

1120 Valve Box

Installing the valve box

The valve box sits on top of the 6890 GC and contains the valves and plumbing, heated zones and sensors, and the insulation.

1. Use a pair of diagonal cutters to remove the metal cutout on the top of the GC.

WARNING Be careful of sharp edges!

Cut toward the outside edge of the tabs so that the valve box will fit correctly.

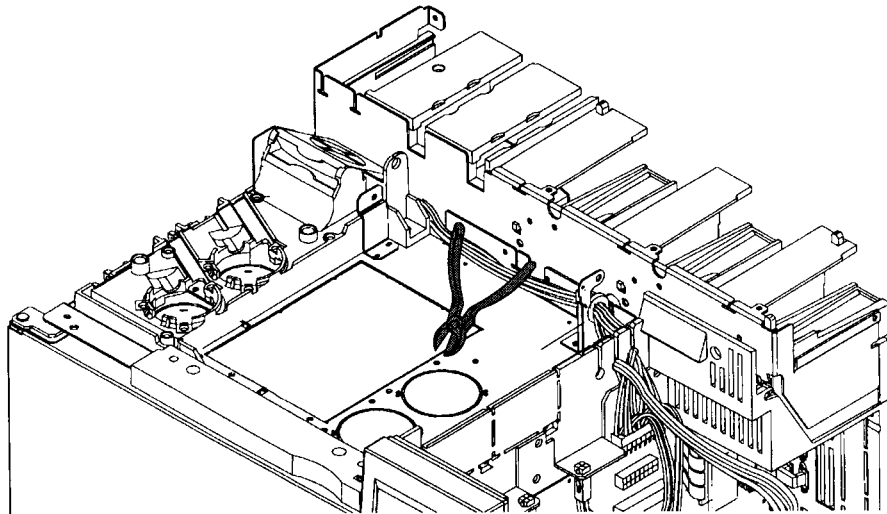


Figure 1120-1 Removing the sheet metal cutout

2. Screw the aluminum standoffs into the valve box bottom plate using one Torx T-20 screw for each standoff.

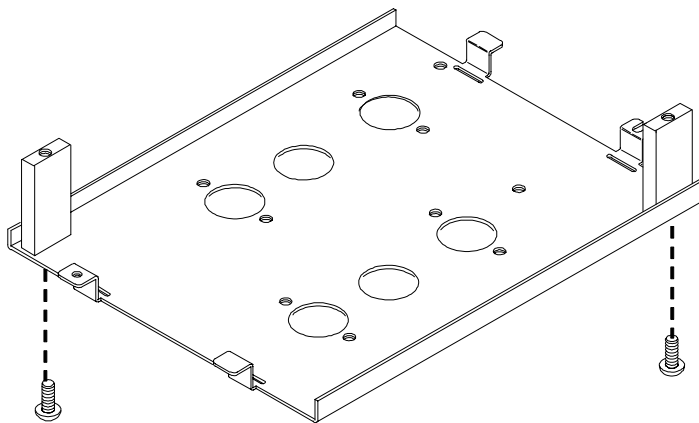


Figure 1120-2 Attaching the standoffs to the bottom plate

3. Screw the valve box bottom plate onto the top of the GC using three Torx T-20 screws.

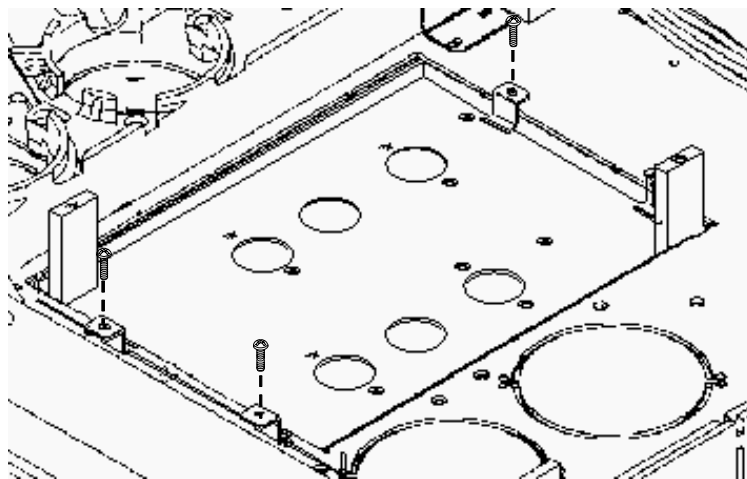


Figure 1120-3 Attaching the bottom plate to the 6890 GC

