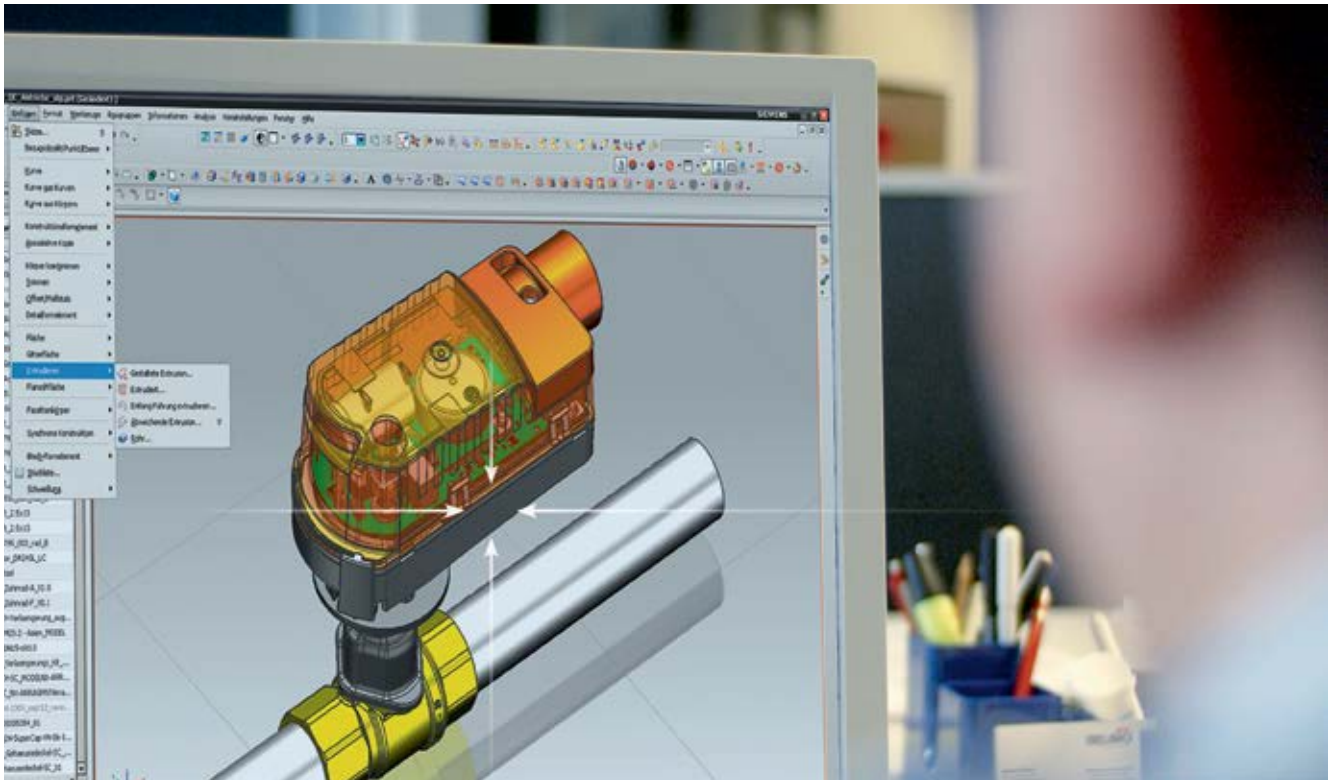


The complete product range.



Comfort, efficiency, economic viability.



Around the globe, electric actuators, motorised valve solutions and sensors from Belimo help to deliver improved comfort, safety and energy efficiency – for example in buildings, research and production facilities, ships and public transport.

Perfectly suited to any application

As a leading global supplier, Belimo has the perfect motorisation and valve solution as well as seamlessly integrable sensors 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 is not happy to rest on its laurels, the company invests more than others in research and development. This results in new product and solution concepts, which aim at surpassing customers' expectations whilst providing them with the assurance of having chosen the best.

