

# BioCheck

## SAMPLING VALVES



For best results  
and a safe sampling.



INSTALLATION OF ACTUATOR  
WITHOUT DAMAGE OF PRODUCT  
TOUCHED GASKET - NO TWISTING  
OR SQUEEZING OF PTFE-BELLOW

# BioCheck

Rieger's BioCheck aseptic valves allow easy and safe sampling of liquids from closed systems such as vessels and pipelines in aseptic as well as non-aseptic applications. The most important feature is the compact design providing integration into aseptic and hygienic production lines. The valve has a dead space free design, that can be easily cleaned and sterilized via CIP/SIP. The PTFE bellows guarantee hermetic sealing against the environment. Industries of application include: dairy, food, beverage, pharmaceutical, cosmetic and chemical.



ONLY ONE-PIECE SEALING (PTFE BELLOW)  
IN CONTACT WITH PRODUCT

## Product Overview BioCheck Sampling Valves

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### DESIGN FEATURES

- / Valve body made from solid bar
- / No dead spaces
- / Resistant to aggressive fluids
- / Hermetically sealed against the environment
- / Long service life of PTFE bellows
- / Drainable
- / Bellow leakage indicator

### MAINTENANCE BENEFITS

- / Maximize life cycles
- / Ease of cleaning - CIP/SIP
- / Folds of the PTFE bellows remain open for easy cleaning
- / Modular system makes changing actuator more convenient
- / Change seals without special tools
- / Minimal downtimes
- / Low spare parts cost
- / PTFE bellows conform to EU1935 (VO 10/2011) and FDA-regulations

### OPTIONS INCLUDE

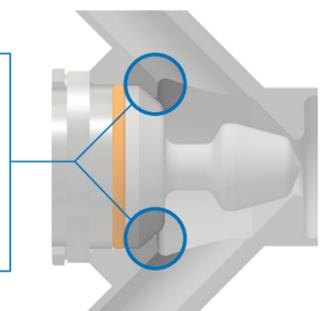
- / Wide variety of installation positions available
- / High quality product surface finishes available, including electropolishing
- / Electronic feedback

### STANDARD ACTUATOR VERSIONS

- / Self-closing lever with automatic actuator
- / Lever in open position with automatic actuator
- / Automatic actuator only
- / Manual activation with handwheel
- / Others on request

WE ARE ONLY USING THE PTFE BELLOW AND NO OTHER DIAPHRAGMS.  
THIS IS WHY:

Sealing is via the PTFE bellow. This seat (circled in blue) is not moving either axially or radially, resulting in hermetic sealing with a leak-tightness of minimum  $\lambda \leq 10^{-4}$  mbar x l/(s x m);  $\Delta p = 6$  bar depending on type. Certification according to TA-LUFT [VDI 2440/VDI 3479] was issued.





BioCheck Classic

/ Available with 1 or 2 ports

Stroke
Standard DN 10 DIN (1/2") = 3 mm
Ingold version = 5 mm (see page 7)

Port Sizes
DN 10 - DN 15"
1/2" - 3/4"

Various actuator types available
(see catalogue for more details)

Process Connections
/ Weld-in tube
/ Weld-in flange for tank
/ Clamp dm 25 - 50,5 mm
/ BioConnect Clamp dm 50,5 mm
/ Aseptic-Clamp DIN 11864
dm 50,5 mm
/ BioControl flange DN 25 and DN 50
/ Varivent Inline Body DN 25
and DN 40 - 125

\* shape of bellow differs in sizes >DN10 / 1/2"

For liquid products, such as
beverages, milk, beer, etc.



BioCheck Classic
/ With hand wheel
/ DN 10
/ Weld-in tube



BioCheck Mini

/ Available with 1 or 2 ports

Stroke
Mini DN 6 and 8 DIN (1/4" - 3/8")
= 1,5 mm

Port Sizes
DN 6 and DN 8
1/4" - 3/8"

Various actuator types available
(see catalogue for more details)

Process Connections
/ Weld-in tube
/ Weld-in flange for tank
/ Clamp dm 25 - 34 mm

For liquid products, such as
beverages, milk, beer, etc.



BioCheck Compact

/ Available with 1 or 2 ports

Stroke
Standard DN 10 DIN (1/2") = 3 mm

Port Sizes
DN 10
1/2"

Various actuator types available
(for more details see catalogue)

Process Connections
/ Weld-in tube
/ Weld-in flange for tank
/ Clamp dm 50,5 mm
/ Clamp according to DIN 32676
dm 50,5 and AWH-Connect-Flange
/ Varivent Inline Body DN 25
and DN 40 - 125

For liquid products, such as
beverages, milk, beer, etc.



