



CONTRAST THERAPY HEATING SYSTEM



GETTING TO KNOW YOUR iCOOL CONTRAST THERAPY HEATING SYSTEM

The iCool Contrast Therapy Heating System was introduced in 2008 in response to many requests from our customers around the world for a complementary heating system to use in conjunction with our award winning iCool Ice Bath Systems.

POWER REQUIREMENTS

There are two models to cover the various requirements of athletes and sports professionals now using contrast hot and cold therapy.

The Powerful 3000 Watt unit is most suitable for indoor situations where there is a reasonable power supply to provide the heating current. This unit needs a 15 Amp Power Outlet

The 2400 Watt Unit also produces a very high heating output for fast results but the input power required is suitable for all normal domestic type power outlets that are normally capable of 10 amps in 220 Volt Countries and 20 amps in 110 Volt Countries.

Your iCool Contrast Therapy Heating System is not multi voltage. It is normally only suitable for use using the voltage marked on the unit.

USING A STEP DOWN TRANSFORMER TO CHANGE THE VOLTAGE

It is possible to use your 220 Volt iCool Contrast Therapy Heating System on a 110 Volt supply but it must be fed via a 220 Volt to 110 Volt step down transformer with a capacity of at least 2500 watts. Step down transformers of this capacity are readily available in the USA and Canada and are relatively inexpensive. If using a step down transformer, care must be taken to ensure that the earth system of the power outlet is connected to the iCool Contrast Therapy Heating System. The step down transformer will normally provide this electrical path.

SAFETY FEATURES

Your iCool Contrast Therapy Heating System has several important safety features. Never attempt to disarm any of these features they are there for your safety and the safety of all users.

1. Power is supplied via a lockable plug and socket to prevent accidental disconnection.
2. All Power is directed through an earth leakage safety circuit that will instantly cut the electrical current if it detects any loss whatsoever from the unit, such as the loss that would occur if a person received an electric shock from the system. In this case it would cut off instantly. This system can not offer protection if the electrical shock comes from another device and a person is simply touching a part of the iCool Contrast Therapy Heating System because this would be discharge path to earth only and not a fault of the iCool Contrast Therapy Heating System.

Your iCool is extremely safe but make sure your other appliances are too.

3. There are four over temperature control devices, 3 are electronic but as a final safety backup one is a passive switch that cuts off the heating power regardless of any electronic malfunction when the temperature of the heat exchange tank reaches more than 70°C.
4. The heating element will not operate unless water is flowing.
5. The system will shut down if the temperature inside the cabinet exceeds 80°C
6. Temperature of the water is automatically controlled within 1 degree of the pre setting.

ELECTRICAL SPECIFICATIONS

Australia , UK, Europe and most of Asia 2400 watts at 200 to 240 Volts AC 50 or 60 Hertz
3200 watts at 200 to 240 Volts AC 50 or 60 Hertz

USA Canada Japan 2400 watts at 100 to 125 Volts AC 50 or 60 Hertz
3200 watts at 200 to 240 Volts AC 50 or 60 Hertz

SETTING UP

WATER CONNECTIONS

Your iCool Heating System is supplied with a set of connection hoses to transfer water to and from your bath. It uses the same convenient snap on water connectors as used on your iCool Chiller system. In fact they are interchangeable.

WATER MUST BE ABOVE THE HEATING UNIT

As with the chiller systems, it can not operate unless it has a steady uninterrupted flow of water. **THE HEATING UNIT MUST BE LOCATED ON THE SAME LEVEL AS YOUR POOL SO THAT THE LEVEL OF THE WATER IN THE BATH IS ABOVE THE HEATING UNIT INLET PORT, OTHERWISE THE PUMP CAN NOT RECEIVE WATER.** So, do not place the Heating System on a table, it must be on the floor or ground that the pool/bath is sitting on.

The iCool Contrast Therapy Heating System can be used with any iCool pools or baths or with any other bath not exceeding 500 litres maximum as long as it has suitable water connections. Obviously larger baths will take longer to heat.

USE A MATT AND COVER TO SPEED HEATING AND SAVE ENERGY

All iCool baths and pools have an insulating matt to suit. These must be used, otherwise a large amount of heat will be lost into the floor, especially concrete floors. In very cold conditions using a cover on the bath will help to save energy and speed heating.

WATER IN THE POOL MUST BE ABOVE THE HEATING UNIT INLET AND OUTLET PORTS TO OPERATE.



WATER CONNECTIONS ARE CLEARLY MARKED ON THE HEATING UNIT

WATER OUT means water coming OUT of the bath goes here, WATER IN means water going into the bath goes here.

CONTROLS AND SETTINGS

TURNING ON

There is a red indicator light that indicates that power is available to the unit. As a safety precaution this indicator works even before the main switch is turned off, so that you know the electrical power is connected.

