



DRAUGHT GUARD

DRAUGHT LINE TREATMENT SYSTEM

DRAUGHTGUARD.COM

INSTALLATION MANUAL

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SAFETY INFORMATION



Due to magnetic field, as with many electronic devices, for precaution, keep Draught Guard unit at least two (2) feet away from any pacemaker or medical device implants.

SPECIFICATIONS

SIZING

- Designed for over-the-trunkline installation
- Up to 3.5" (diameter) trunkline
- One Draught Guard unit can treat up to 12 lines total

ELECTRICAL SPECIFICATIONS

- Voltage Rating 100 - 240 Vac
- Supply Frequency 50 - 60 Hz
- Power Rating <1 Watt (@ 12 Vdc input)

POST-INSTALLATION RECOMMENDATIONS

The LCD screen can be checked periodically to ensure the Draught Guard unit is operating properly. If any installation or operation related issue should arise, please contact your Draught Guard representative or call the team directly at 866-964-0072.

Once Draught Guard has been installed, it is recommended to continue regular chemical cleaning for at least one additional cycle. This is encouraged because of Draught Guard's unique ability to remove existing biofilm that may have adhered itself to the inner wall of the beer line. Chemical line cleaning frequency can then be extended to meet your savings objectives (i.e. every eight weeks, etc.). Faucets and couplers should always remain on the Brewers Association recommended 14-day cleaning cycle. For additional recommended cleaning practices, consult your local representative or get in touch directly with the team at Draught Guard at 866-964-0072.

SETTING PROPER EXPECTATIONS

Draught Guard's proprietary technology propagates a low-frequency signal throughout the entire beer line, no matter the length of run and regardless of flow. This omnipresent and oscillating treatment signal prevents the growth of biofilm and beer stone, protecting your beer while served on tap.

Draught Guard is not a replacement for regular chemical line cleaning. However, the technology provides the opportunity to extend the time between regular chemical line cleanings, significantly reducing the amount of beer, water, and caustic dumped down the drain. Once installed, regular caustic flushes can be extended from the Brewers Association recommended 14-day cycle to at least every eight weeks.

At the end of the day, Draught Guard provides an insurance policy that craft breweries, service providers, and industry stakeholders can rely on to maintain the highest draught quality possible.

Draught Guard is built on the same technology embraced by Fortune 100 companies, government organizations and power plants for commercial and heavy industrial water treatment. The patented and unique technology has been independently evaluated by leading universities and organizations including Montana State University's Center for Biofilm Engineering, the University of Pittsburgh, and others. These studies have validated the technology's unique effect of removing and preventing the growth of sessile bacteria, or biofilm. For more information, please visit draughtguard.com.

TROUBLESHOOTING

Establishing Connection & Structural Integrity

If this message (right) appears during installation, ensure that the connection between the signal transformer and main enclosure is fully clipped into place and secure. **If the message persists, please contact Draught Guard directly at 866-964-0072.**



Once the main enclosure and signal transformer are mounted, connected, and powered up, monitor the LCD screen for startup. If this message (left) appears, it is possible the structural integrity of the signal transformer may be compromised. **Please contact Draught Guard directly at 866-964-0072.**

Ensuring Normal Operation

Once the main enclosure and signal transformer are mounted, connected, and powered up, monitor the LCD screen for startup. If installed correctly, the unit will automatically enter into a 10-second startup phase to calibrate the treatment signal.



Once the unit has completed the startup phase, the LCD screen will show the following screen ensuring normal operation. The screen will alternate between the "NORMAL OPERATION" message and "Voltage Waveform" as the unit continues to operate.



No Signal Detectable Outside the Range of the Immediate Install

Draught Guard representatives or service providers may test the installation to ensure signal strength and propagation. In the event of no detectable signal:

1. Using an oscilloscope, take readings at signal transformer and conductive points along system (i.e. tap, keg, FOB, etc.) to measure signal.
2. Ensure secure connection between main enclosure and signal transformer.
3. If still unable to measure a signal, contact Draught Guard directly at 866-964-0072.

INSTALLATION REQUIREMENTS

Package Contents

The box should contain:

- Draught Guard unit
- Signal transformer
- Hose clamp
- "Protected by Draught Guard" sticker (to be placed near tower, bar, cooler, front door etc.)
- Consumer information/warranty card to be left with customer
- Installation manual to be retained by installer

If anything is missing or damaged, contact your representative immediately. Keep manual for reference in the unlikely event that the unit requires service.

Tools Required

To properly install the Draught Guard unit, the following items are needed:

- 7mm nut driver or flathead screwdriver (to adjust hose clamp)
- Screwdriver or drill (to mount and fasten main enclosure to wall)

Other items potentially needed include:

- Zip ties
- Extension cord
- Oscilloscope (for Draught Guard representatives or service providers looking to verify propagation)

Plumbing and Electrical System Requirements

For the Draught Guard unit to perform correctly, the following requirements must be met:

- The Draught Guard unit is designed to be installed over barrier, poly or other plastic beer lines, or directly over the consolidated trunkline. Do not attempt to install on or over any other component of the draught system, especially over any metal surface or component.

