Typically Belimo: Intelligent actuators for globe valves

More functionality and user benefits from a new generation of linear actuators.

Linear actuators with MFT® Multi-Function Technology – from Belimo, of course
Belimo has recently begun applying its internationally-renowned expertise in the field of actuator technology to the motorization of valves in heating, ventilating and air-conditioning systems. It is now marketing a new generation of linear actuators and a carefully selected range of globe valves. They are based on the actuator systems and gearing employed in Belimo’s damper actuators that have been so successful for many years past. Several other important innovations have further enhanced the market for motorized globe valves and linear actuators.

**Actuator solutions from a single source**

Following the introduction of Belimo’s new design of control ball valve, and together with its new range of motorized globe valves, Belimo is now able to offer a wide range of attractive actuator solutions for applications involving both air and water systems. As well as making procurement much easier it also ensures consistent functionality and principle of actuation throughout a whole system or plant.

### A new generation of linear actuators

The robust and compact NV... actuators that have been specially designed for use with globe valves from DN 15 to 50 mm are setting new standards in the industry in terms of functionality, ease of installation and economy.

- Outstanding precision and reliability thanks to the use of a brushless electric motor.
- An optional integral spring assembly for the automatic triggering of the emergency control function.
- A very simple connection between valve and actuator allowing the easiest possible installation without any special tools or devices.
- With MFT® Multi-Function Technology to allow simple mechanical and electrical adaptation to the widest possible variety of final controlling elements and precise matching to almost all makes of control gear.
- Compact, modular construction making the actuators ideal for use with many other makes of valve.

### Globe valves and linear actuators as a complete solution

The 2-way and 3-way globe valves offered by Belimo cover a wide range of ratings from 1 kW to 3 MW. It means that they are suitable for the majority of throttling and mixing applications that might be needed.

The design of the valves has been upgraded in many important aspects: for example, dual supports for the valve stem, a guided and profiled valve cone and optimized shaping of the valve seats ensure longer service life and reduced maintenance costs.

Belimo – your international partner for water applications too!
Linear actuators with MFT® Multi-Function Technology

Manual operation for commissioning and emergency operation

Control, 3-point or modulating, variable with MFT® types

Cover in impact-resistant plastic. Housing and mounting bracket in strong die-cast aluminium

Optional emergency control function (spring) for power failure

Self-adapting valve lift thanks to the use of intelligent actuators (MFT types)

Integral position indicator

Automatic mechanical coupling of valve stem to actuator spindle

1 m long prefitting connecting lead with terminals

Optional MFT® Multi-Function Technology actuator versions

CE conformity

NV... ACTUATORS FOR VALVES IN NOMINAL SIZES FROM DN 15 TO 50 MM
Powerful AV... linear actuators are suitable for the motorized operation of larger valves in nominal sizes up to DN 150 mm. They are also available with different methods of control and MFT® Multi-Function Technology.

The modulating-control NV24-MFT and AV24-MFT linear actuators are equipped with Belimo’s unique MFT® Multi-Function Technology which offers such excellent features as:

- Digital signal transmission for easy linking-in to modern field bus systems.
- The MFT electronics are able to detect valve lift and parameterize the reference values appropriately.
- Parameters such as control signal, running time, position checkback, operating status display, etc. can be adjusted individually and also be adapted precisely to the needs of the system at installation.
- The actuators are self-monitoring during operation and, if necessary, can signal possible faults directly to a central control room.
Solutions for heating, ventilating and air-conditioning applications

Key features of globe valves for the modulating control of cold and hot water

Characteristic: equal-percentage
Max. pressure $p_s$: 1600 kPa (PN16)
Other technical data see Product Data Sheets

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Connection: external thread ISO 228

3-way: H511, H514, H515, H520, H525, H532, H540, H550

Connection: flange ISO 7005-2


Linear actuator 3-point
Actuating force: 800 N
Nominal stroke: 20 mm

Linear actuator modulating DC 0...10 V
Actuating force: 2000 N
Nominal stroke: 40 mm

3-point actuator

Individual parameterizing of the linear actuators

If necessary, the actuators can be parameterized during manufacture in accordance with a customer’s personal needs. Controls companies, plant contractors, authorized installers and service engineers can also make their own adjustments and settings using an MFT-H Adjuster.

Delivery of globe valves and linear actuators

Globe valves and linear actuators are normally delivered as complete, fully-assembled units ready for immediate use. However, valve manufacturers and controls companies can also order customized actuators as individual separate items if necessary. Actuators can be mounted on different makes of globe valve by using suitable mounting brackets. Ask for advice.

* Planned availability mid-2002  ** Planned availability end 2002