

Accu-Tab® PowerBase® 3140AT by Axiall Corporation

Installation and Operating Instructions



STD 50

The PowerBase® 3140AT Chlorinator is NSF-Listed for pool and spa applications. ONLY Axiall Corp. Accu-Tab® Blue SI Tablets for commercial pool applications are permitted for NSF installations. Use of tablets will void NSF certification.

DANGER:

DO NOT MIX CHEMICALS!

The *PowerBase* 3104AT chlorinator system is designed for use with Axiall Corp. approved tablets only. Do not use Cal-Hypo tablets with stabilized chlorine or bromine products, or other sanitizing chemicals.

Fire or explosion could result.

Rev 01/30/15

Description

The *Accu-Tab PowerBase* 3140AT chlorination system incorporates an Axial Corporation chlorinator into a compact plug and play system. Included in the system is an integrated, level controlled solution tank, solenoid valve and a centrifugal pump. The flow rate through the chlorinator is controlled by a manually adjusted valve located on the inlet of the chlorinator. The solution tank level is controlled by a float valve and a high-level safety switch.

Overflow protection is standard. Two additional level switches in the top area of the Solution Tank will cause the pump to turn on/off as needed.

The chlorination system is designed for use ONLY with Axial *Accu-Tab* Blue SI tablets utilizing the Axial erosion feeder technology that erodes only the bottom layer of tablets on the sieve plate, while keeping tablets above the sieve plate dry and ready for use. Tablets other than Axial *Accu-Tab* Blue SI tablets will have different delivery rates, resulting in improper chlorine delivery.

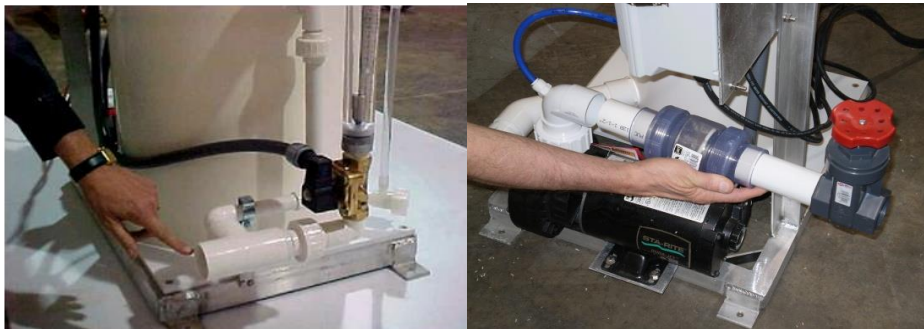


Installation Instructions

1. Uncrate, remove from pallet, and check for damage that may have occurred during shipping.
2. Locate chlorinator in adequately ventilated area and on level ground. If system is in area subject to standing water, then system should be raised above standing water. Adjust leveling feet as necessary.



3. All systems are tested in full operation at the factory, however fittings may loosen during shipping. Before Installing System, hand-tighten all fittings and pipe unions. The inlet bracket will need to be attached w/the provided screws.



Inlet

Outlet

4. Use 2" piping for the chlorinator inlet and outlet piping to ensure ample supply of water. Use isolation valves at main system connections.
5. Install the check valve on the discharge line from the chlorinator.
6. Connect cords to proper power source and controller source. Plugs are labeled.



NOTE: IF A HIGH PRESSURE WEBTROL PUMP IS ORDERED, A LARGER CAPACITY PUMP CONTACTOR IS INSTALLED IN THE ELECTRICAL BOX AND NO CORD/PLUG IS PROVIDED AS A 25 AMP CIRCUIT IS REQUIRED.

