

Guth for you - The FLUID PROCESS GROUP

KIESELMANN bundles with participations the competence of different fields of plant engineering and component production in the FLUID PROCESS GROUP. This network of independent entities enables to offer and realize, over the participations, complex projects as a general contractor, without an surcharge as it is the rule.



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Guth Ventiltechnik GmbH
Valves and
process components

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Guth for You

Program



We are Guth



Many years of experience

Guth Ventiltechnik GmbH is one of the leading companies in the field of high-quality fittings made of stainless steel for the national and international market. Our products are mainly used as process components in the following sectors: Beer and beverages, wine, dairies, liquid and highly viscous food as well as pharmaceuticals, biotechnology and cosmetics.

The company originates from the Wilhelm Guth KG Kellereimaschinenfabrik which was founded in Neustadt/Weinstraße in 1861. Many new developments followed during the economic boom in Germany and formed the basis of success. Since November 2015 Guth Ventiltechnik GmbH, specialised in the production of valves and components, has belonging to the FLUID PROCESS GROUP. The companies being part of this group perfectly complement each other and offer comprehensive services to the process industry, which result in numerous advantages for end customers and plant manufacturers.



The motivated team of Guth guarantees perfect results



State-of-the-art machinery for perfect quality

Our services for your success

You, the customer, is central to us – with this in mind, we aim at offering technically perfect products of optimal quality and long lifetime which deliver to you real benefits. Of course, these include also competent technical consulting and an outstanding flexibility. We attach great importance to a design of our valves easy to service, in hygienic design, which allow maintenance without special tools as well as good cleaning.



Safety for you

A comprehensive quality management system with ISO 9001 certificate guarantees that every product always meets the highest quality and hygienic standards. Many years of experience and the quality awareness of our employees are the guarantee for this.

A wide range

Butterfly valves

Ranging from the small dosing line up to large manifolds, you can cover all applications coming from one source with the hygienic butterfly valves made by Guth. Separate DIN and inch series make sure that everything fits perfectly together.

Double butterfly valves

- ▶ Mix-proof separation of incompatible media in CIP or tank systems
- ▶ Leakage indication in case of defective seals
- ▶ Leakage chamber with flushing connections
- ▶ Manual or pneumatic actuation
- ▶ Minimized mechanical wear of the lifting device



TECHNICAL DATA

Sizes:	DN 10 - 200
Materials	
in contact with product:	1.4404 / AISI 316L
not in contact with product:	1.4301 / AISI 304
Seals:	VMQ, EPDM, HNBR, FKM (FDA approved) easy switchable, especially pressure-proof, functional reliability and low wear
Surfaces in contact with product:	Ra < 0,8 µm Option: electro-polished
Operating pressure:	
DN 25 - DN 60	max. 16 bar
DN 80	max. 10 bar
DN 100 - DN 150	max. 6 bar
Control air:	5,5–8 bar (lower control air pressures upon request)
Operating temperatures:	
Continuous operation:	up to 120°C depending on material of seal
Cleaning:	approx. 85°C
Sterilisation:	145°C (short-time)



The advantages for your system

- ▶ Wide range with an enormous variety of types
- ▶ Compact and cheap assemblies for the optimal layout of your process plant
- ▶ Wide range of actuators and accessories for the task-specific manipulation and automation of locking, reversing and adjusting functions
- ▶ Sturdy, durable and ergonomically optimised manual actuations made of stainless steel
- ▶ Broad-dimensioned, extremely durable and proven precision actuators made of stainless steel in different sizes, single- or double-acting
- ▶ Forged, low-wear disk contour with favourable flow characteristics and mirror finish surface provide optimal hygienic conditions and high strength against pressure
- ▶ Forged, sturdy housings made of certified stainless steels with non-porous surface for safe assembly
- ▶ Available also as a multiple-way butterfly valve in 2/3 ways design

Option:

- ▶ Optionally in sandwich design for higher pressures
- ▶ For very rough conditions: Optional waterproof control head with modular structure, to be screwed on without any tool

Modulating valves

VSR modulating valves serve for the control of flow, mixing, temperature or distribution of liquid or gaseous media. Their modular design enables made-to-measure solutions for the optimisation of processes and costs in your company.

