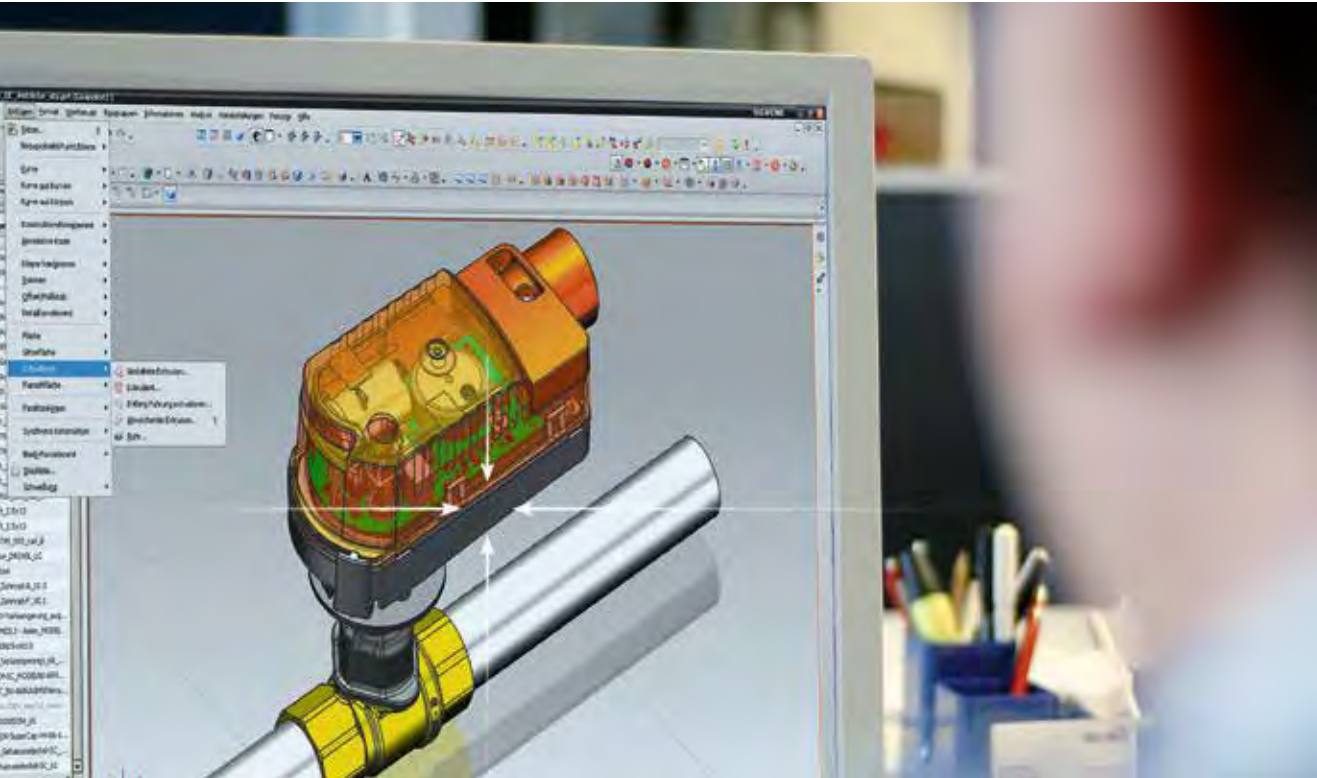


The complete product range.



Edition 2015

Comfort, efficiency, economic viability.



Around the globe, electric actuators and motorised valve solutions from Belimo help to deliver improved comfort, safety and energy efficiency – in buildings, research and production plants with special usage requirements and in public transport.

Perfectly suited to any application

As a leading global supplier, Belimo has the perfect motorisation and valve solution for initial or replacement equipment for any application. The company's decades of experience and specialised know-how guarantee maximum reliability.

Innovation ensures a competitive edge

Because Belimo isn't happy to rest on its laurels, it invests more than others in research and development. This produces new gearbox shapes for smaller actuators as well as comfortable room and residential ventilation systems, pioneering valve technologies and resource-saving networking solutions.

Energy and cost savings

Intelligent actuator controls, air bubble-tight valves with integrated electronic monitoring and analysis tools and compact ZoneTight™ valves – Belimo actuator and valve solutions are key elements in the energy-optimised operation of HVAC systems.