Energy and cost savings

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

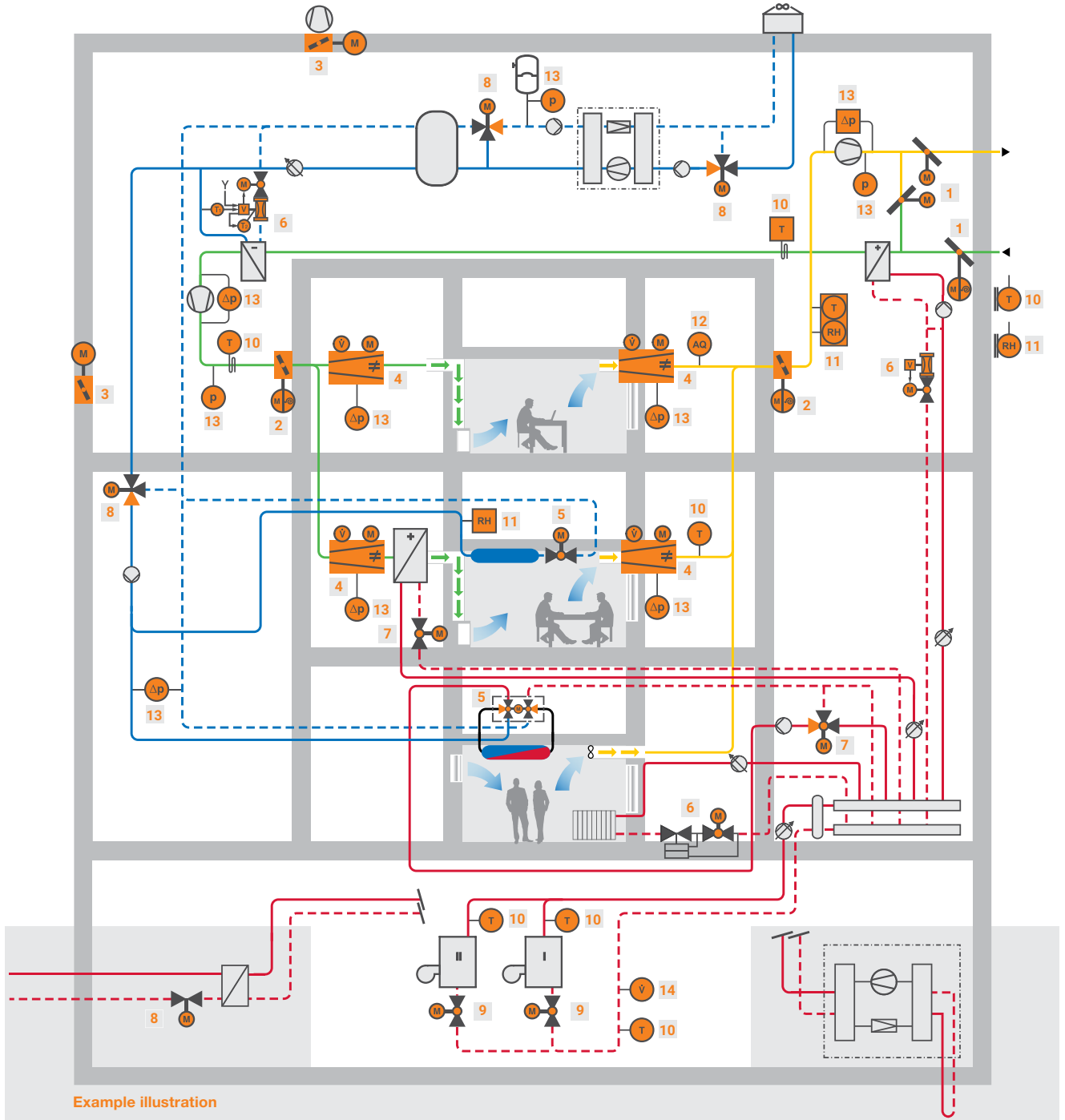
Efficient planning and installation

Actuator solutions from Belimo 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

Actuators from Belimo are checked individually before delivery. This ensures their proverbial Swiss quality. Belimo provides competent on-site consultancy, fast delivery and comprehensive support as standard.

Everything under one roof.



Air

- 1 Air damper actuators
- 2 Fire damper 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

Sensors

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



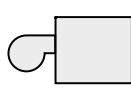
Fan



Air heater



Air cooler



Boiler



Pump



Variable speed pump



Heat exchanger



Chiller / Heat pump



Chilled water reservoir



Substation

Actuator, valve and sensor solutions.



