

River Series

OWNERS INSTALLATION MANUAL

PORTABLE SPA HOT TUBS

REVISED 01/2016



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www.pdcspas.com



ELECTRICIAN

COMPANY NAME _____
CONTACT NAME _____
ADDRESS _____
PHONE, E-MAIL ADDRESS _____

BUILDER, MASON

COMPANY NAME _____
CONTACT NAME _____
ADDRESS _____
PHONE, E-MAIL ADDRESS _____

SERVICE TECHNICIAN

COMPANY NAME _____
CONTACT NAME _____
ADDRESS _____
PHONE, E-MAIL ADDRESS _____

GENERAL NOTES

SAVE THIS MANUAL FOR FUTURE REFERENCE !

TROUBLESHOOTING



A GOOD GENERAL RULE IS TO VISUALLY INSPECT YOUR SPA AND EQUIPMENT AREA FREQUENTLY. IF ANYTHING LOOKS BROKEN, WORN, OR INCORRECT, CONTACT YOUR ELECTRICIAN OR SPA RETAILER. A SIMPLE REPAIR MAY PREVENT AN INJURY OR MORE SERIOUS PROBLEMS REQUIRING EXPENSIVE REPAIRS. IF YOUR SPA IS NOT OPERATING, CHECK THE FOLLOWING:

1. ALL EQUIPMENT IS IN-OPERATIVE

- CHECK POWER SOURCE G.F.C.I. OR EQUIVALENT (RCD).
- CHECK TO ASSURE SPA HAS DEDICATED CIRCUIT.
- CHECK THE “TEST” AND “RESET” BUTTONS ON G.F.C.I. OR EQUIVALENT (RCD).
- CHECK INTERNAL FUSES.

2. PUMP DOES NOT WORK

- CHECK ALL ITEMS ABOVE.
- CHECK FILTER; CLEAN OR REPLACE CARTRIDGE.
- CHECK FOR BLOCKAGES (RESTRICTIONS) AT SUCTIONS, SKIMMER AND PUMP.
- PUSH “PUMP” BUTTON(S) TO CHECK IF HIGH SPEED IS FUNCTIONING, ON A DUAL-SPEED PUMP.

3. INADEQUATE JET ACTION

- MAKE SURE JETS ARE TURNED ON.
- MAKE SURE AIR CONTROLS ARE OPEN.
- CHECK FOR RESTRICTIONS (BLOCKAGES) IN JETS AND/OR MAIN SKIMMER AND PUMP.
- CHECK WATER LEVEL.
- PUSH “PUMP” BUTTON(S) TO CHECK IF HIGH SPEED IS FUNCTIONING ON A DUAL-SPEED PUMP.

4. NO HEAT

- CHECK ALL STEPS UNDER PART “1”.
- CHECK TEMPERATURE SETTINGS.
- CHECK FOR CLOGGED FILTER ELEMENT AND OTHER RESTRICTIONS.
- CHECK WATER LEVEL.
- CHECK IF PUMP IS RUNNING.

5. NO LIGHT

- CHECK “LIGHT” BUTTON.
- CHECK G.F.C.I. EQUIVALENT (RCD) “TEST” AND “RESET” BUTTONS.

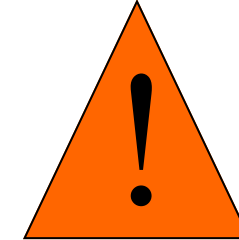
6. WATER IS CLOUDY

- INCREASE CIRCULATION CYCLE.
- TEST WATER CHEMISTRY.
- CLEAN/REPLACE FILTER CARTRIDGE.

7. PUMPS HAVE STARTED FOR 1 MINUTE SEVERAL TIMES

- IF THE TEMPERATURE SENSORS WITHING THE HEATER DETECT A LOW ENOUGH TEMPERATURE, THEN THE PUMPS AND BLOWER AUTOMATICALLY ACTIVATE TO PROVIDE FREEZE PROTECTION. THE PUMPS WILL RUN PERIODICALLY OR CONTINUOUSLY DEPENDING ON CONDITIONS.

IF ABOVE CHECKS DO NOT SOLVE THE PROBLEM, CONTACT A QUALIFIED SERVICE TECHNICIAN.



WARNING!

REPLACE ALL SAFETY SUCTION COVERS EVERY 7 YEARS.

REPLACE WITH SIMILAR VGB APPROVED FITTINGS AT SAME OR HIGHER FLOW RATINGS.

REPLACEMENT APPLIES TO ALL SPA MODELS.





SAVE THIS MANUAL FOR EASY FUTURE REFERENCE !

CONGRATULATIONS ON CHOOSING A QUALITY PDC Spa FOR YOUR BACKYARD RELAXATION!

PLEASE READ THE OWNER’S MANUAL COMPLETELY BEFORE INSTALLING AND USING YOUR NEW SPA. THE PURPOSE OF THIS MANUAL IS TO PROVIDE YOU WITH SAFETY, OPERATIONAL AND INSTALLATION INFORMATION WHICH WILL ALLOW YOU THE FULLEST ENJOYMENT OF THIS FINE PRODUCT.

AT THE TIME OF PRINTING, THIS MANUAL WAS DEEMED AS ACCURATE AS POSSIBLE. PDC SPAS RESERVES THE RIGHT TO CHANGE PRODUCT IN AN EFFORT TO ENHANCE AND IMPROVE, WITHOUT PRIOR NOTICE. TO BE AWARE OF ANY OF THESE POSSIBLE CHANGES, LOG ON TO WWW.PDCSPAS.COM, REFERRING TO THE CUSTOMER CARE SECTION, OR CONTACT YOUR RETAILER DIRECTLY.

OWNERSHIP INFORMATION

NAME _____

ADDRESS _____

INSTALLATION DATE ____ / ____ / ____

MODEL NAME _____

SERIAL # _____ (BEHIND CABINET SIDEWALL ON FILTER HOUSING)

RETAILER NAME _____

RETAILER PHONE NUMBER _____

SERVICE TECHNICIAN CONTACT INFO _____

IMMEDIATELY UPON DELIVERY
REGISTER YOUR HOT TUB
ON THE PDC SPAS WEB SITE
WWW.PDCSPAS.COM

THIS INFORMATION IS VERY IMPORTANT
TO ENSURE WARRANTY COVERAGE
AND RECEIVE INFORMATION
FOR POSSIBLE PRODUCT UPDATES.

MAINTENANCE RECOMMENDATIONS



PERIODIC SPA WATER DRAINING

AFTER A CERTAIN TIME, YOU MAY FIND THAT THE ADDITION OF CHEMICALS WILL NOT CLARIFY OR ELIMINATE ODORS IN THE SPA. THIS IS AN INDICATION THAT THE WATER NEEDS TO BE DRAINED AND REPLACED. GENERALLY, DEPENDING UPON BATHER LOAD AND WATER CHEMISTRY MAINTENANCE, THIS MAY NEED DONE EVERY 3 MONTHS. WITH THE USE OF OZONE, THIS MAY NEED DONE LESS FREQUENTLY.

1. REDUCE SET TEMPERATURE TO LOWEST SETTING.
2. TURN OFF ALL POWER.
3. USING A GARDEN HOSE START A SIPHON TO DRAIN THE WATER FROM THE SPA.
4. CLEAN CARTRIDGE FILTER AS NOTED PREVIOUSLY IN THIS SECTION REGARDING MAINTENANCE RECOMMENDATIONS.
5. CLEAN SPA SHELL WITH NON-SUDSING CLEANSER.
6. FOLLOW INSTRUCTION UNDER START-UP.

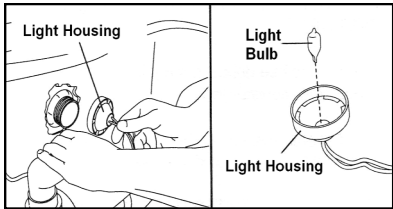
PLUMBING CARE

ALL SPAS ARE PLUMBED WITH PLASTIC JETS, PIPES AND FITTINGS WHICH ARE GLUED TOGETHER. THESE PLASTIC PARTS AND THEIR MANY GLUE JOINTS ARE SUBJECTED TO HARSH TREATMENT. EVERY SPA IS TESTED WITH WATER TO ASSURE THERE ARE NO LEAKS WHEN IT LEAVES THE FACTORY; HOWEVER, SOMETIMES SPAS DEVELOP A LEAK CAUSED BY SHIPPING VIBRATION. OVER THE YEARS, YOUR SPA IS SUBJECTED TO MANY HOT-COLD CYCLES AND THE HIGH PRESSURE GENERATED BY THE POWERFUL JET PUMP, WHICH TOGETHER STRESSES THE PIPES AND JOINTS. PDC SPAS ARE DESIGNED TO BE OWNER SERVICEABLE WITH EASY-ACCESS PANELS ON ALL 4 SIDES OF THE PORTABLE SPA WHICH ALLOW QUICK AND THOROUGH INSPECTION AND REPAIR OF THE PLUMBING SYSTEM. SHOULD A LEAK OCCUR, FOLLOW THESE IN-STRUCTION TO MAKE THE REPAIR.

1. REMOVE SIDE PANEL TO LOCATE LEAK. MARK THE LEAK WITH A MARKING PEN.
2. TURN OFF ALL POWER. DRAIN SPA BELOW LEAK, ALLOW PLASTIC PARTS TO DRY.
3. CONTACT QUALIFIED SERVICE TECHNICIAN TO REPAIR PLUMBING.

REPLACING THE LIGHT BULB

IF THE UNDERWATER LIGHT BULB SHOULD BURN OUT (AURA LIGHTING) YOU WILL NEED TO REMOVE THE ACCESS PANEL TO REPLACE IT. (REFER TO THE MANUAL SECTION REGARDING REMOVAL). BE SURE THE POWER IS “OFF”. LOCATE THE LIGHT HOUSING, TURN THE HOUSING COUNTERCLOCKWISE AND REMOVE FROM SPA SHELL. TO REPLACE THE BULB, PULL THE OLD BULB FROM THE HOUSING AND INSERT NEW ONE. RE-ATTACH THE LIGHT HOUSING TO SPA SHELL. REPLACE CABINET PANEL AND ENDS. (SEE ILLUSTRATIONS)



IF YOUR SPA IS TO BE USED DURING THE WINTER MONTHS IN COLD CLIMATE WHERE THE DANGER OF FREEZING EXISTS, CERTAIN PRECAUTIONS SHOULD BE TAKEN TO AVOID DAMAGE. AN INCREASED CIRCULATION CYCLE, AND USE OF A RIGID FOAM COVER ARE SUGGESTED. CONTACT YOUR DEALER FOR ADVICE.

MANY SPA OWNERS FIND THAT OUTDOOR WINTERTIME SOAKING IS QUITE ENJOYABLE, AND PDC CERTAINLY SUGGESTS THE USE OF A SPA YEAR-ROUND, ALTHOUGH CERTAIN SITUATIONS DO REQUIRE CLOSING THE UNIT FOR THE WINTER MONTHS (I.E., VACATION HOMES).

IF THE SPA WILL NOT BE USED FOR A PERIOD OF TIME, PERFORM THE FOLLOWING WINTERIZING PROCEDURES:

1. TURN HEAT ALL THE WAY DOWN AND TURN OFF AT THE BREAKER.
2. DRAIN SPA OF ALL WATER.
3. REMOVE ANY REMAINING WATER WITH SPONGE.
4. FILTER SHOULD BE DRAINED, REMOVED AND CLEANED. STORE IN A DRY PLACE.
5. PUMP, MOTOR AND ALL CONNECTING LINES SHOULD BE DRAINED FULLY TO PROTECT FROM FREEZING. BLOW AIR THROUGH ALL CONNECTION LINES TO REMOVE WATER. YOU MAY WISH TO USE A NON-TOXIC RV TYPE ANTIFREEZE TO GUARANTEE FREEZE PREVENTION. BE SURE TO READ THE MANUFACTURER’S INSTRUCTIONS AND REMOVE ALL ANTI-FREEZE BEFORE THE NEXT SPA USE.
6. COVER THE SPA WITH A WATERPROOF RIGID COVER TO PROTECT IT FROM SNOW, ICE AND WIND.

MAINTENANCE RECOMMENDATIONS



TESTING THE G.F.C.I. EQUIVALENT (RCD)

GROUND FAULT CIRCUIT INTERRUPTER (G.F.C.I.) PROTECTION FOR THE SPA SHOULD BE TESTED PRIOR TO EACH USE BY THE HOMEOWNER. WITH THE SPA IN OPERATION, PUSH THE “TEST” BUTTON ON THE G.F.C.I. BREAKER AT THE PANEL BOX OR ON THE POWER CORD. THE SPA SHOULD SHUT DOWN IMMEDIATELY. NOW RESET THE G.F.C.I. THE SPA SHOULD RETURN TO NORMAL OPERATION. IF THE G.F.C.I. FAILS TO OPERATE IN THIS MANNER, THERE EXISTS A POSSIBILITY OF ELECTRICAL SHOCK.

DISCONTINUE SPA OPERATION BY DISCONNECTING THE POWER SOURCE AND NOTIFY A QUALIFIED ELECTRICIAN FOR IDENTIFICATION AND CORRECTION OF THE PROBLEM.

THE SPA SURFACE

TO PRESERVE THE SHEEN OF YOUR SPA’S SURFACE, CLEAN AND SANITIZE THE ACRYLIC SURFACE WITH RUBBING ALCOHOL. AVOID USING ABRASIVE CLEANSERS. IF YOU ARE NOT CERTAIN AS TO THE SUITABILITY OF A PARTICULAR CLEANSER, CONSULT YOUR DEALER. DO NOT USE SOAP, AS IT CAN CAUSE SUDSING.

PERMA-WOOD CABINET:

YOUR SPA MAY BE CONSTRUCTED FROM A WOOD ALTERNATIVE MATERIAL DESIGNED TO BE DURABLE, TOUGH, AND VIRTUALLY MAINTENANCE-FREE. IT MAY REQUIRE PERIODIC CLEANING WITH A NON-ABRASIVE CLEANER.

