



Small devices,
big impact.

The complete product range – 2021

**BELIMO**[®]

Small devices, big impact.



Comfort

Energy efficiency

Safety

Installation

Maintenance

Belimo is a world market leader in the development, production and sales of actuator solutions for regulating and controlling heating, ventilation and air conditioning systems. The company's core business includes actuators, control valves and sensors.

Innovations redefining comfort

A precisely controlled, comfortable room environment is essential for the well-being and productivity of people. Belimo sensors, variable air volume (VAV) technology and pressure-independent control valves are three examples that have a big impact on room comfort.

Energy efficiency delivered

The smart control of heating, cooling, and ventilation systems has a major impact on the energy efficiency of buildings. Belimo sets standards for energy-efficient solutions – such as power-saving actuators, air-bubble tight ball valve technology and the Belimo Energy Valve™.

Uncompromised safety

Safety actuators from Belimo save lives and help to minimise damage to buildings and tangible assets. They are highly reliable and have been specially designed for fire dampers and smoke control dampers. An additional product range of fail-safe actuators and fast running actuators prevents hazardous situations, thereby increasing operating safety.

Experience installation ease

Simple installation and quick commissioning save time. Two exemplary features that significantly reduce installation time are the unique, tool-free mountable protective housings for sensors and actuators as well as commissioning via smartphone. Belimo offers a comprehensive product range for this – also for retrofit applications. Fast delivery to the desired location is a matter of course at Belimo.

Long service life paired with first-class support

Low maintenance outlay and professional service have a lasting effect on building performance. Belimo's devices are famous for their long lifetime and 5-year warranty. In addition, our IoT (Internet of Things) product range enables real-time monitoring and full transparency to achieve optimal building performance.

Everything under one roof.

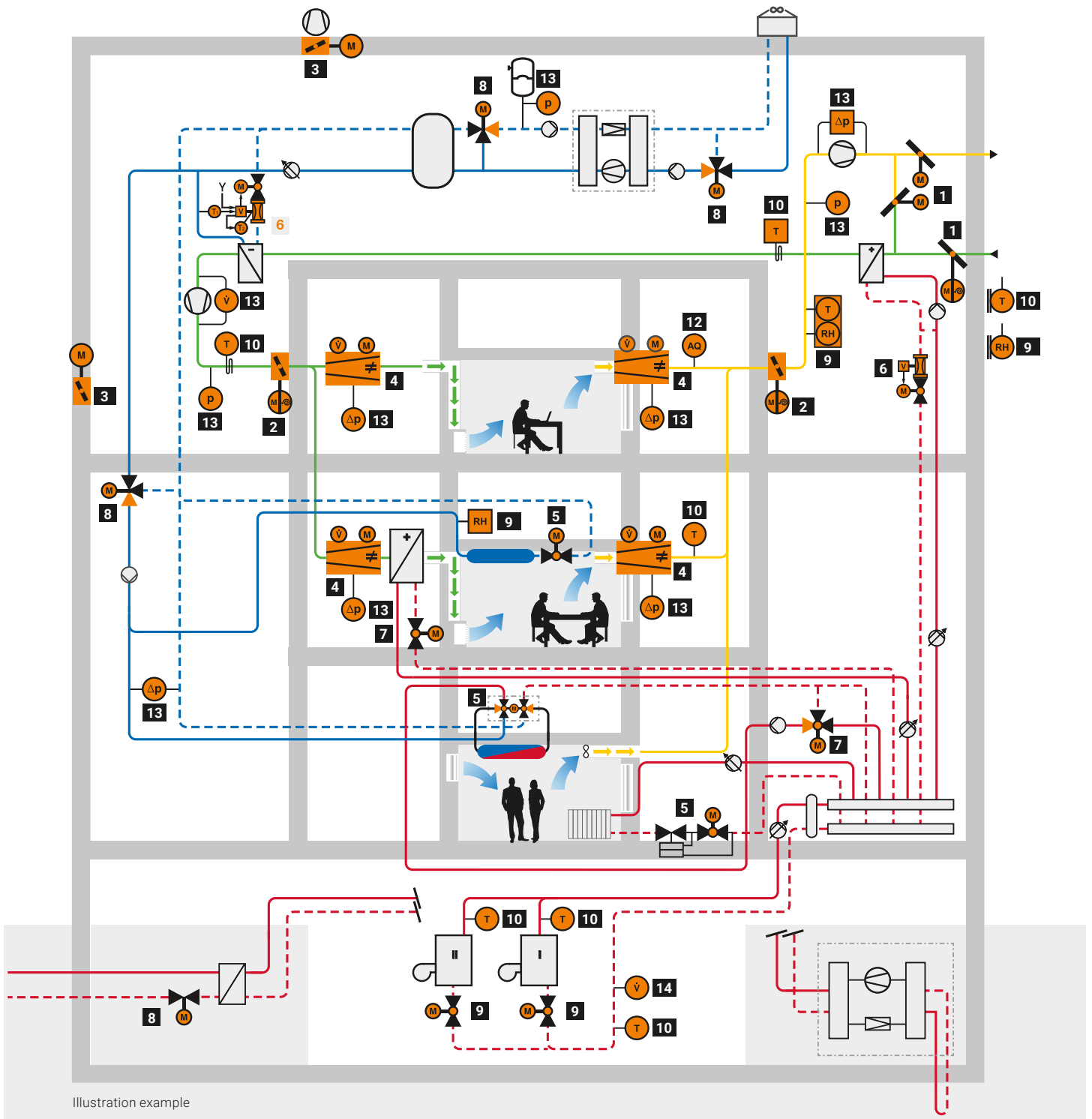


Illustration example

Air

- 1** Air damper actuators
- 2** Fire damper actuators
- 3** Smoke control damper actuators
- 4** VAV-Compact / VAV-Universal

Water

- 5** Zone valves
- 6** Pressure-independent characterised control valves
- 7** Characterised control valves
- 8** Globe valves
- 9** Open/close and changeover butterfly valves

Sensors

- 10** Temperature sensors
- 11** Humidity sensors
- 12** Air quality sensors
- 13** Pressure sensors
- 14** Flow sensors



Fan



Air heater



Air cooler



Boiler



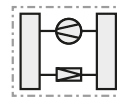
Pump



Variable speed pump



Heat exchanger



Chiller / heat pump



Cold water reservoir



Transfer station

Actuator, valve and sensor solutions.

