



**POOL AND SPA/HOT TUB HEATERS  
H150FD, H250FD, & H400FD MODELS  
FOR USE IN AUSTRALIA & NEW ZEALAND**

**OWNER'S MANUAL**

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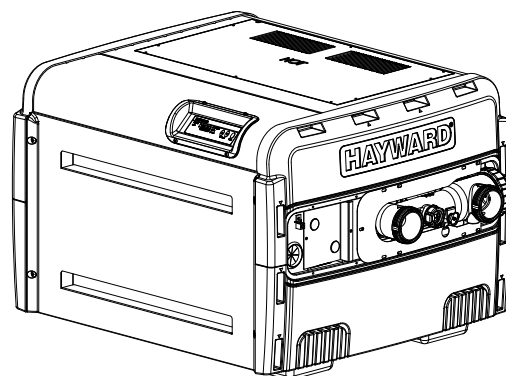
**FOR YOUR SAFETY**

**⚠ WARNING:** If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, injury, or death.

- Do not store or use gasoline or other flammable vapors or liquids in the vicinity of this or any other appliance.

**WHAT TO DO IF YOU SMELL GAS:**

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency, or the gas supplier.



**⚠ WARNING:**

DO NOT PLACE ARTICLES ON OR AGAINST THIS APPLIANCE.

DO NOT USE OR STORE FLAMMABLE MATERIALS NEAR THIS APPLIANCE.

DO NOT SPRAY AEROSOLS IN THE VICINITY OF THIS APPLIANCE WHILE IT IS IN OPERATION.


**FOR YOUR SAFETY**


This product must be installed and serviced by authorized personnel, qualified in pool/spa heater installation. Improper installation and/or operation can create carbon monoxide gas and flue gases that can cause serious injury, property damage, or death.


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Basic safety precautions should always be followed, including the following: Failure to follow instructions can cause severe injury and/or death.

 This is the safety-alert symbol. When you see this symbol on your equipment or in this manual, look for one of the following signal words and be alert to the potential for personal injury.


 **WARNING** warns about hazards that could cause serious personal injury, death or major property damage and if ignored presents a potential hazard.


 **CAUTION** warns about hazards that will or can cause minor or moderate personal injury and/or property damage and if ignored presents a potential hazard. It can also make consumers aware of actions that are unpredictable and unsafe.

 **ATTENTION** indicates special instructions that are important but not related to hazards.

**READ AND FOLLOW ALL INSTRUCTIONS IN THIS OWNER'S  
MANUAL AND ON EQUIPMENT.  
IMPORTANT SAFETY INSTRUCTIONS**


**Before installing or servicing this electrical equipment, turn power supply OFF.  
KEEP SAFETY LABELS IN GOOD CONDITION AND REPLACE IF MISSING OR DAMAGED.**

 **WARNING** – To reduce risk of injury, do not permit children to use or climb on the heater, pumps or filters. Closely supervise children at all times. Components such as the filtration system, pumps, and heaters must be positioned to prevent children from using them as a means of access to the pool.


 **CAUTION** – This heater is intended for use on permanently installed swimming pools and may also be used with spas. Do NOT use with storable pools. A permanently installed pool is constructed in or on the ground or in a building such that it cannot be readily disassembled for storage. A storable pool is constructed so that it is capable of being readily disassembled for storage and reassembled to its original integrity.

Though this product is designed for outdoor use, it is strongly recommended to protect the electrical components from the weather. Select a well drained area, one that will not flood when it rains. It requires free circulation of air for cooling. Do not install in a damp or non-ventilated location.



 **WARNING** – It is required that licensed electricians do all electrical wiring. Risk of Electric Shock. Hazardous voltage can shock, burn, cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply. Provide a properly located outlet. All electrical wiring MUST be in conformance with applicable local and national codes and regulations. Before working on this unit, turn off power supply to the heater.

 **WARNING** – To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment.

 **WARNING** – Failure to bond to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, the electrician must comply with installation instructions and must bond the heater accordingly. In addition, the licensed electrician must also conform to local electrical codes for bonding requirements.

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## NOTES TO THE ELECTRICIAN:

Use a solid copper conductor, size 8 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 8 AWG solid copper bonding wire to the grounding lug provided on the heater and to all metal parts of swimming pool or spa, and to all electrical equipment, metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool or spa.

**IMPORTANT** -Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.



### **! WARNING – Suction Entrapment Hazard.**

Suction in suction outlets and/or suction outlet covers which are damaged, broken, cracked, missing, or unsecured can cause severe injury and/or death due to the following entrapment hazards:

**Hair Entrapment-** Hair can become entangled in suction outlets.

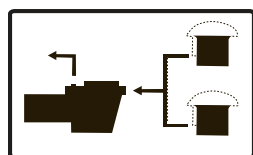
**Limb Entrapment-** A limb inserted into an opening of a suction outlet or suction outlet cover that is damaged, broken, cracked, missing, or not securely attached can result in a mechanical bind or swelling of the limb.

**Body Suction Entrapment-** A differential pressure applied to a large portion of the body or limbs can result in an entrapment.

**Evisceration/ Disembowelment** - A vacuum applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is damaged, broken, cracked, missing, or unsecured can result in evisceration (disembowelment).





**Mechanical Entrapment-** There is potential for jewelry, swimsuit, hair decorations, finger, toe or knuckle to be caught in an opening of a suction outlet or suction outlet cover resulting in mechanical entrapment.

