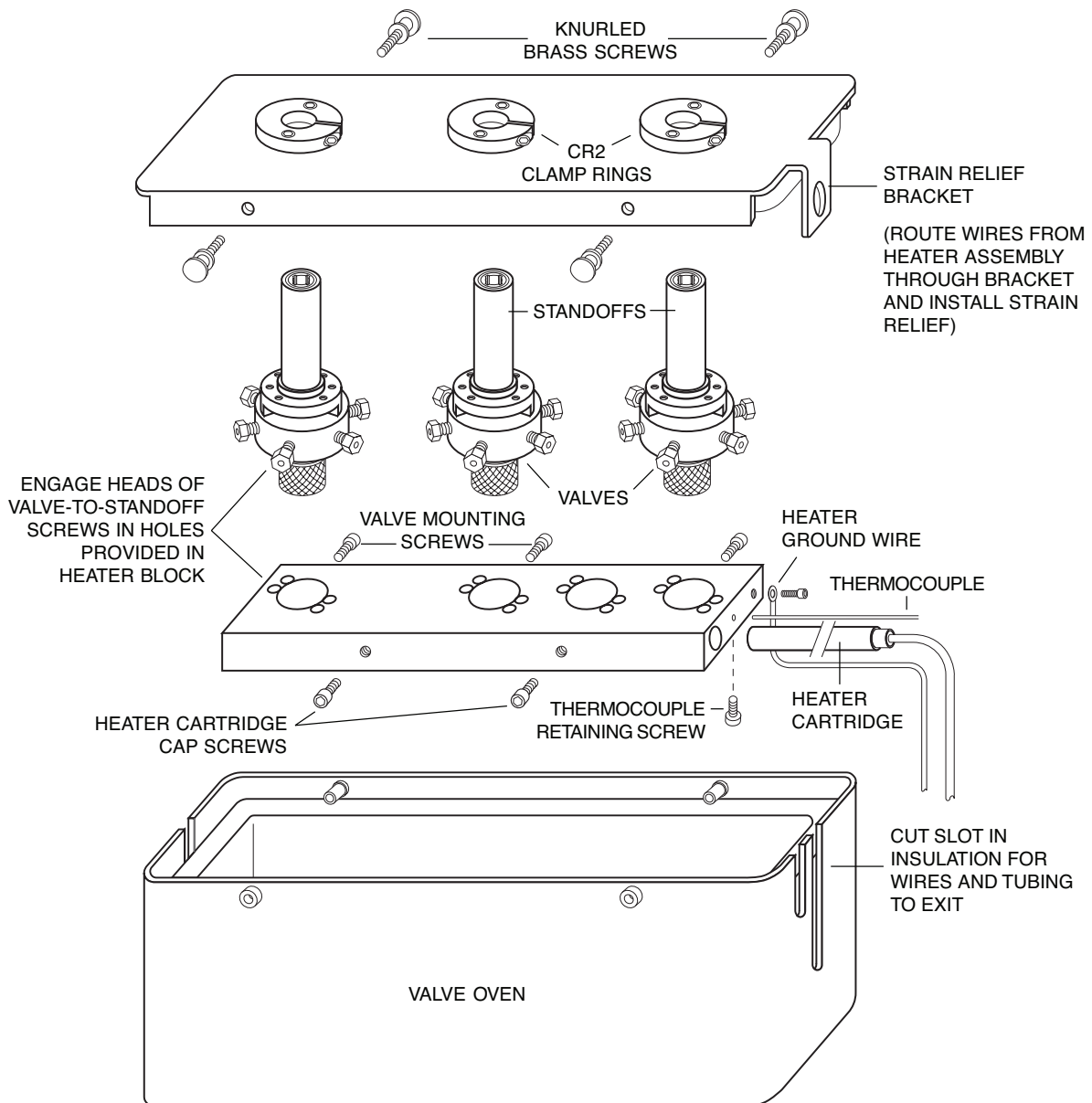


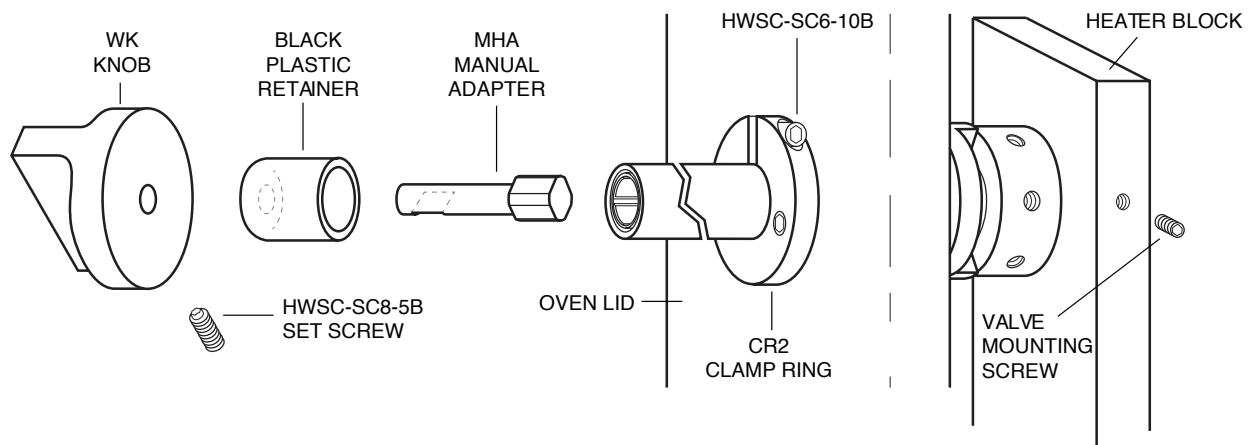
# INSTALLING VALVES IN A HEATED VALVE ENCLOSURE - 2 & 3 VALVE MODELS

## Technical Note 604

**FIGURE 1: Exploded View of Valve Enclosure**



**FIGURE 2: W Type Valve with Standoff and Standard WK Knob**



## Manual Valve

**Repeat Steps 1-3 for each valve.**

1. For a manual valve, remove the knob or handle from the standoff assembly (**Figure 2**).
2. Remove the CR2/clamp ring from the standoff. Since the oven lid is supplied with a CR2 attached, the one supplied with the standoff is not required.
3. Slide the standoff assembly through the opening in the oven lid, with the insulation on the lid toward the valve.
4. Place the heater block on the valves. Make sure that each valve is fully inserted, with the valve body flat against the surface of the block. Tighten the cap screws to secure the block to the valves. (**See Figure 1**)
5. Secure the standoffs to the lid by tightening the HWSC-SC6-10B screws in the CR2/clamp rings.
6. Slide the heater cartridge through the strain-relief bracket in the oven lid and into its hole in the heater block. Gently tighten the heater cartridge cap screws.



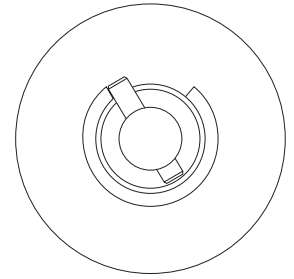
**CAUTION: Over-tightening the heater cartridge cap screw may result in damage to the heater cartridge and can pose a shock hazard. A fraction of a turn beyond the point of contact is adequate.**

7. Attach the ring lug connector of the ground wire to the heater block at the point provided (**see Figure 1**). The heater must be grounded.
8. Insert the thermocouple or RTD into the heater block, as required by the application.
9. Fit the MHA/manual handle adapter into the standoff, engaging the squared end of the MHA firmly in the squared end of the standoff drive shaft.
10. Press the black plastic retainer over the end of the standoff, with the manual handle adapter shaft protruding through the retainer.
11. Slide the knob or handle over the MHA with the set screw toward the flat face on the MHA shaft. Tighten the set screw.

