



Tubes

Components

Valves

Units

Engineering

SO EVERYTHING KEEPS FLOWING

Double Seat Valves





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The GEMINI-Principle

Maximum security



KIESELMANN double seat valves are designed according to the GEMINI-principle with a divided valve disc for save sealing.

The considerable improvements are:

▶ **New *k-flex* seal material**

Universal application in different media.
Resistance in accordance to PTFE.

▶ **The hygienic safety**

Product penetration to the rear side of the gasket is absolutely impossible.

▶ **EHEDG-certified**

High hygienic safety by favorable cleaning options.

▶ **The mounting process**

Simple and speedy exchange of gaskets.
Incorrect mounting is not possible.

▶ **Service life**

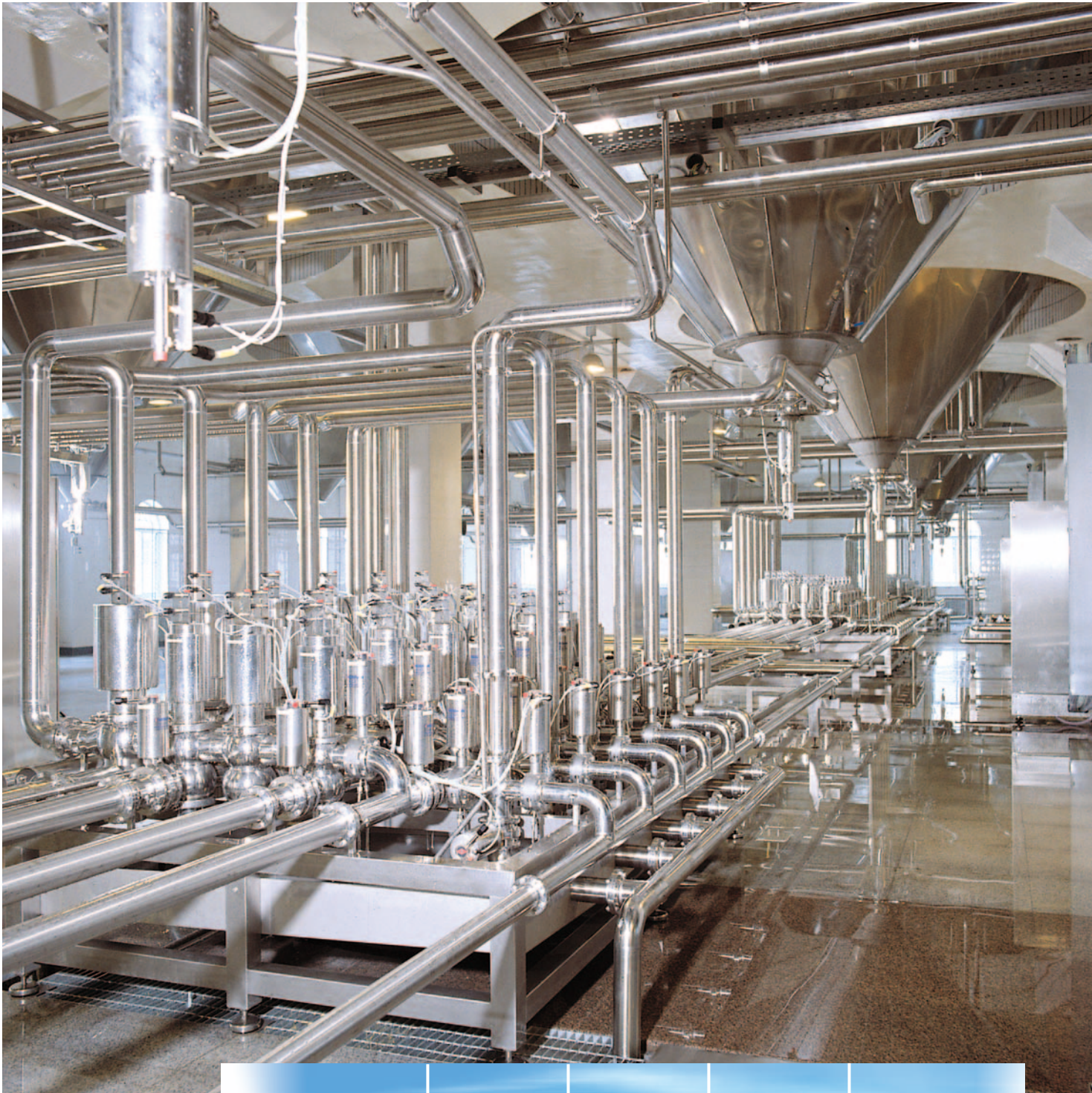
Longer service life with less maintenance.

