

- Circular
- Galvanized steel
- Motorized 24V or 230V



Motorized Constant air volume control dampers type VRS-LP-M

Motorized CAV controllers for flow control at 2 constant air flows. The minimum and maximum flow can easily be set. To be used for controlling the airflow at a pressure between 40 and 500 Pa.

Application

- For flow control in ventilation and air conditioning systems at 2 set flow rates (V_{min} - V_{max}) with the following duct sizes and air volumes
 - Ø80: adjustable between 25 & 80 m³/h
 - Ø100: adjustable between 40 & 125 m³/h
 - Ø125: adjustable between 65 & 220 m³/h
 - Ø160: adjustable between 100 & 350 m³/h
 - Ø200: adjustable between 160 & 500 m³/h
 - Ø250: adjustable between 240 & 800 m³/h
- Accuracy: +/- 10% of the set air volume

Material

- Galvanized steel housing
- Aluminium regulation blade with piston and spring
- Mechanism for positioning with scale for setting the minimum and maximum air flow

Composition

- Round housing made out of laser welded galvanised steel in standard duct sizes according to DIN EN 12237
- Airtight connection up to class D with EPDM rubber according to DIN EN 12237
- Balanced self-regulating aluminium blade with PTFE bearing and piston to prevent oscillations
- Servomotor 24V or 230V for V_{min} - V_{max} flow setting with mechanical end stops.

Technical data

- Nominal voltage: AC / DC 24 V or AC 230 V
- Nominal frequency: 50/60 Hz
- Power consumption Ø80 - Ø250
 - In operation: 1.5 W @ nominal torque CM230-L / 0.5 W @ rated torque CM24-L
 - At rest: 1 W CM230-L / 0.2 W CM24-L

- For measuring wires: 3 VA CM230-L / 1 VA CM24-L
 - Cable 1m, 3 x 0.75 mm²
- Direction of rotation: depending on circuit CW or CCW
- Angle of rotation: limited on both sides by adjustable, mechanical end stops. The actuator is protected against overload, requires no limit switches and stops automatically when the end stop is reached
- Torque CM-L: 2 Nm
- Rotation time CM-L: 75 s / 90°
- Noise level: max. 35 dB (A)
- Designation position: mechanical, pluggable
- Integrated magnet for manual operation (magnetic gear release)
- Protection level: IP54 in every mounting position
- Ambient temperature range of servomotor during operation: -30 ... 50 ° C

Mounting

- Set minimum and maximum flow rates by setting the mechanical end stops of the servomotor according to the scale
- To be inserted at both sides into a round duct and to be equipped with a silencer if necessary
- Horizontal or vertical mounting

Accessories

- Insulation shells available upon request

Text for tender

- The regulation of the airflow of the duct network is done by means of motorized valves for constant air volume control for Vmin - Vmax switching. The round control valves are constructed from a galvanized steel laser welded tunnel in which an aluminum control valve with rotating blade is incorporated. It controls the airflow with a constant flow rate within an operating range between 40Pa and 500Pa. The regulator is resistant to varying pressures in the duct and is provided with an airtight maintenance-free bearing made of PTFE. The air flow rate is preset at the factory, but can be adjusted manually. The calibrated scale outside the regulator allows very accurate adjustment of the flow. The valves are available in duct diameters 80, 100, 125, 160, 200 and 250. The control valves are mounted between 2 channels where a rubber double lip seal provides an air-tight connection to air-tightness class D with the duct.

- **Cairox** Type **VRS-LP-M**

Order example

- **VRS-LP-M, 125, 24V**

Explanation

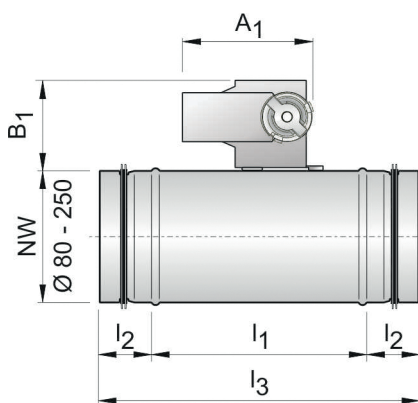
VRS-LP-M = Type of constant air valve

125 = Duct diameter

24V = With actuator CM24-L (24V)

