EVOGUARD

Valve series for the beverage and food industry and for aseptic processes



Who is EVOGUARD?

EVOGUARD is a specialist for components:

Our comprehensive valve programme offers the appropriate solution for all process technology tasks. All valves meet the highest safety standards and work absolutely reliably in continuous operation.

The excellent functionality of our valves is based on the fact that we have implemented all demands for hygienic design in our completely re-engineered modular valve system. Moreover, we are using modern configuration and representation methods to design our valves and optimise their performance. Not least, our manufacturing department with its modern machining centres provides ideal conditions to guarantee the high quality of our valves.

Valves are the basis for a safe, automated process. EVOGUARD valves and components.



Overview of our product range

Shut off Butterfly valve Seat valve









Control

Control valve

Aseptic shut off and separation Aseptic seat valve Aseptic double seat valve



Sampling Sampling valve Sampling system



Checkback signal Control head





Why EVOGUARD?

Highest quality in the manufacturing process

- Manufacturing of the valve housings by chipping solid stainless steel material
- Accurate traceability and identification of parts by means of Matrix Code
- Use of tested materials with acceptance test certifications





Energy savings included

- Actuator variants in modular concept, adapted to systems with a product pressure of 6 bar, 10 bar and 22.7 bar
- Low control air consumption for double seat valves with fast lifting movements for leakage chamber cleaning
- Clear cross section when the valve is open





Consequence when it comes to safety demands

- Design according to the requirements of EU Machinery Directive 2006/42/EG and Pressure Equipment Directive 97/23/EG
- Design inspected by the Technical Inspection Agency TÜV Süd (pressure test, safety test, strength test, etc.)
- Pressure-resistant design of the housings of seat valves for PN 25 pressure rating



Safe handling during daily operation

- Easy assembly and disassembly without special tools
- Maintenance-free actuators in welded design
- Safe and quick spare parts replacement without accident risk and confusion of seals





Process safety

- Optimised sealing geometry, certified by the EHEDG
- Housings without dead space and optimally designed installation areas for the sealing for hygienic production conditions
- Sealing materials according to the specifications of FDA 21 CFR regulation and the EU decree no. 1935/2004





Valves for shutting off



Butterfly valve

Inexpensive shut-off fitting for product and CIP

- Solidly designed valve disk
- Safe guidance of the flap thanks to bushes in the housing
- Seal with a small volume and extension gaps for compensating temperature expansion
- Seal flush against the housing, bevelled seat ensures that the disk opens and closes securely with minimal wear
- Reliable sealing over the entire temperature range
- Innovative seal design and composition of the elastomer according to the latest research findings
- Maintenance-free actuator, designed for one million switching cycles
- Easy installation with different connection variants







Butterfly valve closed

AA actuator Opened by compressed air, closed by compressed air

NO - NC actuator Opened by spring-return, closed by compressed air; Opened by compressed air, closed by spring-return

Seat valve

Shutting of pipes with systematic adaptations to process conditions

- Valve disk with balancer for the reduction of pressure surges, and with cone for smooth product transition
- Metal stop for the valve disk to protect the seal
- Two-piece threaded valve disk with defined clearance for the sealing ring for easy installation
 - Security against infiltration and seal being torn out
- Design of the shaft seal:
 - Wiping function protects against contamination ingress
 - Geometry protects the seal against being torn out
- Application for high product pressure up to 22.7 bar and to prevent pressure surges

Closed, with NC actuator

Seat valve





Tank outlet valve

Other variant: *Overflow valve (no illustration)*

Variants









Valves for separating and automating

Double seal valve

Separation of incompatible media such as CIP water or gases – an economic alternative to double seat valves

- Three-piece threaded valve disk with identical seal rings
- Two seals between the pipes in the closed position
- Hygienic sealing directly at the product chamber, without dead space
- Leakage chamber with two rinsing valves for leakage indication
- Cleaning of the leakage chamber by means of tangential inflow of the flush medium
- Design of the shaft seal:
 - Wiping function protects against contamination ingress
- Geometry protects the seal against being torn out
- Rotational decoupling between valve shaft and actuator for torsion-free lift motion of the valve disk