General air solutions

Air treatment, distribution, control and feedback

The world's most comprehensive range of actuator solutions for air dampers of up 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. As a perfect supplement to actuators, Belimo provides a comprehensive range of sensors for measuring air temperature and humidity, as well as air quality. Differential pressure sensors guarantee for an accurate filter monitoring, to optimally plan service intervals.



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. Thanks to permanent dynamic balancing, pressure-independent characterised control valves ensure the correct amount of water at all times; even in the case of changes in differential pressure and during partial load operation. The forward-looking multifunctional 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. In limited-space installation situations, the zero-leaking valves from the Belimo ZoneTight™ product family are the ideal solution for energy-saving, smooth room and zone control.



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, pick-up devices and sensors are available for replacing defective or pneumatic VAV devices.

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 case of emergency, helps minimise property damage and secures the continued operation of companies. The best protection against the spread of fire and smoke through the air ducts is provided by the motorised fire dampers to form fire compartments. Mechanical smoke extraction systems with motorised smoke control dampers ensure low smoke levels in escape and rescue routes.



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 voltage failures 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, KNX, Modbus and BACnet 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 ZoneEase[™], VAV-Compact or VAV-Universal devices. Special, ZoneEase[™] and compact VAV control units are available for distribution boxes used in controlled residential ventilation.



General air solutions

Rotary actuators without emergency control function

Product range	Types/performance classes	Specifications	Applications
	Standard actuators: <ul style="list-style-type: none"> • LM (5 Nm) • NM (10 Nm) • SM (20 Nm) • GM (40 Nm) • PM (160 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) • IP66/67 (PM...) • NFC (PM...) 	Motorisation of air dampers without emergency control function
	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 disengagement 	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.

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) • NMD (8 Nm) • SMD (16 Nm) 	<ul style="list-style-type: none"> • Identical accessories for all types • Very fast running times starting from 2.5s/90° 	Motorisation of air dampers without emergency control function up to 3.2 m ² 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 	<p>Motorisation of air dampers with and without emergency control function 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 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 	<p>Motorisation of air dampers with and without emergency control function 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



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>* optional 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 (SuperCap)

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) PK (160 Nm, running time 35 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) <p>Compact actuators with emergency control function:</p> <ul style="list-style-type: none"> CM24K (2 Nm) SKM230A (energy storage module) 	<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</p> <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



Zone Valve

Product range	Valves	Actuators	Applications
	<p>Internal thread:</p> <ul style="list-style-type: none"> • RB2.. (2-way zone valve) • RB3.. (3-way zone valve) • Z..S-.. 	<ul style="list-style-type: none"> • Standard Rotary Actuators: FRU.. • Mechanical Fail-Safe Rotary Actuators: Z..S-.. 	<ul style="list-style-type: none"> • For cold and hot water system and fan coil application • Water temperature range: RB: 5°C...100°C Z..S-.. : 0°C...93°C


Belimo ZoneTight™

Product range	Valves	Actuators	Applications
	<p>Internal thread (QCV):</p> <ul style="list-style-type: none"> • C2..Q- (2-way, characterised control valve) • C3..Q- (3-way, change-over ball valve) <p>Internal thread (PIQCV):</p> <ul style="list-style-type: none"> • C2..QP(T)- (2-way, pressure-independent zone valve) <p>Pressure Independent Flow Limiter Valve PIFLV™:</p> <ul style="list-style-type: none"> • C2..QFL- (2-way, pressure-independent zone valve) • R2..FL- (2-way, pressure-independent zone valve) 	<ul style="list-style-type: none"> • Rotary actuators: CQ24A (-SR/-MPL), CQ230A • With emergency control function: CQK24A (-SR) TQF24, TQF230A • Fast runners: CQC230A, CQD230A <ul style="list-style-type: none"> • Rotary actuators: CQ24A, CQ230A LR series • With emergency control function: CQK24A TQF24, TQF230, L(R)F series • Fast runners CQC230A, CQD230A LRQ series 	<p>Cold and hot water:</p> <ul style="list-style-type: none"> • Nominal diameter DN 15 / 20 / (25) • PN25 • Fan coils • Cooling ceilings • Zone air heaters/ air coolers • Floor heaters • Radiators


