

STERICOM[®] *LongLife*

The new valve range for aseptic processes



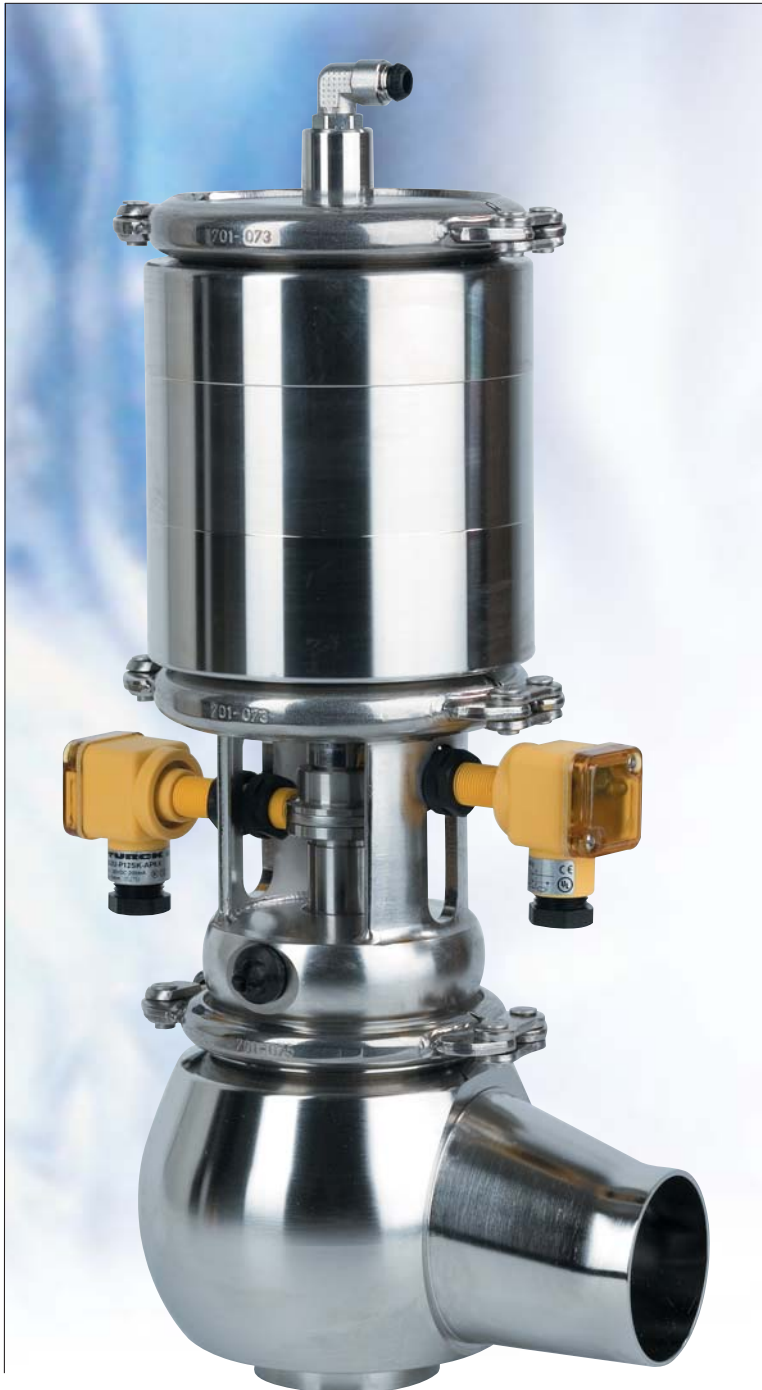
Process Equipment

GEA Tuchenhagen

STERICOM® LongLife

STERICOM® LongLife aseptic shut-off valves - the new range for sterile and aseptic processes.

The STERICOM® LongLife valves are a logical further development of the proven STERICOM® range. They provide many versatile options for applications in the dairy, juice and food industries and have new features that are of benefit to the user.