**One Draught Guard unit can treat up to 12 lines.
The unit is designed to be installed around the consolidated trunkline.**

INSTALLATION INSTRUCTIONS

1. The Draught Guard signal transformer should be installed directly over the trunkline, after the individual beer lines have been consolidated. If there is no access to the trunkline, such as if it runs directly from the cooler into PVC or other conduit, the signal transformer can be installed over the exposed beer lines within the cooler. Whether installed over the trunkline or over exposed beer lines, one Draught Guard unit can treat up to a total of 12 lines. (Diagram A)
2. Begin by removing the hose clamp and separating the two halves of the signal transformer. (Diagram B, Parts 1 & 2)
3. Carefully place the two halves of the signal transformer around the trunkline. Connect the two halves of the signal transformer by aligning the two metal pins and pressing the two halves together.
4. Secure the conjoined halves with the provided hose clamp. Holding the signal transformer in place, tighten the hose clamp around the signal transformer enclosure until the two halves meet and are flush. Do not over tighten the hose clamp.
5. You will need two screws in order to mount the unit enclosure to the wall (Diagram A, Part 3). The type of screw needed will depend on the mounting surface. Alternatively, zip ties allow the enclosure to be mounted to a trunkline, section of conduit, or other surrounding infrastructure.
6. Mount the unit on the wall using the holes in the base of the unit enclosure. Be sure to securely tighten.
7. Plug the Draught Guard unit into your selected power supply.
8. Once the main enclosure and signal transformer are mounted, connected and powered, the unit will run a self-diagnostic startup procedure for 10 seconds. If no error screen appears, the system is ready for operation. See troubleshooting if error screen appears.
9. Your new Draught Guard unit is now ready for operation.

Once Draught Guard has been installed on a system, it is recommended to continue your regular chemical cleaning for at least one additional cycle. This is encouraged due to Draught Guard's unique ability to remove existing biofilm that may have adhered itself to the inner wall of the beer line. Chemical line cleaning frequency can then be extended to meet your savings objectives (i.e. every eight weeks, etc.). Faucets and couplers should remain on the Brewers Association recommended 14-day cleaning cycle. For additional recommended practices, consult your local Draught Guard representative or get in touch with the team directly at 866-964-0072.

INSTALLATION DIAGRAMS

Diagram A

Trunkline Installation

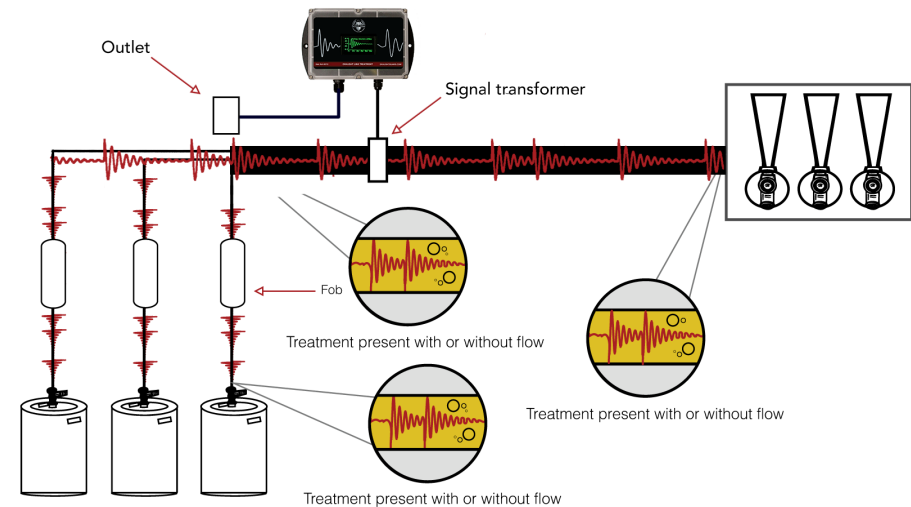
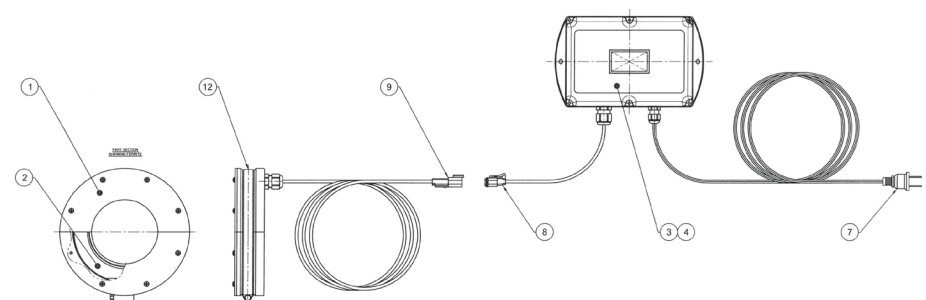


Diagram B

Unit & Signal Transformer Assembly



Signal transformer should be installed over the consolidated trunkline, up to 3.5" diameter, or over the exposed beer lines within the cooler. One Draught Guard can treat up to 12 beer lines.