Pressure-independent characterised control valves

Product range	Valves	Actuators	Applications
	<p>Internal thread (Belimo Energy Valve™):</p> <ul style="list-style-type: none"> • EV..R+BAC (2-way, DN 15..50) • EV..R+KBAC (2-way, DN 15..50) <p>Flange (Belimo Energy Valve™):</p> <ul style="list-style-type: none"> • EV..F+BAC (2-way, DN 65...150) • EV..F+KBAC (2-way, DN 65...150) 	<ul style="list-style-type: none"> • Actuator with monitoring and recording function integrated • Electronic flow measurement • Permanent hydraulic balancing • Delta-T manager • Power control • With electrical emergency control function: KBAC • Connection to Belimo Cloud 	<p>Balancing, measuring, controlling, shutting and energy monitoring:</p> <ul style="list-style-type: none"> • Flow V_{MAX} 0.11...45 l/s • Nominal diameters DN 15...150 • PN25
	<p>Internal thread (EPIV):</p> <ul style="list-style-type: none"> • EP..R+MP (2-way, DN 15..50) • EP..R+KMP (2-way, DN 15..50) • EP..R+MOD <p>Flange (EPIV):</p> <ul style="list-style-type: none"> • EP..F+MP (2-way, DN 65...150) • EP..F+KMP (2-way, DN 65...150) • EP..F+MOD (2-way, DN 65...150) 	<ul style="list-style-type: none"> • Integrated actuator • Electronic flow measurement • Permanent hydraulic balancing • With electrical emergency control function: KMP 	<p>Balancing, measuring, controlling and shutting with a single valve unit:</p> <ul style="list-style-type: none"> • Flow V_{MAX} 0.11...45 l/s • Nominal diameters DN 15...150 • PN16


Characterised control valves

Product range	Valves	Actuators	Applications
	Internal thread: <ul style="list-style-type: none"> • R2..-S.. (2-way) • R3..-S.. (3-way) Flange: <ul style="list-style-type: none"> • R6..AO.. (2-way/PN6) 	<ul style="list-style-type: none"> • Rotary actuators: TR, LR, NR, SR series • With emergency control function: TRF, LRF, NRF, SRF series • Very fast running actuators: LRQ, NRQ, SRQ series 	Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • PN40 (DN15..25) • PN25 (DN32..50)
	Flange: <ul style="list-style-type: none"> • R6..AO (2-way) 	<ul style="list-style-type: none"> • Rotary actuators: SR..5, GR..7 series • With emergency control function: SRF..-5, GRK..-7 series • Fast runners: SR..Q..AX-...-5 (DN65) 	Cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 65...150 • PN16


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) 	<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 • PN40 (DN15..25) • PN25 (DN32..50)

Shut-off and change-over valves

Product range	Valves	Actuators	Applications
	Internal thread: <ul style="list-style-type: none"> • R2.. (2-way) • R3.. (3-way) 	<ul style="list-style-type: none"> • Rotary actuators: TR, LR, NR, SR series • With emergency control function: TRF, LRF, NRF, SRF series 	Cold and hot water, shut-off and changeover function: <ul style="list-style-type: none"> • Nominal diameters DN 15...50 • PN40 (DN15..25) • PN25 (DN32..50) Shutting cold and hot water: <ul style="list-style-type: none"> • Nominal diameters DN 15...50

Butterfly Valves

Product range	Valves	Actuators	Applications
	Flange PN6/10/16: <ul style="list-style-type: none"> • D6..N (2-way) • D6..NL (2-way) • D6..W (2-way) • D6..WL (2-way) 	<ul style="list-style-type: none"> • Rotary actuators: SR-5, SR..P-5, GR-5, DR-5, DR-7, PR, SY series • With emergency control function: SRF-5, GRK-5, DRK, PRK 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...600



Water solutions

Globe valves

Product range	Valves	Actuators	Applications
	Internal thread: <ul style="list-style-type: none"> H20..X-S (2-way) H30..X-S (3-way) 	<ul style="list-style-type: none"> Standard 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) Globe valve actuators with emergency control function: <ul style="list-style-type: none"> NVK..A, SVK..A (20 mm) AVK..A (32 mm), EVK..A (40 mm) Fast runners: <ul style="list-style-type: none"> LVC..A (15 mm) NVC..A, SVC..A (20 mm) EVC..A (40 mm) 	Cold and hot water: <ul style="list-style-type: none"> Nominal diameters DN 15...50 PN16 PN25
	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)/H7..S (2- and 3-way/PN 16) for hot water and steam H6..W/H7..W (2-way and 3-way/PN16), DN 200/250 		




