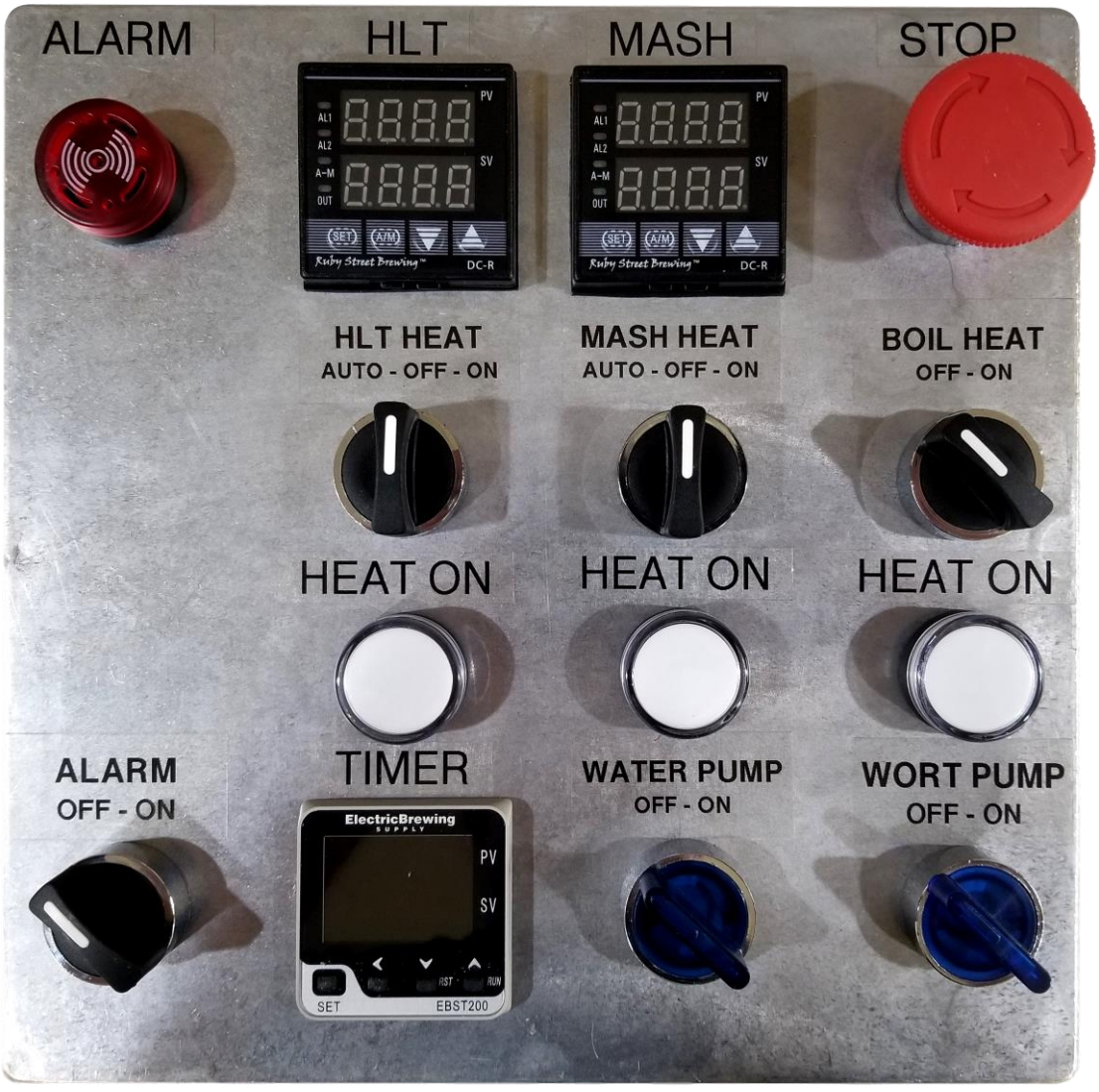
The Ruby Street™ Digital Control



Installation Guide

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Introduction

Thank You for purchasing The Ruby Street Digital Control System

Please follow step-by-step installation instructions detailed in this guide. Please note that certain steps of the installation process will require (2) people