STERICOM® LongLife valves are hermetically sealed which, prevents any product contamination, and their design provides unique, high quality valve technology.

The characteristic feature of STERICOM® LongLife is the long service life of the metal bellows. This offers the user a stable production process over a significantly longer period of use.

The new type of spherical housing design with ideal flow transitions enables careful transport of the product with optimal cleaning efficiency.

Through use of the mature VARIVENT® actuator technology the user has access to a whole range of actuators, including all ancillary equipment. In addition, proximity switches to signal valve position are available with the new open lantern design.

The design features

- hermetically secure seal by means of metal bellows
- hygienic open lantern design with accommodation of proximity switches to signal position
- modular GEA Tuchenhausen VARIVENT® actuator system
- integrated connections for bellows monitoring and leakage removal

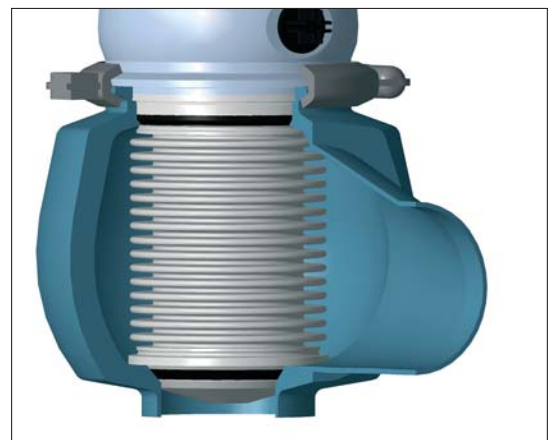
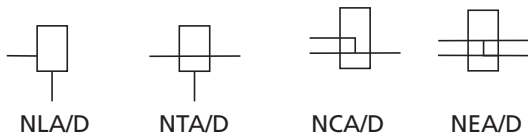
The advantages

- long service life for the metal bellows
- housing with ideal flow transitions
- optimal CIP/SIP cleaning
- simple and reliable servicing

The housing design

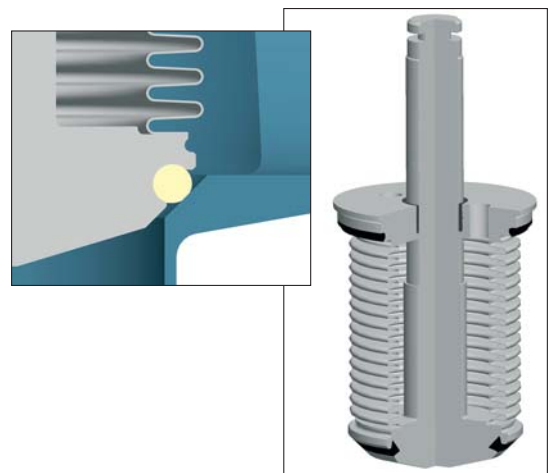
The new type of spherical housing design with ideal flow transitions enables careful transport of the product with optimal cleaning efficiency. Thanks to the robust design the valve can be welded into the pipework system without any distortion.

Housing combinations



The metal bellows – the core element

The metal bellows of the STERICOM® LongLife range can tolerate pressure peaks of up to 12 bar with lateral incident flow. An outstanding feature is the long service life of the metal bellows. The integrated valve shaft has an internal stop face that protects the corrugated compensator from any unintentional damage. The STERICOM® LongLife valve can be supplied with seats seals made of rubber or PTFE.

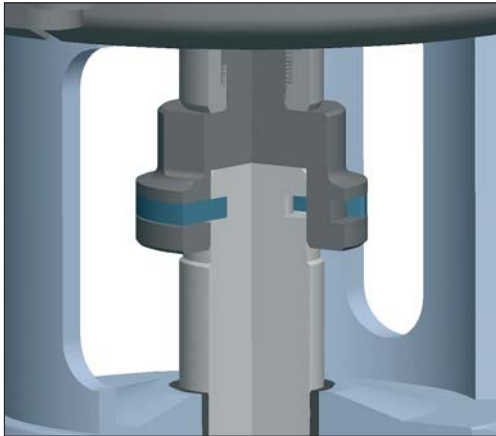


The lantern

The one piece, open lantern design does not have any kind of gaps; all surfaces are liquid repellent enabling the external surface to remain hygienic over the long term. The lantern possesses integrated connections for bellows monitoring and leakage removal.

