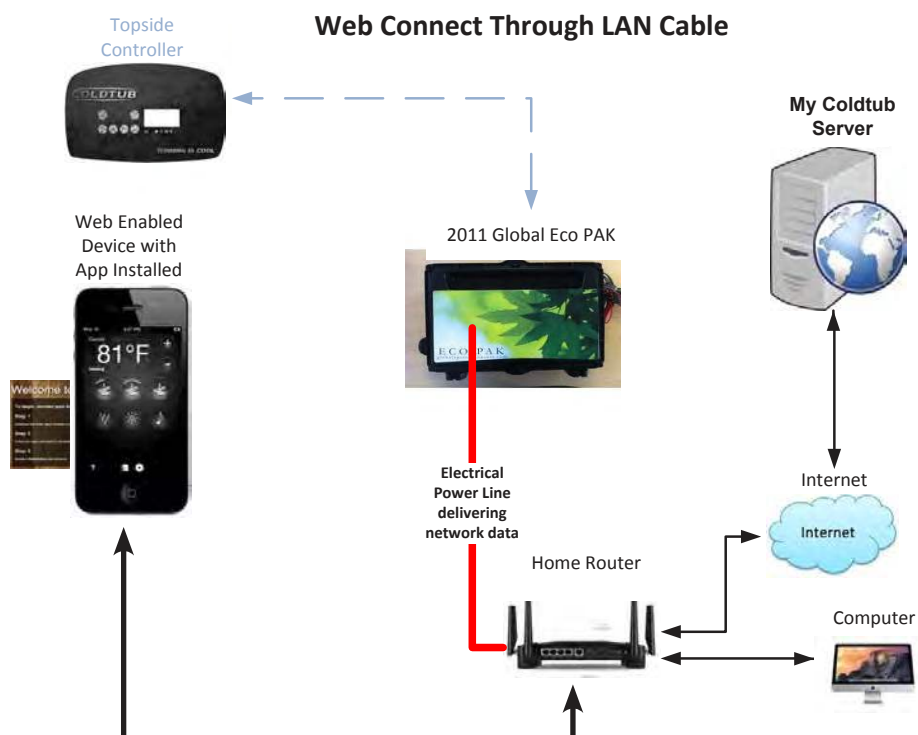
2.7 Web Connect Interface Through WIFI Extender

The following diagram reflects COLDTUB App interface with Web Connect through WIFI Extender.



2.8 Web Connect Interface Through LAN Cable

The following diagram reflects COLDTUB App interface with Web Connect through a LAN Cable connected to the COLDTUBs Processor Card and home Router



2.9 COLDTUB App QRC Through WIFI Extender Flowchart

To connect the Coldtub we recommend running a CAD5 cable to the Coldtub this is the sure way of having a connection. If running a CAD5 cable is not possible there is an option of using a wifi extender. The WIFI extender performance can be affected by the distance to the router and obstacles that block the signal. The following steps are how to pair the wifi extender to a router.

First step will be to open the panel to get access to the mother board (Big black pack that say ECO) about 12" by 18" and remove the front cover of the pack using a Philips screw driver and locate the netgear wifi extender

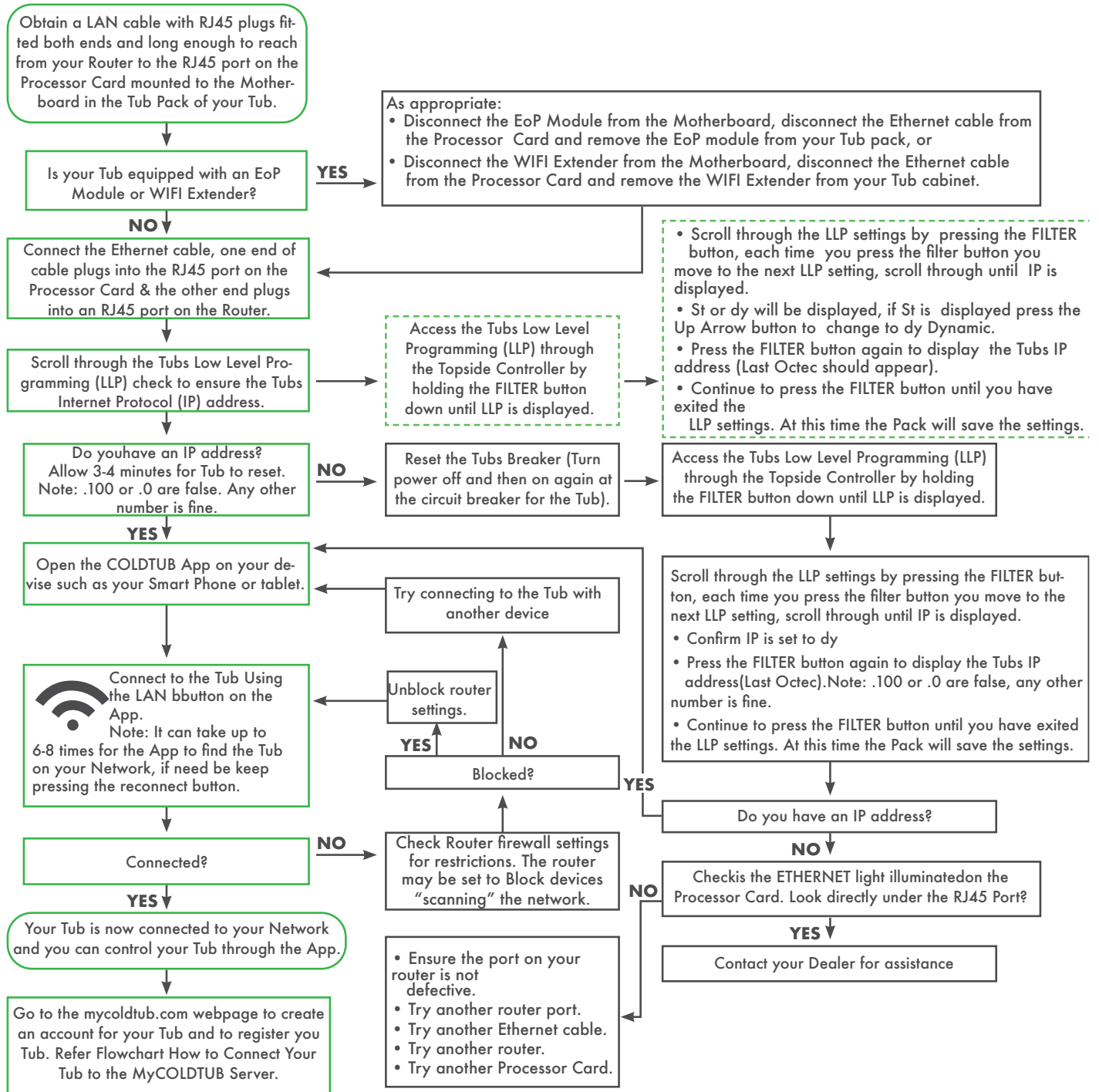


Once the Coldtub is full of water and plugged into the wall outlet and booted up, the Netgear extender will show a power light green, then you will take a paper clip and do a factory reset while still plugged in , (lights will turn off once rebooted) You do not need to run the ethernet cable to the back of the router for this pairing process.

Once the factory reset is done you will push the WPS button on the side of the netgear extender then the one on your WIFI router. (will either say WPS or be 2 arrows pointing towards each other) Once paired the router , power and WPS lights will all be on solid green , This process might take a couple of try's to pair successfully .

2.10 COLDTUB App QRC Through LAN Cable Flowchart

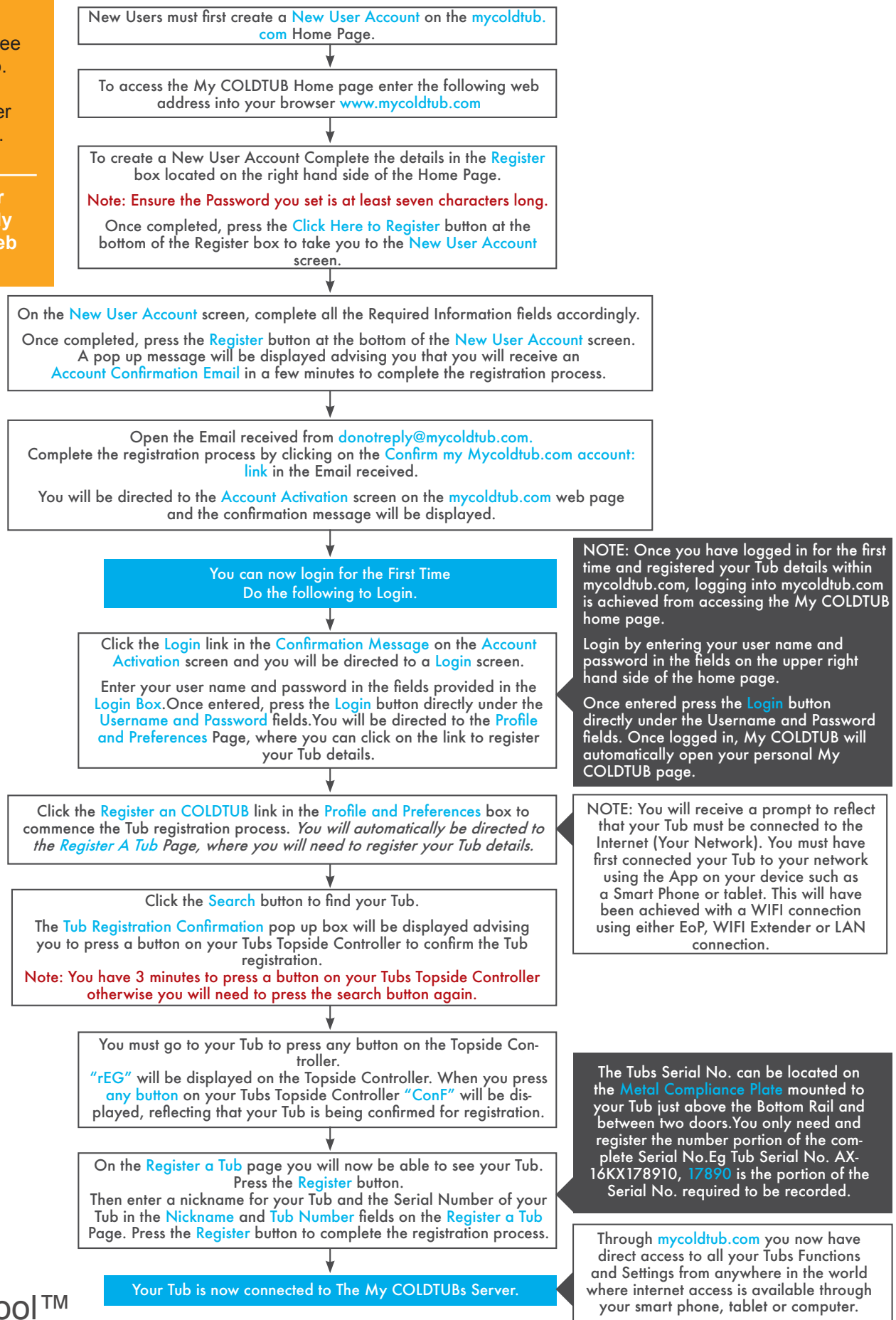
The following flowchart shows how to connect COLDTUB App through connecting a LAN cable to the RJ45 Port on your COLDTUBs Processor Card and the other end connected to an RJ45 Port on your Home Router.