Tools and Materials Needed for installation:

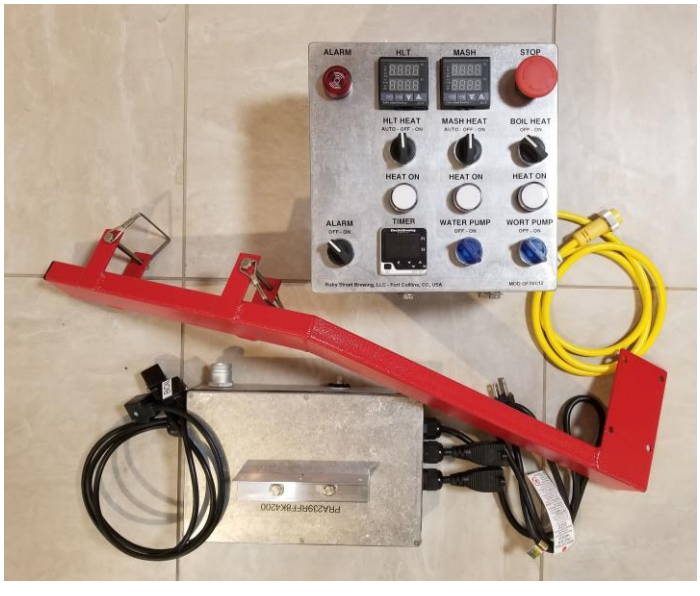
- Safety glasses
- Open end wrenches (5/8” and 3/4”)
- 3/8” deep socket or nut driver
- Adjustable wrench
- Pliers (2 pairs)
- Hammer
- Center Punch
- Tape measure
- Variable speed electric drill
- 5/32 twist drill bit (for metal)
- Stepped drill bit (for drilling stainless kettle)
- Screwdrivers (Phillip head and straight head)
- Black marking pen

Please follow all standard safety precautions for using power and hand tools. Safety Glasses should be worn during any drilling process.

Part List

Your complete digital control installation kits should contain the following parts and components. If any of the parts listed below are missing from your installation kit, stop and contact us before proceeding

- (1) Digital Temperature Control Tower
- (1) Digital Control Panel
- (1) Ignition Control Box
- (3) Solenoid Valve Assemblies
- (3) Ignition Electrodes
- (1) Ignition Wire 16”
- (1) Ignition Wire 20”
- (1) Ignition Wire 32”
- (1) Plastic P Clip
- (1) Locking Hex Nut
- (1) Weldless Sensor Probe
- (1) Pump Sensor Probe Assembly
- (3) #8 Machine Screws
- (3) #8 Hex Nuts
- (4) Self Threading Phillip Head Screws
- (1) Long Sensor Cable Assembly
- (1) Short Sensor Cable Assembly
- (3) Cable Ties
- (1) Roll Thread Sealing Tape



Temperature Probe Installation

Follow these instructions to install the Hot Liquor Tank (HLT) temperature probe in kettle provided by Ruby Street Brewing, LLC. If your HLT kettle was purchased from another manufacturer installation may vary.

Mark hole location on kettle

Step 1 – Remove the bottom drain valve, dip tube, and thermometer from your HLT to avoid damage. Removal is opposite of installation and is detailed in the owners manual for your system.

Step 2 - Using a black marker, place a mark on the HLT centered directly below the hole for the drain valve and exactly 1” up from the bottom of the pot as shown. This location is important as it ensures that the probe is directly beneath the dip tube on the inside where it will be protected from damage on the inside. It also ensures that the temp probe is centered on the kettle and will be protected from the burner by the heat shield on your system

Step 3 – Using a center punch and hammer, punch a small indentation into the stainless kettle at the location of your mark.

Temperature Probe Installation

Step 4 – Using a step type drill bit and an electric drill, drill a 9/16” hole at the location of your mark. It is best to drill stainless steel using constant pressure and very low RPM’s. After drilling the hole it may be necessary to use a small round file to remove the sharp burr inside of the kettle.

