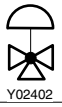
Zusammenbau:	**Ventil und pneumatischer Antrieb**	**Montagevorschrift**
Montage:	**Vanne et servomoteur pneumatique**	**Instruction de montage**
Assembly:	**Valve and pneumatic drive**	**Fitting instruction**
Accoppiamento:	**Valvola e servomotore pneumatico**	**Istruzioni di montaggio**
Montaje:	**Válvula y servomotor neumático**	**Instrucciones de montaje**
Sammansatt:	**Ventil och pneumatik drivning**	**Monteringsanvisning**
Zamenbouwen:	**Afsluiter en pneumatiek**	**Montagevoorschrift**

V6 . ., VX . .



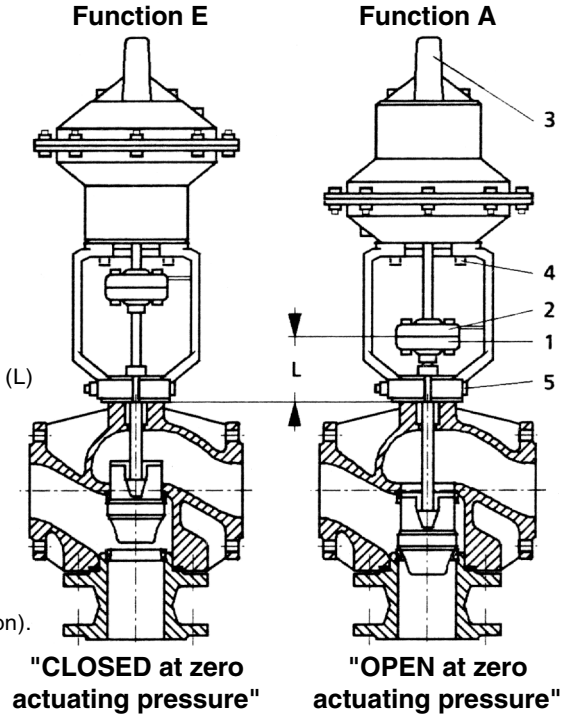
B6 . ., BX . .

Procedure

– The valve drive is prepared ex works for the function E "CLOSED at zero actuating pressure". For the assembly with the valve it is essential to follow the points 1 ... 7.
– If the function A "OPEN at zero actuating pressure" is required, then the points 10 ... 16 should be followed.

Assembly "CLOSED at zero actuating pressure"

1. Remove the lower half of the coupling (1) and stroke indicator, screw entirely the upper half (2) to the top.
2. Remove the clamping screw (5). Mount the drive onto the neck of the valve.
3. Screw the lower half of the coupling (1) onto the valve spindle. If the valve spindle is entirely pushed in, then adjust the distance (L) according to the value indicated on the table (see next page) and lock in position.
4. Insert and tighten the clamping screw (5).
5. Supply the drive by compressed air as far as the two halves of the coupling are in contact. (The upper half of the coupling must be screwed down, if a lasting gap at 1.3 bar is given). Proceeding from this position, the upper half of the coupling must be screwed down by max. 0.5 turns. (If necessary, reduce the pressure to eliminate the created tension).
6. By changing the pressure, create a gap of about 2 mm between the two halves of the coupling, loosen screws (4) a little and move drive on the yoke until the two halves of the coupling are aligned, then retighten screws (4).
7. Reduce pressure to 0 bar. After loosening the screw, move stroke plate so that the topmost line is in line with the stroke indicator.



Assembly "OPEN at zero actuating pressure"

10. Remove both halves of the coupling (1) and (2).
11. Screw off (4) the drive from the yoke, remove the protective cap (3) and the clamping screw (5).
12. Reverse the drive and mount again the protective cap and the drive onto the yoke. (See figure "OPEN at zero actuating pressure"). Screw the upper half of the coupling (2) entirely to the top, retract the spindle by means of pressure (approx. 1 bar) and mount the drive onto the neck of the valve.
13. Screw the lower half of the coupling (1) onto the valve spindle. If the valve spindle is entirely pushed in, then adjust the distance (L) according to the value indicated on the table (see next page).
14. Insert and tighten the clamping screw (5). Reduce slowly the pressure of the compressed air as far as the two halves of the coupling are in contact (the upper half of the coupling must be screwed down, if a lasting gap at 0 bar is given). Proceeding from this position the upper half of the coupling must be screwed down by max. 0.5 turns. (If necessary, increase the pressure to eliminate the created tension).
15. By changing the pressure create a gap of about 2 mm between the two halves of the coupling. Loosen the screws (4) a bit and move the drive on the yoke as far as the two halves of the of the coupling are aligned, then tighten the screws (4) again. Screw the halves of the coupling and the stroke indicator together.
16. Raise pressure to 1.3 bar, after loosening the screw move stroke plate so that the topmost line is in line with the stroke indicator.

Adjustment

– Check the closing point according to the table (see next page). If necessary, correct the spring tension. The therefore provided hexagon screw can be found under the protective cap for the version "OPEN at zero actuating pressure" and on the coupling side for the version "CLOSED at zero actuating pressure". The drive closing pressure is raised with "OPEN at zero actuating pressure" variant by turning anticlockwise and in the "CLOSED at zero actuating pressure" clockwise (always seen from the drive towards the valve).

