



GEA Tuchenhagen Components for Liquid Processing

Made by GEA Tuchenhagen



Process Equipment

GEA Tuchenhagen

Success by Design

Over the last 75 years our success has been no accident. We have worked hand-in-hand with our customers to maintain continuous product development that matches process needs and our customers' requirements. This investment has enabled us to produce technically advanced process components and services for smooth production. Whether you are processing milk, beer, beverages, pasty food or fine chemical products, what counts is the quality of the final product and the efficiency of the production line.

Our components are flexible so they can be adjusted to optimize process parameters and enable high productivity, efficient operation and a constantly high product quality. This is why we are one of the world's leading manufacturers of process components.

Throughout our history we have introduced well-engineered and technically mature product innovations onto the market. Our research and development facility works in close cooperation with our product management and our customers to create individual application solutions to meet specific needs.

Our components enable our customer's production processes to be carried out in a safe and high-quality manner. They form sound interfaces between plants and satisfy the highest hygiene and sterility requirements.

We supply our customers with easy-to-maintain and efficient process components for constant high quality under normal production conditions – that's our promise. Our products are designed and approved in accordance with international standards.



Valves

- VARIVENT®
- ECOVENT®
- T-smart
- STERICOM®
- VESTA®

Pumps

- Centrifugal pumps, non-selfpriming
- Centrifugal pumps, selfpriming
- Rotary lobe pumps

Cleaning technology

- Orbital cleaners
- Rotating cleaners
- Static cleaners

In-Line process connections

- In-Line housings
- In-Line tank connections

Product recovery systems

Tank safety systems

- Tank-tops
- Overflow valves
- Spring-loaded safety valves
- Vacuum valves

Expansion compensator

Our VARIVENT® valves are the core component in matrix-piped process plants. They are operationally reliable, easy to maintain and suitable for CIP/SIP operations. They contribute significantly to the highest product quality. The VARIVENT® system is a flexible, modular system that has many advantages: for instance standardized parts that go with various valve types.

The result: cost-effectiveness for the plant owner, optimized stockkeeping, favorably-priced spare parts and low parts diversity.

All of our valve series can be combined with T.VIS® control modules.

Our valve program includes single-seat, divert, control and mixproof valves. Many of these valve types are EHEDG certified and meet the 3A standards.

Valve types and sizes

	Metric	Inch OD	Inch IPS
Single seat valves	DN 25 – DN 150	1" – 4"	2" – 6"
Single seat shuttle valves	DN 25 – DN 150	1" – 4"	2" – 6"
Single seat longstroke valves	DN 65 – DN 100	2,5" – 4"	
Mixproof valves	DN 25 – DN 150	1" – 4"	2" – 6"
Mixproof valves, pig-able	DN 40 – DN 100	1,5" – 4"	
Mixproof shuttle valves	DN 25 – DN 150	1" – 4"	2" – 6"
Mixproof bottom valves	DN 25 – DN 150	1,5" – 4"	2" – 6"
Modulating control valves	DN 25 – DN 125	1" – 4"	2" – 6"



Mixproof valve



Single seat shut-off valve



Mixproof bottom valve



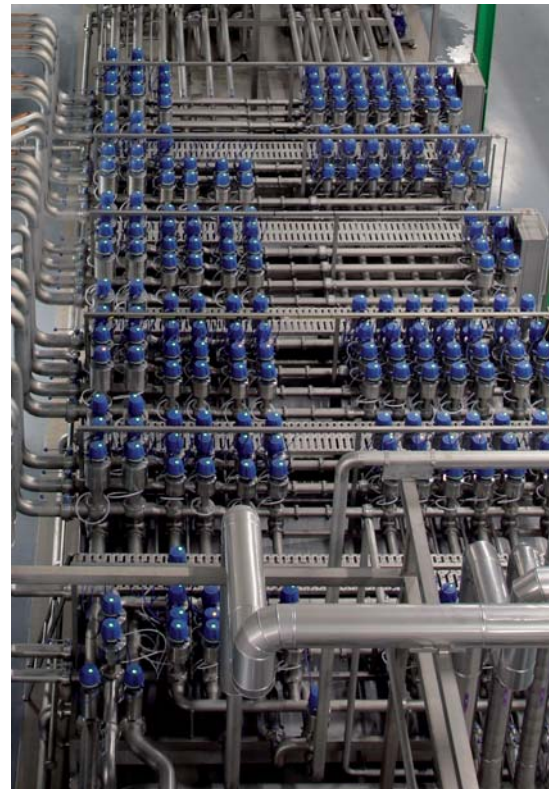
Mixproof valve



Mixproof shuttle valve



Modulating control valve



ECOVENT® Single Seat Valves

With our ECOVENT® program, we offer a valve series covering single-seat and shuttle valves. ECOVENT® valves are based on the VARIVENT® philosophy and offer a cost-effective product with basic functions.