Ventilation applications

Air treatment, distribution, control and feedback

The world's most comprehensive range of electrical actuator solutions for air dampers of up to 8 m² includes rotary and linear actuators with a wide range of motorisation levels and actuating times. The actuators cover almost all motorisation requirements for the control of air flows in air-conditioning plants, from treatment and distribution to feedback and retreatment. The product range also includes special actuators for indoor and outdoor use in harsh ambient conditions. As the perfect complement to the actuators, Belimo offers a comprehensive product range of sensors for measuring air temperature, humidity and quality. Differential pressure sensors guarantee an accurate filter monitoring to optimally plan the service calls in advance.



Water applications

Efficient operation of heating and cooling circuits

In addition to motorised butterfly valves and globe valves, Belimo supplies unique, air-bubble tight characterised control valves for the precise control of heating and cooling circuits without energy loss. Pressure-independent characterised control valves always ensure the correct amount of water thanks to permanent dynamic balancing, even if there are differential pressure changes and during partial load operation. The forward-looking Belimo Energy Valve™ with integrated logic allows energy flows to be monitored and optimised. The integrated delta T manager ensures that the differential temperature does not fall below defined values and that the heat exchanger is always run in the energy-efficient range. Tight-sealing valves of the Belimo ZoneTight™ product range are the ideal solution for energy-saving, unproblematic room and zone control in tight spaces.



Retrofit applications

Giving new verve to old systems

For renovations in existing construction and replacements for older actuators on air dampers, globe valves and rotary valves, Belimo supplies a comprehensive product range of special Retrofit motorisation solutions. Their parameters can be set precisely on site to the prevailing requirements. Retrofit globe and rotary actuators can be mounted practically on all common valve makes with only a few steps. Handy VAV-Retrofit kits with controllers, actuators and differential pressure sensors are available for replacing defective or pneumatic VAV devices. To easily determine the right replacement actuators or sensors, Belimo has developed a Retrofit tool which determines the suitable actuator using different parameters. The tool can be used everywhere – on site or in the office. Now also with optical character recognition (OCR). The software recognises the actuator labelling and connects the relevant text modules with the RetroFIT database.



Open the Retrofit tool:



For every field of application.

Safety solutions

Protecting life and material assets from fire and smoke

Fires represent the greatest potential threat to people and tangible assets in buildings. Efficient fire protection saves lives in times of danger, helps minimise property damage and secures the continued operation of companies. The best protection against the spread of fire and smoke through the ductwork is provided by compartmentalisation using motorised fire dampers. Smoke control systems with motorised smoke control dampers ensure smoke-free escape and rescue routes.



System protection

Avoiding damage in the event of interruptions to operation

Fail-safe actuators protect valuable systems from damage caused by ice, water and steam. Particularly in the event of a power supply voltage failure, this actuator product range moves the dampers to the predefined fail-safe position. Depending on the actuator, short power failures can be bridged for up to 10 seconds and the fail-safe positions can be individually defined. Unnecessary failures and convenience impairments are thereby prevented.



Bus and system integration

Monitoring and controlling systems from a central location

Belimo actuators can be easily integrated into intelligent building management systems. Actuators with an integrated BACnet, Modbus and KNX interface are available for direct connections. MP actuators can be used to combine up to eight different control elements into one MP-Bus section and connect to virtually any supervisory system with greatly reduced wiring costs. Different adjustment and service tools as well as the Belimo Cloud make the installation, monitoring and optimisation easier. IoT actuators communicate via Ethernet and synchronise directly with the Belimo Cloud.



Room and system solutions






Ensuring individual comfort and saving energy

Used in offices, public buildings, production halls, commercial premises or sensitive operating areas, volumetric flow controllers, actuators and sensors ensure an optimum room climate while consuming minimal levels of energy. They can be used as VAV-Compact or VAV-Universal devices. The latter ensure safe conditioning in room pressure applications. Special, compact VAV control units are available for distribution boxes used in controlled apartment ventilation.






Ventilation applications.

Rotary actuators without fail-safe


Product range	Types/performance classes	Specifications	Applications
	Standard actuators: <ul style="list-style-type: none"> TMC (2 Nm) LM (5 Nm) NM (10 Nm) SM (20 Nm) GM (40 Nm) 	<ul style="list-style-type: none"> With integrated auxiliary switch or potentiometer Identical accessories for all types Connection: Cable (IP54) or terminals (IP20 or IP54) 	Motorisation of air dampers without fail-safe up to 8 m ²
	Compact actuators: <ul style="list-style-type: none"> CM (2 Nm) CM..G (2 Nm, IP66) 	<ul style="list-style-type: none"> Mechanical angle of rotation limitation 0...287.5° or endless rotation Magnetic gearing latch The slimmest actuator of its type Simple mounting 	Motorisation of air dampers without fail-safe up to 0.4 m ² in apartment ventilation systems, underfloor air-conditioning equipment, decentralised sill ventilation units, etc.
	Simple compact actuator: <ul style="list-style-type: none"> UM (1 Nm, IP20)¹⁾ 	<ul style="list-style-type: none"> Plug-in actuator Mechanical angle of rotation limitation 0...287.5° or endless rotation (for form-fit variant) Fast running time of 22 s/90° 	Motorisation of air dampers without fail-safe up to 0.2 m ² in apartment ventilation systems, decentralised distribution systems and air outlets
	Compact actuator with integrated damper blade: <ul style="list-style-type: none"> CM..D (2 Nm) 	<ul style="list-style-type: none"> Damper diameter 100, 125, 150 and 160 mm Air tight in accordance with DIN EN 1751, Classes 3 and 2 Sound power level ≤ 35 dB(A) Useable up to 1000 Pa max. Running time 58 s/70° 	Motorisation of round air dampers without fail-safe up to DN 160 in apartment ventilation systems, air distribution systems, after-flows, facade units, etc.
	Rotary actuator with high torque: <ul style="list-style-type: none"> PMCA (160 Nm) 	<ul style="list-style-type: none"> IP66/67, NEMA 4X, UV protection Variable running time 30...120 s Integrated auxiliary switches Connection: terminals 	Motorisation of air and special dampers, tunnel dampers, closing dampers with high-density, industry applications