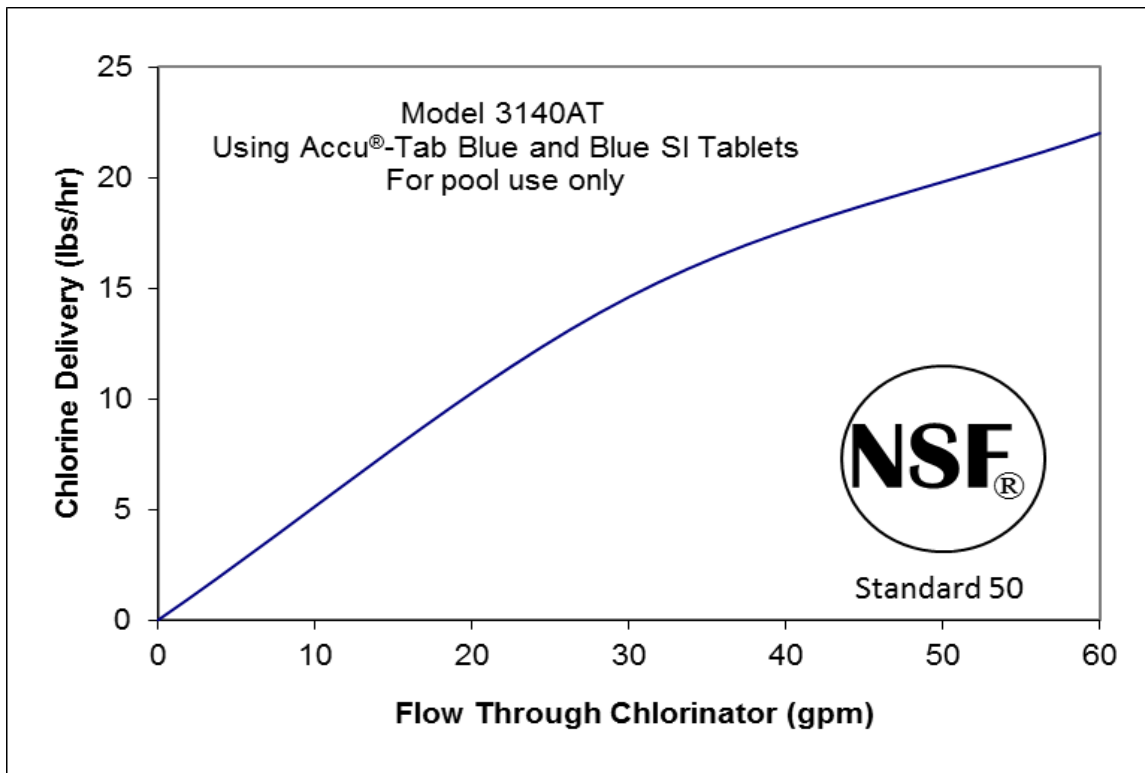
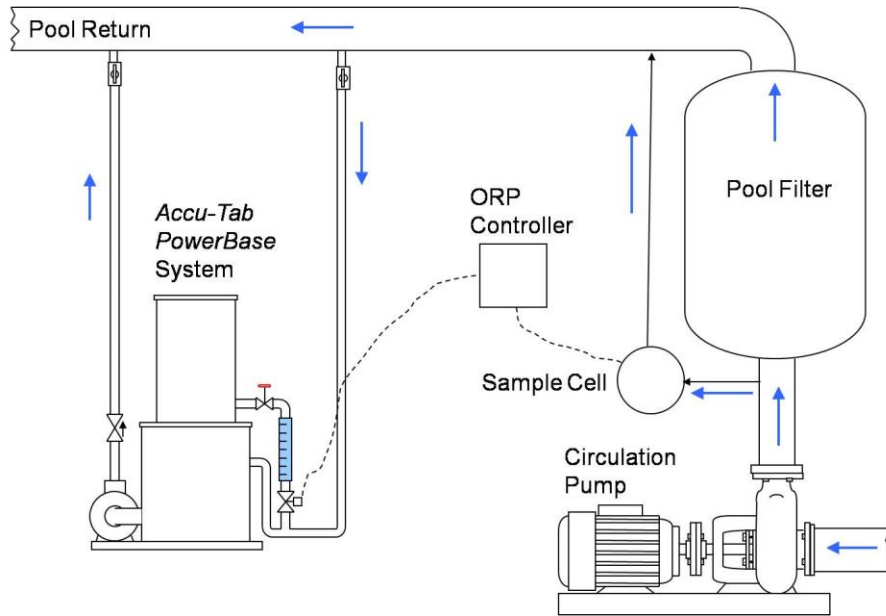
7. Once the power and water input and output connections are in place, open isolation valves and check for leaks. Supply water will begin filling the tank through the float valve. This will automatically prime the pump. (Any air initially in the pump will vent into the solution tank through the blue prime line.)
8. Turn system on using the chemical controller
9. Open the pump discharge valve slightly to start water flow through system.
10. Open inlet valve and set to desired flow rate.
11. Slowly, and in small increments, continue to open the discharge valve, and adjust inlet valve as necessary to get desired inlet flow.
12. Make incremental changes to the discharge valve until the tank water level drops and stabilizes at approximately $\frac{3}{4}$ tank level.



