

Controlled room and zone ventilation.
The complete product range.



Edition 2011

BELIMO[®]

Compact or universal – air volume control with Belimo.



The cost-efficient way to controlled room climate.

Human health, well-being and work performance are crucially influenced by room climate. Belimo room and system solutions – a complete range of products for cost-efficient motorisation and control of zones and single rooms – are proven in numerous installations all over the world.

VAV-Compact – efficient room control with a single unit

Actuator, controller and sensor in one unit – VAV-Compact provides an economical solution for variable and constant air volume control systems in office buildings, hotels, hospitals, etc. Special rotary actuators with a torque of 5 or 10 Nm and linear actuators with 150 Nm can be supplied for a wide range of VAV/CAV unit sizes and types. VAV-Compact controllers can be controlled conventionally or via the Belimo MP-Bus®. The MP types can be integrated in a higher-level system – together with one sensor per device – either via a DDC controller with an MP interface or by means of a gateway. The fans can be incorporated in an MP-Bus® based Belimo Fan Optimiser system to facilitate cost-optimised control according to demand.

VAV-Universal – flexibility in problematic environments

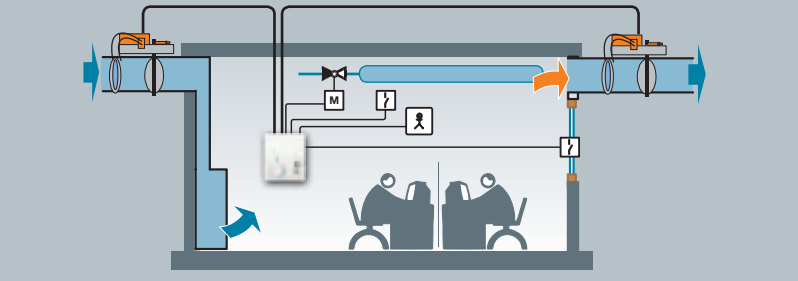
The ready-to-connect VAV-Universal range encompasses rotary and safety actuators as well as controllers with dynamic and static pressure sensors. These devices can be finely tuned to the exact requirements in industry, trade and public buildings. Digital, self-adaptive VRP-M controllers interact with fastrunning actuators in laboratories or production areas with a severely polluted room atmosphere to assure an instant supply of fresh air. Depending on what is chosen, the control systems can be integrated in a higher-level fieldbus and equipped – directly or over the MP-Bus® – with the Belimo Fan Optimiser to cut fan energy consumption by up to 50%.

Increased convenience, a better working atmosphere, optimum energy efficiency.

VAV-Compact for convenient solutions

Individual room comfort

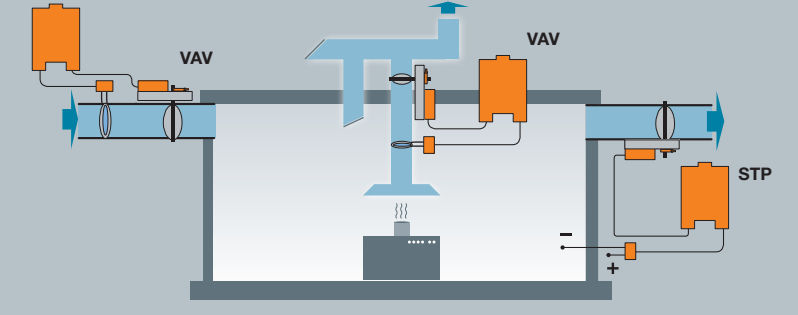
- Wide range of potential applications
- Adjustable to each application
- Demand-based single-room application
- Operation with Fan Optimiser system



VAV-Universal with VRP-M controller and fast-running actuators for sensitive working areas

Instant pure air

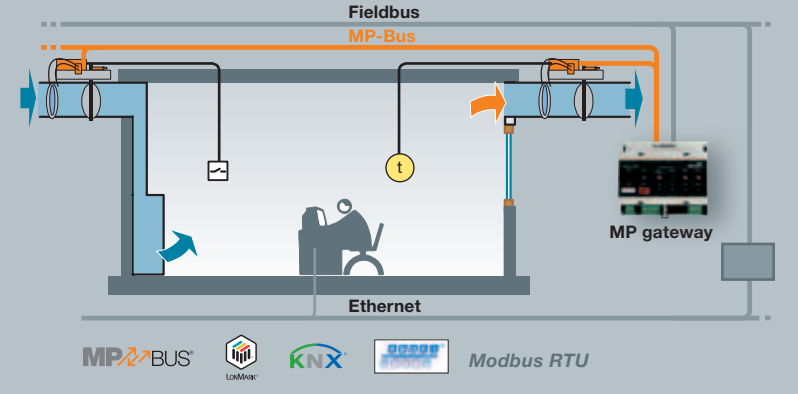
- Extraction of polluted air
- Ready-to-connect control system for maximum safety
- Integration in MP-Bus® network
- Volumetric flow or pressure control