For OPEN/CLOSED signalling of the valve position, proximity switches with an M 12x1 thread can be fitted.





The valve shaft connection

A new feature of the STERICOM® LongLife is the valve shaft connection. A plug-in stainless steel bracket connects the bellows with the actuator allowing the valve shaft connection to rotate. This reliably protects the bellows from any torsional strain of the actuator spring during the switching process, as this could affect the service life (rotational decoupling). The rapid and reliable installation of the bracket also enables simple and safe manipulation during servicing.



The actuator system

Through the use of VARIVENT® actuators, the whole range of actuator components becomes available. This enables the selection of smaller or larger actuators according to process parameters (operating pressure / control air pressure). Conversion to a reversed mode of working is enabled by rotation of the actuator. Also, a variety of ancillary equipment from the VARIVENT® system (e.g. manual actuator, air/air actuator, two-position stop) can be used.

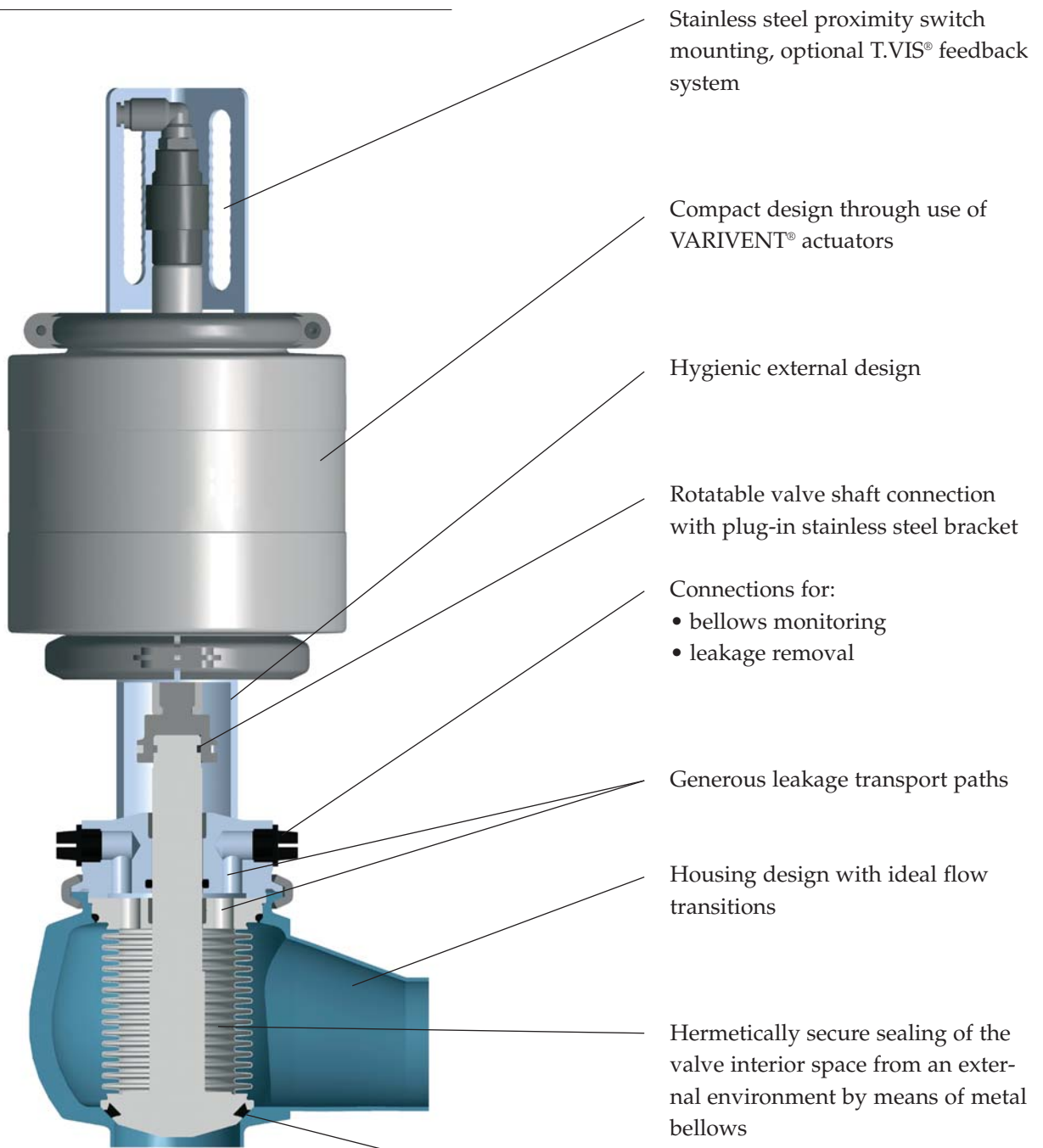


The feedback systems

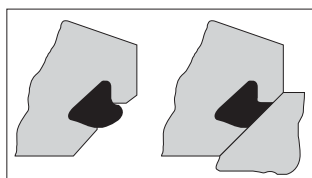
In addition to fitting of proximity switches in the lantern, other feedback systems are also available:

- stainless steel proximity switch mounting
- T.VIS® feedback system





Representation of the stress loading on the seal



Seal with stress removed

The specially shaped groove in the valve disk ensures reliable retention of the seal at all times. The shape of the seal is based on knowledge gained from FEM analyses.

Technical data