### **! WARNING** - To reduce the risk of entrapment hazards:




- When suction outlets are less than a 18" x 23" equivalent, a minimum of two functioning suction outlets per pump must be installed. Suction outlets in the same plane (i.e. floor or wall), must be installed a minimum of three feet (3') [1 meter] apart, as measured from near point to near point.
- Dual suction outlets shall be placed in such locations and distances to avoid "dual blockage" by a user.
- Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- The maximum system flow rate shall not exceed the flow rating of any listed (per current revision of ASME/ANSI A112.19.8) suction outlet cover installed.
- Never use the Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- Install two or more suction outlets per pump in accordance with latest APSP (formally NSPI) Standards and CPSC guidelines. Follow all applicable National, State, and Local codes.


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-  **WARNING** – Failure to remove pressure test plugs and/or plugs used in winterization of the pool/spa from the suction outlets can result in an increase potential for suction entrapment as described above.
-  **WARNING** – Failure to keep suction outlet components clear of debris, such as leaves, dirt, hair, paper and other material can result in an increase potential for suction entrapment as described above.
-  **WARNING** – Suction outlet components have a finite life, the cover/grate should be inspected frequently and replaced at least every ten years or if found to be damaged, broken, cracked, missing, or not securely attached.
-  **WARNING** – All suction and discharge valves **MUST** be OPEN when starting the circulation system. Failure to do so could result in severe personal injury and/or property damage. All drains and suction outlets **MUST** have properly installed covers, securely attached using the screws supplied with the covers. If screws are lost, order replacement parts from your supplier.



-  **WARNING – Hazardous Pressure.** Pool and spa water circulation systems operate under hazardous pressure during start up, normal operation, and after pump shut off. Stand clear of circulation system equipment during start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover due to pressure in the system, which could cause property damage, severe personal injury, or death. Before servicing pool and spa water circulation system, all system and pump controls must be in off position and filter manual air relief valve must be in open position. Before starting system pump, all system valves must be set in a position to allow system water to return back to the pool. Do not change filter control valve position while system pump is running. Before starting system pump, fully open filter manual air relief valve. Do not close filter manual air relief valve until a steady stream of water (not air or air and water) is discharged.



-  **WARNING – Separation Hazard.** Failure to follow safety and operation instructions could result in violent separation of pump components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, manual air relief valve must be in open position. Do not operate pool and spa circulation system if a system component is not assembled properly, damaged, or missing. Do not operate pool and spa circulation system unless filter air relief valve body is in locked position in filter upper body.

-  **WARNING** – Never operate or test the circulation system at more than 40 PSI.
-  **WARNING** – Fire and burn hazard. Motors operate at high temperatures and if they are not properly isolated from any flammable structures or foreign debris they can cause fires, which may cause severe personal injury or death. It is also necessary to allow the motor to cool for at least 20 minutes prior to maintenance to minimize the risk of burns.
-  **WARNING** – Failure to install according to defined instructions may result in severe personal injury or death.

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**WARNING** – The following “Safety Rules for Hot Tubs” recommended by the U.S. Consumer Product Safety Commission should be observed when using the spa.

1. Spa or hot tub water temperatures should never exceed 104°F [40°C]. A temperature of 100°F [38°C] is considered safe for a healthy adult. Special caution is suggested for young children. Prolonged immersion in hot water can induce hyperthermia.
2. Drinking of alcoholic beverages before or during spa or hot tub use can cause drowsiness, which could lead to unconsciousness and subsequently result in drowning.
3. Pregnant women beware! Soaking in water above 100°F [38°C] can cause fetal damage during the first three months of pregnancy (resulting in the birth of a brain-damaged or deformed child). Pregnant women should adhere to the 100°F [38°C] maximum rule.
4. Before entering the spa or hot tub, users should check the water temperature with an accurate thermometer; spa or hot tub thermostats may err in regulating water temperatures by as much as 4°F (2.2°C).
5. Persons taking medications, which induce drowsiness, such as tranquilizers, antihistamines or anti-coagulants, should not use spas or hot tubs.
6. If the pool/spa is used for therapy, it should be done with the advice of a physician. Always stir pool/spa water before entering the pool/spa to mix in any hot surface layer of water that might exceed healthful temperature limits and cause injury. Do not tamper with controls, because scalding can result if safety controls are not in proper working order.
7. Persons with a medical history of heart disease, circulatory problems, diabetes or blood pressure problems should obtain a physicians advice before using spas or hot tubs.
8. Hyperthermia occurs when the internal temperature of the body reaches a level several degrees above normal body temperature of 98.6°F [37°C]. The symptoms of Hyperthermia include: drowsiness, lethargy, dizziness, fainting, and an increase in the internal temperature of the body.

**The effects of Hyperthermia include:**

1. Unawareness of impending danger.
2. Failure to perceive heat.
3. Failure to recognize the need to leave the spa.
4. Physical inability to exit the spa.
5. Fetal damage in pregnant women.
6. Unconsciousness resulting in danger of drowning.

**DEFINITIONS:**

Suction Outlet –	The term Suction Outlet is a fitting, fitting assembly, cover/grate and related components that provide a means for water to exit the pool and into the pump circulating system.
Inches of Mercury (in Hg) -	A unit for measuring pressure below atmospheric (“suction” or “vacuum”) (1.0 inch Hg = .491 PSI)
Main Drain –	See Suction Outlet
PSI –	An abbreviation for pounds per square inch.