2.11 How to Connect Your COLDTUB to the My COLDTUB Server (Web Connect) Flowchart

The following flowchart shows how to open a free account with mycoldtub.com and register your COLDTUB on the server linked to the mycoldtub.com webpage.

Once completed, your COLDTUB will be fully functional through Web Connect



2.12 My COLDTUB

The following is a brief outline of My COLDTUB.

Mycoldtub.com is a Web based after sales support system designed and built by COLDTUBs especially for COLDTUBs owners allowing owners access to the full benefits of owning a COLDTUB.

The My COLDTUB Server has been designed to receive data from your COLDTUB over the internet through your network system. The data is logged and saved to the My COLDTUB Server on a continual basis.

My COLDTUB has been designed to:

- Receive data from your COLDTUB over the Internet through your network which has been connected to your COLDTUB. The data is logged and saved on the My COLDTUB Server on a continual basis.

The following pages make up the My COLDTUB Web site:

- Home.
- Register.
- Login.
- Settings.
- Documentation.
- Error Codes.
- About.
- Profile.
- Diagnostics.
- Logout.

As you can see from the above, My COLDTUB clearly places COLDTUBs owners another milestone ahead of owners of other brand COLDTUBs.

Register and enjoy the experience.

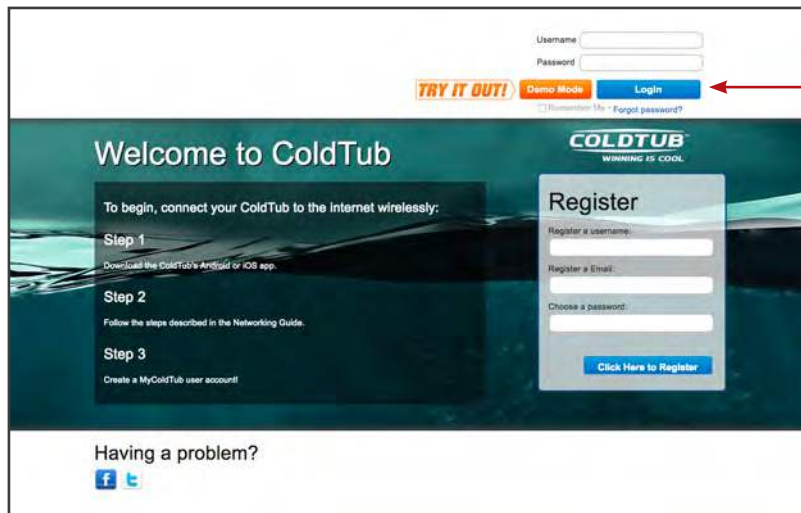
2.12.1 Home Page

To access the My COLDTUB Home page enter the following web address into your browser.

www.mycoldtub.com

For a new user, the user must first create a new user account by completing the details in the Register box located on the right hand side of the Home Page.

For a registered user, click on the Login button located on the upper right hand side of the Home Page.

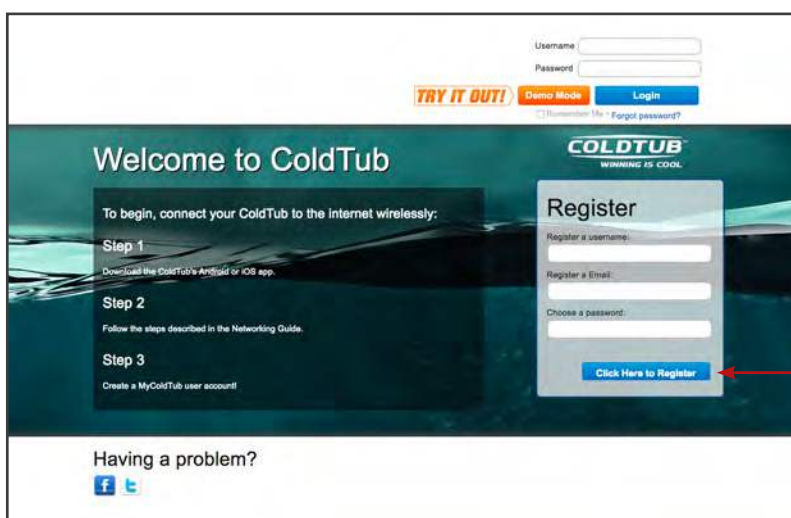


2.12.2 New User Registration

For a new user, to create a user account complete the details in the Register box located on the right hand side of the Home Page.

Note: password must be at least seven characters long.

Once completed, press the Click Here to Register button at the bottom of the Register box on the Home Page.



You will now have been directed to New User Account screen.

Complete all the Required information fields accordingly.

Once completed, press the **Register** button at the bottom of the New User Account screen.

New User Account COLDTUB
SWIMMING IS COOL.

* -Required Information

Enter a username:

Choose a password:

Confirm password:

Enter your e-mail address:

Confirm e-mail address:

Please select your Security Question and enter the answer in the field below.

For your convenience we have created a list of Security Questions. You also have the option of entering your own questions, however we recommend you use the ones listed in the dropdown menu.

Security Question:

Select a question:

Answer:

Enter your first name:

Enter your last name:

Enter your phone number:

Address 1:

Street Address, P.O. box, company name, etc.

Address 2:

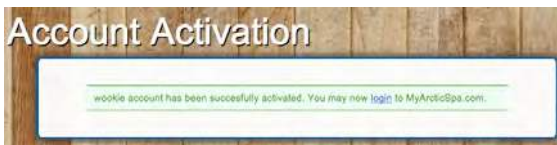
Apartment, suite, unit, building, floor, etc.

Address 3:

City:

You will then receive an Account Confirmation Email from My COLDTUB.

Once you receive the email complete the registration through confirming your email address by clicking on the LINK in the email received.



You will be directed to the Account Activation screen on the mycoldtub.com Web page, and the confirmation will be displayed.

2.12.3 Login First Time

Before you login for the first time you should first ensure your COLDTUB has already been connect your network.

You can now login by clicking the login link on the Account Activation screen and entering your user name and password in the fields provided in the Login box.

You will automatically be directed to the Profile and Preferences Page, where you will need to register your COLDTUB details.

Note: Once you have logged in for the first time and registered your COLDTUB details within mycoldtub.com, logging into mycoldtub.com is achieved from accessing the My COLDTUB home page Log in by entering your user name and password in the fields on the upper right hand side of the home page. Once logged in, My COLDTUB will automatically open your personal My COLDTUB Page.

Login

Sign into MyColdTub.com with your account.

Username:

Password:

Demo Mode **Login**

Remember Me • [Forgot password?](#)
• [Forgot username?](#)

[Resend account confirmation email](#)

2.12.4 Register a COLDTUB

To register your COLDTUB details click the **Register a COLDTUB** link in the **Profile and Preferences** box.

You will receive a prompt to reflect that your COLDTUB must be connected to the Internet (Your Network). Click the Search button to find your COLDTUB. The **COLDTUB Registration Confirmation** pop up box will be displayed advising you to press a button on your COLDTUBs Topside Controller to confirm the COLDTUB registration.

You must go to your COLDTUB and press any button on the Topside Controller.

'**REG**' will be displayed on the Topside Controller. When you press any button on your COLDTUBs Topside Controller "**Conf**" will be displayed, reflecting that your COLDTUB is being confirmed for registration.

On the **Register a COLDTUB** page you will now be able to see your COLDTUB.

Press the **Register** button.

Then enter a nickname for your COLDTUB and the Serial Number of your COLDTUB in the **Nickname** and **COLDTUB Registration** fields on the **Register a COLDTUB Page**.

Press the Register button to complete the registration process.

Your COLDTUB will now be connected to the My COLDTUB server



2.12.5 Login

Once you have logged in for the first time and registered your COLDTUB details within My COLDTUB, logging into My COLDTUB is achieved from accessing the My COLDTUB home page. Login by entering your user name and password in the fields on the upper right hand side of the home page.

Once entered press the **Login** button directly under the Username and Password fields.

Once logged in, My COLDTUB will automatically open your personal **My COLDTUB** page.

Note: If you have forgotten your password you can press the **Forgot Password** button to re-establish your password.

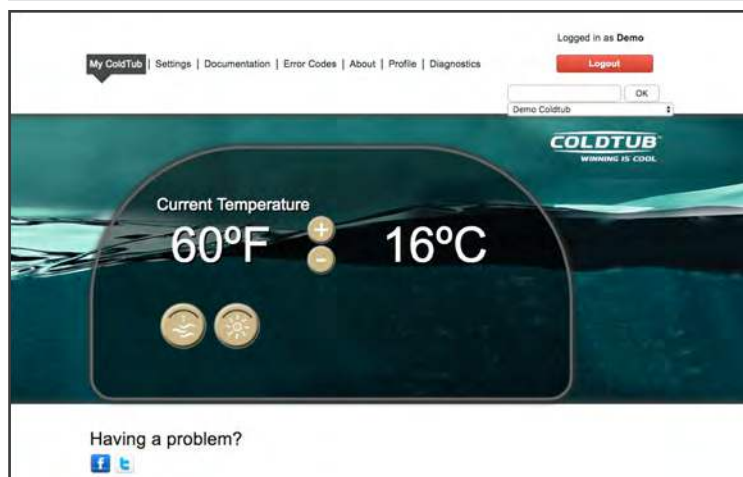
My Arctic Spa: Login Box on Home Page – Screen Shot

Username

Password

Remember Me * [Forgot password?](#)

2.12.6 My COLDTUB



Once you have logged in, My COLDTUB will have automatically directed you to, your **My COLDTUB** page.