Other available products

- Stainless steel models available on request



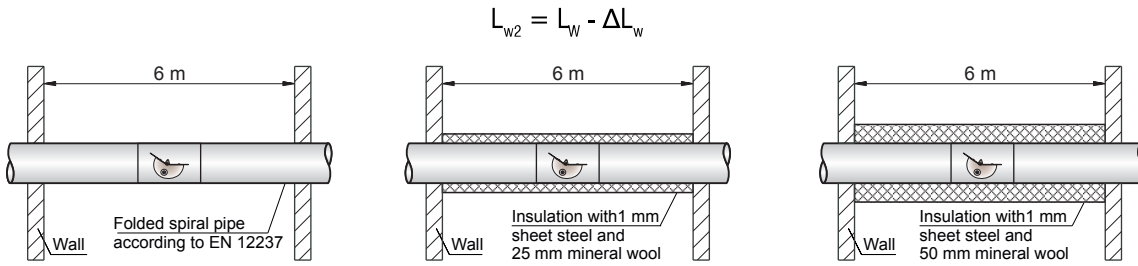
VRS-LP-M	Dimensions				
	ØD [mm]	L1 [mm]	L2 [mm]	A1 [mm]	B1 [mm]
80	79	140	40	158	105
100	99	170	40	158	105
125	124	170	40	158	105
160	159	240	40	158	105
200	199	240	40	158	105
250	249	240	40	158	105

Sound data											
Ø	v [m/s]	Q [m³/h]	Lw [dB/Oct] - 100 Pa								Lw(A)
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	1.4	25	29	33	32	32	32	33	28	27	37
	2.9	52	39	39	37	36	35	36	31	30	41
	4.4	80	48	46	43	41	39	39	33	31	44
100	1.4	40	32	34	34	33	33	34	29	27	39
	2.9	82	46	43	40	37	35	35	28	27	41
	4.4	125	50	48	45	42	40	40	33	32	45
125	1.5	65	35	36	36	35	35	36	30	29	41
	3.2	142	48	46	42	39	37	37	30	29	43
	5	220	52	50	47	44	42	42	36	34	48
160	1.4	100	37	38	38	37	36	36	30	28	41
	3.1	225	49	47	43	40	38	37	31	29	43
	4.8	350	53	51	48	45	43	42	36	35	48
200	1.4	160	40	41	40	38	38	37	31	29	43
	2.9	330	50	47	44	40	38	37	30	29	43
	4.4	500	54	51	48	45	43	42	36	34	48
250	1.4	240	42	42	41	39	38	38	31	28	43
	2.9	520	51	48	45	41	39	38	31	29	44
	4.5	800	55	53	49	46	44	43	37	35	49
Lw [dB/Oct] - 250 Pa											
Ø	v [m/s]	Q [m³/h]	Lw [dB/Oct] - 250 Pa								Lw(A)
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	1.4	25	38	40	40	40	41	42	36	35	46
	2.9	52	40	43	44	45	46	49	44	44	53
	4.4	80	51	51	50	48	48	49	44	44	54
100	1.4	40	41	42	42	42	42	43	38	36	48
	2.9	82	50	49	48	46	45	46	40	40	51
	4.4	125	53	53	51	50	50	50	45	45	55
125	1.5	65	43	45	45	44	44	45	39	37	49
	3.2	142	52	52	50	49	48	48	43	42	53
	5	220	61	59	56	53	51	51	44	43	56
160	1.4	100	46	47	46	45	45	45	39	37	50
	3.1	225	54	54	52	50	49	49	43	42	54
	4.8	350	62	60	57	54	52	51	45	43	57
200	1.4	160	48	49	48	47	46	46	40	38	51
	2.9	330	56	55	52	50	49	49	43	42	55
	4.4	500	59	58	56	54	54	54	48	47	59
250	1.4	240	51	51	50	48	47	47	40	37	52
	2.9	520	57	56	54	52	50	50	44	43	56
	4.5	800	61	60	58	56	55	55	49	48	60
Lw [dB/Oct] - 500 Pa											
Ø	v [m/s]	Q [m³/h]	Lw [dB/Oct] - 500 Pa								Lw(A)
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	1.4	25	45	47	47	47	47	48	43	42	53
	2.9	52	46	49	50	52	53	55	51	51	59
	4.4	80	57	57	56	55	55	56	51	50	60
100	1.4	40	47	49	49	49	49	50	44	43	54
	2.9	82	50	52	53	54	55	57	52	52	61
	4.4	125	59	59	58	57	56	57	52	51	62
125	1.5	65	50	52	51	51	51	51	45	44	56
	3.2	142	53	55	56	57	57	59	54	54	63
	5	220	62	62	60	59	59	59	54	53	64
160	1.4	100	53	54	53	52	52	52	45	44	57
	3.1	225	56	58	58	59	59	60	55	54	65
	4.8	350	64	64	62	60	60	60	55	54	65
200	1.4	160	55	56	55	54	53	53	46	44	58
	2.9	330	58	60	60	60	60	61	55	54	65
	4.4	500	65	65	63	61	60	61	55	54	66
250	1.4	240	57	58	56	55	54	53	46	44	59
	2.9	520	61	62	62	62	61	62	56	55	67
	4.5	800	67	67	65	63	62	62	56	55	67

