



Winterizing Procedures for *Inground & Onground* Swimming Pools

Protecting your Investment!

Our Service Team has been winterizing swimming pools for over 40 years! Below, you will find our recommendations for homeowners closing their own pools. Our instructions include helpful advice from our experts based on years of experience as well as The Pool Shoppe's preferred line-up of professional winterizing products and chemicals.

There are six important steps to winterizing your pool:

1. Water Balance & Protection
2. Vacuum, Clean and Lower the Water Level
3. Remove Pool & Deck Accessories
4. Winterize the Equipment
5. Winterize the Underground Plumbing
6. Install the Winter Cover and Leaf Cover

*****Please read all instructions thoroughly before starting your Winterizing Procedures as certain conditions or circumstances may affect the order of which you perform your closing procedures. Please note that these instructions are to be used as a guideline. Always refer to manufacturer's instructions and owner's manuals for further details.**

Please refer to the last page of these instructions for your Winter Supply Checklist

STEP 1: Water Balance & Protection

One Week before Pool Closing

Bring a water sample into The Pool Shoppe at least one week prior to Closing. All chemistry adjustments should be made at this time before adding any of the Winterizing Chemicals. It is particularly important that the pH and Total Alkalinity are tested and any necessary adjustments are made. As well, the Chlorine/Bromine reading must be between 1.0-3.0 ppm at the time of closing. A second water test may be necessary if major chemistry changes are made after the first water test.

As the temperature of the pool water drops, the water becomes more corrosive. Improperly balanced water may result in the liner becoming brittle and the formation of wrinkles in the liner. Further damage could be the corrosion of any metal parts (face plate screws), and the staining or pitting of a concrete/ gunite pool surface.

Three Days before Closing the Pool

- i. Add a clarifier such as *Clear Blue* to the pool to help the sand filter catch all fine debris. Dilute *Clear Blue* at the rate of 60 mL per 45,000L of pool water and distribute around the pool edges or directly into the skimmer.
- ii. Add the *Meta Sol* from *The Winterizing Kit* or equivalent Stain & Scale prevention. It is used to coat metals and minerals in the water to prevent stain and scale formation both on the pool surface and in the filter media. Dilute the full bottle from *The Winterizing Kit* and distribute around the pool edges.

One Day before Closing the Pool

- i. Add the *Oxy-Out* from *The Winterizing Kit*. This is a non-chlorine, non-bleaching, totally soluble Shock Treatment. Broadcast the whole container from the kit evenly over the pool surface.
- ii. And lastly, add the *Concentrated Algaecide* from *The Winterizing Kit*. It is a 50% concentration used to both kill and prevent all strains of algae growth. Dilute the whole bottle of the algaecide from the Kit and distribute around the pool edges.

STEP 2: Vacuum, Clean and Lower the Water Level

The physical cleaning of the pool begins with a thorough vacuum of the pool walls & floor, followed by backwashing the filter when the vacuum is complete. If the pool is very dirty, a preliminary vacuum may be needed to clean the pool before adding the contents of *The Winterizing Kit*.

Some pool owners will backwash the filter first and then perform their final vacuum on the 'drain' or 'waste' position, cleaning the pool and lowering the water level simultaneously.*

The final backwash should be completed using *Filter Rinse* to remove unwanted minerals and organic build-up from the filter sand. During the final backwash, pour *Filter Rinse* into the Skimmer while backwashing. If you have a Cartridge or Diatomaceous Filter or use *Zeobrite* media in your sand filter, there are proper cleaning solutions available at The Pool Shoppe to soak these types of media to prepare them for storage. This seasonal soak is mandatory to prolong the efficiency and life of your media. If you use **Activate Glass Media** in your filter, a Filter Rinse is not necessary but can be done if desired. Please see a Pool Shoppe representative for these specialty products.

When the final vacuum has been completed, the water level must be dropped to Winterizing Level. Winterizing levels are as follows:

For In-ground or On-ground Pools -*Vinyl Liner*: Winterizing level is traditionally 6" below the Skimmer mouth.

For In-ground Pools -*Gunite/Concrete*: Winterizing Level is traditionally 12" below the Skimmer mouth or just below the Return Jets.

In both in-ground and on-ground pools, remember that initially, the water level will be temporarily lowered to just below the Return Jets. This is so that the Underground lines can be Winterized (those instructions to follow). After the Underground lines have been Winterized, the pool water level will have to be filled back up to the above-mentioned Winterizing Level.