- ▶ Made-to-measure solution
- ▶ Manifold control characteristics
- ▶ Complete construction made of stainless steel
- ▶ Hygienic design
- ▶ Easy assembly and maintenance
- ▶ Special solutions
- ▶ Option: Manual design as a modulating valve

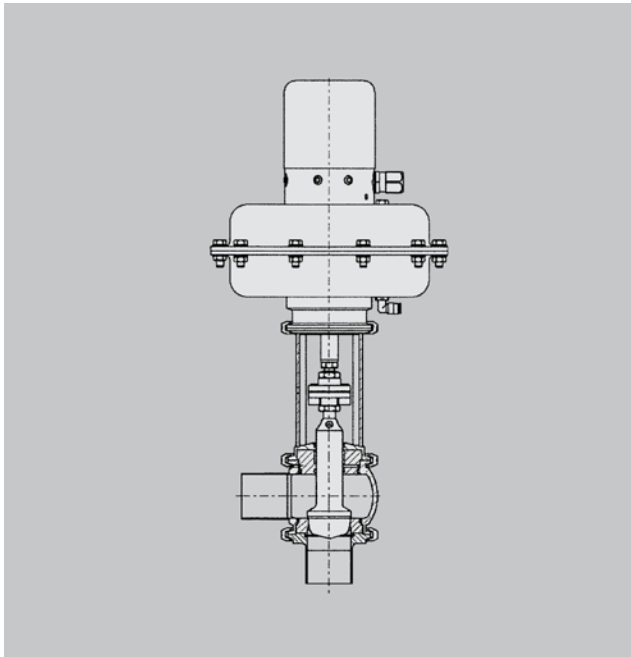
The positioner

- ▶ Digital IP positioner DigiPos as a standard version, lantern with NAMUR interface (DIN/IEC 534-6) for the mounting of alternative positioners
- ▶ Signal range 4-20 mA
- ▶ Characteristic curve setting linear, equal percentage or special characteristic curve via interface (RS 232) and visualisation software
- ▶ Self-calibrating for easy putting into operation
- ▶ Easy to assemble, wear-free and resistant to vibrations
- ▶ No steady-state air consumption
- ▶ Partial range or split range operation as well as signal inverting possible



The variants:

- ▶ Steam modulating valves
- ▶ Aseptic modulating valves
- ▶ Membrane for hermetic sealing of the product chamber outward with aseptic processes
- ▶ Piston modulating valves
- ▶ Disk modulating valves and arc modulating valves with free passage



The advantages for your plant

- ▶ Changeable valve set (plug/seat) for assembly and/or retrofitting of different flow coefficient steps
- ▶ Seat sealing with metallic or elastomer sealing
- ▶ Robust valve housings, membrane actuator made of electro-polished stainless steel, sturdy lantern design, positioner with stainless steel cap
- ▶ Dead space-free ball housing
- ▶ Easy assembly and maintenance
- ▶ Small housings from DN 10 to 25 for the regulation of minimum quantities from a flow coefficient of 0.1 onward
- ▶ Special solutions with high strength against pressure up to 40 bar or valves up to DN 40

TECHNICAL DATA

Sizes:	DN 10–150
Materials	
in contact with product:	1.4404 / AISI 316L
not in contact with product	1.4301 / AISI 304
Seals:	
	EPDM/HNBR/FKM, option: aseptic design
	Option: PTFE coated Viton O-rings
	Steam design: V-ring packings
Surfaces in contact with product:	Ra < 0,8 µm option: electro-polished
Operating pressure:	
DN 25–DN 100	max. 10 bar
DN 125 / 150	max. 6 bar
1" – 4"	max. 10 bar
High pressure design	up to 40 bar
Control air:	1,5–4 bar
Operating temperatures:	
Continuous operation:	up to 120°C
Cleaning:	approx. 85°C
Sterilisation:	145°C (short-time)

Protection against leaks is included

Divided valve disks for maximum safety

Guth double-seat valves are leakage-proof valves and serve to separate incompatible products in automatic process systems in a contamination-free way. A mixing is reliably prevented by two independent valve disks. In case of a defective seal, the medium will drain in a pressure-free way through the leakage gap. Lifting of the upper or lowering of the bottom valve disk enables the cleaning of the leakage chamber.

Guth double-seat valves are characterised by low operating, maintenance and repair costs.



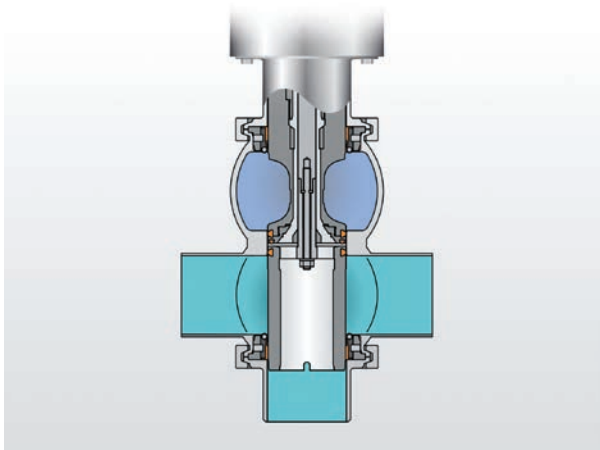
Your advantages:

- ▶ Hygienic safety
Product creeps of the valve disk seals are completely excluded
- ▶ EHEDG certified
High hygienic safety owing to good cleanability
- ▶ Minimum product shearing owing to targeted flow regulation
- ▶ Universal sealing material k-flex
Highly resistant to different media and optimized shape for long lifetime of the seal
- ▶ Reliable leakage detection
Leakage-free opening and closing, only seal failure causes leakage
- ▶ Everything under control
Comprehensive automation possibility ranging from sensor monitoring via SPS or ASI-BUS control head, to emergency stop function and feedback
- ▶ The assembly handling
Easy and quick replacement of seals, incorrect assembly is excluded

Option:

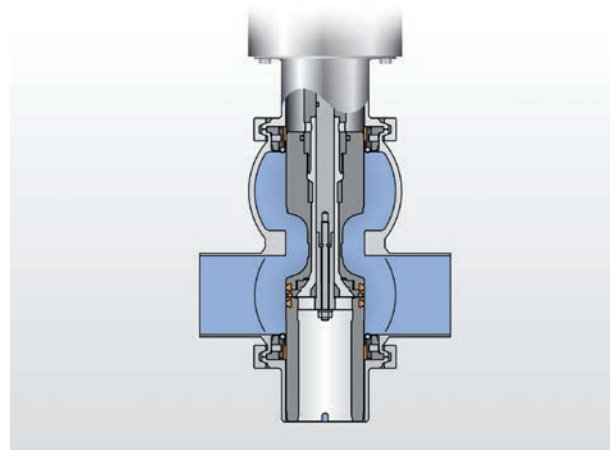
Cleaning of the lantern is possible

Functions of the double-seat valve



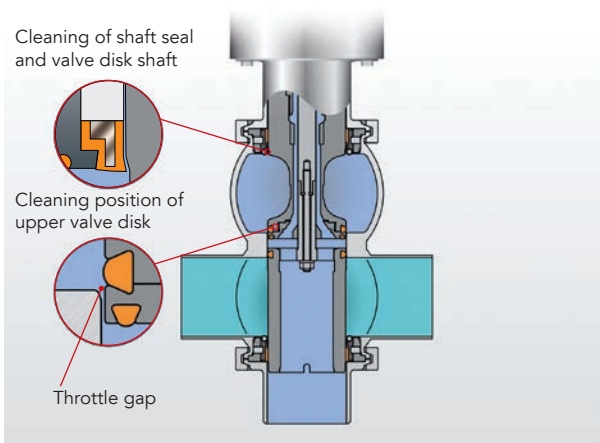
Valve closed

- ▶ Safe separation of product and cleaning medium
- ▶ Possible leakages are drained outward in a pressure-free way over the leakage chamber
- ▶ Pressure shock-resistant closing position



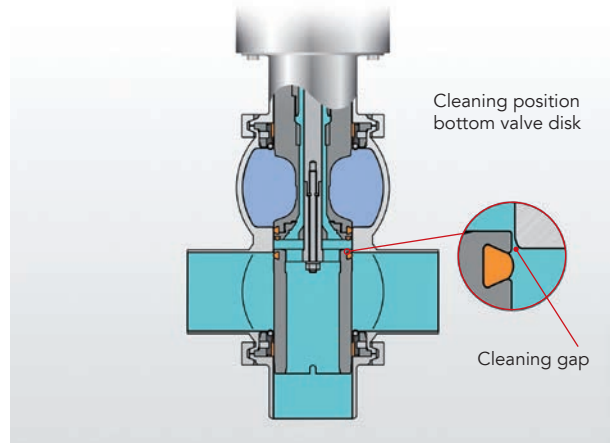
Valve open

- ▶ Leakage-free switching of the valve
- ▶ Leakage hole closed
- ▶ Spacious valve passage favourable to flow



Cycle of upper valve disk

- ▶ Lifting of upper valve disk
- ▶ Cleaning and sterilisation of shaft seal, valve disk shaft, lantern, valve disk and seals, valve seat, leakage chamber with drain and protective sleeve
- ▶ Cleaning quantity defined by metallically limited cleaning gap



Cycle of bottom disk valve

- ▶ Lowering of upper valve disk
- ▶ Cleaning and sterilisation of valve disk seal, valve seat, leakage chamber with drain and protective sleeve
- ▶ Cleaning quantity defined by metallically limited cleaning gap

Guth – pressure compensation under control

Overflow valves

The overflow valve program is available as a corner, T and ring circuit valve in modular design. It meets all needs of the hygienic design. A disk geometry with an optimised flow provides an exact opening/closing behaviour and a high flow capacity. Owing to the pneumatic lifting, these valves can be opened until they reach their full stroke. The hexagon head, which serves for the setting of the opening pressure, is secured against unintended settings. An end position feedback or control heads can be mounted directly onto the actuator. Should the setting range not be sufficient, it can be extended by retrofitting it with a larger actuator.

