TIPS ON FILLING SPA

• Remove doors and ensure that all valves in the plumbing system are fully open to maximise the amount of air that can escape the pipe work during filling

• Remove filter cartridge(s) before filling enable filling of the spa through the filter itself to flood the pipe work with water and minimise the chance of air pockets forming in the plumbing during the filling process.

• DO NOT fill spa by placing hose in the foot well. Filling a spa this way will create a large number of air pockets in the pipe work and may cause difficulty when priming. Always fill spa through the filter area.

• Once the spa is filled to the correct level attempt to power up the spa with the filter cartridges still removed. Verify that the spa controller completes its priming sequence and begins normal operation. Once normal operation has been verified turn mains power off, re-install filter cartridge(s) and restart spa.

- Every time the power is turned on the SV controller will initiate a water priming sequence on start up.

During priming sequence the filtration pump will run for up to 20 seconds at a time in an attempt to purge air from the plumbing. The keypad display will scroll PRIMING during this sequence.

If the spa controller is successful in clearing all of the air from the heater tube the system will begin normal operation. However if air is still detected the spa controller will shut down and display a fault code (**ER3-Water Prime**).

ER-3 WATER PRIME:

- Press Pump A  button to retry water priming sequence
- Check spa is filled to correct operating level as advised by spa manufacturer (refill if necessary)
- Remove filter cartridge(s) and retry water prime
- With mains power turned OFF, bleed airlock from pipe work by slightly loosening couplings on front of filtration pump and allowing air to escape
- With filter cartridge(s) removed use hose to flush water down pipe work in an attempt to clear the air pockets from the plumbing

WARNING

RESTRICTION OF WATER FLOW DUE TO DIRTY FILTER CARTRIDGES IS THE MOST COMMON CAUSE OF ER-3 FAULTS. IF THE SPA POOL HAS BEEN OPERATING NORMALLY THEN INTERMITTENT ER-3 FAULTS START TO OCCUR THE FILTER CARTRIDGE(S) WILL REQUIRE SERVICING.

DEPENDING ON TYPE OF FILTER CARTRIDGE(S) INSTALLED THE FILTERS WILL EITHER REQUIRE CLEANING, SOAKING IN A FILTER CARTRIDGE DEGREASER SOLUTION OR REPLACING. REFER TO SPA RESELLER / MANUFACTURER FOR DETAILS ON TYPE OF CARTRIDGE INSTALLED AND RECOMMENDED CLEANING FREQUENCY & METHODS

IMPORTANT NOTE

Do not allow the filtration pump to continue to run after five (5) x failed priming attempts. Operating a pump without water for extended periods may cause damage to the pump. Turn power off, wait ten (10) minutes and then try again later.

The in-heater water sensor constantly monitors the presence of water in the heater tube. If at any time air bubbles are detected the spa controller will automatically cancel all current operations and force a water priming sequence to begin. This will occur whether the spa is in automatic mode or manual use. If the priming sequence is successful in clearing the air pockets from the plumbing normal spa operation will resume in automatic mode. If unsuccessful the spa controller will shut down and latch on fault code ER-3 Water Prime.

Error Codes & Troubleshooting Problems

SV spa controllers feature self-diagnostics and scrolling error messages to quickly troubleshoot possible problems. Should the spa control encounter a problem the error code / message will scroll across the topside panel screen until the problem is resolved. If an error condition is experienced all spa functions are shut down and the spa should not be used until the error condition has been fixed. A list of error codes with descriptions of problems and possible solutions is detailed below for your reference.

IMPORTANT NOTE

For most error codes mains power to the spa control must be turned OFF and then back ON before the error condition will be cleared.

Heartbeat LED

All SV model spa packs feature a red flashing heartbeat LED light. The heartbeat LED is located on the front right hand side of the spa pack itself (installed underneath spa skirt).