Double seal valve with two flushing valves for leakage monitoring

Identical seals on the valve disk



Double seat valve Separation of incompatible media with leakage-free switching

- Both valve disks with balancer for hammering resistance up to at least 45 bar
- Two-piece threaded valve disk with defined clearance for the sealing rings for easy installation
 - Security against infiltration and seal being torn out
- Shaft seal with wiping function for protection against contamination ingress
- Universally applicable seal for radial and axial sealing of the valve disk
- Sealing of the leakage chamber without additional seal
- Actuator with integrated cycle functions
 - For fast cycle times and low air consumption







Variants

Double seat valve Closed, actuator with integrated timing function Detailed view of the seals Shaft seal (top), valve disk (bottom)

Double seat tank outlet valve

Valves for aseptic shut-off and separation

Our aseptic valves in detail

Hermetic sealing of the valve interior by means of metal bellows

- Two-piece or one-piece valve disk available
 - Two-piece threaded valve disk with defined clearance for the sealing ring for easy installation and for security against infiltration and the seal being torn out
 - One-piece valve disk with PTFE compound sealing ring
- Leakage drain/bellows monitoring connections
- Aseptic seat valve Shutting off pipes in aseptic and sterile processes
- Housing design for a smooth product transition
- PN 25 housing designed for optimal cleaning

- Rotational decoupling between valve shaft and actuator
 - For torsion-free lift motion of the valve disk
- Bellows with support
 - Stop for disassembly to prevent overstressing of the bellows; moreover, the support reduces vibrations and increases the service life of the bellows





Aseptic seat valve Sealing of the product chamber by means of metal bellows

Aseptic tank outlet valve



Aseptic double seat valve Separation of incompatible media in aseptic and sterile processes

- Safety during lifting of the bottom valve disk by means of locking the top valve disk with compressed air
- Clear cross sections without reduction of the passage
- Leakage chamber with angular flushing valve
 - Direction of flow of the cleaning liquid diagonal to the bellows
 - Turbulence in the safety chamber
 - Cleaning by means of operating the top and bottom valve disk at intervals
- Actuator with integrated cycle functions
 - For fast cycle times and low air consumption



Aseptic double seat valve with flushing valves



Valves for controlling



Control valve

Quick and accurate process control

- Suitable also for aseptic applications
- Fine adjustment
- Diaphragm actuator with mounted position controller
- Equal-percentage or linear control cone
- Sealing system concept according to the seat valve
- Maintenance-free diaphragm actuator for various sizes, welded standard execution
- Rough and fine adjustment with position controller, setpoint 4 – 20 mA

Valves for sampling

Sampling valve/sampling system Safe and sterile withdrawal of product samples

- Design as fixed valve or as flexibly applicable sampling system
- Valve version with tank connection stub, welded end or for inline installation
- PTFE-TFM 1705 bellows seal
- Actuation variants: Pneumatic actuator, automatically closing manual lever or with handwheel for fine adjustment
- Monitoring: optional use of a proximity switch

Technical data

| | | Butterfly valve | Seat valve | Double seat valve | Aseptic valves |
|----------------------|---------------------------------------|---|-------------------------------|---|---|
| Nominal diameters | | DN25, DN40, DN50, DN65, DN80, DN100, DN125, DN150 DN125, DN150 (does not apply to aseptic double seat valve) 1" OD, 1.5" OD, 2" OD, 2.5" OD, 3" OD, 4" OD and 6" OD | | | |
| Actuator | Manual actuator | Х | Х | | X (does not apply to aseptic double seat valve) |
| | Pneumatic actuator | Х | Х | Х | Х |
| Pressures | | 10 bar Housing PN16 | 6/10/22,7 bar Housing PN25 | 10 bar Housing PN25 | 6/10 bar Housing PN25 |
| Air pressure | | Min. 5.5 bar, max. 8 bar | | | |
| Material | In contact with the product | 1.4404 (AISI 316 L) | | | |
| | Not in contact with the product | 1.4301 (AISI 304 L) | | | |
| | | EPDM/FDA, Other materials available upon request | | Two-piece valve disk: Seal material highly fluorinated EPDM | |
| | Seal | | | | – One-piece valve disk: PTFE Compound |
| Surface | In contact with the product | Ra ≤ 0.8 μ | | | |
| | Not in contact with the product | Ra ≤ 1.6 μ | | | |

We do more.



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