4. There are six holes in the plate for up to four valves. The outside holes on each side of the plate are for valves and the inside holes are for plumbing into the GC. Punch out the pre-perforated insulation from the holes you plan to use.
5. Use two Torx T-20 screws to mount the heater block(s) on the valve box bottom plate.
6. Install the heater/sensor into the heater block(s) and secure the leads to the valve box bottom plate with the U-clamp and two Torx T-10 screws.

Note Make sure that the sensor is seated all the way in the heater block.

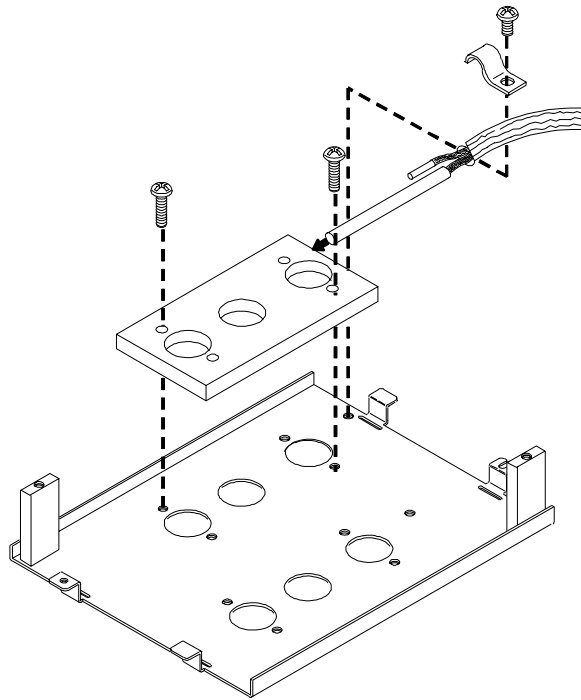


Figure 1120-4 Attaching heater block to the bottom plate

7. Insert the valve(s) into the appropriate hole(s) in the heater block and secure each valve with two long Torx T-10 screws.

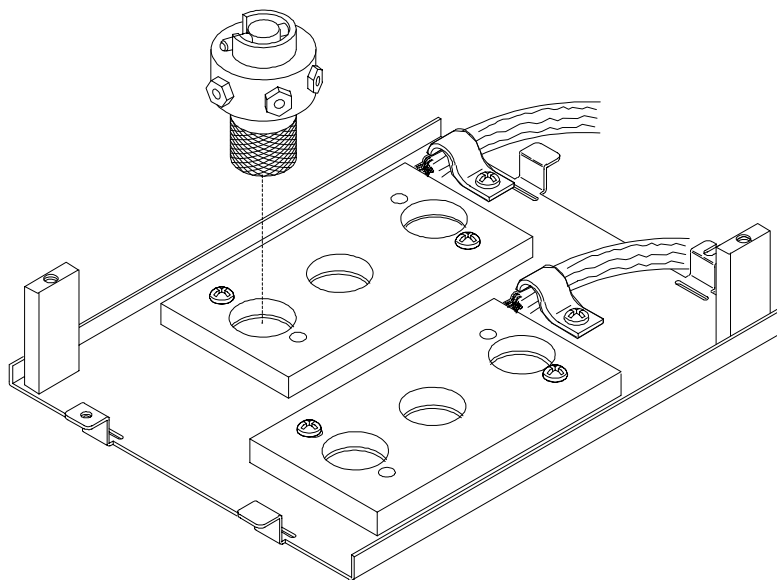


Figure 1120-5 Installing valves

8. Plumb the valves in the appropriate configuration. A variety of valve configurations are diagrammed in the *Typical Valve Configurations* section in this chapter.
9. Orient all of the valves in the OFF (CCW) position.