Linear actuators without fail-safe

Product range	Types/performance classes	Specifications	Applications
	Standard actuators: <ul style="list-style-type: none"> LH (150 N) SH (450 N) 	<ul style="list-style-type: none"> Gear rod lengths 60, 100, 200 and 300 mm Mechanical stroke limitation every 20 mm Direction of stroke can be selected 	Motorisation of final controlling elements with linear movements up to 300 mm for swirl outlets, long range nozzles, mixing units, cabin units, VAV units, etc.
	Compact actuator: <ul style="list-style-type: none"> CH (125 N) 	<ul style="list-style-type: none"> Gear rod lengths 60 and 100 mm Mechanical stroke limitation every 20 mm Gearbox can be rotated by 90° Linear unit can be mounted beforehand without actuator 	Motorisation of air dampers without fail-safe up to 0.8 m ² in apartment ventilation systems, swirl outlets, long-range nozzles, mixing units, etc.
	Simple compact actuator: <ul style="list-style-type: none"> UH (50 N)¹⁾ 	<ul style="list-style-type: none"> Gear rod length 60 mm Mechanical stroke limitation every 1 mm Linear unit can be mounted beforehand Can be used for various installation situations 	Motorisation of control elements with linear movement up to 60 mm in apartment ventilation systems, air outlets, mixing units, etc.

¹ Available as of the 2nd quarter of 2021.

Very fast running actuators without fail-safe

Product range	Types/performance classes	Specifications	Applications
	Rotary actuators: <ul style="list-style-type: none"> LMQ (4 Nm) NMQ (8 Nm) SMQ (16 Nm) NMD (8 Nm)* SMD (16 Nm)* 	<ul style="list-style-type: none"> Identical accessories for all types Very fast running times starting from 2.5 s <p>*Running time 20 s</p>	Motorisation of air dampers without fail-safe up to 3.2 m ² for laboratories, clean rooms, hospitals, research institutes, industrial extraction systems, painting and welding plants etc.



Linear actuators:

- LHQ (100 N)
- SHQ (200 N)

- Gear rod length 100 mm
- Mechanical stroke limitation every 20 mm
- Running times starting from 3.5 s / 100 mm

Motorisation of control elements and slide valves with linear movement up to 100 mm for wood boilers, mixing units, tilt windows, etc.

RobustLine rotary actuators with/without fail-safe for extreme environment conditions (IP66/67, NEMA 4X)

Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none"> • NM..P (10 Nm) • SM..P (20 Nm) • NKQ..P (6 Nm, running time 4s)* <p>* with fail-safe</p>	<ul style="list-style-type: none"> • IP66/67, NEMA 4X, UV protection, corrosion resistant • Integrated auxiliary switch or potentiometer <p>Optional for ambient temperatures down to -40 °C:</p> <ul style="list-style-type: none"> • Heating with humidistat • Heating with thermostat 	<p>Motorisation of air dampers with and without fail-safe up to 4 m² in particularly exposed positions:</p> <ul style="list-style-type: none"> • Protection against aggressive gases, moisture, humidity, high dust and contamination levels • General outdoor applications, kiln drying plants, agriculture, swimming pool installations, greenhouses, etc.

Rotary actuators with/without fail-safe for outdoor applications (IP66/67, NEMA 4X)

Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none"> • GM..G (40 Nm) • SMQ..G (16 Nm, running time 7s) • NF..G (10 Nm)* • SF..G (20 Nm)* • GK..G (40 Nm)* <p>* with fail-safe</p>	<ul style="list-style-type: none"> • IP66/67, NEMA 4X, UV protection • Integrated auxiliary switch or potentiometer <p>Optional for ambient temperatures down to -40 °C:</p> <ul style="list-style-type: none"> • Heating with humidistat • Heating with thermostat 	<p>Motorisation of air dampers with and without fail-safe up to 8 m²:</p> <ul style="list-style-type: none"> • Protection against moisture, humidity, high dust and contamination levels • General outdoor applications, greenhouses, etc. • Rooftop ventilation plant rooms

System protection.

Rotary actuators, fail-safe



Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none"> • TF (2 Nm) • LF (4 Nm) • NF (10 Nm)* • SF (20 Nm)* • EF (30 Nm)*/** • GK (40 Nm) 	<ul style="list-style-type: none"> • Automatic closing function in <20 s in the event of voltage interruption • Manual override <p>*Optional with 2 integrated auxiliary switches</p> <p>**Optional with IP66 and UV protection for outdoor applications</p>	<p>Motorisation of air dampers with fail-safe up to 8 m²</p>
	<p>Compact actuators:</p> <ul style="list-style-type: none"> • CM24K (2 Nm) with SKM230.. (energy storage module) 	<ul style="list-style-type: none"> • External energy storage module: moves 2 CM actuators into fail-safe position in <15 s in the event of voltage interruption 	<p>Motorisation of air dampers up to 0.4 m². Particularly suitable for decentralised air-conditioning units, apartment ventilation systems and with extremely limited space conditions.</p>
	<p>Rotary actuator with high torque:</p> <ul style="list-style-type: none"> • PKCA (160 Nm) 	<ul style="list-style-type: none"> • IP66/67, NEMA 4X, UV protection • Variable running time 30...120s • Running time fail-safe position 30s • Connection: terminals 	<p>Motorisation of air and special dampers, tunnel dampers, closing dampers with high-density, industry applications</p>