If your COLDTUB is connected to the internet through your network you can see if your COLDTUB is in use, adjust the temperature and turn on and off components if desired

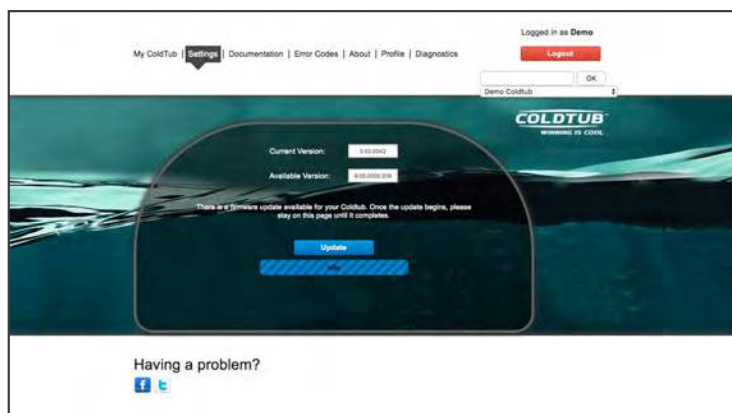
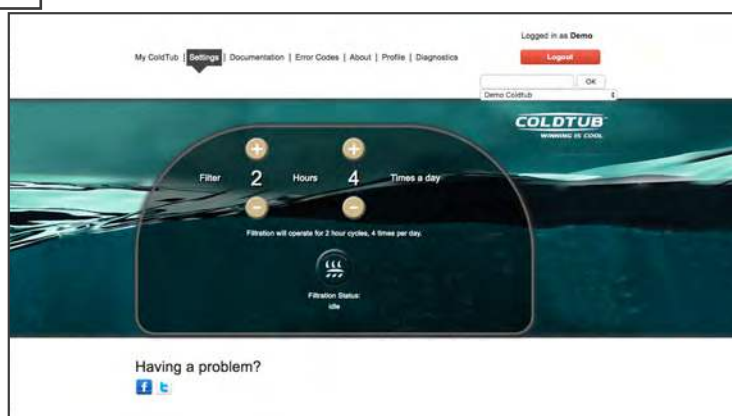
From this page you are able to explore the My COLDTUB web pages by clicking the desired tab along the horizontal tool bar.

2.13.1 Settings

Click on this tab to access the Settings page.

From this page, you can see your COLDTUBs currently producing Sanitizer (Sanitizing) adjust the following settings of your COLDTUB:

- Filtration
- Firmware Upgrade



2.13.2 COLDTUB PAL Status Settings

If your COLDTUB is optioned with COLDTUB PAL, the dashboard displays:

- Your Chlorine and PH levels, divided into three levels - Low, Ok, High
- Battery Status Indicator, displaying Salt Cell life. Your firmware must be 9.01.0026 or above
- Indicator light to reflect if COLDTUB PAL is operating or not
- Boost button to manually run COLDTUB PAL for 1hr. Used in cases of heavier bather load

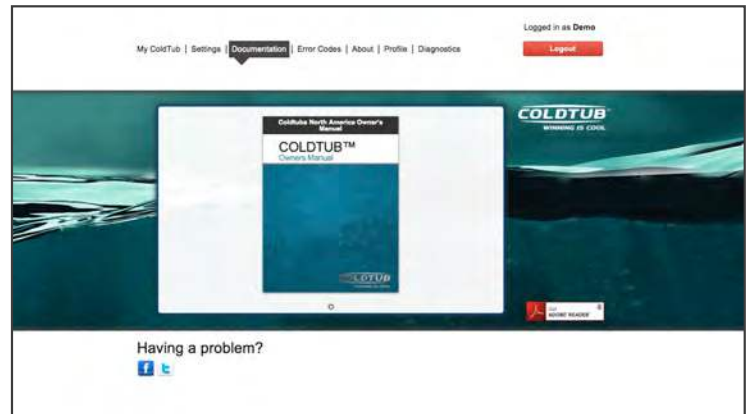


2.13.3 Documentation

Click on this tab to access the Documentation page.

This page provides you easy access to:

- Owners manual
- Networking guide
- COLDTUB App user guide
- Other cool stuff
- Quick Reference Cards

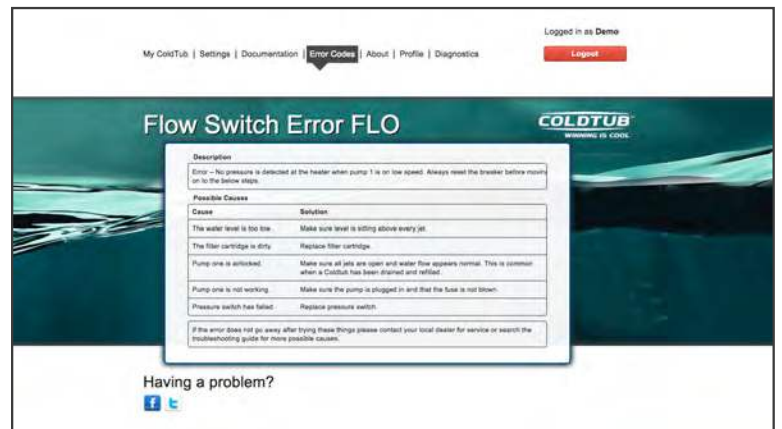


2.13.4 Error Codes

Click on this tab to access the Error Codes page.

This page provides you quick access to error code descriptions, possible causes and solutions for error codes that will be displayed on your COLDTUBs topside controller, in the unlikely event of a system warning linked to a possible component fault, such as:

- Flow switch error - FLC.
 - Flow switch error - FLO.
 - High limit error - HL.
 - High limit temp probe error - HL.
 - Temp probe error - PRR.
 - High PH error - PH flashing
- } Or HPT

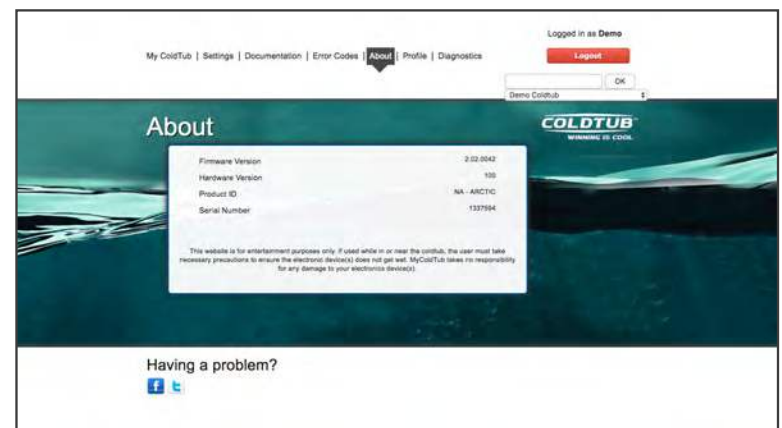


2.13.5 About

Click on this tab to access the About page.

This page displays the following details about your COLDTUB:

- Firmware version load.
- Hardware version.
- Product ID.
- COLDTUB serial number.

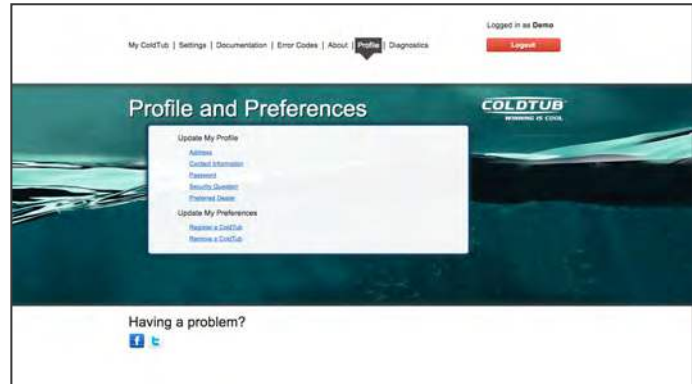


2.13.6 Profile

Click on this tab to access the Profile page.

This page is used to:

- Update your personal details such as email and password.
- Update your preferences such as register and remove a COLDTUB from My COLDTUB.

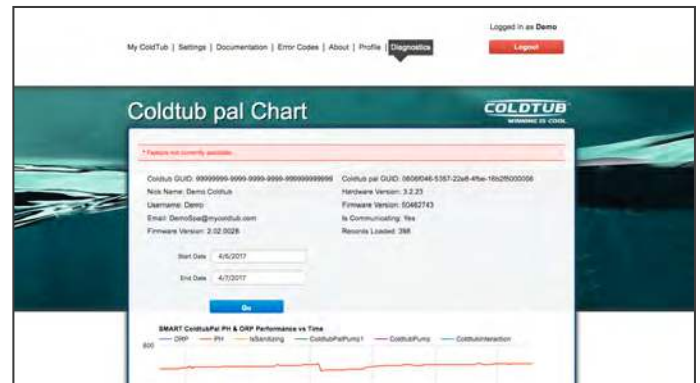


2.13.7 Diagnostics

Click on this tab to access the Diagnostics page.

This page is used to access the data that has been transmitted from your COLDTUB to My COLDTUB. Data such as, but not limited to the following is captured:

The data can be used by the COLDTUBs owner to determine and track their COLDTUBs power consumption.



2.13.8 Logout

To logout of My COLDTUB press the Logout button on the horizontal tool bar in the right hand upper corner of the screen.

Once out, enjoy your COLDTUB!

2.14 Connect with the NETGEAR Installation Assistant

1. Use a WiFi network manager on a computer or mobile device to find and connect to the extender WiFi network NETGEAR_EXT
After the connection with the computer or WiFi device is established, the Device Link LED lights.
2. Launch a web browser.
3. Enter www.mywifiext.net in the address field of the browser. The New Extender Setup page displays.
4. Click the NEW EXTENDER SETUP button.
The Create Account page displays.
5. Complete the fields on the page to set up your login credentials and click the NEXT button.
6. Select a WiFi network to extend and click the NEXT button.
7. In the Password (Network Key) field, type the existing WiFi network password (also called the passphrase or security key) and click the NEXT button.
8. Set the network name (SSID) and password for your extender and click the NEXT button.
9. Connect your computer or WiFi device to the new extended WiFi network using the SSID and password that you created in Steps 7 and
10. Make sure that your computer or WiFi device is successfully connected before you click the CONTINUE button.
11. Click the CONTINUE button. A message displays confirming that the extender is connected and ready.
12. Click the NEXT button.
The registration page displays
13. Complete the registration fields and click the FINISH button to complete the setup.
If you do not want to register your extender, click the Skip Registration link

COLDTUB™
WINNING IS COOL

COLDTUB™ PAL

Owners Manual



NATURAL SALT WATER CARE

Table of Contents

3.1	What is COLDTUB Pal?	43
3.2	What Does COLDTUB Pal Do?	43
3.3	What Are The Benefits of COLDTUB Pal?	43
3.4	How Does COLDTUB Pal Work?	44
3.4.1	COLDTUB Pal System Interface	44
3.4.2	COLDTUB Pal Main Components	45
3.5	COLDTUB Pal Version Table	46
3.6	COLDTUB Pal Version – Installed in Owners Tub	46
3.7	Definitions of Terms	46
3.8	Water Chemistry Abbreviations/Acronyms & Ranges	49
3.9	COLDTUB Pal Warranty	49
3.10	COLDTUB Pal Start – Up Guide	50
3.10.1	COLDTUB Pal Start-Up Overview Flowchart	50
3.10.2	Fill Tub With Water Power Up Tub and Set Water Temperature	53
3.10.3	Program Filtration Cycles/Filtration Duration	54
3.10.4	Establishing Correct Water Chemistry	54
3.10.5	Register Tub With COLDTUB Pal	55
3.10.6	Sanitizer and pH Readings	55
3.11	COLDTUB Pal	56
3.11.1	Home Page	57
3.11.2	New User Registration	57
3.11.3	Login First Time	58
3.11.4	Register a COLDTUB	58
3.11.5	Login	59
3.11.6	COLDTUB Pal	59
3.11.7	Settings	59
3.11.8	Documentation	60
3.11.9	Error Codes	60
3.12	About	61
3.12.1	Profile	61
3.12.2	Diagnostics	62
3.12.3	Logout	62
3.12.4	Caring for your COLDTUB Pal System - Maintenance	63
3.12.5	Caring for your COLDTUB Pal System - Questions	65
3.13	COLDTUB COLDTUB Pal Version 1 R1 Maintenance Schedule	68

3.1 What is COLDTUB Pal?

COLDTUB Pal is an advanced salt water maintenance system designed to data log pH (potential Hydrogen) and ORP (Oxidation-Reduction Potential) readings and self manage the ORP level within the specified range.

