Our passion.

In one breath.

Perfect volume flow control made easy.

NEW

Volume flow controller

- Electronic, round
- Type VRSE
- Controllers and actuators from different manufacturers according to customer requirements

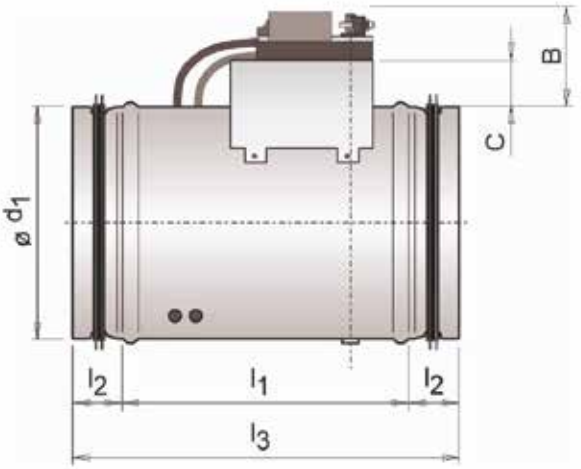
Simple, comfortable, precise and reliable as usual in control behavior for perfect room air control.

MADE IN GERMANY

AS AEROTECHNIK SIEGWART

Variable volume flow controller:
Easy control and regulation via electronic controller.

The volume flow controller type VRSE is a cost-effective alternative to the volume flow controller of type VRME. It is used for pressure-independent control of variable volume flows in supply air and exhaust air systems. The volume flow controller consists of a control damper, which at the same time can also serve as a shut-off damper, and two measuring sticks that are integrated in the casing as well as the electronic control components.



Dimensions:

- Ø 80 mm
- Ø 100 mm
- Ø 125 mm
- Ø 140 mm
- Ø 150 mm
- Ø 160 mm
- Ø 180 mm
- Ø 200 mm
- Ø 224 mm
- Ø 250 mm
- Ø 280 mm
- Ø 315 mm
- Ø 355 mm
- Ø 400 mm

Executions:

- Galvanized steel
- Stainless steel AISI 316

Options:

- 25 or 50 mm insulation shell for reduction of radiated noise
- Silencer to reduce the flow noise
- Connection on both sides with flat flange or board (standard: push-fit ends with double lip sealing)

For information on radiation noise and flow noise, please refer to the VRSE brochure.

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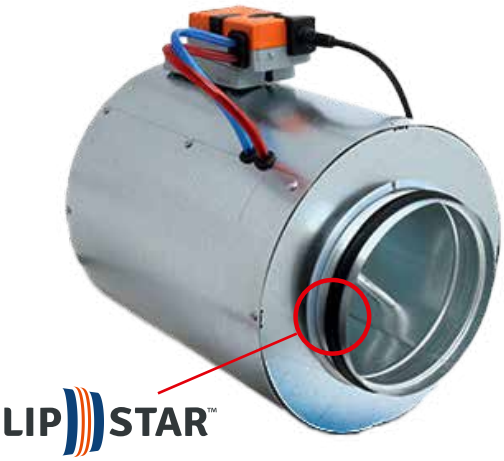


Product advantages

- Parallel arranged measuring rods ensure little air resistance and noise development
- Fast delivery times

Product information:

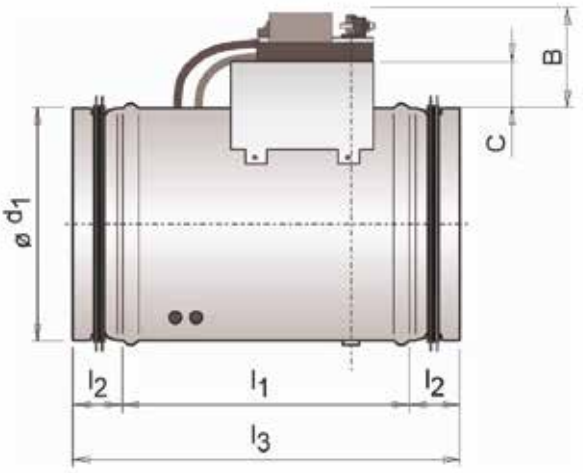
- The differential pressure measurement is carried out by measuring rods with 2 to 8 measuring points. These are aligned using the method of centroidal axis.
- Factory preset and programmed according to the customer's requested airflow.
- The preset minimum and maximum airflows can be subsequently adjusted by the customer.
- Push-fit ends are airtight according to DIN 12237 Class D withLipstar double lip sealing made of EPDM.
- Sealing of the control damper made from silicone.
- Aluminum sensor tubes.
- Ventilation testing of each device on the test bench
- Bearings and damper blade holders made of plastic

Technical data

- Nominal sizes: 80-400 mm
- Volume flow range: 25-5.400 cmh
- Volume flow control range: approx. 12 - 100% of the nominal volume flow
- Differential pressure range: 20 – 1.000 Pa
- Temperature range: 0 - 50 °C
- Air velocities of 1.4 - 12.0 m/s
- airtight according to EN 1751 class 4 when control damper is completely closed
- Housing leakage according to EN 1751 class C

Functionality:

The flow speed is determined and recorded via the measuring sticks and a differential pressure sensor. The differential pressure sensor gives the determined speed as an electrical signal to the control unit.
The control unit compares this signal with the setpoint and adjusts the actuator accordingly.



