

1" and 1 1/4" Model C153S6

The Cycle Gard® control valve allows your water system to give you "city-like constant water pressure" and at the same time keeps your pump from cycling on and off. Please read and understand the INSTALLATION INSTRUCTIONS below so that you will have a trouble-free installation and your pumping system will work better and last longer.

SIZE	Cycle Gard® Pressure Setting		
	40 psi	50 psi	60 psi
1"F x 1-1/4"M*	C153002S6A	C153002S6	C153002S6B
1-1/4"F	C153003S6A	C153003S6	C153003S6B

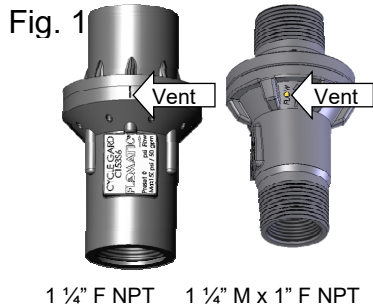
*Note: Dual Purpose Threads – 1" valve port area



PLEASE NOTE: The valve pressure setting must be below the pressure switch-off setting.

INSTALLATION INSTRUCTIONS:

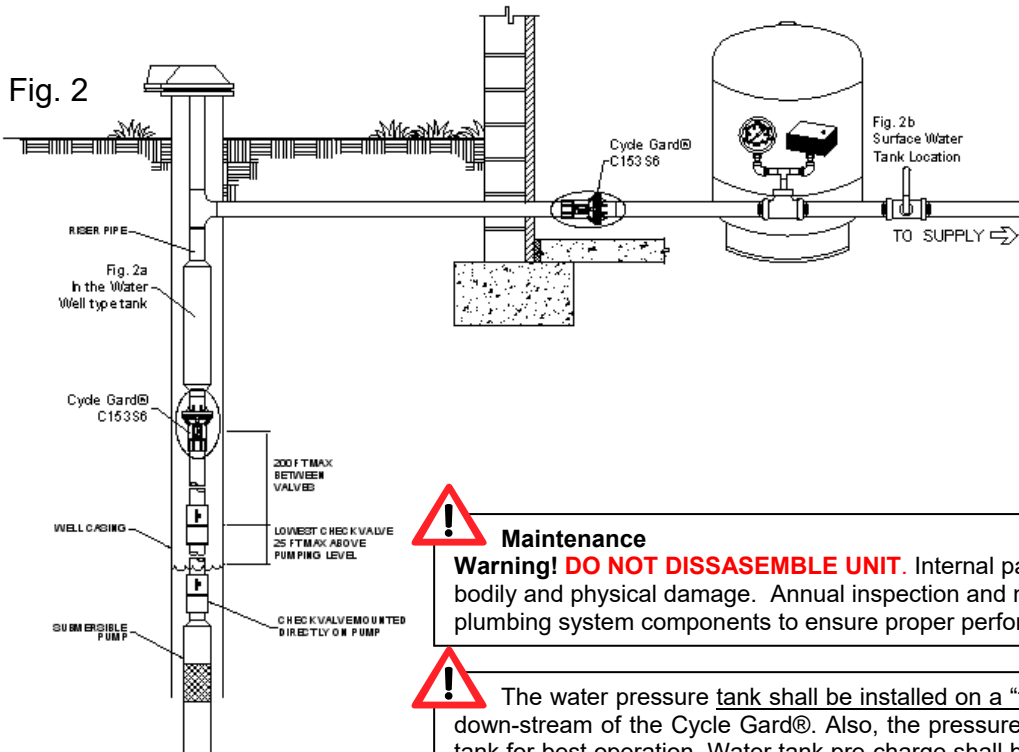
1. Before installing Cycle Gard® valve (Fig. 1), flush out pipe system water lines to remove any foreign material and or debris and turn electrical power off. Install valve in-line with arrow on valve body pointing in direction of flow.



2. Install the valve after (downstream) the pump with flow direction indicated by an arrow on valve and before (upstream) the pressure switch and tank (See Fig. 2).

3. Pre-charge pressure in the tank should be 5 to 10 PSI lower than pressure switch turn "ON" pressure. **THIS VALVE IS NOT ADJUSTABLE** they are factory preset to 40, 50 or 60 psi & regulated flow at 2-20 gpm for the 1" size and 2-50 gpm for the 1 1/4" size. Consult your Distributor / Dealer if you require a higher/lower pressure setting. For use with smaller in the well type tanks (See Fig 2a) or optional surface Water Tank (See Fig. 2b). The Cycle Gard's® pressure regulation shall be the same pressure as the switch turn "ON" pump pressure. For example on a switch turn "ON" at 40 PSI and turn "OFF" at 60 PSI the Cycle Gard® valve shall have a 40 PSI setting. The pressure switch "OFF" setting must always be set higher than the Cycle Gard® pre-set regulating pressure. Valve may be installed in the horizontal or vertical position.

4. The Cycle Gard® valves are equipped with a bleeder vent hole near the top of the flange (See fig. 1). The valves incorporate a spring in an air chamber that can fill with water over time needing to vent to atmosphere to maintain valve operation. Any water emitted from the bleeder hole is a function of the normal operation; it **does not** indicate a leak.



