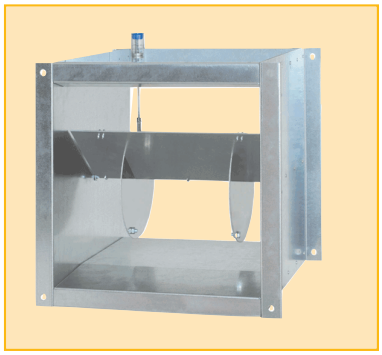
SQUARE VOLUME FLOW CONTROLLER
SVC



Application

Adjustable self-regulating constant air volume control damper in galvanized steel.
To be used to regulate airflows at pressures between 20 and 1000 Pa and temperature ranges between -30°C and 100°C.
Big sizes will consist of double valves.
Desired air volume should always be mentioned when ordering.

For air volume regulation in rectanglar ventilation and air-conditioning systems

Material

- Galvanized steel housing
- Aluminium regulation blade whith piston and spring

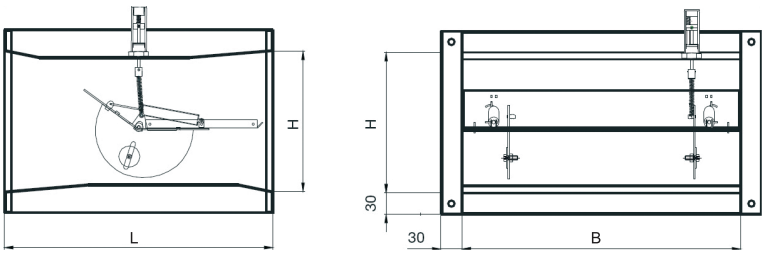
Colour

galvanized steel

Composition

- Rectangular housing made out of galvanized steel in standard duct sizes with flange 30 mm
- Balanced self-regulating aluminium blade with PTFE bearing and piston to prevent oscillations

Installation dimensions



All dimensions in mm

B mm		H mm		L mm
from	to	from	to	
150	200	150	200	220
201	250	150	200	220
		201	250	385
251	300	150	200	220
		201	250	385
		251	300	385
301	350	150	200	220
		201	250	385
		251	300	385
351	400	150	200	220
		201	250	385
		251	300	385
401	500	200	250	385
		251	300	385
501	600	200	300	385

B mm	H mm	L mm
200	100	220
300	100	220
400	100	220
400	400	385
500	400	385
600	400	385
500	500	425
600	500	425
600	600	470

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Mounting

- to be joined at both sides with the rectangular ductwork
- horizontal or vertical mounting

Accessories

Stainless steel models and insulation shells available upon request

- The constant volume control damper shall be of the rectangular type, made of galvanised steel and to be joined at both ends with rectangular ductwork. They shall contain a self-regulating valve, piston an stainless steel spring. the valves shall be used for a pressure range between 20 and 1000 Pa.
- Grada type SVC

How to order

Square Volume flow Controller, with length 100 mm and height 200 mm, for an air volume of 500 m³/h.

S	V	C	0	5	0	0	0	4	0	0	0	2	0	0
			Air Volume				L				H			

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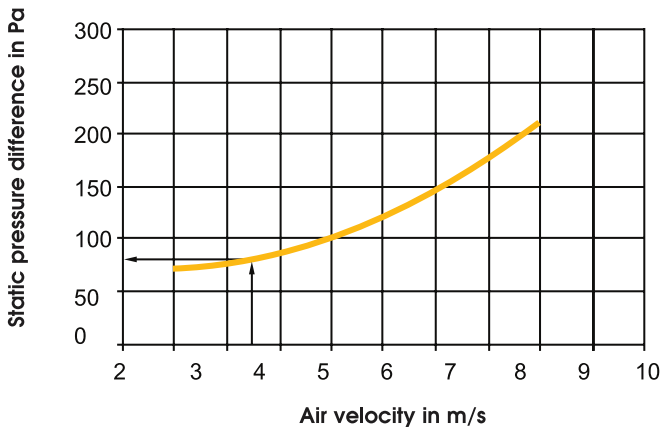
Minimum static pressure difference at the controller



Example:

Given: width 250 mm
height 200 mm
volume flow 810 m³/h
(= air velocity 4.5 m/s)

Min. static pressure difference Δp in Pa?