VAV-Compact with bus connection

Intelligent simplicity

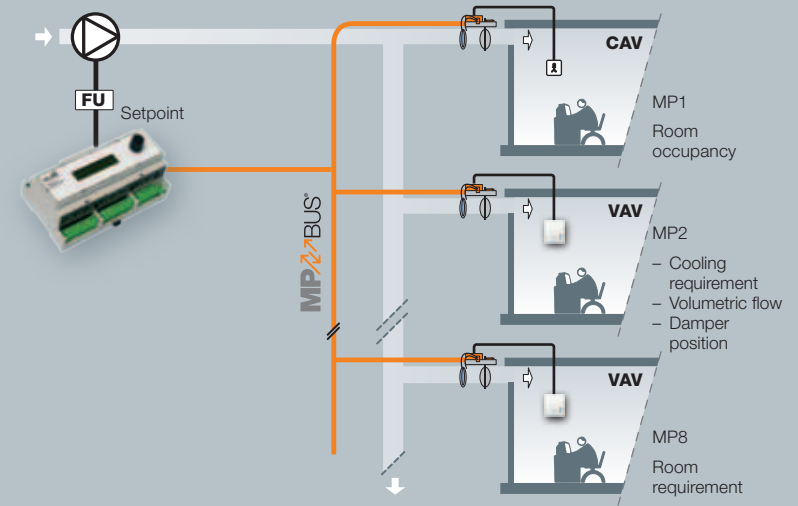
- System connection to DDC controller with MP interface via MP-Bus®
- Integration in higher-level systems such as LonWORKS®, Konnex, Ethernet TCP/IP, Profibus DP, Modbus RTU etc. via MP gateway
- Convenient, cost-efficient wiring
- Maximum flexibility in new, retrofitted, converted or renovated buildings



VAV-Compact with Belimo Fan Optimiser system for reduced energy consumption

Up to 50% fan energy saving







- Optimised consumption and operating costs
- Reduced flow noise thanks to lower supply pressure in the air duct system
- Reduced wiring expenses thanks to MP-Bus® network



Convenient room air solutions for working and public areas.



VAV-Compact

	 LMV-D3-MP	 NMV-D3-MP	 LHV-D3-MP	 LMV-D3LON	 NMV-D3LON
Applications	Comfort	Comfort	Comfort	Comfort	Comfort
VAV / CAV control	•	•	•	•	•
Actuators					
Torque / positioning force	5 Nm	10 Nm	150 N	5 Nm	10 Nm
Running time	variable	variable	variable	variable	variable
Supply/Inputs					
AC/DC 24 V	•	•	•	•	•
Sensor integration (bus operation only)	•	•	•	•	•
Control					
0/2...10 V	•	•	•		
Via contacts (CAV)	•	•	•		
MP-Bus®	•	•	•		
LONWORKS®				•	•
Operation					
Service socket for connecting tool	•	•	•	•	•
Pressure sensor					
0...300 Pa, dynamic integrated	•	•	•	•	•
Accessories	Type				
Room temperature controller	CR24..	•	•	•	
Fan Optimiser	COU24-A-MP	•	•	•	
MP gateways	UK24LON, UK24EIB, UK24MOD	•	•	•	
PC-Tool	MFT-P	•	•	•	•
Service tool	ZTH-GEN	•	•	•	•

Process air applications for sensitive working areas.



