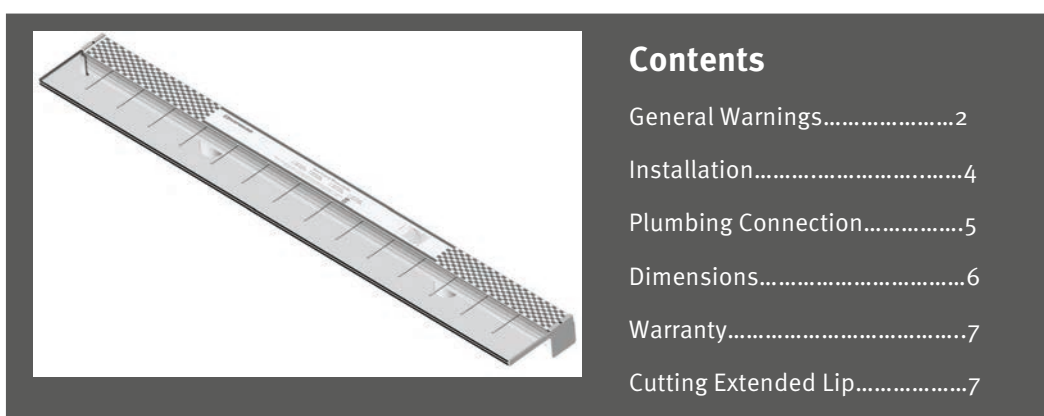


SHEER 500

Owner's Manual



MODELS:				
WFS512R1	WFS524R1	WFS536R1	WFS548R1	WFS560R1
WFS512B1	WFS524B1	WFS536B1	WFS548B1	WFS560R6
WFS512R6	WFS524R6	WFS536R6	WFS548R6	
WFS512B6	WFS524B6	WFS536B6	WFS548B6	

IMPORTANT SAFETY INSTRUCTIONS

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.

The **NOTICE** label indicates special instructions that are important but not related to hazards.

Hayward Pool Products
620 Division Street, Elizabeth, NJ 07207
Phone: (908) 355-7995
www.hayward.com



HAYWARD®



⚠ WARNING - Read and follow all instructions in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

⚠ 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 outlet cover.



Limb Entrapment- A limb inserted into an opening of a suction outlet sump 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 negative pressure applied to a large portion of the body or limbs can result in an entrapment.

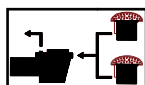


Evisceration/ Disembowelment - A negative pressure applied directly to the intestines through an unprotected suction outlet sump or suction outlet cover which is, damaged, broken, cracked, missing, or unsecured can result in evisceration/ disembowelment.

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

⚠ WARNING - To Reduce the risk of Entrapment Hazards:

- o When outlets are small enough to be blocked by a person, 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.
- o Dual suction fittings shall be placed in such locations and distances to avoid “dual blockage” by a user.
- o Dual suction fittings shall not be located on seating areas or on the backrest for such seating areas.
- o The maximum system flow rate shall not exceed 6 ft/sec in the return main line.
- o Never use Pool or Spa if any suction outlet component is damaged, broken, cracked, missing, or not securely attached.
- o Replace damaged, broken, cracked, missing, or not securely attached suction outlet components immediately.
- o In addition two or more suction outlets per pump installed in accordance with latest ASME, APSP Standards and CPSC guidelines, follow all National, State, and Local codes applicable.
- o Installation of a vacuum release or vent system, which relieves entrapping suction, is recommended.



⚠ 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.

⚠ CAUTION – Components such as the filtration system, pumps and heater must be positioned so as to prevent their being used as means of access to the pool by young children. To reduce risk of injury, do not permit children to use or climb on this product. 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.