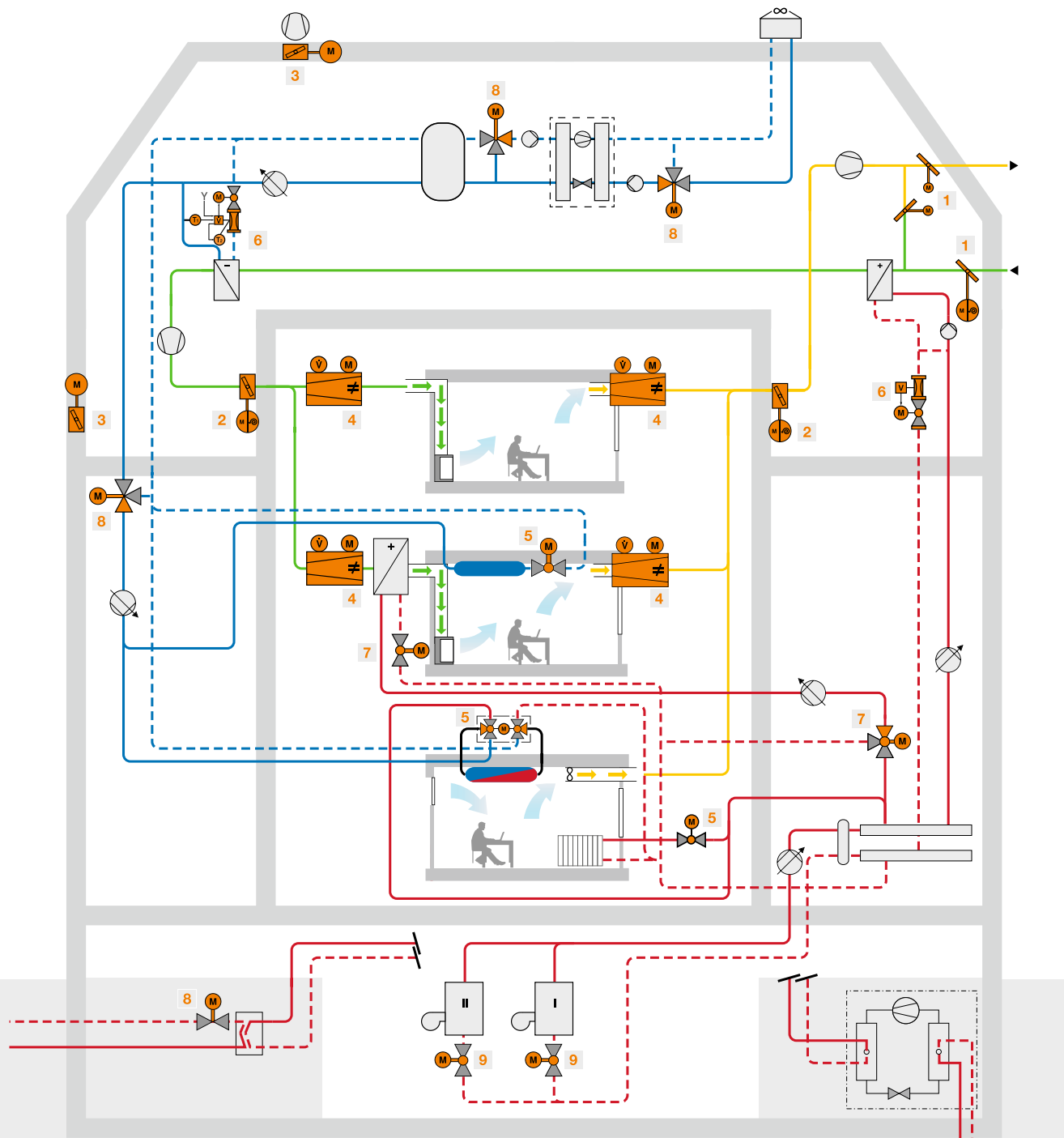
Efficient planning and installation

Belimo actuator solutions are all based on a consistent installation and operating philosophy. This improves safety and simplifies the planning, installation, commissioning and maintenance of the systems.

Quality and service

Belimo actuators are checked individually before delivery. This ensures their proverbial Swiss quality with a 5-year guarantee. Belimo provides competent on-site consultancy, fast deliveries and comprehensive support as standard.

Everything under one roof.

