

## AVP 142: Pneumatic valve drive

For activating the valves of the V6, B6, VX and BX series in continuous or open/closed control systems. The valve drive is silicon-free and conforms with directive 97/23 EWG for pressure equipment. Housing of glass-fibre-reinforced plastic; fixing bracket of light alloy; rubber diaphragm; drive spindle of stainless steel with coupling piece and stroke indicator; direction of movement can be changed by fitting accordingly (factory setting: spindle normally retracted; fitting method E, valve closed); compressed-air connection Rp 1/8.

Type	Characteristic <sup>1)</sup>	For valves with stroke of 14 mm		For valves with stroke of 20 mm		Weight [kg]
		Span [bar]	Air consumption per stroke [ln]	Span [bar]	Air consumption per stroke [ln]	
<b>AVP 142 F001</b>	full	0.6	0.8	0.9	1.1	2.0
<b>AVP 142 F002</b>	bottom	0.3	0.7	0.45	0.9	2.0
<b>AVP 142 F003</b>	top	0.3	0.7	0.45	0.9	2.0

Control pressure <sup>2)</sup>	0...1.2 bar	Dimension drawing	<a href="#">M09477</a>
Max. pressure	1.5 bar	Fitting instructions	
Effective area	180 cm <sup>2</sup>	Valve/drive	<a href="#">MV 505766</a>
Permissible ambient temp.	-15...50 °C	Declaration of materials	<a href="#">MD 71.246</a>
Temperature at the diaphragm	max. 70 °C		

### Accessories

- XSP 31** Positioner <sup>3)</sup> (see Section 79)
- XSP 31G** Positioner <sup>3)</sup>, in protective housing (see Section 79)
- XAP 1** Aux. contact unit <sup>3)</sup> (see Section 79)
- XAP 2** Potentiometer unit <sup>3)</sup> (see Section 79)
- XEP** Electro-pneumatic converter <sup>3)</sup> for continuous signals (see Section 69)
- 0274730 001** Manual-adjustment facility <sup>4)</sup> for AVP142; weight 0.6 kg; [MV 505819](#)

<sup>1)</sup> Dimension drawing or wiring diagram are available under the same number

### Assembly material for valve series V6, B6 and VXD, VXE, BXD, BXE

Drive type	XSP 31	XSP 31 G	XAP	XEP
<b>AVP 142</b>	0226504 002	0226532 002	0226512 003	0274700

- 1) Pressure–stroke curves: see valve data sheet, Section 76.
- 2) Needed in order to attain the actuating power. See Section 60 for regulations concerning the quality of supply air, especially at low ambient temperatures.
- 3) 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 onto the fixing bracket at the side.
- 4) Can be used for minimum or maximum limitation of the stroke. Removable hand wheel.

### Operation

The control pressure acts via a diaphragm 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 (factory setting): 'normally retracted' (the spindle extends as the control pressure rises).

Used with the valves of the V6, B6 and VX, BX series (vertical plug), the following applies:-

Function A: (valve) 'normally open' (NO).

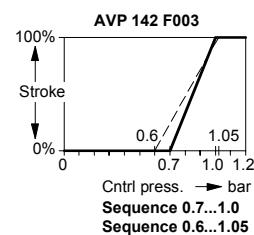
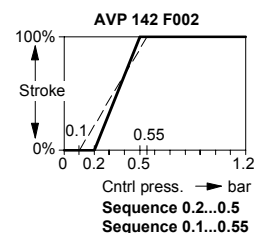
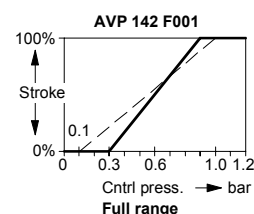
Function E: 'normally closed' (NC).