▶ **Your advantages**

Cost savings and higher product safety.

▶ **For the future**

Flexible, compatible adaptation to the production processes



▲ Double seat valves with leakage butterfly valves as manifold for fully automated filling / draining / cleaning of a tank farm



All advantages at a glance

Modular valve control

Design includes:

- ▶ Position detection and display
- ▶ Valve control
- ▶ Diagnostic system
- ▶ Automated learning mode
- ▶ Seat lift monitoring

Lift drive

(with 5 year functional warranty)

- ▶ Compact
- ▶ Robust
- ▶ Simple disassembly
- ▶ Maintenance-free

Simple, quick removal of the

actuator by unscrewing

the locking clamp.

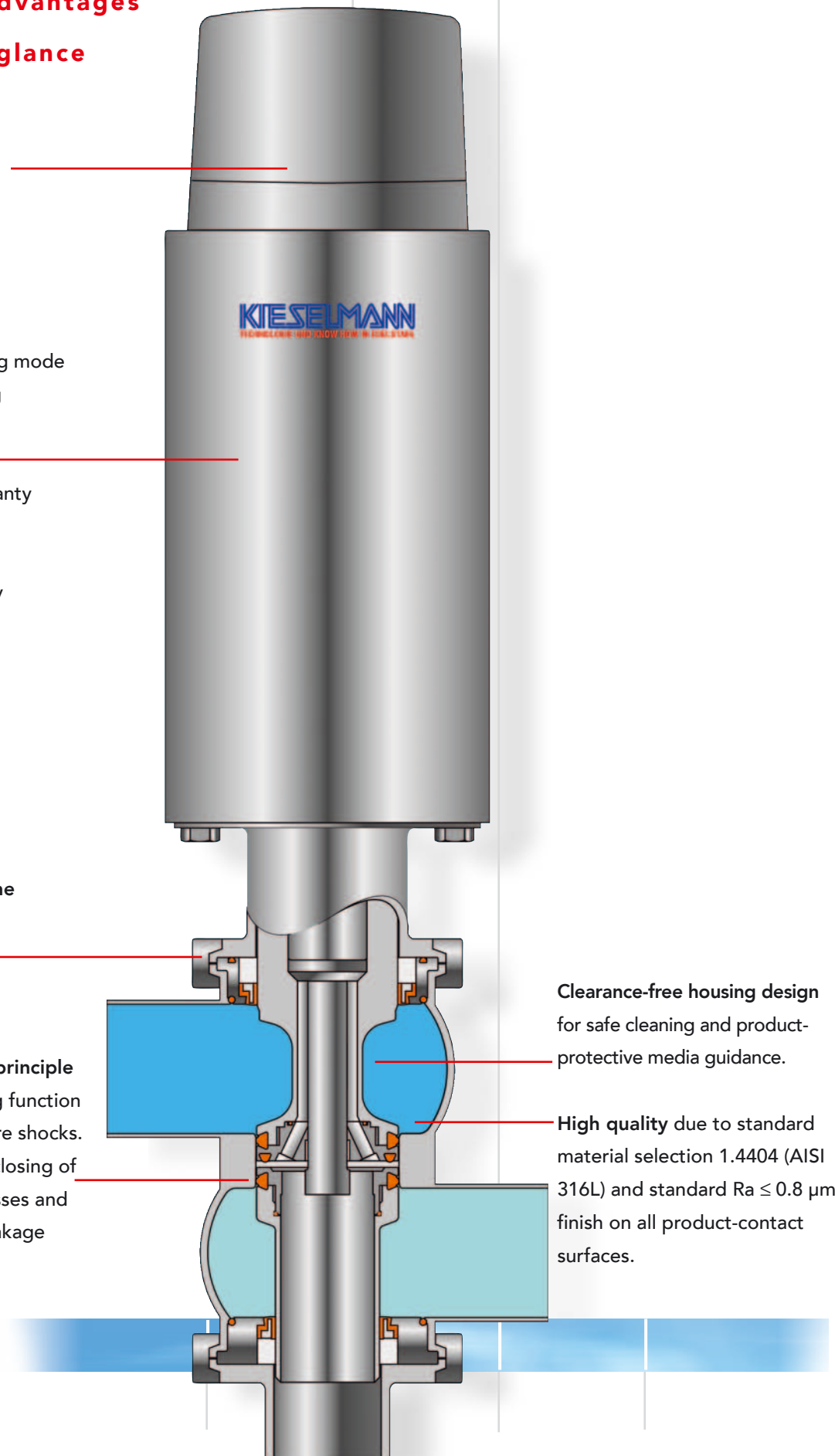
Uniform valve disc gasket principle

results in continuous locking function and protection from pressure shocks.

Leakage-free opening and closing of the valve avoids product losses and hygienic problems in the leakage interspace.

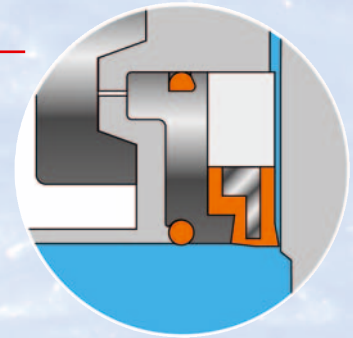
Clearance-free housing design for safe cleaning and product-protective media guidance.

