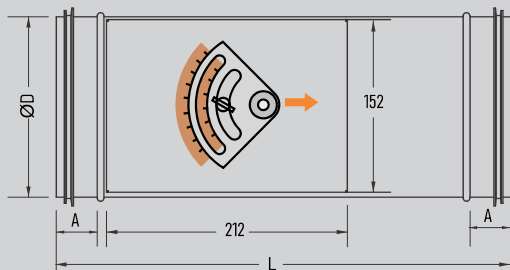


ROUND CAV



SPECIFICATION TEXT

Application

- Round CONTROL CONSTANT FLOW CAV controllers of Type EN for supply air / extract air volume flow control in constant air volume systems
- Mechanical self-powered volume flow control without external power supply
- Simplified project handling with orders based on nominal size

Special characteristics

- Volume flow rate set point can be set from outside by rotary Cam plate
- High control accuracy of the set volume flow
- Any installation orientation
- Correct operation even under un-favourable up stream conditions
- Visual display of damper blade position for operating point optimisation

Nominal sizes

- Ø80 to Ø400 (mm)

Construction

- Galvanised sheet steel
- Powder-coated.

Parts and characteristics

- Ready-to-commission controller
- Damper blade with low-friction bearings
- Bellows that acts as an oscillation damper
- Cam plate with leaf spring

- Rotary knob with pointer and scale for setting the volume flow setpoint value
- Aerodynamic functional testing of each unit on a special test rig prior to shipping
- Visual display of damper blade position for operating point optimisation

Galvanised sheet steel construction

- Casing and damper blade made of galvanised sheet steel
- Leaf spring made of stainless steel
- Polyurethane bellows
- Cam plate and adjusting unit made of galvanised sheet steel

Standards and guidelines

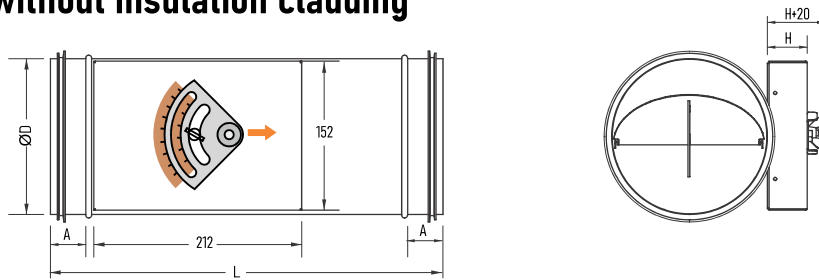
- Casing air leakage tested to EN 1751, class C

Maintenance

- Maintenance-free as construction and materials are not subject to wear

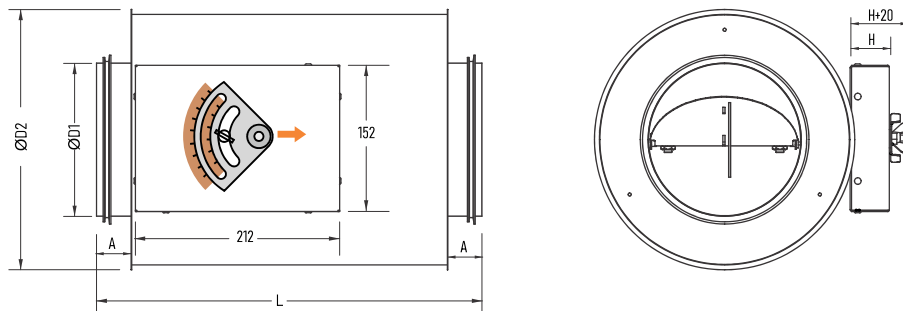
DIMENSION

■ S-CAV - CAV without insulation cladding



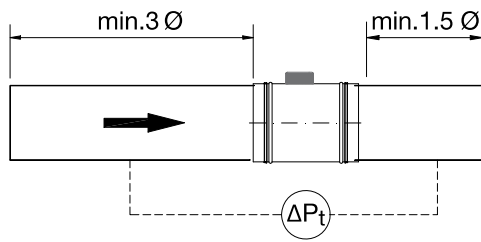
Nominal diameter	D		L	A	Weight
	mm		mm	mm	kg
80	79		300	25	1.4
100	99		300	25	1.8
125	124		300	25	2.0
160	159		300	25	2.5
200	199		300	25	3.0
250	249		400	25	3.5
315	314		400	25	4.8
400	399		400	25	5.7

■ S-CAV(S) - CAV with insulation cladding



Nominal diameter	D1	D2	L	A	Weight
	mm	mm	mm	mm	kg
80	79	181	300	25	2.2
100	99	200	300	25	3.6
125	124	220	300	25	4.0
160	159	262	300	25	5.0
200	199	300	300	25	6.0
250	249	356	400	25	7.3
315	314	418	400	25	9.8
400	399	500	400	25	11.8