11. Turn the system OFF and ON several times, allowing it to operate for several minutes each time. Check all connections for leaks; make sure the delivery pump suction always remains covered with water.
12. To begin chlorinating, remove the chlorinator lid and fill the Chlorinator with ACCU-TAB® Blue SI Tablets.
13. Check the system daily for leaks and proper operation of all components.
14. Adjust the flow rate through the chlorinator by adjusting the chlorinator adjustment valve.



Installation Example:



Operation

1. Remove lid from chlorinator and fill with the appropriate amount of *Accu-Tab* Blue SI tablets. Add no more than the amount of tablets that will be used within one week.
2. Check pool water for desired chlorine level and adjust flow through chlorinator as needed.

NOTE: When pool water circulation stops, flow to chlorinator will stop. This will stop chlorine delivery.

Adding Tablets

1. Tablets may be added while the system is running. Take care to protect eyes, skin, clothing and other equipment from splashing. Do not inhale fumes.
2. Remove lid and add *Accu-Tab* Blue SI tablets.
3. Replace lid.

Balancing the Solution Tank Level

Tank Runs Low:

1. Slowly, and using small increments, close the Discharge Control Valve.
2. Make incremental changes to the Discharge Control Valve until the Solution Tank water level rises and stabilizes at approximately $\frac{1}{2}$ to $\frac{3}{4}$ level.

Tank Runs High:

1. Slowly, and using small increments, open the Discharge Control Valve.
2. Make incremental changes to the Discharge Control Valve until the Solution Tank water level drops and stabilizes at approximately $\frac{1}{2}$ to $\frac{3}{4}$ level.
3. If level will not drop, begin reducing the water flow to the Chlorinator. If this results in low chlorine residuals, contact Axiall Technical Service at 855-934-3570 for assistance.

System Cleaning

Over time the chlorination system may develop a scale build-up. This should be cleaned on a periodic basis, up to twice per year. If scale formation is severe, more frequent cleanings may be necessary. Cleaning may be accomplished by soaking the chlorinator with a dilute acid solution according to the instructions below.

Preparation for cleaning

1. Prepare 2 gallons of muriatic acid.
2. **Always use** appropriate safety equipment while servicing the unit or handling chemicals.
3. Clean the feeder in a well-ventilated area. Chlorine gas may be released during the cleaning process.

Cleaning procedure

1. Turn system off.
2. Open lid and remove all tablets. Use proper protective equipment when handling chemicals.
3. Switch system on to begin flushing the system.
4. Wash out the feeder with a hose to remove remnants of tablets and loosen scale.
5. Operate system until normal solution tank level is achieved. Switch system off.
6. Close inlet and outlet isolation valves.
7. Very carefully, pour the acid into the upper chlorinator to dissolve scale. It may be necessary to pour directly on the inside walls to remove any scale above the water level. **Always add acid to water, never add water to acid.**
8. Let soak for 30 minutes. As acid dissolves scale, carbon dioxide will be released, and foaming will occur. If any tablets were left in the feeder, **chlorine gas may also be released.**
9. Turn system on to start acid circulation through the blue tubing. Circulate for 10 minutes.
10. Open all valves to begin purging acid from system.
11. Wash the walls and sieve plate of the feeder with a hose to remove all acid residue. Chlorine gas may be released if any acid remains in the system.
12. Allow feeder to flush water for 30 minutes.
13. Turn system off. System is ready for operation.

Annual Preventative Maintenance

1. Clean the system as outlined above once per year
2. Float Valve must be free to move. Replace piston if necessary.
3. Disassemble Solenoid Valve and clean out debris and make sure small orifices are clear
4. Disassemble Discharge Check Valve and soak in muriatic acid solution if necessary.

Winterizing

1. Clean chlorination system following instructions below.
2. Close inlet isolation valve and operate pump until no more water can be pumped out.
3. Shut system down and close the outlet isolation valve.
4. Siphon any remaining water from the solution tank.
5. Remove any debris from the chlorinator or solution tank.
6. Open the bottom drain on the pump.
7. Drain water from feed and discharge lines.
8. Make sure no water remains in the pump, chlorinator, pipe line, or solution tank to prevent freezing over the winter.

Troubleshooting

A. Solution Tank fills and continuously overflows when system shuts down.

1. Solenoid Valve has failed in the open position
2. Discharge Check Valve has failed in the open position
3. Float Valve has failed in the open position

B. Solution Tank fills and overflows slightly, but does not continue indefinitely.

Level in the Solution Tank is too high during operation. Slightly open up the Discharge Control Valve to increase the flow rate through the Solution Delivery Pump. Refer to “Solution Tank Leveling” section for Solution Tank leveling instructions or adjust float valve to operate at lower level.