High quality due to standard material selection 1.4404 (AISI 316L) and standard $Ra \leq 0.8 \mu m$ finish on all product-contact surfaces.



Shaft gaskets with metal core guarantee the highest dynamic and static sealing results by defined pre-compression.

Location of all sealing elements – clearance free.



Split valve discs for retention of the valve disc gasket.

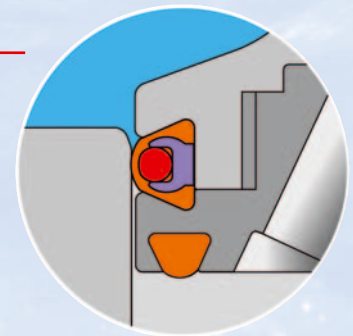
- ▶ Reduction in mounting efforts
- ▶ Absolutely preclude drifting of the valve disc gasket

Valve disc gasket with FEM optimized sealing from results in safe, dynamic, long-term locking function.

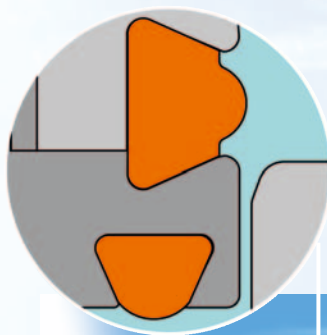


Reliable

Chemically highly resistant *k-flex* valve disc gaskets allow the application in universal media with a long service life.



Optimized cleaning of all product-contact surfaces by cycle valve disc. Cycling at the upper valve disc allows simultaneous cleaning of disc and shaft.

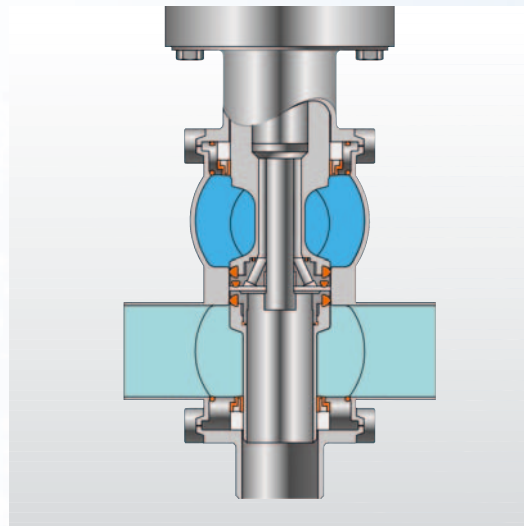




▲ Double seat manifold with ASI-Bus control system in a pharmaceutical production facility.

