

# STANDOFF ASSEMBLY FOR AIR OR ELECTRIC ACTUATORS

## 2 POSITION VALVES

### Technical Note 404

Standoff assemblies allow a valve to be mounted in a heated zone while leaving the actuator isolated outside the zone. VICI Valco valves ordered on a standoff with an air or electric actuator are shipped from the factory fully assembled. Follow these instructions to mount the valve in an oven.

#### INSTALLATION

1. Remove the valve/standoff assembly from the actuator by loosening the HWSC-SC8-8B screw in the CR3 clamp ring. (**Figure 2 or 3**).
2. Remove the CR2 clamp ring from the standoff and mount it on the oven wall or mounting bracket. *The standoff requires an 11/16" clearance hole, and the two mounting holes in the clamp ring are on a 1" center.* Once the clamp ring is mounted, slide the standoff through it.
3. 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 engages the squared hole of the standoff drive shaft. Position the assembly so that the valve cutout is visible.
4. Tighten the HWSC-SC8-8B screw in the CR3 clamp ring.
5. Align the valve and actuator according to the steps in **Alignment Procedure**.

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

6. Position the standoff in the CR2 clamp ring and tighten the HWSC-SC6-8 B screw to secure the standoff in place.

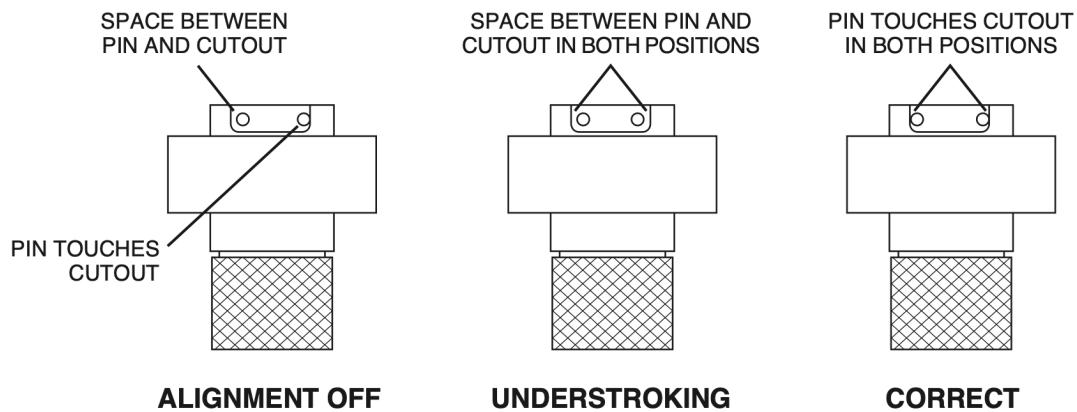
#### VISUALLY CHECKING THE ALIGNMENT

The valve and actuator arrive from the factory accurately aligned and ready to use. However, any time the clamp ring on the actuator is loosened to readjust or remove the valve from the actuator, the alignment must be checked.

It is important to note that the actuator drives only the rotor within the valve body (via the driveshaft): the valve body and standoff remain stationary with respect to the actuator. To check the alignment, cycle the actuator from one position to the other and observe the location of the rotor pin. (**Figure 1**) The rotor pin should come to rest against both sides of the cutout in the valve body. If it does not, realignment is necessary.

If the pin does not contact the stop in either position, the actuator does not stroke far enough. This should never be the case with newly purchased valve and actuator combinations, but it could come up if you are using these instructions to retrofit an actuator to a valve. **Technical Note 408** and the two position electric actuator manual contain instructions for adjusting the stroke of an electric actuator. For an air actuator, consult the factory.

**FIGURE 1: Visually checking the alignment (rotor pin shown in both positions)**

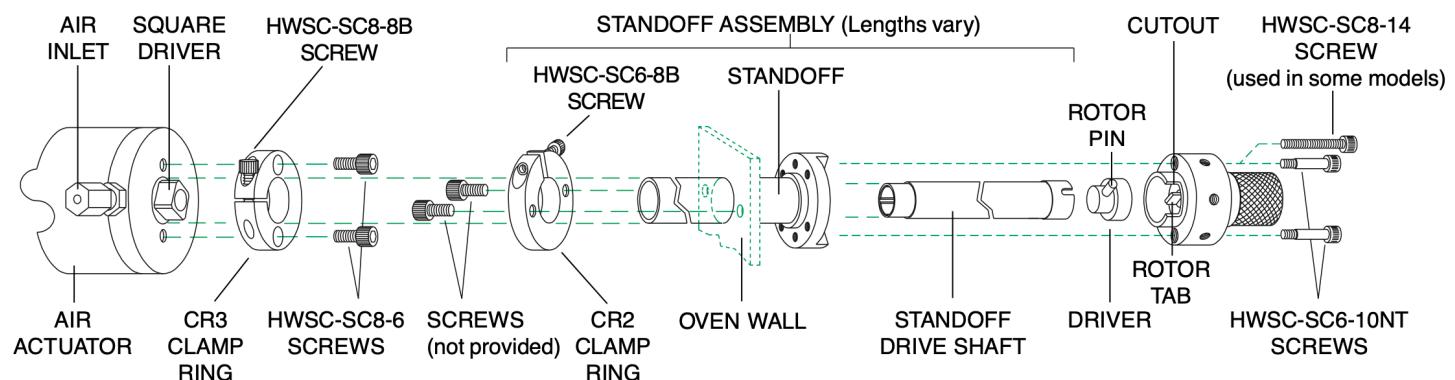


## ALIGNMENT PROCEDURE

In air actuated valves, air must be maintained on the actuator throughout this procedure. Actuators which have been installed with a Valco Digital Valve Interface or with two 3-way solenoid valves will not allow this. The DVI or solenoids must be bypassed so that gas is supplied directly to the actuator.