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### INTRODUCTION:

This manual contains instructions for operation and the safe use of the swimming pool/spa/hot tub heaters. Hayward strongly recommends that the owner read the manual before using the swimming pool/spa/hot tub heater. If after reviewing the manual any questions remain unanswered, contact the factory or local representative.

### LIMITED WARRANTY SUMMARY:

We warrant the pool/spa/hot tub heater to be free from defects in materials and workmanship, and we will within one year from date of installation for all users, for the original purchaser, repair or, at our option, replace without charge any defective part. We further warrant that if the heat exchanger or exchanger headers (water-containing section) leak within one year from date of such installation for all users, due to defects in materials and workmanship, we will provide a replacement part. Cost of freight, installation, fuel, and service labor (after one year) is at user's expense. For full details of warranty agreement, see warranty certificate included in this manual.



**ATTENTION:** If the pool/spa/hot tub heater is damaged or destroyed by improper maintenance, excessive water hardness, incorrect water chemistry, or freezing it is not covered under the manufacturer's warranty.

## SECTION II. CONSUMER OPERATION & MAINTENANCE

### MAINTAINING PROPER WATER CHEMISTRY



**WARNING:** Failure to Maintain Proper Water Chemistry May Cause Premature Heat Exchanger Damage or Failure

The heat exchanger in your Hayward pool heater is made from the highest quality of copper and nickel (Cupronickel) materials. The premium materials and the exacting processes used in the manufacture of the heat exchanger are state of the art in pool heater design and manufacture. Yet, it remains vital that the heat exchanger be protected from damaging or corrosive chemicals, insufficient water flow, or improperly balanced water chemistry. Heat exchanger damage or failure resulting from improper flow, improperly balanced pool water, or the improper addition of sanitizers into the water is NOT covered under the terms of your warranty.

The following factors are critical to heat exchanger protection. Follow these guidelines to help prevent premature damage or failure to your heater and heat exchanger.

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## WATER FLOW THROUGH HEATER

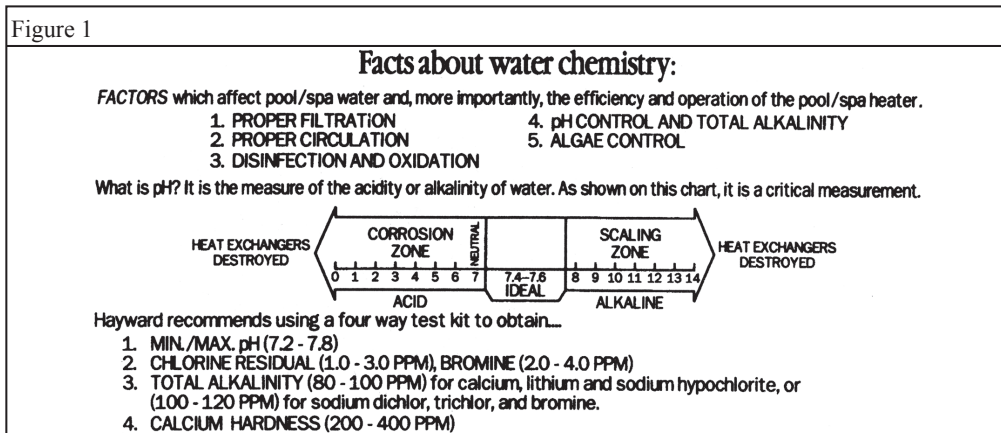
Water must be flowing through the heater at the minimum rated flow rate during operation. Check that the pump is operating and the system is filled with water and purged of all air prior to starting the heater. The minimum rated flow rates are listed in the installation manual on page 19. Some installations may require an adjustment to the water pressure switch for proper low-flow protection. Test your system and if necessary, adjust the water pressure switch as described in the installation manual on page 28.

## POOL/SPA WATER CHEMISTRY

The chemistry balance and mineral content of swimming pool water changes daily due to the addition of pool and sanitizing chemicals, bather loads, rain, runoff, and the amount of sun, to name a few. Improper chemistry balance and mineral content can cause scaling and deposits to form on pool walls, in the filtration system, in the heat exchanger tubes, and additionally, can promote corrosive action to all metals in the water path. Changing spa water regularly and maintaining the correct chemical balance in your pool/spa will keep the pool/spa safe and sanitary, and will help protect the heat exchanger. Use a 4-way pool/spa water test kit to check your water frequently (at least weekly). Use the following guidelines to help protect your heater's heat exchanger:

	Recommended Level	Effect of Low Levels	Effect of High Levels
Chlorine	1 - 3 ppm	hazy water, algae growth, bacteria causing infections	swimmer irritation, bleaching of clothes/hair, corrosive to heat exchanger
Bromine	2 - 4 ppm		
pH	7.4 - 7.6	corrosive to heat exchanger, swimmer irritation	cloudy water, scaling of heat exchanger, reduced sanitizer effectiveness
Total Alkalinity	80 - 120 ppm	corrosive to heat exchanger, large fluctuations in pH	scaling of heat exchanger
Calcium Hardness	200 - 400 ppm	corrosive to heat exchanger	scaling of heat exchanger
Salt	2700 - 5000 ppm	poor salt chlorinator performance	corrosive to heat exchanger

Remember, addition of any chemicals can change the levels of chlorine, pH, and total alkalinity. It is recommended that residential spa water be changed every 2 to 3 months to prevent water problems. Public spas may need to have the water changed every week, or even daily, depending on the bather load.



