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› AquaStar ChemStar Inline Chlorinator CH100 User Manual

AquaStar CH100

AquaStar ChemStar Inline Chlorinator CH100 User Manual

Model: CH100

Brand: AquaStar

INTRODUCTION

The AquaStar ChemStar Inline Chlorinator CH100 is designed for permanent installation in the return line on the pressure side of the pump, downstream of all other pool or spa equipment. This system provides an efficient and hassle-free method for sanitizing your pool or spa by accommodating both large and small Trichlor or Bromine slow-dissolving tablets. Its fully enclosed design eliminates escaping gases, ensuring a safer and more reliable operation.



Image: AquaStar ChemStar Inline Chlorinator CH100, a grey cylindrical device with a label, designed for inline pool chemical dispensing.

SAFETY INFORMATION

WARNING: Always read and follow all instructions carefully before installing or operating this product. Failure to do so can result in serious injury or property damage.

- Ensure the chlorinator is installed downstream of all other pool equipment (heater, filter, etc.) to prevent damage from concentrated chemicals.
- Never mix different types of chemicals in the chlorinator. Only use Trichlor or Bromine slow-dissolving tablets as specified. Mixing chemicals can cause explosions or dangerous gas release.
- Always wear appropriate personal protective equipment (PPE), such as gloves and eye protection, when handling pool chemicals.
- Keep the chlorinator and chemicals out of reach of children and pets.
- Do not operate the chlorinator if any part is damaged or leaking.
- Ensure proper ventilation when working with pool chemicals.
- The maximum operating pressure for this unit is 50 PSI. Do not exceed this pressure.

PRODUCT COMPONENTS AND OVERVIEW

The AquaStar ChemStar Inline Chlorinator CH100 consists of several key components designed for efficient and safe chemical dispensing. Understanding these parts is crucial for proper installation and maintenance.

