

More functionality and user benefits:

Belimo's intelligent actuators for globe valves

Since the industry leader in the field of air damper actuators also began applying its internationally-renowned expertise to water control devices for HVAC installations there has been a surge of interest throughout the market. Following Belimo's introduction last year of its new range of unique and innovative control ball valves the company has come up with something new and progressive once again - the first family of linear actuators incorporating multi-function electronics.

With the introduction of its new motorized globe valves Belimo is now offering the most extensive range of actuators available anywhere for use in heating, ventilating and air-conditioning systems. Having such a comprehensive range not only makes purchasing much easier for customers but also allows a consistent choice of actuator to be made for all kinds of control devices throughout HVAC installations regardless of what make of controlgear is being used.

Top-quality motorized valves

Motorized globe valves for throttling-circuit and mixing-circuit applications are one of the basic items of equipment found in any HVAC installation. The new Type NV actuators for such valves in sizes from DN 15 to 50 mm offer the same high standards of quality as Belimo's air damper actuators. They also employ a precision-made, brushless electric motor together with gearing that has been proven a million times over in other Belimo products. The robust construction with a cover made of impact-resistant plastic and a housing and mounting bracket of die-cast aluminium ensures exceptional toughness and long service life. IP 54 protection comes from having a Pg screw gland for the prefitted connecting lead.



Legend:

The new Type NV linear actuator is setting new standards in the field of motorized globe valves

Belimo's 25 years of experience in the design of easy-fit actuators have helped to make the new Type NV unit the darling of every fitter. The functional design and compact construction make their job simplicity itself - even when space is severely limited. And the fact that the valve stem couples automatically to the actuator spindle means that no special tools are needed either.

A comprehensive range of actuators

Type NV actuators can use all the most popular control signals and are available for either modulating or 3-point control. Another of the actuators - the Type NVF24-MFT - incorporates a spring assembly which automatically drives the valve to the appropriate emergency position in the event of a power failure.

For the larger sizes of globe valve up to DN 150 mm, Belimo offers another family of linear actuators - the tough and extremely powerful Type AV with an output rating of 2000 N. The end result is an easily-assembled range of cost-effective motorized valves. Several different methods of control can also be used with Type AV actuators.

Intelligence and bus capability

As well as conventional versions, Type NV and AV linear actuators are also available with MFT[®] Multi-Function Technology. This unique system developed by Belimo allows actuators to be adapted specifically and precisely to the needs of particular valve functions and to a wide range of installation needs. MFT[®] Multi-Function Technology also helps to cut monitoring and maintenance costs.

The MFT versions of the actuators are self-adapting when they are being commissioned. Their electronics detect the amount of valve lift involved and assign the appropriate parameters for the required reference values. During operation, MFT actuators also monitor themselves continuously and, if necessary, signal any faults directly to a plant's control centre. In addition, the use of digital signal transmission establishes the ideal preconditions for a simple link-up to modern field bus systems.



Legend:

Thanks to the use of intelligent electronics MFT-type actuators can be parameterized individually and linked into field bus systems very simply

Valves and actuators as total solutions

Actuator and valve together form a single functional unit - this is why Belimo are also offering a carefully-selected range of 2-way and 3-way globe valves in nominal sizes from DN 15 to 150 mm. The valves themselves are being produced by a leading European manufacturer and their design has been upgraded in many important aspects: for example, dual supports for the valve stem, a guided and profiled valve cone, optimised shaping of the valve seats and especially fine machining of the cast iron seat section to ensure longer service life and reduced maintenance costs. The success of the improvements has been verified by tests under extremely arduous conditions.

Belimo's exceptionally easy-to-fit globe valves are available with either male screw ends or flanged ends and satisfy all the requirements for throttling-circuit and mixing-circuit applications in HVAC installations:

The profiled valve cone produces an equal-percentage valve characteristic. For smaller nominal sizes there are several types to choose from with different k_{vs} values. For the control of water/air heat exchangers, thanks to a range of k_{vs} values from 0.6 to 320 m³/h, the full range of output from 1 to 3000 kW can be covered with a single type range of valves.

Article on globe valves (PPR2/00L)

- The maximum permitted medium temperature of +5 °C to +120°C allows the valves to be used for both hot and cold water applications.
- A maximum permitted pressure of 1600 kPa (16 bar) allows the valves to be used in both single-storey buildings and high-rise blocks. The high maximum permitted differential pressure of 4 bar up to nominal size DN 40 also allows them to be used in conjunction with variable-speed pumps in large distribution networks.



Legend:

A carefully selected range of valves covers practically all throttling-circuit and mixing-circuit applications in HVAC installations

Globe valves and linear actuators are normally delivered directly from the factory as fully-assembled and tested units ready for immediate use, although they can also be supplied as separate items if necessary. Valve manufacturers and controls companies can also order customised versions of the actuators. Actuators can be mounted on different makes of globe valve by using suitable mounting brackets.

Get more information from:

BELIMO Automation AG, Guyer-Zeller-Strasse 6, CH-8620 Wetzikon, Switzerland

Tel. ++41(0)1 933 11 11, Fax ++41(0)1 933 12 68, Internet: www.belimo.ch

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