## SKIMMER CHLORINATION

Placing chlorine or bromine tablets directly into the skimmer may result in high chemical concentrations flowing through the heater. **DO NOT** place chlorine or bromine tablets in the skimmer.

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## USING CHLORINATORS AND CHEMICAL FEEDERS

Follow the instructions provided with any automatic or manual chlorinator and chemical feeder. All chemicals must be introduced and diluted into the pool or spa water before being circulated through the heater. Do not place chlorine tablets or bromine sticks directly into the skimmer. High chemical concentrations may result when the pump is not running. High chemical concentrations will cause very rapid corrosion of the heat exchanger. This damage will not be covered by the Hayward warranty.

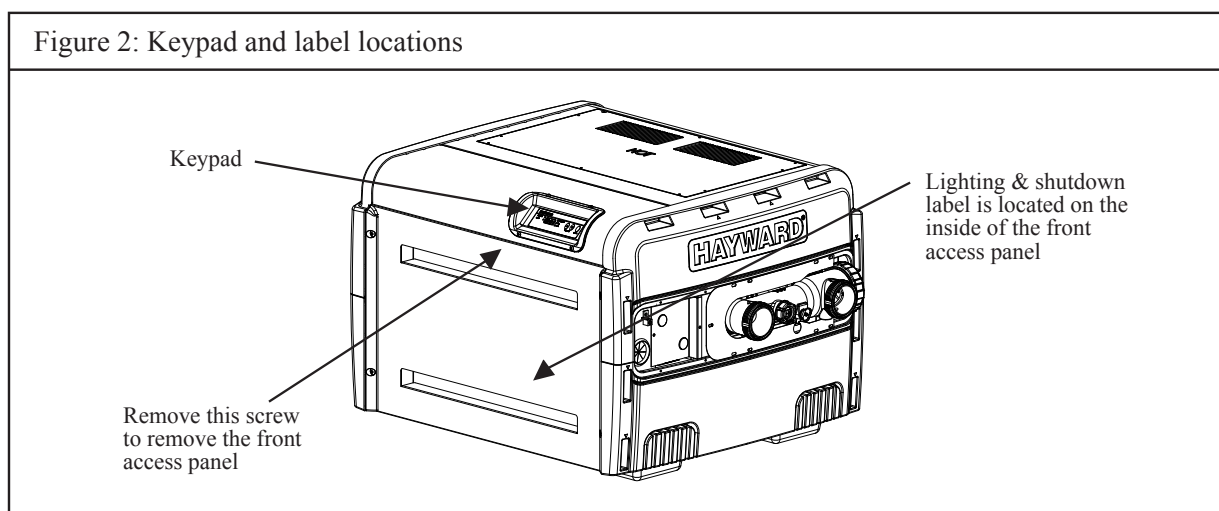
Chlorinators must be installed downstream of the heater, and a check valve must be installed between the heater and chlorinator to prevent high chemical concentrations from back flowing into the heater. Make sure your piping arrangement meets the chlorinator installation requirements shown in the installation manual on page 20.

## BYPASS

Until water chemistry is properly balanced, and if your piping has a bypass valve installed for the heater, open the bypass so that corrosive and potentially damaging water will not flow through the heater and therefore the heat exchanger. Close the bypass valve once the water is properly balanced. Failure to close the bypass valve when attempting to operate the heater will result in extensive damage to the heat exchanger. Ensure water flow through the heater is restored before operating the heater. A bypass feature is also advantageous for service needs and for the ability to remove the heater from the water path when not heating. Refer to page 25 in the installation manual for further information.

## HEATER OPERATION:

Full lighting and shutdown instructions are included on the lighting & operating instructions label affixed to the inside of the front access panel. See Figure 2 for the location of this label and the keypad. See Figure 3 for the label.



**WARNING:** If you smell gas in the appliance area or near the floor (PROPANE IS HEAVIER THAN AIR AND HENCE SETTLES ON THE FLOOR), stop and follow the instructions on the front cover of this manual. Since propane can accumulate in confined areas, extra care should be taken when lighting propane heaters.



**ATTENTION:** Do not use the heater below 40°F (4°C) temperature without adequate temperature protection.



**WARNING:** Do not ingest alcohol or drugs during use or prior to using pool, spa, or hot tub. Ingestion of such intoxicants can cause drowsiness, which can lead to unconsciousness, and subsequently result in drowning.









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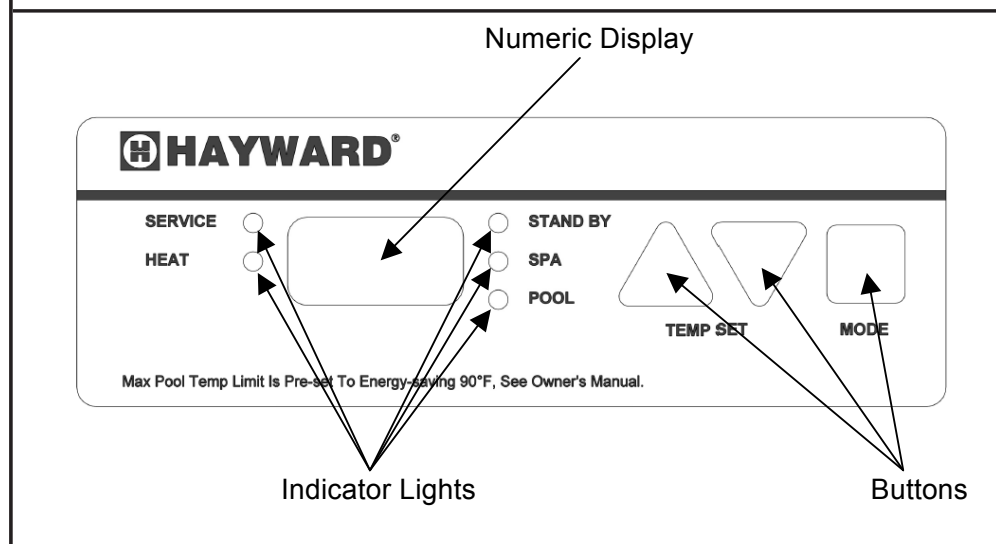
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Figure 3: Lighting &amp; Operating Instructions label