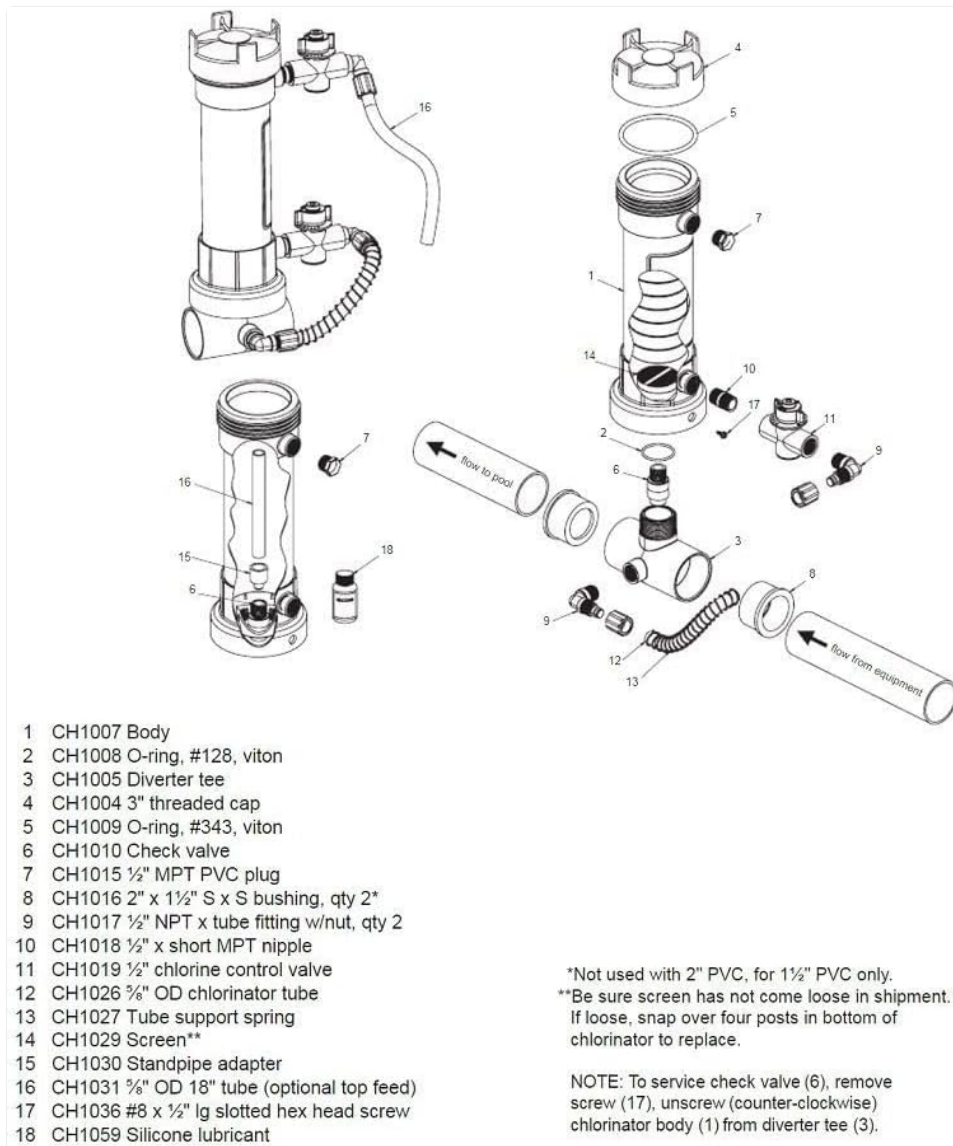


Image: Exploded view diagram of the AquaStar ChemStar Inline Chlorinator CH100, showing individual parts and their assembly. Key components include the body, O-rings, diverter tee, threaded cap, check valve, PVC fittings, control valve, and support spring.

Key components include:

- **CH1007 Body:** The main cylindrical chamber where chemical tablets are held.
- **CH1008 O-ring, #128, viton:** Provides a watertight seal for the cap.
- **CH1005 Diverter tee:** Connects the chlorinator to the main plumbing line.
- **CH1004 3" threaded cap:** Secures the top of the chlorinator, allowing access for tablet loading.
- **CH1009 O-ring, #343, viton:** Seals the diverter tee connection.
- **CH1010 Check valve:** Prevents water backflow into the chlorinator.
- **CH1015 ½" MPT PVC plug:** Used for sealing unused ports.
- **CH1016 2" x 1½" S x S bushing, qty 2:** Adapters for plumbing connections.
- **CH1017 ½" NPT x tube fitting w/nut, qty 2:** Connects the control valve tubing.
- **CH1018 ½" x short MPT nipple:** Plumbing connector.
- **CH1019 ½" chlorine control valve:** Allows precise adjustment of the chemical feed rate.
- **CH1026 ¾" OD chlorinator tube:** Carries chlorinated water.
- **CH1027 Tube support spring:** Supports the internal tubing.

- **CH1029 Screen:** Filters debris.
- **CH1030 Standpipe adapter:** Connects the standpipe.
- **CH1031 3/8" OD 18" tube (optional top feed):** Optional tubing for top feed configuration.
- **CH1036 #8 x 1/2" lg slotted hex head screw:** Fastener.
- **CH1059 Silicone lubricant:** Used for O-rings to ensure proper sealing.

SETUP AND INSTALLATION

The AquaStar ChemStar Inline Chlorinator CH100 is designed for permanent installation in your pool or spa's plumbing system. Proper installation is critical for safe and effective operation.

Location Requirements:

- Install the chlorinator in the return line on the pressure side of the pump.
- It must be installed **downstream** of all other pool equipment, including heaters, filters, and pumps. This prevents highly chlorinated water from damaging sensitive equipment.
- Ensure adequate space for future maintenance, especially for lid removal (refer to specifications for service clearance).

