26th March 2018

**Reliable even at high operating pressures**

**The GEMÜ 790 ball valve series stands out thanks to its compact yet robust design. At the same time, it is suitable for use up to a pressure rating of PN125.**

Ball valves can be used in a wide variety of applications in industrial processes, and in water supply and water treatment systems in particular. One of the most efficient filtration procedures in water treatment is reverse osmosis. During this procedure, the unclean water is pressed through a semi-permeable diaphragm at high pressure. This filters unwanted substances out of the water. The differing electrolyte loads of the raw water fundamentally determine the treatment process with regard to the water quality that must be achieved. The higher the concentration of electrolytes, the higher the pressure must be in the system. Thus, the operating pressure range for ball valves in industrial waste water treatment, for example, is 60 to 70 bar; by contrast, it is between 60 to 80 bar for sea water. A ball valve which is installed in the raw water supply or clean water drain outlet must be able to sustain these demanding operating parameters in order to ensure a safe process sequence.

**High operational safety due to low maintenance engineering**

The highly polished and precisely manufactured GEMÜ 790 series ball fits snugly and air-tightly into the internal seal contour. A discharge slit in the seal ensures pressure relief in the valve flow. This not only reduces the seat wear but also lowers the actuating torque required to rotate the ball. This enables both cost-effective and energy-efficient system operation. The additional pressure relief hole in the ball enables pressure compensation, preventing a potential failure due to an internal build-up of pressure. Blow-out protection in the shaft ensures maximum operational safety. The antistatic device provides a permanently conductive connection between the ball and the shaft. A tongue-and-groove-style connection between the shaft and the valve body enables full earthing of the ball valve during installation in the system. This also ensures that it is safe for use in ATEX areas.

The stainless steel ball valves of the GEMÜ 790 series are designed to enable quick and easy servicing of internal wearing parts at all times. The generous valve neck extension has a top flange in accordance with EN ISO 5211. This standardized interface enables the user to fit the ball valve with various different actuators. The solid design of the body with an additional enclosed body seal enables use at pressures up to 137 bar as well as in vacuum applications. Depending on customer requirements, the ball valves are available with full or with reduced through flow.

**Background information**

GEMÜ is one of the world's leading manufacturers of valves, measurement and control systems. Over the course of more than 50 years, this globally focused, independent family owned enterprise has established itself in important industrial sectors thanks to its innovative products and customised solutions for process media control. GEMÜ is the world market leader for sterile valve applications in the pharmaceutical and biotechnology industries.

Today, the GEMÜ Group employs over 1000 employees in Germany and more than 1700 worldwide. Manufacturing is carried out at six manufacturing sites in Germany, Switzerland, China, Brazil, France and the USA. From Germany we coordinate global marketing with 26 subsidiaries and with a large distributor network in more than 50 countries, the GEMÜ Group is active on all five continents. GEMÜ will continue to establish itself in future markets with its international growth strategy.

A broad based modular system and adapted automation components mean that individualised standard products and customised solutions can be combined to make over 400,000 product versions.

Further information can be found at [www.gemu-group.com](http://www.gemu-group.com)