THE COVER

USING THE OPTIONAL INSULATING SPA COVER ANYTIME THE SPA IS NOT IN USE WILL SIGNIFICANTLY REDUCE YOUR OPERATING COSTS, HEAT-UP TIME AND MAINTENANCE REQUIREMENTS. TO PROLONG THE LIFE OF THE COVER, HANDLE IT WITH CARE AND CLEAN IT REGULARLY USING MILD SOAP AND WATER. PERIODIC TREATMENTS WITH A VINYL CONDITIONER WILL HELP PROTECT AGAINST DETERIORATION CAUSED BY UV RAYS FROM THE SUN. NEVER ALLOW ANYONE TO STAND OR SIT ON THE COVER, AND AVOID DRAGGING IT ACROSS ROUGH SURFACES. KEEP COVER LOCKED WHEN NOT IN USE.

THE FILTER

SPA WATER FILTRATION BEGINS AS SOON AS THE FLOW IS STEADY THROUGH THE PUMP. THE SKIM FILTER ASSURES OPTIMUM CLEANING CAPACITY. AS THE FILTER CARTRIDGE REMOVES DIRT FROM THE WATER, THE ACCUMULATED DEBRIS WILL CAUSE A RESISTANCE TO FLOW. WHEN THIS IS NOTICED, ALONG WITH CLOUDY WATER, CLEAN OR REPLACE THE FILTER ELEMENT AS NOTED BELOW.

1. SHUT OFF POWER AT THE MAIN OR SUB PANEL.
2. REMOVE THE FILTER HOUSING TOP BY USING THE RAISED PORTIONS OF THE FILTER TOP AND TURNING IT COUNTER CLOCKWISE. AFTER TOP STOPS TURNING, LIFT UP TO REMOVE TOP FROM FILTER.
3. LIFT THE SKIMMER BASKET OUT OF THE FILTER CANISTER.
4. REMOVE THE FILTER FROM THE CANISTER.
5. REPLACE WITH CLEAN FILTER (REVIEW ABOVE FOR CLEANING RECOMMENDATIONS.)
6. PLACE SKIMMER BASKET BACK IN FILTER CANISTER.
7. PLACE FILTER TOP ONTO FILTER CANISTER AND TURN CLOCKWISE UNTIL TOP STOPS.

SAFETY INSTRUCTIONS



YOU NOW OWN A HIGH QUALITY PDC SPA BUILT FOR YEARS OF ENJOYMENT AND RELAXATION. IT IS OF PRIME IMPORTANCE THAT YOU UNDERSTAND THE OPERATION OF YOUR SPA AND ENJOY IT WITH SAFETY IN MIND. YOU SHOULD READ THIS MANUAL THOROUGHLY AND UNDERSTAND ALL OF THE SAFETY PRECAUTIONS. USING YOUR SPA WITHIN THESE GUIDELINES ASSURES YEARS OF FUN AND RELAXATION GAINED FROM ADDING A PDC SPA TO YOUR LIFESTYLE.

WARNING

**THIS UNIT IS A PROFESSIONAL-GRADE PRODUCT.
A KNOWLEDGE OF CONSTRUCTION TECHNIQUES,
PLUMBING AND ELECTRICAL INSTALLATION ACCORDING
TO CODES ARE REQUIRED FOR PROPER INSTALLATION AND
USER SATISFACTION. IT IS RECOMMENDED THAT
A LICENSED CONTRACTOR PERFORM THE INSTALLATION.
WARRANTY IS VOIDED FOR IMPROPER
INSTALLATION RELATED ISSUES.**

SAVE THESE INSTRUCTIONS

INCLUDED WITH THIS MANUAL IS A SAFETY SIGN THAT IS TO BE POSTED NEAR THE SPA WHERE ALL OCCUPANTS CAN EASILY READ. THIS SIGN IS INTENDED FOR YOU AND YOUR GUEST’S PROTECTION, SAFETY AND TO ASSURE THEIR SPA ENJOYMENT. TAKE THE TIME TO POINT OUT THE LOCATION OF THE SIGN AND INDICATE THE IMPORTANCE OF THE PRECAUTIONS.

ADHERE THE SIGN WITH SCREWS OR ANOTHER MANNER OF PERMANENT ADHESION. SHOULD YOU REQUIRE ADDITIONAL COPIES OR REPLACEMENTS, SIMPLY CONTACT THE FACTORY DIRECTLY OR YOUR NEAREST RETAILER.



Read and Follow All Important Safety Instructions

When installing and using this equipment basic safety precautions should always be taken to reduce the risk of electrical shock, to ensure safe usage, and to safeguard the user’s health.

Read and Follow All Instructions!!

This unit is a professional-grade product. A knowledge of construction techniques, plumbing and electrical installation according to codes are required for proper installation and user satisfaction. It is recommended that a licensed contractor perform the installation. Warranty is voided for improper installation related issues.

It is the responsibility of the home owner to ensure that all users of the spa are adequately informed of all precautions.

Use the spa only as described in this manual. The spa is intended for home use only. Do not use the spa in a commercial or rental setting. All warranties will be voided.

Ground All Metal Electrical Equipment

- A green colored terminal or a terminal marked G, GR, Ground, or Grounding, is located inside the supply terminal box or compartment. This terminal must be connected to the grounding means provided in the electric supply service panel, using a continuous copper wire equivalent in size to the circuit conductors supplying this equipment.
- At least two lugs marked “Bonding Lugs” are provided on the external surface or on the inside of the supply terminal box or compartment. Connect the local common bonding grid (household ground) in the area of the spa to these terminals, using an insulated or bare copper conductor not smaller than No. 6 AWG.
- All field-installed metal components such as rails, ladders, drains or similar hardware located within 5 feet of the spa or hot tub must be bonded to the equipment grounding bus with copper conductors not smaller than No. 6 AWG.
- All metal surfaces within 5 feet of the spa must be bonded to the home bonding grid.

Ground Fault Circuit Interrupter Protection (or Equivalent; RCD, for Export Installs)

- All PDC Spas are permanently installed units. Ground Fault Circuit Interrupter Protection is Required. All spa equipment systems must be protected by a class A ground fault circuit interrupter (GFCI) or equivalent; RCD, for export installs. A ground fault circuit interrupter type circuit breaker (not supplied) must be installed in the home panel box by a licensed electrician when making wire connection to the spa support pack equipment.

DANGER: Risk of Electrical Shock:

- Install the spa at least five feet (1.52 m) from all ungrounded (unbounded) metal surfaces.
- Ground fault circuit interrupter protection of the home power supply to the spa is necessary. Your electrician should explain how it works. (See spa maintenance)
- Do not permit any electric appliance, such as a light, telephone, radio or television, within five feet (1.52 m) of a spa. Keep electrical appliances and extension cords away from the spa. Water is a conductor of electricity.

DANGER: Risk of Accidental Drowning.

- Extreme caution must be exercised to prevent unauthorized access by children. To avoid accidents, ensure that children cannot use a spa unless they are supervised at all times.



Water Chemistry Maintenance (cont’d.)

Ozone:

Your spa is equipped with ozone as the sanitizing agent. Standard on the River Series spas. This utilizes ultraviolet light and offers a “hands-free” routine to spa water care. The pH must be maintained and shocking may be needed after heavy bather loads. With the use of ozone, the periodic draining may be needed less frequently, and the bromine odor no longer an issue. It is suggested that 24-hour circulation is required to effectively sanitize the water, and a chlorine shock used periodically. Contact your chemical supplier for more information.

- There is no test kit available to test ozone presence in spa water, although a 24-hour circulation period is recommended for clean, clear water. A clean, “after rain” smell will be present when you open your spa cover as an indicator that the ozone is doing its job.
- A proper pH must be maintained and a routine bromine or chlorine shock is suggested.

Ozone Unit

Location varies with spa model. Refer to specifications for location and take note during installation positioning.



Basic Water Chemistry Chart			
Problem	Description	Cause	Remedy
Green Algae	Green Water Green spots on surface Slippery surface	Low ozone, bromine, or chlorine levels Low algaecide levels	Superchlorinate Brush spa; removing algae Vacuum spa; removing algae Increase oxidizer residual
Black Algae	Black spots on spa surface	Low oxidizer levels Low algaecide levels.	Superchlorinate Brush spa; removing algae Vacuum spa; removing algae Increase oxidizer residual
Unpleasant Odor, Burning Eyes	Chlorine-like odor. Burning sensation in eyes.	Combined chlorine and/or pH out of balance	Superchlorinate. Balance pH to 7.2-7.6
Colored Water	Water in newly-filled spa turns black, blue, or brown when treated with ozone	Copper, iron, or manganese in water being oxidized by chlorine or ozone	Adjust pH to 7.2-7.6 Run filter continuously Vacuum settled material Use sequestering agent for prevention
Hard Water	Cloudy water Scaling	Excessive hardness of makeup water or building up of dissolved minerals in the water caused by continued use of spa chemicals.	Clean filter Filter continuously Adjust pH to 7.2-7.6 Use scale inhibitor Dilute with makeup water



WATER CHEMISTRY MAINTENANCE

pH CONTROL:

CHEMICALLY BALANCED WATER DEPENDS PRIMARILY ON:

1. THE AMOUNT OF ACID OR BASE IN THE WATER (pH),
2. THOSE CHEMICALS THAT HELP MAINTAIN OR STABILIZE pH (TOTAL ALKALINITY) AND,
3. THOSE CHEMICALS THAT CAUSE SCALING (CALCIUM HARDNESS). DESCRIBED AS A MEASURE OF RELATIVE ACIDITY OR ALKALINITY OF WATER, pH IS MEASURED ON A NUMBER SCALE FROM 0 - 14. THE MID-POINT, 7, IS SAID TO BE PRECISELY NEUTRAL, ABOVE WHICH ALKALINITY BECOMES PROGRESSIVELY GREATER AND BELOW WHICH ACIDITY BECOMES PROGRESSIVELY GREATER. PROPERLY BALANCED SPA WATER SHOULD HAVE A pH BETWEEN 7.2-7.8, A TOTAL ALKALINITY OF 75-150 PPM AND AN OPTIMUM RANGE OF 100-400 PPM OF CALCIUM HARDNESS. WITHIN THESE LIMITS, YOUR SANITIZING CHEMICALS AND FILTERING FUNCTIONS WILL BE MOST EFFECTIVE. TEST KITS ARE AVAILABLE TO MEASURE THE pH AND SHOULD BE REPLACED ON AN AT LEAST ANNUAL BASIS TO ASSURE ACCURACY.

DISINFECTION:

THE HIGH TEMPERATURE AND INCREASED VELOCITY OF THE WATER, AS WELL AS THE HEAVY BATHER LOADS, ALL CONTRIBUTE TO THE ORGANIC CONTAMINATION OF SPA WATER. IT IS VERY IMPORTANT TO MAINTAIN AN EFFECTIVE RESIDUAL OF SANITIZING AGENT, TO SHOCK TREAT AT PERIODIC INTERVALS AND, IF NEEDED, TO CONTROL ALGAE GROWTH.

BROMINE IS THE BEST-SUITED SANITIZER FOR SPA WATER. ALTHOUGH CHLORINE IS POPULAR AS A SWIMMING POOL SANITIZER, THE HIGH TEMPERATURES AND AERATION OF A SPA GREATLY ACCELERATE CHLORINE LOSS. FREE CHLORINE REACTS WITH ORGANIC MATERIALS TO FORM COMBINED CHLORINE, WHICH IS A POOR DISINFECTANT THAT CAUSES OFFENSIVE ODORS AND OFTEN CAUSES EYE BURN. BROMINE IS SIMILAR TO CHLORINE, ALTHOUGH IN THE FREE AND COMBINED FORM IT IS AN EFFECTIVE SANITIZING AGENT AND CAUSES NO OFFENSIVE ODOR OR EYE BURN. IT IS EASIER TO MAINTAIN A BROMINE RESIDUAL THAN CHLORINE AND IT IS EFFECTIVE OVER A WIDER pH RANGE THAN CHLORINE.

THE TEST FOR BROMINE SHOULD READ 1 PPM IN A RESIDENTIAL SPA. DEPENDING UPON BATHER LOAD, AMOUNT OF USAGE, TYPE OF WATER, ULTRAVIOLET EXPOSURE, ETC., THE AMOUNT OF CHEMICALS NEEDED WILL VARY. ON A WEEKLY BASIS, A “SHOCK” TREATMENT SHOULD BE USED TO DESTROY ORGANIC CONTAMINATION NOT READILY DESTROYED BY NORMAL ADDITIONS OF THE SANITIZING AGENT. THIS IS ACCOMPLISHED BY USING A POWERFUL, LONG-LASTING OXIDIZING AGENT CAPABLE OF DESTROYING THE ORGANIC CONTAMINANTS SO THE SANITIZER CAN BE EFFECTIVE IN KILLING BACTERIA.

CONTACT YOUR CHEMICAL SUPPLIER FOR THE BEST “SHOCKING” AGENT IN CONJUNCTION WITH THE LINE OF CHEMICALS BEING USED. FOR SPAS INSTALLED OUTSIDE AND DIRECTLY IN SUNLIGHT, ALGAE GROWTH MAY BE A PROBLEM. IF THIS OCCURS, CONTACT YOUR RETAILER OR CHEMICAL MANUFACTURER FOR ADVICE ON THE BEST AGENT AVAILABLE TO HANDLE THIS PROBLEM.