⚠ 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 pump start up. Failure to follow safety and operation instructions could result in violent separation of the pump housing and cover, and/or filter housing and clamp 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 and/or filter components. Strainer cover must be properly secured to pump housing with strainer cover lock ring. Before servicing pool and spa circulation system, filters 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 manual air relief valve body is in locked position in filter upper body. **Never operate or test the circulation system at more than 50 PSI. Do not purge the system with compressed air.** Purging the system with compressed air can cause components to explode, with risk of severe injury or death to anyone nearby. Use only a low pressure (below 5 PSI), high volume blower when air purging the pump, filter, or piping.



HAYWARD®



⚠ WARNING – Risk of Electric Shock. All electrical wiring **MUST** be in conformance with applicable local codes, regulations, and the Canadian Electrical Code, ANSI/NFPA70). Hazardous voltage can shock, burn, and 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 electrical receptacle. Before working on any electrical equipment, turn off power supply to the equipment. To reduce the risk of electric shock replace damaged wiring immediately. Locate conduit to prevent abuse from lawn mowers, hedge trimmers and other equipment. Do NOT ground to a gas supply line.

⚠ WARNING – Risk of Electric Shock Failure to ground all electrical equipment can cause serious or fatal electrical shock hazard. Electrical ground all electrical equipment before connecting to electrical power supply.

⚠ WARNING – Risk of Electric Shock Failure to bond all electrical equipment to pool structure will increase risk for electrocution and could result in injury or death. To reduce the risk of electric shock, see installation instructions and consult a professional electrician on how to bond all electrical equipment. Also, contact a licensed electrician for information on local electrical codes for bonding requirements.

Notes to electrician: Use a solid copper conductor, size 6 or larger. Run a continuous wire from external bonding lug to reinforcing rod or mesh. Connect a No. 6 AWG (13.3 mm²) solid copper bonding wire to the pressure wire connector provided on the electrical equipment and to all metal parts of swimming pool, spa, or hot tub, and metal piping (except gas piping), and conduit within 5 ft. (1.5 m) of inside walls of swimming pool, spa, or hot tub.

IMPORTANT - Reference Canadian Electrical Code, ANSI/NFPA70 codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

⚠ CAUTION – HAYWARD® pumps are intended for use with permanently-installed pools and may be used with hot tubs and spas if so marked. 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.

⚠ WARNING – Risk of Hyperthermia. To avoid hyperthermia the following “Safety Rules for Hot Tubs” are recommended by the U.S. Consumer Product Safety Commission.

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 physician's 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.

SAVE THESE INSTRUCTIONS



INSTALLATION INSTRUCTIONS:

▲ **WARNING** - Read through and follow all instructions entirely, in this owner's manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

▲ This product should be installed and serviced only by a qualified pool professional.

NOTICE: This SHEER unit, includes no serviceable parts. In the event of a product failure, the entire unit must be removed and replaced.

IMPORTANT: Inspect the unit for damage prior to installation. Lay SHEER on flat surface in the original packaging until ready to install. Do not remove grout guard until the installation is complete. This guard will protect the SHEER opening from damage. Protect the unit from direct sunlight until unit is installed. Do not operate mechanical soil compactors near SHEER installation areas, as this may damage the SHEER.