1. After determining that alignment is necessary, actuate the valve so that the rotor pin is against one stop.
2. Loosen the clamp ring screw slightly. This will allow the actuator to complete its travel if it was being stopped by the end of the valve rotor travel. The valve will rotate slightly.
3. Tighten the clamp ring screw and cycle the actuator to the other position. The pin should come to rest against the stop. If it does not, repeat the procedure. If after several attempts the pin still does not contact the stop in both positions, consult the factory.

**FIGURE 2: W type valve with standoff assembly and air actuator**

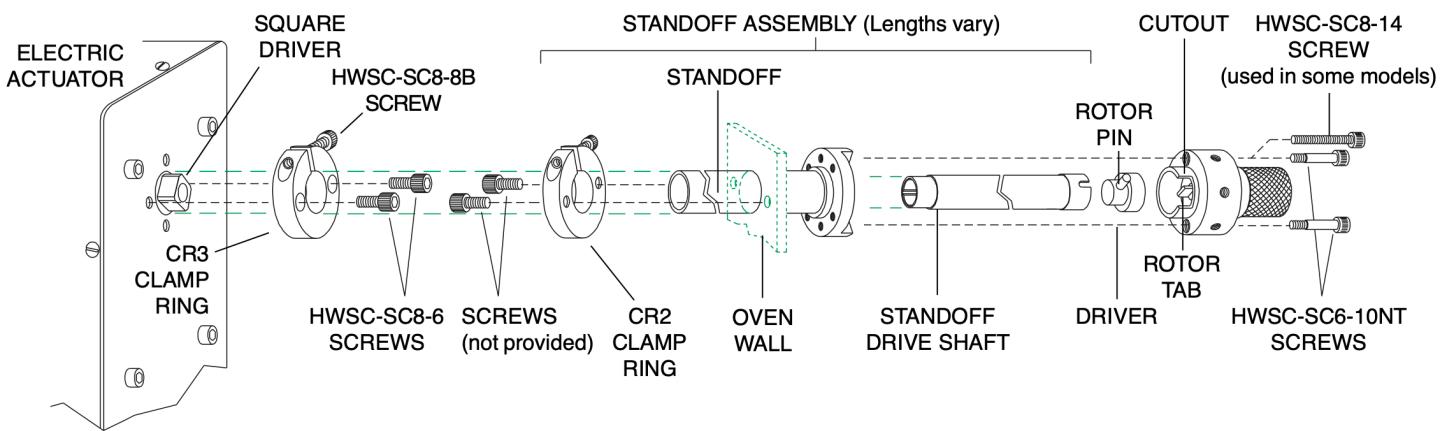


## DISSASEMBLY

The valve can be removed from the standoff assembly without affecting alignment by removing the screws shown at the extreme right of **Figures 2 and 3**. The alignment is not changed so long as the HWSC-SC8-8B screw in the CR3 clamp ring is not loosened. However, any time the clamp ring screw is loosened, the alignment must be checked.

**NOTE:** The old P type 10 port valves have only one HWSC-SC6-10NT screw. W valves with more than 10 ports and UW valves with more than 8 ports have no mounting holes; they are held in place by a clamp ring on the end of the standoff and are removed by loosening the clamp ring screw. Valves with no mounting holes cannot be removed from the standoff without affecting the alignment.

**FIGURE 3: W type valve with standoff assembly and electric actuator**



## ASSEMBLY

The instructions under Installation cover typical use of the standoff assembly. If further disassembly is necessary, follow these instructions for reassembly:

1. If an actuator has been specified for use with a standoff, it will come from the factory with the CR3 clamp ring already mounted. The clamp ring should not be removed from the actuator; however, if for some reason it has been, reattach it with the screws called out in **Figures 2 and 3**.

**CAUTION: The clamp ring is fixed to air actuators with a 3/8" screw, while electric actuators use a 1/2" screw. Do not use a screw longer than 1/2" in electric actuators, as it will interfere with internal moving parts and damage the actuator.**

2. For an air actuator, apply air pressure to the air inlet closest to the valve. For an electric actuator, switch to the LOAD position.
3. Turn the valve to the counterclockwise position, shown by the position of the rotor tab in **Figures 2 and 3**. The valve and actuator are now both in the LOAD position.

**CAUTION: The valve and actuator must be in corresponding rotational positions before assembly. If they are not, the valve or electric actuator may be damaged when operated.**

4. Slide the standoff drive shaft into the standoff. Position the valve on the standoff, making sure the slot of the drive shaft is fitted over the rotor pin. Attach the valve to the standoff with the HWSC-SC6-10NT screws, choosing the orientation that leaves the rotor pin and valve cutout visible. (P Type 10 port valves have only one HWSC-SC6-10NT screw. As described earlier, some valves have no mounting holes and are held onto the standoff with a clamp ring.)
5. Follow Steps 2-6 under Installation.

## **ADDITIONAL INFORMATION ON HIGH TEMPERATURE VALVES**

High temperature valves that have not been used for long periods have a tendency to stick and resist turning. If this occurs, the valve must be reconditioned. If a high temperature valve is forced to turn when stuck, or if squeaking occurs during turning, the rotor material may gall onto the valve body. This usually means that a leak path is created, necessitating repair. To recondition the valve, heat it to 340°C without switching, then switch it from position to position a few times before letting it cool to operating temperature.