

WVK2 Volume Flow Rate Controllers

Introduction

WVK2 volume flow rate controllers for air conditioning and ventilation systems, suitable for vertical and horizontal installation in supply and exhaust ducts. The casing and control mechanism are made of galvanised sheet steel. The centrally supported damper blade, which controls the volume flow rate, has a stainless steel bearing axis in special bushings. Adjustment device with rotary pointer, scale and lock for the volume flow rate set point and can be adjusted manually or by actuator.

WVK2 Volume Flow Rate Controllers are mechanical controllers for constant volume flow rates and do not require an auxiliary power supply. A special control mechanism guarantees control accuracy over the entire volume flow range. Within this control range, specified at V_{min} and V_{max} , the set point for the required volume flow rate is adjustable.

The volume flow rate is maintained constant at varying pressures within the specified pressure range, with an approximate deviation of between $\pm 5\%$ and $\pm 15\%$ with greater deviations at lower flow rates, especially on the smaller sizes.



Product Description

- WVK2 Volume flow rate controllers are mechanical controllers that provide a constant volume flow rate in ventilation and air conditioning installations.
- WVK2/-/M Volume flow rate controller with actuator-driven adjustment of the volume flow rate set point.
- WVK2/-/DS Volume flow rate controller with acoustic insulation for the reduction of external sound radiation.

Features

- Volume flow range: 200 to 7000 m³/h
- Pressure range: 50 To 1000 Pa
- Leak tightness classification: B in accordance with EN 1751
- Internal temperature range: -20 to +70°C, 90°C for a short time only



Options

- Actuator-driven setting to two volume flow rate set points with 230V~ or 24V \cong power supply
- Continuous actuator-driven setting to any desired volume flow set point with 24V \cong power supply
- External acoustic insulation with sheet metal jacket