Very fast running rotary actuators, fail-safe




Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none"> • NKQ (6 Nm, running time 4s) 	<ul style="list-style-type: none"> • Running time, fail-safe position 4s • Bridging of voltage interruptions of up to 10s • Fail-safe position adjustable between 0...100% 	<p>Motorisation of air dampers with fail-safe up to 1.2 m²</p> <ul style="list-style-type: none"> • Laboratory applications • Painting plants • Sensitive working environments

Water applications.

Belimo ZoneTight™

Product range	Valves	Actuators	Applications
	Internal thread (QCV): <ul style="list-style-type: none"> C2..Q-.. (2-way, characterised control valve) C3..Q-.. (3-way, changeover ball valve) 	<ul style="list-style-type: none"> Rotary actuators: CQ24A (-SR/-MPL/-BAC) CQ230A With fail-safe: CQK24A (-SR/-MPL) CQK230A 	Cold and warm water: <ul style="list-style-type: none"> Nominal diameters DN 15/20/(25) Permissible operating pressure 1600 kPa Fan coils Cooling ceilings Zone air heaters/cooling coils Floor heaters Radiators
	External thread (QCV): <ul style="list-style-type: none"> C4..Q-.. (2-way, characterised control valve) C5..Q-.. (3-way, changeover ball valve) 		
	Internal thread (PIQCV): <ul style="list-style-type: none"> C2..QP(T)-.. (2-way, pressure-independent zone valve) 		
	Internal thread (PIFLV): <ul style="list-style-type: none"> C2..QFL-../R225FL-.. (2-way, relief valve) 	<ul style="list-style-type: none"> Open/close rotary actuator: CQ24A (-SR/-MPL/-BAC) CQ series¹⁾ 	Cold water: <ul style="list-style-type: none"> Chilled ceilings Fan coils
	Internal thread: <ul style="list-style-type: none"> R30...-B.. (6-way, characterised control valve) 	<ul style="list-style-type: none"> Rotary actuators: LR24A-SR LR24A-MP CQ24A (-SR/-MPL/-BAC) 	Cold and warm water: <ul style="list-style-type: none"> Nominal diameters DN 15/20/(25) Permissible operating pressure 1600 kPa Modulating control of combined heating/cooling elements
Internal thread (6-way EPIV): <ul style="list-style-type: none"> EP..R-R6+BAC 	<ul style="list-style-type: none"> Integrated actuator Electronic flow measurement Permanent hydronic balancing 		

Pressure-independent characterised control valves





Product range	Valves	Actuators	Applications
	Internal thread (Belimo Energy Valve™, 2-way, DN 15...50): <ul style="list-style-type: none"> EV..R+BAC²⁾ EV..R+KBAC²⁾ 	<ul style="list-style-type: none"> Actuator with monitoring and recording function integrated Electronic flow measurement Permanent hydronic balancing Delta T manager Power control With fail-safe: KBAC With glycol monitoring Belimo Cloud connection 	Balancing, measuring, controlling and, isolating and energy monitoring with a single valve unit: <ul style="list-style-type: none"> Flow \dot{V}_{max} 0.11...45 l/s Nominal diameters DN 15...150 Permissible pressure 1600 kPa
	Flange (Belimo Energy Valve™, 2-way, DN 65...150): <ul style="list-style-type: none"> EV..F+BAC EV..F+KBAC 		
	Internal thread (Belimo Energy Valve™, 3-way, DN 15...50): <ul style="list-style-type: none"> EV..R3+BAC 	<ul style="list-style-type: none"> Actuator with monitoring and recording function integrated Electronic flow measurement Permanent hydronic balancing Power control Belimo Cloud connection 	Creates system transparency in 3-way applications: <ul style="list-style-type: none"> Flow \dot{V}_{max} (A-AB) 0.11...4.8 l/s Nominal diameters DN 15...50 Permissible pressure 1600 kPa
	Internal thread (EPIV, 2-way, DN 15...50): <ul style="list-style-type: none"> EP..R+MP³⁾ EP..R+KMP³⁾ EP..R+MOD³⁾ 	<ul style="list-style-type: none"> Integrated actuator Electronic flow measurement Permanent hydronic balancing With fail-safe: KMP 	Balancing, measuring, controlling and shutting with a single valve unit: <ul style="list-style-type: none"> Flow \dot{V}_{max} 0.11...45 l/s Nominal diameters DN 15...150 Permissible pressure 1600 kPa
	Flange (EPIV, 2-way, DN 65...150): <ul style="list-style-type: none"> EP..F+MP EP..F+KMP EP..F+MOD 		

¹ R225FL-.. is motorised with LR..A (only open/close permissible).


² The valve types EV..R+(K)BAC will be replaced in the course of the year by the new types EV..R2+(K)BAC.

³ The valve types EP..R+(K)MP/MOD will be replaced in the course of the year by the new types EP..R2+(K)BAC.