REMEMBER!:

1. BEFORE USING CHEMICALS, READ THE LABELS AND FOLLOW DIRECTIONS CAREFULLY.
2. ALWAYS ADD THE CHEMICALS DIRECTLY TO THE SPA WATER, EITHER IN A SUITABLE FEEDER, DISTRIBUTED OVER THE SURFACE OF THE WATER, OR POURED INTO THE WATER, PREFERABLY WITH PUMP AND BUBBLER ON.
3. NEVER ADD CHEMICALS TO THE SPA WHILE PEOPLE ARE USING IT.
4. MAINTAINING TEMPERATURE BETWEEN 95-104°F (35-40°C) IS ESSENTIAL AS A HEALTH FACTOR FOR USERS AND IS HELPFUL IN CONTROLLING WATER PROBLEMS.
5. THE BOTTOM LINE TO PROPER WATER MAINTENANCE IS TO ADHERE TO A REGULAR SCHEDULE OF TESTING CHEMICAL LEVELS AND MAINTAINING THEM.



DANGER: TO REDUCE THE RISK OF DROWNING:

1. NEVER USE THE SPA ALONE.
2. CHILDREN SHOULD NOT USE THE SPA UNLESS THEY ARE SUPERVISED BY AN ADULT
3. KEEP PETS AWAY FROM THE SPA AT ALL TIMES.
4. **ALWAYS REPLACE AND LOCK THE SPA COVER WHEN THE SPA IS NOT IN USE.**

DANGER: TO REDUCE THE RISK OF DROWNING

- **PROLONGED IMMERSION IN THE SPA MAY CAUSE HYPERTHERMIA. THE CAUSES, SYMPTOMS AND EFFECTS OF HYPERTHERMIA MAY BE DESCRIBED AS FOLLOWS: HYPERTHERMIA OCCURS WHEN THE INTERNAL TEMPERATURE OF THE BODY REACHES A LEVEL SEVERAL DEGREES ABOVE THE NORMAL BODY TEMPERATURE OF 98.6 °F (37°C). THE SYMPTOMS OF HYPERTHERMIA INCLUDE AN INCREASE IN THE INTERNAL TEMPERATURE OF THE BODY, DIZZINESS, LETHARGY, DROWSINESS, AND FAINTING. THE EFFECTS OF HYPERTHERMIA INCLUDE:**
 1. FAILURE TO PERCEIVE HEAT
 2. FAILURE TO RECOGNIZE THE NEED TO EXIT THE SPA
 3. UNAWARENESS OF IMPENDING HAZARD
 4. FETAL DAMAGE IN PREGNANT WOMEN
 5. PHYSICAL INABILITY TO EXIT THE SPA
 6. UNCONSCIOUSNESS RESULTING IN THE DANGER OF DROWNING

DANGER: RISK OF INJURY

- **DO NOT REMOVE THE SUCTION FITTINGS. THE SUCTION FITTING IN THIS SPA IS SIZED TO MATCH THE SPECIFIC WATER FLOW CREATED BY THE PUMP. SHOULD THE NEED ARISE TO REPLACE THE SUCTION FITTING OR THE PUMP, BE SURE THAT THE FLOW RATES ARE COMPATIBLE. NEVER OPERATE THE SPA IF THE SUCTION FITTING IS BROKEN OR MISSING. NEVER REPLACE A SUCTION FITTING WITH ONE RATED LESS THAN THE FLOW RATE MARKED ON THE ORIGINAL SUCTION FITTING.**

DANGER: RISK OF ACCIDENTAL DROWNING

- **KEEP HAIR AND BODY PARTS AWAY FROM THE SUCTION GUARD. DO NOT ALLOW LONG HAIR TO FLOAT FREELY IN THE WATER; LONG HAIR SHOULD BE RESTRAINED WITH A BATHING CAP. TO REDUCE THE RISK OF DROWNING FROM HAIR OR BODY ENTRAPMENT, INSTALL A SUCTION FITTING (S) WITH A MARKED FLOW RATE IN GALLONS PER MINUTE THAT EQUALS OR EXCEEDS THE FLOW RATE MARKED ON THE EQUIPMENT ASSEMBLY, IF REPLACEMENT OF SUCTION FITTINGS BECOMES NECESSARY.**

WARNING

- **GROUND FAULT CIRCUIT INTERRUPTER PROTECTION (GFCI) OR EQUIVELANT; RCD, FOR THE SPA SHOULD BE TESTED PRIOR TO EACH USE BY THE HOMEOWNER. WITH THE SPA IN OPERATION, PUSH THE “TEST” BUTTON ON THE GFCI CIRCUIT BREAKER AT THE PANEL BOX. THE SPA SHOULD SHUT DOWN IMMEDIATELY. NOW RESET THE GFCI. THE SPA SHOULD RETURN TO NORMAL OPERATION. IF THE GFCI FAILS TO OPERATE IN THIS MANNER, THERE EXISTS A POSSIBILITY OF ELECTRICAL SHOCK. APPROVED TESTING APPLIES FOR EXPORT PROTECTION DEVICES, I.E. RCD.**
- **DISCONTINUE SPA OPERATION BY DISCONNECTING THE POWER SOURCE AND NOTIFY A QUALIFIED ELECTRICIAN FOR IDENTIFICATION AND CORRECTION OF THE PROBLEM.**

WARNING

- **TO REDUCE THE RISK OF INJURY, DO NOT PERMIT CHILDREN TO USE THIS PRODUCT UNLESS THEY ARE CLOSELY SUPERVISED AT ALL TIMES.**

WARNING: TO REDUCE THE RISK OF INJURY

- **THE WATER IN A SPA SHOULD NEVER EXCEED 104°F (40° C). WATER TEMPERATURES BETWEEN 100° F (38° C) AND 104° F (40° C) ARE CONSIDERED SAFE FOR A HEALTHY ADULT. LOWER WATER TEMPERATURES ARE RECOMMENDED FOR EXTENDED USE (EXCEEDING 10 TO 15 MINUTES) AND FOR YOUNG CHILDREN.**



- **EXCESSIVE WATER TEMPERATURES HAVE A HIGH POTENTIAL FOR CAUSING FETAL DAMAGE DURING THE EARLY MONTHS OF PREGNANCY. PREGNANT OR POSSIBLY PREGNANT WOMEN SHOULD LIMIT SPA TEMPERATURES TO 100° F (38° C).**
- **BEFORE ENTERING A SPA, THE USER SHOULD MEASURE THE WATER TEMPERATURE WITH AN ACCURATE THERMOMETER SINCE THE TOLERANCE OF WATER TEMPERATURE REGULATING DEVICES MAY VARY AS MUCH AS 5° F (3°C).**
- **THE USE OF ALCOHOL, DRUGS, OR MEDICATION BEFORE OR DURING SPA USE MAY LEAD TO UNCONSCIOUSNESS WITH THE POSSIBILITY OF DROWNING.**
- **PERSONS SUFFERING FROM OBESITY OR WITH A MEDICAL HISTORY OF HEART DISEASE, LOW OR HIGH BLOOD PRESSURE, CIRCULATORY SYSTEM PROBLEMS, OR DIABETES SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA.**
- **PERSONS USING MEDICATION SHOULD CONSULT A PHYSICIAN BEFORE USING A SPA SINCE SOME MEDICATION MAY INDUCE DROWSINESS WHILE OTHER MEDICATION MAY AFFECT HEART RATE, BLOOD PRESSURE, AND CIRCULATION.**
- **ENTER AND LEAVE SPA SLOWLY AND WITH CAUTION. SURFACES AROUND SPA WILL BE WET AND SLIPPERY.**

WARNING

1. NEVER USE THE SPA ALONE.
2. DO NOT BRING ANY OBJECT INTO THE SPA THAT COULD DAMAGE THE SPA SHELL.
3. DO NOT SIT ON SPA COVER OR PLACE OBJECTS ON IT; IT IS NOT DESIGNED TO SUPPORT WEIGHT.
4. REMOVE ANY WATER OR DEBRIS THAT MAY COLLECT ON THE SPA COVER.
5. KEEP ALL CHEMICALS AWAY FROM CHILDREN AND PETS.
6. THE PH AND CHEMICAL BALANCE OF THE WATER MUST BE MAINTAINED AS EXPLAINED IN THIS MANUAL.

FAILURE TO DO SO MAY CAUSE INJURY TO USERS OR DAMAGE TO THE SPA, AND WILL VOID YOUR WARRANTY.

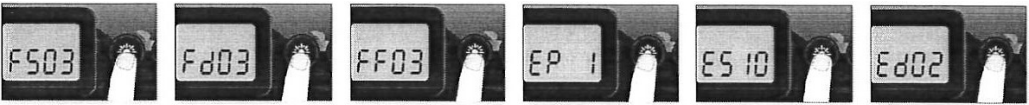
WARNING: HEALTH CONSIDERATIONS

- **THE USE OF ALCOHOL, DRUGS, MEDICATION CAN GREATLY INCREASE RISK OF FATAL HYPERTHERMIA.**
- **INDIVIDUALS WITH INFECTIONS AND OPEN SORES OR WOUNDS SHOULD NOT USE THE SPA. BACTERIA THRIVE IN WARM AND HOT WATER. ALWAYS KEEP YOUR SPA DISINFECTED AND MAINTAIN THE PROPER CHEMICAL BALANCE.**
- **SHOWER BEFORE AND AFTER USING THE SPA. THIS WILL REMOVE ANY DEODORANT, PERSPIRATION, OR BODY OILS THAT COULD CONTAMINATE THE WATER. SHOWERING AFTER WILL REMOVE ANY RESIDUAL CHEMICALS AND ANY BACTERIA THAT MAY HAVE BEEN IN THE SPA.**
- **DO NOT USE THE SPA IMMEDIATELY AFTER STRENUOUS EXERCISE.**
- **IF YOU FEEL PAIN OR DIZZINESS AT ANY TIME WHILE USING THE SPA, DISCONTINUE USE AND CONTACT A PHYSICIAN.**

WARNING: TO REDUCE THE RISK OF INJURY

- **IT IS ESPECIALLY IMPORTANT FOR PERSONS OVER THE AGE OF 35 OR PERSONS WITH PRE-EXISTING HEALTH PROBLEMS, SUCH AS OBESITY, HEART DISEASE, HIGH BLOOD PRESSURE, CIRCULATORY PROBLEMS, OR DIABETES TO CONSULT THEIR PHYSICIAN BEFORE USING THE SPA.**
- **THE SPA JETS PRODUCE A STREAM OF WATER WITH RELATIVELY HIGH PRESSURE. PROLONGED EXPOSURE OF A LOCALIZED AREA OF THE BODY MAY CAUSE BRUISES TO THE SKIN.**
- **NEVER INSERT ANY OBJECT INTO ANY OPENING.**
- **DO NOT USE BREAKABLE CONTAINERS IN OR NEAR THE SPA.**

WARNING: ELECTRICAL CONSIDERATIONS



- Setting filter or purge cycle start time**

The display will show FSxx, "xx" representing the starting hour of the cycle. Use the Up or Down key to adjust the hours. Use the Light key to jump to the next parameter, filter duration (Fd).
- Setting filter cycle duration**

(not available on purge systems)

The display will show Fdxx, "xx" representing the duration in hours of the filter cycle. Use the Up or Down key to adjust the duration. Use the Light key to jump to the next parameter, filter or purge frequency (FF).

0 = no filtration
24 = continuous filtration

It is not recommended to set this to "0".
- Setting filter or purge cycle frequency**

The display will show FFxx, "xx" representing the number of cycles per day. Use the Up or Down key to adjust the frequency. Use the Light key to jump to the next parameter, economy mode (EP).

The "Filter cycle" indicator lights up when filter is on and flashes when suspended.
- Setting economy mode**

This mode allows you to lower the temperature set point of the spa by 20 °F (11 °C) during a certain period of the day.

The display will show EPx, "x" representing the state of the programmed economy (0 = disabled, 1 = enabled). Use the arrow keys to enable or disable economy mode. Use the Light key to jump to the next parameter, economy start time (ES).
- Setting economy start time**

The display will show ESxx, "xx" representing the hour at which the economy mode will become active. Use the Up or Down key to adjust the hour. Use the Light key to jump to the next parameter, economy duration (Ed).

When the Economy mode is ON, the display will toggle between the "Eco" message, the time, and the water temperature.
- Setting economy duration**

The display will show Edxx, "xx" representing the duration in hour of the economy mode. Use the Up or Down key to adjust the hour. Use the Light key to jump to the next parameter, temperature unit.

24 = continuous economy



- Setting temperature unit**

Water temperature can be displayed in either Fahrenheit (°F) or Celsius (°C). The display will show F or C.

Use the Up or Down key to change the setting. Use the Light key to save all the parameters.
- Smart Winter Mode**

Our Smart Winter Mode protects your system from the cold by turning pumps on several times a day to prevent water from freezing in pipes.

The "SWM" indicator lights up when freezing is detected and flashes when the purge is active.
- Cooldown**

After heating the spa water to the desired Set Point, the heater is turned off, but its associated pump (Pump 1, low-speed or CP) remains on for a predetermined period of time to ensure adequate cooling of the heating element, prolonging its useful life.
- Water temperature regulation**

Every 15 to 90 minutes the pump will run to ensure accurate water temperature readings as well as avoid heater activation in dry conditions. After verifying pump activation and taking a water temperature reading if required, the system automatically turns the heater on to reach and maintain water temperature at Set Point.

Indicator flashes when taking water temperature reading.

Troubleshooting section

Should an error occur, the display will show one of the following error messages toggled with the clock and the water temperature.

in.xe error codes	Description
	Hr An internal hardware error has been detected in the in.xe. Contact dealer or service supplier.
	HL 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 the spa cover and allow the water to cool down, then shut power off and power your spa up again to reset the system.
	AOH Temperature inside the spa skirt is too high, causing the internal temperature in the in.xe to increase above normal limits. Open skirt and wait until error clears.
	FLO The system does not detect any water flow while the primary pump is running. Check and open water valves. Check for water level. Clean filter. If the problem persists, call your dealer or service supplier.
	Prr A problem is detected with the temperature probe. Call your dealer or service supplier.
	OH The water temperature in the spa has reached 108°F (42°C). Do not enter the water! Remove the spa cover and allow the water to cool down to a lower temperature. Call your dealer or service supplier if problem persists.