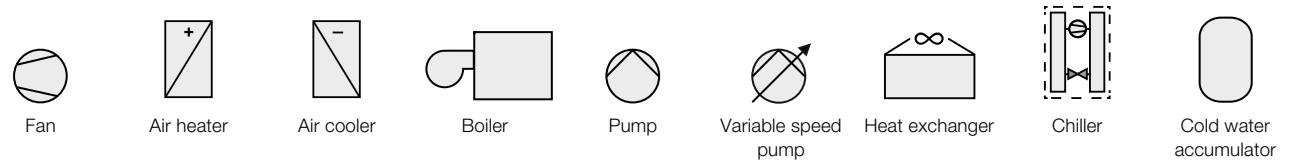


Air

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

Water


- 5 Zone valves
- 6 Pressure-independent characterised control valves
- 7 Characterised control valves
- 8 Globe valves
- 9 Butterfly valves






Room and system solutions


VAV-Compact controllers¹⁾

Product range	Types / performance classes	Specifications	Applications
	Rotary actuators: <ul style="list-style-type: none"> • LMV-D3-MP (5 Nm) • NMV-D3-MP (10 Nm) • LMV-D3LON (5 Nm) • NMV-D3LON (10 Nm) • LMV-D3-MOD (5 Nm) • NMV-D3-MOD (10 Nm) Linear actuator: <ul style="list-style-type: none"> • LHV-D3-MP (150 N) 	<ul style="list-style-type: none"> • Compact unit with sensor, controller and actuator • On-site operation with ZTH EU • Commissioning by means of PC-Tool, including trend function • Integration in MP-Bus®, Modbus or LonWORKS® networks 	Control of VAV and CAV units for volumetric flow systems in buildings


VAV-Compact control system²⁾

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 controlled residential ventilation applications in specific residential ventilation distribution boxes


VAV-Universal solutions¹⁾

Product range	Types / performance classes	Specifications	Applications
	VAV-Universal controller: <ul style="list-style-type: none"> • VRD3 with integrated sensor • VRP with external sensor • VRP-M with external sensor 	<ul style="list-style-type: none"> • Plug connections between sensor, controller and actuator • Wide array of periphery devices • Integration in MP-Bus® networks 	<ul style="list-style-type: none"> • Control of VAV and CAV units in buildings • VAV laboratory applications • Pressure or volumetric flow
	Pressure sensor: <ul style="list-style-type: none"> • VFP (static 0...600 Pa) • VFD3 (dynamic 0...600 Pa) 	<ul style="list-style-type: none"> • Plug connection 	<ul style="list-style-type: none"> • For severely contaminated air or aggressive gases • Indoor air and comfort applications
	Actuators: <ul style="list-style-type: none"> • LM / NM / SM (5...20 Nm) • LMQ / NMQ (rapid-running 4/8 Nm) • LF / SF (spring-return 4/20 Nm) 	<ul style="list-style-type: none"> • Plug connection • Running times starting from 2.5 s 	Use with VAV-Universal controller

Fan control

Product range	Types	Specifications	Applications
	<ul style="list-style-type: none"> • COU24-A-MP 	<ul style="list-style-type: none"> • MP-Bus® connection for VAV-Compact, VRP-M • 0...10V FU output signal • Cascading 	System solution for energy-efficient control of frequency converter-controlled fans in VAV / CAV systems

Room controller system solutions

Product range	Types / performance classes	Specifications	Applications
	Controllers: <ul style="list-style-type: none"> • CR24 (room controller) • CRA24 (residential controller) • CRK24 (controller for 6-way characterised control valve) Positioners: <ul style="list-style-type: none"> • CRP 	<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 residential ventilation.

Actuator and valve solutions.



General air solutions:

Air treatment, distribution, control and feedback.

The world's most comprehensive range of servomotors for air dampers from 0.4 to 8 m² includes rotary, linear and full-rotation actuators with a wide range of motorisation levels and actuating times. The actuators cover almost all power requirements for the control of air flows in air-conditioning plants, from treatment and distribution to feedback and retreatment. The range also includes special actuators for indoor and outdoor use in extreme conditions and platforms for the implementation of individual actuator solutions by OEMs.



Water solutions:

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 combine functions such as measuring, controlling, shutting and automatic hydraulic balancing in a single valve unit. The forward-looking Belimo Energy Valve™ with integrated logic allows energy flows to be monitored and optimised, while the integrated Delta-T manager ensures that the differential temperature does not fall below defined limit values.