Sensor solutions


Temperature

Product range	Types	Specifications	Applications
	Outdoor: <ul style="list-style-type: none"> 01UT 22UT 	<ul style="list-style-type: none"> -35...+50 °C -50...+50 °C 	<ul style="list-style-type: none"> Outdoor temperature sensor Room temperature sensor with NEMA 4X/IP65 protection
	Duct / Immersion: <ul style="list-style-type: none"> 01DT 22DT 	<ul style="list-style-type: none"> Sensor dependent 0...+160 °C 	<ul style="list-style-type: none"> Duct temperature sensor Immersion sensor; compression fitting or a thermowell required
	Duct averaging: <ul style="list-style-type: none"> 22MT 	<ul style="list-style-type: none"> -20...+80 °C 	Duct averaging temperature sensor for air-handling units or larger ducts with stratification
	Strap-on: <ul style="list-style-type: none"> 01ST 01HT 22HT 	<ul style="list-style-type: none"> -35...+100 °C -35...+90 °C 0...+100 °C 	Strap-on temperature sensors for heating systems and solar collectors, passive (ST, without housing) and passive or active (HT, with housing)
	Cable: <ul style="list-style-type: none"> 01CT 22CT 	<ul style="list-style-type: none"> -35...+100 °C 0...+160 °C 	Cable temperature sensor passive (without housing) and active (with housing)
	Frost protection: <ul style="list-style-type: none"> 01DTS 	<ul style="list-style-type: none"> -10...+12 °C 	Frost protection thermostats for protection of heat exchangers and registers in air-handling units with automatic or manual reset


Humidity

Product range	Types	Specifications	Applications
	Outdoor: • 22UTH	• 0...100% rH/-20...+80°C	<ul style="list-style-type: none"> Outdoor sensor humidity / temperature Room sensor humidity / temperature with NEMA 4X/IP65 protection Option: weather protection
	Duct: • 22DTH	• 0...100% rH/-20...+80°C	Duct sensor humidity / temperature
	Condensation: • 22HH		Condensation sensor • Option: external sensor


Air quality

Product range	Types	Specifications	Applications
	Duct: • 22DC • 22DTC • 22DTM • 22DCV • 22DCM • 22DCK	<ul style="list-style-type: none"> CO₂: 0...2000 ppm CO₂: 0...2000 ppm, Temp.: 0...+50°C CO₂: 0...2000 ppm, rH: 0...100%, Temp.: 0...+50°C CO₂: 0...2000 ppm, VOC: 0...100% CO₂: 0...2000 ppm, VOC: 0...100%, Temp.: 0...+50°C CO₂: 0...2000 ppm, VOC: 0...100%, Temp.: 0...+50°C 	Duct sensor to measure the air quality

Pressure

Product range	Types	Specifications	Applications
	Duct: • 22ADP	• 250 Pa • 2500 Pa • 7000 Pa	Air differential pressure sensor
	Duct: • 01APS	• 20...300 Pa • 50...500 Pa • 200...1000 Pa • 500...2500 Pa	Air differential pressure switch
	Pipe: • 22WP • 22WDP	• 4, 6, 10, 16 bar • 1, 2.5, 4, 6 bar	Pressure and differential pressure for water and selected refrigerants


Flow

Product range	Types	Specifications	Applications
	Pipe: • FM...R-SZ (DN15 – 50) • FM...F-SZ (DN 65 – 150)	<ul style="list-style-type: none"> 25, 46, 83, 130, 180, 345 l/min 480, 680, 1200, 1875, 2700 l/min 	Flow control




Retrofit applications

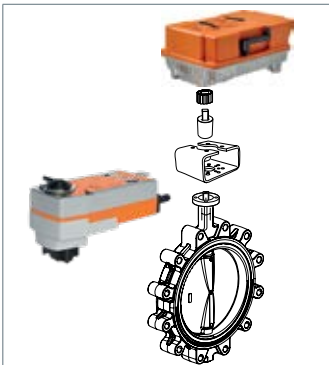
Retrofit general air solutions: actuators without emergency control function