WARNING: READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC Spas, PDC International assumes no responsibility for personal injury or property damage sustained by or through the use of this product. When installing and using this equipment, basic safety precautions should always be taken to reduce risk of electrical shock, ensure safe usage, and safeguard the user’s health.

Description

Smart Winter Mode

Heater

Filter

Set Point

88.88

AM PM

2 Pump Model

Pump 1

Pump 2

Light

Indicator lights

Up / Down

Spa Functions

Off Mode

Pressing Pump 1 for 5 seconds will enable the Off mode. This mode allows you to stop all outputs including automatic functions such as filter cycle, heat request and smart winter mode for 30 minutes to perform quick spa maintenance. When Off mode is active, the display will toggle between the “OFF” message, the clock and the water temperature. The spa light will flash for a few seconds before the end of the 30 minutes to warn you that the system is about to resume its normal operation. Press Pump 1 or Pump 2 (if available) to restart the system before the expiration of the 30 minute delay. When the system resumes its normal operation, the display shows “On” for 3 seconds.

Pump 1

Press Pump 1 key to turn Pump 1 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

Pump 2 key

Not available on all models. Press Pump 2 key to turn Pump 2 on at low speed. Press a second time to turn pump to high speed (with a dual-speed pump*). A third time turns pump off. A built-in timer automatically turns pump off after 20 minutes, unless pump has been manually deactivated first.

Light key

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

Up/Down keys

Use Up or Down key to set desired water temperature. The temperature setting will be displayed for 2 seconds to confirm your new selection.

The “Pump 1” indicator lights up when Pump 1 is on. With a dual-speed pump, the indicator will flash when pump 1 is on at low speed.

The “Pump 2” indicator lights up when Pump 2 is on. With a dual-speed pump, the indicator will flash when pump 2 is on at low speed.

The “Light” indicator lights up when light is on.

The “Set Point” icon indicates that the display shows the desired temperature, NOT the current water temperature!

* If single speed pump: press Pump key to turn pump on. Press Pump key again to turn pump off.

Programming Steps

Program menu

The program menu is accessible by holding down the Light key for 5 seconds. In the program menu the following parameters can be set: clock, the filter or purge cycles, economy mode and temperature units. While you are in the program menu, use the Up or Down key to adjust the parameters and use the Light key to jump to the next parameter. The changes will be saved after the confirmation of

Setting the clock

Enter the program menu by holding down the Light key for 5 seconds. The display will show the current clock setting with the hour flashing.

Setting the minutes:

Use the Up or Down keys to adjust the minutes. Press the Light key to jump to the next parameter, the filter or purge start time (FS).

Programming the filter/ purge cycles

Depending on system configuration your spa will perform either a filter or a purge cycle. The filter cycle menu consists of the following parameters: the start time (FS), the duration (Fd) and the frequency (FF). The purge cycle menu consists of the following parameters: the start time (FS) and the frequency (FF).

A filter cycle consists of starting all the pumps and blower in high speed for 1 minute (purge step) then, the pump associated with the filter will run in low speed for the remaining duration of the filter cycle (clean step).

A purge cycle is used when the spa is equipped with a 24 hour circulation pump which provides a continuous clean step. It consists of starting all the pumps and blower in high speed for 1 minute.



- **FOR CONTROLS OTHER THAN UNDERWATER LIGHTING CIRCUITS: A GROUND FAULT CIRCUIT INTERRUPTER (OR EQUIVELANT FOR EXPORT INSTALLS) MUST BE PROVIDED IF THIS DEVICE IS USED TO CONTROL AN UNDERWATER LIGHTING FIXTURE. THE CONDUCTORS ON THE LOAD SIDE ON THE GROUND FAULT CIRCUIT INTERRUPTER SHALL NOT OCCUPY CONDUIT, BOXES, OR ENCLOSURES CONTAINING OTHER CONDUCTORS UNLESS THE ADDITIONAL CONDUCTORS ARE ALSO PROTECTED BY A GROUND FAULT CIRCUIT INTERRUPTER (OR EQUIVALENT FOR EXPORT INSTALLS).**
- **THE ELECTRICAL SUPPLY FOR THIS PRODUCT MUST INCLUDE A SUITABLY RATED SWITCH OR CIRCUIT BREAKER TO OPEN ALL UNDERGROUND SUPPLY CONDUCTORS TO COMPLYWITH SECTION 422-20 OF THE U.S. NATIONAL ELECTRIC CODE. THE DISCONNECTING MEANS MUST BE READILY ACCESSIBLE TO THE TUB OCCUPANT BUT INSTALLED AT LEAST 5 FT (1.5 M) FROM THE SPA WATER.**

WARNING: FOR SPAS WITH AUDIO / VIDEO COMPONENTS

1. **CAUTION - RISK OF ELECTRIC SHOCK. Do NOT LEAVE COMPARTMENT DOOR OPEN.**
2. **CAUTION - RISK OF ELECTRIC SHOCK. REPLACE COMPONENTS ONLY WITH IDENTICAL COMPONENTS; AND,**
3. **Do NOT OPERATE THE AUDIO/VIDEO CONTROLS WHILE INSIDE THE SPA.**
4. **WARNING - PREVENT ELECTROCUTION. Do NOT CONNECT ANY AUXILIARY COMPONENTS (FOR EXAMPLE CABLE, ADDITIONAL SPEAKERS, HEADPHONES, ADDITIONAL AUDIO/VIDEO COMPONENTS, ETC.) TO THE SYSTEM.**
5. **THESE UNITS ARE NOT PROVIDED WITH AN OUTDOOR ANTENNAE; WHEN PROVIDED, IT SHOULD BE INSTALLED IN ACCORDANCE WITH ARTICLE 810 OF THE U.S. NATIONAL ELECTRICAL CODE, ANSI/NFPA 70.**
6. **Do NOT SERVICE THIS PRODUCT YOURSELF AS OPENING OR REMOVING COVERS MAY EXPOSE YOU TO DANGEROUS VOLTAGE OR OTHER RISK OF INJURY. REFER ALL SERVICING TO QUALIFIED SERVICE PERSONNEL.**
7. **WHEN THE POWER SUPPLY CONNECTION OR POWER SUPPLY CORD(S) ARE DAMAGED; IF WATER IS ENTERING THE AUDIO/VIDEO COMPARTMENT OR ANY ELECTRICAL EQUIPMENT COMPARTMENT AREA; IF THE PROTECTIVE SHIELDS OR BARRIERS ARE SHOWING SIGNS OF DETERIORATION; OR IF THERE ARE SIGNS OF OTHER POTENTIAL DAMAGE TO THE UNIT, TURN OFF THE UNIT AND REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.**
8. **THIS UNIT SHOULD BE SUBJECTED TO PERIODIC ROUTINE MAINTENANCE (FOR EXAMPLE, ONCE EVERY 3 MONTHS) TO MAKE SURE THAT THE UNIT IS OPERATING PROPERLY.**

ADDITIONAL SAFETY CONSIDERATIONS

- **INSTALL THE SPA TO PROVIDE DRAINAGE FOR COMPARTMENTS OF ELECTRICAL COMPONENTS.**
- **FOR FLOOR RECESSED SPAS: INSTALL TO PERMIT ACCESS FOR SERVICING FROM ABOVE OR BELOW THE FLOOR. SPA EQUIPMENT MUST BE INSTALLED BELOW WATER LEVEL.**
- **WHEN PLANNING YOUR SPA INSTALLATION SITE, PREPARE FOR THE UNLIKELY EVENT OF RAPID SPA DRAINAGE.**
- **DO NOT PLACE SPA IN DIRECT SUNLIGHT WHILE UNIT IS EMPTY OR WHEN SEALED IN SHIPPING MATERIALS. EXCESSIVE HEAT BUILD MAY CAUSE DAMAGE TO SPA AND VOID WARRANTY.**
- **INSTALL SPA SO THAT WATER CAN EASILY BE DRAINED OUT, LOCATING THE SIDE DRAIN VALVE ON THE SPA SPECIFICATION LISTING.**
- **WHEN INSTALLING SPA, ALLOW AMPLE SPACE FOR FUTURE SERVICING, NOTING LOCATION OF ALL SUPPORT EQUIPMENT PER THE MODEL SPECIFICATIONS.**

SAVE THESE INSTRUCTIONS



A

CABINET PANEL WARNING SIGN

FOR YOUR REFERRAL AND CONVENIENCE, A WEATHER RESISTANT WARNING SIGN HAS BEEN MOUNTED ON THE CABINET SIDE OF YOUR PORTABLE SPA. BECOME FAMILIAR WITH THE PRECAUTIONS AND EXERCISE SAFETY AND CARE WHILE ENJOYING YOUR SPA.

ENCLOSED WARNING SIGN FOR POSTING

LOCATE THE WEATHER RESISTANT SIGN ENCLOSED WITH THIS MANUAL INTENDED FOR PERMANENT POSTING IN AN AREA NEAR THE SPA VISIBLE TO ALL SPA OCCUPANTS. NOTIFY THE FACTORY OR YOUR RETAILER SHOULD YOU REQUIRE ADDITIONAL SIGNS OR REPLACEMENTS.

SAFETY INSTRUCTION SIGNS FEATURE SEVERAL LANGUAGES. DISPLAY ACCORDING TO THE APPROPRIATE LANGUAGE.

WARNING: READ ALL INSTRUCTIONS BEFORE USING THE SPA. PDC SPAS ASSUMES NO RESPONSIBILITY FOR PERSONAL INJURY OR PROPERTY DAMAGE SUSTAINED BY OR THROUGH THE USE OF THIS PRODUCT.



**SAVE THIS MANUAL, SIGNS, AND INSTRUCTIONS
FOR FUTURE REFERENCE.**



GENERAL GUIDELINES

1. BE SURE THAT THE POWER IS TURNED OFF AT THE MAIN CIRCUIT BREAKER.
2. CAUTION: ELECTRIC HEATER ELEMENT MUST BE FULLY SUBMERGED IN WATER BEFORE BEING ENERGIZED.
3. FILL SPA TO THE RECOMMENDED LEVEL, ASSURING ALL SUCTION OUTLETS ARE COVERED WITH WATER.
4. MAKE SURE VALVES ON THE SUCTION AND RETURN SIDES OF THE SPA PUMP ARE OPEN TO ALLOW WATER TO FLOW TO AND FROM THE SPA AND SPA SUPPORT SYSTEM.
5. IF THE PUMP IS AIR-LOCKED, LOCATE PUMP #1, LOOSEN RETURN FITTING FROM THE TOP OF THE PUMP A FEW TURNS. AFTER ABOUT 10 SECONDS, TIGHTEN UNION AND CONTINUE START-UP.
6. TURN POWER “ON” AT MAIN CIRCUIT BREAKER.
7. PRESS JET / PUMP BUTTON TO ACTIVATE CYCLE.
8. TURN AIR REGULATOR KNOB TO “OFF” POSITION.
9. WHEN THE SYSTEM HAS FULLY PRIMED, ALL THE JETS SHOULD BE FREELY ROTATING AND FREE OF EXCESS AIR; EXCEPT THE JETS ATTACHED TO OZONE, IF THIS OPTION IS INCLUDED ON THE SYSTEM. ALLOW THE SYSTEM TO OPERATE FOR FIVE MINUTES IN THIS POSITION.
10. SET THE THERMOSTAT TO THE DESIRED TEMPERATURE TO BEGIN HEATING THE SPA WATER. THE INDICATOR ICON ON THE SPA SIDE CONTROL WILL BE ON WHEN THE SPA IS HEATING.
11. THE ECONOMICAL, GRADUAL HEATING OF THE WATER TAKES PLACE OVER A NUMBER OF HOURS, DEPENDING UPON THE SIZE OF THE SPA, SIZE OF THE HEATER AND THE RECOMMENDED USE OF A PDC SPA COVER. WHEN THE DESIRED TEMPERATURE IS REACHED, NOT OVER 104°F (40°C). LEAVE THE THERMOSTAT AT THIS SETTING, THE TEMPERATURE WILL AUTOMATICALLY BE MAINTAINED. RE-CHECK WATER TEMPERATURE WITH AN ACCURATE THERMOMETER BEFORE ENTERING THE SPA.
12. SET THE FILTRATION PROGRAM TO DESIRED SETTING PER INSTRUCTIONS FOUND IN THE CONTROL CENTER SECTION OF THIS MANUAL.
13. CHEMICALLY TREAT THE SPA WATER. READ THE SECTION ON WATER CHEMISTRY MAINTENANCE AND FOLLOW INSTRUCTIONS ON CONTAINER OF ANY PRODUCT USED.
14. COVER THE SPA WITH A THERMAL COVER TO MAINTAIN TEMPERATURE AND LOCK FOR SAFETY.

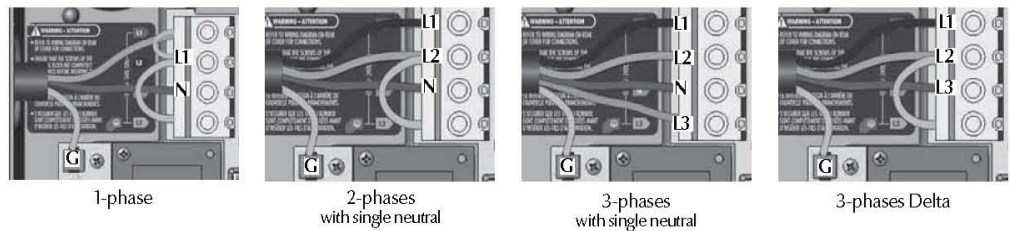


INSTALLATION GUIDELINES

ALL INSTALLATIONS AND CONNECTIONS ARE TO BE PERFORMED BY A QUALIFIED, LICENSED ELECTRICIAN ONLY AND IN ACCORDANCE WITH LOCAL REGULATIONS. IDENTIFY THE CORRECT CE PLATFORM ON THE SPA UNIT, IN ACCORDANCE WITH THE HOME’S ELECTRICAL OUTPUT, AND FOLLOW THE GUIDELINES BELOW. ENSURE POWER IS TURNED OFF PRIOR TO MAKING ANY ELECTRICAL CONNECTIONS.

