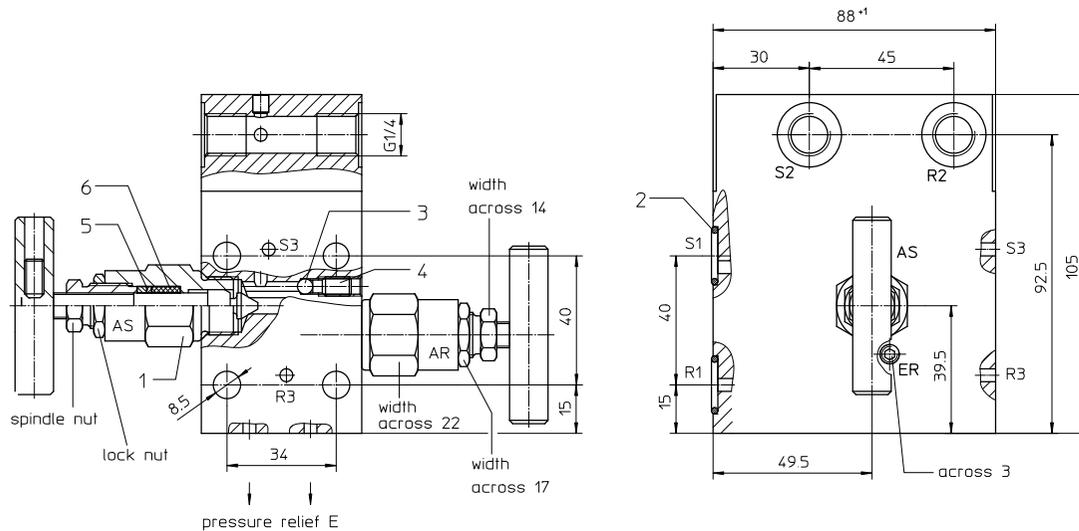


# SHUT-OFF VALVE Series AV

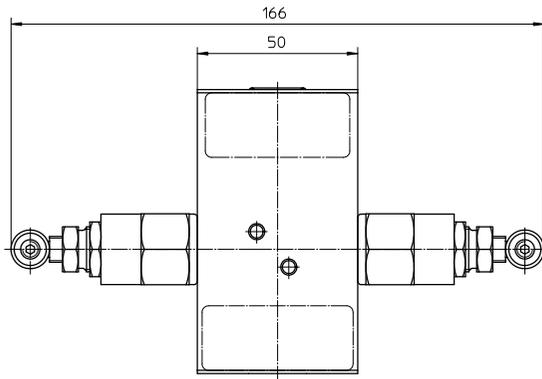
DN 5

PN 420 (210)

Sheet No.  
1655 F



connection S3 and R3 only for intermediate plate construction



## 1. Type index: (ordering example)

### AV. G. 1. -. P. VA

1	2	3	4	5	6
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- 1 series:**  
AV = shut-off valve
- 2 connection:**  
G = thread according to DIN 3852, T2
- 3 connection size:**  
1 = G 1/4
- 4 execution:**  
- = cannot be interlinked (R3 and S3 not present)  
- = intermediate plate interlinking, interlinked with clogging indicators according to sheet-no. 1609, 1628, 1629 or clogging sensors according to sheet-no. 1607, 1608
- 5 sealing material:**  
P = Nitrile (NBR)  
V = Viton (FPM)
- 6 housing material:**  
- = standard (Al-design)  
VA = stainless steel

## 2. Technical data:

- temperature range: -10°C to +80°C (for a short time +100°C)
- max. operating pressure: 420 bar ( cannot be interlinked )  
210 bar ( interlinked, execution Z )
- max. pressure difference: 160 bar

## 3. Spare parts:

item	qty.	designation	dimension	article-no.
1	2	valve	AV.DN5	316344
2	2	O-ring	14 x 2	304342 (NBR)   304722 (FPM)
3	2	ball	4.762	316377
4	2	set screw	M6 x 12	316368
5	2	annular becel		316371
6	2	packing		316370

weight: approx. 3,5 kg

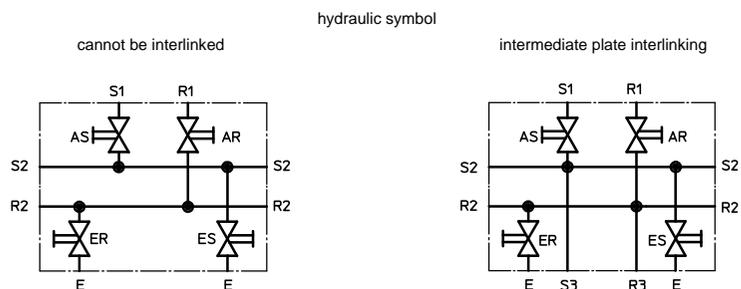
Changes of measures and design are subject to alteration!



