AV43 P: Pneumatic valve drive

Y07550

How energy efficiency is improved
Accurate activation of valves with minimal air consumption.

Areas of application
Actuation of through and three-way valves in the V6R and B6R product series in continuous control equipment or open/closed control.

Features
- Silicone-free, can therefore be used in many areas
- Housing and mounting bracket made of light-metal alloy
- Long-term-stable rubber membranes
- Reverse direction of travel by fitting other way round on mounting bracket
- Compressed-air connection with Rp $^1/_8$" female thread
- Complies with directive 97/23/EC Art. 3.3 on pressure equipment

Technical description
- Control pressure 0 - 1.2 bar
- Effective drive surface 250 cm²

Type	For valves with stroke mm	Air consumption for 100% stroke l_n	Control span [1] bar	Effective drive area cm²	Weight kg
AV43 P15 F001 [2]	14	1,2	0,6	250	5,2

Control pressure [3]	0...1,2 bar	Dimension drawing	M274951
Max. pressure	1,5 bar	Fitting instructions	
		Assembly	MV 40.136
Permissible ambient temp.	–15...50 °C	Valve/drive	MV 43190
Temperature at the diaphragm	max. 70 °C		

Accessories
-**XSP 31** [6]	Positioner [4] (see Section 79)
-**XAP 1** [6]	Aux. contact unit [4] (see Section 79)
-**XAP 2** [6]	Potentiometer unit [4] (see Section 79)
-**XEP**	Electro-pneumatic converter [4] for continuous signals (see Section 69)
0274521 000	Manual-adjustment facility [5] for AV43 weight 1,7 kg; MV 505819

*) Dimension drawing for accessory is available under the same number

Assembly material for valve series V6R, B6R

Drive type	XSP 31	XSP 31 G	XAP	XEP
AV43 P15	0226506 002	0226532 002	0226513 003	0274700

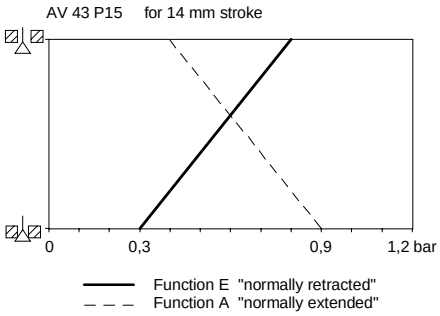
1) Pressure–stroke curves: see valve data sheet, Section 78.
2) Only for valves with O-ring stuffing box.
3) Needed in order to attain the actuating power.
   See Section 60 on regulations concerning the quality of supply air, especially at low ambient temperatures.
4) Of the accessories, only a positioner (XSP 31 or 31 G), a feedback unit (XAP) and an electro-pneumatic transducer (XEP) can be fitted.
   When fitting XSP 31 and XAP, the XEP must be screwed sideways onto the fixing bracket.
5) Can be used for minimum or maximum limitation of the stroke. Removable hand wheel.
6) Fitted to valve/actuator at the factory

Operation
Via a diaphragm, the control pressure acts against a pre-tensioned pressure spring. When the former force is greater than the latter, the spindle starts to move. The valve drive is reversible and can be fitted to the bracket in one of two ways:-
Function A: 'normally extended' (the spindle retracts as the control pressure rises).
Function E: 'normally retracted' (the spindle extends as the control pressure rises).
(The unit is set at function E at the factory.)
Used with the valves of the V6R, B6R series (vertical plug), the following applies:-
Function A: (valve) ‘normally open' (NO).
Function E: ‘normally closed' (NC).

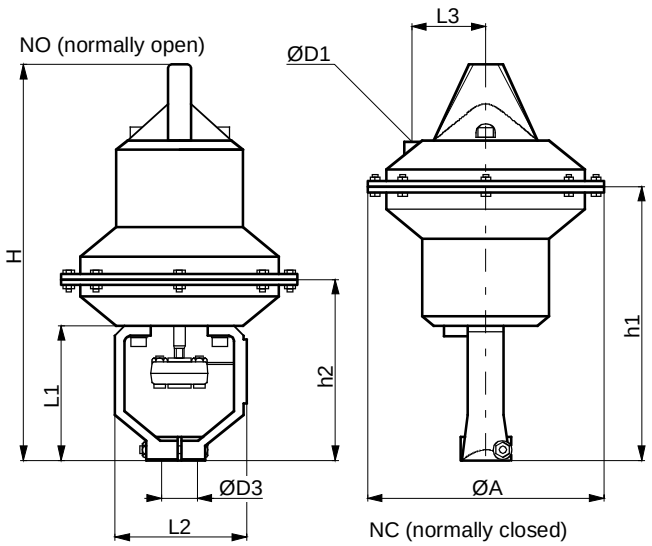
Engineering and fitting notes
The drive springs are pre-set for fitting to the valve (14 or 40 mm stroke). After fitting, the closing points should be checked as per MV 40.136. If necessary, the spring pressure should be adjusted by turning the nut in the centre.
The unit can be fitted in any position except facing downwards and at temperatures (of the valve medium) of up to 240 °C.
Where the temperature of the medium exceeds 180 °C, the unit should be fitted horizontally.
This piece can also serve as an extension when the drive needs to extend beyond the pipe insulation.
The ingress of condensate, dripping water etc., along the stem and into the drive should be prevented.
When fitting the drive to the valve, care must be taken not to turn the valve plug in the valve seat, thus damaging the seal.

Pressure–stroke characteristics
Pre-set for through valves of 14 or 40 mm stroke (see table of types).

Pressure–stroke characteristics, pre-set for through valves.