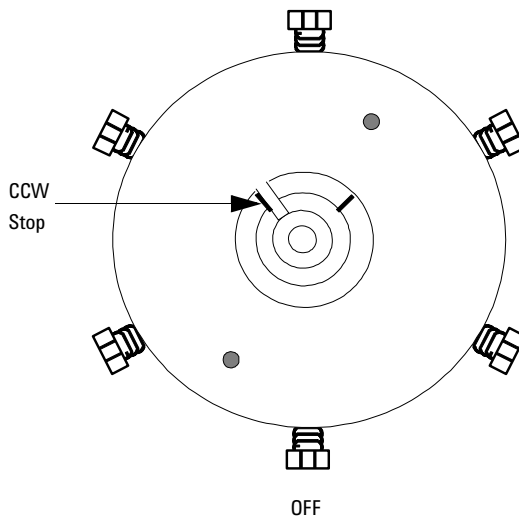


Figure 1120-6 Valve in the OFF position (top view)

10. Place the valve box insulation in the valve box top. Make sure the perforations in the insulation line up properly with the valve box top.
11. Insert the insulation retainer plate in the bottom of the valve box top and secure it to the threaded studs using the two 5.5-mm nuts.

Tighten the nuts until they are flush with the top of the stud. Make sure the holes in the retainer plate line up with the perforations in the insulation.

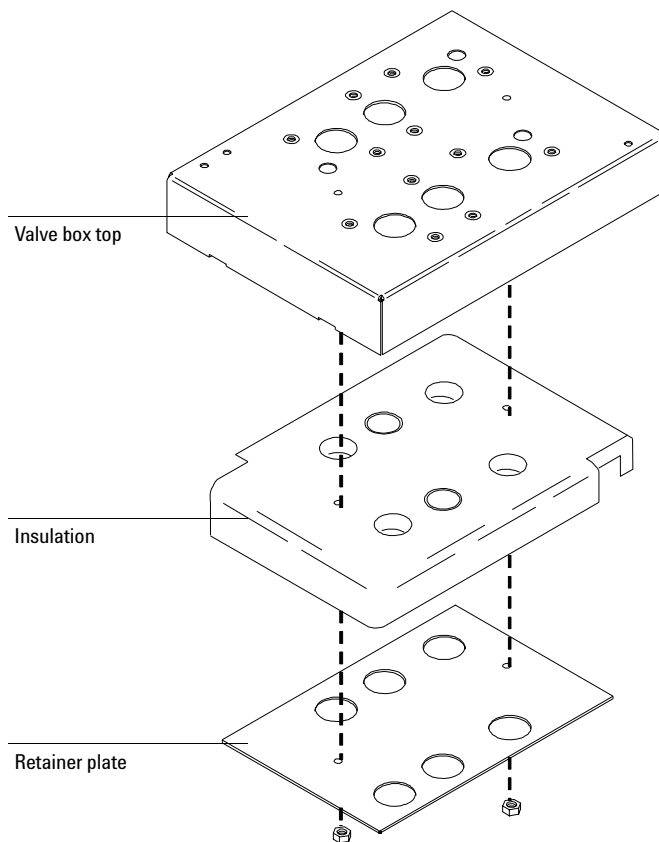


Figure 1120-7 Assembling the valve box top

12. While wearing a pair of protective gloves and holding the valve box top over a waste receptacle, punch or cut out the insulation from the appropriate holes.
13. Use two Torx T-20 screws to secure the valve box top over the installed valves, making sure the heater/sensor leads are routed under the appropriate cutout(s).

Make sure the valve box top is oriented correctly with holes punched out over the installed valves.