Drill temp probe hole

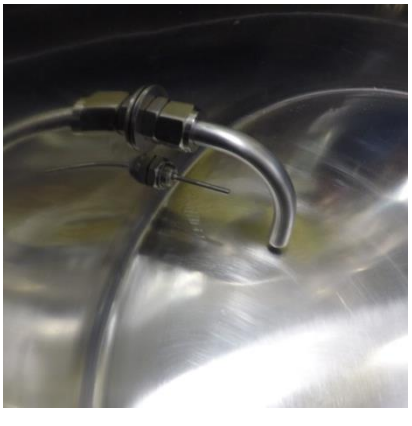
Step 5 – Install the threaded portion of the weldless temperature probe into the kettle from the outside making sure that the orange silicon o-ring is on the outside of the kettle. Thread the temperature probe nut onto the probe from the inside of the kettle and tighten only until the o-ring is slightly compressed against the kettle. Overtightening may cause the o-ring to deform and leak.

File hole and clean kettle

Step 6 – Clean all metal shavings from inside of the kettle and re-install the valve, thermometer, and dip tube.

Probe installed (outside view)

Probe installed (inside view)



Solenoid Valve Installation

Follow these instructions to install the gas solenoid valves onto your existing gas valve manifold.

Step 1 – Make sure that all kettles are removed from the brewing system frame. Have a helper assist you with standing the frame on-end so that you have complete access to the bottom-side of the frame.

Step 2 – Loosen and remove the (3) stainless steel gas lines from the gas valve manifold by using a 5/8” open end wrench to hold the brass flare fitting while using a 3/4” open end wrench to remove the stainless gas line flare nut.

Step 3 – Remove the (3) brass flare fittings from the gas ball valves by holding the ball valve firmly with an adjustable wrench while using a 5/8” open end wrench to remove the flare fittings.

Disconnect the stainless steel gas lines from the flare fittings at the gas ball valves

Remove the brass flare fittings from the gas ball valves

Solenoid Valve Installation

Follow these instructions to install the gas solenoid valves onto your existing gas valve manifold.

Install the new solenoid valve assemblies into the gas ball valves

Step 4 – Install (3) solenoid valves into the (3) gas ball valves by using an adjustable wrench to hold the ball valves while tightening the solenoid valves using a 5/8” open end wrench as shown. The solenoid valves are shipped with gas thread sealant already applied to the fittings. Tighten each of the solenoid valves making sure that final orientation has the green plastic solenoid coil facing directly toward you as shown. Note that you can turn the solenoid coils to make access to the fitting easier

Step 5 – Re-install the (3) stainless steel gas lines onto the solenoid valves using 5/8” and 3/4” open end wrenches to tighten. Please note that this is a flare type connection and that thread sealing tape or pipe dope should NOT be used.

Ignition Control Box Installation

Follow these instructions to install the ignition control box to the brewery frame.

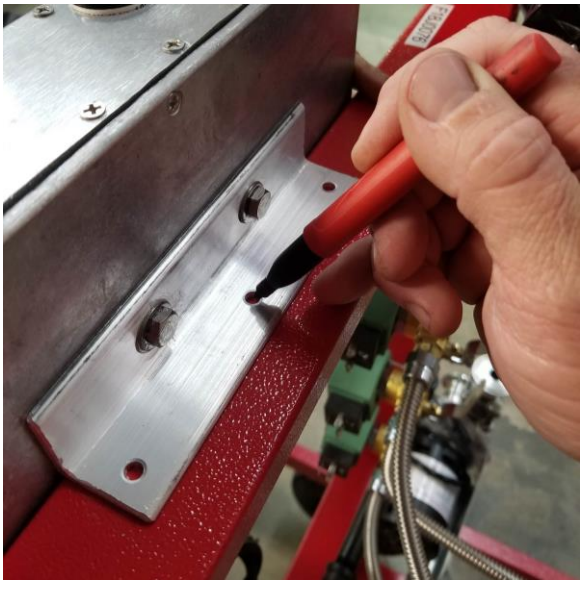
- Step 1: Measure 5” back from the back of the front rail as shown and make a mark on the upper cross rail just below the pump.