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...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 	<p>Replacement of the motorisation of air dampers and slide valves without emergency control function up to 8 m²</p>


Retrofit water solutions: globe valve actuators

Product range	Valves	Actuators	Applications
	<p>For globe valves from various manufacturers</p>	<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) 	<ul style="list-style-type: none"> • Motorisation of globe valves with nominal diameters • DN 15...250

Retrofit water solutions: rotary valve actuators


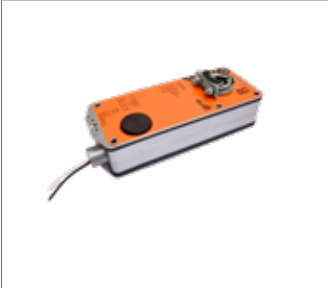
Product range	Valves	Actuators	Applications
	<p>For rotary valves from various manufacturers:</p> <ul style="list-style-type: none"> • Ball valves • Butterfly valves • Mixing valves <p>A check must be made of the required torque</p>	<ul style="list-style-type: none"> • Rotary actuators HT..., SR...-R, GR...-R, DR...-R, PR (up to 90 Nm) with adapter (square, flat head, wedge etc.) • With emergency control function: SRF-R and GRK-R, PRK (up to 40 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 • Up to nominal diameter DN 600: upon request

Retrofit VAV


Product range	Types	Specifications	Applications
	<ul style="list-style-type: none"> • Set with VAV-Compact • Set with VAV-Universal 	<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 conversions</p>



Motorisation solutions for fire and smoke protection dampers

Product range	Types	Specifications	Applications
	Actuators ¹⁾ : <ul style="list-style-type: none"> • BFL (4/3 Nm) • BFN (9/7 Nm) • BFG (11/8.5 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
	Actuators ¹⁾ : <ul style="list-style-type: none"> • FSTF (2 Nm) • FSLF (3.5 Nm) • FSNF (8 Nm) • FSAFA (20 Nm) • FSAFB (20 Nm) 	<ul style="list-style-type: none"> • Fulfils specific requirements from UL555 and UL555S • Thermoelectric tripping device (Optional) • Overload Protection • Low power consumption life safety actuator • ISO 9001 Certified Quality Control • 2 SPST switches 	Motorisation of fire and smoke protection dampers

Motorisation solutions for smoke control dampers

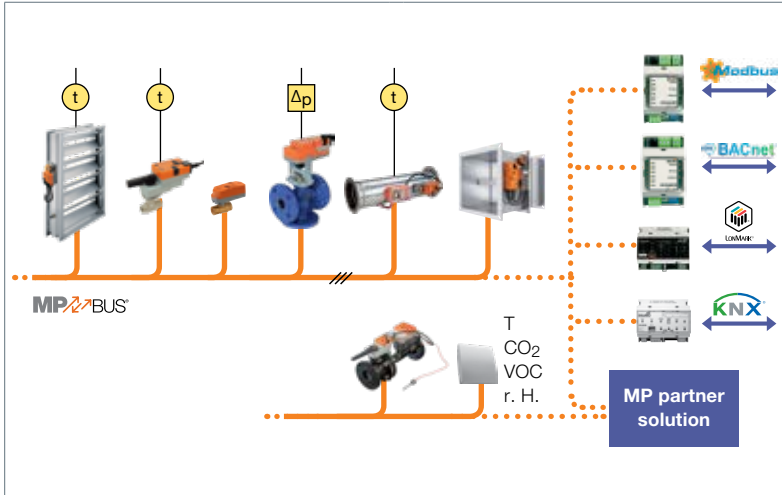
Product range	Types	Specifications	Applications
	Actuators ¹⁾ : <ul style="list-style-type: none"> • BLE (15 Nm) • BE (40 Nm) 	<ul style="list-style-type: none"> • Steel gearbox, form fit • 2 auxiliary switches • Halogen-free cables • Low current consumption in stand-by • 1-wire and 2-wire control • High holding torque • Fulfils specific requirements from EN 12101-8 	Motorisation of smoke control dampers in mechanical smoke extraction systems