C. Solution Tank overflows when system is running

1. The system is not balanced. Refer to “Solution Tank Leveling” section for Solution Tank leveling instruction.
2. High Level Switch may have failed

D. Solution Tank continually runs low level/empty, causing Solution Delivery Pump to lose prime.

1. Float Valve not operating properly
2. Solenoid Valve failure
3. Improper Solution Tank leveling

E. Solenoid cycles ON and OFF while system is running.

1. System is not balanced. Slightly open up the Discharge Gate Valve to increase the flow rate through the Solution Delivery Pump or reduce flow to the chlorinator.
2. Refer to “Balancing the Solution Tank Level” section.

F. Solution delivery pump does not pump when analyzer calls for chlorine.

1. Check internal circuit breaker
2. Check analyzer output signal voltage—120 Volts. To confirm that the problem is not the analyzer, unplug the “Controller” plug from the analyzer and plug it directly into a known 120v source. If the pump starts, then the analyzer may be responsible for the malfunction.
3. Check pump contactor voltage—120 volts. Confirm that the contactor “pulls in” when the analyzer signal is engaged. If the contactor “pulls in” and the pump does not start, pump motor may be bad.

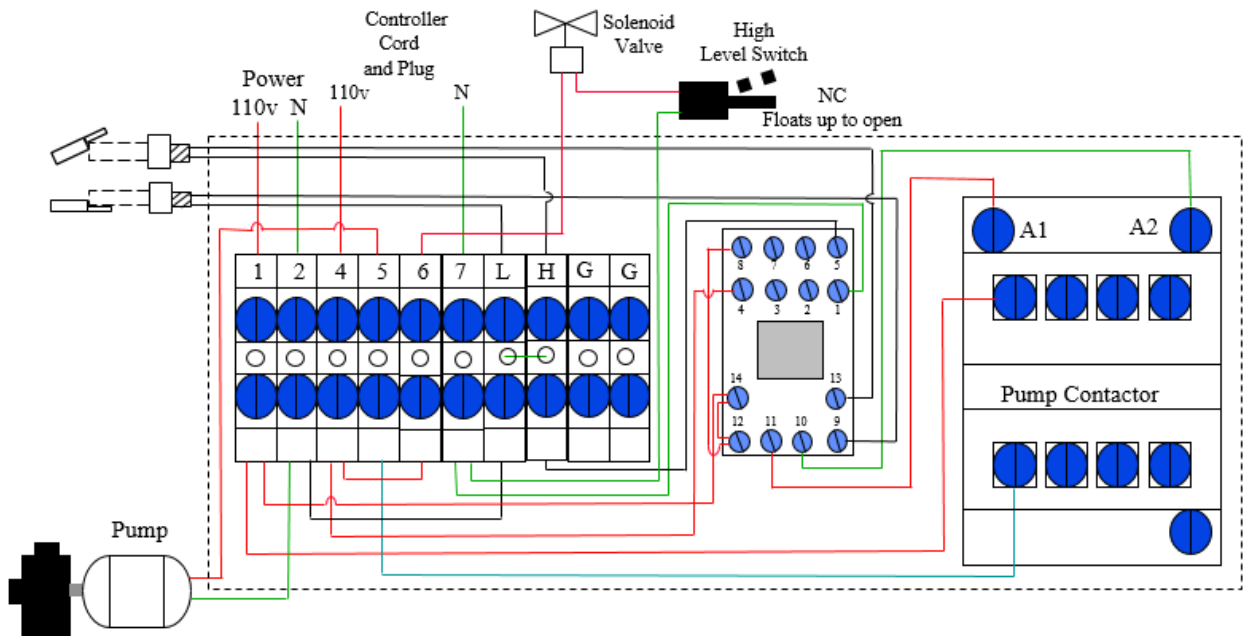
G. Solenoid valve does not open to allow flow through the chlorinator.