Characterised control valves

Product range	Valves	Actuators	Applications
	Internal thread: • R2..S.. (2-way) • R3..S.. (3-way)	<ul style="list-style-type: none"> Rotary actuators: TR, LR, NR, SR series With fail-safe: TRF, LRF, NRF(D), SRF series Fast runners: TRC, LRC, NRC, SRC series Very fast running actuators from 2.5s: LRQ-, NRQ-, SRQ series 	Cold and warm water: <ul style="list-style-type: none"> Nominal diameters DN 15...50 Permissible pressure 1600 kPa
	External thread: • R4.. (2-way) • R5.. (3-way)		
	External thread (high temperatures): • R4..D (2-way)		
	Flange: • R6..W..S8 (2-way, PN16)	<ul style="list-style-type: none"> Rotary actuators: SR-5, GR-5 series With fail-safe: SRF-5, GRK-5 series Fast runners: SRC-5, GRC-5 series 	Cold and warm water: <ul style="list-style-type: none"> Nominal diameters DN 65...150 Permissible pressure 1600 kPa


Control, isolation and changeover valves for outdoor applications

Product range	Valves	Actuators	Applications
	Internal thread: • R2.. (2-way) • R3.. (3-way)	<ul style="list-style-type: none"> Rotary actuators: SR..P series IP66/67 	Cold and warm water, applications in IP66/67 environment: <ul style="list-style-type: none"> Nominal diameters DN 15...50 Permissible pressure 1600 kPa
	External thread: • R4.. (2-way) • R5.. (3-way)		


Isolation and changeover valves

Product range	Valves	Actuators	Applications
	Internal thread: • R2.. (2-way) • R3..(BL) (3-way)	<ul style="list-style-type: none"> Rotary actuators: TR, LR, NR, SR series With fail-safe: TRF, LRF, NRF(D), SRF series 	Cold and warm water, isolation and changeover function: <ul style="list-style-type: none"> Nominal diameters DN 15...50 Permissible pressure 1600 kPa
	External thread: • R4.. (2-way) • R5.. (3-way)		

Potable water valves



Product range	Valves	Actuators	Applications
	<ul style="list-style-type: none"> EXT-R2..-B..PW (2-way) DVGW, ACS, WRAS certified 	<ul style="list-style-type: none"> Rotary actuators: NR-, SR-, GR series With fail-safe: NRF-, SRF-, GRK series 	Potable water: <ul style="list-style-type: none"> Nominal diameters DN 15...50 Permissible pressure 1000 kPa

Butterfly valves

Product range	Valves	Actuators	Applications
	Flange PN6/10/16: • D6..N (2-way) • D6..NL (2-way) • D6..W (2-way) • D6..WL (2-way) • D7.. (3-way)	<ul style="list-style-type: none"> Rotary actuators: SR-5, SR..P-5, GR-5, DR-5, DR-7-, PR-, SY series With fail-safe: SRF-5-, GRK-5-, DRK-, PRK series Optional: <ul style="list-style-type: none"> Heating with humidistat/thermostat Integrated auxiliary switch or potentiometer 	Isolating, switching and controlling cold and warm water: <ul style="list-style-type: none"> Nominal diameters DN 25...700 (2-way) Nominal diameters DN 150...300 (3-way)



Water applications.

Globe valves


Product range	Valves	Actuators	Applications
 	Internal thread: <ul style="list-style-type: none"> • H2..S.. (2-way) • H3..S.. (3-way) 	<ul style="list-style-type: none"> • Default globe valve actuators: <ul style="list-style-type: none"> LV..A (15 mm) NV..A, SV..A (20 mm) EV..A, RV..A (40 mm) • Fail-safe globe valve actuators: <ul style="list-style-type: none"> NVK..A, SVK..A (20 mm) AVK..A (32 mm) • Fast runners: <ul style="list-style-type: none"> LVC..A (15 mm) NVC..A, SVC..A (20 mm) EVC..A (40 mm) • Large stroke actuators: <ul style="list-style-type: none"> GV (65 mm) 	Cold and warm water: <ul style="list-style-type: none"> • Nominal diameters DN 15..50 • Permissible pressure 1600 kPa • Permissible pressure 2500 kPa (H20/H30) Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15..250 • Permissible pressure 1600 kPa *Hot water and steam
	External thread: <ul style="list-style-type: none"> • H4..B (2-way) • H5..B (3-way) 		
	Flange: <ul style="list-style-type: none"> • H6..N/H7..N (2-/3-way, PN16) • H6..S(P)/H7..S (2-/3-way, PN16)* • H6..W../H7..W.. (2-/3-way, PN16), DN 200/250 		
	Additional flange versions: <ul style="list-style-type: none"> • H6..R/H7..R (2-/3-way, PN6) • H6..X../H7..X.. (2-/3-way, PN25) 		

Retrofit applications.


Retrofit ventilation applications: actuators without fail-safe

Product range	Types/performance classes	Specifications	Applications
 	<ul style="list-style-type: none"> • LM24A-MP-TP (5 Nm) • NM24A-MP-TP (10 Nm) • SM24A-MP-TP (20 Nm) • GM24A-MP-TP (40 Nm) • SM24A-R9 (20 Nm, 0...135 Ω) • SM24A-PC (20 Nm, 0...20V phase-cut signal) • SM24A-MA (20 Nm, 4...20 mA) • LH24A-MP60-TP • LH24A-MP100-TP • LH24A-MP200-TP • LH24A-MP300-TP 	<ul style="list-style-type: none"> • Freely parameterisable and optimally adjustable for matching the application • Identical accessories such as auxiliary switches and potentiometers for all rotary actuators • Identical accessories such as rotary support and coupling pieces for all linear actuators • TP (terminal protected) connection: terminals IP54 	Replacement of the motorisation of air dampers and slide valves without fail-safe up to 8 m ²


Retrofit water applications: globe valve actuators

Product range	Valves	Actuators	Applications
	For globe valves from various manufacturers	With universal valve adapter: <ul style="list-style-type: none"> • LV..A..-RE (500 N, 20 mm) • NV..A..-RE (1,000 N, 20 mm) • SV..A..-RE (1,500 N, 20 mm) • SVL..A..-RE (1,500 N, 50 mm) • AVK..A..-RE (2,000 N, 32 mm) • EV..A..-RE (2,500 N, 50 mm) • RV..A..-RE (4,500 N, 50 mm) Short stroke globe actuators with adapter for Siemens or Cazzaniga valves: <ul style="list-style-type: none"> • NRDVX.. (500 N, 5.5 mm) 	Motorisation of globe valves with nominal diameters DN 15...250