The heartbeat LED flashes to indicate the current health/status of the spa pack. When the spa pack is functioning correctly with no errors to report the heartbeat LED emits a single flash in a constant pulse much like a heartbeat (ON, OFF, ON, OFF). If the spa pack encounters a fault the heartbeat LED will begin flashing in sequence with the error code number being experienced (i.e. ER2 = ON ON; OFF ON; ON OFF).

If the keypad display is ever blank a spa user can still determine the health / status of the SV controller by removing a door and checking the heartbeat LED on the front of the spa controller itself.

ER-2 HEATER PLUG

Problem: No heater sensor communication

Cause: Internal heater sensor communication problem

Solutions:

- Turn mains power OFF, wait 5 minutes then restart spa
- Contact spa reseller if problem is not resolved with power reset

ER-3 WATER PRIME

Problem: Water prime failed – air detected in heater tube

Cause: Airlock in pipe work, low water level, dirty filter cartridges

Solutions:

- Press Pump A  button to retry water prime
- Check spa water level (refill if necessary)
- Remove filter cartridges and press Pump A  button to retry prime
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump or small plastic bung on the front of Filtration Pump
- Remove filter cartridges and flush water down pipe work with a hose

ER-4 THERMAL TRIP

Problem: Heater thermal trip activated. Heater has been active and has had insufficient water flow over the element. Low or no water flow has caused the heater temperature to exceed its maximum limits and the spa control has shut down operation to prevent any damage to the heater unit

Cause: Low water level, airlock in pipe work, closed shut-off valves, dirty filter cartridges, filtration pump failed or operation intermittent

Solutions:

- Turn mains power OFF and wait 10-15 minutes for element to cool and thermal cut-out device to reset. Then turn power back ON
- Check spa water level (refill if necessary)
- Remove filters and clean as per manufacturer's recommendations or replace cartridges if required
- Check under spa cabinet to ensure all shut-off valves are in the OPEN position
- Bleed airlock from pipe work by slightly loosening couplings on front of filtration pump, releasing plastic bleed screw, or by removing filters and flushing water down pipe work with a hose.

ER-5 POOL TOO HOT

Problem: Pool over temperature. Temperature sensor reading **≥ 45°C**

Cause: High ambient temperatures (especially in summer months) have caused water temperature to rise above set temp point, Excessive filtration time, Jet pumps have been operating for extended periods with the spa cover still on

Solutions:

- Turn mains power OFF, remove spa cover, allow spa to cool then turn power back ON
- Check daily filtration time (refer filtration section) and reduce daily filtration time if required
- Check spa cover is not resting on topside panel buttons causing jet pumps to start when cover is on. Use keylock function to lock keypad buttons when spa not in use.

ER-6 12V OVERLOAD

Problem: 12V (port) current draw over 1A limit

Cause: Total 12V current drawn by keypad(s), light(s), expansion ports and in pool temp sensor is excessive, 12V power supply is overloaded, too many LED light bulbs installed, faulty LED light

Solutions:

- Turn mains power OFF and restart spa to see if problem reoccurs
- Reduce number of LED lights being installed
- Systematically unplug lights, in pool temp sensor, keypads and expansion port loads from spa pack (one by one) to identify faulty part
- Contact your spa reseller if problem persists

ER-8 CTRL FAULT HVS

Problem: Heater relay is on when it should be off

Cause: Power surge, periods of low or high voltage, water on spa pack terminal block, relay problem

Solutions:

- Turn mains power OFF and back ON again to see if spa control recovers from ER8 fault
- Inspect under spa cabinet for evidence of water leaking onto spa control. If water present, turn mains power OFF and isolate, then resolve leak, dry up excess water, and allow spa control to dry out before restoring power.
- Contact your spa reseller if problem persists

ER-10 OVER CURRENT

Problem: Mains (230V) current draw above current limit (C.LMT) detected

Cause: Accessory devices current draw is too large for the C.LMT setting,
faulty jet pump or air blower drawing excessive current, current limit (C.LMT) settings are not configured to match circuit breaker rating, load shed (L.SHD) and/or load limit (L.LMT) settings incorrect

Solutions:

- Turn mains power OFF and back ON again
- Check operation of each pump => attempt to identify problematic pump or blower causing ER10 to occur
- Contact your reseller to check controller settings are configured to match available power and circuit breaker rating

HEAT PUMP ERROR CODES

If an optional heat pump is fitted and a heat pump fault condition is detected a warning message is scrolled across the touch pad LCD every 60 seconds and the heat pump is disabled.
Spa operation will continue however the spa will now heat with the inbuilt SV electric element and there will be no ability to cool the water. The heat pump warning message will continue to scroll every 60 seconds, and the heat pump will remain disabled until the mains power is turned OFF and back ON again.

If after resetting mains power the fault condition persists please contact your spa reseller and report the warning message that is shown. A list of the fault conditions and warning messages are detailed below for reference.

WARNING MESSAGE	DESCRIPTION
"HEAT PUMP AMB"	Ambient thermistor temperature sensor error
"HEAT PUMP COND"	Condenser thermistor temperature sensor error
"HEAT PUMP FLOW"	Water flow not detected
"HEAT PUMP LOW P"	Compressor low pressure switch open
"HEAT PUMP HIGH P"	Compressor high pressure switch open
"HEAT PUMP COMP"	Compressor thermal cut out open
"HEAT PUMP EXCH"	Heat exchanger thermal cut out open

SERVICE REMINDER MESSAGES

Certain spa manufacturers will choose to take advantage of the inbuilt service timer reminders available within the SV controller software. Maintenance reminders such as "SERVICE FILTERS" can be programmed to scroll across the screen every 60 seconds after a certain time period has elapsed.

If your keypad display begins scrolling a service reminder every 60 seconds this message can be cancelled/reset by pressing the OK button whilst the service message is scrolling.

SERVICE FILTERS

A default service reminder scheduled to occur every 2 or 4 weeks. This reminder is to prompt the spa owner to thoroughly clean and service their spa filters. Depending on type of filter cartridge(s) installed the filters will either require cleaning, soaking in a filter cartridge degreaser solution or replacing. Refer to spa reseller/manufacturer for details on type of filter cartridge(s) installed and recommended cleaning methods.

How to cancel "Service Filters" scrolling message
Press OK

SPA WATER MAINTENANCE TROUBLESHOOTING GUIDE

Problem solutions	Probable causes	Solutions
Cloudy Water	• dirty filters • excessive oils / organic matter • Improper sanitization • suspended particles / organic matter • overused or old water	• clean filters • shock spa with sanitizer • clean filters • Add sanitizer • Adjust ph and/or alkalinity range • Run jet pump(s) and clean filters • drain and refill the spa
Water odour	• excessive organics in water • Improper sanitization • low ph	• shock spa with sanitizer • Add sanitizer • Adjust ph to rec. range
Chlorine odour	• chloramine levels too high • low ph	• shock spa with sanitizer • Adjust ph to rec. range
Musty odour	• bacteria or algae growth	• shock spa with sanitizer–if problem is visible or persistent, drain, clean and refill the spa
Organic build up or ring around spa	• build-up of oils and dirt	• Wipe off scum with clean rag – if scum severe, drain the spa, use a spa surface and tile cleaner to remove the scum, and refill the spa
Algae growth	• high ph • low sanitizer level	• shock spa with sanitizer and adjust ph • shock spa with sanitizer and maintain sanitizer level
Eye Irritation	• low ph • low sanitizer level	• Adjust ph • shock spa with sanitizer and maintain sanitizer level
Skin Irritation / Rash	• unsanitary water • free chlorine level above 5 ppm	• shock spa with sanitizer and maintain sanitizer level • Allow free chlorine level to drop below 5 ppm before spa use
Stains	• total alkalinity and/or ph too low • high iron or copper in source water	• Adjust total alkalinity and/or ph • use a metal deposit inhibitor
Scale	• high calcium content in water – total alkalinity and ph too high	• Adjust total alkalinity and ph – if scale requires removal, drain the spa, scrub off the scale, refill the spa and balance the water