Warning! This product must always be connected to a circuit protected by a residual-current device (RCD) having a rated operating residual-current not exceeding 30 mA. Proper wiring of the electrical service box, RCD and the terminal block is essential! Check your electrical code for local regulations. Only copper wire should be used, never aluminum.

WHEN INSTALLING THE POWER BOX WE RECOMMEND THE FOLLOWING:



In.ye.ce 230 V AC or 230/400 V AC

Correct wiring of the electrical service box, RCD, and pack terminal block is essential! Call an electrician if necessary.

Refer to heater connection section for proper connections of ORANGE and BROWN wires.

Warning! In.ye.ce models must always be connected to a circuit protected by a Residual-Current Device (RCD) having a rated operating residual-current not exceeding 30 mA.

To install the wiring for the spa equipment controller, you’ll need a Phillips screwdriver and a flat screwdriver. Loosen the 4 screws of the spa pack lid and open it. Remove 70 mm (3”) of cable insulation. Strip away 25 mm (1/2”) of each wire insulation. Pull the cable through the cutout of the box and use an IEC certified plastic bushing that will maintain the IPX5 rating. Also, the power cord must be in accordance with the national electrical code of the country in which it’s to be installed and must maintain IPX5 rating. Make sure that only the uncut sheathing is clamped at this opening. Push the color-coded wires into the terminals as indicated on the sticker, use the flat screwdriver to tighten the bolts on the terminals. After making sure wire connections are secure, push them back into the box and close the lid. Tighten the 4 screws of the spa pack lid.

An IEC certified bushing that will maintain the IPX5 rating must be used. The power cord must be in accordance with the national electrical code of the country in which the spa equipment is to be installed.

Make sure all accessories are linked to the bonding connector and connected to the pack. Electrical connections should be made only by qualified personnel and in accordance with local regulations.



SPA PART TERMINOLOGY AND DESCRIPTION

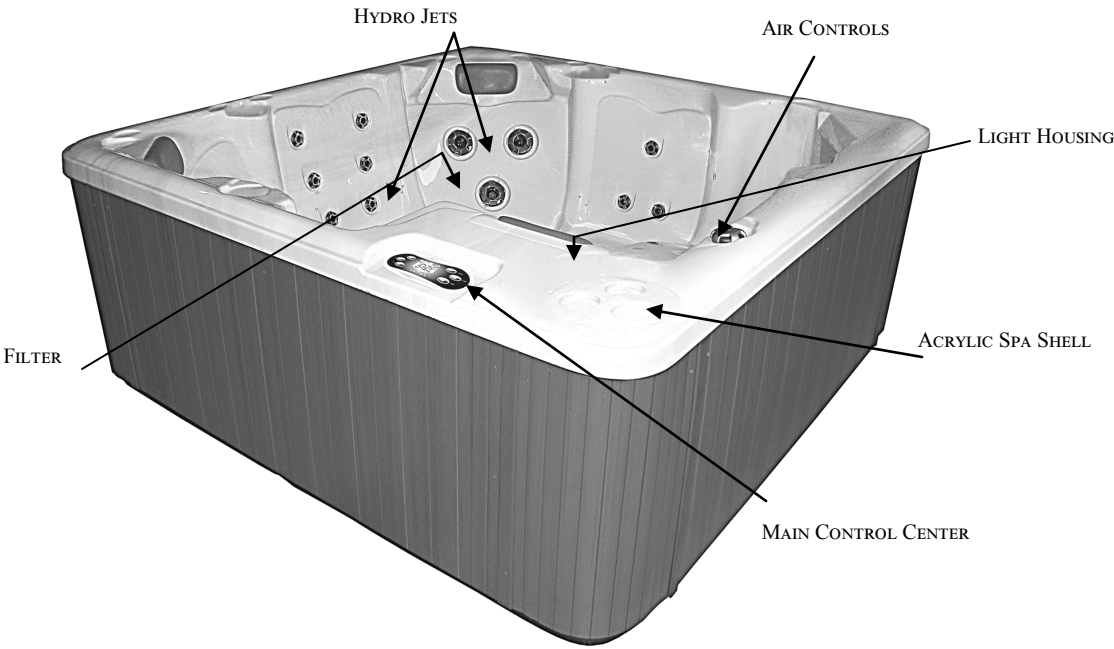
HYDRO-JETS: THESE ARE THE WALL FITTINGS AROUND THE INSIDE PERIMETER OF THE SPA. THEY MIX WATER WITH AIR TO PRODUCE LOCALIZED THERAPY, IN A STRAIGHT STREAM, CIRCULAR MOTION OR IN RANDOM PATTERNS FOR UPPER AND LOWER BACK MASSAGE IN THE LOUNGE AND CONTOURED SEATING AREAS.

FILTER: YOUR SPA IS EQUIPPED WITH A SKIM FILTER. THIS ASSURES OPTIMUM WATER FILTERING AND EASE OF CLEANING AT SPA SIDE. REVIEW THE MAINTENANCE SECTION OF THIS MANUAL FOR FILTER CARTRIDGE CLEANING AND REPLACEMENT.

SUCTION: THESE ARE CIRCULAR FITTINGS MOUNTED ON THE VERTICAL WALL OF THE FOOTWELL AND SERVE THE SAME FUNCTION AS THE SKIMMER. IT WORKS IN CONJUNCTION WITH THE SKIMMER TO RETURN WATER TO THE SUPPORT EQUIPMENT.

AIR CONTROLS: THESE ARE ROUND FITTINGS MOUNTED ON THE LIP OF SPA THAT CONTROL THE AMOUNT OF OUTSIDE AIR MIXED WITH THE INCOMING WATER OF THE HYDRO-JET. YOUR SPA HAS ONE AIR CONTROL ON THE SPA LIP THAT CONTROLS AIR/ WATER MIX FOR THE JETS.

AURA LIGHTING: LOW VOLTAGE SPA LIGHT, WITH VARYING SHADES OF A COLOR WASH, CONTROLLED AT THE SPASIDE CONTROL PANEL. CHOOSE ROTATION OF COLOR OR STATIONARY COLOR OF YOUR CHOICE. INCLUDES TWO LIGHT ED CUP HOLDERS AT SPA SIDE.





SPA PART TERMINOLOGY AND DESCRIPTION

THE SPA SUPPORT PACK CONTAINS UP TO FIVE MAJOR COMPONENTS: EITHER SINGLE OR DUAL SPEED PUMPS, THAT CIRCULATE THE WATER THROUGH THE HYDRO-JETS AND BACK THROUGH THE SUCTIONS AND A CARTRIDGE FILTER THAT PHYSICALLY REMOVES DEBRIS FROM THE WATER. YOUR UNIT WILL ALSO BE EQUIPPED WITH AN ELECTRIC HEATER. ALL COMPONENTS ARE OPERATED BY SWITCHING AT SPA SIDE. WATER IS ROUTED THROUGH THE PUMP, HEATER AND JETS.

PUMP: YOUR NEW SPA HAS BEEN EQUIPPED WITH A PUMP FOR HYDROTHERAPY JET ACTION AND WATER FILTRATION. THE SPA SUPPORT PACK FEATURES A DUAL-SPEED PUMP AND, ON SOME MODELS ONE OR TWO ADDITIONAL SINGLE SPEED PUMPS. THE REVOLUTION CONTROL CENTER OPERATES, THE HIGH SPEED OF A DUAL-SPEED PUMP IS ACTIVATED BY THE PUMP1 CONTROL AT SPA SIDE. THE LOWER SPEED (FILTRATION SPEED) IS CONTROLLED BY THIS PROGRAMMABLE ELECTRONIC CONTROL. THE FILTRATION TIME REQUIRED TO MAINTAIN WARM, CLEAN WATER MAY VARY FROM SPA TO SPA. GENERALLY, NO LESS THAN SIX HOURS A DAY IS RECOMMENDED. THE PUMP1 BUTTON CAN ACTIVATE THE PUMP AT FULL SPEED AT ANY TIME FOR HYDROTHERAPY, EVEN THOUGH TURNING OFF THE PUMP AT THE PUMP1 BUTTON DOES NOT OVERRIDE THE FILTRATION CYCLE (LOW SPEED). FOR EXAMPLE, IF THE SPA HAS BEEN PROGRAMMED TO CIRCULATE THE SYSTEM AT A TIME WHEN BATHERS ARE EXITING THE SPA, THE PUMP WILL CONTINUE TO OPERATE AT LOW SPEED EVEN THOUGH THE JET BUTTON IS PUSHED. THE CONTROL UNIT WILL SHUT THE PUMP OFF WHEN PROGRAMMED TO DO SO.

FILTER: YOUR RIVER SERIES SPA IS EQUIPPED WITH A SUCTION-SIDE FILTER. THIS ASSURES OPTIMUM WATER FILTERING AND EASE OF CLEANING AT SPA SIDE. REVIEW THE MAINTENANCE SECTION OF THIS MANUAL FOR FILTER CARTRIDGE CLEANING AND REPLACEMENT.

HEATER: YOUR SPA IS EQUIPPED WITH THERMOSTAT CONTROL AT SPA SIDE. ONCE YOU FIND THE TEMPERATURE YOU ENJOY MOST, LEAVE THE THERMOSTAT AT THAT SETTING, AND THE SPA WILL AUTOMATICALLY MAINTAIN THE CORRECT TEMPERATURE; READY FOR YOUR ENJOYMENT ANY TIME OF THE DAY. AVOID CONSTANT RESETTING OF THE THERMOSTAT; IT IS MORE ECONOMICAL TO MAINTAIN TEMPERATURE, THAN TO LET THE TEMPERATURE FALL AND THEN WAIT DURING HEAT-UP TIME BEFORE SOAKING.

OZONE: ALL SPAS ARE STANDARD WITH OZONE FOR SANITATION AND SHOULD CIRCULATE 16-24 HOURS DAILY. USE THE PROGRAMMABLE ELECTRONIC CONTROL CENTER TO PROGRAM THIS OPERATION.

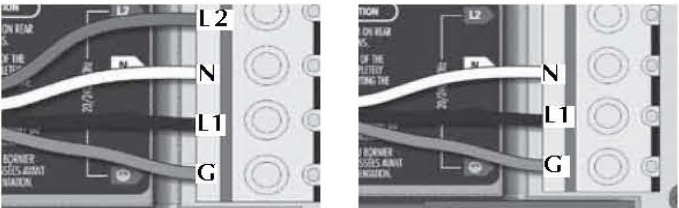


INSTALLATION GUIDELINES

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Warning! This product must always be connected to a circuit protected by a Ground Fault Circuit Breaker (GFCI) having a rated operating residual-current not exceeding 50 mA. Proper wiring of the electrical service box, GFCI and the terminal block is essential! Check your electrical code for local regulations. Only copper wire should be used, never aluminum.

WHEN INSTALLING THE POWER BOX WE RECOMMEND THE FOLLOWING:



For 240 V (4 wires)

For 120 V (*3 wires)

- Correct wiring of the electrical service box, GFCI, and pack terminal block is essential.

Call an electrician if necessary.
- *If connected to a 3 wire system, no 240 V component will work.

Refer to "Connections for 120 V heater" section of this manual.
- Refer to heater connection section for proper connections of ORANGE and BROWN wires.

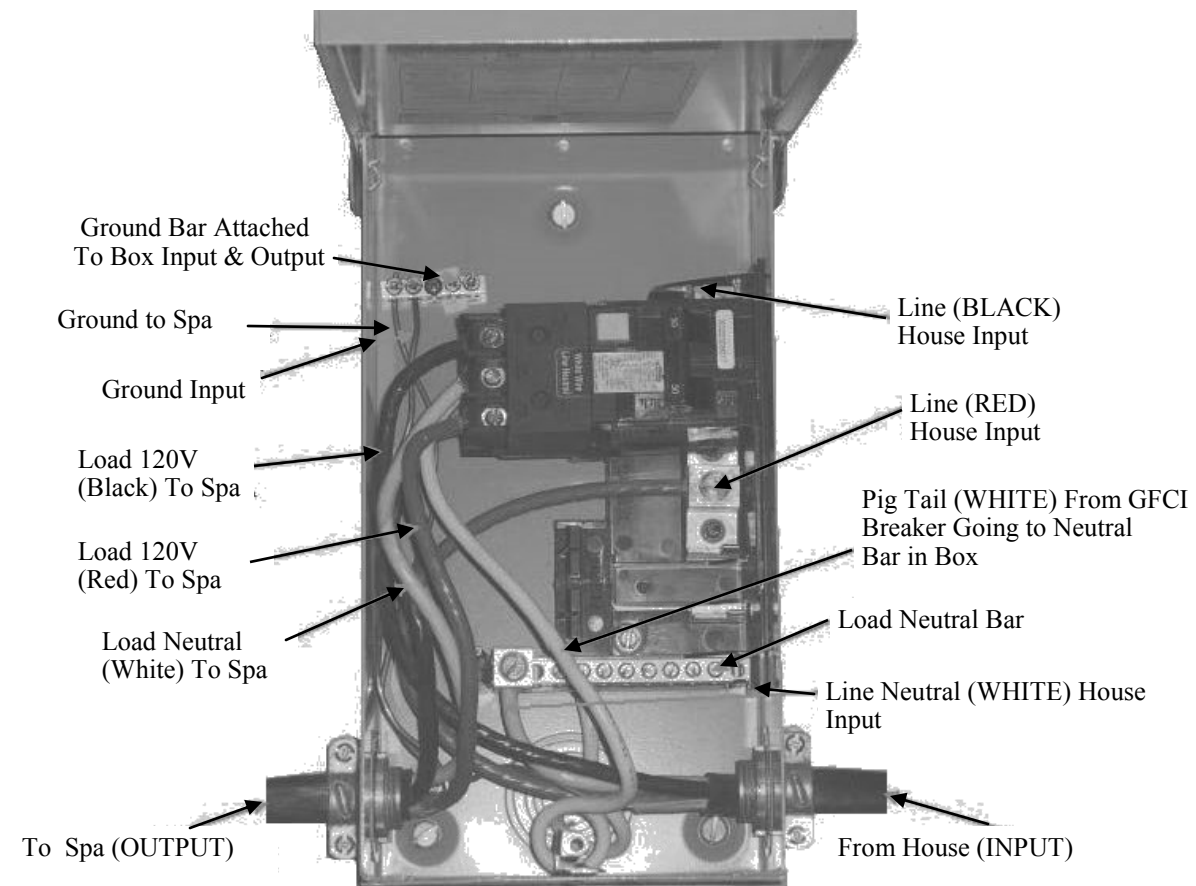
To install the wiring for the spa equipment controller, you'll need a Phillips screwdriver and a flat screwdriver. Loosen the 4 screws of the spa pack lid and open it. Remove 70 mm (3") of cable insulation. Strip away 25 mm (1/2") of each wire insulation. Pull the cable through the cutout of the box and use an IEC certified plastic bushing that will maintain the IPX5 rating. Also, the power cord must be in accordance with the national electrical code of the country in which it's to be installed and must maintain IPX5 rating. Make sure that only the uncut sheathing is clamped at this opening. Push the color-coded wires into the terminals as indicated on the sticker, use the flat screwdriver to tighten the bolts on the terminals. After making sure wire connections are secure, push them back into the box and close the lid. Tighten the 4 screws of the spa pack lid.