Single seat shut-off valve

Single seat shut-off valve

Single seat shuttle valve

Sizes

Seat valves

Metric: DN 10 – DN 100

Inch OD: 1" – 4"

T-smart Valve Series

Our T-smart valve series is designed for basic functions; it is favorably priced and designed for standard applications. This valve series includes butterfly, single-seat, divert and mixproof valves.

The T-smart valve series is characterized by standardized products, while still offering the necessary variations (e.g. body combinations, seals, feedback options). Clearly assigned item numbers simplify the selection and ordering process.

The T-smart valves stand out for their small, compact design. The resulting low weight enables easy handling and operation of the valve.



Mixproof valve

Single seat shut-off valve

Butterfly valve

GEA Tuchenhagen T-smart

Sizes

Seat valves

Metric: DN 25 – DN 100

Inch OD: 1" – 4"

Sizes

Butterfly valves

Metric: DN 25 – DN 150

Inch OD: 1" – 4"

The new T-smart butterfly valve series, made by GEA Tuchenhagen, is a cost-effective shut-off device in piping systems, valve blocks and panels for product and CIP operation. The T-smart butterfly valve offers a wide range of advantages to the benefit of the user: hygienic design, ease of maintenance, reduced cleaning cycles, reduced installation and maintenance - achieving overall an economical production in the process plant.

STERICOM® Sterile Valves

Sterile and aseptic processes require special components. STERICOM® valves are fitted with metallic bellows or PTFE bellows which enable hermetic sealing against the atmosphere which considerably increases safety in the production process. The range of STERICOM® valves includes single-seat, shuttle, bottom and double seal valves.

The STERICOM® *LongLife* valve has been specially designed for aseptic applications in the dairy, beverage and food industries – where the perfect combination of cleanability, gentle product handling, and a long life cycle are essential.

Sizes

Metric: DN 10 – DN 100

Inch OD: 1" – 4"



Double seal valve

Longlife Valve

VESTA® Sterile Valves

Our VESTA® sterile valves provides the market with a valve series suitable for applications from laboratory up to highly complex process plants for the pharmaceutical, biotech, cosmetics and food industries.

VESTA® sterile valves prevent product contamination from the outside, ensure that the process system stays free of germs. VESTA® sterile valves fully meet the operational requirements for processes at the highest level, comply with the strictest safety regulations and provide a high quality product.

The product range of VESTA® sterile valves includes standard valves, tank bottom valves, valve blocks (shuttle valves), mixed matched valves, sampling valves and VESTA® multiport.



Shut-off valve



Sample valve



Tank bottom valve



Shut-off valve



Block valve



Multiport

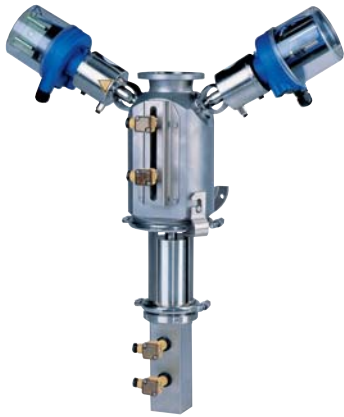
Sizes

Metric: DN 10 – DN 100

Inch OD: 0,5" – 4"

ISO: 13,5 – 114,3

VARICOVER® Product Recovery Systems



Pig cleaning station



Pig station

Our VARICOVER® product recovery systems are used to recover valuable products from pipes. Piggable components are used for pushing and fluid products without mixing to another media. Energy and detergent consumption and waste water costs are reduced considerably with corresponding savings in production costs as well as optimizing the plant operation.

VARITOP® Tank Safety Systems

This modular and compact system is used for the protection and cleaning of process tanks and satisfies the highest hygienic demands. The various VARITOP® modules enable individual solutions tailored to the customer's needs for protecting process and storage tanks against overpressure and vacuum.