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

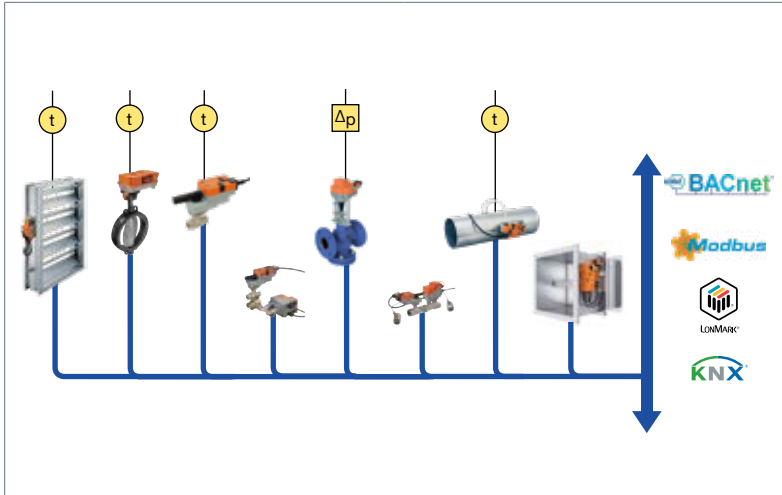


Bus and system integration

Belimo MP-Bus®

Product range	Applications
 <p>MP-BUS</p> <p>T CO₂ VOC r. H.</p> <p>MP partner solution</p>	<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, 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

Modbus RTU, LONWORKS®, KNX® and BACnet®

Product range	Applications
 <p>BACnet</p> <p>Modbus</p> <p>LONMARK</p> <p>KNX</p>	<p>BACnet actuators</p> <ul style="list-style-type: none"> • Actuators can be connected directly to BACnet MS/TP and/or BACnet IP <p>Modbus actuators</p> <ul style="list-style-type: none"> • Actuators can be connected directly to Modbus RTU (RS485) • One sensor can be connected per actuator <p>LON actuators</p> <ul style="list-style-type: none"> • LONMARK®-certified actuators with integrated FTT-10A transceiver • One sensor can be connected per 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

Adjustment and service tools.



For parameterisable and communicative actuators and volumetric flow controllers

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




Room and system solutions


Room controller system solutions - VAV set

Product range	Types / performance classes	Specifications	Applications
	<p>VAV Controller:</p> <ul style="list-style-type: none"> • LMV-BAC <p>Room Unit/ Sensor:</p> <ul style="list-style-type: none"> • ZE-SET 	<ul style="list-style-type: none"> • NFC interface • Support Belimo Cloud • BACnet MS/TP • With AI for CO2 sensor • Standardized Control Application 	Design for CAV or VAV room control application
	<p>VAV Controller:</p> <ul style="list-style-type: none"> • T24 controller <p>Room Unit/ Sensor:</p> <ul style="list-style-type: none"> • T24-MP • TG-R10000 (Optional) 	<ul style="list-style-type: none"> • LCD display: blue backlight and built-in diagnostic socket RJ12 • Built-in NTC type sensor • BACnet® / LonWorks® VAV Set 	Designed for VAV room control application, connect with open IP address directly.


VAV-Compact controllers

Product range	Types / performance classes	Specifications	Applications
	<p>Rotary actuators:</p> <ul style="list-style-type: none"> • LMV (5 Nm) • NMV (10 Nm) • SMV (20 Nm) <p>Linear actuator:</p> <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, KNX® or LonWorks® networks 	Control of VAV and CAV units for volumetric flow systems in buildings


VAV-Universal solutions

Product range	Types / performance classes	Specifications	Applications
	<p>VAV-Universal controller:</p> <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
	<p>Pressure sensor:</p> <ul style="list-style-type: none"> • VFP (static 0...500 Pa) • VFD3 (dynamic 0...500 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
	<p>Actuators:</p> <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
	<p>Room Unit:</p> <ul style="list-style-type: none"> • EXT-T24-D201 • CR24-B1/B2/B3/B2E • T24A1T <p>Room Sensor:</p> <ul style="list-style-type: none"> • TG-K340B • TG-A130B 	<ul style="list-style-type: none"> • Modulating / on-off control • LCD display 	Single duct temperature control

Seamless Service.



A world map with orange dots indicating global service locations. The dots are concentrated in North America, Europe, and Asia, with a few scattered in South America and Australia.

 On-site around the globe

 Complete product range

 Quality first

 Short delivery times

 Comprehensive support

Edition SEPT 2019