3.2 What Does COLDTUB Pal Do?

- Data log Tub water pH and ORP readings.
- Maintains ORP within the specified range by automatically producing sanitizer (Chlorine) agents.
- Displays current ORP and pH levels of your Tub water.
- Softens water.
- Clarifies water.

3.3 What Are The Benefits of COLDTUB Pal?

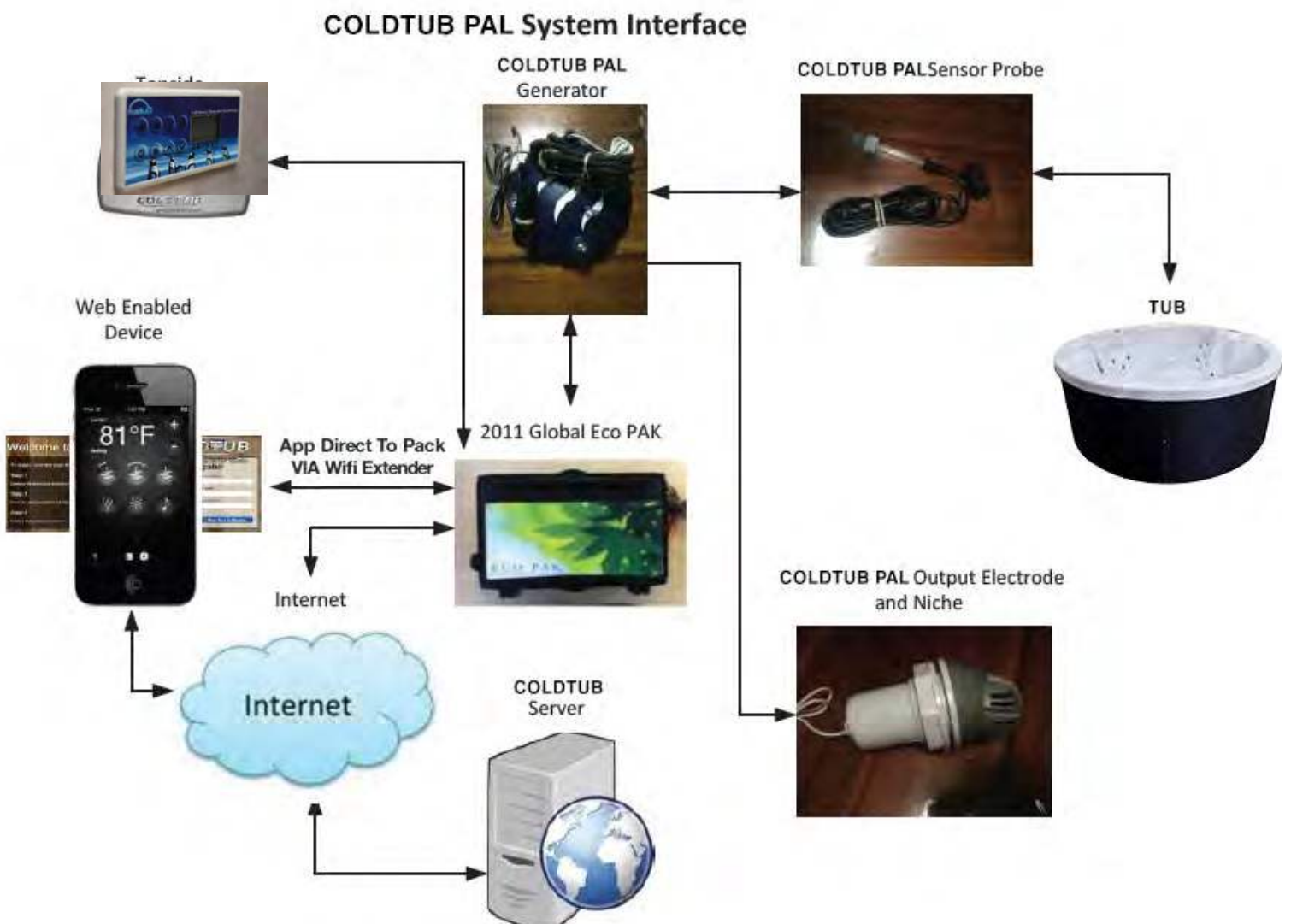
- Automatically maintains sanitizer (Chlorine) within the specified ORP range.
- Displays current ORP and pH levels of your Tub water.
- Takes the guess work out of calculating how much COLDTUB Cold Water Run Down is required to add to your Tub water to lower the pH level within the required range.
- Makes skin feel soft and smooth.
- Makes water look Sparkling clean.
- Reduces contact with harsh chemicals.
- Dramatically reduces time and money needed to maintain Tub water.
- Reduces impact to the environment:
 1. Fewer trips to the Tub store for supplies and having your water tested.
 2. Less packaging wasted on chemical containers.
 3. Less industrial waste produced making Tub chemicals.

3.4 How Does COLDTUB Pal Work?

- Consumer registers their Tub on the COLDTUB Pal web based after sales support system.
- COLDTUB Cold Water Dead Sea Salt is added to the Tubs water when the Tub has been filled with water and water balanced.
- An ORP/pH probe fixed into the foot well area of your Tub sends a signal to the Global Eco Pak through the COLDTUB Pal Communication Cable. The Global Eco Pak then establishes a two-way communication channel between the Global Eco Pack and COLDTUB Pal.
- COLDTUB Pal data logs the Tub water pH and ORP levels.
- COLDTUB Pal automatically produces and maintains sanitizer (Chlorine) within the specified ORP range.
- COLDTUB Pal displays current ORP and pH levels of your Tub water within COLDTUB Pal.
- As required the consumer adds the required amount of COLDTUB Cold Water Run Down to keep the pH within the required range.

3.4.1 COLDTUB Pal System Interface

The following diagram reflects the COLDTUB Pal System interface:



3.4.2 COLDTUB Pal Main Components

The following table depicts the COLDTUB Pal components referenced in this manual.

Term	Picture
Global Eco PAK	 A rectangular black device with a green and white screen displaying the text "ECO PAK".
COLDTUB Pal Generator	 A dark blue, dome-shaped device with various cables and connectors attached.
COLDTUB Pal Output Electrode	 A grey, dome-shaped electrode with a grid-like pattern on its surface.
COLDTUB Pal Sensor	 A small, white, rectangular sensor with a black cable attached.
COLDTUB Pal Niche (Two piece the front section unscrews from the body section)	 Two white plastic components: a front section and a body section, connected by a white cable.
COLDTUB Pal Electrode Housing (Also known as Lippert Wallfitting Threaded)	 A black, circular, threaded component with a white center.
COLDTUB Pal Housing Grate (Also known as Lippert Grate Threaded)	 A black, circular, threaded component with a grid-like pattern.
COLDTUB Pal Housing Plug	 A black, circular, threaded component with a white label.
COLDTUB Pal Communication Cable	 A bundle of white cables with a black connector.

3.5 COLDTUB Pal Version Table

The following table is used to track the release dates and provide a summary for any COLDTUB Pal version releases.

COLDTUB Pal VERSION	PRODUCTION RELEASE DATE	SUMMARY
Version 1	January 2018	Initial release

3.6 COLDTUB Pal Version – Installed in Owners Tub

The following table provides for the owner to record the COLDTUB Pal version details of their Tub.

COLDTUB Pal VERSION	Tub PRODUCTION DATE	Tub SERIAL NO.

3.7 Definitions of Terms

TERM	DEFINITION
COLDTUB Pal	COLDTUB Pal is an advanced salt water maintenance system designed to data log pH and ORP readings and self manage the ORP level within the specified range
COLDTUB Pal Output Electrode	Five plate platinum-iridium Titanium electrode - equipped salt cell converts the saltwater solution to sanitizer, and as this solution reverts back to its natural form (salt) after sanitizing. Unless large volumes of water are added to the Tub you never have to add more salt. The five plate electrode plastic outer casing is silver in color.
COLDTUB Pal Output Electrode Version	Modification status of the electrode fitted to the Tub.
COLDTUB Pal Sensor	pH and ORP sensor (probe) used to measure pH and chlorine (ORP) readings along with many other reading and transfer the readings to the COLDTUB Pal web site. The Sensor is connected to the Global Eco Pak with a COLDTUB Pal Communication Cable.
COLDTUB Pal Communication Cable	Cable that connects the COLDTUB Pal Sensor to the Global Eco Pak. The communication cable is used to establish continuous two-way communication between the COLDTUB Pal System and COLDTUB Pal.
COLDTUB Cold Water	COLDTUB range of products developed especially for maintaining your Tubs water.
COLDTUB Pal	COLDTUB Pal is a Web based after sales support system designed and built by COLDTUB especially for COLDTUB owners that have COLDTUB Pal installed in their Tub. COLDTUB Pal has been designed to receive data from your Tub over the internet through the Tubs Wi-Fi system. The data is logged and saved by COLDTUB Pal on a continual basis.