FOR YOUR SAFETY READ BEFORE LIGHTING		OPERATING INSTRUCTIONS	
<p><b>WARNING:</b> If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.</p> <p>A. This appliance does not have a pilot. It is equipped with an ignition device which automatically lights the burners. Do <u>not</u> try to light the burners by hand.</p> <p>B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.</p> <p><b>WHAT TO DO IF YOU SMELL GAS</b></p> <ul style="list-style-type: none"> <li>Do not try to light any appliances.</li> <li>Do not touch any electric switch; do not use any phone in your building.</li> <li>Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.</li> <li>If you cannot reach your gas supplier, call the fire department.</li> </ul> <p>C. Use only your hand to turn the gas control knob. Never use tools. If the knob will not turn by hand, don't try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.</p> <p>D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.</p> <p>E. Should over-heating occur, or the gas supply fails to shut off, turn off manual gas valve to the appliance.</p>		<p>1. STOP! Read the safety information on this label.</p> <p>2. Change the "MODE" on the control panel to "STANDBY".</p> <p>3. Remove the heater's front access panel.</p> <p>4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burners by hand.</p> <p>5. Turn gas control knob clockwise  to "OFF".</p> <p><b>GAS CONTROL KNOB SHOWN IN "OFF" POSITION</b></p>  <p>6. Wait five (5) minutes to clear out any gas. If you then smell gas, STOP! Follow "B" in the safety information on this label. If you don't smell gas, go to the next step.</p> <p>7. Turn gas control knob  counterclockwise to "ON".</p> <p>8. Replace the heater's front access panel.</p> <p>9. Set the "MODE" on the control panel to "SPA" or "POOL".</p> <p>10. Set the set point temperature on the control panel to the desired setting.</p> <p>11. If the appliance does not operate, repeat steps 2 thru 10. If the appliance still does not operate, follow instructions "TO TURN OFF GAS TO APPLIANCE" and call your service technician or gas supplier.</p>	
<p><b>POUR VOTRE SÉCURITÉ LIRE AVANT L'ALLUMAGE</b></p> <p><b>MISE EN GARDE:</b> Si vous ne suivez pas exactement ces instructions, un incendie ou une explosion pourrait survenir et causer des dommages à la propriété, des blessures corporelles ou la perte de la vie.</p> <p>A. Cet appareil n'a pas de pilote. Un mécanisme d'allumage automatique pour les brûleurs. N'essayer pas d'allumer les brûleurs à la main.</p> <p>B. AVANT L'ALLUMAGE, sentir tout autour de l'appareil pour déceler d'éventuelles odeurs de gaz. S'assurer de sentir près du plancher parce que les gaz plus lourds que l'air, se concentrent au niveau du plancher.</p> <p><b>QUE FAIRE EN PRÉSENCE D'ODEURS DE GAZ:</b></p> <ul style="list-style-type: none"> <li>Ne pas essayer d'allumer l'appareil.</li> <li>Ne pas toucher à un commutateur électrique; Ne pas utiliser le téléphone dans la maison.</li> <li>Appeler immédiatement fournisseur de gaz chez un voisin. Suivre les instructions du fournisseur de gaz.</li> <li>Si le fournisseur ne peut pas être atteint, appeler le service des incendies.</li> </ul> <p>C. Utiliser uniquement les mains pour actionner les boutons de commande du gaz. Ne jamais utiliser d'outils. Si le bouton ne s'enfonce pas ou ne se tourne pas à la main, ne pas essayer de le réparer. Appeler un technicien qualifié. L'utilisation de la force ou une tentative de réparation pourrait causer un incendie ou une explosion.</p> <p>D. Ne pas utiliser cet appareil si une des composantes a été immergée dans l'eau. Appeler immédiatement un technicien qualifié pour vérifier l'appareil et remplacer toute composante du système de commande ou de gaz qui aurait été immergée dans l'eau.</p> <p>E. Si le système surchauffait ou si le gaz refusait de se fermer, placer le robinet d'arrêt manuel de gaz de l'appareil en position "FERMÉ" (OFF).</p>		<p><b>TO TURN OFF GAS TO APPLIANCE</b></p> <p>1. Change the "MODE" on the control panel to "STANDBY".</p> <p>2. Remove the heater's front access panel.</p> <p>3. Turn the gas control knob clockwise  to "OFF".</p> <p>4. Replace the heater's front access panel.</p> <p><b>INSTRUCTIONS D'ALLUMAGE</b></p> <p>1. STOP! Lire les consignes de sécurité sur cette étiquette.</p> <p>2. Changer le MODE du tableau de commande à STANDBY.</p> <p>3. Retirer le panneau d'accès avant de l'appareil de chauffage.</p> <p>4. Cet appareil est pourvu d'un dispositif d'allumage qui allume automatiquement les brûleurs. Ne pas tenter d'allumer manuellement les brûleurs.</p> <p>5. Tourner le bouton de commande du gaz en sens  horaire à OFF (fermé).</p> <p><b>BOUTON DE COMMANDE DE GAZ MONTRÉ EN POSITION "FERMÉ" (OFF)</b></p>  <p>6. Attendre cinq (5) minutes que tout gaz se dissipe. Arrêter si l'on sent alors une odeur de gaz. Suivre B dans les consignes de sécurité de cette étiquette.</p> <p>Passer à l'étape suivante en l'absence d'odeur de gaz.</p> <p>7. Tourner le bouton de commande du gaz en sens anti-horaire à ON (OUVERT). </p> <p>8. Remplacer le panneau d'accès avant de l'appareil de chauffage.</p> <p>9. Régler le MODE du tableau de commande à SPA ou à POOL.</p> <p>10. Établir la valeur de réglage sur le tableau de commande à la température désirée.</p> <p>11. Si l'appareil ne fonctionne pas, répéter les étapes 2 à 10. Si l'appareil refuse toujours de "FERMÉ" fonctionner, dissipe. Suivre les instructions Pour tourner le gaz à l'appareil et appeler votre technicien de service ou votre fournisseur de gaz.</p>	
<p><b>POUR FERMER LE GAZ SUR L'APPAREIL</b></p> <p>1. Changer le MODE du tableau de commande à STANDBY.</p> <p>2. Retirer le panneau d'accès avant de l'appareil de chauffage.</p> <p>3. Tourner le bouton de commande du gaz en sens horaire  à OFF (fermé).</p> <p>4. Remplacer le panneau d'accès avant de l'appareil de chauffage.</p>		<p>1301623001 REV A</p>	