Solution:
Δp = 80 Pa

Air flow noise, generated by the controller

Width (mm)	Height (mm)	Velocity (m/s)	Volume flow (m³/h)	Static Pressure difference (Pa)																											
				100 Pa									250 Pa									500 Pa									
				Lw(dB)								Lp	Lw(dB)								Lp	Lw (dB)								Lp
				63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	
150	150	3	243	49	48	47	45	43	41	39	36	49	57	56	55	53	51	49	47	44	57	63	62	61	59	57	55	53	50	63
		6	486	54	54	52	51	49	48	45	43	55	62	61	60	59	57	55	53	51	63	68	67	66	65	63	62	59	57	69
		9	729	57	56	56	54	53	51	49	47	58	65	64	63	62	61	59	57	55	66	71	70	69	68	67	65	63	61	72
300	150	3	486	52	50	49	47	45	43	40	37	50	60	58	57	55	53	51	48	45	58	66	64	63	61	59	57	54	51	64
		6	972	56	56	54	53	51	49	47	44	57	64	64	62	61	59	57	55	52	65	70	70	68	67	65	63	61	58	71
		9	1458	59	59	58	56	55	53	51	48	60	67	66	66	64	63	61	59	56	68	73	73	72	70	69	67	65	62	74
200	200	3	432	52	50	49	47	45	43	40	37	50	60	58	57	55	53	51	48	45	58	66	64	63	61	59	59	57	54	64
		6	864	56	56	54	53	51	49	47	44	57	64	64	62	61	59	57	55	52	65	70	70	68	67	65	63	61	58	71
		9	1296	59	59	58	56	55	53	51	48	60	67	66	66	64	63	61	59	56	68	73	73	72	70	69	67	65	62	74
300	200	3	648	53	52	50	48	46	44	41	38	51	61	60	58	56	54	52	49	46	59	67	66	64	62	60	58	55	52	65
		6	1296	58	57	56	54	52	50	48	45	58	66	65	64	62	60	58	56	53	66	72	71	70	68	66	64	62	59	72
		9	1944	61	60	59	57	56	54	52	49	61	69	68	67	65	64	62	59	57	69	75	74	73	71	70	68	65	63	75
400	200	3	864	54	52	51	49	47	44	41	38	52	62	60	59	57	55	52	49	46	60	68	66	65	63	61	58	55	52	66
		6	1728	59	58	56	55	53	51	48	45	58	67	66	64	63	61	59	56	53	66	73	72	70	69	67	65	62	59	72
		9	2592	61	61	60	58	56	54	52	49	62	69	69	68	66	64	62	60	57	70	75	75	74	72	70	68	66	63	76
300	300	3	972	54	53	51	49	47	45	42	39	53	62	61	59	57	55	53	50	47	61	68	67	65	63	61	59	56	53	67
		6	1944	60	58	57	56	54	51	49	46	59	67	66	65	63	62	59	57	54	67	74	72	71	69	68	65	63	60	73
		9	2916	62	62	60	59	57	55	53	50	63	70	69	68	67	65	63	61	58	71	76	75	74	73	71	69	67	64	77
450	300	3	1458	56	54	53	50	48	46	43	39	54	64	62	60	58	56	53	51	47	62	70	68	67	64	62	59	57	53	68
		6	2916	61	60	58	57	55	52	50	47	60	69	68	66	65	63	60	58	55	68	75	74	72	71	69	66	64	61	74
		9	4374	64	63	62	60	58	56	54	51	64	72	71	70	68	66	64	62	59	72	78	77	76	74	72	70	68	65	78
600	300	3	1944	56	55	53	51	49	46	43	40	54	64	63	61	59	57	54	51	48	62	70	69	67	65	63	60	57	54	68
		6	3888	62	60	59	57	55	53	50	47	61	70	68	67	65	63	61	58	55	69	76	74	73	71	69	67	64	61	75
		9	5832	65	64	62	61	59	57	54	51	64	73	72	70	69	67	65	61	59	72	79	78	76	75	73	71	68	65	78

Lw = Noise level in dB (ref: 10-12 W)
Lp = Sound pressure level in dB (A) at 8 dB (A) local soundproofing

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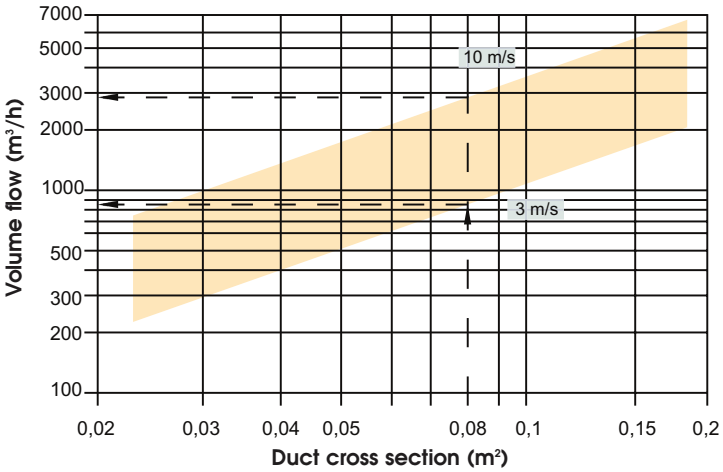
Volume flow against duct cross-section



Example:
Given: width 400 mm
height 200 mm
duct cross section 0.08 m²

Which volume flow is possible?

Solution:
V at 3 m/s = 865 m³/h
V at 10 m/s = 2880 m³/h

Air velocity between 3 m/s and 10 m/s

Correction data for calculation of the radiating noise of a pipe 6 m length with built-in volume flow controller

Width (mm)	Height (mm)	Duct without insulation								Duct with 30 mm insulation shell							
		Correction values in dB/octave								Correction values in dB/octave							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
150	150	0	2	2	3	4	6	7	8	0	4	6	11	14	17	17	17
300	150	0	4	5	6	8	9	11	11	0	6	9	14	18	20	21	20
200	200	0	2	2	3	4	6	7	8	0	4	6	11	14	17	17	17
300	200	0	4	5	6	8	9	11	11	0	6	9	14	18	20	21	20
400	200	0	4	5	6	8	9	11	11	0	6	9	14	18	20	21	20
300	300	0	3	4	5	6	8	9	11	0	5	8	13	16	19	19	20
450	300	0	4	4	6	7	9	10	12	0	6	8	14	17	20	20	21
600	300	0	4	4	6	7	9	10	12	0	6	8	14	17	20	20	21