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. The Retrofit globe valve and rotary actuators can be mounted on practically all conventional makes of valve in just a few steps. Handy VAV-Retrofit kits with controllers or actuators, differential pressure sensors and sensors are available for replacing defective or pneumatic VAV devices.



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 ducts is provided by the motorised fire dampers to form fire compartments. Smoke control systems with motorised smoke control dampers ensure smoke-free escape and rescue routes.

For every field of application.



System protection:

Avoiding damage in the event of interruptions to operation.

Actuators with an emergency control function protect the systems from damage caused by ice, water and steam. In mechanical emergency control actuators, the integrated spring package is triggered automatically and the damper closed in the event of electricity interruption. The SuperCap actuators with electrical emergency control function can bridge short power outages lasting up to 10 seconds and the emergency control positions can be defined individually. Unnecessary downtimes and inconvenience are thereby avoided.



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 LON or Modbus interface are available for direct connections. MP actuators can be used to combine up to eight different final controlling elements into one MP-Bus® section and connect to virtually any supervisory system with greatly reduced wiring costs. Various adjustment and service tools simplify commissioning and monitoring.







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. Special, compact VAV control units are available for distribution boxes used in controlled residential ventilation. Eu.bac-certified room and residential controllers and Fan Optimiser system solutions improve comfort levels and reduce energy consumption.



Motorisation solutions for fire and smoke protection dampers

Product range	Types / performance classes	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 protection dampers
	Communication and power supply units: <ul style="list-style-type: none">• BKN230-24• BKN230-24LON• BKN230-24MP• BKN230-24-C-MP• BKN230-24-MOD• BKN230-MOD	<ul style="list-style-type: none">• Sockets 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• LONWORKS®
	Gateways: <ul style="list-style-type: none">• UK24MOD• UK24BAC	<ul style="list-style-type: none">• Up to 8 dampers per gateway• Fault message	<ul style="list-style-type: none">• Interface to BACnet MS/TP or to Modbus RTU
	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 / performance classes	Specifications	Applications
	Actuators ¹⁾ : <ul style="list-style-type: none">• BLE (15 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 mechanical smoke control systems
	Communication and power supply unit: <ul style="list-style-type: none">• BKNE230-24	<ul style="list-style-type: none">• Sockets for actuator• Status LED• Command memory	Control and monitoring: <ul style="list-style-type: none">• 2-wire bus line• Local power supply AC 230V
	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 BMA• Function test of the smoke control actuators


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




Rotary actuators without emergency control function

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 emergency control function 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°• Rotation without limits• Magnetic gearing latch	Motorisation of air dampers without emergency control function up to 0.4 m ² in residential ventilation systems, underfloor air handling units, decentralised sill ventilation units, etc.
	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 emergency control function up to DN 160 in residential ventilation systems, air distribution systems, after-flows, facade units, etc.


Linear actuators without emergency control function

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	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• Direction of stroke can be selected• Gearbox can be rotated by 90°	Motorisation of air dampers without emergency control function up to 0.8 m ² in residential ventilation systems, swirl outlets, long range nozzles, mixing units, etc.


Full-rotation actuators without emergency control function

Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none">• LU (3 Nm)	<ul style="list-style-type: none">• Mechanical angle of rotation limitation up to 330°• Electronic angle of rotation limitation up to 1800°• Rotation without limits	Motorisation of final controlling elements with rotary movement > 90° and VAV units, replacement for KMU


Very fast running actuators without emergency control function

Product range	Types/performance classes	Specifications	Applications
	Rotary actuators: <ul style="list-style-type: none">• LMQ (4 Nm)• NMQ (8 Nm)• SMQ (16 Nm)• SMD (16 Nm)	<ul style="list-style-type: none">• Identical accessories for all types• Very fast running times starting from 2.5 s/90°	Motorisation of air dampers without emergency control function up to 3.2 m² for industrial suction plants, laboratories, painting and welding plants, etc.
	Linear actuators: <ul style="list-style-type: none">• LHQ (100 N)• SHQ (200 N)	<ul style="list-style-type: none">• Gear rod length 100 mm• Mechanical stroke limitation every 20 mm• Running times starting from 3.5 s/100 mm	Motorisation of final controlling elements and slide valves with linear movement up to 100 mm for wood boilers, mixing units, tilt windows, etc.