Dimensions – Volume flow

Nominal diameter Ød1 (mm)	Selectable velocity V (m/s)	Nominal volume flow Vnenn (m³/h)	max. static pressure difference Δp (Pa)	Dimensions (mm)					Weight
				l1	l2	l3	B Article no. 610	C	Article no. 610 (kg)
80	1,4-12,2	25-220	1000	298	40	373	90	25	1,4
100	1,4-12,0	40-340	1000	298	40	373	90	25	1,6
125	1,4-12,0	60-530	1000	298	40	373	90	25	1,8
140	1,4-12,0	80-660	1000	298	40	373	90	25	1,9
150	1,4-12,0	90-760	1000	298	40	373	90	25	2,1
160	1,4-12,0	100-870	1000	308	40	383	90	25	2,2
180	1,4-12,0	130-1100	1000	318	40	393	90	25	2,5
200	1,4-12,0	160-1360	1000	328	40	403	90	25	2,8
224	1,4-12,0	200-1700	1000	353	40	428	90	25	3,3
250	1,4-12,0	250-2120	1000	363	40	438	90	25	3,7
280	1,4-12,0	310-2660	1000	393	60	508	90	25	4,5
300	1,4-12,0	360-3050	1000	423	60	538	90	25	5,5
315	1,4-12,0	400-3360	1000	423	60	538	90	25	6,1
355	1,4-12,0	500-4280	1000	533	60	648	90	25	7,5
400	1,4-11,9	650-5400	1000	505	80	660	90	25	8,9

Control accuracy

The controller operates from the minimum response pressure up to the maximum pressure difference of 1.000 Pa. The volume flow deviation over this entire pressure range is ± 10% (up to 100 m3/h ± 10m3/h).

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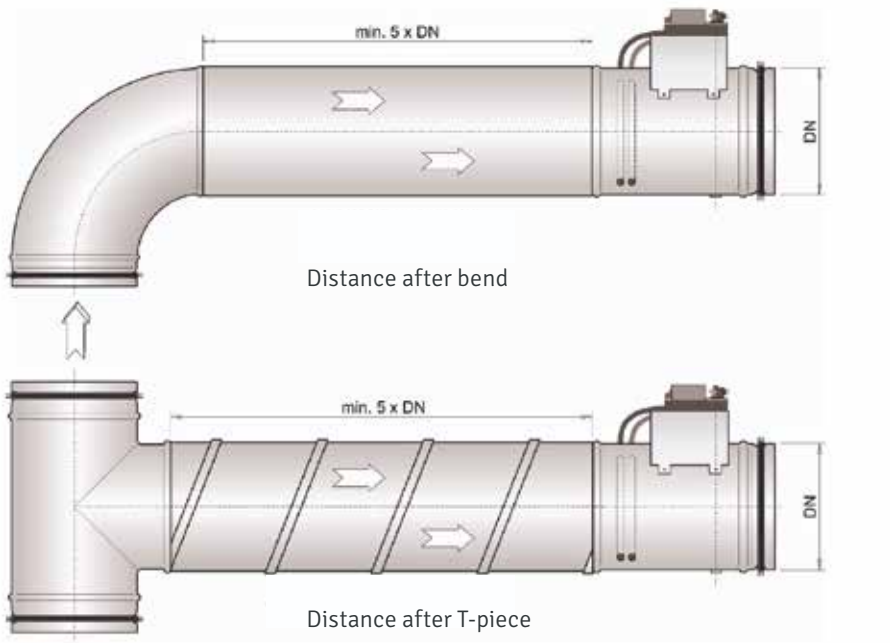
Installation instructions:

For optimal function of the volume flow controller the inflow section should not be less than 5 x DN after branches or deflections.



Maintenance:

All components are maintenance-free, age-resistant and corrosion resistant under normal conditions. According to DIN EN 12097, accessibility to the duct system and the volume flow controllers must be provided for possible adjustment and maintenance. Furthermore, the manufacturer's information and manual apply for the servomotors and controllers.