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Figure 4: User interface keypad

**GENERAL:**

This model of Hayward gas fired pool/spa heater is equipped with a temperature control module (TCM) and a direct spark ignition control module (DSICM) for automatically controlling pool and spa water temperatures. Pool and spa set points are entered using the TCM keypad & display located on the top edge of the front panel (see Figure 2, pg 9). The TCM also displays the water temperature and, if needed, diagnostic information (error codes). The front panel must be removed to inspect the DSICM.

**KEYPAD INPUTS:**

In normal use, the user activates the heating cycle by moving from “STANDBY” mode to “SPA” or “POOL” mode by pressing the “MODE” button.

The TCM & DSICM will regulate the water temperature to the set point of the mode selected.

To deactivate the heating cycle, the user presses the “MODE” button again (once or twice) to return to “STANDBY” mode.

**SET POINT ADJUSTMENT:**

Set point temperature is displayed by momentarily pressing the “UP” or “DOWN” buttons while in “POOL” or “SPA” mode. The set point for the selected mode will blink while it is displayed. Further pressing of the “UP” or “DOWN” buttons will adjust the set point temperature up or down as desired. To accept the adjustment, press the “MODE” button (or the adjustment will be automatically accepted in 10 seconds). The set point range is 18°C to 40°C. The temperature settings for both spa and pool modes are initially set at the factory to 18°C.

**FAHRENHEIT VERSUS CELSIUS:**

The temperature can be displayed in Celsius or Fahrenheit. To change the display, use the “MODE” button to place the heater in “STANDBY”. Then press and hold the “UP” and “MODE” buttons until the display shows the °C/°F selection. Press the “DOWN” button to toggle between selections. To accept the selection, press the “MODE” button (or the selection will be automatically accepted in 10 seconds).

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**AUTOMATIC TEMPERATURE CONTROL:**

The TCM holds the temperature of the water returning to the heater from the pool or spa at set point by conventional “thermostat” action. This ensures the bathing temperature is held close to set point and does not exceed 40°C. In addition, the heater has three other independent water temperature limiting devices, each of which will shutdown the heater if its temperature limit is exceeded. The DSICM manages the ignition of the gas burner and ensures safe operation by constantly monitoring the flame and blower fan.

**WINTERIZATION:**

In moderate climates, the heater can continue to operate during short-term cold spells. Do not use the heater to maintain the water temperature just above freezing or for freeze protection. Care must be taken to avoid freeze-up in the heater. When it is used during freezing weather, the pump must run continuously. The heater is not warranted against freeze-ups. In regions where freezing temperatures are encountered, all water must be drained from the heater when it is out of service, to prevent damage to the heater and piping. Draining the heat exchanger is recommended as part of the season’s shutdown procedures.

**SPRING START-UP - CONSULT A PROFESSIONAL:**

1. Inspect and clean the heater, being sure the heater is free of leaves and debris prior to startup.
2. Be sure inlet and outlet piping are properly attached to the heater and the drain valve is closed.
3. Turn the filtration system pump “ON” and allow the system to run long enough to purge all the air from the lines.
4. Turn the gas supply to the heater “ON”.
5. Set the temperature control using the keypad to “POOL” or “SPA” and adjust the set point to the desired temperature setting.
6. If operating difficulties are encountered, contact a qualified service company for assistance.

**SERVICING & MAINTENANCE:**

Warning: Servicing should be carried out only by authorised personnel.

Maintenance procedures carried out by authorised personnel are recommended to be performed annually to ensure safe operation of the appliance.

**DO NOT MODIFY THIS APPLIANCE.****ABNORMAL OPERATION**

Any of the following are considered to be abnormal operation and may require servicing:

- Yellow tipping of the burner flame.
- Burners not igniting properly.
- Burners failing to remain alight.