Installation Steps:

1. **Turn off Power:** Before beginning any work, ensure all power to the pool pump and related equipment is turned off at the circuit breaker.
2. **Drain System:** Partially drain the pool or spa system to below the level of the proposed installation point to prevent water spillage.
3. **Cut Plumbing:** Identify the appropriate section of the return line for installation. Cut out a section of the PVC pipe to accommodate the chlorinator's diverter tee (CH1005). The chlorinator is standardized with 2-inch slip PVC fittings and includes adapters for 1½ inch pipes.
4. **Dry Fit:** Temporarily fit the diverter tee and chlorinator body into place to ensure proper alignment and fit.
5. **Apply PVC Cement:** Apply PVC primer and cement to all connecting surfaces according to the manufacturer's instructions. Securely glue the diverter tee into the plumbing line.
6. **Assemble Chlorinator:**
 - Ensure the screen (CH1029) is properly seated at the bottom of the chlorinator body.
 - Connect the chlorinator body (CH1007) to the diverter tee (CH1005).
 - Install the check valve (CH1010) as indicated in the diagram, ensuring the flow direction is correct.
 - Connect the ½" chlorine control valve (CH1019) and associated tubing (CH1026) as shown in the product diagram.
 - Apply silicone lubricant (CH1059) to all O-rings (CH1008, CH1009) before assembly to ensure a proper seal.
7. **Secure Connections:** Tighten all connections securely, but do not overtighten.
8. **Leak Check:** Once installation is complete, slowly refill the pool/spa system and turn on the pump. Carefully inspect all connections for leaks. Address any leaks immediately.

OPERATING INSTRUCTIONS

The AquaStar ChemStar Inline Chlorinator CH100 is designed for easy operation and precise chemical dispensing.

Loading Chemical Tablets:

1. **Turn off Pump:** Always turn off the pool pump before opening the chlorinator.
2. **Release Pressure:** If applicable, open any air relief valves on your filter or pump to release system pressure.
3. **Open Cap:** Slowly unscrew the 3" threaded cap (CH1004) from the top of the chlorinator body. Be cautious as there may be

residual chemical fumes.

4. **Load Tablets:** Carefully place Trichlor or Bromine slow-dissolving tablets into the chlorinator chamber. The unit accommodates both large (3-inch) and small (1-inch) tablets. Do not overfill. Refer to the specifications for chamber capacity.
5. **Secure Cap:** Replace the threaded cap and tighten it securely by hand. Do not overtighten.
6. **Restart Pump:** Turn the pool pump back on.

Adjusting Feed Rate:

The external fine control valve (CH1019) allows for precise adjustment of the chemical feed rate to meet your pool or spa's specific requirements.

- **Increase Feed:** Turn the control valve knob counter-clockwise to increase the flow of water through the chlorinator, thereby increasing the chemical dissolution rate.
- **Decrease Feed:** Turn the control valve knob clockwise to decrease the flow of water, reducing the chemical dissolution rate.
- **Monitor Levels:** Regularly test your pool or spa water chemistry (chlorine/bromine levels) using a reliable test kit. Adjust the control valve incrementally until the desired sanitizer level is consistently maintained. Allow several hours for changes to take effect before retesting.

MAINTENANCE

Regular maintenance ensures the longevity and efficient operation of your AquaStar ChemStar Inline Chlorinator CH100.

- **O-Ring Inspection:** Periodically inspect the O-rings (CH1008, CH1009) for cracks, wear, or damage. Replace them if necessary. Lubricate O-rings with silicone lubricant (CH1059) during reassembly to maintain a good seal.
- **Screen Cleaning:** The internal screen (CH1029) should be checked and cleaned periodically to ensure proper water flow and prevent blockages. Turn off the pump, open the cap, and carefully remove the screen for cleaning.
- **Check Valve Service:** To service the check valve (CH1010), remove the screw (CH1036), unscrew the chlorinator body (CH1007) from the diverter tee (CH1005). Inspect the check valve for debris or damage and clean or replace as needed.
- **General Cleaning:** Keep the exterior of the chlorinator clean. Avoid using harsh chemicals that could damage the plastic components.
- **Winterization:** In colder climates, ensure the chlorinator is drained and protected from freezing temperatures during winter months to prevent damage.