VAV-Universal



Applications		Industrial	Laboratory	Industrial	Laboratory
VAV / CAV control		•	•		
Duct / room pressure				•	•
Actuators	Type				
4 Nm, 2.5 s fast-running	LMQ24A-SRV-ST		•		•
8 Nm, 4 s fast-running	NMQ24A-SRV-ST		•		•
10 Nm, 150 s	NM24A-V-ST	•	(•)	•	(•)
20 Nm, 200...300 s / 20 s spring return	SF24A-V-ST	•	(•)	•	(•)
Supply/Inputs					
AC/DC 24 V		•	•	•	•
Sensor integration (bus operation only)		•	•	•	•
Control					
0/2...10 V		•	•	•	•
Via contacts (CAV)		•	•	•	•
MP-Bus®		•	•	•	•
Operation					
Service socket for connecting tool		•	•	•	•
Pressure sensors	Type				
0...100 Pa, static	VFP-100	•	•	•	•
0...300 Pa, static	VFP-300	•	•	•	•
0...600 Pa, static	VFP-600	•	•	•	•
0...600 Pa, dynamic	VFD3	•		•	
Accessories	Type				
Room temperature controller	CR24..	•	•		
Fan Optimiser	COU24-A-MP	•			
MP gateways	UK24LON, UK24EIB, UK24MOD	•	•	•	•
PC-Tool	VRP-M Tool	•	•	•	•
Service tool	ZTH-GEN	•	•	•	•

Room air and safety applications for trade and industry.



VAV-Universal



VRD3



VRP
















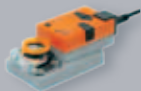


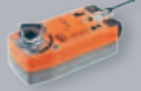







VRP-STP

Applications		Comfort	Industrial	Comfort	Industrial	Comfort	Industrial
VAV / CAV control		•	•	•	•		
Duct / room pressure						•	•
Actuators	Type						
5 Nm, 150 s	LM24A-V	•	•	•	•	•	•
10 Nm, 150 s	NM24A-V	•	•	•	•	•	•
20 Nm, 150 s	SM24A-V	•	•	•	•	•	•
4 Nm, 120 s/20 s spring return	LF24-V	•	•	•	•	•	•
20 Nm, 200...300 s/20 s spring return	SF24A-V	•	•	•	•	•	•
Supply							
AC / DC 24 V		•	•	•	•	•	•
Control							
0/2...10 V		•	•	(*)	(*)	(*)	(*)
Via contacts (CAV)		•	•	•	•	•	•
Operation							
Service socket for connecting tool		•	•				
Pressure sensors	Type						
0...100 Pa, static	VFP-100			•	•	•	•
0...300 Pa, static	VFP-300			•	•	•	•
0...600 Pa, static	VFP-600			•	•	•	•
0...600 Pa, dynamic	VFD3			•	•	•	•
0...300 Pa, dynamic integrated		•	•				
Accessories	Type						
Room temperature controller	CR24..	•	•	•	•		
Service tool	ZTH-GEN	•	•				

(*) 2...10 V only

Product range overview.

Volumetric flow and pressure control.

Function	VAV-Compact		VAV-Universal		
	LON types	MP types	VRP-M system solutions	Universal range	
Sensors	 LONMARK®	MP²BUS 	 VFP...  VFD3	 VFP...  VFD3	
Controllers		 LMV-D3-MP NMV-D3-MP	MP²BUS  VRP-M	 VRD3  VRP VRP-VRP-STP	
Actuators		LMV-D3LON NMV-D3LON	 LHV-D3-MP	  LMQ24A-SRV-ST NMQ24A-SRV-ST NM24A-V-ST SF24A-V-ST with emergency control function	 LM24A-V  NM24A-V  SM24A-V  LF24A-V SF24A-V with emergency control function
Bus integration			MP²BUS  In fieldbus systems via MP gateway. LonWORKS®: UK24LON gateway Konnex: UK24EIB gateway Modbus RTU: UK24MOD gateway		
Fan optimisation via MP-Bus			MP²BUS  Fan Optimiser COU24-A-MP		
Service tool			ZTH-GEN		
Parameterisation and service software			PC-Tool MFT-P		
Room controller			 CR24... CRA24...		
Positioner			 CRP24...	 SG...	

Note: Separate documentation for the VAV-Compact LON version, VRP-M system solution, VAV-Universal, CR24, CRA24, CRP24 single-room controllers, COU24-A-MP Fan Optimiser, tools and interfaces can be found on the Internet at www.belimo.eu

All-inclusive.



5 year warranty



On site around the globe



A complete range of products from one source



Tested quality



Short delivery times



Comprehensive support

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Croatia	Iceland	Oman	Taiwan
Cyprus	India	Pakistan	Turkey
Czech Republic	Indonesia	People's Republic of China	Ukraine
	Ireland	Philippines	United Arab Emirates
	Israel	Poland	United States of America
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