T09503



Y07550



— 14 mm stroke  
 - - - 20 mm stroke  
 B09568

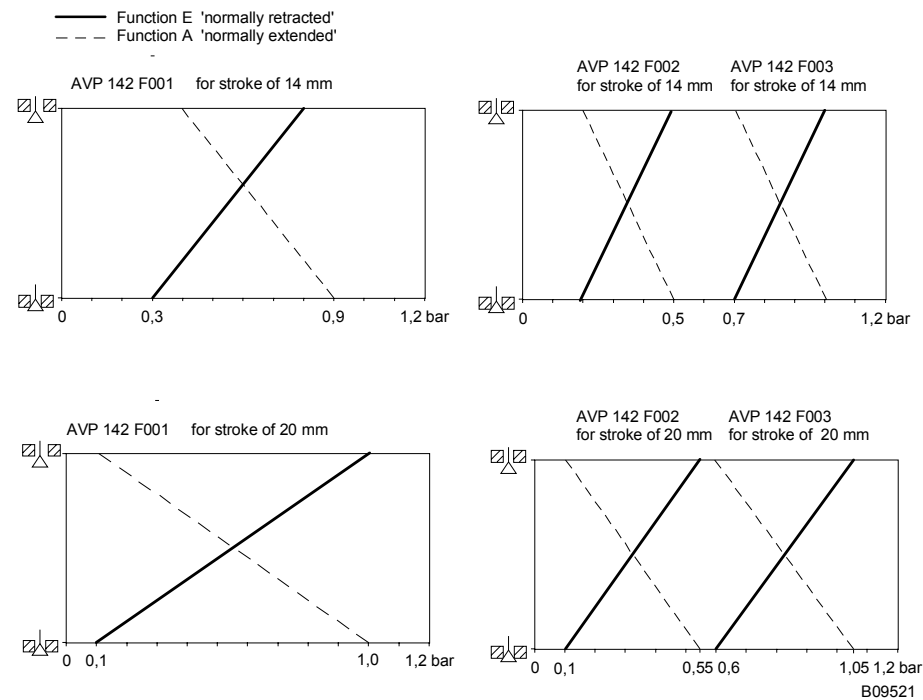
**Engineering and fitting notes**

The drive springs can be used for fitting to the valve (14 or 20 mm stroke). 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, it is recommended to fit the unit horizontally. When used in combination with the AVP 142 valve drive at temperatures above 130 °C, an accessory (no. 0361259) should be used (see also PDS 76.526 and 76.528). 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.

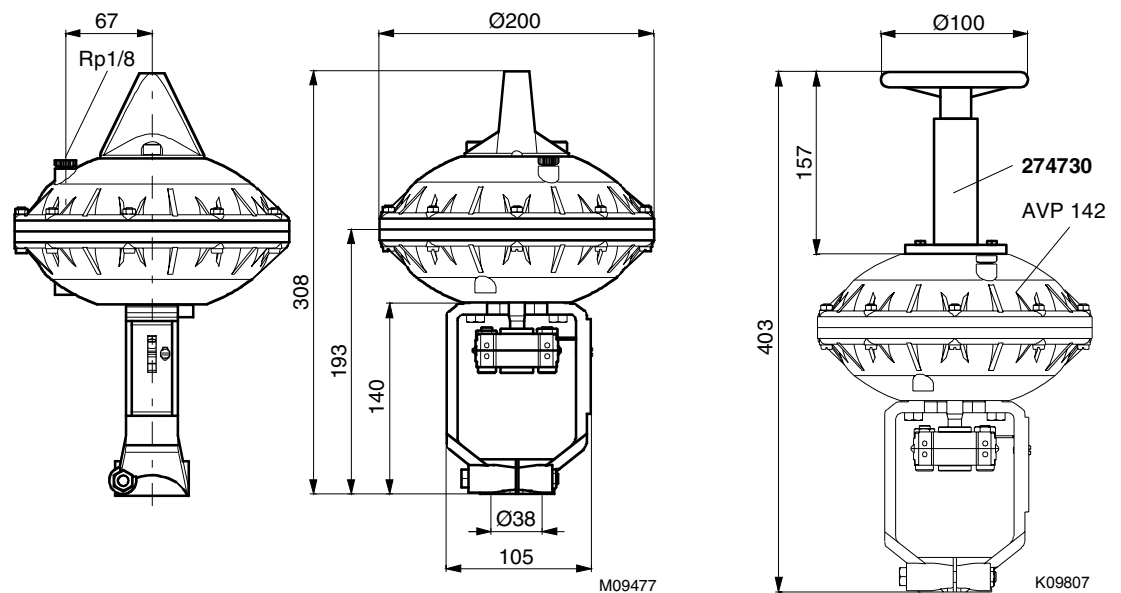
**Pressure–stroke characteristics**

Prepared for through valves with a stroke of 14 or 20 mm (see table of types).