Tender text:

Manufacturer: AEROTECHNIK E. Siegwart Type: VRSE, no. 610

Circular electronic volume flow controller for regulating of variable volume flows in the ventilation system, with a compact form with a housing made from galvanized steel, laser-welded without overlapping, with measuring sticks made from aluminum and mounted actuator and controller; control plate with non-ageing silicone sealing, spigot ends with lip sealing made from EPDM, shaft feedthrough of the control plate located in maintenance-free and airtight crewing, in flow direction airtight according to DIN EN 1751 class 4 for pressure up to 1000 Pa, volume flow range 12:1,4; airtightness of spigot connection according to DIN 12237 class D, leakage of housing according to DIN EN 1751 class C. Flow rate factory preset and/or programmed and tested for function.

15 nominal diameters 80 – 400 mm

Range of temperature: 0°C to +50° C

Volume flow range: 25 – 5.400 cmh depending on the manufacturer of the controller

Differential pressure range: 20 to 1.000 Pa

Air velocity: about 1,4 to 12 m/s

Add-on components:

Electronic compact controller
Belimo LMV-D3-MP (5Nm) up to NW 450

Supply voltage 24 V AC/DC, 50/60 Hz

Dynamic pressure sensor

Command signal 2V-10V

Adjustable volume flow „Vmin", „Vmax" or „Closed"

Possible adjustment of the preset volume flow by the customer.

Electronic or pneumatic variable volume flow controller

Article No.	No. Type	Make and controller type	Measuring method of pressure sensor	adjustable volume flow		command signal
				V_{min}	V_{max}	
601	VRSE	**Belimo** Controller, sensor and motor up to NW 355 LMV-M1-MP (5 Nm), NW 400 NMV-M1-MP (10 Nm) compact controller	static	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V MP-Bus
602	VRSE	**Belimo** Controller, sensor and motor up to NW 355 LMV-M1-MOD (5 Nm) NW 400 NMV-M1-MOD (10 Nm) compact controller	static	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V MOD-Bus, BACnet, MP-Bus
603	VRSE	**Sauter** Controller, sensor and motor up to NW 355 ASV205BF132E (5 Nm) NW 400 ASV215BF132E (10 Nm) compact controller	static	20% - 80%* V_{nenn} (Vmin ≤ Vmax)	30% - 100% V_{nenn}	0V-10V static BACnet
607	VRSE	**Siemens** Controller, sensor and motor up to NW 355 GDB 181.1E/3 (5 Nm) NW 400 GLB 181.1E/3 (10 Nm) compact controller	dynamic	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	0V-10V
610	VRSE	**Belimo** Controller, sensor and motor up to NW 355 LMV-D3-MP (5 Nm) NW 400 NMV-D3-MP (10 Nm) compact controller	dynamic	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V MP-Bus
612	VRSE	**Schischek** Controller and sensor ExReg-V300-A Motor type ExMax-5.10-CY (5/10 Nm)	static	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	30% - 100% V_{nenn}	0V-10V
613	VRSE	**Sauter** Controller type RLP 10 to NW 250 Motor type AK 31 P (1.8 Nm) from NW 280 motor type AK 41 P (3 Nm) from NW 355 motor Type AK 42 P (10 Nm)	static	20% - 80%* V_{nenn} (Vmin ≤ Vmax)	30% - 90% V_{nenn}	0,2 bar - 1 bar
614	VRSE	**Sauter** Controller, sensor and motor ASV215BF152E (10 Nm) Compact controller (3-15 sec)	static	20% - 80%* V_{nenn} (Vmin ≤ Vmax)	30% - 100% V_{nenn}	0V-10V
615	VRSE	**Belimo** Controller and sensor VRU-D3-BAC up to NW 355 LM24A-VST(5 Nm, 120 s) NW 400 NM24A-VST (10 Nm, 120 s) Universal regulator	dynamic	15% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V BACnet, MOD-Bus, MP-Bus
616	VRSE	**Belimo** Controller and sensor VRU-D3-BAC up to NW 355 LMQ24A-VST (4 Nm, 2.4 s) NW 400 NMQ24A-VST (8 Nm, 4 s) Universal regulator	dynamic	15% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V BACnet, MOD-Bus, MP-Bus
617	VRSE	**Belimo** Controller and sensor VRU-M1-BAC up to NW 355 LM24A-VST (5 Nm, 120 s) NW 400 NM24A-VST (10 Nm, 120 s) Universal regulator	static	15% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V BACnet, MOD-Bus, MP-Bus
618	VRSE	**Belimo** Controller and sensor VRU-M1-BAC up to NW 355 LMQ24A-VST (4 Nm, 2.4 s) NW 400 NMQ24A-VST (8 Nm, 4 s) Universal regulator	static	15% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V BACnet, MOD-Bus, MP-Bus
619	VRSE	**Belimo** Controller, sensor and motor up to NW 355 LMV-D3-MOD (5 Nm) NW 400 NMV-D3-MOD (10 Nm) Compact controller	dynamic	0% - 100%* V_{nenn} (Vmin ≤ Vmax)	20% - 100% V_{nenn}	2V-10V Modbus, BACnet, MP-Bus

*It is important to ensure that the minimum air velocity in the duct is 1.4 m/s