TCW Rinser / Sparger Manual

Introduction & Overview

This document will provide basic usage and troubleshooting information for your TCW Rinser, Sparger, or Rinser-Sparger.

The unit is designed to rinse and or purge bottles while inverted to force ambient air & debris out of the bottle neck.

Quick-Start Guide

This guide will help you get your TCW Rinser/Sparger operational in minutes. For detailed information, please refer to the corresponding sections in the full manual.

> 💡 **Before You Begin**
>
> Ensure you have:
> - 115V AC power outlet
> - Clean water source with male GHT fitting (for rinser models)
> - Inert gas supply with 1/4″ NPT quick-connect fitting (for sparger models)
> - Bottles compatible with the unit's nozzle size

1. Setup

- Place the unit on a stable surface in your production area
- Adjust the height: Loosen the knob on the main shaft and raise the head to a comfortable working height
- Adjust the angle: Loosen the collar clamps on the bottom of the box and position to desired angle
- Tighten all adjustments securely before operation

2. Connections

- **Power**: Plug the unit into a standard 115V AC outlet
- **Water** (Rinser models): Connect your water supply to the female GHT fitting provided
- **Gas** (Sparger models): Connect your inert gas supply to the 1/4″ NPT quick-connect fitting

> 🚧 **Gas Pressure**
>
> Typical sparging pressure is 15 psig. Do not exceed 75 psig.

3. Initial Settings

- Turn the power switch to the "On" position

- Set cycle length (if needed):
  - Unplug the unit
  - Open the rear box
  - Adjust the timer dials to desired cycle length
  - Close the box and reconnect power

4. Operation

- Place bottles onto the rinsing/sparging nozzles
- Ensure bottle necks reach the gray actuation bar inside the main box
- Press down briefly to start the cycle
- When indicator lights switch from red to green, the cycle has started
- When lights switch back, the cycle is complete
- Remove bottles and continue with your bottling process

> ⚠ **Important Safety Notes**
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> - Always operate with bottles on nozzles to prevent errant spray
> - Unplug before adjusting internal components
> - Keep hands clear of moving parts during operation

Quick Troubleshooting

If the unit does not operate:

- Verify power connection and that the switch is in the “On” position
- Check that bottles properly reach the actuation bar
- Ensure adequate water/gas pressure
- If problems persist, refer to the Troubleshooting section or contact TCW Support

Need more help? Contact us at (800) 735-5291 or service@tcwequipment.com

Process Connections

Electrical

Standard models of the TCW Rinser/Sparger operate using 115 AC volt power, with a maximum load of 2 amps.

Inert Gas (If Unit Has Sparging Capabilities)

To sparge bottles with inert gas, you must supply connect the gas using a 1/4″ NPT industrial interchange quick-connect fitting. If your gas supply line does not have such a fitting, you can purchase one from TCW or your local fittings supply house.

Typical sparging pressures are 15 psig, and should not exceed 75 psig.

Water (If Unit Has Rinsing Capabilities)
A source of clean rinse water with a male GHT (garden hose thread) fitting is required. A female GHT fitting is supplied. Normal tap water pressures of 30-60 psig are sufficient for rinsing.

Rinse water can be filtered using standard filtration cartridges. For sterile-grade membrane filtration to 0.45 µm we recommend Graver WaterTEC filters.

> ⚠ **Safety Precautions for Rinsing With Water**
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> Rinse water does not need to be hot to rinse effectively unless bottles are exceptionally soiled. If you do wish to use hot water, ensure that it does not exceed 120 °F to prevent the risk of scalding.
>
> Always operate the rinser with bottles covering both nozzles to prevent errant water spraying.

Adjustments & Setup

Adjustments for Ergonomics
The height and angle of the unit can be adjusted to suit the user's desired ergonomics. Loosen the knob on the unit base's main shaft. This allows you to raise the head to the operator's desired height.

To adjust the angle, loosen the collar clamps on the bottom of the box and position the box as desired. Tighten the collar clamps to ensure the desired angle is maintained through repeated actuation cycles.

Turn the on/off switch to the "On" position and place bottles on the rinsing nozzles. Bottle necks should reach the gray actuation bar inside the main rinser box. Most bottles can without issue, but if your bottles are particularly short, please contact us to make you custom spacers. Alternately, spacers can easily be fashioned by cutting down 1/2″ Schedule 40 PVC pipe to an appropriate length.

