

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

backpressure 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 (slot type throttle) are less sensitive to micro-contamination.

Additional versions are available with an integrated check valve to enable free flow in the opposite direction.



Nomenclature: Throttle and shut-off valve with or without by-pass check valve

Design: Individual valve for pipe mounting
Screw-in valve

Adjustability: Manually adjustable (handle, adjusting knob)
Tool adjustable

p_{max}: 500 ... 630 bar

Q_{max}: 50 lpm

Basic types and general parameters

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

¹⁾ 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

• Type CAV with connection block for direct pipe connection

Order examples

AV 3R

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

AVT 8

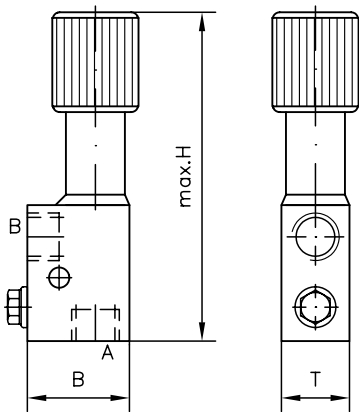
Throttle and shut-off valve type AVT, with short connection pipe at one side diameter 8 mm

CAV 2

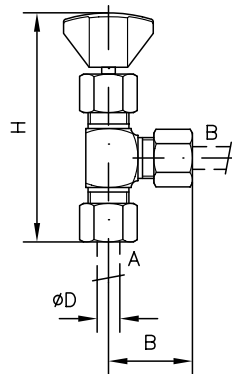
Screw-in throttle and shut-off valve type CAV, size 2

Dimensions

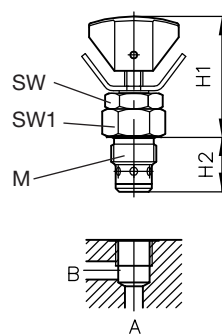
Type AV..



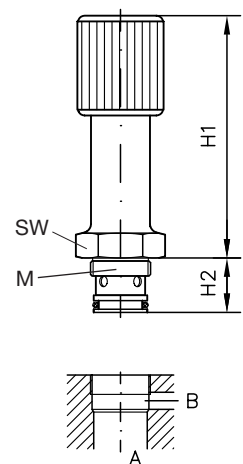
Type AVT..



Type CAV..



Type AV..E



Basic type	H	B	T	ØD	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
- 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