

# Throttle and shut-off valves type AV, AVT, and CAV

The throttle and shut-off valves types AVT, AV, and CAV, which can be completely blocked, are available in various sizes and belong to the flow valve group. Versions AV...E and CAV are screw-in valves. They generate a pressure drop between inlet and outlet to control the speed of cylinders in accumulator circuits, the flow in control circuits, or can function as a safeguard for a pressure gauge.

The throttles type AV.. restrict the flow via an annular gap i.e. a cone enters a valve seat hole (needle valve). Throttles type CAV create back-pressure by means of a slot with a constant width where the area of opening varies proportionally with the distance of the adjustment travel. Valves using this throttling principle are much less sensitive to contamination. Additional versions are available with an integrated check valve to enable free flow in the opposite direction.



<b>Nomenclature:</b>	Throttle and shut-off valve with or without by-pass check valve
<b>Design:</b>	Individual valve for pipe mounting Screw-in valve
<b>Adjustability:</b>	Manually adjustable (handle, adjusting knob) Tool adjustable
<b>p<sub>max</sub>:</b>	500 ... 630 bar
<b>Q<sub>max</sub>:</b>	50 lpm

## Basic types and general parameters

Basic type and size	Version	Flow Q <sub>max</sub> (lpm) <sup>1)</sup>	Oper. pressure p <sub>max</sub> (bar)	Connection size	Symbol
<b>AV 2</b>	Valve for pipe connection	40	500	G 1/2 (BSPP)	<b>AV, AV.E, AVT, CAV</b> 
<b>AV 3</b>		100	400	G 3/4 (BSPP)	
<b>AV 2E</b>	Screw-in valve	40	500	M 28 x 1.5	<b>CAV..R</b> 
<b>AV 3E</b>		100	400	M 40 x 1.5	
<b>AV 3RE</b>		100	400	M 40 x 1.5	
<b>AVT 6</b>	Valve for pipe connection	12	630	6 mm	<b>CAV.V, AV..R, AV..RE</b> 
<b>AVT 8</b>		25	630	8 mm	
<b>AVT 12</b>		50	630	12 mm	
<b>AVT 16</b>		100	400	16 mm	
<b>CAV 1</b>	Screw-in valve	30	500	M 16 x 1.5	
<b>CAV 2</b>		50	500	M 20 x 1.5	

<sup>1)</sup> This figures do apply with a back pressure of approx. 10 bar (throttled flow direction)

## Additional versions

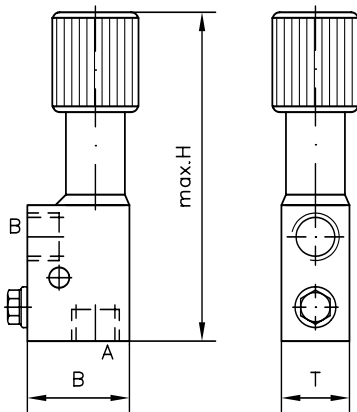
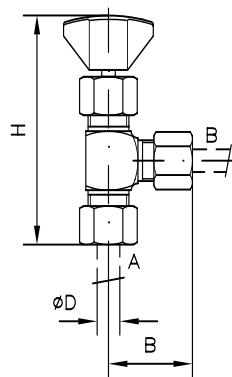
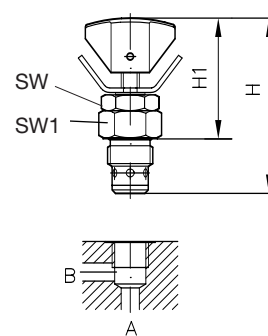
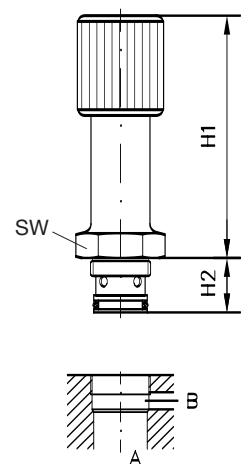
- Shut-off valve AVM 8 with a short pipe at one end

**Order examples****AV 3R**

Throttle and shut-off valve type AV, size 3 with check valve,  
blocked flow direction A → B

**AVT 8**

Throttle and shut-off valve type AVT, with short connection pipe at  
one side diameter 8 mm

**Dimensions****Type AV..****Type AVT..****Type CAV..****Type AV..E**

Basic type	H	B	T	D	m (kg)
AV 2	145	45	30	-	0.6
AV 3	198	60	40	-	1.7
AVT 6	91	31	-	6	0.14
AVT 8	94	32	-	8	0.18
AVT 12	114	38	-	12	0.32
AVT 16	123	43	-	16	0.44

Basic type	H1	H2	M	SW	SW1	m (kg)
CAV 1	42	19	M 16 x 1.5	a/f 17	a/f 22	0.05
CAV 2	51	21	M 20 x 1.5	a/f 22	a/f 24	0.07
AV 2E	115	25	M 28 x 1.5	a/f 36	--	0.6
AV 3E	143	38	M 40 x 1.5	a/f 46	--	1.0

All dimensions are in mm, and subject to change without notice !

**Further information**

- Shut-off valves type AVT D 7690
- Throttles and shut-off valves type AV D 4583
- Throttles and shut-off valves type CAV D 7711
- Throttles and restrictor check valves type ED, RD, RDF D 7540
- Throttles type Q, QR, QV D 7730
- Fine throttle type FG D 7275

- See also section "Devices for special applications"  
(Screw-in valves and installation kits, Devices for up to 700 bar)

For page and section of the devices additionally listed,  
see type index