Definitions of Terms (Continued)

TERM	DEFINITION
Calcium Hardness (CH)	<p>Calcium Hardness is a measure of the total amount of dissolved calcium salts in the water. CH helps determine how scaling or corrosive the water is. It is believed that calcium helps control the corrosive nature of water.</p> <p>Calcium has two major problems in Hot Water Chemistry:</p> <ol style="list-style-type: none"> 1. CH has a tendency to precipitate (fall out of suspension in high temperatures). 2. High pH will cause calcium to precipitate. The problem with calcium falling out of suspension is that it collects on the heater and pump, and shortens their life. <p>Any natural corrosiveness in the water can be combated by maintaining a slightly higher Total Alkalinity Level.</p>
Alkalinity Total Alkalinity (TA)	<p>A measure of how stable the pH is (a measure of the total levels of carbonates, bicarbonates, hydroxides, and other alkaline substances in the water).</p> <p>TA is referred to as the water's "pH buffer". In other words, it's a measure of the ability of the water to resist changes in pH level.</p> <p>If the TA is too low, the pH level will fluctuate widely from high to low. Fluctuations in pH can cause corrosion or scaling of the Tub components.</p> <p>Low TA can be corrected by adding COLDTUB Cold Water Balance to the Tub water.</p> <p>If the Total Alkalinity is too high, the water will be more susceptible to scale and high pH. High pH may be difficult to bring down.</p> <p>Note: Salt systems naturally drive pH levels to increase.</p> <p>High TA can be lowered by adding COLDTUB Cold Water Run Down to the Tub water.</p> <p>Once the TA is Balanced, it normally remains stable, although some sanitizers, and the addition of more water with a high or low alkalinity will raise or lower the TA reading of the water.</p>
Potential Hydrogen (pH)	<p>The pH level is the measure of alkalinity.</p> <p>pH is measured between 0 and 14 denoting various degrees of acidity or alkalinity.</p> <p>Neutral water has a pH of 7.0 Water below 7.0 is acidic and becomes more acidic as it approaches zero.</p> <p>Water above 7.0 is alkaline and alkalinity increases as it approaches 14.</p> <p>When the pH of water is 7.0 or below, chlorine will act primarily as a sanitizer. At this level, it is very effective at killing bacteria.</p> <p>At 7.4, chlorine will act equally as a sanitizer and oxidizer.</p> <p>Above 7.8, chlorine will act principally as an oxidizer.</p> <p>The pH of chlorine is 11.7ppm.</p> <p>Tub water is considered balanced if the pH level is within the target range, between 7.0pH to 7.6pH.</p> <p>Adding chlorine either automatically through a salt system or manually, into Tub water with high pH, above 7.6pH, will further increase the pH level and dramatically reduce the effectiveness of the chlorine as a sanitizer. This must be avoided by first reducing the pH level into the target range 7.2pH - 7.6pH.</p> <p>Maintaining a Balanced pH level between 7.2pH and 7.6pH is extremely important for:</p> <ul style="list-style-type: none"> • Optimizing the effectiveness of the sanitizer. • Maintaining water that is comfortable for the user. • Preventing equipment deterioration. • Note: Salt systems naturally drive pH levels to increase, strive to achieve a balanced pH level.

Definitions of Terms (Continued)

TERM	DEFINITION
Potential Hydrogen (pH) <small>(Continued)</small>	<p>If the Tub water's pH level is too low, the following may result:</p> <ul style="list-style-type: none"> • The sanitizer will dissipate rapidly. • The water may cause irritation to Tub users. • The Tub's equipment may corrode. <p>Low pH can be raised by adding COLDTUB Cold Water Jump Up to the Tub water.</p> <p>If the pH level is too high, the following may result:</p> <ul style="list-style-type: none"> • The sanitizer is less effective. • Scale will form on the Tub shell surface and the equipment. • High pH will cause calcium to precipitate (fall out of suspension). • The water may become cloudy. <p>High pH can be lowered by adding COLDTUB Cold Water Run Down to the Tub water.</p> <p>It is important to check the pH on a regular basis. The pH will be affected by the bather load, the addition of new water, the addition of various chemicals, and the type of sanitizer used.</p>
ORP	<p>Oxidation–Reduction Potential.</p> <p>This is simply a measurement of the water's ability to cleanse itself. ORP is measured in millivolts (mV). Also refer to FCL</p>
Free Chlorine (FCL)	<p>FCL is the active form of chlorine that actually kills bacteria and algae (It is a Sanitizer).</p> <p>Sanitizer is extremely important for killing algae, bacteria and viruses, and preventing unwanted organisms for growing in the Tub. At the same time, you don't want too high of a sanitizer level, or it can irritate your skin, lungs and eyes.</p> <p>Always maintain the sanitizer level in your Tub within the recommended range.</p> <p>Also refer to ORP</p>
Chlorine Residual	<p>The actual level of chlorine in the water after the chlorine demand has been satisfied.</p>
Sanitizer	<p>Chemical used to kill bacteria.</p> <p>Generic name: Chlorine.</p> <p>Warning Adding a Chlorine agent such as Cold Water Sanitizer will cause inaccurate ORP and pH readings. If chlorine is added to the Tubs water it will take three days for the COLDTUB Pal Sensor Probe to cleanse itself and start sending accurate readings to COLDTUB Pal.</p> <p>Also Refer Section 1.16 Caring for your COLDTUB Pal System, Question 3 If the COLDTUB Pal System is not working, what should I do if I need to add COLDTUB Cold Water BOOST or other sanitizer to the Tubs water?</p>
Parts Per Million (ppm)	<p>ppm: parts per million, a standard measure of chemical or mineral concentration.</p>
Organic waste	<p>Debris such as microorganisms, perspiration, urine, etc. which needs to be burned up or "oxidized" regularly to prevent haze, algae, chloramines, etc.</p>
Shock	<p>An oxidizer that "burns off" the organic wastes which cause cloudiness and algae. It is a generic term for a chemical used to oxidize organic wastes.</p>

3.8 Water Chemistry Abbreviations / Acronyms & Ranges

ABBREVIATION/ACRONYMS	DEFINITION	CORRECT CHEMICAL LEVELS
CH	Calcium Hardness	50 - 150 ppm
TA	Total Alkalinity	80-120 ppm
pH	Potential Hydrogen	7.0 – 7.6 ppm
ORP	Oxidation–Reduction Potential	545 – 550 mV COLDTUB Pal Optimum Range. (Optimum Range is the default factory setting, user may adjust higher if preferred). Depending on the water chemistry which will be effected by bather load and Tub usage, at times the ORP value will overshoot or undershoot the Optimum Range.

3.9 Warranty

COLDTUB Pal Warranty

COLDTUB warrants the COLDTUB Pal system against malfunctions due to defects in materials and workmanship for 2 years from the original date of delivery to the original customer on factory installed systems, except the user replaceable COLDTUB Pal Electrode which needs to be replaced annually. This warranty includes parts only.

Tub water quality and other damages resulting from water imbalance are specifically not covered by this warranty.

Disclaimer: This is not an automatic water care system. The system is set up for typical Tub use.

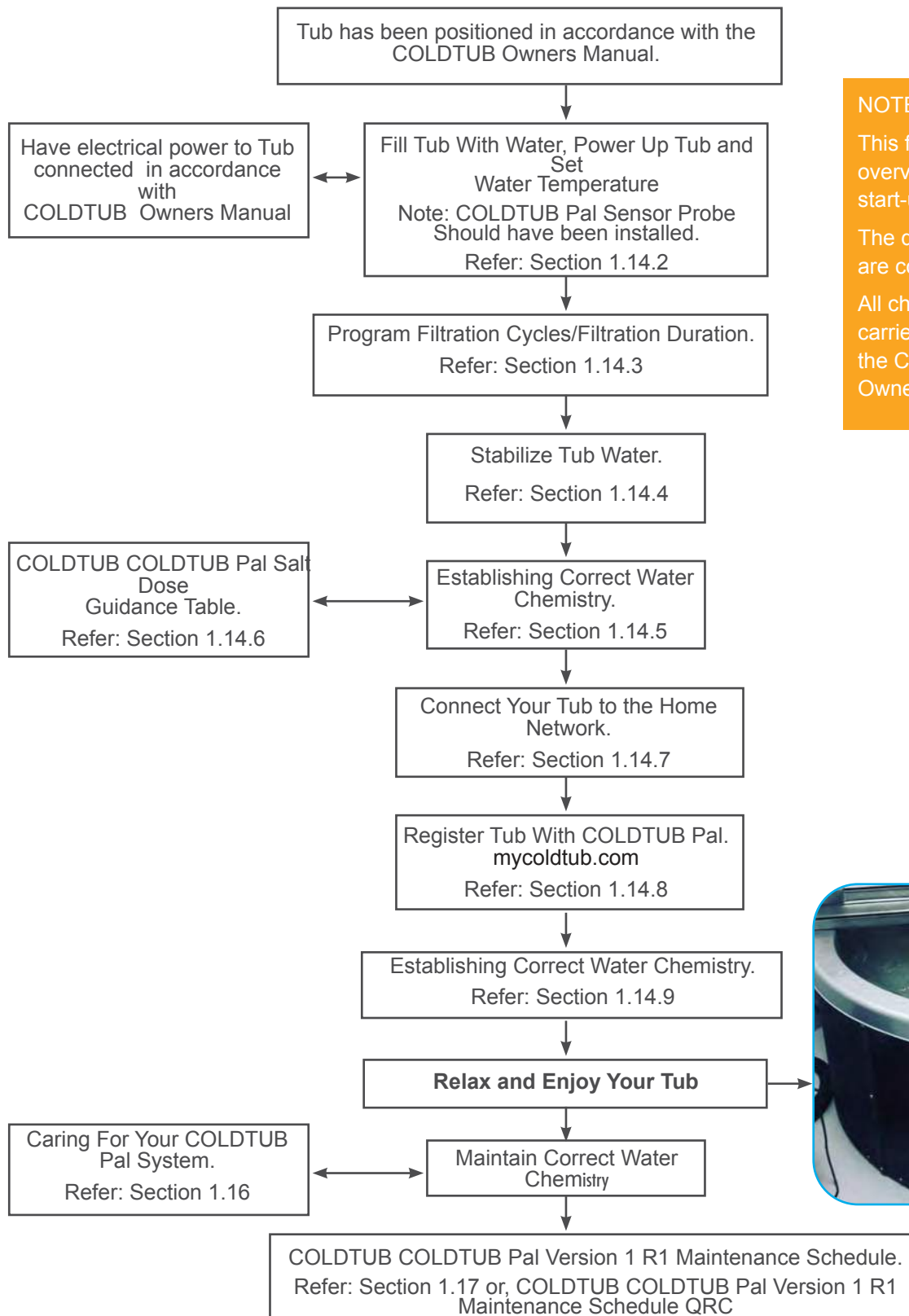
The Tub user is ultimately responsible for maintaining proper sanitary water conditions. Use of salt other than COLDTUB Cold Water Sea Salt Blend will damage the COLDTUB Pal components and void the warranty. The COLDTUB Cold Water Sea Salt blend has been developed to protect COLDTUB Pal components from damage and the use of alternative salt blends will be easily detected by technicians.

This warranty may be void if the Tub is operated with water salt concentrations outside the recommended level of 2000 to 2500 parts per million (ppm).

Damage to other Tub components unrelated to the COLDTUB Pal system as a result of leaking pump seals are specifically not covered by this warranty. For example, heaters, heater barrels, jets, grab rails, pump seals, and pump motors are not covered in this case.

3.10 COLDTUB Pal Start-up Guide

3.10.1 COLDTUB Pal Start-Up Overview Flowchart



NOTE:

This flowchart provides an overview of the COLDTUB Pal start-up process.

The detailed support procedures are contained in this document.

All checks and test should be carried out in accordance with the COLDTUB COLDTUB Pal Owners Manual.



ORP/PH Probe Installation

ORP/PH Probe Installation



Fill water to just above the ORP Probe wall fitting



Get Probe ready to install. The Probe needs to stay in its solution until you are ready to install.



Remove Probe from solution



Insert probe into strain relief

ORP/PH Probe Installation (Continued)



Tighten strain relief until tight



Probe installed! Now remove the 2" plug allowing water to be in contact with the Probe



Install grate into wall fitting. Installation is complete, Continue filling you spa with water



Connect the wires from the ORP probe to the genertor. Make sure the label on the cord matches the label on the generator

3.10.2 Fill Tub With Water Power Up Tub and Set Water Temperature

The following steps provide guidance to help establish correct chemically balanced water. To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before carefully adding to the Tub water.