RobustLine rotary actuators with and without emergency control function for extreme conditions (IP66/67)

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, motor running time 4 s)	<ul style="list-style-type: none">• IP66/67, 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	Motorisation of air dampers without emergency control function up to 4 m² in particularly exposed positions: <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 and without emergency control function for outdoor applications (IP66/NEMA4)


Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none">• GM..G (40 Nm)• SMQ..G (16 Nm, motor running time 7 s)• NF..G (10 Nm)*• SF..G (20 Nm)*• GK..G (40 Nm)** <p>Emergency control function: * mechanical ** electrical</p>	<ul style="list-style-type: none">• IP66/NEMA4, 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	Motorisation of air dampers with and without emergency control function up to 8 m²: <ul style="list-style-type: none">• Protection against moisture, humidity, high dust and contamination levels• General outdoor applications, greenhouses, etc.• Rooftop ventilation plant rooms

Platform for rotary actuators without emergency control function




Product range	Types/performance classes	Specifications	Applications
	<ul style="list-style-type: none">• TM24E.. (2 Nm)• LM24E.. (5 Nm)• NM24E.. (10 Nm)• SM24E.. (20 Nm)	A platform for customers who want to implement their own actuator, based on proven Belimo technology and quality.	Motorisation of air dampers without emergency control function up to 4 m²

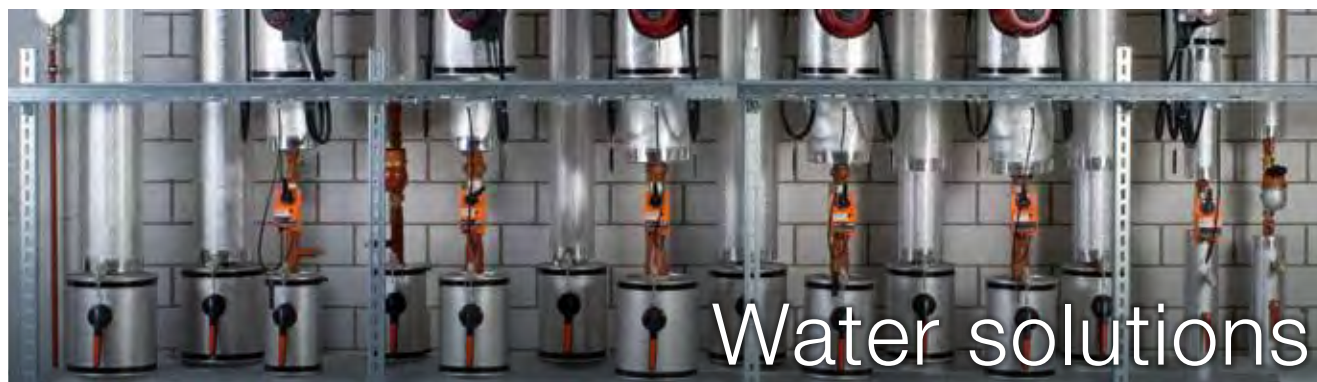


Rotary actuators with mechanical emergency control function (spring package)

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)* <p>* with 2 integrated auxiliary switches</p>	<ul style="list-style-type: none"> • Automatic closing function in <20 s in the event of electricity interruption • Manual override 	<p>Motorisation of air dampers with emergency control function up to 6 m²</p>


Rotary and linear actuators with controlled electrical emergency control function (SuperCaps)

Product range	Types/performance classes	Specifications	Applications
 	<p>Rotary actuators with emergency control function:</p> <ul style="list-style-type: none"> • NKQ (6 Nm, running time 4 s) • GK (40 Nm, running time 150 s) <p>Linear actuators with emergency control function:</p> <ul style="list-style-type: none"> • LHK (150 N, 100 mm stroke, running time 120 s) • SHK (450 N, 100 mm stroke, running time 120 s) 	<ul style="list-style-type: none"> • Integrated energy storage; actuator moves into predefined emergency setting position in <35 s (NKQ: 4 s) in the event of electricity interruption (POP, «Power Off Position») • Bridging of electricity interruptions of up to 10 s • Emergency setting position adjustable between 0...100% 	<p>Motorisation of air dampers with emergency control function up to 8 m²</p>
	<p>Compact actuators with emergency control function:</p> <ul style="list-style-type: none"> • CM24K (2 Nm) • SKM230A 	<ul style="list-style-type: none"> • Energy storage module: moves 2 CM actuators into emergency setting position in <15 s in the event of electricity interruption 	<p>Motorisation of air dampers up to 0.4 m². Particularly suitable in decentralised air handling units, residential ventilation systems and with extremely limited space conditions</p>