- Step 2: Align the front edge of the box with your mark as shown and mark the location of the (3) screw mounting holes on the frame rail as shown.

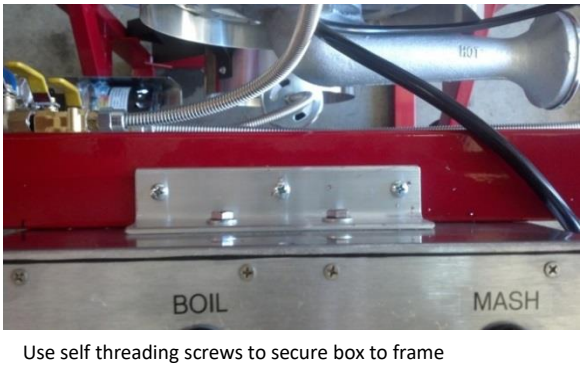
- Step 3: Lightly center punch the locations of the (3) mounting holes that you marked on the frame rail. Using an electric drill and a 5/32” drill bit, drill holes in the (3) mounting hole location.

- Step 4: Using the included self threading phillips head screws, mount the ignition control box to the frame rail as shown.

Mount ignition box 5” back from inside of frame rail



Mark mounting screw locations on frame and drill.



Use self threading screws to secure box to frame rail

Solenoid Valve Connection

Follow these instructions to finish the electrical connections to the solenoid gas valves

- Step 1 – Plug the 3 electrical connectors from the ignition control box onto the solenoid valves as shown. Gently tighten the screw that secures the connection onto the valve
  - Boil connector on the top valve
  - Mash connector on the middle valve
  - HLT connector on the lower valve

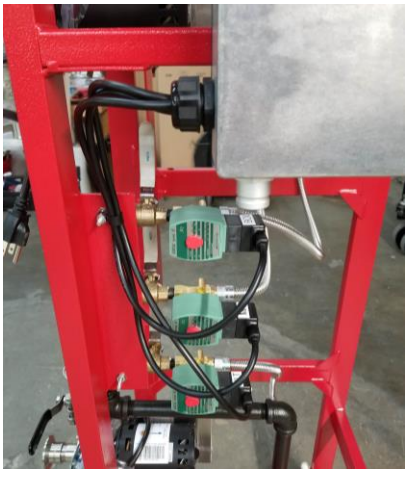
Step 1

- Step 2 - Place the included plastic P clip over the 3 cables and slide it over the upper bolt that protrudes through the gas manifold bracket as shown. Install the locking hex nut over the bolt and tighten with a 3/8” deep socket or nut driver only until it makes contact with the P clip.

Step 2

- Step 3 – See photo for finished installation. You can gently pull the 3 cables up through the P clip to better organize the cables.