In case the appliance fails to operate correctly, contact the authorised service provider in your area.

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**TCM ERROR CODES:**

Note: If two or more faults are present at the same time, the error code highest on the following table will be displayed.

Code	Description	Information
LO	Limit string open while call-for-heat	If the string of limit switches opens while there is a call-for-heat, the heater will shutdown and go into lock-out. Automatic restart 2 minutes after the limit string error condition is corrected.
SF	Thermistor error	An excessive temperature difference between the two thermistors (3°C or more) or an “out of bounds” condition on either sensor (temperature less than 2°C or greater than 82°C). The heater will shut down and go into lock-out. Automatic restart 2 minutes after the thermistor error condition is corrected.
HE	Rapid water temperature rise	If water temperature rises too rapidly in two consecutive 10-second periods, the heater will shut down and go into lock-out. Automatic restart after 2 minutes. After the third occurrence in the same call-for-heat, the heater will go into lock-out with automatic restarts disabled. Manual restart is required.
HS	Excessive Water Temperature	Inlet water temperature sensor is reporting a temperature in excess of 40°C. Normal operation resumes 2 minutes after inlet water temperature sensor reports temperatures of 40°C or less. This error functions in both normal and remote thermostat modes.
lo	Limit string open while no call-for-heat	If the string of limit switches opens while there is no call-for-heat, the error code will be displayed, but the control will continue to function. The error code will be cleared when the condition is corrected.
Sb	Keypad button stuck closed	If one of the keypad buttons is closed (pressed) for more than 30 seconds, the error code will be displayed but the control will continue to function. The error code will be cleared when the condition is corrected.
bo	Bypass Operation mode	This is NOT an error code. If the user sees “bo” in the display, the TCM is in Bypass Operation mode. To exit “Bypass Operation” mode, select “STANDBY” mode, then press and hold both the “DOWN” and “MODE” buttons for 3 seconds (until the “bo” code is no longer displayed).
. (dot)	Auto restarts disabled	When a dot (decimal point) is displayed after the error code, this is an indication that auto restarts are disabled. The TCM must be manually restarted.

**USE ONLY HAYWARD GENUINE REPLACEMENT PARTS**

Hayward Pool Products (Australia) Pty Ltd (ACN 083 413 414) ("Hayward Pool Products") distributes Hayward Pool Products in Australia and provides the following warranty:-

#### LIMITED HEATER WARRANTY

Hayward Pool Products warrants that its products are free from defects in materials and manufacture for 12 months from the date of purchase (unless otherwise specified). Hayward Pool Products will at its discretion, except in the circumstances described below, either replace or repair any product proven to be defective during the warranty period for either materials or manufacture or alternatively pay the cost or repair or replacement within 90 days of the receipt of the defective product, barring unforeseen delays. This warranty is personal to the original purchaser and does not pass to any subsequent purchaser(s). It does not apply if the pool heater is installed in violation of any applicable code or ordinance, or is not installed, operated and maintained in accordance with our instructions, or is misused, damaged by accident, weather, freezing, water void and/or excess pressure, altered or disconnected. It does not apply with respect to:

1. A heater not equipped with Certified C.S.A. limit controls or equivalent pressure relief valve.
2. A heater operated with settings in excess of, and/or with fuel not conforming to those shown on rating plate.
3. A heater on which the serial numbers have been altered, defaced, or removed.
4. Leaks arising from defective installation;
5. Production of noise, odours, or discoloured (rusty, ect.) water;
6. Leakage substantially contributed to by sediment, lime precipitate and/or higher than normal dissolved solids (pH above 7.8) in the tank, copper tubes, or water ways;
7. Leakage caused substantially contributed to by corrosive elements in the atmosphere (such as the storage of chlorine or other chemicals);
8. Leakage caused substantially or contributed to by corrosive pool water in an acid condition (pH below 7.2);
9. Damage caused substantially or contributed to by an external source of energy;
10. A pool/spa heater is a water containing device. Leakage of water from this device can be expected at some time due to malfunctions or limitations of the service life of various components. Do not install this product where such leakage can cause damage. MANUFACTURER IS NOT RESPONSIBLE OR LIABLE FOR ANY COSTS INCURRED BY SUCH DAMAGE.

To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products excludes all statutory or implied conditions and warranties and any other liability it may have to the Customer (including liability for indirect or consequential loss) that may arise under statute or at law including without limitation for breach of contract, in tort (including negligence) or under any other cause of action.

To the extent permitted by law, except as set out in this Warranty, Hayward Pool Products limits its liability under any condition or warranty which cannot be legally excluded in relation to the supply of Goods and Services to:

1. Replacing the Goods or supplying equivalent Goods or Services again;
2. Repairing the Goods;
3. Paying the cost of replacing the Goods or of supplying equivalent Goods or Services again; or
4. Paying the costs of repairing the Goods.

#### THIS PRODUCT REQUIRES QUALIFIED INSTALLATION

All Hayward heaters due to their technical nature are only intended for sale by retail shops where local sales and technical support can be provided or as a part of a new Pool Installation. Warranty claims for such products will only be recognised when the products have been sold and installed by technicians approved by Hayward Pool Products where installation has not been carried out in accordance with this requirement, warranty, labour and support will be the sole responsibility of the reseller supplying the product. Claims will only be accepted where evidence is provided that installation has been completed by an organization, business or individual who has been authorised or approved by Hayward Pool Products (Australia) Pty Ltd, to undertake such installation.