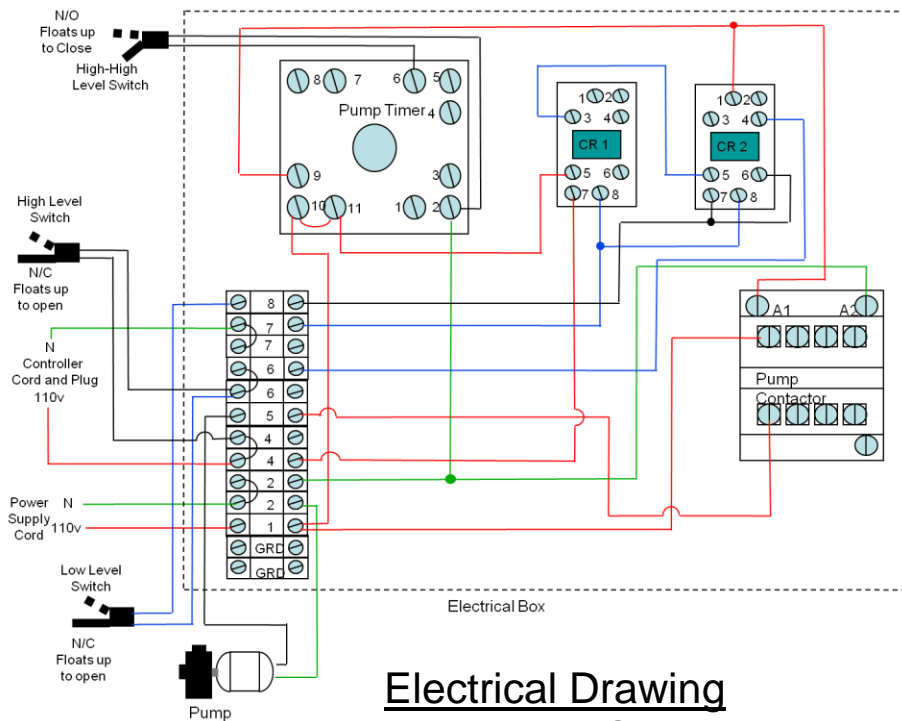
1. Check analyzer output signal voltage—120 Volts. To confirm that the problem is not the analyzer, unplug the “Controller” plug from the analyzer and plug it directly into the wall. If the solenoid opens, then the analyzer may be responsible for the malfunction.
2. Confirm that the coil is “actuating.” The coil may be burned out—evident by a tar-like substance oozing out of the coil body. If it warms up and the does not work, then the problem is inside the solenoid valve.
3. Take solenoid valve apart. Be careful not to lose the small gaskets that seal the main body to the cover. Check for debris or build-up inside the solenoid valve and under the shaft.

H. Pump is running but not pumping solution

1. Confirm that the solution tank is full. The pump may have lost prime. Start and stop the unit to allow water to flow back into the pump.
2. Discharge pressure may be too high. If the pressure is above 20 psig, the standard pump will not work.

Electrical Drawing—Base System



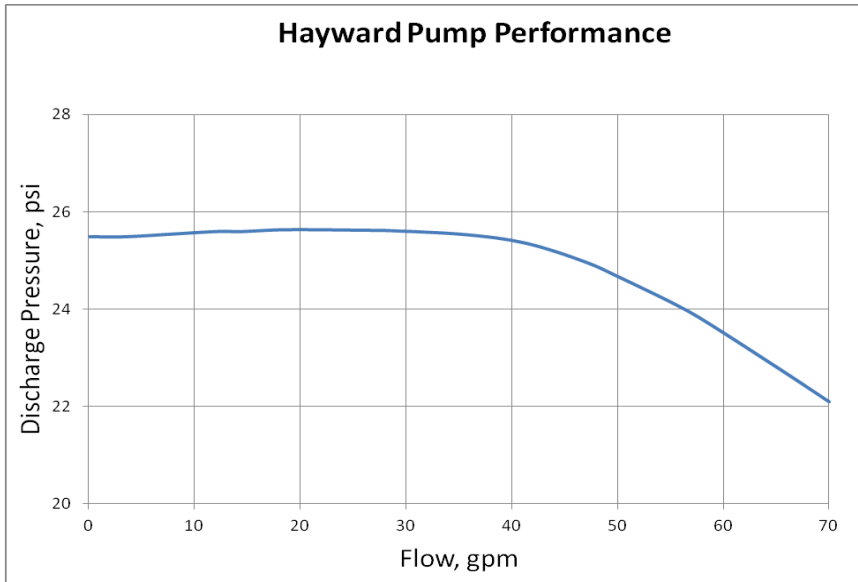


If a chemical controller is not used, remove control cord and install jumpers between:
Terminal #1 & #4
Terminal #2 & #7

The controller cord should be removed.