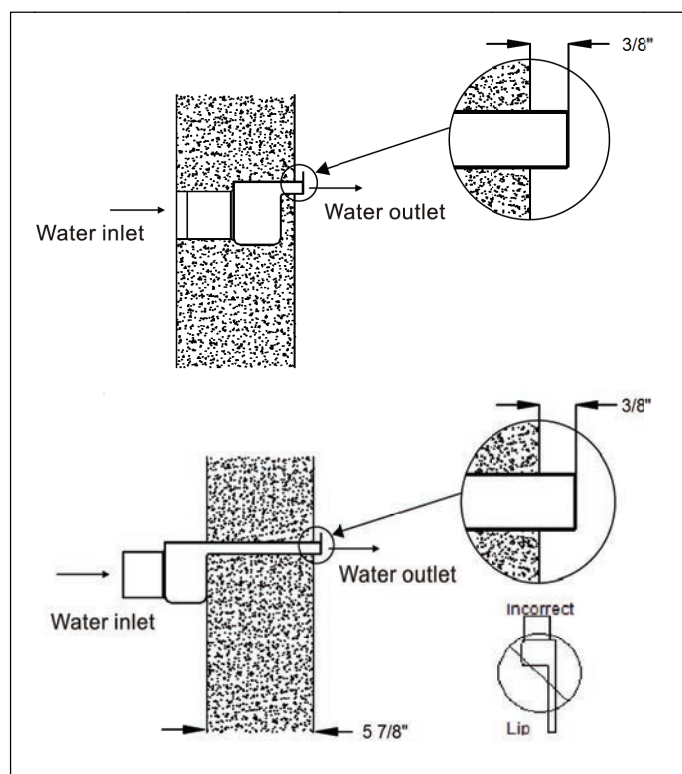
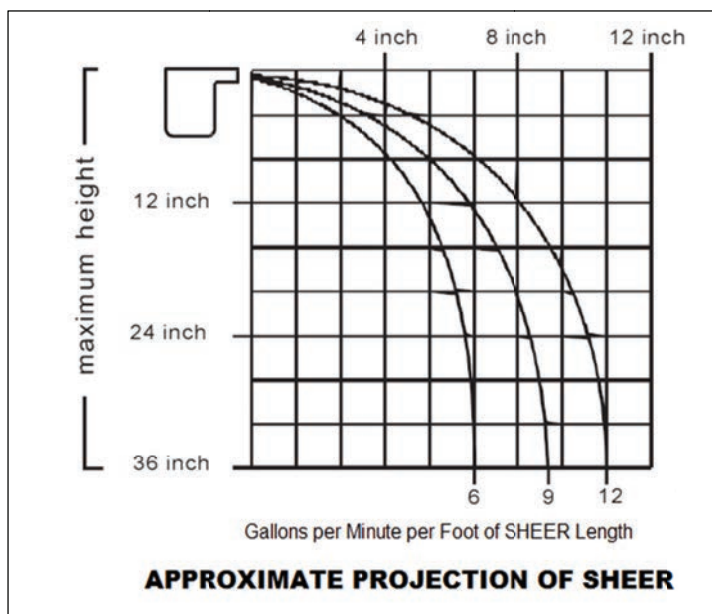
See the chart below for the approximate projection of the SHEER. Use this chart in planning the layout of your SHEER.

Wall Preparation

For 1" lip models, the wall should be notched to a depth of 4". For 6" lip models, the back of the wall should be notched to a depth of 4" (to accommodate the waterbox) with the rest of the wall notched to a depth of 1" to accommodate the lip section. The width of the notch should be the length of the waterfall plus 1/2 inch. Be sure to include notch for plumbing if required. The top of the wall must be finished to a level and flat surface.

Setting of the SHEER

Set the unit with a leveling compound such that the lip will extend beyond the finished pool wall by approximately 3/8". Fill the gaps between the ends of the waterfall and the end of the notch (approximately 1/4") with a non-expanding sealant. Once set, cover the unit to protect it from damage and exposure to sunlight until it is permanently covered. After final installation, including all plastering, remove the grout guard.



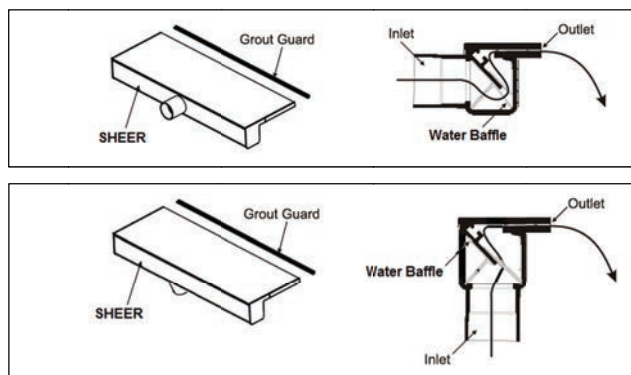
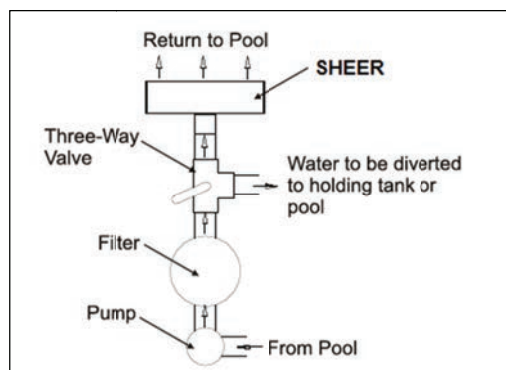