****When performing the final vacuum, do note that when the water level drops below the Skimmer, some systems may begin to draw air and you could lose the prime on the pump. To prevent this air draw, run just enough water into the Skimmer with the garden hose, maintaining a 'water seal'.***

Completely remove the 'ring-around-the-pool' with *Vinyl Liner Cleaner* and a sponge. This will prevent staining of the liner over the winter as well as premature fading of the liner pattern due to reactions with the "bathtub ring" and the vinyl. *Vinyl Liner Cleaner* also works great on coping. For Gunite/Concrete pools, use *Tile-X* (a granular cleaner).

STEP 3: Remove Pool & Deck Accessories

We recommend that your solar blanket be fully cleaned with *Cover Cleaner* and rinsed to remove chlorine and organic residue. Allow the solar blanket to dry and fold neatly for storage. If you store your solar blanket on the roller for the winter months, protect the blanket by wrapping it with a tarp or a Solar Blanket Cover to protect it from damaging UV rays of the sun. If you plan on storing your solar blanket in a shed, keep in mind that mice and other critters tend to find refuge over the winter by chewing their way into a few layers of the plastic. Consider storing the solar blanket up off of the shed floor.

- Fully clean solar blanket with *Cover Cleaner*, dry off and fold neatly for storage. Store Cover indoors or in a shed if possible.
- Remove deck ladders and drop-in steps.
- Remove the diving board and base; grease ground bolts. The board can be wrapped with plastic if the bolts will not come off.

STEP 4: Winterizing the Equipment

Along with these basic instructions, always refer to your Equipment Owners Manuals for further details. Power to the pool equipment must be off in order to complete the following equipment winterization procedures.

- **Pump and Filter** If it is removable, undue unions and unplug pump. Turn the pump upside down to drain the water out and store the pump indoors. If you cannot remove the pump, you will have to winterize it in place. Remove the drain plugs from the Pump Housing to drain out any remaining water. Store the drain plug in the strainer basket and leave in the pump. Lubricate the lid O-ring

with *Jack's Lube* and re-install the lid. Do not wrap the motor in plastic as that will retain moisture and rust out the motor bearings. Ideally, shelter the pump and motor with a vented cover or box to protect it from the elements. Also, refer to your Owner's Manual for any further instructions.

There are different styles of filters on the market. Always refer to the Owner's Manual for further details.

- For **Cartridge Filters** and **Diatomaceous Earth Filters**, bring indoors when possible. Also soak filter elements in a proper cleaning solution, such as *Cartridge Cleaner*, to prolong their life and efficiency. If the canister cannot be brought indoors, drain all water out of the canister and cover canister to protect it from the elements.
- **Sand Filters** can be left in place because they are too heavy to move. There is a drain cap that must be removed to allow the water that is in the tank to drain out, and the sand to stay in. Leave the drain cap off for the winter and store the cap in the pump strainer basket. We suggest storing or placing all removable drain plugs, caps, pressure gauges, site glasses etc. from the filtration equipment into the pump basket and leaving these items inside the pump for the winter. The valve head itself, has been designed to withstand freezing temperatures and is best left on the filter. The process of removing the valve head could cause damage to the internal standpipe assembly so we recommend caution if the home owner wishes to remove this and store indoors. If the filter tank is outdoors, the valve head can be wrapped in plastic to protect it from the elements.
- **Chlorinator** All Chlorinator canisters must be emptied of all water and chemicals before winterizing. For Off-Line Chlorinators: remove all feeder tubes to storage. For In-Line Chlorinators: undue the unions on the canister for removal from the filter. Due to fumes and gases from the chlorinator, replace the lid loosely as not to compress the o-ring or allow gases to build-up during the off-season. Store the Chlorinator outside and cover with plastic to protect it from the elements.
- **Hayward Gas Heaters** (*For all other brands of heater, please refer to your Owner's Manual*)
It is just as important to properly winterize the Pool Heater as it is to have it properly cleaned out in the Spring. First turn the Manual Service Gas Valve 'OFF'. This valve is located outside of the heater within the pipeline where the gas line connects to the heater. Next, take the front door off of the heater to locate the Manufacturer's Gas Valve inside the heater. On Hayward's Millivolt or Standing Pilot heater, the gas valve has a knob that needs to be turned from 'On' to 'Off'. Push this knob down slightly in order to turn it to the 'Off' position. For the Hayward Electronic Ignition and Forced Draft Heaters, the Manufacturer's Gas Valve inside the heater has a toggle switch that simply needs to be switched from 'On' to 'Off'.