#### HEATING PRODUCTS

Please note that warranty claims for gas Heaters are handled directly by Hayward Pool Products and are not authorised for over the counter exchanges. These items are site specific and involve local conditions such as placement, installation, water chemistry, fuel supply and electricity. Each unit needs to be evaluated on the site utilising Hayward Pool Products authorised service network. Hayward Pool Products will not be responsible for additional costs incurred where a heater has been installed at a location situated further than 20km from an authorised service outlet. Advice must be sought in writing from Hayward Pool Products to determine appropriate service procedure on a case by case basis. Under no circumstances should a complete Heater or Heat Pump be returned without prior written approval from either Hayward Pool Product warranty department or your local Branch Customer Service Centre.

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## HAYWARD POOL HEATER CERTIFICATE OF LIMITED WARRANTY (CONTINUED)

### WHAT TO DO IF YOU HAVE A WARRANTY CLAIM

The faulty product is to be returned to the place of purchase or to an authorised warranty agent. Unless prior authorisation is provided, no returns will be received directly from end consumers by Hayward Pool Products. You are responsible for arranging removal of the defective product and arranging installation of the repaired or replacement product, all transportation (and any applicable insurance costs) of transporting the product to the supplier and transporting the replaced or repaired product from the supplier.

All returns are subject to Hayward Pool Products written approval and must be accompanied by either:-

1. A Field Inspection Report authorised by the Local Customer Service Manager; or
2. A "Return Goods Authorisation" form obtained from Hayward Pool Products prior to shipment.

Unauthorised returns will not be accepted.

All Hayward Pool Products warranty parts taken as an across the counter warranty exchange must be held for inspection until authorisation has been given by the Local Branch Customer Service Manager to dispose of them. Hayward Pool Products reserves the right to provide replacement or credit for any items authorised under this warranty program.

All serial numbers must place the product within the warranty period or a proof of purchase is required. No claims in respect of the product can be made after the expiration of the warranty period.

### STATUTORY RIGHTS

1. The benefits to the consumer under this warranty are in addition to other rights and remedies of the consumer under the laws in relation to the goods and services to which the warranty relates; and

2. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You may be entitled to a replacement or refund for a major failure and for compensation for any other loss or damage. You are also entitled to have the goods repaired if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

To register your product for warranty, please go to [www.hayward-pool.com.au/warrantyregistration](http://www.hayward-pool.com.au/warrantyregistration)

Warranty service requests can be faxed to: **Hayward Pool Products (Australia) Pty Ltd (ACN 083 413 414) Fax 1300 POOLS2 (1300 766572) or call 1300 POOLS1**

A standard form is available to request warranty service. We will require:

- Installation contact information including address, daytime telephone numbers, home phone number, email etc.
- Complete model and serial number
- Proof of purchase (if the serial number was manufactured > 1 year ago).
- Evidence that purchase and Installation was completed in one transaction, by the one business or organization. Nature of problem including specific faults and error codes

***USE ONLY HAYWARD GENUINE REPLACEMENT PARTS***



# HAYWARD® Pool Products

A Hayward Industries, Inc. Company

## VERY IMPORTANT - PLEASE READ

**I**n order to insure a longer life for your new Hayward Pool Heater as well as your liner (if applicable), pump and filter, steps should be taken to insure proper water chemistry. The responsibility for proper balance is yours, and it is very important.

Proper water chemistry is crucial to the operation and efficiency of your heater. Unbalanced water will cause serious damage. Maintaining proper water chemistry is not difficult if you work closely with your local pool dealer and follow the recommendations below. Proper chemistry will ensure trouble-free enjoyment of your pool.

### ***Follow these simple steps to check and maintain your water chemistry:***

**1.** Bring a water sample to your pool dealer for a complete test, including hardness, pH, alkalinity, and sanitizer. It's a good idea to have the hardness checked at least twice a season, and maintain a level of at least 250 ppm. Consult your pool dealer for corrective action if necessary.

**2.** We recommend you test the water every three days and correct any chemical imbalances. Pay special attention to the total alkalinity and pH. If these are incorrect, damage to your heater will eventually occur.

### ***See Installation, Operation and Service Procedures for Warranty Information.***

**To the Consumer** - Please go to [www.hayward-pool.com.au/warrantyregistration](http://www.hayward-pool.com.au/warrantyregistration) to register your gas heater so that we may contact you in the event of a safety issue.

### **HELPFUL HINTS**

(READ THIS BEFORE YOU CALL FOR SERVICE ON YOUR HEATER TO AVOID NON-WARRANTY CHARGES)

- Have you read your owner's manual?
- Has the filter been thoroughly cleaned?
- Is the pump on? Is water flowing?
- Is the gas turned on?
- Is the pilot lit? (Millivolt heaters only)
- If propane gas - does the tank have adequate gas? (40% capacity minimum for smaller tanks).
- Is the thermostat turned all the way up to hot?
- Is the on/off switch on?
- Direct spark-electronic H-Series only - is the yellow light on?
- Are all suction & discharge lines open?



### ***If heater will still not light - please call your pool professional.***

Make sure to know the model #, serial #, and the date of installation of your equipment.

Hayward Pool Products, Inc.  
620 Division St.  
Elizabeth, NJ 07207

Hayward Pool Products, Inc.  
2875 Pomona Boulevard  
Pomona, CA 91768

Hayward Pool Products, Inc.  
2880 Plymouth Drive  
Oakville, Ontario L6H 5R4

Hayward S.A.  
Zoming de Jumet  
B6040 Jumet, Belgique