Retrofit water applications: rotary valve actuators

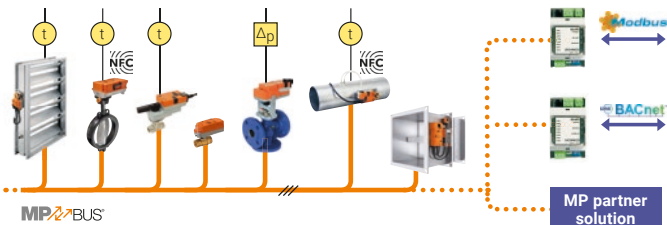
Product range	Valves	Actuators	Applications
	<p>For rotary valves from various manufacturers:</p> <ul style="list-style-type: none"> • Ball valves • Butterfly valves • Mixing valve <p>A check must be made of the required torque</p>	<ul style="list-style-type: none"> • Rotary actuators HT., SR.-R, GR.-R, DR.-R, PR (up to 160 Nm) with adapter (square, flat head, wedge etc.) • With fail-safe: SRF-R, GRK-R, PRK (up to 160 Nm) with adapter (square, flat head, wedge) • SY rotary actuator with adapter: 400...3500 Nm 	<p>Motorisation of mixing valves and valves with:</p> <ul style="list-style-type: none"> • Interface ISO 5211: F03 / F04 / F05 / F07 or F10 • 12 mm round spindle <p>Up to nominal diameter DN 700 and other designs on request</p>

Retrofit VAV

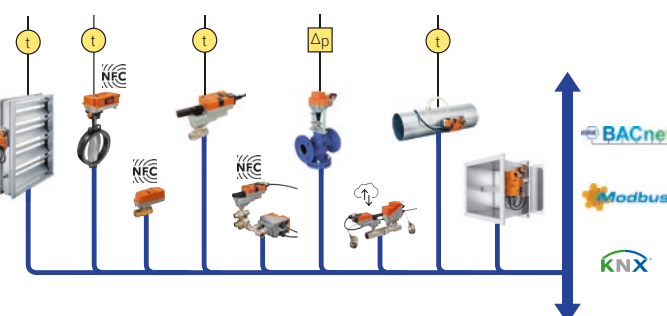
Product range	Types	Specifications	Applications
	<ul style="list-style-type: none"> • Set with VAV-Compact 	<p>Set solution for round VAV units with differential pressure sensor and complete installation set</p>	<p>Replacement of VAV actuator and control components with small and medium retrofits</p>

Bus and system integration.


Belimo MP-Bus

Product range	Applications
	<ul style="list-style-type: none"> • Master-slave system, specially developed by Belimo for HVAC actuators and sensors • Up to 8 different control elements can be combined and together connected to a supervisory field bus system (BACnet, Modbus, KNX, etc.) • One sensor can be connected per actuator • Either the Belimo gateways (UK24BAC, UK24MOD) or gateways and DDC controllers from other manufacturers can be used as the MP master

BACnet, Modbus and KNX

Product range	Applications
	<p>BACnet/ Modbus actuators</p> <ul style="list-style-type: none"> • Actuators with an RS485 interface can be connected directly to BACnet MS/TP or Modbus RTU • Actuators with Ethernet interface can be connected directly to BACnet IP or Modbus TCP. At the same time a connection with the Belimo Cloud is possible • The analogue control can be monitored and overridden via Bus in hybrid operation • Up to two sensors can be connected for each actuator <p>KNX actuators</p> <ul style="list-style-type: none"> • Actuators can be connected directly to KNX (S-mode) • One sensor can be connected per actuator

IoT, Belimo Cloud









Product range	Applications
	<ul style="list-style-type: none"> • Actuators with Ethernet interface can optionally exchange operating and setting data with Belimo Cloud • The monitoring and optimisation of the devices is made through a central access point • Open Client-API for the connection to specific Cloud solutions

Setting and service tools for parametrisable and communicative actuators and volumetric flow controllers


Type	Type	Type	Specifications
<p>PC-Tool MFT-P</p> 	<p>Service tool ZTH EU</p> 	<p>Smartphone App</p> 	<ul style="list-style-type: none"> • The right tool for every job • PC-Tool for convenient parametrisation, commissioning and maintenance of actuators and bus networks • Efficient setting of parameters with service tool ZTH EU • Parametrisation of actuators with smartphone app, even when deenergised

Sensor applications.