Symbols and specifications

- Q [m³/h] = Air volume in m³/h
- Ø = Duct diameter in mm
- 100Pa, 250Pa of 500Pa = Static pressure in Pa
- Lw[dB/Oct] = Generated sound power in the duct divided into dB per octave band

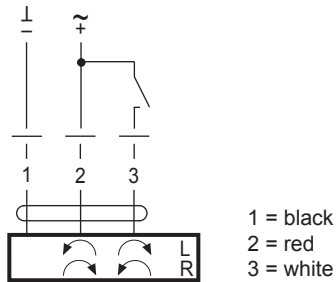
Radiated sound data									
Ø	ΔLw [dB/Oct] - non insulated duct								
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	36	33	32	23	17	12	11	11	
100	34	32	30	22	16	12	11	10	
125	29	29	31	24	21	19	15	11	
160	23	23	20	18	11	10	9	8	
200	22	19	16	16	15	11	9	8	
250	19	16	13	12	12	10	9	8	
Ø	ΔLw [dB/Oct] - insulated duct (25mm)								
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	39	35	39	35	32	33	34	29	
100	38	35	38	34	31	33	34	28	
125	35	33	37	36	32	33	36	27	
160	27	26	28	29	27	31	31	25	
200	23	18	23	26	29	29	29	24	
250	23	18	20	24	26	30	28	24	
Ø	ΔLw [dB/Oct] - insulated duct (50mm)								
	63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
80	42	37	45	46	47	54	56	47	
100	41	38	46	45	47	54	57	47	
125	35	36	42	48	51	60	58	45	
160	29	28	35	40	44	51	54	44	
200	26	22	29	37	42	51	53	43	
250	25	20	26	35	41	50	52	42	



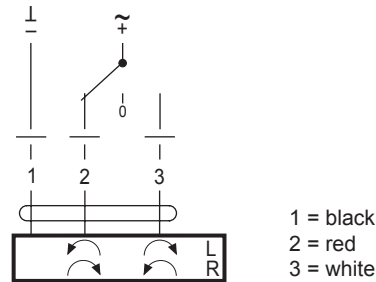
$L_{w2} = L_w - \Delta L_w$
 L_{w2} = Case radiated noise in dB
 L_w = Sound power given for the frequencies f [Hz] from 63 up to 8000 Hz
 ΔL_w = Correction values for case radiated noise in dB

Wiring diagram

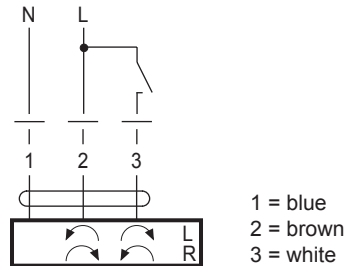
AC/DC 24 V, open-close



AC/DC 24 V, 3-point



AC 230 V, open-close



AC 230 V, 3-point