Field of application

Suitable for shut-off and control of all kinds of liquid and gaseous media.

| | |
|---------------------------|---|
| Operating pressure | Max 6 bar (higher pressures on request) |
| Control air pressure | Min. 4 bar, max. 8 bar. |
| Metal bellows | Can be used with pressure peaks up to 12 bar max (short-duration) |
| Operating temperature | Max 135 °C. |
| Sterilisation temperature | Max 150 °C (short-term 1 hour) |

Materials

| | | |
|---------------------------------|---------------|--|
| In contact with the product | Housing | 1.4404 (AISI 316L) |
| | Metal bellows | 1.4404/1.4571 (AISI 316L/316T) |
| | Seals | EPDM (standard), FKM, HNBR - FDA-conformant Seat seal made of PTFE as option - FDA-conformant |
| Not in contact with the product | | 1.4301 (AISI 304) |

Surfaces

| | |
|----------|--|
| Internal | $R_a \leq 0.8 \mu\text{m}$ |
| | $R_a \leq 0.4 \mu\text{m}$ (as option) |
| | Electropolished surfaces (option) |
| External | Bright metal |

Nominal widths

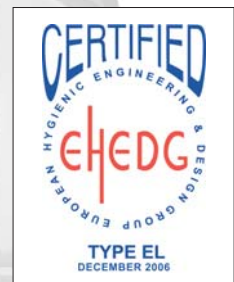
| | |
|------------|--|
| DIN | DN 25, 40, 50, 65, 80, 100, Outside diameter to DIN 11850 Row 2 |
| OD | 1" OD, 1 1/2" OD, 2" OD, 2 1/2" OD, 3" OD, 4" OD Outside diameter to ISO 2037/BS 4825, Part 1 |

Drive unit variants

Pneumatic actuator
Manual actuator
Two-position stop
Air/Air actuator

Certification

Verification of quality characteristics in accordance with EN 10204/3.1 for housing (on request)



Process Equipment

GEA Tuchenhagen GmbH

Am Industriepark 2-10, 21514 Büchen, Germany

Phone +49-4155 49-0, Fax +49-4155 49-2428

sales.geatuchenhagen@geagroup.com, www.tuchenhagen.com