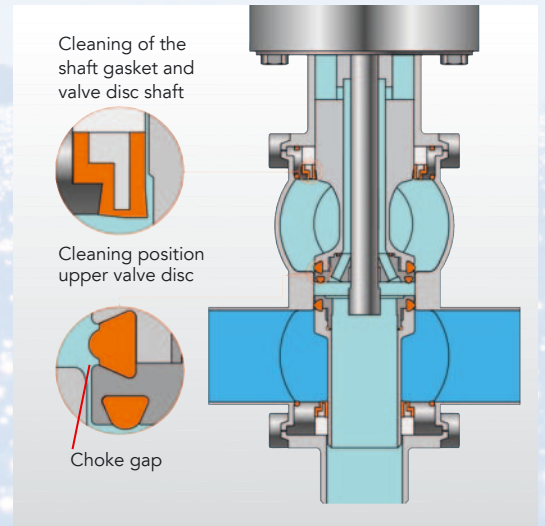
Detailed functionality:

The KIESELMANN Double Seat Valve



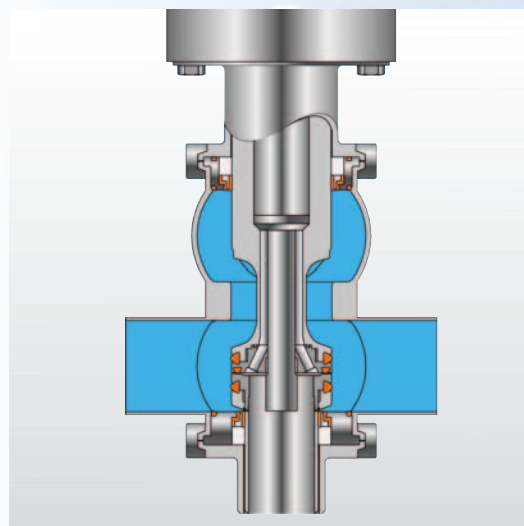
▲ Valve closed

- Secure separation of product and cleaning media
- Possible leakages are diverted via the leakage compartment to the exterior without pressure
- Pressure shock resistant locking position



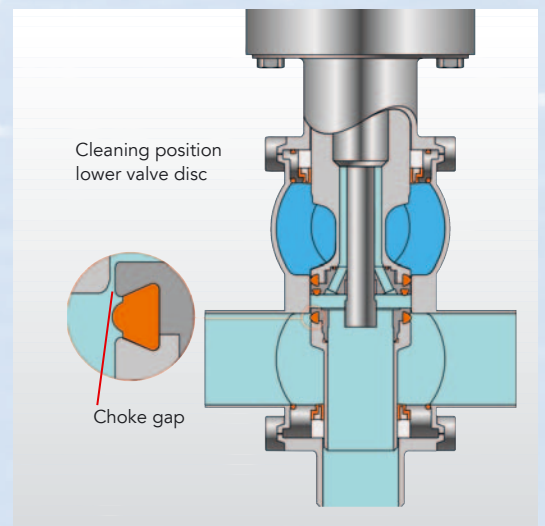
▲ Lifting of upper valve disc

- Lifting upper valve disc
- Cleaning and sterilization of shaft gasket, valve disc shaft, lantern, valve disc and gaskets, valve seat, leakage space with drainage and protective shell
- Cleaning fluid volume defined by metallic limited choke gap



▲ Valve open

- Leakage-free opening of the valve
- Leakage outlet closed
- Valve passage designed for large capacity flow



▲ Lifting of lower valve disc

- Lowering of lower valve disc
- Cleaning and sterilization of valve disc gasket, valve seat, leakage space with drainage and protective shell
- Cleaning dosage defined by metallic limited choke gap

**Maintenance-free actuator with
5 year functional warranty**



3 actuators covering
all nominal diameters
with integrated
lift function

Size I: DN 25 – 65
Size II: DN 80 – 100
Size III: DN 125 – 150

Technical data:

Sizes:	DN 25 – 150, 1" – 4"
Materials:	
Product contact	1.4404/AISI 316L
Non-product contact	1.4301/AISI 304
Gaskets:	EPDM (SIP 140°C) FDA conform HNBR (SIP 140°C) FDA conform <i>k-flex</i> (150°C) FDA conform
Surfaces:	
Product contact	Ra ≤ 0,8 µm E-polished
Operating pressure:	10 bar
Vacuum:	1,5 x 10 ⁻⁶ (mbar x L/s)
Pressure shock resistance:	up to 50 bar (closed valve position)
Control air:	4 – 10 bar