Water solutions

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, change-over ball valve) 	Rotary actuators: <ul style="list-style-type: none"> CQ24A CQ24A-SR CQ230A CQ24A-MPL CQK24A-SR 	Cold and hot water: <ul style="list-style-type: none"> Nominal diameter DN 15/20 Permissible pressure 1600 kPa Fan coils Cooling ceilings Zone air heaters / air coolers Floor heaters Radiators
	Internal thread (PIQCV): <ul style="list-style-type: none"> C2..QP(T)- (2-way, pressure-independent zone valve) Available from 3rd quarter 2015		
	Internal thread: <ul style="list-style-type: none"> R30..-B2 (6-way, characterised control valve) 	Rotary actuators: <ul style="list-style-type: none"> LR24A-SR LR24A-MP 	Cold and hot water: <ul style="list-style-type: none"> Nominal diameters DN 15/20 Permissible pressure 1600 kPa Modulating control of combined heating/cooling elements

Pressure-independent characterised control valves

Product range	Valves	Actuators	Applications
	Internal thread (Belimo Energy Valve™): <ul style="list-style-type: none"> EV..R+BAC (2-way, DN 15..50) 	<ul style="list-style-type: none"> Actuator with monitoring and recording function integrated Electronic flow measurement Permanent hydraulic balancing Delta-T manager Power control 	Balancing, measuring, controlling, shutting and energy monitoring: <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™): <ul style="list-style-type: none"> P6..W..EV-BAC (2-way, DN 65..150) 		
	Internal thread (EPIV): <ul style="list-style-type: none"> EP..R+MP (2-way, DN 15..50) 	<ul style="list-style-type: none"> Integrated actuator Electronic flow measurement Permanent hydraulic balancing 	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): <ul style="list-style-type: none"> P6..W..E-MP (2-way, DN 65..150) 		
	Internal thread: <ul style="list-style-type: none"> R2..P- (2-way) 	<ul style="list-style-type: none"> Rotary actuators: KR, TR, LR, NR, SR series With emergency control function: TRF, LRF, NRF, SRF series Fast runners: LRC, NRC, SRC series Very fast running actuators: LRQ, NRQ, SRQ series 	Balancing, controlling and shutting with one valve: <ul style="list-style-type: none"> Flow \dot{V}_{MAX} 0.04...5.5 l/s Nominal diameters DN 15...50 Permissible pressure 1600 kPa




Characterised control valves

Product range	Valves	Actuators	Applications
	Internal thread: <ul style="list-style-type: none"> • R2..-S.. (2-way) • R3..-S.. (3-way) 	<ul style="list-style-type: none"> • Rotary actuators: TR, LR, NR, SR series • With emergency control function: TRF, LRF, NRF(D), SRF series • Fast runners: TRC, LRC, NRC, SRC series • Very fast running actuators: LRQ, NRQ, SRQ series • KR.. to DN 20 	Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • Permissible pressure 1600 kPa
	External thread: <ul style="list-style-type: none"> • R4.. (2-way) • R5.. (3-way) 		Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 10...50 • Permissible pressure 1600 kPa
	External thread (high temperatures): <ul style="list-style-type: none"> • R4..D (2-way) 		District heating, cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 10...20 • Permissible pressure 1600 kPa
	Flange: <ul style="list-style-type: none"> • R6..R.. (2-way / PN6) • R7..R.. (3-way / PN6) 	<ul style="list-style-type: none"> • Rotary actuators: SR-5, GR-5 series • With emergency control function: SRF-5, GRK-5 series • Fast runners: SRC-5, GRC-5 series 	Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • Permissible pressure 600 kPa
	Flange: <ul style="list-style-type: none"> • R6..W...S8 (2-way) 		Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 65...150 • Permissible pressure 1600 kPa


Shut-off and change-over valves

Product range	Valves	Actuators	Applications
	Internal thread: <ul style="list-style-type: none"> • R2.. open-close ball valve • R3..(BL) (3-way) 	<ul style="list-style-type: none"> • Rotary actuators: TR, LR, NR, SR series • With emergency control function: TRF, LRF, NRF(D), SRF series 	Cold and hot water, «change-over» function: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • Permissible pressure 1600 kPa
	External thread: <ul style="list-style-type: none"> • R4.. open-close ball valve • R3..(BL) (3-way) 		Shutting cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • Permissible pressure 1600 kPa