Turn on the Main Safety Switch on the left hand side of the front panel. This switch is also a safety device that constantly monitors the flow of electricity for any malfunction and stops power immediately if a fault is detected including electrical shock. It has a test button that simulates a fault and it is a good idea to use this test regularly before operating the system to make sure it is working correctly. **If it clicks off at any time after you switch it on, it indicates that there is a fault. As this may be dangerous it must be investigated before using the system.**

STARTING THE HEATING FUNCTION

When the main switch is turned on the LED displays the word OFF



Pressing to ON button starts the water pump and the LED indicates this with the word ON

Pressing OFF at any time turns the pump and heater off. The MAIN POWER Switch can also be used to stop the system completely.

ALWAYS CHECK THAT THE WATER IS RUNNING SMOOTHLY BACK TO THE POOL

IF THE WATER IS NOT RUNNING SMOOTHLY AFTER 30 SECONDS THE UNIT WILL STOP. CHECK THE WATER HOSES AND PRESS START TO TRY AGAIN

FOR SAFETY, WATER MUST BE RUNNING Only if water runs smoothly for more than 30 seconds will the heating system start. This is indicated by a bright red dot at the bottom of the LED display. This dot is always on if the heating element is on. After a successful start up, if the water flow is interrupted for more than a few seconds at any time the heating element will turn off but the pump will keep running. The system will then try to restore the heating every few seconds but if the water flow is not running correctly after 1 minute the unit will shut down completely for safety, because the heating element could overheat without water flowing over it. If this sequence occurs the reason for the poor water flow must be corrected before re starting.

IF THE UNIT STOPS BECAUSE OF POOR WATER FLOW

THE WORDS **NO FLO** meaning NO WATER FLOW will flash on the LED display.

Check that the hoses are connected to the correct connections.

Check for air leaks into the fittings or hoses,

Make sure the water level is above the pump inlet, make sure hoses are not bent or crushed.

Once the problem is located re start the system as above.

CONTROLS AND SETTINGS

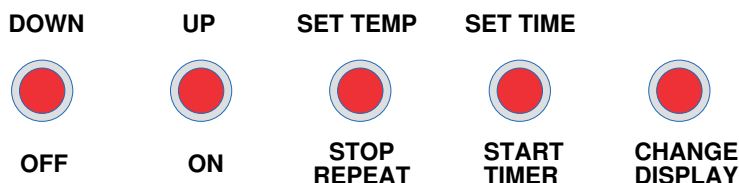
PRE SETTING THE TEMPERATURE

The previous temperature used is stored in memory even if the power is removed, therefore if you require the same temperature again, there is no need to reset it.

The system heats until the pre set temperature is reached and then cycles to maintain that temperature accurately within 1°C.

For safety reasons there are no electrical sensors in the pool, therefore although the heating element cycles on and off, the pump will run continually so that the sensors in the unit can monitor the pool temperature at all times. Because the sensors are remote from the actual pool there may be a small difference between the systems display and the actual pool temperature in some setups. This does not mean that the system is not accurate controlling the temperature, it is simply a matter of discovering the offset amount in your particular setup and allowing for it when you set the desired temperature. For example if you find a constant 1 or 2 degree difference between the system's reading and the pool, add (or subtract) that to your setting in future to eliminate it.

TO SET THE TEMPERATURE, press the SET TEMP button and hold it for a few seconds until the display begins to flash. Then use the UP or DOWN button to set the desired temperature. Once the desired temperature is on the display press and hold the SET TEMP button again until the display stops flashing. This is now the temperature the unit will heat to and maintain.



USING THE COUNT DOWN TIMER

Your iCool Heating System has a convenient timer that counts down by a pre set number of seconds (up to 200) to assist with correctly timing immersion.

To set the time in seconds, press the SET TIME button and hold it for a few seconds until the display begins to flash. Then use the UP or DOWN button to set the desired time in 5 second steps. Once the desired time is on the display press and hold the SET TIME button again until the display stops flashing. This is now the time the unit will count down whenever the START TIMER button is pressed.

There is also a repeat function if you required the count to repeat over and over when several athletes are using the system. To set this, during the time setting procedure above press the STOP REPEAT button while the display is still flashing and a red light on the LCD display comes on to indicate that repeat is on. Repeat can be stopped by reversing this procedure.

The countdown can be stopped mid count at any time by touching STOP REPEAT. It will resume when START TIMER is touched.

The timer has an audible alarm to alert users that their time is almost up. It beeps every second for the last 5 seconds and at zero it gives a long beep. If repeat is on it will start counting down again after 2 to 3 seconds.

LCD DISPLAY

The LED display will show the actual water temperature at most times except during setting of the time or temperature or if the count down timer is running. If you wish to see the current temperature while the count down timer is running just press CHANGE DISPLAY and the current water temperature will be displayed for 5 seconds and then it will return to the count down feature.