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## 4. Symbols:



## 5. Connection configuration:

description of the connection	equipment connection		pressure
S1	filter connection	dirt side	$p_1$
R1	filter connection	clean side	$p_2$
S2	indicator pipe connection	dirt side	$p_1$
		test connection	
R2	indicator pipe connection	clean side	$p_2$
S3	indicator intermediate plate connection	dirt side	$p_1$
R3	indicator intermediate plate connection	clean side	$p_2$
E	relieving connections		$p = 0$

## 6. Description:

The AV shut-off valves, intended for use in double filters with change-over valve, that can be serviced during operation and are fitted with a contamination indicator.

To check or exchange the contamination indicator, it is necessary to shut off the pressure feed pipes S1 (contaminated side) and R1 (clean side) between the contamination indicator. Valves AS and AR meet this shut-off requirement.

The pressure relief valves ES and ER are used to relieve the pressure of the connected contamination indicator. Pipes to the contamination indicator and external test equipment can be fitted to connections S2 and R2.

## 7. Operating instructions:

Depending on the order, filters are normally fitted with the shut-off valve before delivery. During retrofitting care must be exercised to ensure that the sealing elements, O-ring 14x2 are there and seated correctly and that there is cleanliness during installation.

Operation depends on the operational condition:

- Operating condition of the shut-off valve
  - Valves AS and AR open,  $p_1$  and  $p_2$  operate the contamination indicator.
  - Valves ES and ER closed.
- Cutting-off operation of the shut-off valve
  - Close valves AS and AR, turn the valve spindle clockwise up to the stop, torque approx. 1-2 Nm,  $p_1$  and  $p_2$  remain active on the indicator.
  - Open valves ES and ER 1 turn anti-clockwise on the M6x12 stud (tool, 3 mm Allen key),  $p_1$  and  $p_2$  on the indicator go to 0, which means that the existing pressure is released through relief connections E.
  - Dismantling or exchange of the connected contamination indicator is possible.
- Test operation
  - Close valves AS and AR (see point 7b)
  - Open valves ES and ER (see point 7b)
  - Close valve ES (see point 7d)
  - Connect external test equipment to S2
  - Provide the test pressure to S2 and check the operation of the connected indicator. Test pressure = switching pressure differential.
  - Release the test pressure, remove the external test equipment and seal connection S2.
- Establishing the operating condition
  - After an exchange or test of the connected contamination indicator the operating condition must be re-established.
  - Clock valves ES and ER, turn the M6x12 stud clockwise up to the end stop, tighten to approx. 0.5-1 Nm
  - Open valves AS and AR (see point 7b)

### **Warning!**

With valves AS and AR closed and valves ES and/or ER open, the valves AS and AR will not shut off if there is a constant leak at connections E.

The connected contamination indicator or the seal at connection S2 must not be dismantled if it is impossible to establish the closing operation of valves AS and AR.

## 8. Maintenance:

Maintenance of the shut-off valve should only be undertaken if the valve is de-pressurized.

Maintenance includes:

- Exchange of replacement parts, item 1 to 7.
- Tightening of the packing of the valve, item 1
- Exchange of complete shut-off valve

In the case of a leak on the valve spindle of the valve, item 1, first tighten the packing. Only if this does not stop the leak should the packing, item 6, and the annular bezel, item 5, or the whole valve, item 1 be replaced. The following torque pressures must be observed when tightening the packing or exchanging the packing and annular bezel or valve or exchanging the complete shut-off valve.

- Spindle nut SW 14 10 to 20 Nm
- Lock nut SW 17 40 Nm
- Valve SW 22 80 Nm
- Screws M8-8.8 28 Nm