



Adjustment Procedure

SAUTER AV-42 OPERATOR WITH XSP 31 G POSITIONER USED ON ARMSTRONG HUMIDIFIERS AND CONTROL VALVES

This bulletin should be used by experienced personnel as a guide to the adjustment of Sauter Operators used on Armstrong humidifiers and control valves. Selection or installation of equipment should always be accompanied by competent technical assistance. We encourage you to contact Armstrong or its local representative if further information is required.

THE MAXIMUM SAFE AIR PRESSURE FOR PILOT IS 22 PSIG.

The positioner will be set for a 3-15 **PSIG** signal if ordered from Armstrong.

1. Loosen lock screw "V" and rotate plastic ring "S" on face of positioner to location "A". When plastic ring "S" is in place, tighten lock screw "V". (See Figure 1)
2. Hook up supply air to Port 1 (P1) = 20 ± 1.5 PSIG. Max. 22 PSIG. (See Figure 2)

WARNING: Use plastic fittings provided, threads are not standard thread sizes.

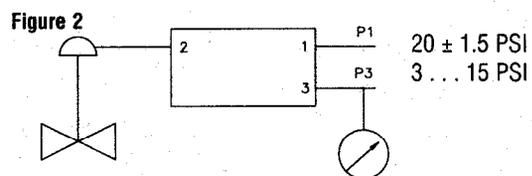
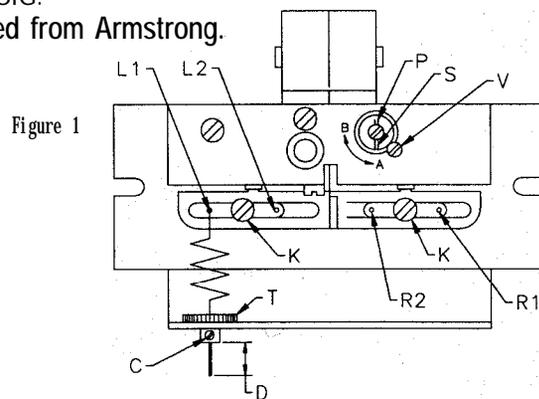
3. Hook up control air (adjustable source 3 minimum to 15 maximum PSIG) to Port 3 (P3). (See Figure 2)
4. Loosen screw "K" and knurled nut "T" to set the desired control span, (range of operating pressure). Slide spring assembly to the left to increase range, or right to decrease the range (Figure 1). **Make sure axis of spring is always vertical.** Tighten "K" and "T".

5. Loosen screw "C" and pull tip of spring out as shown in Figure 1 and per dimension given below. Tighten "C".

Approximate spring locations:

- Control span = 5 PSIG range, spring in L2 far right of left slot. "D" Dimension = $\frac{1}{32}$ "
- CI Control span = 10 PSIG range, spring in L1 farthest point left in left slot "L". "D" Dimension = $\frac{3}{8}$ "

6. Set control pressure to the desired starting point pressure. Adjust the starting point screw "P", slowly in or out until valve just starts to move off the seat. Observe at indicator on side of Yoke. (Avoid damaging the plastic ring while adjusting screw "P".) To set a 3 PSIG start point for the 10 psi range, the "P" screw is turned in until air bleed goes from audible to inaudible (approximately $1\frac{1}{2}$ turns counterclockwise from screw bottomed out position.) Cycle operator to check control span.
7. If control span is not correct, repeat steps four and five until desired range is obtained.



**SAUTER AV-42 OPERATOR WITH XSP 31 G POSITIONER
USED ON ARMSTRONG CONTROL VALVES, *NORMALLY OPEN OPERATION* — FIG. 3B**

1. Stem carrier should be positioned so travel indicator is at full open mark. Position marking can be moved by loosening hold down screw and sliding indicator plate up or down. To move stem carrier, remove position indicator arm from carrier and turn carrier clockwise or counterclockwise. Reinstall position indicator arm.
2. Loosen lock screw "V" and rotate plastic ring "S" on face of positioner to location "A". When plastic ring "S" is in place, tighten lock screw "V". (See Figure 1)
3. Hook up supply air to Port 1 (P1) = 20 ± 1.5 PSIG. (See Figure 2) Max. 22 PSIG.

WARNING: Use plastic fittings provided, threads are not standard thread sizes.

4. Hook up control air (adjustable source 3 minimum to 15 maximum PSIG) to Port 3 (P3). (See Figure 2)
5. Loosen screw "K" and knurled nut "T" to set the desired control span, (range of operating pressure). Slide spring assembly to the right to increase range, or left to decrease the range (Figure 1).

Approximate spring locations:

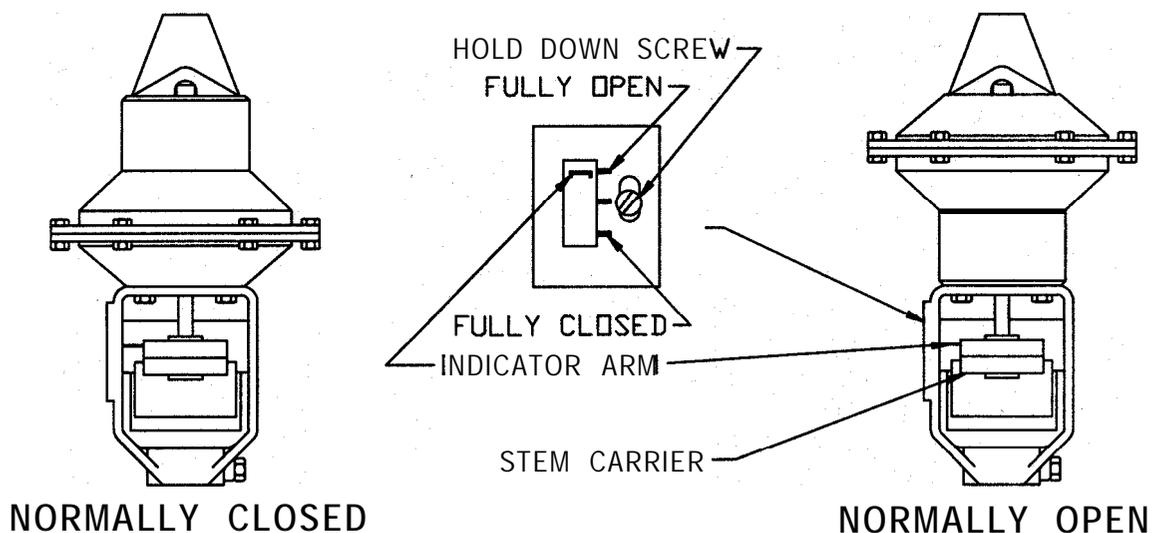
CI Control span = 5 PSIG range, spring in R2 far left of right slot.

□ Control span = 10 PSIG range, spring in either R1 or R2, centered in right slot.

6. Set control pressure to the desired starting point pressure.
7. Adjust the starting point screw "P", slowly in or out until valve just starts to close. Observe at indicator on side of Yoke. (Avoid damaging the plastic ring while adjusting screw "P".)
8. Cycle operator to check control span.
9. If control span is not correct, repeat steps four and five until desired range is obtained.
10. Adjust valve stem so valve is tightly closed when indicator position is at full closed mark.

Figure 3A — Normally CLOSED Operation

Figure 3B — Normally OPEN Operation



NORMALLY CLOSED

NORMALLY OPEN