



VAV actuators

Variabel-volume units

Use

Our variable volume units are fitted with Belimo control equipment as standard ex works. You can choose a compact controller (cost-effective solution) or a universal control set (more flexibility). With a compact controller, the pressure sensor and regulator are integrated into the drive and form one compact whole. The compact controller is available in different bus communicative versions such as *-MOD (which can also be set for BACnet), *-KNX or *-MP.

With a universal control set, you choose a pressure sensor/controller in one housing and a separate drive. A dynamic or static pressure sensor can be chosen for, for example, clean or contaminated air. You can choose a standard drive, fast-running drive or operationally safe drive. In addition to the volume flow control, the universal pressure sensor/regulator can also be used for volume flow measurement, no drive is selected.

In addition to the volume flow solutions, the universal control set can also be used for static channel pressure control or room pressure control. Ask our sales department about the possibilities.

The variable volume units are always operated by a VAV actuator that is calibrated and set for the desired application ex works.

Characteristics

- Actuators for variable-volume units are only available with a 24 Volt supply.
- Suitable for analogue control and readout by means of 0(2)-10 Volt control/feedback signal.
- Modbus, BACnet, KNX and MP-bus bus communicative versions are available for integration into building management systems.
- Some versions can also be used of a hybrid function in which the control takes place analogue and the reading via the communication bus.

Fitting

VAV actuators are assembled, calibrated and adjusted from the factory. Installation of other products and/or accessories on request.

VAV actuator compact

Belimo compact (pressure transducer/regulator and actuator in one housing)



function	article code	moment	running time 90 gr.	sensor	power supply	bus type	near field communication (NFC)	factory installed as standard					
								application	mode	turn-direction open *2	set-point	control	readout
volume-flow control	LMV-D3-MP-SD	5 Nm (1 m ²)	120 sec.	D3 dynamic 0-500 Pa	24 Volt AC/DC	MP	Yes	Volume-flow control	0-10 Volt	Counter Clock Wise (CCW)	Analog	0-10 Volt	0-10 Volt
	NMV-D3-MP-SD	10 Nm (2 m ²)											
	LMV-D3-MOD	5 Nm (1 m ²)				MOD BACnet MP	No		2-10 Volt *1		BUS	BUS	BUS
	NMV-D3-MOD	10 Nm (2 m ²)											
	LMV-D3-KNX	5 Nm (1 m ²)				KNX			2-10 Volt *1				
	NMV-D3-KNX	10 Nm (2 m ²)											

1 Bus communicative compact controllers (-MOD and *-KNX) are delivered ex works standard for control via the communication bus (setpoint source is set to BUS). There is digital control instead of analogue control. Nevertheless, these controllers have a mode setting that is set to 2-10V by default. This is necessary for applications where clamp 3 may be used as an analog input for sensor input.

*2 For volume controls type VVI or VVR in Left version, the 'direction of rotation open' is set to CW.

VAV actuator universal

Belimo universal (pressure transducer/regulator and separate actuator)



function	article code	sensor	power supply	bustype	near field communication (NFC)	standaard af fabriek					
						application	mode	turn-direction open *2	set-point	control	readout
volume flow control	VRU-D3-BAC	D3 dynamic 0-500 Pa	24 Volt AC/DC	MOD BACnet MP	Yes	Volume- flow control	0-10 Volt	Counter Clock Wise (CCW)	Analog	0-10 Volt	0-10 Volt
volume flow control polluted air *3	VRU-M1-BAC	M1 static 0-600 Pa									

*3 Note: Validate the chosen volume unit is based on materials used that come into contact with polluted air.

Actuators

function	artikelcode	moment	looptijd 90 gr.	voeding
slow running	LM24A-VST	5 Nm (1 m ²)	120 sec.	Plug in ready (via VRU)
	NM24A-VST	10 Nm (2 m ²)		
	SM24A-VST	20 Nm (4 m ²)		
fast running	LMQ24A-VST	4 Nm (0,8 m ²)	2,4 sec.	
	NMQ24A-VST	8 Nm (1,6 m ²)	4 sec.	
	SMQ-24A-VST	16 Nm (3,2 m ²)	7 sec.	
operational safety	LF24-VST	4 Nm (0,8 m ²)	120 sec. (Spring < 20 sec.)	
	NF24A-VST	10 Nm (2 m ²)		
	SF24A-VST	20 Nm (4 m ²)		
safety fast-running	NKQ24A-VST	6 Nm (1,2 m ²)	4 sec. (Capacity < 4 sec.)	

Pressure transducer for measuring instrument

function	article code	sensor	power supply	bustype	near field communication (NFC)	factory installed as standard		
						application	mode	readout
volume flow measurement	VRU-D3-BAC	D3 dynamic 0-500 Pa	24 Volt AC/DC	MOD BACnet MP	Yes	Volume flow measurement	0-10 Volt	0-10 Volt
volume flow measurement polluted air *4	VRU-M1-BAC	M1 static 0 - 600 Pa						

*4 Note: Validate the chosen measuring instrument on the basis of materials used that come into contact with the polluted air.