PUMP SIZING:

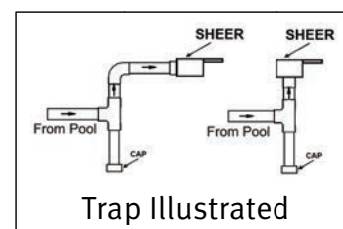
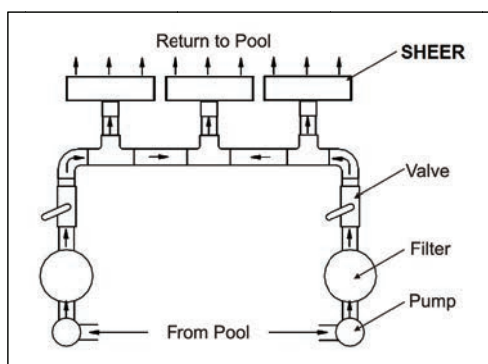
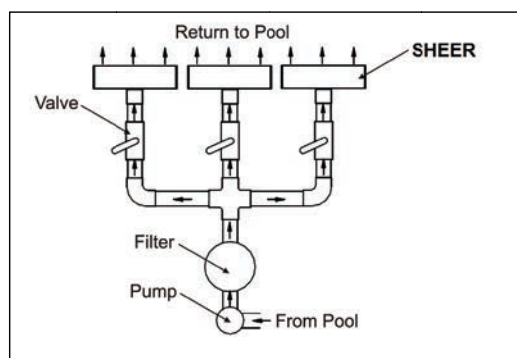
In general, the pump should be sized to supply the SHEER one (1) gallon per minute per inch of width. For example, a pump for a 24 inch SHEER should produce approximately 24 gallons per minute to provide a wall of water. Ratios of flow apply, as can be seen on chart on page 4.

PLUMBING CONNECTIONS:

The most common installation of the SHEER is utilizing the main pool pump. A three way valve is installed as illustrated below.



For multiple SHEERs, Hayward recommends that individual valves and lines be installed to allow balancing of the flow.



Two pumps can be connected to multiple SHEERs. This is the recommended installation when more than 70" of SHEER is installed.

NOTICE: Only filtered water should be used with this product. As noted in the figures above when a separate pump is installed an additional properly sized filter is required between the pump and the SHEER.

Hayward recommends the use of a plumbing trap in front of each SHEER. As illustrated this trap will allow any large debris from construction to fall out of the flow stream, avoiding damage to the sheer. If the plumbing line is accessible in final installation, it is recommended that the cap be removable.

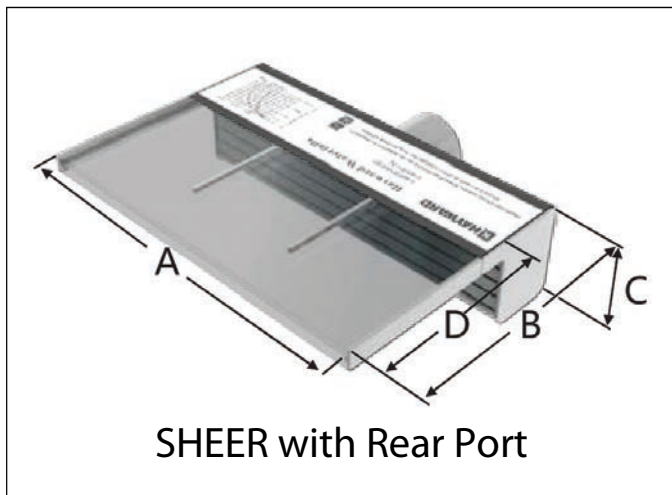
If SHEER flow rate exceeds more than 40% of the filtered flow, a separate pump and filter system are recommended.