Step 3



Electrode Installation Instructions

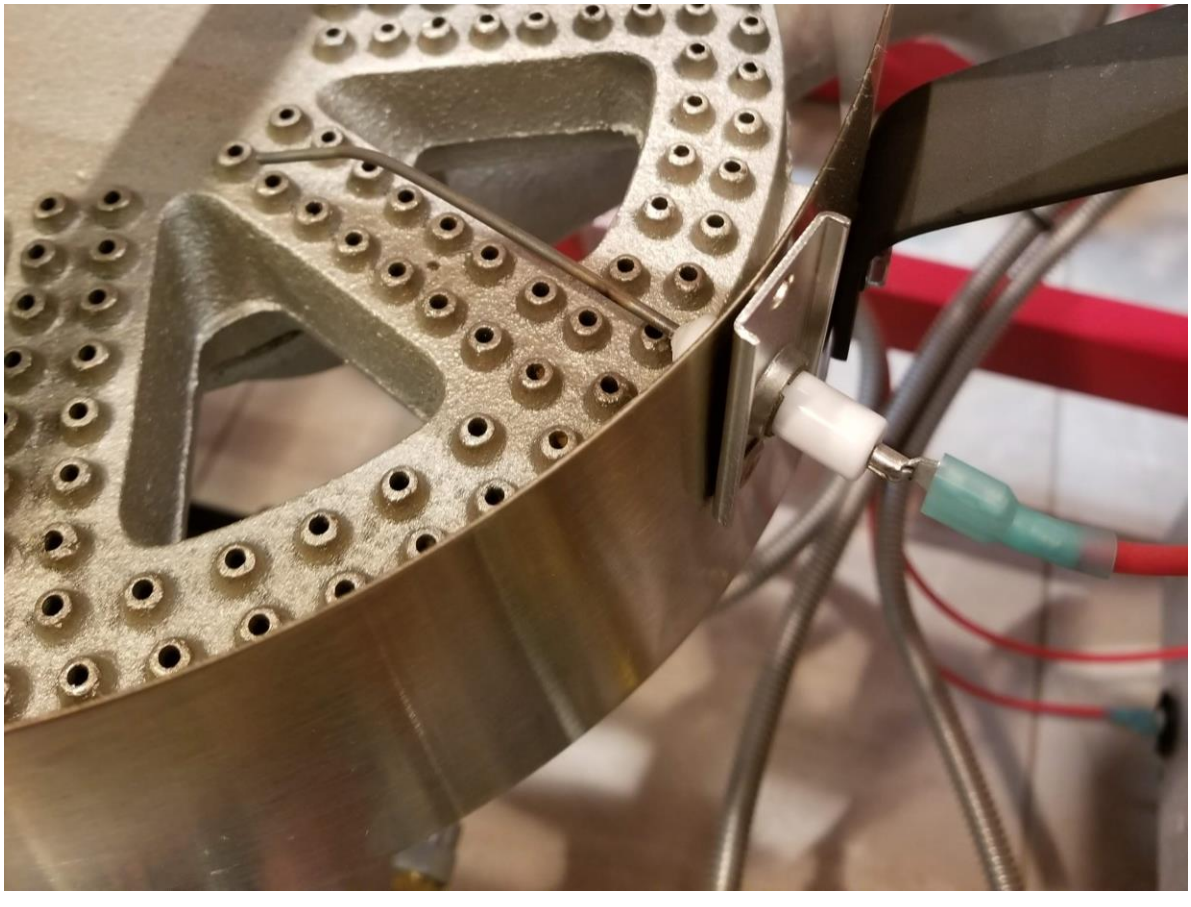
Follow these instructions to install the burner electrodes

- Step 1 – Locate the 2 smaller holes on one of your burner shields that are pre-punched for the electrodes.

- Step 2: Push the electrode through the hole in the burner shield and orient so that the smallest hole lines up with one of the small holes on the electrode bracket.

- Step 3: Secure the electrode to the burner shield using one of the included machine screws and nuts. Tighten screw/nut.