TROUBLESHOOTING

This section addresses common issues you might encounter with your AquaStar ChemStar Inline Chlorinator CH100.

Problem	Possible Cause	Solution
No chlorine/bromine being dispensed.	<ul style="list-style-type: none">• Chlorinator empty.• Control valve closed.• Screen blocked.• Check valve stuck closed.• Insufficient water flow through system.	<ul style="list-style-type: none">• Refill with tablets.• Open control valve.• Clean the screen.• Inspect and clean/replace check valve.• Check pump, filter, and plumbing for blockages or low flow.
Chlorine/bromine levels too high.	<ul style="list-style-type: none">• Control valve open too much.• Too many tablets in chamber.	<ul style="list-style-type: none">• Close control valve incrementally.• Remove some tablets (with pump off).

Problem	Possible Cause	Solution
Water leaking from cap or connections.	<ul style="list-style-type: none"> • Cap not tightened properly. • Damaged or dry O-rings. • Loose plumbing connections. 	<ul style="list-style-type: none"> • Tighten cap securely. • Inspect, clean, lubricate, or replace O-rings. • Check and tighten all PVC connections.
Strong chemical odor near chlorinator.	<ul style="list-style-type: none"> • Leaking seals or connections. • Improper ventilation. 	<ul style="list-style-type: none"> • Inspect and fix any leaks. • Ensure area is well-ventilated.

SPECIFICATIONS

Technical specifications for the AquaStar ChemStar Inline Chlorinator CH100.

MODEL CH100	Bottom Feed	Top Feed
Chamber Capacity - 1" Tablet		
Quantity	98	98
Weight	3.5 lbs	3.5 lbs
Chamber Capacity - 3" Tablet		
Quantity	11	11
Weight	4.8 lbs	4.8 lbs
Maximum Erosion in 24 Hours	0.67 lbs	1.75 lbs
Treat Pool/Spa Size in Gallons per 24 Hours*		
@ 10 ppm	6,700	17,500
@ 5 ppm	13,400	35,000
@ 2½ ppm	26,800	70,000
Dimension	17¾" H x 5" W x 10" D	17¾" H x 5" W x 10" D
Service Clearance for Lid Removal	19"	19"

**using 1" Trichlor tabs*

Image: Table detailing the specifications of the AquaStar ChemStar Inline Chlorinator CH100, including chamber capacity for 1" and 3" tablets, maximum erosion rate, treatable pool/spa size per 24 hours, dimensions, and service clearance for lid removal.

Feature	Bottom Feed Configuration	Top Feed Configuration
Chamber Capacity - 1" Tablet		
Quantity	98	98
Weight	3.5 lbs	3.5 lbs
Chamber Capacity - 3" Tablet		
Quantity	11	11
Weight	4.8 lbs	4.8 lbs
Maximum Erosion in 24 Hours	0.67 lbs	1.75 lbs
Treat Pool/Spa Size in Gallons per 24 Hours*		
@ 10 ppm	6,700	17,500

Feature	Bottom Feed Configuration	Top Feed Configuration
@ 5 ppm	13,400	35,000
@ 2½ ppm	26,800	70,000
Dimension (H x W x D)	17¾" H x 5" W x 10" D	17¾" H x 5" W x 10" D
Service Clearance for Lid Removal	19"	19"

*using 1" Trichlor tabs

General Product Specifications:

- **Product Dimensions:** 12 x 6 x 2 inches
- **Item Weight:** 5 pounds
- **Manufacturer:** Aquastar
- **Model Number:** CH100
- **Country of Origin:** USA
- **Maximum Operating Pressure:** 50 PSI
- **Fittings:** Standardized with 2-inch slip PVC fittings and adapters for 1½ inch.

WARRANTY AND SUPPORT

AquaStar products are manufactured to high standards. For specific warranty information and customer support, please refer to the documentation included with your purchase or visit the official AquaStar website. Keep your proof of purchase for warranty claims.

For technical assistance or inquiries, please contact AquaStar customer service.

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