WIRING GUIDELINES - STATE-SIDE (U.S. INSTALLATIONS)

ATTENTION ELECTRICIAN:

ALL PDC SPA UNITS MUST BE INSTALLED WITH AN APPROVED G.F.C.I. IN ACCORDANCE WITH ALL APPLICABLE CODES. INSTALLATION OF G.F.C.I. VARIES AMONG THOSE MANUFACTURERS. FOLLOW EACH MANUFACTURER’S GUIDELINES TO ENSURE PROPER OPERATION AND PROTECTION OF SPA OCCUPANTS. THIS DIAGRAM IS A “TYPICAL” INSTALLATION TO BE USED ONLY AS A REFERENCE FOR THE INSTALLING ELECTRICIAN.

TYPICAL INSTALLATION BREAKER BOX CLASS A 50 AMP, 120/240 VOLT, GFCI



TO BE NOTED: Installation of this GFCI Circuit Breaker, including ampere sizing and choice of qualified electrician in accordance with the National Electrical Code, and all applicable federal, state and local codes and regulations in effect at the time of installation.

TO BE NOTED: The white neutral wire from the back of the GFCI Circuit Breaker **MUST** be connected to an incoming Line Neutral. The internal mechanism of the GFCI requires this Neutral connection for proper GFCI function.

**IMPORTANT: 6 GAUGE COPPER WIRE MUST BE USED
TEST GFCI MONTHLY AND PRIOR TO EACH USE.**

AMAZON SPA MODEL

GENERAL		rev. 2014/06
Seating Capacity	5	
Shell Material	Acrylic	
Dimensions (Domestic)	76” (6’4”)sq. x 31” (2’7”)	
Dimensions (Export)	193 cm. sq. x 79 cm.	
Water Capacity	275 Gallons (1,041 liters)	
Dry Weight	530 lbs. (240 kg)	
Skirt Material	PermaWood™	
Water Flow	100 Gallons per Minute	

WATER SYSTEM** (photo ref.)

Water Treatment System		Ozonator
Filter		25 sq. ft.
Slide Valves		2
Mega Swirl Jet	AS	3
Large Euro Jet w/ Eyeball	E	28
Mega'ssage Jet	GS	1
Multi'ssage Jet	P	0
Ozone Jet	O	1
Diverter Valves	V	0
Safety Suction	U	2
Mini Skimmer	K	0
Air Control	I	1
Spa Light	L	1
Drain Valve	5	0

SPECIAL FEATURES

Spa Pillows	3
Aura™ Light	Standard
Stainless Steel Jetting	Standard
Waterfall Jet WF	N/A
Waterfall Control Valve C	N/A
SoundStream™ SE Audio	N/A
Ozone Water Purification	Standard

ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak(Continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Electronics			
Electrical Can	6	YE Gecko	YE Gecko
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	4.0 KW
Operation System			
Main Spa Side Control	7	Gecko 300 Control	Gecko 300 Control
Secondary Spa Side Control	8	N/A	N/A

**** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install. Equipment location relates to slimline design, AdvantagePack option has major components located beneath end cabinet. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.**

CONGO SPA MODEL



GENERAL rev. 2014/06	
Seating Capacity	3
Shell Material	Acrylic
Dimensions (Domestic)	60” (5’) x84” (7’) x 33” (2’9”)
Dimensions (Export)	152 cm. x 213cm x 84 cm.
Water Capacity	200 Gallons (757 liters)
Dry Weight	450 lbs (204 kg)
Skirt Material	PermaWood™
Water Flow	100 Gallons per Minute

WATER SYSTEM** (photo ref)

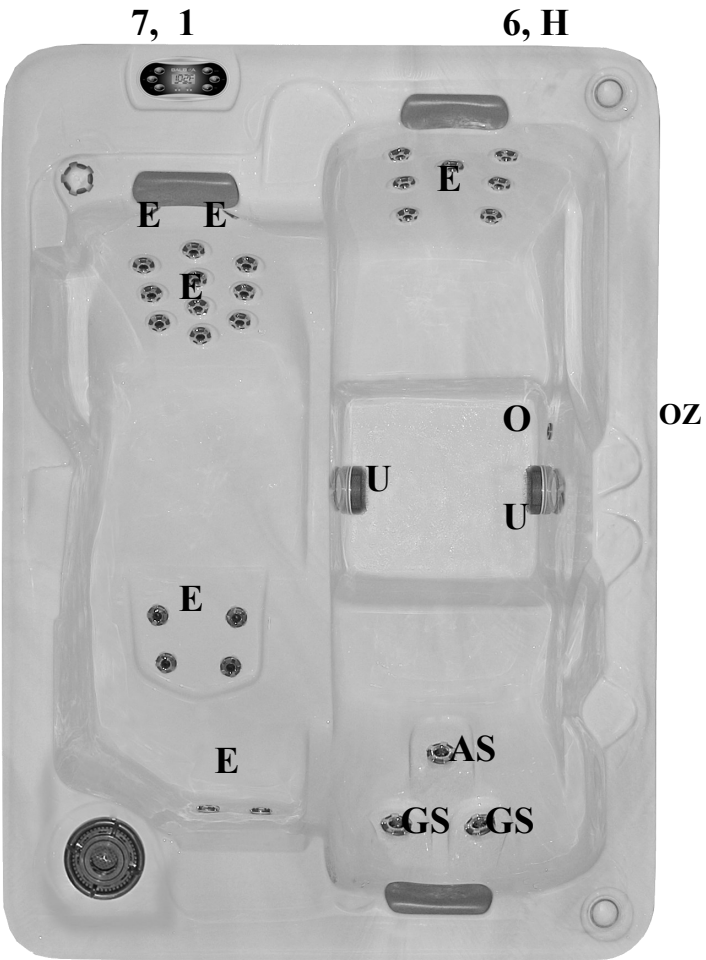
Water Treatment System	Ozonator
Filter	25 sq. ft.
Slide Valves	2
Mega Swirl Jet	AS 1
Large Euro Jet w/ Eyeball	E 26
Mega’ssage Jet	GS 2
Ozone Jet	O 1
Multissage Jet	P 0
Diverter Valves	V 0
Safety Suction	U 2
Mini Skimmer	K 0
Air Control	I 1
Spa Light	L 1
Drain Valve	5 0

SPECIAL FEATURES

Spa Pillows	3
Aura™ Light	Standard
Stainless Steel Jetting	Standard
Waterfall Jet	WF N/A
Waterfall Control Valve	C N/A
SoundStream™ SE Audio	N/A
Ozone Water Purification	OZ Standard

ELECTRICAL SYSTEM

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	4.0 (2.0) HP	4.0 (2.0) HP
Pump #2 peak (continuous) HP	2	N/A	N/A
Electronics			
Electrical Can	6	YE Gecko	YE Gecko
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	4.0 KW
Operation System			
Main Spa Side Control	7	Gecko 300 Control	Gecko 300 Control
Secondary Spa Side Control	8	N/A	N/A



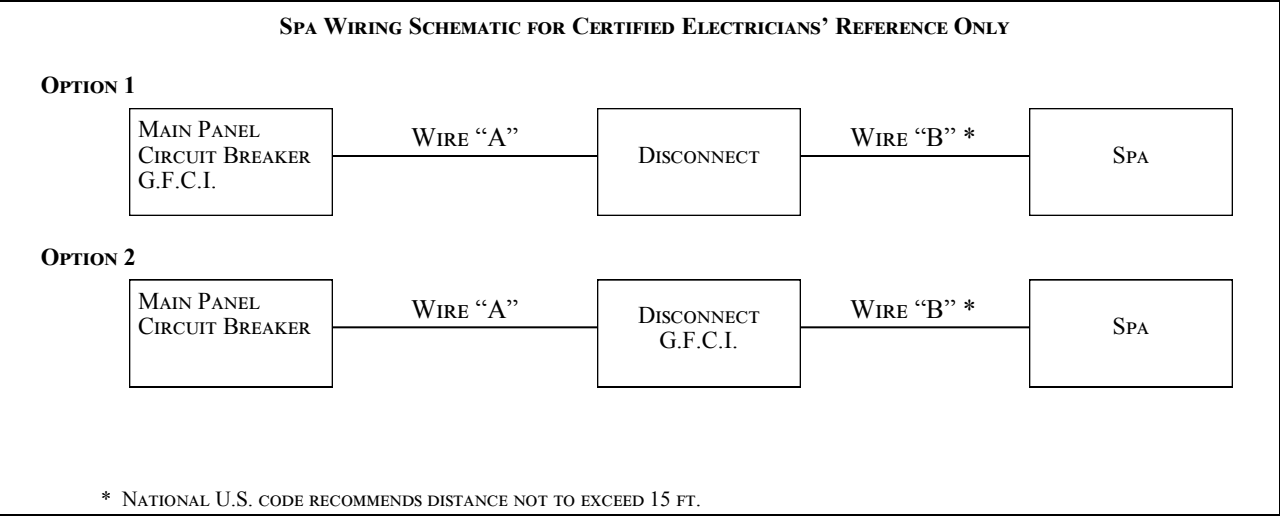
WIRING INSTALLATION



WIRING GUIDELINES

ALL EQUIPMENT MODELS ARE 120/240 VOLT, 60 CYCLE FOR STATE-SIDE, U.S. INSTALLATIONS, AND 50 HZ FOR EXPORT, CE, INSTALLATIONS.

- ALL SPAS MUST BE PERMANENTLY CONNECTED.
- ALL SPA SUPPORT SYSTEMS ARE MULTIPLE SUPPLY CIRCUITS.
- ALL SPA SYSTEMS REQUIRE THE INSTALLATION OF A GROUND FAULT CIRCUIT INTERRUPTER PROTECTOR (GFCI) OR EQUIVALENT; RCD, FOR EXPORT INSTALLS, AT THE POWER SOURCE (NOT SUPPLIED) BY A QUALIFIED ELECTRICIAN IN ACCORDANCE WITH ALL CODES AND REGULATIONS. REFER TO TYPICAL G.F.C.I. INSTALLATION ON FOLLOWING PAGE.
- PRIOR TO EACH USE, TESTING OF THE GFCI (OR EQUIVALENT) IS REQUIRED. REFER TO THE MAINTENANCE SECTION OF THIS MANUAL FOR INSTRUCTIONS.
- ALL SPA SUPPORT EQUIPMENT MUST BE BONDED (GROUNDED) TO THE PRESSURE CONNECTOR LOCATED WITHIN THE CONTROL PANEL, AS WELL AS THE BONDING TERMINAL LOCATED ON THE OUTSIDE OF THE CONTROL PANEL. (see wiring schematic below)
- DISCONNECT ALL ELECTRICAL SUPPLIES AND CONTACT A QUALIFIED TECHNICIAN BEFORE SERVICING.
- ALL SPA INSTALLATIONS ARE TO BE PERFORMED BY A LICENSED ELECTRICIAN AND IN ACCORDANCE WITH ALL LOCAL AND NATIONAL CODES.

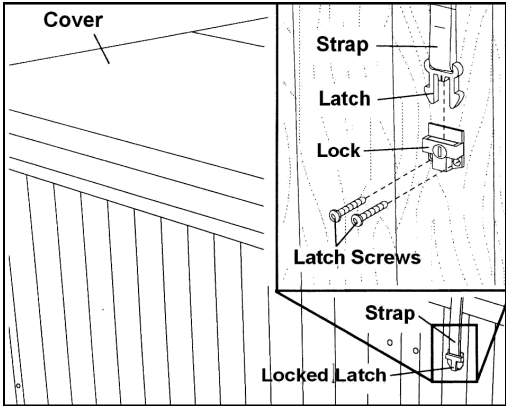


** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install. Equipment location relates to slimline design, AdvantagePack option has major components located beneath end cabinet. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

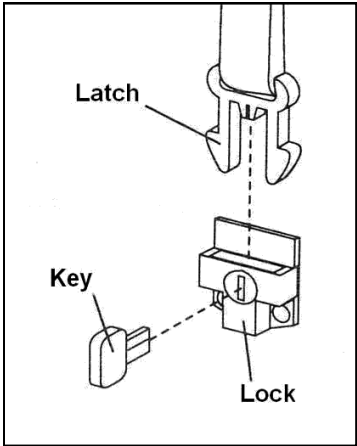


INSTALLING THE THERMAL COVER

REMOVE THE SPA COVER FROM THE BOX AND PLACE IT ON THE SPA. PULL DOWN ONE OF THE STRAPS ON THE SPA COVER AND HOLD LATCH AGAINST THE CABINET SIDE PANEL. TO POSITION THE LOCK CORRECTLY, HAVE A SECOND PERSON HOLD THE STRAP TIGHT ON THE OPPOSITE SIDE OF THE SPA COVER. THE SPA COVER MUST BE TIGHT. DO NOT PLACE THE LATCH OVER THE GROOVES OF THE CABINET FINISH. REMOVE THE LATCH FROM THE LOCK, ATTACH THE LOCK TO THE CABINET SIDE PANEL WITH THREE #4 SCREWS PROVIDED. ATTACH THE OTHER THREE LOCKS TO THE CABINET IN THE SAME MANNER.