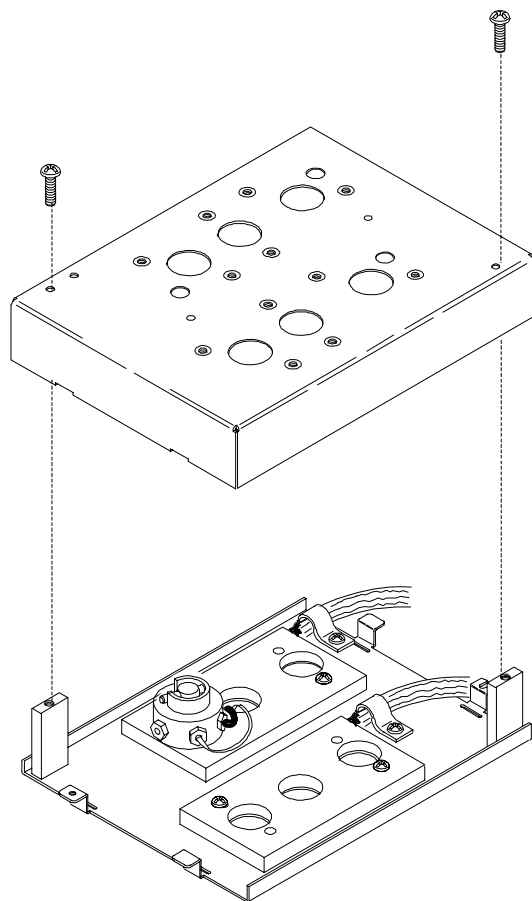


Figure 1120-8 Installing the valve box top assembly

14. Install the actuators as described in the *Actuators* section of this chapter.

Removing the valve box assembly

1. Place the main power switch in the off position.

WARNING Hazardous voltages are present in the instrument when the power cord is connected. Avoid a potentially dangerous shock hazard by disconnecting the power cord before working on the instrument.

2. Unplug the line power cord from its receptacle.
3. Allow some time for the oven and heated zones to cool.
4. When the oven has cooled, turn off all gas supplies.
5. Switch the solenoid valve off so the actuator is in its fully extended position (piston rod extended as shown).

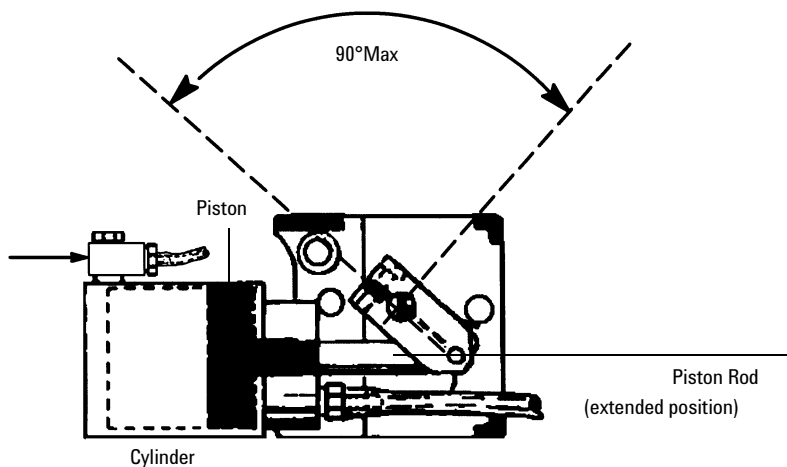


Figure 1120-9 Actuator in the fully extended position

6. If variable restrictors are present, remove their mounting hardware in the following order: two Torx T-20 screws, hex nut, and mounting bracket for each restrictor valve.

7. Remove the two Torx T-20 screws securing the valve box top assembly to the standoffs. Lift the valve box top assembly straight off the valve box. Be careful not to move the valve rotor index pin from its “at rest” position.

Note

If valve/actuator alignment is to be made, see *Valve/Actuator Alignment* in this section.

8. To reassemble: Align the two mounting holes in the valve box top assembly with the standoffs in the valve box. Lower the box top assembly until it rests on the standoffs.
9. Secure the valve box top assembly with two Torx T-20 mounting screws. Tighten these screws firmly. Reinstall hardware for variable restrictors if present.
10. Exercise the valve(s) on and off a few times to verify operation.