**Electrical Drawing
HHL Pump Switch**

PowerBase Replacement Parts	PurAqua Part #	Axiall Part #
Hayward 1 1/2 HP Pump	PAPP1500	9500080
Seal for Hayward Pump	SPX1250XZ2C	
Webtrol 1 1/2 HP Pump	PC150R	9500185 Option
Seal for Webtrol Pumps	70X130-M	Option
1 1/2" Solenoid Valve	PASV150B	9500001
Pump Contactor	NC1-1810-120V	9500145
1 1/2" Inline Flow Meter	F-42050LN	9500002
Level Switch	M8710	9500084
1 1/2" Discharge Swing Check Valve	S1720C-15	9500077
1 1/2" Solenoid Valve Rebuild Kit	PASV150BK	
Solenoid Replacement Coil	D100P3	9500156
1 1/2" Gate Valve	GVG-1500-S	9500006
1 1/2" Inlet Filter	1-1/2-60-F	9500000
1" Kerick Float Valve	PS-100SS	9500007



PurAqua Part #: PAPP1500
Pump Frame: R48Y
Amp rating: 15 amps

For other questions, contact Axiall Technical Service (855-934-3570) for assistance

CAL-HYPO COMMERCIAL SYSTEM LIMITED WARRANTY

Axiall Corporation ("Axiall") warrants (subject to the below conditions) only its title to this water treatment system equipment (the "System") and that the System will be free of defects in materials and workmanship for a period of twelve (12) months from its original installation date. THIS IS THE ONLY REPRESENTATION OR EXPRESS WARRANTY THAT AXIALL MAKES AND ALL OTHER EXPRESS WARRANTIES UNDER STATUTE OR ARISING OTHERWISE IN LAW FROM A COURSE OF DEALING OR USAGE OF TRADE WITH RESPECT TO THE SYSTEM ARE DISCLAIMED. ANY IMPLIED WARRANTIES EXISTING AS A MATTER OF LAW SHALL NOT EXCEED THE DURATION OF THIS LIMITED WARRANTY. IN THE EVENT THE SYSTEM FAILS TO CONFORM TO THIS WARRANTY, AXIALL'S EXCLUSIVE OBLIGATION AND YOUR EXCLUSIVE REMEDY SHALL BE LIMITED TO, AT AXIALL'S OPTION, THE FURNISHING OF NEEDED REPLACEMENT PARTS OR THE FURNISHING OF A NEW SYSTEM (BUT THIS DOES NOT INCLUDE INSTALLATION OR THE COSTS FOR INSTALLATION). EXCEPT AS PROVIDED IN THE IMMEDIATELY PRECEDING SENTENCE, IN NO EVENT WILL AXIALL BE LIABLE UNDER ANY THEORY OF RECOVERY (WHETHER BASED ON NEGLIGENCE OF ANY KIND, STRICT LIABILITY OR TORT) FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES IN ANY WAY RELATED TO ANY USE MADE OF THE SYSTEM.

Warranty Conditions. This Limited Warranty shall apply and be effective only if: (i) the Axiall Chlorinator Warranty Registration information has been completed within thirty (30) days of the customer's receipt of the system via the Internet at <http://www.accu-tab.com/WarrantyRegistration.aspx>; (ii) the System is installed and operated and maintained in accordance with this manual and the instructions accompanying the System; (iii) you, at your cost, promptly return the System or defective part to such location as may be specified by Axiall; and, (iv) only Axiall's Accu-Tab® Blue SI calcium hypochlorite tablets are used in the System. If any of these conditions are not met, this Limited Warranty will not apply and you acknowledge and agree that your purchase of the System will be on an "AS-IS" basis without any warranty of any kind whatsoever having been provided by Axiall.

You assume all responsibility and risk and liability arising from: (i) the unloading, installation, storage, handling and use of the System, including use thereof alone or in combination with other materials; (ii) the improper functioning or failure of unloading, installation, transportation or storage equipment you use, whether furnished or recommended by Axiall or not; and, (iii) the failure to comply with laws, rules and regulations governing storage, unloading, installation, handling, and use of the System. You will indemnify, hold harmless, and defend Axiall from and against any claim, suit, damage, cost, expense, fine, liability, or cause of action whatsoever, including reasonable attorney fees, on account of relating to, or arising out of the use, possession, installation or resale of the System.

This Limited Warranty gives you specific rights, and you also may have other rights, which vary from jurisdiction to jurisdiction. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Some jurisdictions do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.