On Hayward's Millivolt /Standing Pilot and ED2 Electronic Ignition heaters, there is a small tube that leads to the pressure switch that needs to be disconnected for the winter. The best way to access this pressure switch is to remove the upper front panel of the heater. Once that panel is removed, it will be on the right hand side. There are 2 nuts on the pressure switch tube that when unthreaded, will disconnect the tube in question. Using 2 wrenches, place the first wrench on the nut closest the pressure switch and hold the switch firm. Place the second wrench on the second nut and turn that nut further away to disconnect the tube. Do not remove the switch from the heater – let it hang inside the heater by its connecting wires. Replace the front panel doors. Hayward's Forced Draft heaters do not require disconnection of the pressure switch tube. These pressure switches have been mounted vertically allowing them to self-drain.

Under the header on right side, there is either a brass plug to be removed completely or a petcock valve to be unscrewed as far as it will go.

Use a 'Shop Vac' to blow all of the water out of the heater by putting the 'Shop Vac' Hose into the inlet water pipes.

Do realize that rodents and spiders look for a winter home and the Pool Heater offers a lot! Each spring, a licensed Gas Technician should be hired to clean out the burner tray and pilot tube to prevent a gas back-up, resulting in an inefficient heater or flame roll-out.

- **Hayward Heat Pro Heat Pump** (*For all other brands of heat pump, please refer to your Owner's Manual*) Disconnect the two water connection unions from the heat pump to drain all water from the lines. Remove the drain plug from the bottom water connection on the heat exchanger to remove any excess water. Insert the 'Shop Vac' hose into the inlet water pipe in order to blow out any remaining water from the unit. Cover the top of the heat pump only or place a piece of plywood onto the top and weigh it down. This will prevent debris from entering the openings on the top of the heat pump in addition to protecting it from the elements.
- **Aqua Rite Salt Chlorine Generator/Pro Logic Automation System**
The Aqua Rite in-line electrolytic cell and control panel are both designed to withstand all winter weather and should not be removed. The supply and return lines to and from the cell are to be blown clear of water along with the cell itself, using a 'Shop Vac'. The cell and flow detection switch will be damaged by freezing water just as your pool plumbing would. This is why it is so important to drain all water from plumbing lines.

The Aqua Rite Cell should be cleaned using *Salt Cell Cleaner* at least once a year to remove calcium and phosphate build-up. This procedure can be done at the time of winterizing to avoid delays or downtime during the summer months. Remove the cell from the piping by unthreading the unions and follow the *Salt Cell Cleaner* instructions, or consult a Pool Shoppe representative. An *Aqua Rite Cleaning Stand* can be purchased to keep the cell upright during the cleaning process.

- **Del Ozone**

Ozonators and their components are designed to withstand all winter weather and should not be removed. Disconnect the power to the Ozone Generator. Disconnect the gas tube from the ozone injector in addition to removing the ¼" barbed adaptor and store with other seasonal accessories in the pump basket. Install the Ozone Injector winterizing cap. Remove all water from the plumbing and equipment lines using a 'Shop Vac'.

- **Aqua Lamp Incandescent or LED Pool Light**

Aqua Lamp sealed receptacles are housed inside of a cavity called a niche. To protect this receptacle and the bulb from freezing, we remove it from the niche and lower it down into the pool. For each light fixture, loosen the lamp receptacle from the niche by turning the lens of the receptacle counter clockwise. Once the receptacle comes loose, you will be able to pull it away from the niche to allow it to hang in the pool below ice formation, keeping it attached to its cord. If the receptacle has a tendency to float, you can weigh it down with a smooth object such as your empty antifreeze bottle filled with water and some stones. For all other brands of light fixtures, please refer to your owner's manual.

STEP 5: Winterize the Underground Lines

Very important! Any water remaining in unprotected lines will freeze and expand, possibly damaging pipes and fittings. A 'Shop Vac' is required to blow the water from the lines. Realize that there are two sets of lines to be Winterized, the Suction Line and the Return Line(s). The Suction Line is the line that runs from the back hole in the Skimmer to the front of the pump. The Return Line(s) run from the top of the Filter head to the Return Jet(s) in the pool.

BLOWING THE LINES WITH A SHOP VAC

Winterizing the Suction Line:

- Inground Pools:** There are two holes in the bottom of the Skimmer. The hole closest to the pool is the line from the Main Drain and if it is left open, it will continually fill the Skimmer with water, making the 'blow-out' difficult. Plug this hole with a *Gizzmo* and *foam rope*. The *Gizzmo* and *foam rope* are sacrificial parts that are used to protect the Skimmer and Main Drain line from freezing. Tie a knot in the end of the Foam Rope and push about three feet down the Main Drain line. The knot will hold the *Foam Rope* in place while you install the *Gizzmo*. The *Foam Rope* displaces the water that remains in the Main Drain Line and compresses under the pressure of freezing water to protect the piping. The *Gizzmo* will displace water that may accumulate in the Skimmer and compresses under the pressure of freezing water.