Cycle Length Adjustments
Rinsing and Sparging cycles are independently adjustable. To alter cycle length, open the rear box. The unit will contain one of the following configurations:

- Two-Head Rinser or Two-Head Sparger: One timer for adjusting rinse or sparging cycle length

- Two-Head Rinser-Sparger: Two timers — one for adjusting rinse cycle length, one for adjusting sparging cycle length
- Four-Header Rinser or Sparger: Two timers — one for adjusting cycle length for the top two nozzles, and one for adjusting cycle length for the bottom two nozzles.
- Four-Head Rinser-Sparger: Four timers — two for independently adjusting rinsing and sparging cycle lengths for the top two nozzles, and two to perform the same task for the bottom two nozzles.

Skipping the Rinse or Sparge Cycle (Rinser-Sparger models only)
If you have a rinser-sparger and wish to skip either the rinse or sparge cycle, simply turn the dial for that cycle all the way to zero.

> ⚠ **Unplug Before Adjusting Timing**
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> Adjusting the cycle timing requires opening the rear electrical box. Unplug the unit before carrying out this task to minimize the chance of user shock.

Operation

To begin a rinsing cycle place bottles on the set of two nozzles you wish to use. Press down briefly. Indicator lights on the electrical box will switch from red to green, indicating that the cycle has started. After the elapsed time has passed, the lights will switch back, indicating that the cycle is over.

Only a brief press is required to start the cycle. Users do not need to hold bottles down.

Troubleshooting

> ⚠ **Always Unplug Before Servicing**
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> Before performing any maintenance or troubleshooting that involves opening the control box, always unplug the power cord to minimize the risk of electrical shock.

> 💡 **Professional Service**
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> For any electrical issues beyond basic troubleshooting, contact TCW technical support at (707) 963-9681 rather than attempting complex repairs yourself.

Common Problems and Solutions

Problem	Solution
Unit does not power on	• Ensure power cord is firmly plugged into a functioning 115V AC outlet • Check if circuit breaker has tripped • Verify power switch is in “On” position • If still not working, contact TCW technical support
Green indicator light does not come on	• Verify power connection and switch position • Indicator light may need replacement. If other functions work properly, unit can still be used until light is replaced
Red indicator light does not come on	• Ensure unit is otherwise operating correctly. • With unit unplugged, look inside electrical enclosure and see if wires connected to indicator light are loose or unplugged. • Indicator light may need replacement. If other functions work properly, unit can still be used until light is replaced.
Unit activates but no water comes out	• Check water supply connection • Verity water pressure (should be 30-60 psig) • Inspect for kinks in supply line • Water solenoid may be clogged with debris. Disassemble and clean.
Unit activates but no gas flows during sparging cycle	• Verify gas supply connection • Check gas pressure (should be approximately 15 psig) • Ensure gas supply valve is open • Check cycle timer settings
Cycle starts but stops prematurely	• Timer settings may need adjustment • Check for proper bottle placement during entire cycle • Internal relay may need service
Water or gas continues to flow after cycle completion	• Immediately turn off unit and disconnect water/gas supply • Solenoid valve may be stuck open due to debris. Clean and reassemble for testing. • Contact TCW for service

Erratic operation or intermittent function	• Check for loose connections (with unit unplugged) • Inspect for water damage or corrosion • Ensure stable power supply • Contact TCW for service if issue continues
Control box feels hot to touch	• Turn off unit immediately • Ensure proper ventilation around control box • Do not operate until inspected by qualified technician

Visual Inspection

With the unit unplugged, you may perform a basic visual inspection:

- Check for loose wires or components
- Look for signs of water damage or corrosion
- Verify the relay is firmly seated in its socket
- Ensure no foreign objects have entered the control box

If you notice any damaged components or are unsure about what you're seeing, contact TCW technical support rather than attempting repairs yourself.

Need Help?

Your TCW Rinser/Sparger is designed for reliable operation, but we understand that questions and issues can arise. Our technical support team is ready to assist you with any challenges you may encounter.

> 💡 **When to Contact TCW**
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> - Your unit requires electrical troubleshooting beyond the basic checks
> - You need replacement parts or maintenance supplies
> - The unit is not operating as expected after basic troubleshooting
> - You're considering modifications for special applications
> - Regular maintenance or servicing is due

Contact Information:

Technical Support	Phone: (707) 963-9681 Email: support@tcwequipment.com
Hours of Operation	Monday-Friday: 8:00 AM - 4:30 PM Pacific Time