Pressure–stroke characteristics, prepared for through valves.

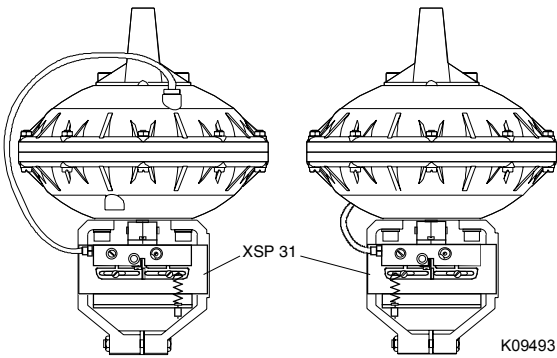


**Dimension drawing**

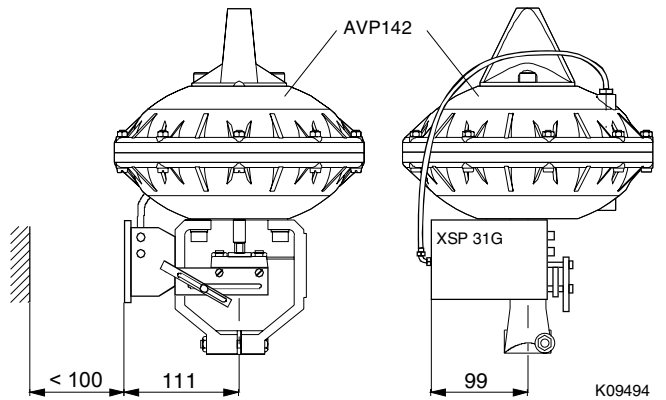


**Method of fitting: ancillaries**

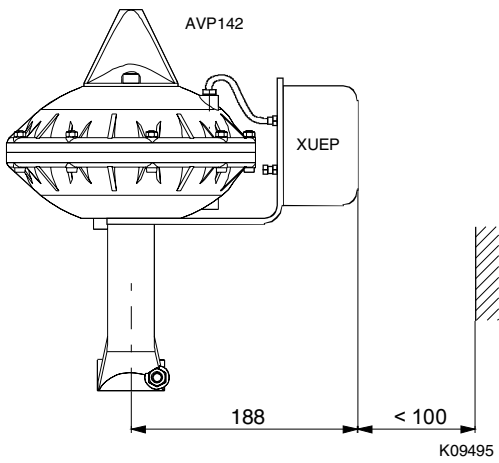
XSP 31



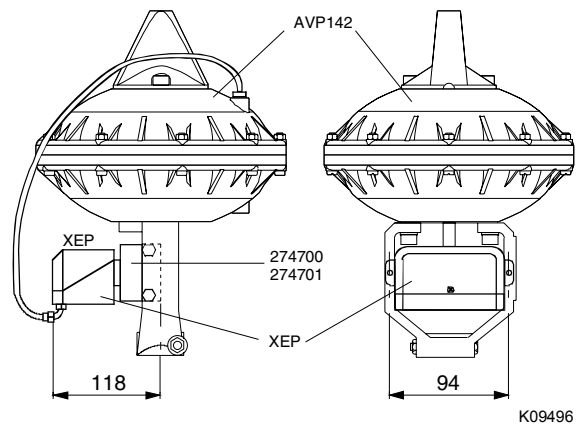
XSP 31 G



XUEP 1

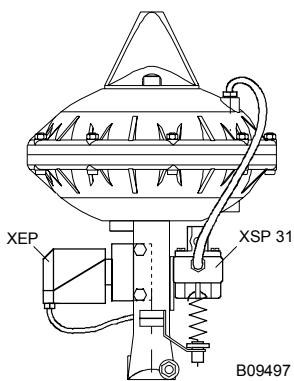


XEP

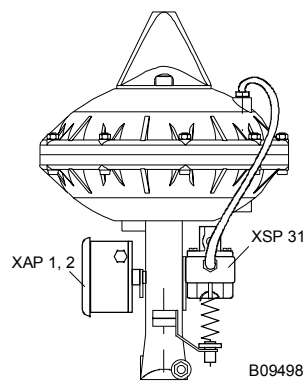


**Method of fitting: two ancillaries**

XEP + XSP 31



XAP + XSP 31



XEP + XAP