TO SECURE THE HOT TUB COVER, SNAP THE LATCHES ON THE SPA COVER INTO THE LOCKS ON THE CABINET SIDE PANEL. TO LOCK THE COVER IN PLACE, INSERT THE KEY AND TURN IT CLOCKWISE 1/4 TURN. TO UNLOCK THE LATCHES, INSERT THE KEY AND TURN IT COUNTERCLOCKWISE 1/4 TURN. ALWAYS KEEP THE COVER LOCKED WHEN THE SPA IS NOT IN USE. KEEP THE KEYS IN A SAFE PLACE, OUT OF THE REACH OF CHILDREN.



NILE SPA MODEL

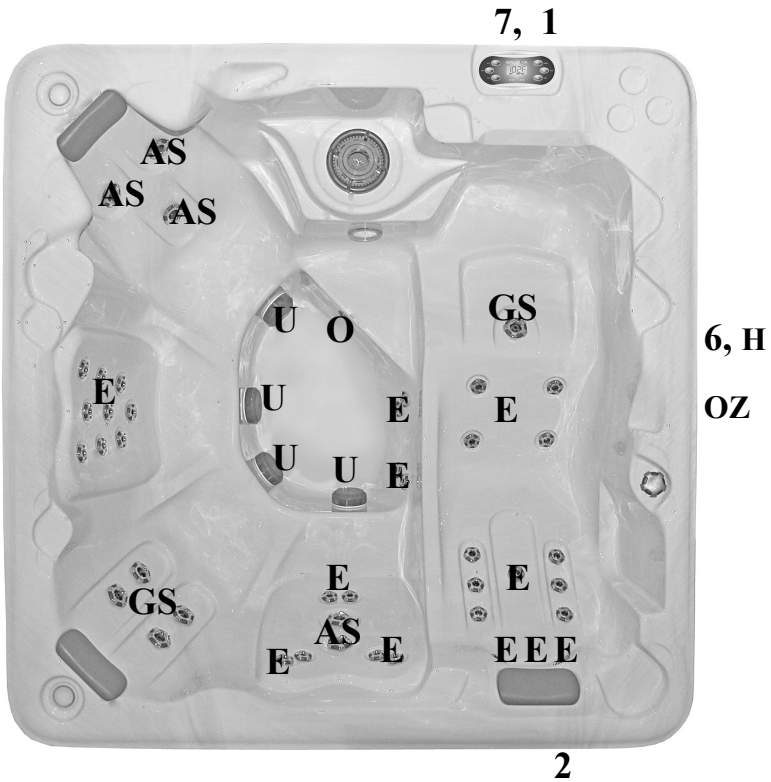


GENERAL	rev. 2014/06
Seating Capacity	5
Shell Material	Acrylic
Dimensions (Domestic)	82” sq.(6’10”) x 36” (3’)
Dimensions (Export)	210 cm. sq. x 91 cm.
Water Capacity	375 Gallons (1,420 liters)
Dry Weight	665 lbs. (302 kg.)
Skirt Material	PermaWood™
Water Flow	305 Gallons per Minute

WATER SYSTEM**	(photo ref)
Water Treatment System	Ozonator
Filter	25 sq. ft.
Slide Valves	2
Mega Swirl Jet	A S 5
Large Euro Jet w/ Eyeball	E 35
Mega’ssage Jet	GS 5
Multi’ssage Jet	P 0
Ozone Jet	O 1
Diverter Valves	V 0
Safety Suction	U 4
Mini Skimmer	K 0
Air Control	I 1
Spa Light	L 1
Drain Valve	5 0

SPECIAL FEATURES	
Spa Pillows	3
Aura™ Lighting	Standard
Stainless Steel Jetting	Standard
Waterfall Jet	WF N/A
Waterfall Control Valve	N/A
SoundStream™ SE Audio	N/A
Ozone Water Purification	Standard

Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	2.0 (1.0) HP	2.0 (1.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
Electronics			
Electrical Can	6	YE Gecko	YE Gecko
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	4.0 KW
Operation System			
Main Spa Side Control	7	Gecko 300 Control	Gecko 300 Control
Secondary Spa Side Control	8	N/A	N/A



** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install. Equipment location relates to slimline design, AdvantagePack option has major components located beneath end cabinet. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.

DANUBE SPA MODEL

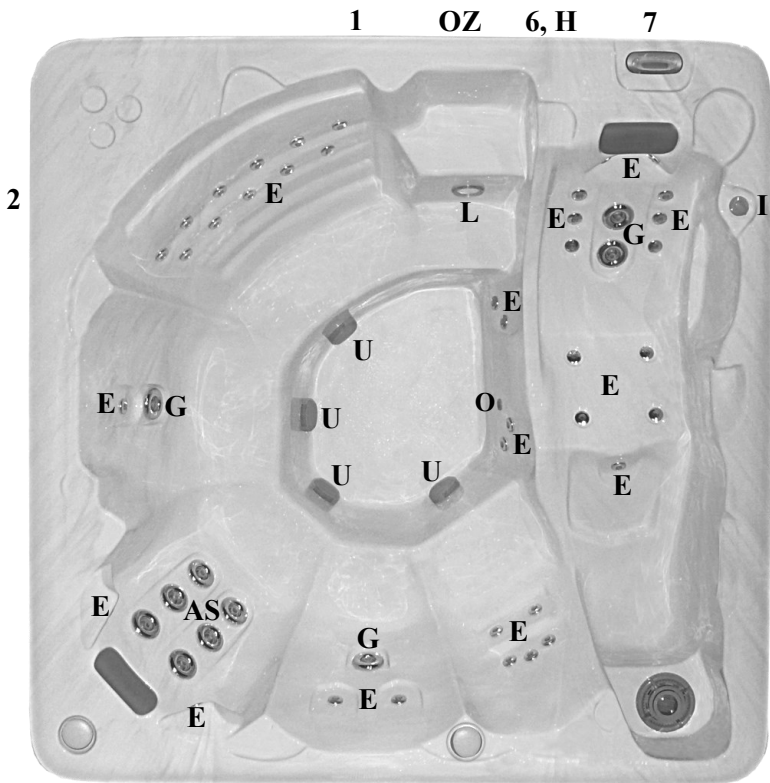


GENERAL		rev. 2014/06
Seating Capacity	6	
Shell Material	Acrylic	
Dimensions (Domestic)	93” sq.(7’8”) x 35” (2’11)	
Dimensions (Export)	236 cm. sq. x 89 cm.	
Water Capacity	520 Gallons (1,968 liters)	
Dry Weight	856 lbs. (392 kg.)	
Skirt Material	PermaWood™	
Water Flow	305 Gallons per Minute	

WATER SYSTEM**		(photo ref)
Water Treatment System	Ozonator	
Filter	25 sq. ft.	
Slide Valves	2	
Mega Swirl Jet	A S	6
Large Euro Jet w/ Eyeball	E	39
Mega’ssage Jet	G	4
Multi’ssage Jet	P	0
Ozone Jet	O	1
Diverter Valves	V	0
Safety Suction	U	4
Mini Skimmer	K	0
Air Control	I	1
Spa Light	L	1
Drain Valve	5	0

SPECIAL FEATURES	
Spa Pillows	2
Aura™ Lighting	Standard
Stainless Steel Jetting	Standard
Waterfall Jet	WF N/A
Waterfall Control Valve	N/A
SoundStream™ SE Audio	N/A
Ozone Water Purification	Standard

ELECTRICAL SYSTEM			
Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	2.0 (1.0) HP	2.0 (1.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
Electronics			
Electrical Can	6	YE Gecko	YE Gecko
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	4.0 KW
Operation System			
Main Spa Side Control	7	Gecko 300 Control	Gecko 300 Control
Secondary Spa Side Control	8	N/A	N/A



SPA INSTALLATION



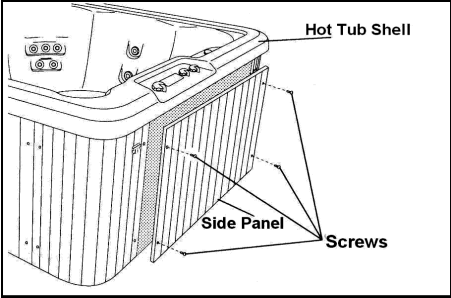
EQUIPMENT LOCATION

FOR ALL RIVER SERIES SPAS:

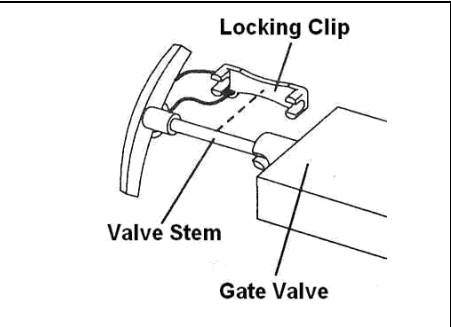
AFTER THE HOT TUB HAS BEEN PLACED IN THE DESIRED LOCATION REMOVE CABINET ACCESS PANEL USING A SQUARE HEAD SCREWDRIVER. (SEE ILLUSTRATION)

NEXT, PULL AWAY THE CABINET PANEL AND LOCATE THE ELECTRICAL BOX, PUMP (OR PUMPS). NOTE THE HEATER ATTACHED UNDER THE ELECTRICAL BOX. BE SURE YOU HAVE ALLOWED AMPLE SPACE AROUND THE NECESSARY CABINET SIDES TO ACCESS EQUIPMENT. REVIEW YOUR SPA MODEL SPECIFICATION PAGE IN THIS MANUAL FOR A GUIDE OF EQUIPMENT LOCATION FOR THAT SPECIFIC SPA MODEL.

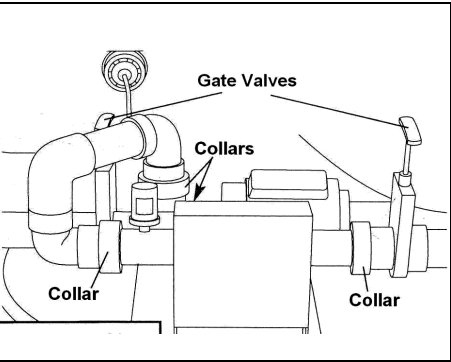
NOTE THE LOCATION OF THE ELECTRICAL BOX, THIS WILL NEED TO BE ACCESSED TO COMPLETE THE WIRING CONNECTION TO THE HOME POWER SOURCE. REFER TO THE SPA SPECIFICATION PAGE TO IDENTIFY THE CORRECT LOCATION FOR YOUR SPA UNIT..



CHECK THAT ALL VALVES: ON PUMP, ARE OPEN AND THE LOCKING CLIP HAS REMAINED SNAPPED ON THE VALVE STEM DURING SHIPMENT. (SEE ILLUSTRATION)



THE SPA EQUIPMENT HAS BEEN ASSEMBLED WITH NUMEROUS COLLARS (UNIONS) FOR EASE OF FUTURE SERVICING. LOCATE AND HAND-TIGHTEN ALL COLLARS CHECKING FOR ANY WHICH MAY HAVE LOOSENED DURING SHIPMENT. (SEE ILLUSTRATION)



- **THE SPA SUPPORT EQUIPMENT MUST BE PLACED AT OR BELOW THE WATER LEVEL OF THE SPA.**
- **NEVER PLACE THE EQUIPMENT ABOVE THE SPA WATER LEVEL.**
- **ALL PDC EQUIPMENT MUST BE IN A SHELTERED ENVIRONMENT THAT WILL PROTECT THE EQUIPMENT FROM RAIN, SLEET, SNOW, AND DIRECT SUNLIGHT.**

REFER TO SPA SPECIFICATION PAGES IN THIS MANUAL FOR THE LOCATION OF EQUIPMENT FOR THE MODEL YOU HAVE CHOSEN. INSTALLATION AND WIRING IS TO BE COMPLETED BY A QUALIFIED ELECTRICIAN.

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install. Equipment location relates to slimline design, AdvantagePack option has major components located beneath end cabinet. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



GENERAL LOCATION CONSIDERATIONS

REVIEW OUTDOOR INSTALLATIONS AND INDOOR INSTALLATIONS PRIOR TO CHOOSING YOUR SPA LOCATION. YOUR SPA SHOULD BE PLACED ON A LEVEL CONCRETE PAD OR ON A DECK DESIGNED TO SUPPORT 6000 LBS (2722 KG.) OR ON PATIO BLOCKS ON THE GROUND. DO NOT PLACE THE SPA ON A DIRT SURFACE OR DIRECTLY ON THE GROUND. ONCE YOU HAVE A LOCATION SELECTED, THERE ARE SEVERAL ISSUES YOU SHOULD CONSIDER IN PREPARING THE SITE FOR THE HOT TUB INSTALLATION.

A FLAT, LEVEL SURFACE THAT IS STRONG ENOUGH TO SUPPORT YOUR SPA IS REQUIRED. ONCE YOUR SPA IS FILLED, IT HAS CONSIDERABLE WEIGHT. MAKE CERTAIN THE LOCATION YOU CHOOSE CAN SUPPORT A MINIMUM OF 100 LBS (45.4 KG) PER SQUARE FOOT LOAD, PER RECOMMENDED GUIDELINES. STRUCTURAL DAMAGE TO THE SPA RESULTING FROM THE INCORRECT INSTALLATION OF PLACEMENT ON INADEQUATE FOUNDATION IS NOT COVERED IN THE SPA’S LIMITED WARRANTY.