Temperature

Product range	Types	Properties	Applications
	Outside: • 01UT • 22UT	<ul style="list-style-type: none"> • Sensor-dependent temperature ranges -50...250 °C • Active sensors with 8 selectable temperature ranges 	Sensors for outdoor temperature or for room solutions with increased requirements, e.g. in cold stores and greenhouses as well as in production halls and warehouses
	Duct/immersion: • 01DT • 22DT • 01PT	<ul style="list-style-type: none"> • Sensor-dependent temperature ranges -50...250 °C • Active sensors with 8 selectable temperature ranges • Suitable for air and water applications • Probe length: 50...450 mm 	For measuring the temperature in the duct. In connection with a thermowell made of brass or stainless steel also suitable for liquid fluids
	Duct mean value: • 01MT • 22MT	<ul style="list-style-type: none"> • Sensor-dependent temperature ranges -50...250 °C • Active sensors with 8 selectable temperature ranges • Passive sensors with Pt1000 • Probe length: 3 m / 6 m 	Duct averaging temperature sensor for air-handling units or larger ducts with stratification
	Pipe contact: • 01ST • 01HT • 22HT	<ul style="list-style-type: none"> • Active and passive contact temperature sensors for pipe applications • Sensor-dependent temperature ranges -50...250 °C • Metal probe or spring-loaded brass pin guarantee fast reaction times 	Contact temperature sensors for heating systems and solar collectors, passive and active
	Cable: • 01CT • 22CT	<ul style="list-style-type: none"> • Cable temperature sensor, active and passive • Sensor-dependent temperature ranges -50...250 °C • Probe length: 50...200 mm 	Temperature measurement in gaseous fluid of heating, ventilation and air-conditioning systems. With stainless steel probe. Immersion temperature sensor in combination with a thermowell
	Frost monitor: • 01ATS • 20DTS	<p>01ATS</p> <ul style="list-style-type: none"> • Output: switch • Manual or automatic reset • Capillary tube length: 3 m / 6 m <p>20DTS</p> <ul style="list-style-type: none"> • Modulating output 0...10 V (valve control) • Output: switch • Capillary tube length: 2 m / 6 m 	Frost detection for air handling units according to the hot water register
	Temperature monitor • 01HT-...A	<ul style="list-style-type: none"> • 30...90 °C • Probe length: 1 m • Automatic reset 	For monitoring the temperature in heat generation systems, underfloor heating or other applications of HVAC technology
	Security temperature limiter STB • EXT-J...	<ul style="list-style-type: none"> • 50...80 °C • 70...130 °C • Probe length: 1 m • Manual reset 	For monitoring the temperature in heat generation systems, underfloor heating or other applications of HVAC technology




Air quality

Product range	Types	Properties	Applications
	Duct: • 22DC • 22DTC • 22DTM • 22DCV • 22DCM • 22DCK	<ul style="list-style-type: none"> • Wide range of combined multi sensors for CO₂, humidity, temperature and VOC • Dual-channel CO₂ sensor based on NDIR technology 	Dual-channel self-calibration technology enables the use of Belimo CO ₂ sensors in all buildings and applications – even where the ABC (Automatic Background Calibration) method cannot be used

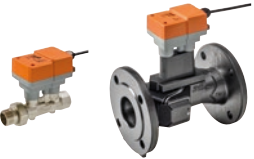
Humidity

Product range	Types	Properties	Applications
	Outside: • 22UTH	<ul style="list-style-type: none"> Multi sensors for relative and absolute humidity, temperature, enthalpy, dew point and condensation 0...100% r.H. 4 selectable temperature measuring ranges Output signals: 0...10 V, Modbus RTU, BACnet MS/TP 	<ul style="list-style-type: none"> Sensors for temperature/humidity for outdoor use or for room solutions with increased requirements, e.g. in cold stores and greenhouses as well as in production halls and warehouses Option: weather protection
	Duct: • 22DTH	<ul style="list-style-type: none"> Output signal: 0...5 V, 0...10 V Probe length: 140 mm / 270 mm 0...100% r.H. 4 selectable temperature measuring ranges 	<ul style="list-style-type: none"> Active sensor for measuring the relative or absolute humidity and temperature in duct applications
	Condensation: • 22HH	<ul style="list-style-type: none"> With signal LED and relay contact for connecting to controller and display systems Output signal: switch 	<ul style="list-style-type: none"> For detection of condensation on chilled surfaces (e.g. chilled beams) Condensation Sensor Option: external sensor
	Duct humidistat: • 01DH	<ul style="list-style-type: none"> 15...95% r.H. Probe length: 156 mm Adjustable switch range Output signal: switch Temperature compensation 	<ul style="list-style-type: none"> Duct humidistat for regulating or controlling fans, drying units and humidifiers. Installation in a duct or on a wall



Pressure

Product range	Types	Properties	Applications
	Duct: • 22ADP	<ul style="list-style-type: none"> Differential pressure sensor air Sensor-dependent pressure ranges -150...7000 Pa Selectable pressure ranges Auto-zero LCD display 2 independent measuring systems in the same housing Output signal 0...5 V / 0...10 V / 4...20 mA, Modbus RTU 	<ul style="list-style-type: none"> Measurement and monitoring of differential pressure of air Air filter monitoring Suitable for pressure control of fans
	Duct: • 01APS	<ul style="list-style-type: none"> Duct differential pressure switch air Type-dependent pressure ranges 20...2500 Pa Output signal: switch (1 x SPDT) Setpoint adjustment and automatic reset function 	<ul style="list-style-type: none"> Typical application in HVAC systems for filter or fan V-belt monitoring
	Pipe: • 22WP • 22WDP	<ul style="list-style-type: none"> Pressure sensor for liquid fluids WP: sensor-dependent pressure ranges 4, 6, 10, 16 bar WDP: sensor-dependent pressure ranges 1, 2.5, 4, 6 bar 	<ul style="list-style-type: none"> Pressure and differential pressure sensor for water and refrigerant

Flow


Product range	Types	Properties	Applications
	Pipe connection: • DN 15...50 with thread • DN 65...150 with flange	<p>Flow measurement with automatic glycol compensation</p> <ul style="list-style-type: none"> 0.42, 0.78, 1.38, 2.16, 3.00, 5.76 l/s 9.60, 13.60, 24.00, 37.50, 54.00 l/s 	<ul style="list-style-type: none"> Volumetric flow measurement in water and water-glycol mixtures

Room units


Product range	Types	Properties	Applications
	Room sensors: • 01RT • 22RT	<ul style="list-style-type: none"> Passive/active Temperature range: 0...50 °C CO₂: 0...2000 ppm r.H.: 0...100% 	<ul style="list-style-type: none"> Room temperature, CO₂ and humidity measurement
	Room operating unit: • P-01RT	<ul style="list-style-type: none"> Passive Temperature range: 0...50 °C 	<ul style="list-style-type: none"> Room temperature measurement incl. setpoint adjuster

Room and system solutions.