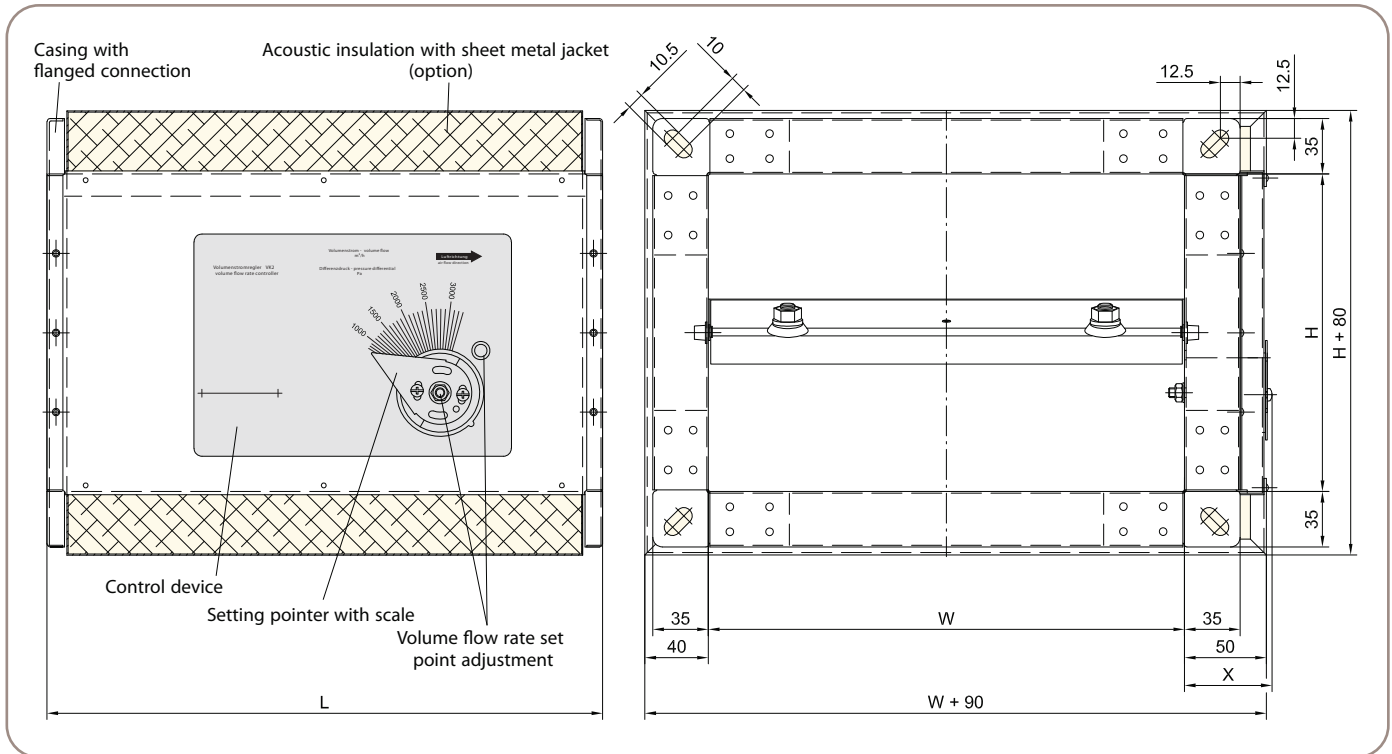


Order Example

WVK2/200/100/M1/DS

Type _____
 Width _____
 Height _____
 Actuator _____
 Acoustic Insulation _____

WVK2 Volume Flow Rate Controllers



- Sizes (50 - 1000 Pa) see chart

Width W [mm]	Height H [mm]	Length L [mm]	Volume flow rate	
			V_{min} [m ³ /h]	V_{max} [m ³ /h]
200	100	300	200	800
	150	325	250	1200
	200	425	350	1550
300	100	300	250	1200
	150	325	350	1650
	200	350	500	2100
	250	450	600	2800
400	300	500	750	3500
	200	375	700	3300
	250	450	800	3700
500	300	500	1000	4250
	200	375	875	4125
	250	400	1000	4375
600	300	500	1200	5200
	200	350	1125	4750
	250	500	1400	6000
	300	500	1600	7000

Excess length X at set point adjustment	X [mm]
Manual	55
Actuator-driven	130 maximal

Technical data for actuators

	M1	M2	M3
Connection voltage	AC 230 V	AC/DC 24 V	AC/DC 24 V
Operating range	85 to 265 V	19.2 to 28.8 V	19.2 to 28.8 V
Torque	5 Nm	5 Nm	5 Nm
Run time for 90°	150 s	150 s	150 s
Input power supply	4 VA	2 VA	2 VA
Energy consumption	1.5 W	1W	1W
Degree of protection	IP 54	IP 54	IP 54
Connecting cable 0.75mm ²	~1m (3 core)	~1m (3 core)	~1m (4 core)
Ambient temperature	-30 to +50° c	-30 to +50° c	-30 to +50° c

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Velocity (m/s)	Airborne Noise LwA in dBA with Static Pressure			Radiated Noise LwA in dBA with Static Pressure		
	100 Pa	200 Pa	400 Pa	100 Pa	200 Pa	400 Pa
3	42	49	56	31	38	43
4	44	51	58	34	40	46
6	46	53	61	38	44	50
8	48	56	63	41	47	53
10	50	57	64	43	49	55

Width/Height Correction for Airborne Noise

Height (mm)	Width (mm)				
	200	300	400	500	600
100	-3	-2			
200	-2	-1	0	1	1
300		0	1	1	2

Width/Height Correction for Radiated Noise

Height (mm)	Width (mm)				
	200	300	400	500	600
100	-3	-2			
200	-2	-1	0	0	1
300		0	2	2	2

Spectrum Correction (Add to LwA)

Velocity (m/s)	Octave Band Centre Frequency (Hz)							
	63	125	250	500	1000	2000	4000	8000
3	0	1	1	-4	-7	-7	-7	-12
4	0	2	1	-3	-7	-8	-9	-14
6	0	4	2	-2	-8	-9	-11	-16
8	0	5	4	-2	-8	-10	-12	-17
10	0	6	5	-2	-9	-11	-13	-18

Notes

Tabulated values inclusive of 8 dB room absorption for sound power Lw ref 10⁻¹² W.
 When acoustic insulation is used the average room level is 6 dB lower than the tabulated values.