Onground Pools: There are two holes in the bottom of the Skimmer. The hole closest to the pool is usually plugged from the bottom during construction. This is because most onground pools are not built with a Main Drain. There are usually enough threads to still allow a *Gizzmo* to be installed.
- At the pump, remove (if not already) the pipe that attaches to the pump intake (going into the front of the pump). Insert and tape the 'Shop Vac' hose into the disconnected Suction Pipe with Duct Tape. Put the 'Shop Vac' on 'Blow' mode. This force will push all water in the Suction Line out at the Skimmer, the hole farthest from the pool. Leave the 'Shop Vac' running for 4-5 minutes, or until there is just a fine mist blowing out of the Skimmer.
- Pour 4L of *Non-Toxic Anti-Freeze* down the Suction Line in the Skimmer (the hole furthest from the pool). After the Anti-Freeze has been installed, plug the hole with an Expandable Winterizing Plug (Usually a #10 Rubber Plug).

Winterizing the Return Line(s)

You have already lowered the water level to just below the Return Jets during the Physical Cleaning Instructions. This will allow you to remove the water from the Return Lines and plug them without water running back into the lines. You will use the 'Shop Vac' to force the balance of the water out of the lines. This is done by inserting and taping the 'Shop Vac' hose into the Return Line where it comes off of the filter head (and through the heater too, if you have one). Put the 'Shop Vac' on Blow mode and the water in the Return Lines will blow out. There are typically multiple lines on an in-ground or on-ground pool. One line will usually blow out first, once there is just a fine mist coming out; plug this line with a 1½" *Threaded Plug*. Generously apply plumbers tape to threaded plugs and snugly thread into each Return Fitting opening. The next line will start to drain; once there is just a fine mist coming out; plug this line with a 1½" *Threaded Plug*. Continue this procedure until all of the return lines in your pool are plugged. Remember to top up the water level at this time if necessary if water is below the preferred winterizing level.

Please refer back to Step 4: "Winterizing the Equipment" to ensure you have properly winterized all of the equipment installed into your return line(s).

STEP 6: Install Winter Cover and Leaf Cover

The instructions below outline Cover Performance, Care and Maintenance, and Cover Installation for all types of pools and pool covers.

- **Inground and Onground Pools – Polywoven Winter Covers using Water Bags**

The cover rests upon and is supported by the pool water. Therefore, prior to cover installation, it is important to make sure the pool is not leaking. Please contact our Service Department if you are losing more than ¼" of water in a 24 hour period.

Although your Winter Cover is made of a durable material, it is required that you pad sharp corners, abrasive decking, protrusions, rough edges of the coping, etc. with old towels, foam remnants or corrugated cardboard, etc. Lay the cover out across one end of the pool, black side down. With two people, carefully walk the cover over the pool surface letting the cover rest on the lowered water surface. Pat extra cover material against the inside walls of the pool all the way around. Neatly lay out the remainder of the material on the pool deck. Fill water bags ½ full to allow for ice expansion during the freezing temperatures. Water bags can be filled prior to installing the cover on the pool to assist with positioning the cover and are especially helpful on a windy day! Water bags should be positioned so that the ends of the bags are overlapping each other to prevent wind from getting underneath and billowing the cover. In high wind areas, extra ballast will be needed – either additional water bags or wall bags which lie along the side walls and down into the cover. Do not use abrasive materials such as concrete blocks, bricks or boards to hold a cover down – should these items fall into the pool over the winter, they could puncture the pool liner.

When the cover is installed on the pool, it is normal for a small amount of water to seep through the stitched seams onto the cover.

Use a Submersible Pump or siphon to safely remove excess water during the Fall & Spring months when possible.

- **Inground and Onground Pools – Fabrene or Vinyl Lock-In Winter Covers**

The Cover rests upon and is supported by the pool water. Therefore, prior to cover installation, it is important to make sure the pool is not leaking. Please contact our Service Department if you are losing more than ¼" of water in a 24 hour period.

In order to use a lock-in winter cover, you must have an additional receptacle or track in your pool coping to accept the bead of this cover. This track is located directly above the liner's track. Both fabrene and vinyl lock-in covers are installed the same way. This cover does not require use of water bags or cover weights. Lay the cover beside the pool with the deep end and shallow ends facing the correct direction. Before moving the cover onto the pool, it is best to fold the walls of the cover in upon itself and then allow the cover to float on the water. It will float here providing that no water is able to channel onto it to force it to sink. If the pool is rectangular, it is easiest to first install the four corners followed by one side at a time. If the pool is a kidney or other freeform, install 2 feet of cover into the track at one point, move 2 feet down, install another 2 feet into the track and continue this intermittent cover install until the majority of the cover is in position. This will allow some shifting room to position the cover appropriately. Once the cover is installed correctly, it is time to mark the landmark points with a permanent magic marker to ease the installation process in future years.