**See remaining steps in Both Valve Types section beginning on page 4.**

## Valve on an Air or Electric Actuator

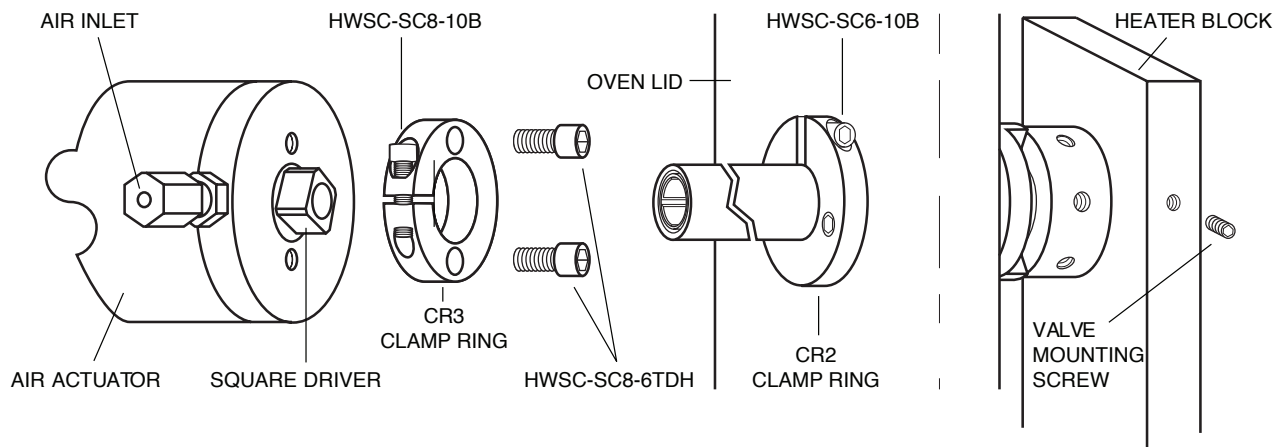
FIGURE 3:



Repeat Steps 1-3 for each valve.

1. For a valve on an air or electric actuator, loosen the HWSC-SC8-10B screw in the CR3/clamp ring (**Figure 4**) and remove the valve/standoff assembly from the actuator.
2. Remove the CR2/clamp ring from the standoff. Since the oven lid is supplied with a CR2 attached, the one supplied with the standoff is not required.
3. Slide the standoff assembly through the opening in the oven lid, with the insulation on the lid toward the valve.
4. Place the heater block on the valves. Make sure that each valve is fully inserted, with the valve body flat against the surface of the block. Tighten the cap screws to secure the block to the valves. (**See Figure 1**)
5. Secure the standoffs to the lid by tightening the HWSC-SC6-10B screws in the CR2/clamp rings.
6. Slide the heater cartridge through the strain-relief bracket in the oven lid and into its hole in the heater block. Gently tighten the heater cartridge cap screws.

FIGURE 4: W Type Valve with Standoff and Air Actuator



**CAUTION: Over-tightening the heater cartridge cap screw may result in damage to the heater cartridge and can pose a shock hazard. A fraction of a turn beyond the point of contact is adequate.**

7. Attach the ring lug connector of the ground wire to the heater block at the point provided (**see Figure 1**). The heater must be grounded.
8. Insert the thermocouple or RTD into the heater block, as required by the application.
9. Orient the actuator in its fully counterclockwise position. With an air actuator, this is done by applying air pressure to the air inlet closest to the valve. For an electric actuator, switch to the LOAD position.
10. Turn the valve to its counterclockwise position, as shown in **Figure 3**. The valve and actuator are now both in the LOAD position.
11. Firmly press the end of the standoff into the CR3/clamp ring mounted on the actuator, making sure that the square driver of the actuator fully engages the squared hole of the standoff drive shaft. Position the assembly so that the valve cutout is visible, and tighten the HWSC-SC8-10B screw in the CR3/clamp ring.
12. Align each valve according to the instructions supplied with the valve and actuator.

**See remaining steps in the "Both Valve Types" section below.**



**CAUTION: If the valve and actuator are not properly aligned before use, internal slots and ports in the valve body will not align properly, flow of sample may be blocked, and other problems may result.**

### **Both Valve Types**

13. Plumb the valve as necessary.
14. Use a sharp knife to cut a slot in the oven insulation to allow wires and valve plumbing to exit the oven.
15. Gather up all the wiring and plumbing so that it can be directed toward the slot as you put the lid on the oven. Press the assembly firmly together and secure the lid with the four knurled brass screws provided for the purpose. This can be harder than it sounds if there are some sturdy loops offering resistance.
16. Put the black plastic strain relief device around the heater cable, and use a pair of pliers to press it into the cable support bracket on the lid.