

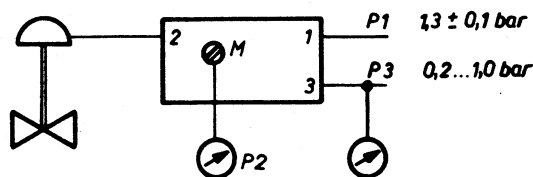
INSTALLATION

1. Tightly screw the 90° fitting into connection 2 of the positioner.
2. Place square nut into slot of the middle rib of the drive housing. Suspend at the front the holding plate with cam and secure the positioner with the long screws provided.
3. Release lock nut (1) at the coupling (2), insert shaft (3), adjust and lightly secure according to the above picture.
4. Insert the straight part of spring (4) into the shaft (3) and connect at the right-hand lever R of the positioner:

Hole R 2: For modulating range 0,2...0,6 bar
Hole R 1: For modulating range 0,6...1,0 bar

5. Set desired modulating range by sliding the slider K
Effective lever length h (mm) = $\Delta p \times 30$ (see table)
When loosening or tightening the screw of slider K, the lever should be supported at the rear by a finger so that the band bearing is not overloaded.
6. Shaft (3) is to be set and secured so that the spring (4) is approx. parallel to the drive shaft.
7. Expand spring (4) from 1 to 2 mm and secure with Allan screw.

CONNECTIONS



1 = Supply pressure $1,3 \pm 0,1$ bar

2 = Output to drive

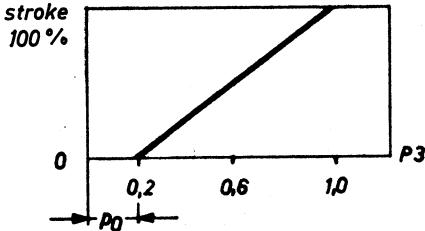
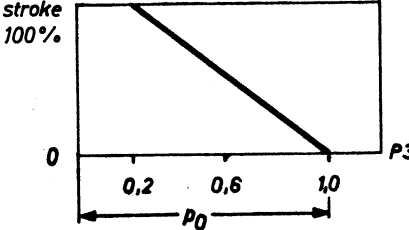
3 = Input pressure (control pressure)
(adjustable pressure source 0,2...1,0 bar
to adjust the XSP 31)

M = Measuring connection

ADJUSTING

1. Check points 5 and 6 of the assembly instructions
2. Control the spring tension
Through deflection of the left force balance lever the spindle is fully retracted. In this position the spring must be pressureless (1...2 mm initial tension) and suspended in the lever.
3. Set control action according to table. Loosen the lock screw V. Insert a screwdriver (2...3 mm wide) into the slot of the plastic ring (S) and through thumb pressure slide into the desired position A or B. Tighten again the lock screw V.
4. Set starting point pressure p_0 (see table)
 - Input pressure p_3 is set to desired starting point pressure p_0
 - Adjust the starting point screw (p_0) slowly with a small screwdriver (2 mm) until the drive just begins to move the spindle out, (pressure change at manometer pressure gauge M). Introduce the screwdriver well into the centre to avoid damaging the plastic ring (S).
5. Function control
Vary the input pressure p_3 slowly or in steps and compare the drive stroke with the desired positioner characteristic.
6. Push over into position from underneath, suspend to fixing plate and screw tight.
7. Attention: With a poorly designed installation supply system (e.g. long, small dia supply pipes to several control units) the supply pressure can collapse causing a disorder in the system loop, re-periodical surging may be produced.
Check supply pressure with a gauge at connection 1 of the positioner:
When the pressure falls below 1,1 bar then a throttle Z 274553 is built-in at output 2 of position controller XSP 31 to reduce the air capacity by half.

Typical positioner characteristics

Required function		Value to be set
	Spindle extends with increasing input pressure Control span 100 % $\Delta p = 0,8 \text{ bar}$ Zero point 0,2 bar	Control action A right lever $h = 24 \text{ mm}$ $p_0 = 0,2 \text{ bar}$
	Spindle retracts with increasing input pressure Control span 100 % $\Delta p = 0,8 \text{ bar}$ Zero point 1,0 bar	Control action B right lever $h = 24 \text{ mm}$ $p_0 = 1,0 \text{ bar}$