Butterfly valves

Product range	Valves	Actuators	Applications
	Flange PN 6/ 10/ 16: <ul style="list-style-type: none"> • D6..N (2-way) • D6..NL (2-way) 	<ul style="list-style-type: none"> • Rotary actuators: SR-5, SR..P, GR-5, DR-7, SY series • With emergency control function: SRF-5, GRK-5 series Optional: <ul style="list-style-type: none"> • Heating with humidistat / thermostat • Integrated auxiliary switch or potentiometer 	Shutting cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 25...700

Control, shut-off and change-over valves for outdoor applications

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

Globe valves

Product range	Valves	Actuators	Applications
	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-way and 3-way/PN16) • H6..S(P) (2-way/PN16) for hot water and steam • H6..W/H7..W (2-way and 3-way/PN16), DN 200/250 Additional flange versions: <ul style="list-style-type: none"> • H..R (2-way and 3-way/PN6) • H..X.. (2-way and 3-way/PN25) • H..Y.. (3-way/PN40) 	<ul style="list-style-type: none"> • Standard globe valve actuators: LV..A (15 mm) NV..A, SV..A (20 mm) EV..A, RV..A (40 mm) • Globe valve actuators with emergency control function: NVK..A, SVK..A (20 mm) AVK..A (32 mm) NVFT (20 mm, TÜV certification) • Fast runners: LVC..A (15 mm) NVC..A, SVC..A (20 mm) EVC..A (40 mm) • Long stroke actuators: GV (65 mm) 	Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • Permissible pressure 1600 kPa Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...250 • Permissible pressure 1600 kPa Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...100 • Permissible pressure 600 kPa • Permissible pressure 2500 kPa • Permissible pressure 4000 kPa



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 final controlling elements (dampers, valves, VAV controllers) can be combined and together connected to a supervisory field bus system (LonWorks®, BACnet, EIB/KNX, Ethernet TCP/IP, Modbus RTU, Profibus, etc.)• Either the Belimo gateways (UK24LON, UK24EIB, UK24MOD, UK24BAC) or gateways and DDC controllers from other manufacturers with an MP interface can be used as the MP master• One sensor can be connected per actuator

LON and Modbus actuators

Product range	Applications
	<p>LON actuators</p> <ul style="list-style-type: none">• LONMARK®-certified actuators with integrated FTT-10A transceiver can be connected directly to LonWorks®• Integrated temperature controller (Functional Profile LONMARK® #8060) allows individual room control to be implemented in a low-cost manner• One sensor can be connected per actuator• LNS plug-ins for simplified commissioning and monitoring <p>Modbus actuators</p> <ul style="list-style-type: none">• Actuators with integrated MOD interface can be connected directly to Modbus RTU (RS485)• Communication parameters (address, baud rate, transmission format, etc.) and actuator settings (running time, scaling etc.) can be set using the service tool ZTH EU• One sensor can be connected per actuator

Adjustment and service tools.

For parameterisable and communicative actuators and volumetric flow controllers

Type	Specifications	Type	Specifications
	<ul style="list-style-type: none">• Convenient application-specific adaptation of the actuator by means of parameterisation• Simple diagnostics with commissioning and maintenance• Graphics depiction of setpoint, actual value and operating displacement		<ul style="list-style-type: none">• Efficient setting of actuator parameters• Diagnostics and test functions• Reverse-compatible for all Belimo PP/MP devices after 1992• With integrated MP level converter (ZIP)



Retrofit general air solutions: actuators without emergency control function

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...20 V 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 emergency control function up to 8 m²

Retrofit water solutions: globe valve actuators

Product range	Valves	Actuators	Applications
	For globe valves from various manufacturers	<p>Globe valve actuators with universal valve adapter:</p> <ul style="list-style-type: none">• NV..A..-RE (1000 N, 20 mm)• SV..A..-RE (1500 N, 20 mm)• SVL..A..-RE (1500 N, 50 mm)• AVK..A..-RE (2000 N, 32 mm)• EV..A..-RE (2500 N, 50 mm)• RV..A..-RE (4500 N, 50 mm) <p>Short stroke actuators with adapter for Siemens or Cazzaniga short stroke globe valves:</p> <ul style="list-style-type: none">• NRDVX.. (500 N, 5.5 mm)	Motorisation of globe valves with nominal diameters DN 15...150