As an option, a purely pneumatic design is available. Here the closing pressure of the overflow valve is defined by a pressure superposition of the double-acting actuator. The setting of the superposition pressure and/or response pressure is made over an external filter pressure controller.

- ▶ Easy setting and locking of the target pressure
- ▶ Four changeable actuator sizes for later upsizing or downsizing
- ▶ Easy mounting of the end position feedback (retrofittable)
- ▶ Standard version is with pneumatic lifting function



TECHNICAL DATA	
Sizes:	DN 25 – DN 100, 1" – 4"
Nominal pressure:	PN 16
Operating temperatures	
Continuous operation:	100 °C
CIP / SIP:	85/140 °C
Adjustable pressure ranges	
DN 25 – DN 65, 1" - 2½"	0,5 - 12 bar
DN 80 – DN 100, 3" - 4"	0,5 – 10 bar
Materials	
in contact with product:	1.4404 / AISI 316L
not in contact with product:	1.4301 / AISI 304
Seals:	HNBR, EPDM and FKM, FEP
Surfaces in contact with product:	Ra < 0,8 µm Option: electro-polished
Operating pressure:	
DN 25–DN 100	max. 10 bar
DN 125 / 150	max. 6 bar
1" – 4"	max. 10 bar
Pressure shock resistance:	up to 40 bar (closed valve position)
Control air:	5,5–8 bar (lower control air pressures on request)
Operating temperatures:	
Continuous operation:	up to 120°C
Cleaning:	approx. 85°C
Sterilisation:	145°C (short-time)

Compact valves of high performance

Miniature valves

Guth miniature valves are used for the dosing of small quantities. Especially in case of small pipe diameters, they are the perfect choice owing to their excellent cleaning. These hygienic seat valves are available as corner or change-over valves.

- ▶ Very small housings for pipes DN 10-25
- ▶ Very compact design
- ▶ Option: with modular control head



Non-return valves

Guth non-return valves surely prevent that liquid flows unintentionally back to the pipes.

- ▶ Hygienic sealing, similar to DIN 11864
- ▶ Flow-optimised housing
- ▶ Minimum quantity of seals
- ▶ No corners/dead spaces
- ▶ Flow-optimised disks
- ▶ Standard opening pressure: 0.1 – 0.2 bar



Guth – Good mixing

Mobile and stationary agitators

RA, RSA, RSN

Our agitators offer to you excellent mixing results and manifold advantages for the mixing of liquids with gaseous products. In mobile version, they can be used for many different tanks or vessels.



- ▶ Intensification of the effect with thermal or cold influence
- ▶ Constant liquid flow with cooling processes
- ▶ Assembly or disassembly, even in case of filled vessels, is possible at any time
- ▶ No product and pressure losses during assembly and disassembly
- ▶ Several vessels can be operated with one device only, without having to pump the liquid from one vessel to the other
- ▶ Low weight, therefore easy to carry and to handle
- ▶ Different device performances and sizes
- ▶ Wide accessory program, such as support pedestals and gassing valves
- ▶ Consulting regarding installation position and angle as well as individual installation drawing is included



Guth – Good products for your system

High-pressure seat valves

Seat, double-seat and overflow valves for higher pressures up to 70 bar upon request.



Dirt traps

Dirt traps and corner pipe strainers available in different mesh sizes



Drain valves

- ▶ Bottom drain valves
- ▶ Inclined seat valves
- ▶ Drain valves
- ▶ Butterfly valves



Tank fittings and safety valves

We offer different fittings and valves for the safety and equipment of your tanks and vessels.

- ▶ Safety valves
- ▶ Constant-pressure relief valves
- ▶ Drain valves
- ▶ Sight glasses
- ▶ Sampling valves
- ▶ Manometers/Thermometers
- ▶ Spray heads and spray head supports



Safety valve for liquids and gases

Sample valves and gauge cocks in hygienic design, different tank and sampling connections



Sampling valve

Decantation bends for tank emptying

- ▶ Bending radii or segment parts selectable depending on tank shape
- ▶ Different connecting possibilities



Level indicators with different connection and outlet variants



Level indicating valve



Level indicating valve with automatic drainage

Pressure compensation valves of stainless steel or plastic



Safety and flash pasteurisation fittings

Guth offers a variety of safety fittings which are individually adapted to your tank and your process requirements. We are glad to advise you and to choose the right fitting for you.

- ▶ For pressure tanks and flash pasteurisation tanks
- ▶ Manifold options:
Safety valve, inclined seat valve, butterfly valve, manometer-vacuum gauge, fermentation glass, fermentation cup, sterile filter and much more
- ▶ Individual consulting and design of the fitting



Flash pasteurisation fitting with butterfly valve



Flash pasteurisation fitting with drain valve