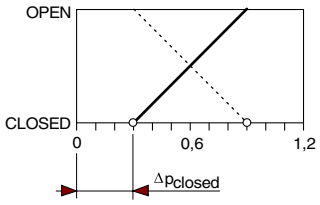
Additional installation instructions:

Mounting of the positioner XSP 31	MV 43143
Mounting of the positioner XSP 31 G	MV 4149
Mounting the auxiliary units XAP 1 ... 2 (feed back of the position)	MV 4151
Hand wheel for manual operation	MV 7326
Electro-pneumatic converter XUEP 1	MV 43180

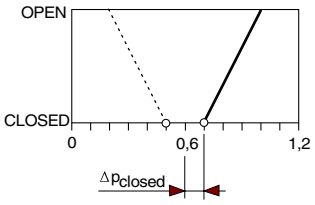
Type of drive		AV 42 . .		AV 43 . .			AV 44 . .		AV 45 . .	
		P10	P30	P10	P15	P30	P20	P10	P10	P15
Nominal valve stroke mm		14	14	14	14	40	40	14	40	40
Span bar		0.6	0.32	0.32	0.6	0.6	0.6	0.21	0.35	0.6
Characteristic		I	II	III	I	I	I	III	III	I
bar per turn		0.06	0.03	0.03	0.06	0.02	0.03	0.03	0.02	0.03
Distance L ± 0,5 mm		89 (86)*	89 (86)*	89	89 (86)*	151(148)*	151(148)*	89	151	151
Type of valve	at zero actuating pressure	**Closing point in bar** [1]								
V 6 R	CLOSED	0.3	0.7		0.3					
	OPEN	0.9	0.5		0.9					
V 6 F	CLOSED	0.3	0.7	0.6	0.3	0.3	0.3	0.6	0.6	0.3
	OPEN	0.9	0.5	0.6	0.9	0.9	0.9	0.6	0.6	0.9
V 6 G	CLOSED	0.3	0.7	0.6	0.3			0.6		
	OPEN	0.9	0.5	0.6	0.9			0.6		
V 6 S	CLOSED	0.3	0.7	0.6	0.3	0.3	0.3	0.6	0.6	0.3
	OPEN	0.9	0.5	0.6	0.9	0.9	0.9	0.6	0.6	0.9
VXD VXE	CLOSED	0.3	0.7		0.3	0.3	0.3			
	OPEN	0.9	0.5		0.9	0.9	0.9			
B 6 R	CLOSED	0.2	0.7		0.2					
	OPEN	1.0	0.5		1.0					
B 6 F	CLOSED	0.2	0.7	0.4	0.2	0.2	0.2	0.5	0.4	0.2
	OPEN	1.0	0.5	0.8	1.0	1.0	1.0	0.7	0.8	1.0
B 6 G	CLOSED	0.2	0.7	0.4	0.2			0.5		
	OPEN	1.0	0.5	0.8	1.0			0.7		
B 6 S	CLOSED	0.2	0.7	0.4	0.2.	0.2	0.2	0.5	0.4	0.2
	OPEN	1.0	0.5	0.8	1.0	1.0	1.0	0.7	0.8	1.0
BXD BXE	CLOSED	0.2	0.7		0.2	0.2	0.2			
	OPEN	1.0	0.5		1.0	1.0	1.0			

Two-way valve V6 . / VX .

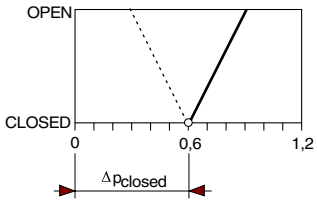
Full range CharacteristicI



Split range (sequence) CharacteristicII

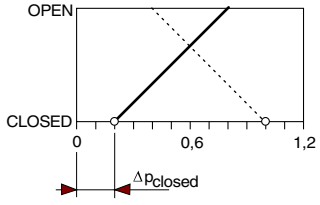


With increased closing force CharacteristicIII

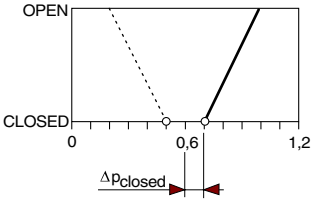


Three-way valve B6 . / BX .

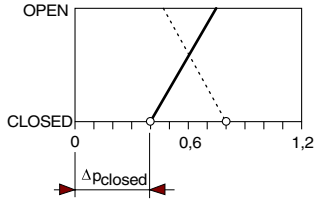
CharacteristicI



CharacteristicII



CharacteristicIII



——— = CLOSED at zero actuating pressure (function E) ------- = OPEN at zero actuating pressure (function A)

With mixer valves the characteristics relate to the upper seat (control branch)

1) The "closing point" is defined by the actuating pressure, which just closes the pressureless valve (For three-way valves the upper seat is effectiv).
The closing points are defined with regard to the hysteresis in this way, that
– for two-way valves the max. closing force is obtained
– with mixer the closing force on the mixer branch is at least 2/3 of the closing force on the control branch.

*) (86) and (148) valid only for VX . and BX .

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