VARITOP® meets the requirements of cleaning compatibility as well as CIP/gas management, functionality and reliability.

Tank-top safety systems

Installation on a tank dome cover

Installation using a central connection

Safety valve

Spring-loaded safety valves against overpressure for steam, gases and liquids

Metric: DN 25 – DN 100

Vacuum valve

for securing tanks against vacuum pressure

Metric: DN 65 – DN 100

Inch OD: 2,5" – 4"

Inch IPS: 3" – 6"

Overflow valves

as pressure relief valves in pipe lines

Metric: DN 25 – DN 100

Inch OD: 1" – 4"

Inch IPS: 2" – 6"

D-Force Q valves

for securing against overpressure with shut-off function

Metric: DN 25 – DN 100

Inch OD: 1" – 4"

Inch IPS: 2" – 6"



Installation on a tank dome cover



Installation using a central connection



Vacuum valve



Spring-loaded safety valve



Overflow valve



D-Force Q valve

VARIPURE® Cleaning Technology

GEA Tuchenhausen offers a comprehensive program of different VARIPURE® cleaners – static, rotating and orbital cleaners – just fine tuned for their task.

Capacity range orbital cleaners

Working pressure 2 to 90 bar
Cleaning diameter up to 27 meter
Flow rate 1 to 34 m³/h
Operating temperature 120° C max.
Ambient temperature 140° C max.
FDA conform or ATEX exempt



Thyphoon



Monarc



Tempest



Trollball 3"



Turbo SSB



Sanitor

Capacity range rotating cleaners

Working pressure 0,5 to 20 bar
Cleaning diameter up to 10 meter
Flow rate 0,5 to 29 m³/h
Operating temperature 120° C max.
Ambient temperature 140° C max.
FDA conform or ATEX exempt

Capacity range static cleaners

Working pressure 1 to 2,5 bar
Cleaning diameter up to 8 meter
Flow rate 2,8 to 66,7 m³/h
Operating temperature 120° C max.
Ambient temperature 140° C max.



Spray balls

VARINLINE® Process Connections

It is necessary to locate instruments at various points of the production line to monitor and control the process. These instruments supply information about the process status and the condition of the product to the control system and the line operator – and thus allow fast intervention into the production process if required.

Based on the VARIVENT® system, we have developed an in-line access unit which accommodates a wide range of measuring and control instruments. Access units can have up to two process connections – they allow pocket-free installation of the sensors and hence are used in process plants with high hygienic standards.

The VARINLINE® system comprises sensors and transmitters for temperature, pressure, flow rate, liquid analysis, sampling, visual monitoring and level.



VARINLINE® housing with two process connections

Sizes

Metric: DN 10 – DN 150
Inch OD: 1" – 4"
Inch IPS: 2" – 6"
ISO: 17.2 – 114.3



VARINLINE® housings

GEA Tuchenhagen®-VARIFLOW Pumps

GEA Tuchenhagen offers pumps for different applications in the food and dairy industry, brewery and beverage industry as well as in the pharmaceutical, cosmetic and chemical industry.

Pumps are among the key components of a process plant and they are gaining importance when it is necessary to meet the ever-higher quality requirements placed on products and conveying processes. GEA Tuchenhagen®-VARIFLOW centrifugal pumps have been specially developed in a high sanitary standard. Our pumps enable ease of installation, operation and maintenance.

Low flow velocities and careful discharging of the media through the spiral housing allow the product to be handled very gently. Most of our pumps are EHEDG certified and meet 3A standards.



Non-selfpriming pump



Selfpriming pump



Rotary lobe pump

Capacities

Flow rates up to 220 m³/h and flow heads up to 92 m w.c.

VARICOMP® Expansion Compensator

The innovative VARICOMP® expansion compensator compensates thermal stress in pipe systems. Its unique design principle makes it also suitable for aseptic processes. The unique advantage of the VARICOMP® expansion compensator, the pocket-free design with draining behaviour, meets the requirement of optimum cleaning by CIP/SIP processes. Due to its compact dimensions, the VARICOMP® expansion compensator is especially suitable for valve blocks and process units.



Expansion compensator

Sizes

Metric: DN 65 – DN 125
Inch OD: 2,5" – 4"
Inch IPS: 3" – 6"



Process Equipment

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