**The Double seat -
design kit**



Double seat valve



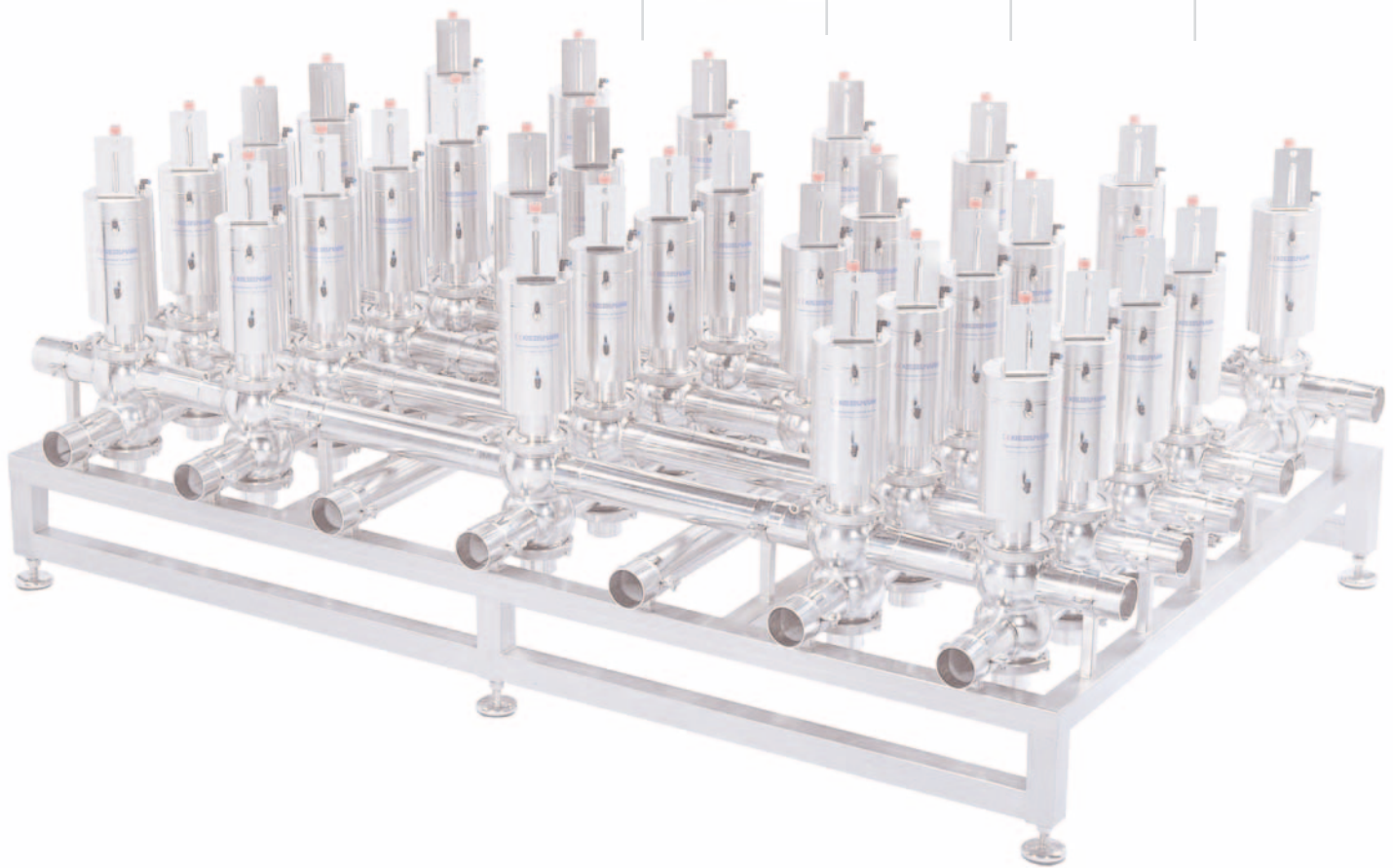
**Double seat
divert valve**



**Piggable double
seat valve**



**Double seat bottom
outlet valve**



**▲
Pre-mounted
manifold
on frame**



KIESELMANN Valve Control Systems

Years of experience and constant advances in development distinguish KIESELMANN – control head systems as dependable valve control system.

