



# AUXILIARY KILNSITTER

## INSTALLATION INSTRUCTIONS

### "KM" KILNMASTER KILNS

Congratulations on the purchase of your Skutt Auxiliary Kilnsitter Unit. The Auxiliary Kilnsitter provides an added measure of safety and flexibility to all of your firing applications. Using proven Dawson Kilnsitter technology your new Auxiliary Kilnsitter may be used as an additional shutoff device that complements the Kilnmaster control unit already found on your Skutt kiln. It may also be used to terminate ramp and hold firings programmed into your Kilnmaster controller. This is especially true of complicated ramp and hold programs that need to be terminated by a true indication of the amount of heat work done.

### RECOMMENDED INSTALLATION TOOLS

- 1" Hole saw
- 7/8" hole saw or knock out punch
- 1" spade bit or twist drill
- Small center punch or ice pick
- #2 Phillips screwdriver
- Electric drill (variable / reversible is best) with #2 Phillips bit

### INSTALLATION INSTRUCTIONS

#### AUXILIARY KILNSITTER BOX

1. Unplug the kiln from the power supply.
2. Drill a 1" hole in the master section at the prepunched pyrometer hole. The pyrometer hole should be located about 18" to the right of the master section control box. This 1" hole must go through the stainless steel band material and also the kiln firebrick. Use the 1" hole saw for the stainless steel band then use the 1" twist drill or spade bit for the 1" hole in the firebrick. Make absolutely sure that the hole is drilled squarely through the side of the kiln. Drill brick slowly to prevent brick breakage.
3. Mount the heat shield to the side of the kiln. Center the heat shield on the stainless band and over the 1" hole just drilled. The heat shield is held in place with two long sheet metal screws.
4. Install the shutoff tube into the Auxiliary Kilnsitter control box. Use your shutoff tube hardware package here.

(continued)

## UPGRADE CONTINUED

5. Use the shutoff tube as a guide and carefully locate the control box on the side of the master section. Ensure that the shutoff tube is not put into a bind and is centered in the 1" hole. Install the two sheet metal screws into the mounting holes on the left-hand side of the box.
6. If you are satisfied with the mounting and alignment of the box so far, install the hinge leaves on the right hand side of the control box. Simply slide the hinge leaves onto the hinge pins and fasten in place with sheet metal screws.

### KILNMASTER CONTROL BOX MODIFICATION / INSTALLATION

1. Remove the Kilnmaster control box from the kiln. Remove the fiberglass lined heat baffle. Select a spot in the lower portion of the control box where the power cord enters. Drill a 7/8" hole in the control box to allow the wire from the Auxiliary Kilnsitter to enter. Ensure that you drill the hole in an area where the cord may enter freely with no obstructions. Either the front or the side of the box may be drilled. (1" under the power cord works well)
2. Remove the Auxiliary Kilnsitter box from the kiln. Be careful to remove the shutoff tube first to avoid breakage. Insert the loose end of the power cord from the Auxiliary Kilnsitter box through the 7/8" hole in the Kilnmaster control box.
3. Locate the red 18 gauge wire that connects the top tab (tab #1) of the circuit board to the control relays. Cut this wire in half at a location close to the wiring coming into your control box from the auxiliary kilnsitter. See the wiring diagram for the location of this wire. The words "Cut Here" and two triangles show the original routing of this wire. Strip back the ends of the red wire you just cut by 1/4". The small triangles show the location of the new connecting points for the black and red wires.
4. Crimp the red 18 gauge wire that comes from the bottom of the relays to the red wire of the Auxiliary Kilnsitter power cord.
5. Crimp the red 18 gauge wire that comes from the circuit board to the red wire of the Auxiliary Kilnsitter power cord.
6. Locate the existing ground wire (may be green or pink 8 ga.) on the Kilnmaster control box. Attach the green wire of the Auxiliary Kilnsitter power cord at this point also. Use a longer machine screw to do the connection.
7. Check all wiring and connections for accuracy. Install the Heyco black nylon strain relief at the point where the power cord goes through the 7/8" hole in the Kilnmaster control box. The strain relief is installed by placing the strain relief around the power cord, compressing the two halves together with pliers and inserting the tapered end into the outside of the 7/8" hole. Push the strain relief far enough into the hole so that the detent in the nylon holds it in place.

## UPGRADE CONTINUED

8. Reassemble the Kilnmaster control box and install both control boxes on the kiln. Plug the kiln into the power supply. Ensure that no wiring problems are present before proceeding.

### OPERATION OF THE AUXILIARY KILNSITTER

The falling weight of the Auxiliary Kilnsitter must be adjusted or checked prior to use.

1. Install a cone of your choice in the kilnrest of the shutoff tube. Usually one cone hotter than your programmed firing will be sufficient. Depress the plunger and ensure that the falling weight is in the up position and held in place by the claw. The unit is ready for operation. [ Note: The Auxiliary Kilnsitter completes the circuit to the relays in the Kilnmaster control box. The Kilnmaster will operate normally. When the falling weight of the Auxiliary Kilnsitter drops and the plunger pops out, the relays in the Kilnmaster control box will not energize and the kiln is effectively turned off. If a program is in progress and the falling weight drops, an ERROR 8 will occur. Getting this error is normal because the Kilnmaster controller did not terminate the firing].
2. Program the Kilnmaster controller as you normally would. Review your program to ensure accuracy and then press START when you want to begin firing.
3. Change the cone in the Auxiliary Kilnsitter after every firing.

### OPERATING NOTES

If your Auxiliary Kilnsitter is to be used as a shutoff device to avoid overfiring due to improper Kilnmaster programming or Kilnmaster malfunction, select a cone for the shutoff tube that is one or two cones hotter than the desired shutoff temperature. Do not select a cone that is so hot that the ware in the kiln will be damaged.

If your Auxiliary Kilnsitter is to be used as the normal shutoff device for a ramp and hold program on the Kilnmaster, select a cone of the proper shutoff temperature. Error codes will be displayed on the Kilnmaster at the end of the firing if this mode of operation is used. This is normal and you only need to clear the error codes before starting the next firing

Excessively generous timer settings will not give added kiln shutoff protection in the event of an overfire.

If anything unexpected happens during a firing, be sure to take note of all existing conditions. Some items to check are:

- Are any error codes displayed on the Kilnmaster
- Has the falling weight of the Auxiliary Kilnsitter dropped
- Has the cone in the Auxiliary kilnsitter matured or bent
- Was the falling weight of the Auxiliary Kilnsitter locked in the claw and a cone placed in the shutoff tube before the firing began
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By careful observation, the cause of unexpected problems can usually be determined. If you plan to call Skutt customer service for help, please have a list of the above conditions ready.

**UPGRADE CONTINUED****AUXILIARY KILNSITTER****PARTS LIST**

The following parts should be included in this kit:

1. 1 - Auxiliary kilnsitter control box (red) with Dawson kilnsitter (timer optional) and black power cord.
2. 1 - Stainless steel heat shield
3. 2 - 1 1/4" sheet metal screws for heat shield
4. 6 - 5/8" sheet metal screws for control box and hinges.
5. 1 - Heyco brand strain relief (black nylon: for 7/8" hole)
6. 1 - shutoff tube ("long size" for 2 1/2" brick, "extra long size" for 3" brick) with gauge washer, cone supports and flat head phillips machine screws.
7. Hardware package for mounting shutoff tube to Dawson kilnsitter faceplate: 2 - round head machine screws, 1 - guide plate, 2 - Allen wrenches, 1 - aluminum claw
8. 1 - wiring diagram
9. 2 - hinge leaves