The plumbing connection is a 1.5" US standard pipe socket. This fitting also accepts a 2" coupling.

NOTE: The water supply line should be flushed prior to plumbing the SHEER.

Plumb the unit using standard PVC cement. For rear mount units, minimize stress on the waterbox by turning the plumbing down as close to the back of the wall as possible with a 90 degree elbow or sweep fitting. Ensure that plumbing is sized appropriately for the required flow to the SHEER.

If more than 60" of SHEER length is installed, 2" plumbing, or larger, is recommended from the pump and filter to the SHEERs.



MODEL NO.	A(inch)	B(inch)	C(inch)	D(inch)	Port Location
WFS512R1	12	3 3/4*	3	1	Rear
WFS512B1	12	3 3/4	3*	1	Bottom
WFS512R6	12	8 3/4*	3	6	Rear
WFS512B6	12	8 3/4	3*	6	Bottom
WFS524R1	24	3 3/4*	3	1	Rear
WFS524B1	24	3 3/4	3*	1	Bottom
WFS524R6	24	8 3/4*	3	6	Rear
WFS524B6	24	8 3/4	3*	6	Bottom
WFS536R1	36	3 3/4*	3	1	Rear
WFS536B1	36	3 3/4	3*	1	Bottom
WFS536R6	36	8 3/4*	3	6	Rear
WFS536B6	36	8 3/4	3*	6	Bottom
WFS548R1	48	3 3/4*	3	1	Two (2) Rear
WFS548B1	48	3 3/4	3*	1	Two (2) Bottom
WFS548R6	48	8 3/4*	3	6	Two (2) Rear
WFS548B6	48	8 3/4	3*	6	Two (2) Bottom
WFS560R1	60	3 3/4*	3	1	Two (2) Rear
WFS560R6	60	8 3/4*	3	6	Two (2) Rear

*Dimension does not include Coupling (Socket)

FREEZE PROTECTION and WINTERIZING:

To prevent system damage due to freezing, the plumbing to the SHEERs must be installed such that water drains easily. The SHEERs have been designed to allow a minimum of water to remain in the unit, if the plumbing is installed such that the plumbing drains. It is recommended that normal procedures for winterizing be followed, and all pipes including those to the SHEER, be winterized.



HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its SHEER to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