The modular design allows individual adaptation to control systems and valve styles.

Control systems:

- ▶ SPS
 - ▶ ASI-Bus
 - ▶ ASI-Bus 100
- 100% funktion control
with seat lift indication

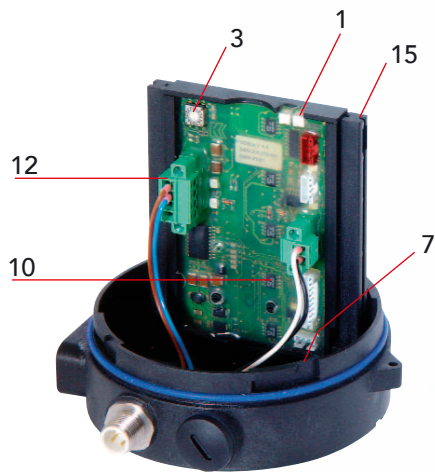
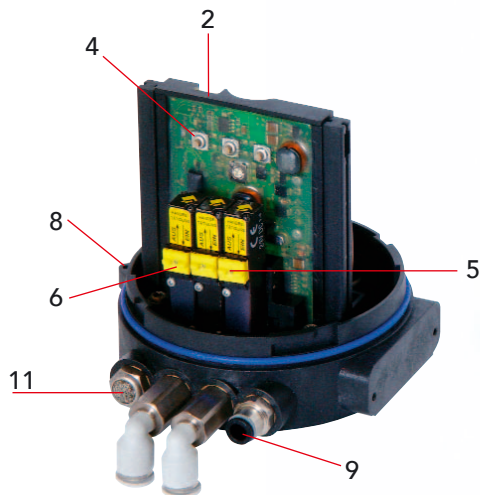
Gateway connection to networked or supervisory computers and control systems is possible.

Valve control functions:

- ▶ Position detection and display
- ▶ Valve control
- ▶ Diagnostic system
- ▶ Emergency stop mode
- ▶ Seat lift monitoring



Valve Control Features



1. LED-Display:
 - Valve position indication
 - operating voltage
 - 3/2 solenoid valve active
2. Encapsulated board protects against external influence. Board is suited for all valve types.
3. Functions adjustable by selection switch.
4. Programming switch (only ASI-Bus 100)
5. Can be equipped with up to 3 solenoid valves.
6. Solenoid valve with robust sliding hand operation for manual control.
7. Pressure relief valve preventing enclosure overpressure in case of air leakage within the head.
8. Bayonet lock of the cover for simple, fast handling and ensures protection classification IP 65.
9. A single air line for 3 solenoid valves reduces the pneumatic tube requirements.
10. Maintenance free sensors on the board.
11. Corrosion resistant stainless steel exhaust silencers.
12. Threaded plug connection for a interference-free operation.
13. Transparent, acid resistant cover for visual position monitoring.
14. Alternative stainless steel cover for robust operating conditions.
15. Simple and fast mounting of the board.



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**Quality and
responsibility
secure
the result**

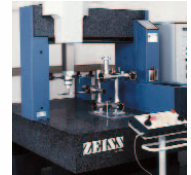
After more than 70 years experience, KIESELMANN has achieved a leading position in manufacturing of processing components in stainless steel for the food-, chemical- and pharmaceutical industry. Our success is based mainly on the high quality conscious of employees, combined with a constantly growing performance demand.

Due to continuous product development and constant improvement of the organization, KIESELMANN is today prepared for the tasks of the future.

At the parent plant in Knittlingen as well as in numerous national and international representatives, highly motivated and trained employees are at your disposal.

We look forward to a successful cooperation with your company.

Certified according to DIN EN ISO 9001



Quality control with program controlled machines



Most modern equipment for construction and production



Particular test center for new developments and product control

KIESELMANN

TECHNOLOGY AND KNOW-HOW IN STAINLESS STEEL

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