PRODUCT DATA SHEET


CAV Operating Range

Vk min @ 2.0 m/s - Vk max @ 12 m/s
 P@ 50 - 1000 Pa. Temp. @ 10-80° C

Air Flow Recommendation

Ø (mm)	Q (m ³ /h)		ΔPt min (Pa)	Ø (mm)	Q (m ³ /h)		ΔPt min (Pa)
80	Qmin	40	50 <P< 1000	250	Qmin	450	50 <P< 1000
	Qmax	162	110 <P< 1000		Qmax	1200	135 <P< 1000
100	Qmin	100	50 <P< 1000	315	Qmin	700	50 <P< 1000
	Qmax	250	110 <P< 1000		Qmax	2100	220 <P< 1000
125	Qmin	100	50 <P< 1000	355	Qmin	900	50 <P< 1000
	Qmax	350	80 <P< 1000		Qmax	2600	220 <P< 1000
160	Qmin	180	50 <P< 1000	400	Qmin	1000	50 <P< 1000
	Qmax	600	100 <P< 1000		Qmax	3400	220 <P< 1000
200	Qmin	250	50 <P< 1000				
	Qmax	900	125 <P< 1000				

On request other sizes available

Sound Power Level

Ø (mm)	Q (m ³ /h)	Lw (dB)			Ø (mm)	Q (m ³ /h)	Lw (dB)		
		100 Pa	250 Pa	500 Pa			100 Pa	250 Pa	500 Pa
80	40	32	50	53	250	450	47	59	65
	75	42	54	58		700	49	59	66
	144	48	58	60		1060	51	59	67
	162	50	62	63		1325	52	61	67
100	70	43	50	55	315	700	48	60	66
	110	46	54	60		1120	50	59	67
	170	49	58	64		1680	54	60	67
125	210	50	60	65	355	2100	57	62	67
	110	44	51	56		890	49	61	67
	175	47	55	61		1425	50	61	66
	265	49	58	65		2150	56	62	68
160	330	51	60	66	400	2600	61	64	70
	180	45	54	60		1130	50	62	68
	290	48	57	63		1800	51	61	66
	435	49	58	65		2700	61	63	68
200	540	51	59	66	3400	3400	65	66	71
	280	46	57	64					
	450	48	59	66					
	680	50	59	67					
	850	51	59	67					

Installation and commissioning

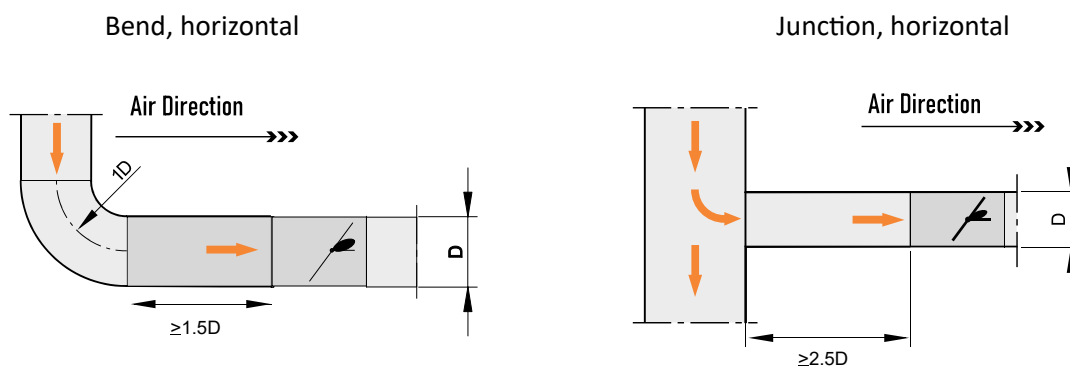
- Any installation orientation (from H = 500 mm, the horizontal air duct must be installed so that the operating side is positioned to the side (right / left) or below)
- Equipotential bonding to be provided by others
- Volume flow rate setpoint can be set from outside by rotary knob
- Loosen and lock the rotary knob with hexagonal socket screw
- No repeat measurements or adjustments required during commissioning
- For constructions with acoustic cladding, ducts on the room side should have cladding up to the acoustic cladding of the controller

Upstream conditions

The volume flow rate accuracy Δq_v applies to straight upstream. Bends, junctions or a narrowing or widening of the duct cause turbulence that may affect measurement. Duct connections, e.g. branches off the main duct, must comply with EN 1505. Free air intake only with a straight duct section of 1.5B or 1.5H upstream.

Space required for commissioning and maintenance

Sufficient space must be clear near to allow for commissioning and maintenance. If necessary, inspection openings of sufficient size are required.



The stated volume flow rate accuracy Δq_v can only be achieved with a straight duct section of at least 1.5D upstream between any bend and the controller.

A junction causes strong turbulence. The stated volume flow rate accuracy Δq_v can only be achieved with a straight duct section of at least 2.5D upstream. If there is no straight upstream section at all, the control will not be stable, even with a perforated plate.

■ ORDERING CODE : S-CAV / S-CAV(S) - DN

- S-CAV : Round CAV, without insulation cladding
- S-CAV(S) : Round CAV, with insulation cladding
- DN = Diameter : 80/100/125/160/200/250/315/400