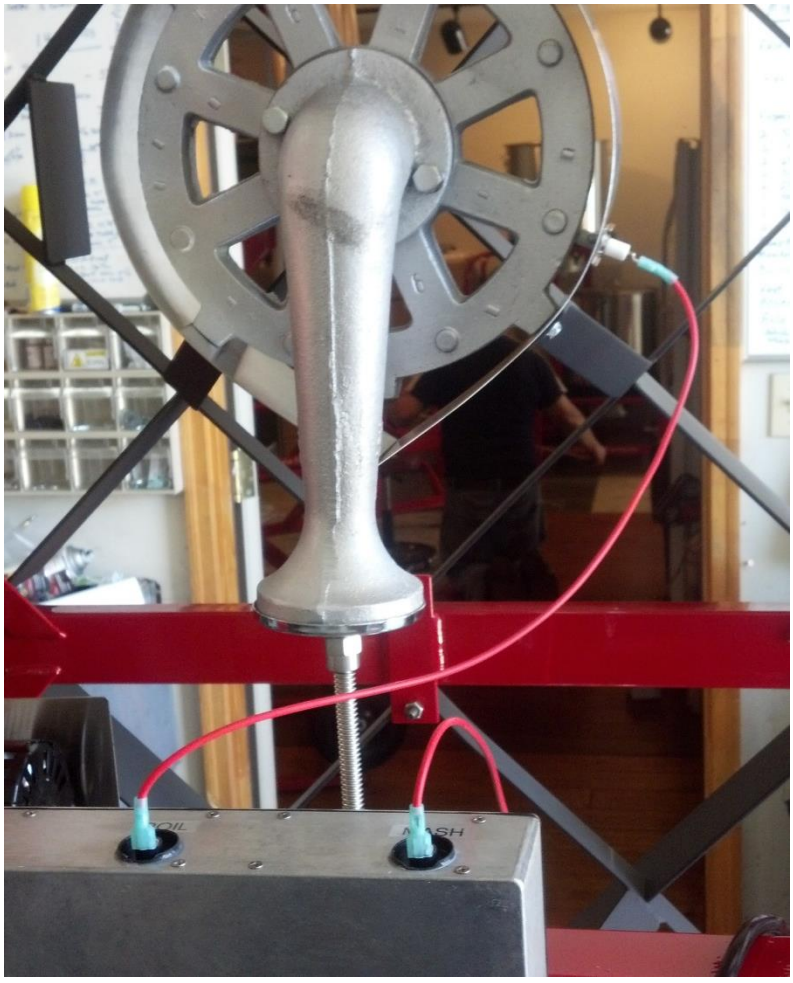
- Using 2 sets of pliers hold the electrode wire with one set of pliers while using the other to gently bend the outer tip of the electrode wire downward as shown. It is important that the electrode tip is 1/8” – 3/16” gap from one of the burner holes, and that it is centered directly over that hole.



Ignition Wire Installation

Follow these instructions to install the electronic ignition wires.

- Step 1: Using the (3) included specific length ignition wires, complete the connections between the three ignition box coils and each burner electrode. Use the following reference information for connections:
    - 20” Ignition Wire > Top Burner > Boil
    - 16” Ignition Wire > Middle Burner > Mash
    - 32” Ignition Wire > Bottom Burner > HLT

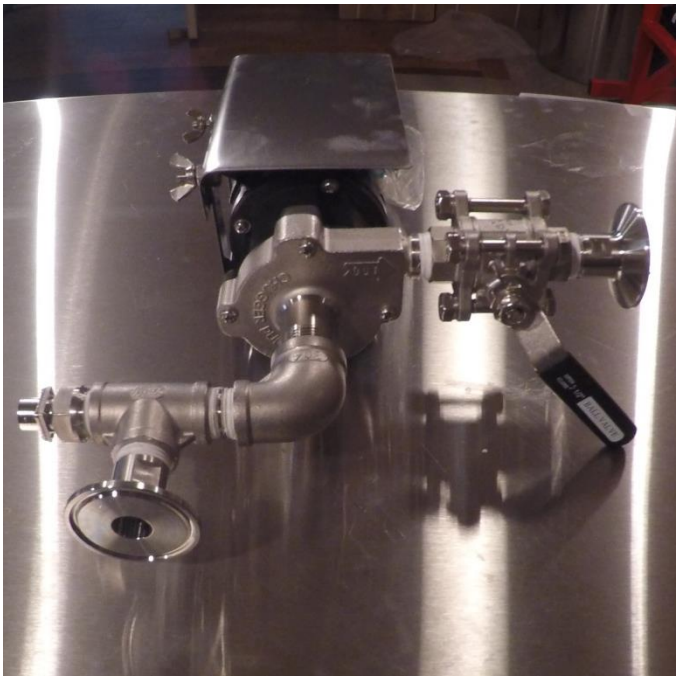


Pump Sensor Installation

Your specific brewery may have been shipped with either in-line or center inlet pumps. We have included hardware for sensor installation for either of the two different types of pumps.

- Step 1 - Use the illustrations below to determine which type of pump your brewery has.
- Step 2 – Remove the right side pump from your brewing frame
- Step 3 – Remove the existing inlet tri-clover fitting from the pump
- Step 4 – Refer to the illustrations below for correct sensor mounting based on your application.

Center Inlet Pump Installation



Inline Pump Installation

Congratulations

All digital control system installation should now be complete. Refer to your Digital Control Owners manual for temperature control tower mounting, testing, and operating instructions.