For older covers that have lost their stretch, install the cover on a warmer sunny day. You can also use a kettle of boiling water to make the vinyl bead a little more pliable for stretching it into position. Do this with caution as the older the cover, the greater the tendency of it tearing.

The final stage of installing the lock-in cover, is to install a cover retainer. We recommend either our flexible *T-Bead retainer* or *Cover Wedgies*. These products are installed into the same receptacle as the cover and assist with securing the cover into the track over the course of the winter.

If you have in-wall stairs, you most likely use a *Stairboard* with a coping receptacle to hold the step area of the lock-in cover into position. Stairboards should be examined each Fall to ensure that the coping track is secure and can easily be weighted down using *Waterbags*

When a fabrene lock-in cover is installed on the pool, it is normal for a small amount of water to seep through the stitched seams onto the cover

Use a Submersible pump or siphon to safely remove excess water during the winter months when possible.

- **Leaf Covers (Optional)**

Tree leaves and other heavy debris will add extra weight to your Winter Cover which could shorten the expected life span of your cover. A *Leaf Mesh Cover* may be installed on top of your winter cover before the leaves fall, to collect debris. This Leaf Cover should then be removed before the freezing weather starts, which will lighten the load on top of the cover as well as make Spring clean-up a little easier.

- **Inground Pools – Safety Covers**

The following instructions are for Safety Covers that have already been professionally installed. There are brass anchors already in place throughout your pool deck and your cover should have been stored with straps and springs already attached. Before you get started, ensure that all of the cover springs with sleeves and strap adjustment buckles are all attached to each cover strap. You will also

need your red handled allen key tool to assist you with raising the brass anchors out of the deck collars and your installation rod to extend the springs over the anchors.

To prepare the cover for install, use the allen key to raise/turn the anchors out of all of the deck collars so the tops are out about 3/8" above the deck surface. Spread the cover out on top of the pool so that it can float on top of the water. Starting on one side of the pool, begin to slip the springs onto the anchors one by one along that one side. As you approach a turn or your next side, you will experience increasing tension with the springs. Continue hooking so that all of the springs are installed onto the anchors.

As the years pass, your cover may need some adjustments at the buckles to either tighten or loosen the cover. Ideal tension of your safety cover would be measured by a 75% compression of the springs. This means that if the coil portion of the cover spring is 4 inches long without any tension, that it will be compressed to 3 inches when adjusted at the buckle for ideal tension.

STEP 7: Closing Checklist during the Winter Months

Check water level underneath the pool cover to ensure that the pool is not losing water. Maintain the proper Winterizing Level until Spring when you can correct the problem. Water loss will not only compromise the integrity of the pool cover, but also the underground structure of the pool itself. If your pool has a safety cover, do not allow the water to fall more than 18" below the pool deck.

Pump water off the winter cover periodically to maintain a minimum amount. Water that is left to accumulate on the winter cover will displace the water that is under the cover. This displaced water will spill into the Skimmer and could lead to Skimmer damage. Accumulated water will also put undue stress on the winter cover and shorten its life-span.

Clean off leaves and debris in the Fall to leave you with less of a mess in the Spring.

Replace flat water bags immediately to prevent the cover from falling into the pool.

If the cover is continually being windblown, use wall bags as extra ballast to keep cover in place.

BEFORE YOU GET STARTED

Confirm your needs for the following items and check your home supply levels

- *Pool Shock, pH Up and Buffer* (in case chemistry adjustments are required)
- The winterizing Kit – Contains *Meta-Sol, 50% Concentrated Algaecide* and *Oxy-Out*
- *Clear Blue*
- *Non-Toxic Antifreeze*
- *Filter Rinse* (or *Cartridge Cleaner* for Cartridge or D. E. Filters, or *Filter Cleanse* for Zeobrite Filters)
- *Jack's Lube*
- *Aqua Guard Vinyl Cleaner* (*Tile-X* for concrete or gunite pools)
- *Cover Cleaner, Solar Blanket Cleaner*
- *Solar Blanket Cover*
- *Foam Rope*
- *Salt Cell Cleaner* and *Cleaning Stand*
- *Gizzmo*
- *Winterizing Plugs*
- *Plumbers Tape*
- *Water Bags, Wall Bags*
- *Lock-in Cover Retainer* or *Cover Wedgies*

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