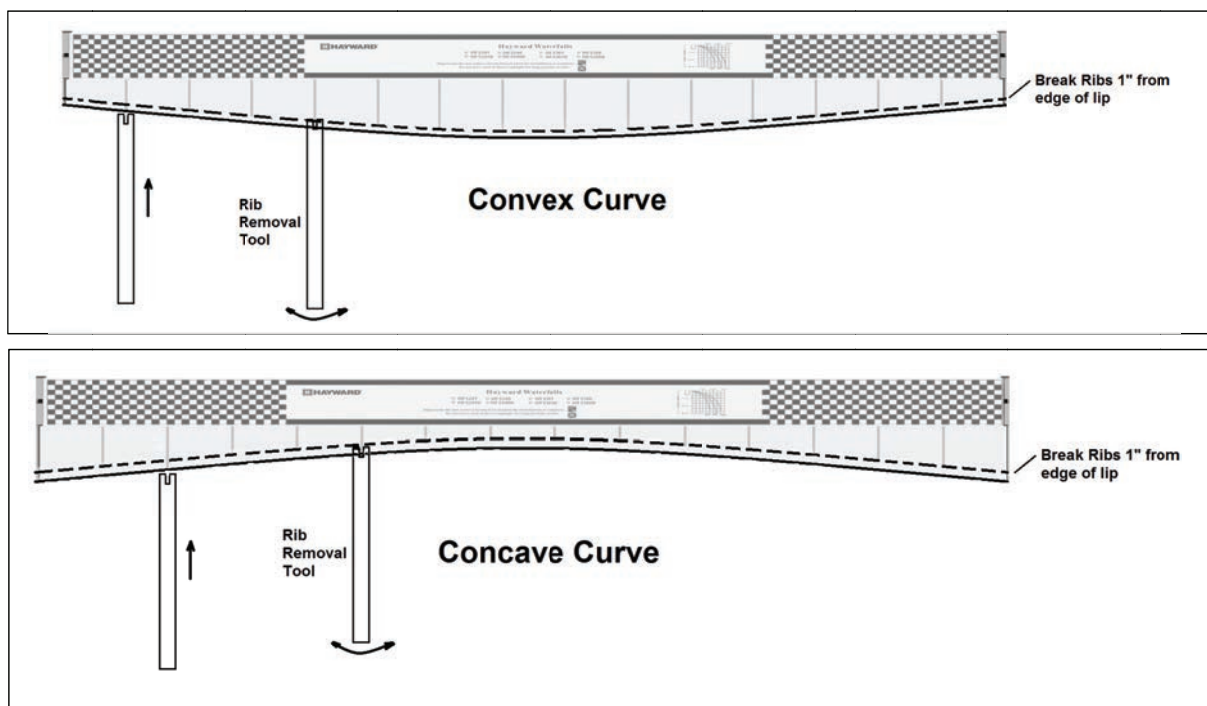
Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Hayward Pool Products
620 Division Street
Elizabeth, NJ 07207

*Supersedes all previous publications.

Cutting The Extended Lip

The extended lip (6") models can be cut to custom shapes depending on the application. Determine how much of the lip is to be removed, allowing for room for the tile and thin set such that the lip will protrude a minimum of $\frac{3}{8}$ " beyond the final finish of the wall. A minimum length of $1\frac{1}{2}$ " on the lip must remain after cutting and finishing. Remove the Grout Guard before cutting the lip. Cut carefully to avoid creation of jagged edges on the lip. Use the rib removal tool to remove the ends of the exposed ribs, back from the cut edge, to provide about 1" of clearance. Remove all broken pieces from the SHEER. Sand, or use a flame on the edge to provide a smooth surface. Replace the Grout Guard.





PRODUCT REGISTRATION

(Retain For Your Records)

DATE OF INSTALLATION _____

▲ Retain this Warranty Certificate (upper portion) in a safe and convenient location for your records.



DETACH HERE: Fill out bottom portion completely and mail within 10 days of purchase/installation or register online.

SHEER 500

Warranty Card Registration

Please Print Clearly:

First Name _____ Last Name _____

Street Address _____

City _____ State _____ Zip _____

Phone Number _____ Purchase Date _____

E-Mail Address _____

Model Number _____

Pool Capacity _____ (U.S. Gallons)

If your product contains components that have individual serial numbers, it is not necessary to complete warranty registration for those individual components. Instead, complete warranty registration only for the overall product, using the serial number that is located on the outside of the product packaging.

Please include me on all e-mail communications regarding Hayward® Equipment or promotions.

Mail to: Hayward Pool Products, 620 Division Street, Elizabeth, NJ 07207

Attn: Warranty Dept

Or REGISTER YOUR WARRANTY ON-LINE AT WWW.HAYWARD.COM

Years Pool has been in service

< 1 year 1-3 4-5 6-10 11-15 >15

Purchased from _____

Builder Retailer Pool Service Internet/Catalog

Company Name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Type of Pool:

Concrete/Gunite Vinyl Fiberglass

Other _____

New Installation

Replacement

Installation for:

In Ground

Above Ground

Spa



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