VAV-Compact controllers¹⁾

Product range	Types/performance classes	Specifications	Applications
	Rotary actuators: <ul style="list-style-type: none"> • LMV (5 Nm) • NMV (10 Nm) • SMV (20 Nm) Linear actuator: <ul style="list-style-type: none"> • LHV (150 N) 	<ul style="list-style-type: none"> • Compact unit with sensor, controller and actuator • On-site operation with ZTH EU or smart phone • Commissioning by means of PC-Tool, including trend function • Integration in MP-Bus, BACnet, Modbus or KNX networks 	Control of VAV and CAV units for volumetric flow systems in buildings


CMV system for living space solutions²⁾

Product range	Types/nominal diameters	Specifications	Applications
	<ul style="list-style-type: none"> • CMV-100-MP (DN 100) • CMV-125-MP (DN 125) • CMV-150-MP (DN 150) • CMV-160-MP (DN 160) 	<ul style="list-style-type: none"> • Compact unit with sensor, controller, actuator and damper blade • On-site operation with ZTH EU or PC-Tool • Integration in MP-Bus networks 	Only for use in the controlled residential ventilation applications

VAV-Universal solutions¹⁾

Product range	Types/performance classes	Specifications	Applications
	VAV-Universal controller: <ul style="list-style-type: none"> • VRU-D3-BAC with flow meter 0...500 Pa • VRU-M1-BAC with diaphragm sensor 0...600 Pa • VRU-M1R-BAC with diaphragm sensor -75...75 Pa Actuators: <ul style="list-style-type: none"> • LM/NM/SM24A-VST (5...20 Nm) • LMQ/NMQ24A-VST (very fast running actuator 4/8 Nm) • LF/NF/SF24A-VST (fail-safe 4...20 Nm) • NKQ24A-VST (fail-safe 6 Nm) 	<ul style="list-style-type: none"> • Controller with integrated sensor • Plug connection between the controller and actuator • Conventional control 0...10 V / 2...10 V • Integration in MP-Bus, BACnet or Modbus networks 	<ul style="list-style-type: none"> • Volumetric flow VAV / CAV • Volumetric flow summation • Duct and room pressure
		<ul style="list-style-type: none"> • Plug connection • Running times starting from 2.5s 	Use with VAV-Universal controller

Room controller system solutions




Product range	Types/performance classes	Specifications	Applications
	Controllers: <ul style="list-style-type: none"> • CR24 (room controller) • CRA24 (controller for apartments) • CRK24 (controller for 6-way characterised control valve) Positioners: <ul style="list-style-type: none"> • CRP24 	<ul style="list-style-type: none"> • Complete solution • Energy-efficient (eu.bac-certified) • Tool plug on the unit 	<ul style="list-style-type: none"> • Individual room controls in comfort zone • Setpoint specification

¹⁾ Deliveries exclusively to manufacturers of volumetric flow units (except for communication and control units).




²⁾ Deliveries exclusively to manufacturers of apparatus in apartment ventilation.

Safety solutions.

Motorisation solutions for fire and smoke dampers

Product range	Types	Specifications	Applications
	Actuators ¹⁾ : <ul style="list-style-type: none"> • BFL (4 / 3 Nm) • BFN (9 / 7 Nm) • BF (18 / 12 Nm) 	<ul style="list-style-type: none"> • Steel gearbox with Safety Position Lock™ function • Form fit • 2 auxiliary switches • Halogen-free cables • Low current consumption in stand-by • Thermoelectric tripping device (function-protected) • Fulfils specific requirements from EN 15650 	Motorisation of fire and smoke dampers
	Communication and power supply units: <ul style="list-style-type: none"> • BKN230-24 • BKN230-24-C-MP • BKN230-24-MOD 	<ul style="list-style-type: none"> • Connector socket for actuator • Status LED • Connection for additional smoke switching contact • Watchdog function 	Control and monitoring of various protocols: <ul style="list-style-type: none"> • 2-wire bus line • Belimo MP-Bus • Modbus • BACnet
	Communication and control units: <ul style="list-style-type: none"> • BKS24-1B • BKS24-9A 	<ul style="list-style-type: none"> • Permanent monitoring of power supply and damper position • Status LEDs <ul style="list-style-type: none"> – Open – Closed – Fault 	Connection of 1 and up to 9 dampers: <ul style="list-style-type: none"> • Star-shaped wiring • 2-wire bus line • Interface with building management technology • Function test of fire protection actuators

Motorisation solutions for smoke control dampers

Product range	Types	Specifications	Applications
	Actuators ¹⁾ : <ul style="list-style-type: none"> • BLE (15 Nm) • BEN (15 Nm) • BEE (25 Nm) • BE (40 Nm) 	<ul style="list-style-type: none"> • Steel gearbox, form fit • 2 auxiliary switches • Halogen-free cables • Low current consumption in stand-by • 1-wire and 2-wire control • High holding torque • Fulfils specific requirements from EN 12101-8 	Motorisation of smoke control dampers in powered smoke control systems
	Communication and power supply unit: <ul style="list-style-type: none"> • BKNE230-24 	<ul style="list-style-type: none"> • Connector socket for actuator • Status LED • Command memory 	Control and monitoring: <ul style="list-style-type: none"> • 2-wire bus line • Local power supply AC 230 V
	Communication and control unit: <ul style="list-style-type: none"> • BKSE24-6 	<ul style="list-style-type: none"> • Permanent monitoring of the power supply and damper positions • Status LEDs <ul style="list-style-type: none"> – Open – Closed – Fault 	Connection of up to 6 dampers: <ul style="list-style-type: none"> • Star-shaped wiring • 2-wire bus line • Interface with building management technology and fire alarm system • Function test of smoke control damper actuators

¹ The fire and smoke control damper actuators are supplied exclusively to damper manufacturers.

All inclusive.



5-year warranty



On site around the globe



Complete product range



Tested quality



Short delivery times



Comprehensive support

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