Note: The following steps take into account that your Tub has water above the COLDTUB Pal Sensor Housing, removed the COLDTUB Pal Sensor Plug, installed the COLDTUB Pal Sensor Housing Grate and installed the COLDTUB Pal Sensor.

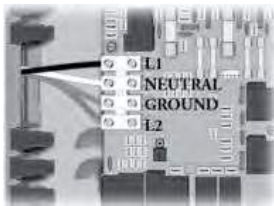
WARNING: Do not proceed until your Tub water is above the COLDTUB Pal Sensor Housing, removed the COLDTUB Pal Housing Plug, installed the COLDTUB Pal Sensor Housing Grate and installed the COLDTUB Pal Sensor. or you have obtained further direction from your Dealer.

Steps to Fill Tub With Water Power Up Tub and Set Water Temperature



STEP 1. FILL TUB

Fill your Tub through half way up the skimmer box as shown to the appropriate level.



STEP 2. CONNECT/TURN ON ELECTRICAL POWER TO THE TUB

Once the Tub is filled to the proper level, connect power to the Tub in accordance with the COLDTUB Owners Manual, and turn the power on to the Tub on.



STEP 3. SET WATER TEMPERATURE

Set the water temperature control on the settings to the desired temperature (between 42°F and 104°F or 5.5°C and 40°C).

3.10.3 Program Filtration Cycles/Filtration Duration

The system will automatically perform 4 one hour filtration cycles per day, 6 hours apart. The above system factory filtration settings can be adjusted by the consumer through:

- onTub power management using your device such as smart phone or tablet that has been connected to your Tub through WiFi. Refer onTub user Guide.
- The settings. Refer COLDTUB COLDTUB Owners Manual.

3.10.4 Establishing Correct Water Chemistry

The following steps provide guidance to help establish correct chemically balanced water.

To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before adding to the Tub water.

Steps to Establish Chemically Balanced Water With COLDTUB Pal



Step 1. Test and Adjust Total Alkalinity

Test Total Alkalinity. It should be 80 – 120 ppm (120 max). If high, lower Total Alkalinity with **COLDTUB Cold Water Run Down** (pH Down) or muriatic acid. If low, raise TA with **COLDTUB Cold Water Balance**.

WARNING: Skipping this step on Start-up can cause scaling problems and cloudy water that may not be covered under warranty.

NOTE: Use all products according to directions on the bottle.



Step 2. Test and Adjust pH

Test pH. Levels should be between 7.0 – 7.6.

If pH is high, (over 7.6) add **COLDTUB Cold Water Run Down**.

NOTE: Use all products according to directions on the bottle. If low, raise PH with **COLDTUB Cold Water Balance**.

NOTE: Salt systems naturally drive pH levels to increase, strive to achieve a Balanced pH level.

NOTE: High pH will cause calcium to precipitate (fall out of suspension). The problem with calcium falling out of suspension is that it collects on the heater and pump, and shortens their life.



Step 3. Mix Salt Crystals

Dissolve the required recommended salt dosage in a 5 Gallon (20 litre) pail of hot water.

Pal Salt Dosage Chart contained in this guide.



Step 4. Add Salt to Tub Water & Re-Test TA / pH

(a) Slowly pour the dissolved salt from the pail into the Tub water.

(b) Run pumps for 5 minutes to help mix salt blend through.

(c) Wait 1 hour.

(d) Then re-test and adjust Total Alkalinity level accordingly.

(e) Then re-test and adjust pH level accordingly.

Refer: Steps 2 and 3 for correct TA/pH levels

3.10.5 Register Tub With COLDTUB Pal

You will now need to register your Tub through the internet with COLDTUB Pal.

COLDTUB Pal is a Web based after sales support system designed and built by COLDTUB especially for COLDTUB owners that have COLDTUB Pal installed in their Tub.

COLDTUB Pal has been designed to receive data from your Tub over the internet through the Tubs Wi-Fi system. The data is logged and saved by COLDTUB Pal on a continual basis.

The web address is: www.mycoldtub.com

Refer Section 1.15 COLDTUB Pal for registration details.

3.10.6 Sanitizer and pH Reading

The following provides guidance on the establishment and maintenance of sanitizer and pH readings.

Sanitizer Readings

You should have ORP sanitizer (Chlorine) readings within 24 hours.

24 hours post adding the salt to the Tubs water, COLDTUB Pal will be able to provide accurate readings regarding the ORP sanitizer (chlorine) reading, and pH reading.

Important: Always check the pH and ORP (sanitizer) levels before each Tub use.

* Expect the pH to increase slowly over each week and when the pH gets too high use [COLDTUB Cold Water Run Down](#) to correct it.

High pH will cause premature failure of the COLDTUB Pal Output Electrode, cloudy water, and decreased effectiveness of the sanitizer.

3.11 COLDTUB Pal

The following is a brief outline of COLDTUB Pal.

COLDTUB Pal is a Web based after sales support system designed and built by COLDTUB especially for COLDTUB owners that have COLDTUB Pal installed in their Tub.

COLDTUB Pal has been designed to receive data from your Tub over the Internet through the Tubs Wi-Fi system. The data is logged and saved by COLDTUB Pal on a continual basis.

The data is translated into a format that allows:

The Tub Owner

To log into COLDTUB Pal and check their Tub water to confirm that it is safe for bathers to enter the Tub by accurately confirming pH and ORP sanitizer (Chlorine) are in the required target range. If not the Tub owner will know the exact pH and ORP readings and this is critical in ensuring the correct chemical volume is added to the Tubs water when needed. No need to interpret test strips, takes the guesswork out of maintaining water.

The following pages make up the COLDTUB Pal Web site:

- Home.
- Register.
- Login.
- Settings.
- Documentation.
- Error Codes.
- About.
- Profile.
- Diagnostics.
- Logout.

As you can see from the above, COLDTUB Pal clearly places COLDTUB owners another milestone ahead of owners of other brand Tubs.

Register and enjoy the experience.

3.11.1 Home Page

To access the COLDTUB Pal Home page enter the following web address into your browser.

www.mycoldtub.com

For a **new user**, create a new user account by completing the details in the **Register** box located on the right hand side of the **Home Page**.

For a registered user, click on the Login button located on the upper right hand side of the Home Page.



3.11.2 New User Registration Page

For a **new user**, to create a user account complete the details in the **Register** box located on the right hand side of the **Home Page**.

Once completed, press the Click Here to Register button at the bottom of the Register box on the Home Page.



You will now be directed to New User Account Tab.

Complete the data fields as required.

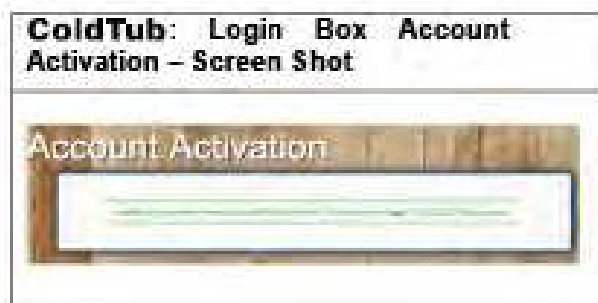
Once completed, press the **Register** button at the bottom of the New User Account tab.



You will then receive an account registration email from COLDTUB Pal.

Once you receive the email complete the registration by confirming your email address by clicking on the link in the received email.

You will be directed to the COLDTUB Pal Web page and the confirmation will be displayed.



3.11.3 Login First Time



Before you login for the first time you should first connect your Tub to your home network.

You can now login by clicking the login link and entering your user name and password in the fields provided in the Login box.

Once you have access to the home page, you can log in by entering your user name and password in the fields on the upper right hand side of the home page.

Once entered press the Login button directly under the Username and Password fields.

You will automatically be directed to the Profile and Preferences Page, where you will need to register your Tub details.

3.11.4 Register a COLDTUB

To register your COLDTUB details click the **Register a COLDTUB link in the Profile and Preferences** box.

You will receive a prompt to reflect that your Tub must be connected to the Internet (Your Home Network). Click the Search button to find your Tub. The **Tub Registration Confirmation** pop up box will be displayed advising you to press a button on your Tubs Topside Controller to confirm the Tub registration.

If you are not sure of how to register your Tub you can click on the Help Video button to obtain further guidance.

Your Tub will now be connected to the COLDTUB Pal server



3.11.5 Login

Once you have logged in for the first time and registered your Tub details within COLDTUB Pal logging into COLDTUB Pal is achieved from accessing the COLDTUB Pal home page. Login by entering your user name and password in the fields on the upper right hand side of the home page.

Once entered press the Login button directly under the Username and Password fields.

Once logged in, **COLDTUB Pal** will automatically open your personal **COLDTUB Pal page**.

Note: If you have forgotten your password you can press the Forgot Password button to re-establish your password.



3.11.6 COLDTUB Pal

Once you have logged in, COLDTUB Pal will have automatically directed you to, your **COLDTUB Pal page**.

If your Tub is connected to the internet through your home network you can see if your Tub is in use, adjust the temperature and turn on and off components if desired, see ORP and pH levels, etc

From this page you are able to explore the COLDTUB Pal web pages by clicking the desired tab along the horizontal tool bar.

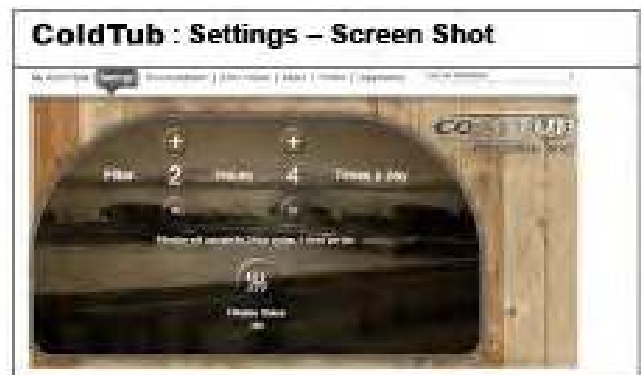


3.11.7 Settings

Click on the Settings tab to access the Settings page.

From this page, you can see your Tubs pH and ORP readings, see if your COLDTUB Pal System is currently producing Sanitizer (Sanitizing) adjust the following settings of your Tub:

- Filtration.
- COLD TUB Pal Status.
- Firmware Upgrade



3.11.8 Documentation

Click on the Documentation tab to access the Documentation page.

This page provides you easy access to:

- Your owners manual.
- Networking guide.
- onTub user guide.
- COLDTUB Pal Owners Manual.
- Power Management.
- Quick Reference Cards.
- Other cool stuff.



3.11.9 Error Codes

Click on the Error Codes tab to access the Error Codes page.

This page provides you quick access to error code descriptions, possible causes and solutions for error codes that will be displayed on your Tubs topside controller, in the unlikely event of a system warning linked to a possible component fault, such as:

- Pressure switch error -FLC
- No water flow - FLO.
- High limit error - HL.
- Temp probe error - PRR.
- High PH - flashing PH



3.12 About

Click on the About tab to access the About page.