MOST UNITS ARE INSTALLED OUTSIDE, ON GROUND LEVEL, ON EITHER A CONCRETE PAD OR A WOODEN DECK. IF THE SPA IS NOT ON GROUND LEVEL, HAVE A BUILDER DETERMINE IF THE SUPPORT IS ADEQUATE. IF THE UNIT IS PLACED DIRECTLY ON THE GROUND, YOU WILL WANT TO REMOVE THE GRASSY LEVEL, AND PLACE A LAYER OF GRAVEL ON THE SOIL. THE BEST WAY TO LEVEL THE GRAVEL MAY BE WITH THE STRAIGHT EDGE OF A PIECE OF SOLID LUMBER TO ACHIEVE A LEVEL SURFACE. PAVERS PLACED IN A SAND BASE IS ALSO A RATHER QUICK AND CONVENIENT WAY TO PREPARE THE LOCATION SITE. NOTE THAT PAVERS, STEPPING STONES, ETC. STILL HAVE A TENDENCY TO SETTLE AND MAY BECOME UNLEVEL AT SOME POINT. A REINFORCED CONCRETE SLAB SHOULD BE AT LEAST FOUR INCHES THICK WITH THE REINFORCING MESH OR ROD ATTACHED TO A BOND WIRE.

MAKE SURE YOUR DIMENSIONS ARE CORRECT AS YOU PREPARE THE SITE FOR YOUR NEW HOT TUB. CLICK ONTO THE WEB SITE OR CALL YOUR RETAILER FOR DIMENSIONS OF THE MODEL YOU HAVE CHOSEN. ALLOW A PERIMETER OF THE CHOSEN GROUND SURFACE TO EXTEND BEYOND THE SPA ITSELF TO PROVIDE A CLEAN AREA FOR USERS TO GET IN AND OUT OF THE SPA.

THE SPA LOCATION AND THE SPA ITSELF MUST BE LEVEL BEFORE FILLING WITH WATER.

SHOULD YOUR SPA SITE BE A WOODEN DECK, THIS PROVIDES A CLEAN AREA WITH WEATHER AND ROT RESISTANT QUALITIES, IF A PRESSURE-TREATED TYPE LUMBER IS USED. CONSIDER THE LOAD REQUIREMENTS AND CONSULT A BUILDER TO DETERMINE IF YOUR DECK IS OF ADEQUATE STRENGTH.

IF INSTALLING YOUR HOT TUB BELOW GRADE, CONSIDER ADEQUATE DRAINAGE FOR RUN-OFF AND THE UNLIKELY EVENT OF RAPID SPA DRAINAGE.

ALLOW ADEQUATE SPACE TO ACCESS THE EQUIPMENT BEHIND THE FOUR ACCESS PANELS ON THE HOT TUB CABINET. REVIEW THE PAGES IN THIS MANUAL REFERENCING SPA MODEL SPECIFICATIONS FOR THE LOCATION OF THE SUPPORT EQUIPMENT FOR THE MODEL YOU HAVE CHOSEN.

LEAVE AMPLE ACCESS TO THE GFCI CIRCUIT BREAKER FOR TESTING, ETC.

A QUICK DISCONNECT (MANUAL DISCONNECT) IS TO BE INSTALLED BETWEEN 5 - 15 FT (1.5-4.6 M) OF THE SPA AND WITHIN THE LINE OF SIGHT FROM THE HOT TUB. CONSIDER WHERE THIS CAN BE LOCATED WHEN SELECTING AND PREPARING THE SPA SITE. ALL WIRING MUST COMPLY WITH THE U.S. NATIONAL ELECTRIC CODE.

TO DRAIN THE SPA YOU WILL NEED TO SYPHON THE WATER FROM THE SPA WITH A GARDEN HOSE.

YUKON SPA MODEL



GENERAL	rev. 2014/06
Seating Capacity	7
Shell Material	Acrylic
Dimensions (Domestic)	82” sq.(6’8”) x 39” (3’4”)
Dimensions (Export)	209 cm. sq. x 100 cm.
Water Capacity	425 Gallons (1,609 liters)
Dry Weight	645lbs. (293 kg.)
Skirt Material	PermaWood™
Water Flow	305 Gallons per Minute

WATER SYSTEM**	(photo ref)
Water Treatment System	Ozonator
Filter	25 sq. ft.
Slide Valves	2
Mega Swirl Jet	AS 5
Large Euro Jet w/ Eyeball	E 34
Mega’ssage Jet	G 5
Multi’ssage Jet	P 0
Ozone Jet	O 1
Diverter Valves	V 0
Safety Suction	U 4
Mini Skimmer	K 0
Air Control	I 1
Spa Light	L 1
Drain Valve	5 0

SPECIAL FEATURES	
Spa Pillows	2
Aura™ Lighting	Standard
Stainless Steel Jetting	Standard
Waterfall Jet	WF N/A
Waterfall Control Valve	N/A
SoundStream™ SE Audio	N/A
Ozone Water Purification	Standard



ELECTRICAL SYSTEM			
Pump Information	Reference Number	Domestic (60Hz)	Export (50Hz)
Pump #1 peak (continuous) HP	1	2.0 (1.0) HP	2.0 (1.0) HP
Pump #2 peak (continuous) HP	2	4.0 (2.0) HP	4.0 (2.0) HP
Electronics			
Electrical Can	6	YE Gecko	YE Gecko
Voltage		240	230/400
Amperage		40	1x16 / 1x32
Heater	H	4.0 KW	4.0 KW
Operation System			
Main Spa Side Control	7	Gecko 300 Control	Gecko 300 Control
Secondary Spa Side Control	8	N/A	N/A

** Not every jet is referenced. Each type of jet is noted for ease of identification. *Note location of audio components prior to install. Equipment location relates to slimline design, AdvantagePack option has major components located beneath end cabinet. All specifications are accurate at time of print. Manufacturer reserves the option to change product without prior notice. Dimensions are approximate.



INSTALLATION GUIDELINES

THE LOCATION OF YOUR SPA IS AN IMPORTANT FACTOR IN GUARANTEEING YOUR MAXIMUM SPA ENJOYMENT. GENERALLY, MOST SPAS ARE INSTALLED OUTDOORS WITH NO CONCERNS REGARDING MOISTURE ACCUMULATION, WATER SPILL-OVER, ETC. WHICH ARE CONSIDERATIONS FOR THOSE LOCATED INSIDE.

OUTDOOR INSTALLATION CONSIDERATIONS

1. LOCAL ELECTRICAL AND PLUMBING CODES.
2. CONSIDER LOCAL CODES PERTAINING TO FENCING, ENCLOSURES, WALLS, ELECTRICAL AND PLUMBING. YOU WILL NEED TO ENSURE THAT YOUR SPA IS AN ADEQUATE DISTANCE FROM POWER LINES, BOTH ABOVE GROUND AND UNDERGROUND. YOUR SPA WILL ALSO NEED TO BE CHILDPROOFED.
3. VIEW FROM HOUSE FOR AESTHETICS AND SUPERVISORY NEEDS.
4. DISTANCE FROM HOUSE FOR WINTERTIME SOAKING.
5. NIGHTTIME LIGHTING.
6. LOCATE THE SPA WITH AN AWARENESS TO SUNLIGHT EXPOSURE, VIEWS, ACCESS, PROPERTY LINES, LIGHTING, WIND DIRECTION, SHIELDING, SEPTIC TANKS, PLANTS, TREES. (CHEMICALS IN THE SPA WATER SPLASHED FROM YOUR SPA MAY DAMAGE NEARBY PLANT LIFE.)
7. CONSIDER THE LOCATION OF THE NEAREST BATHROOM.
8. IF YOUR SPA IS TO BE LOCATED ON A SECOND STORY, BE POSITIVE SUPPORT IS ADEQUATE. CALL YOUR BUILDER.
9. AREA FOR PLACEMENT OF SUPPORT EQUIPMENT WHERE ADEQUATE SPACE WILL BE NEEDED TO GAIN ACCESS TO COMPONENTS FOR MAINTENANCE AND GENERAL SERVICING.
10. BE SURE TO NOTE ANY OTHER CONSIDERATIONS, SUCH AS AESTHETICS OR PRIVACY CONCERNS, THAT MAY AFFECT THE SAFETY OR ENJOYMENT OF USING THE SPA.
11. PROVIDE ADEQUATE DRAINAGE AWAY FROM THE EQUIPMENT AND ADEQUATE ELEVATION TO ALLOW DRAINING BY SIPHON, IF SHOULD BE REQUIRED.
12. LOCATION OF ELECTRICAL SUPPLY. 120/240 VOLT SYSTEMS REQUIRE HARD WIRE INSTALLED FROM THE ELECTRICAL SOURCE TO THE SPA SUPPORT PACK TERMINAL. ALL EQUIPMENT MUST BE GROUND FAULT CIRCUIT PROTECTED AT THE POWER SOURC. ALL ELECTRICAL WIRING OF THE SPA SUPPORT EQUIPMENT MUST COMPLY WITH THE NATIONAL ELECTRIC CODE.
13. LOCATIONS AT LEAST 5 FT (1.52 M) FROM ALL METAL SURFACES. (A SPA MAY BE INSTALLED WITHIN 5 FEET OF METALS SURFACES PROVIDING EACH METAL SURFACE IS PERMANENTLY CONNECTED BY A No. 8AWG (8.4 MM2) COPPER CONDUCTOR ATTACHED TO THE WIRE CONNECTOR ON THE TERMINAL BOX PROVIDED FOR THIS PURPOSE.) ALL INSTALLATIONS MUST COMPLY WITH ARTICLE 680 OF THE U.S. NATIONAL ELECTRIC CODE AND ANSI/NFPA 70-1984.
14. PLACE THE SPA ON A FIRM, LEVEL SURFACE THAT WILL NOT SHIFT.



INSTALLATION GUIDELINES

INDOOR INSTALLATION CONSIDERATIONS

1. LOCAL ELECTRICAL AND PLUMBING CODES.
2. VENTILATION FANS AND/OR DEHUMIDIFIERS SHOULD BE PROVIDED TO HANDLE THE HIGH HUMIDITY DEVELOPED BY YOUR SPA. WALLS, CEILING AND WOOD TRIM SHOULD BE RESISTANT, ALSO.
3. CHEMICALS WILL VAPORIZE FROM THE WATER AND MAY CAUSE AN ODOR AND POSSIBLY CORROSION TO CERTAIN HOME HARD-WARE. NEVER STORE CHEMICALS INSIDE THE SPA CABINET.
4. DURING THE NORMAL USE OF THE SPA, WATER WILL ESCAPE THE SPA VESSEL. NEVER PLACE THE SPA ON OR OVER ANY MATERIAL WHICH MAY BE DAMAGED BY THIS WATER OR THE CHEMICALS WITHIN THE WATER. KEEP DAMAGABLE MATERIALS FAR ENOUGH AWAY FROM THE SPA TO AVOID WATER DAMAGE, EVEN IF THE SPA SHOULD LOSE ALL WATER.
5. CONSIDER AND PREPARE FOR THE UNLIKELY EVENT OF RAPID SPA DRAINAGE. IF PLACEMENT OF THE SPA IS PERMANENT, YOU MAY WISH TO PROVIDE FLOOR DRAINS TO ACCOMMODATE DRAINING, ETC. ALWAYS LEAVE ROOM ALL AROUND THE SPA FOR EASY ACCESS IN CASE REPAIRS ARE NECESSARY.
6. CONSIDER AND PREPARE FOR THE UNLIKELY EVENT OF SPA REMOVAL.
7. READ 7-14 IN THE OUTDOOR INSTALLATIONS INFORMATION.
8. DO NOT SET SPA ON FINISHED FLOOR WITHOUT A WATERPROOF BARRIER PROTECTION UNDERNEATH.
9. THE SPA SHOULD HAVE ACCESS TO A POWER SOURCE CAPABLE OF SUPPLYING 240 VOLTS AC POWER. IT MUST BE WIRED DIRECTLY INTO A GROUNDED CIRCUIT WITH A GROUND FAULT CIRCUIT INTERRUPTER (G.F.C.I.) OR EQUIVALENT RCD, FOR EXPORT INSTALLS. NO OTHER APPLIANCES SHOULD BE ON THE SAME CIRCUIT.
10. THE SPA SHOULD BE CLOSE TO A SOURCE OF WATER.
11. BE SURE THAT THE LOCATION YOU CHOOSE IS STABLE. IT MUST BE ABLE TO SUPPORT THE WEIGHT OF THE SPA WHEN IT IS FILLED WITH WATER, PLUS THE WEIGHT OF THE OCCUPANTS. THE SPA MAY WEIGH UP TO 6000 LBS (2722 KG.) WHEN IT IS FILLED WITH WATER.
12. DO NOT USE THE SPA ABOVE A FINISHED LIVING AREA, DUE TO THE RISK OF WATER DAMAGE.
13. THE SPA IS NOT DESIGNED FOR IN-FLOOR INSTALLATION. HOWEVER, IT IS COMPATIBLE WITH A DECK SYSTEM THAT IS BUILT FLUSH WITH THE TOP OF THE SPA, PROVIDED YOU LEAVE ACCESS FOR SERVICE.
14. BE SURE TO NOTE ANY OTHER CONSIDERATIONS, SUCH AS AESTHETICS OR PRIVACY CONCERNS, THAT MAY AFFECT THE SAFETY OR ENJOYMENT OF USING THE SPA.

WARNING:
THIS IS A PROFESSIONAL GRADE PRODUCT.
A KNOWLEDGE OF CONSTRUCTION TECHNIQUES, PLUMBING AND ELECTRICAL
INSTALLATION ACCORDING TO CODES ARE REQUIRED FOR PROPER INSTALLATION
AND USER SATISFACTION. WE RECOMMEND THAT A LICENSED CONTRACTOR
PERFORM THE INSTALLATION. OUR WARRANTY DOES NOT COVER
IMPROPER INSTALLATION-RELATED PROBLEMS.