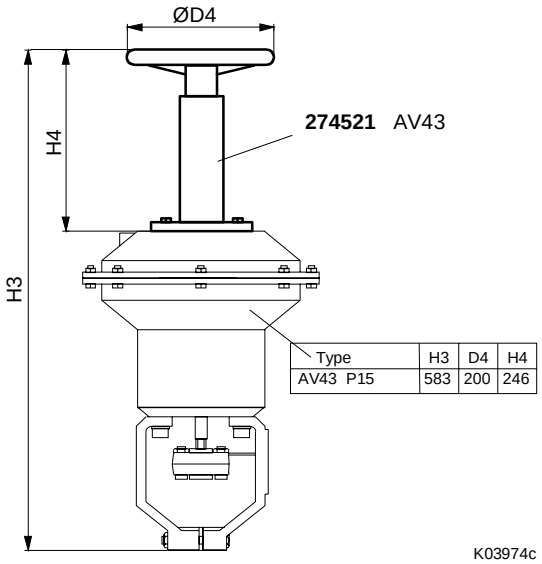
Dimension drawings



Type	A	D	D1	D3	H	h1	h2	L1	L2	L3
AV43 P15	250	M10	Rp 1/8	38	417	288	191	142	139	70

M274951c

Manual adjustment

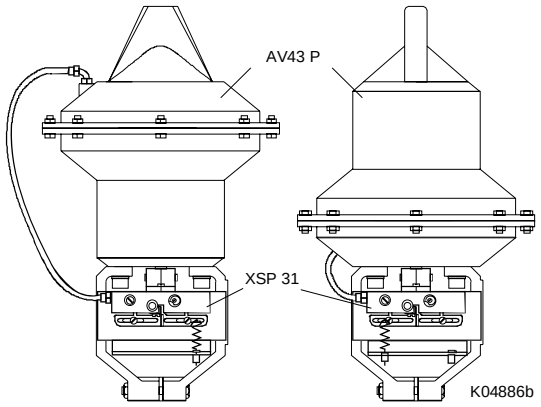


Type	H3	D4	H4
AV43 P15	583	200	246

K03974c

Fitted with one ancillary

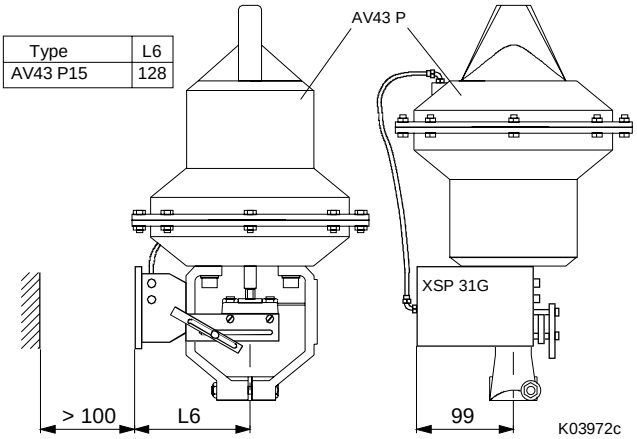
XSP 31



K04886b

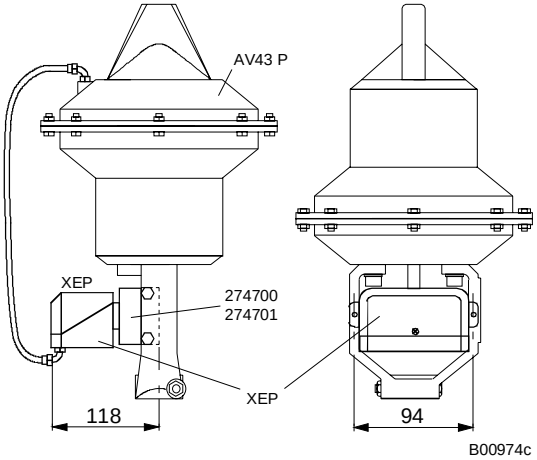
XSP 31 G

Type	L6
AV43 P15	128



K03972c

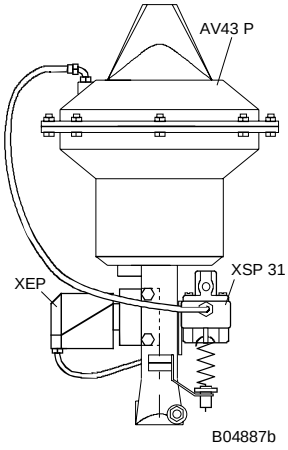
XEP



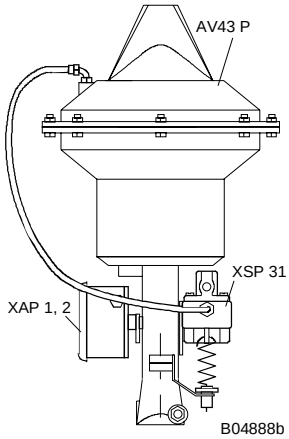
B00974c

Fitted with two ancillaries

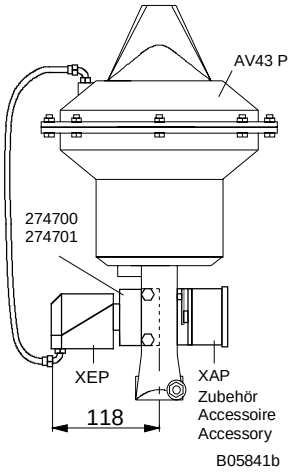
XEP + XSP 31



XAP + XSP 31



XEP + XAP



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