This page displays the following details about your Tub:

- Firmware version load.
- Hardware version.
- Product ID.
- Tub serial number.



3.12.1 Profile

Click on the Profile tab to access the Profile page.

This page is used to:

- Update your personal details such as email and password.
- Update your preferences such as register and remove a COLDTUB from Mycoldtub.com.



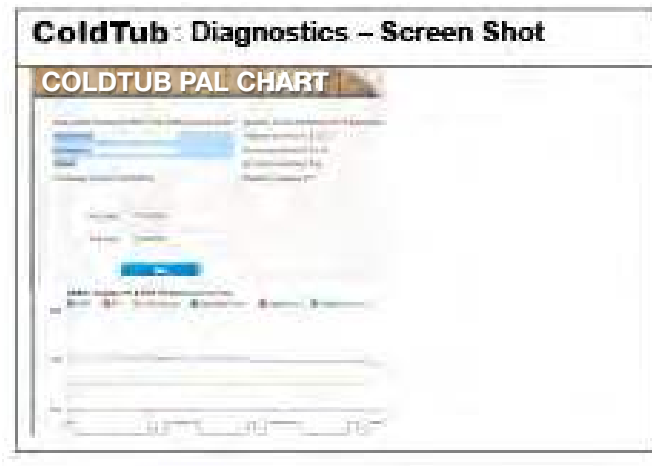
3.12.2 Diagnostics

Click on the Diagnostics tab to access the Diagnostics page.

This page is used to access the data that has been transmitted from your Tub to COLDTUB Pal. Data such as, but not limited to the following is captured:

- COLDTUB Pal chart.
- COLDTUB Pal Table.
- COLDTUB Pal Controls.
- COLDTUB Pal Report.
- Power Management

The data can be used by the Tubs owner to graphically check pH and ORP readings determine power usage.



3.12.3 Logout

To logout of COLDTUB Pal press the Logout button on the horizontal tool bar in the right hand upper corner of the screen.

Once out, enjoy your Tub!

3.12.4 Caring for your COLDTUB Pal System

COLDTUB Pal Maintenance

Question 1 How do I Replace the COLDTUB Pal Output Electrode?

The COLDTUB Pal Output Electrode should be replaced every 12 months. Doing this ensures Sanitizer will be produced and sanitizer remains in the required range.

The COLDTUB Pal Output Electrode can be replaced without draining the Tubs water providing these steps are followed.

Steps:

- Unscrew the COLDTUB Pal Niche out of its housing.
- Raise the Niche completely out of the Tubs water and dry off any water on the Niche and Electrode.
- To help prevent galvanic corrosion, it is critical to ensure that Tub water does not come into contact with the COLDTUB Pal Electrode Electrical Pin or female matting connection located on the COLDTUB Pal Niche when disconnecting the Niche from the COLDTUB Pal Electrode.

*** Keep them high and keep them dry, when replacing the COLDTUB Pal Output Electrode!**

- With a small Phillips screwdriver unscrew the set screw that secures the COLDTUB Pal Output Electrode to the Niche.
- Remove the COLDTUB Pal Output Electrode from the Niche by Unscrewing the Electrode anticlockwise and ensure the small O-ring has not dislodged from the Electrode and remained behind inside the Niche.
- Ensure the new Electrode has the small O-ring correctly seated into the groove that is positioned around the electrical pin.
- Inspect the male electrical connection plug in the Niche to ensure it is not corroded. If corroded the dealer will need to be contacted as the COLDTUB Pal Niche Assembly will require replacement.
- Apply Dielectric Grease to the electrical pin on the new COLDTUB Pal Electrode.
- Insert the COLDTUB Pal Electrode back into the Niche and turning clockwise screw the Electrode into the Niche until tight and the locating hole has aligned (approximately 4 revolutions).
- Insert the set screw into the Electrode and using a Phillips screwdriver tighten the set screw.
- Tuck the wiring loom back into the Housing.
- Screw the Niche back into its Housing ensuring the Electrode points upwards when tight. This ensures maximum output from the Electrode.

Question 2 How do I Care for the COLDTUB Pal Sensor?

The COLDTUB Pal Sensor must never be permitted to freeze and must always remain in contact with water. If the Sensor freezes or is not left in contact with water at all times the sensor will fail and will require replacement!

3.12.4 Caring for your COLDTUB Pal System (Continued)

Question 3 How do I Care for the COLDTUB Pal Sensor when Draining the Tubs Water?

Note: Draining tub and using the provided plug, should take place when Tub will be empty for period of time. (1 week or longer) If doing a quick drain/refill for fresh water, steps using the plug are not needed. The probe will not dry out in 24 hours.

As the COLDTUB Pal Sensor must always remain in contact with water, when the Tubs water is being drained the COLDTUB Pal Sensor Housing must be sealed before the water is drained.

The COLDTUB Pal Sensor Housing is usually located in the foot well or other area of the Tub that is not in the way of bathers or impacted by water turbulence from jets. The COLDTUB Pal Housing has a Grate screwed into the front of the Housing.

Steps for caring for your COLDTUB Pal Sensor when draining the Tubs water:

- Obtain the COLDTUB Pal Housing Plug provided with the Tub.
- Check to ensure the Housing Plug has an O-ring in place.
- Turn the breaker off to isolate power to your Tub.
- Turning anticlockwise, unscrew the Grate located on the front of the COLDTUB Pal Sensor Housing.
- Screw the COLDTUB Pal Housing Plug provided with your Tub into the front of the COLDTUB Pal Sensor Housing. This will seal the water that is in the Housing and prevent the water in the Housing from draining when you drain your Tubs water.

Warning: The COLDTUB Pal Sensor must never be permitted to freeze and must always remain in contact with water. If the Sensor freezes or is not left in contact with water at all times the sensor will fail and will require replacement!

- You can now drain your Tubs water.
- When refilling your Tub with water, leave the COLDTUB Pal Sensor Plug secured in place until the water line is higher than the PH Probe housing.
- The COLDTUB Pal Housing Plug can now be unscrewed from the Housing and the Housing Grate can be screwed back into the Housing.
- Once the water level has been reached you can turn the breaker back on to repower your Tub.

3.12.5 Caring for your COLDTUB Pal System

COLDTUB Pal Questions

Question 1 Does adding salt to the Tubs water impact pH?

Yes adding salt to the Tubs water will increase the pH level.

The chlorine that is produced by a salt chlorinator plays a role in the water chemistry of a salt Tub. Salt is sodium chloride. When an electric charge is passed through salt water, the sodium chloride is turned into sodium hypochlorite. This is the same kind of chlorine that is sold by the gallon as liquid chlorine. The most important feature of sodium hypochlorite is a high pH. When the salt chlorinator produces chlorine, it raises the pH of the Tubs water. Strive to achieve a Low pH level 7.0. pH must not exceed 7.6.

Question 2 What do I do if my ORP Reading is below the Optimum Range?

If COLDTUB Pal reflects that the ORP is below the Optimum Range of 545 – 550 mV you must first consider that water chemistry may have been affected by recent bather load and Tub usage, at times the ORP value will overshoot or undershoot the Optimum Range.

If the COLDTUB Pal Dashboard on COLDTUB Pal reflects that the ORP is below 545 mV do the following:

Check COLDTUB Pal Dashboard through COLDTUB Pal to see if the Dashboard reflects **sanitizing YES**, if yes COLDTUB Pal is currently producing sanitizer. Re-check ORP in a few hours to confirm ORP is increasing.

If Dashboard reflects **Sanitizing NO**:

Trip the Tubs breaker to isolate the power to the Tub and then turn the breaker back on to repower the Tub.

Check COLDTUB Pal Dashboard through COLDTUB Pal to see if the Dashboard reflects **sanitizing YES**, if yes COLDTUB Pal is currently producing sanitizer. Re-check ORP in a few hours to confirm ORP is increasing.

If Dashboard reflects **Sanitizing NO**: Contact COLDTUB who will request a Master Technician to log onto your Tub to determine the possible cause, such as depleted COLDTUB Pal Output Electrode, Poisoned COLDTUB Pal Sensor or corroded COLDTUB Pal Output Electrode electrical connections.

3.12.5 Caring for your COLDTUB Pal System (Continued)

Question 3 How do I help prevent impedance increase at the COLDTUB Pal Electrode?

Maintain the pH level within the target range 7.0 pH – 7.6 pH.

As salt systems naturally drive pH levels upwards, it is most critical to the performance/life of the salt system to

maintain the pH within the target range.

High pH reduces the effectiveness of chlorine.

Therefore, high pH causes your COLDTUB Pal system to produce more chlorine unnecessarily thus increasing pH even higher and reducing the effectiveness of chlorine even further.

Strive to achieve a Low pH level 7.0. pH must not exceed 7.6.

Question 4 Why is my water bright yellow, or bright green, or a rusty color suddenly?

Is the filter dirty? Make sure the filter is new.

Make sure users are washing before entering the tub.

This can happen if the pH gets too high.

Maintain the pH level within the target range 7.0 pH – 7.6 pH.

Lower the pH using 'Cold Water Run Down'. If the color of the water does not normalize you may need to replace the water.

*** Keep an eye on the pH and adjust it weekly to avoid this problem in the future.**

Question 5 What happens if my water becomes cloudy?

Is the filter dirty? Make sure the filter is new.

Make sure users are washing before entering the tub.

Check you pH level to ensure it is in the target range. If high Lower the pH using 'Cold Water Run Down'

Check/Test the water for chlorine content. If the level is low or there is no reading the COLDTUB Pal Output Electrode may be exhausted and require replacement.

Check your filters as they may require replacement.

3.12.5 Caring for your COLDTUB Pal System (Continued)

COLDTUB Pal Questions

Question 6 What is the impact of phosphates on the COLDTUB Pal system?

High levels of phosphates (above 250 ppb) may reduce the effectiveness of sanitizer output.

Question 7 Can I use softened water with my COLDTUB Pal system?

Yes.

You probably have a water softener because your water is quite hard. Your water-softener removes calcium from your water and helps you achieve water with calcium content near the target range, between 50 - 150ppm.

3.13 COLDTUB Pal Version 1 R1 Maintenance Schedule

The following table outlines the typical water maintenance program required for an COLDTUB fitted with COLDTUB Pal Version 1 R1.

