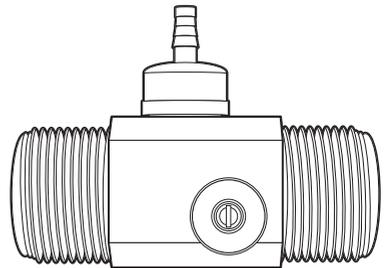




**Puretec**<sup>®</sup>  
PERFECTING WATER



# User Guide

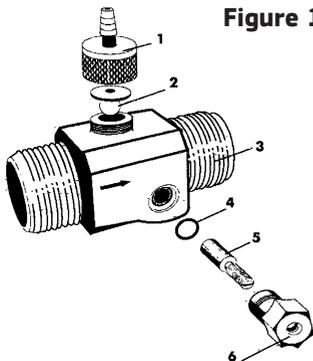
## WTZ1000

Inline Water Aerator

## Introduction and Installation of Replacement Parts

The Puretec WTZ1000 consists of a high impact Celcon® plastic body containing two water passages. The water passage closest to the check valve (2) contains built-in convergent and divergent cones forming a venturi. The venturi causes air to be drawn into the water stream when water is flowing.

The second water passage acts as a by-pass. The percentage of water flow allowed through the by-pass assembly is regulated by the valve gate (5) and gate retainer (6) assembly. This in turn regulates the amount of air drawn into the water stream through the venturi. Turning the valve gate screw at the same time, forces more water through the venturi passage. This in turn causes more air to be drawn into the water stream. In the event that parts must be replaced, this can be accomplished by following a few simple instructions.



**Figure 1.**

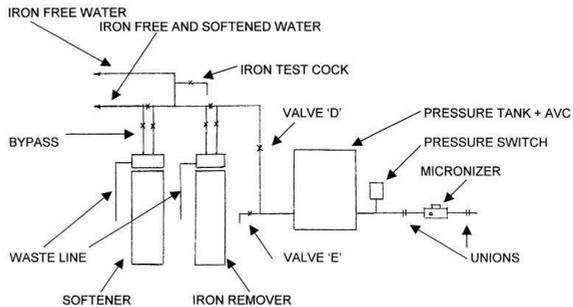
WTZ100 Parts	
1	Knurled Cap, Brass M-006
2	Check Valve M-005
3	Main Body - Blue M-988
4	O-Ring M-011
5	Valve Gate, Brass M-003
6	Gate Retainer, Brass M-002

1. To replace die rubber check valve (2), wet the check valve with water and install it in the main body. Thread the cap down snugly by hand. **Do not overtighten.** Failure to lubricate the rubber properly will cause the valve to twist inside the cap and will result in leakage of water through the valve. If this should occur, remove the valve, relubricate and install it.
2. To replace the O-ring or valve gate/gate retainer assembly, start by lubricating the rubber O-ring with water or a silicone oil. Carefully insert the O-ring into its seat in the bottom of the hole in the main body. Thread the valve gate fully into the gate retainer. Thread the valve gate fully into the gate retainer. Thread the gate retainer into the main body by hand to a snug fit. With the use of a wrench or pliers, turn the gate retainer another  $\frac{1}{4}$  turn into the main body. **Do not overtighten.**

**Note:** To prevent leakage at the 1" NPT threads, use thread seal tape during the assembly of the WTZ1000 to the plumbing system. Care should be taken when wrapping the thread seal tape over the threads to ensure that no tape enters the WTZ1000 and blocks the venturi.

## Installation in a Private Well Water System

**Figure 2.**



### Start Up Procedure

See Figure 2 above to review a typical air injection system configuration. The air should first be flushed from the filter tank and the filter media conditioned.

1. Check to verify that the adjusting screw is in the fully open position (turned counter-clockwise).
2. Adjust the pressure switch to ensure a 20 psi differential between cut-in and cut-out (for example: 20-40 psi) for the pump.
3. Partially close valve D, turn on the pump, thereby filling the pressure tank and slowly filling the filter until water overflow appears at the backwash.
4. Fully open valve D and backwash until the water until the drain looks free of air. Cycle to "Backwash-Rapid-Rinse" several times to completely remove the air and orient the filter bed, then turn the control handle to "Service".

### Adjusting the WTZ1000

The proper adjustment of the WTZ1000 to provide a colloidal suspension of the iron is a final and important step.

1. Close Valve D. Close down the WTZ1000 adjusting screw three turns by rotating it clockwise.
2. Open Valve D and open a faucet in the house. Then control the water flow with valve D. Drain water from the pressure tank until the pump starts, then immediately turn off valve D. Using a clock, time the pump-up cycle (the time from the low pressure cut-in of the pump to the high pressure cut-out) in seconds.
3. Re-open valve D until the pump starts, then immediately shut valve D. Determine the time of air-draw at the suction nozzle. This time should be 30% of the total pump-up time. If the air draw time is more than 30 seconds, turn the adjusting screw counter-clockwise slightly. Determine the total pump time after each adjustment, since this time will change as the adjusting screw is being reset.
4. If all iron is being removed at the 30% setting of the adjustment screw, after 4 weeks, increase the air draw time to 35% of the total pump time.



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**AUSTRALIA**

P 1300 140 140

E [sales@puretec.com.au](mailto:sales@puretec.com.au)

W [puretec.com.au](http://puretec.com.au)

**NEW ZEALAND**

P 0800 130 140

E [sales@puretec.co.nz](mailto:sales@puretec.co.nz)

W [puretec.co.nz](http://puretec.co.nz)