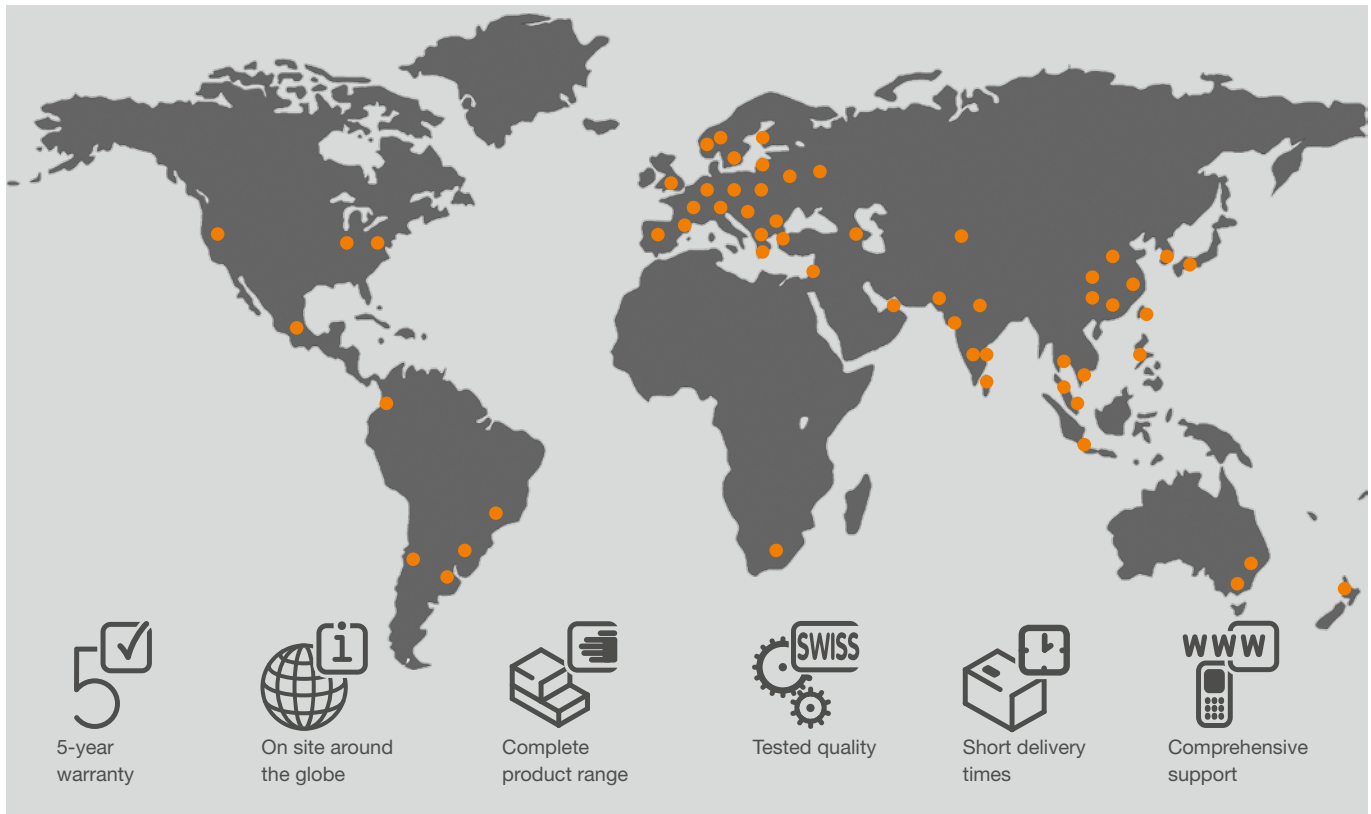
Retrofit water solutions: rotary valve actuators

Product range	Valves	Actuators	Applications
	<p>For rotary valves from various manufacturers:</p> <ul style="list-style-type: none">• Ball valves• Open-close ball valves• Butterfly valves• Mixing valves <p>A check must be made of the required torque</p>	<ul style="list-style-type: none">• Rotary actuators HT.., SR-R, GR-R (up to 40 Nm) with adapter (square, dihedral, wedge)• With emergency control function: SRF-R and GRK-R (up to 40 Nm) with adapter (square, dihedral, wedge)• SY rotary actuator with adapter: 35...3500 Nm	Motorisation of valves with: <ul style="list-style-type: none">• Interface ISO 5211: F03/F04/F05/F07 or F10• Up to nominal diameter DN 700: upon request

Retrofit VAV

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

All-inclusive.



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