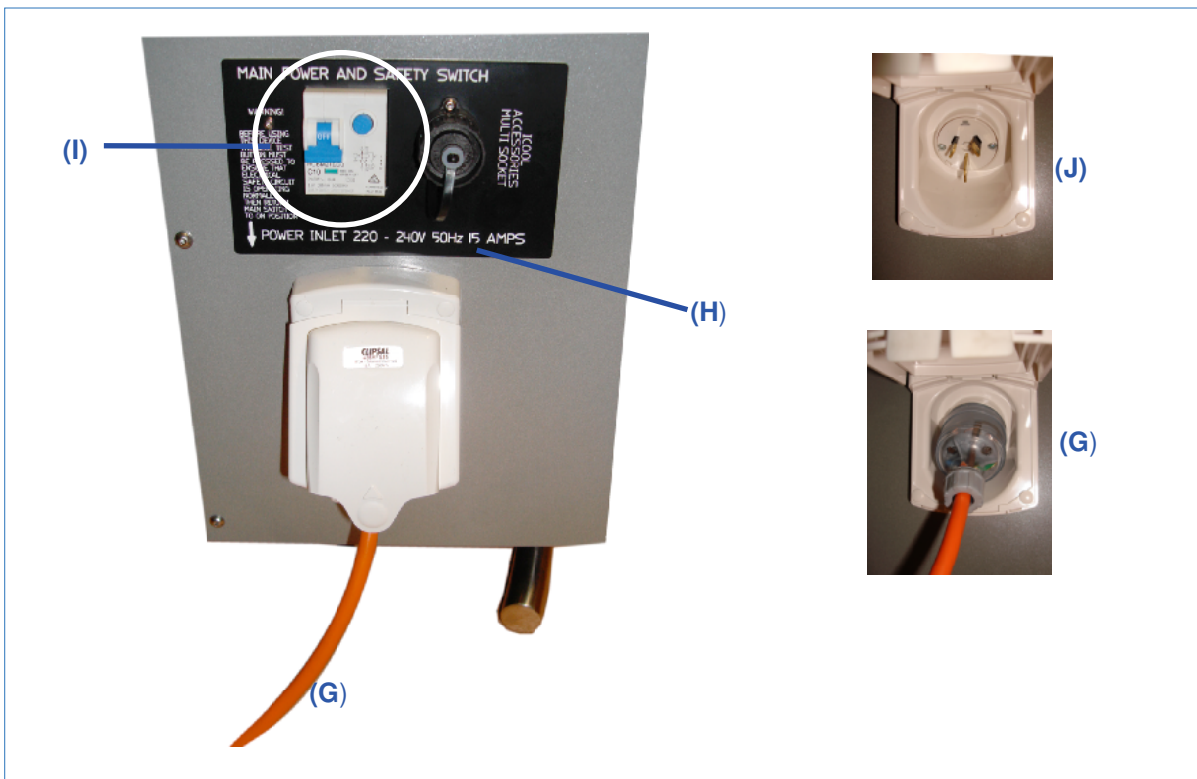
MAINS POWER

9. Connect the Cooling System to mains electricity by connecting the cable (G) provided. Electricity voltage must comply with that specified on the name plate (H) The power outlet socket must be capable of supplying at least 15 Amps at 220 Volts, or, for 110 Volt models at least 30 Amps. These are standard outlets in most countries.

GENERATORS

If you need to use a generator instead of mains power, it must be capable of providing at least 3200 Watts or the chiller compressor may not be able to start. The chilling system has a large rotary refrigeration compressor similar to the type used in split system air conditioners and as with air conditioners it needs up to 3 times it's normal running power for up to 30 seconds each time the compressor starts. Once started it only needs about 1200 Watts.

PLEASE NOTE, that the compressor needs to re start each time the temperature of the chilled water rises above your pre set temperature. This can happen often in warm conditions or when several athletes use the system at once.



10. The electrical power input plug (J) and socket on all iCool systems is the Australian standard 15 Amp type that is in increasing use in many countries because of the inherent safety of the design. The cable supplied with your iCool is normally fitted with the correct plug for your country. You can use a normal travel plug adaptor if you are using your system in another country providing the voltage in that country is the same and the adaptor has an earth pin.

NEVER USE AN iCOOL SYSTEM WITHOUT A 3 PIN EARTHED PLUG & POWER OUTLET. THE SYSTEM MUST BE EARTHED TO BE SAFE.

Spare Australian standard plugs and sockets are available from electronics stores in most countries or iCool can provide spare cables by express post to almost anywhere.

11. Switch ON power using the main switch (I) This device also provides protection against accidental electric shock and should be tested often by pushing the small button. Pushing the button simulates an unsafe condition and this should cause the device to switch off instantly. IF THIS DOES NOT CUT THE POWER INSTANTLY THE SYSTEM IS UNSAFE TO USE.

GO TO NEXT PAGE →