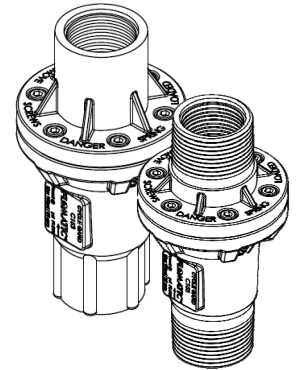
Tank Sizing: The Cycle Gard® will work with any size pressure tank. A small, air pre-charged diaphragm type water tank with a draw-down capacity of 1 gallon of water minimum, dependent on pump capacity and pressure is often sufficient for most smaller domestic applications. The tank refill rate is approx. 1 gpm for the 1" size and 1.5 gpm for the 1 1/4" at a 50 psi pressure differential across the valve.

Maintenance
Warning! DO NOT DISSASSEMBLE UNIT. Internal parts are spring-loaded and may cause bodily and physical damage. Annual inspection and maintenance is recommended of all plumbing system components to ensure proper performance and maximum service life.

The water pressure tank shall be installed on a "tank-tee" on the main supply pipe line down-stream of the Cycle Gard®. Also, the pressure switch shall be installed close to the tank for best operation. Water tank pre-charge shall be 5-10 psi lower than pressure switch "ON" setting (cut-in pressure setting).
NOTE: Submersible motor manufacturers recommend using a flow inducer sleeve to be sure the motor is properly cooled at low flows.
Higher Pressures: Higher pump system pressures above 200 psi and where the desired pressure reduction is more than a 4 to 1 ratio (i.e. 200 psi to 50 psi), two Cycle Gard's® in series should be installed to step down the higher pressure in two stages. Please, consult factory for properly sized units and settings.

! Valve Rating: Flow-Pressure-Temperature

The Cycle Gard® 1" size Model C153S6 is designed for normal flow range of 1 to 20 gpm and the larger 1 1/4" size 1 to max 50 gpm. **Maximum Pump Shutoff Pressure of 150 psi.** Any pressure above 150 psi inlet pressure may damage the internal parts. Temperature rating is Max 90°F (32°C). The unit is designed to support a vertical hanging load up to 3,400 Lbs.



General Trouble Shooting Guide

- Water system pipes must be of sufficient size (inches) to allow flow capacity (gpm) at adequate pressure (psi) to the most remote fixtures in the system.
- Valve requires laminar flow, must be installed 5 diameters downstream from any obstructions like elbows, pumps etc.
- Higher service pressures can create higher water flow velocities in pipe lines, allowing for the use of smaller pipes to satisfy fixture use. However, higher pipe flow velocities may cause water hammer, whistling and humming.

Cycle Gard® C153S6 Troubleshooting Guide	
<p>1. PROBLEM: <i>Pressure and fixture flow unsteady.</i></p>	<p style="text-align: center;">POSSIBLE CAUSES</p> <p>A. Low pump water supply pressure in main pipe line. B. Heavy periodic demands by appliances in the house.</p>
<p>SOLUTIONS:</p> <p>A. Pump may need to be serviced or too small for application. B. Alternate appliance usage to reduce over usage. C. Increase pressure. D. House service lines may at times be inadequate for the load. Size of some pipes may need to be increased.</p>	
<p>2. PROBLEM: <i>Pump continues to cycle on and off</i></p>	<p style="text-align: center;">POSSIBLE CAUSES</p> <p>A. Pressure switch may not be set correctly. B. Damaged or torn diaphragm in valve. C. Water tank has become water logged.</p>
<p>SOLUTIONS:</p> <p>A. Readjust pressure switch setting to about 10 psi higher pressure than the Cycle Gard® factory set pressure. B. Water Tank too small or is water logged (no air in tank). Recharge air or replace tank C. Recharge air tank to 5-10 psi below pressure switch pump "ON" pressure (cut-in pressure).</p>	
<p>3. PROBLEM <i>Valve appears to be noisy, hums or chatters</i></p>	<p style="text-align: center;">POSSIBLE CAUSES</p> <p>A. High velocity of flow in pipelines causing vibration due to excessive pressure drop across valve. B. Air pressure in tank is set too high.</p>
<p>SOLUTIONS:</p> <p>A. Use a second valve to reduce the differential pressure to the original valve. B. Reset the air pressure in the tank to 5-10 psi below the pump "ON" pressure switch setting (cut-in). C. Make sure there is at least 8" of straight pipe upstream.</p>	

Limited Three Year Warranty: Flomatic Cycle Gard's® are guaranteed against defects of material or workmanship when used for the services recommended. If, in any recommended service, a defect develops due to material or workmanship, and the regulator is returned, freight prepaid, to us within 36 months from product date code or date of shipment from our factory, it will be repaired or replaced free of charge. Flomatic Corporations liability shall be limited to our agreement to repair or replacement of regulator only. The Flomatic regulator described in this Bulletin is suitable for water service only. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.