To help ensure chemicals dissolve appropriately it is good practice to first mix/dissolve the chemical in an uncontaminated container of hot water before carefully adding to the Tub water. There are two methods to check the target range:

- COLDTUB Pal Application, if your Tub has Wi-Fi and access to the internet through your home network or portable device such as iPad or smart phone, you can log onto COLDTUB Pal and open the Settings or Diagnostics Page to review the readings (To access COLDTUB Pal you must first register your details on the COLDTUB Pal web site: www.mycoldtub.com).

pH	Weekly	Check the Potential Hydrogen (pH) to ensure it is in the target range. Always first check to ensure the pH is within the target range. If the pH is out of the target range pH must be adjusted before making any adjustments to chlorine levels	7.2 – 7.6 pH	
ORP	Weekly (& before each use)	Check the Free Chlorine Level to ensure it is in the target range.	545–550 mV	
Sodium Chloride	Monthly	Check the Sodium Chloride Level to ensure it is in the target range.	Version 1 R1 2200 – 2500 ppm	
Filter	3 Monthly	Change the filter(s)	N/A	
Water	6 Monthly	Change the water	N/A	

Maintenance Action to Adjust/Correct

As Salt systems naturally drive pH levels upwards, it is most critical to the performance/ life of the salt system to maintain the pH within the target range.

High pH reduces the effectiveness of chlorine.

Therefore, high pH causes your COLDTUB Pal system to produce more chlorine thus increasing pH even higher and reducing the effectiveness of chlorine even further.

Strive to achieve a Low pH level 7.0. pH must not exceed 7.6.

Low pH - Can be raised by adding COLDTUB Cold WaterJump to the Tub water.

High pH - Can be lowered by adding COLDTUB Cold Water Run Down to Tub water.

545-550 mV is the Optimum Range factory default setting.

The user may adjust higher if preferred through the COLDTUB Pal Web Page.

COLDTUB Pal will strive to maintain ORP within the Optimum Range.

Depending on the water chemistry which will be affected by bather load and Tub usage, at times the ORP value will overshoot or undershoot the Optimum Range.

Once Sodium Chloride reading is in the target range salt concentration will only change if water is splashed or drained out. Do not add salt unless this test confirms the level is below the chemical acceptable range of 2200ppm.

High Sodium Chloride - add water.

Low Sodium Chloride - add salt.

Change the filter(s) in accordance with Owners Manual instructions.

Change the water in accordance with Owners Manual instructions.

COLDTUB Warranty

Tub Shell Structure~5 Years

Coldtub® warrants the tub shell to the customer against water loss due to structural failure for 7 years.

Equipment & Plumbing~2 years

Coldtub® warrants the tub's electrical equipment components ~ specifically the pump(s) *(please refer to detailed pump warranty on the reverse under "Detailed Pump Warranty". Factory installed Lighting controls, Cooling unit and control system against malfunctions due to defects in materials and workmanship for a period of two years to the original customer from the date of delivery. This warranty includes all parts. On site labor necessary to repair the tub is not included.

Other Components~2 years

Coldtub® warrants the fuses, lights, lighting LEDs, WIFI, jet inserts**, topside control overlays, filter baskets and weir assemblies, diverter handles and caps, air control handles and caps, plastic cover clips, chrome trim to be free of defects in workmanship and materials for a period of two years to the original customer from the original date of delivery. Includes parts necessary to repair. **jet inserts (including Titanium) are not warranted against discoloration, rusting or fading.

Shell Surface~2 years

Coldtub® warrants the shell surface to the customer against water loss due to material failure including cracks, blisters, peeling and delaminating for a period of two years to the original customer from the original date of delivery. Includes parts necessary to repair.

Cabinets~2 years

Coldtub® warrants Cabinet to be free from defects in materials and workmanship for a period of two years to the original customer from the original date of delivery. Includes only parts necessary to repair. Scratches – as well as fading and weathering from exposure to direct sunlight on Cabinet side panels are considered normal wear and tear, and are not covered by this warranty.

Cover~2 years

Coldtub® warrants the cover against malfunctions due to defects in materials and workmanship for two years to the original customer from the original date of delivery. Includes parts necessary to repair. (Normal wear and tear is not included in this warranty, when used with a cover lifter seam damage will be considered normal wear and tear)

Salt System ~ 2 years (Coldtub PAL)

Coldtub® warrants the factory installed natural salt water care system against malfunctions due to defects in materials and workmanship for two years from the original date of delivery to the original customer. This warranty includes parts. Tub water quality and other damages resulting from water imbalance are specifically excluded from this warranty. *See salt system user guide for operating details. Salt cells and probes are consumable parts and warranted to be free from defects for 3 months.

Floor®~2 years

Coldtub® warrants the Floor against rotting and structural cracking for a period of two years to the original customer from the original date of delivery. Includes parts necessary to repair.

DETAILED PUMP WARRANTY

Pump(s) are warranted against material and component failure. The pump shaft seal is covered under warranty. Damage resulting from a neglected leaking shaft seal is not covered under warranty. This includes but is not limited to bearing seizure, end bell failure, start switch failure, impeller failure and capacitor failure. It is the responsibility of the customer to report shaft seal failure before further damage can occur. Any pump component failure determined to be the result of defective material will be replaced under warranty. Coldtub® reserves the right to replace pump components, rather than the complete pump assembly. Vibration noise associated with normal pump operation is excluded under this warranty.

PERFORMANCE

To obtain parts in the event of a defect or malfunction covered by this Limited Warranty, notify Coldtub as soon as possible and use all reasonable means to protect the tub from further damage. Upon proof of purchase, Coldtub will correct the defect subject to the terms and conditions continued in this Limited Warranty. The customer must be prepared to follow technical instructions provided by Coldtub. Pre-Approved claims must be executed within 60 days of Pre-approval, All existing claims expire upon expiration of warranty. *Please note that union connection leaks are considered to be user serviceable and are expressly excluded from the Limited Warranty. Damage resulting from union connection leaks are expressly excluded from the Limited Warranty, specifically equipment. Travel costs are the responsibility of the customer. If Coldtub® determines that repair of the covered defect is not feasible we reserve the right to instead provide a replacement tub equal in value to the original purchase price of the defective tub. Tub replacement is done only at the discretion of Coldtub®. Reasonable costs for the removal of the defective tub, and delivery and installation will be the responsibility of the customer. Freight will be paid to the nearest distribution center.

CONDITIONS OF WARRANTIES

All warranties provided hereunder extend only to the original customer of the tub if purchased and originally installed within the boundaries of the country where it was originally purchased. All warranties hereunder terminate upon transfer of ownership of a tub from the original customer. Your limited warranty does not include repair travel mileage or for shipping cost assessed by your service agents. To obtain service, the customer must contact Coldtub. In the event that a tub or component thereof must be returned to Coldtub® all freight costs are the responsibility of the spa customer. In all cases Coldtub® has sole responsibility for determining the cause and nature of failure of the tub and Coldtub® determination with regard thereto shall be final.

EXCLUSIONS

All warranties hereunder are void if the tub has been subject to alterations (including after-market accessories), misuse or abuse. Alterations include but not limited to, any change to the components, addition of components without the written authorization from Coldtub®. Misuse includes careless handling of the tub, damages caused by improper and/or non-certified electrical hook-ups, failure to operate the tub in accordance with the instructions contained in the owner's manual provided, including incorrect start-up procedures, any use of the tub or any of its components in an application for which it was not designed, damage caused by improper chemical balance (including any damage to tub components caused by scale build up due to poor water chemistry), overheating the tub or tub water, damage to the tub surface by allowing undissolved sanitizing chemicals to lie on the surface. Tub covers are not warranted against chemical burn, discolouration, water absorption or any damage resulting from water absorption. Any damage resulting from using the spa cover in any way other than it was intended is not covered under warranty. Any damage caused by moving of the tub or improper installation including insufficiently prepared or uneven ground. Any damage to the material or workmanship of the spa cabinetry and floor in shipping or handling are expressly excluded from the Limited Warranty. Coldtub will not be responsible for power company issues or improper electrical installations, Damage and/or lack of performance resulting from high or low voltages outside operating parameters. Coldtub will not be responsible for software and product upgrades throughout the life of the tub. Coldtub® expressly excludes warranty coverage on any of the following: Acts of nature including but not limited to damage resulting from lightning, storm, flooding, freezing, fire and any other acts of nature. Any failure caused by improper cover use or damage to the tub surface by leaving the tub without the cover in place. The heat created by leaving the tub in direct UV light without a cover may cause surface issues with the acrylic and may also cause plastic parts to warp, some fittings will leak or cease working as a result. These occurrences are not covered under warranty. The cover must be kept on the tub when not being used. Scratches or micro-crazing in the tub shell reported after the day of installation are not covered under warranty. Micro-crazing is defined as an area of tiny shiny lines visible in areas on the surface of some thermoplastic sheets. This phenomena, although rare, is known to occur in many types of plastic sheet materials. The surfaces of thermoformed acrylic tubs are not immune to this possibility. Damaged caused by unapproved sanitizers such as tri-chlor, acids, calcium hypochlorite, sodium hypochlorite, peroxides, any sanitizing chemical that may remain undissolved on the tub surface. Any and all sanitization systems used in your tub must be factory approved prior to installation or your warranty is void. Installation of not factory approved salt systems will void the warranty related to pump seals, metal part, jets, etc. Damage caused by any item(s) attached to or installed onto the tub, including but not limited to gazebos, cover lifters and accessories. Any options or additional components that are not factory installed are not covered under warranty. Any damage or failure due to improper preparation for winter storage is not covered under warranty. Damage to pillows reported beyond the day of delivery will not be covered under warranty. Pillows are to be removed from the tub when not in use. Any damage resulting from the use of cover removing mechanisms is not covered under warranty. The sanitizer cell is considered a user serviceable component; replacement will be the responsibility of the customer. Coldtub® expressly excludes warranty coverage on splitting, fading or warping of the cabinet beyond the date of delivery. Any damage resulting from handling of the cabinet is excluded from this warranty. This warranty will not cover any labour for WIFI/Bluetooth connection assistance/issues, onSpa® App initialization & connection assistance/issues from a smartphone, or assistance with actually connecting any of these devices.

DISCLAIMERS

Coldtub® will not be liable for loss of use of the tub or other incidental or consequential costs, expenses or damages that may include but not limited to, the removal of a permanent decking, sunroom, gazebo, or other custom fixture, any crane costs associated with the removal of the tub for service or replacement. Coldtub® shall not be liable for costs arising from water, filter cartridges and chemical loss. Under no circumstances shall Coldtub® or any of its representatives be liable for any injury to any person or damage to any property, howsoever arising from the tub. Coldtub® warranties are limited to a maximum amount of moneys received by Coldtub® with respect to the sale of the tub.

ALL WARRANTIES

The warranties contained herein are all of the warranties provided by Coldtub® to the customer, and to the extent permitted by law. Warranty registration (within 30 days of delivery) is the responsibility of the customer and is a condition of warranty coverage. (Please refer to the instructions on the registration form provided with the tub or register at www.Coldtub.com) This Warranty is offered as an extra benefit and does not affect your statutory rights. All warranties herein require that any claim must be submitted to Coldtub® within ten days of the time the defect is discovered, and must be accompanied by the original customer's receipt confirming purchase of the tub, which shows the date of purchase. All warranty claims must be submitted within the warranty period. Failure to provide such notice and information invalidates all warranties provided hereunder. Coldtub® reserves the right to repair or replace components or materials at its option. In certain cases, photographs may be required for proper evaluation before warranty coverage is determined.

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