BioCheck Compact
With lockable
handwheel



BioCheck Combi

/ Available with 1 port + 1 CIP/SIP valve

Stroke
Standard DN 10 DIN (1/2") = 3 mm

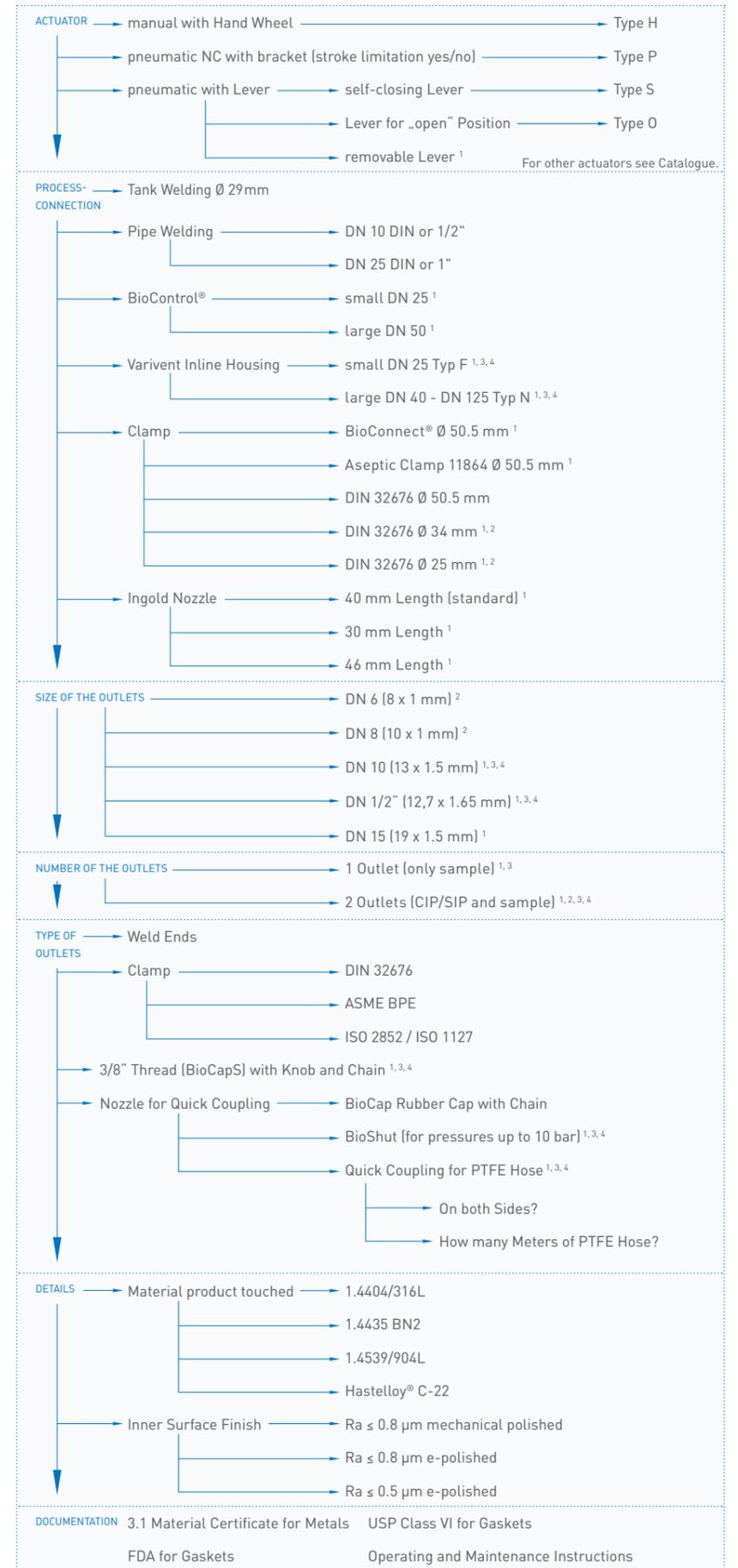
Port Sizes
DN 10
1/2"

Various actuator types available
(for more details see catalogue)

Process Connections
/ Weld-in tube
/ Weld-in flange for tank
/ Clamp dm 25 - 50,5 mm

For liquid products, such as
beverages, milk, beer, etc.

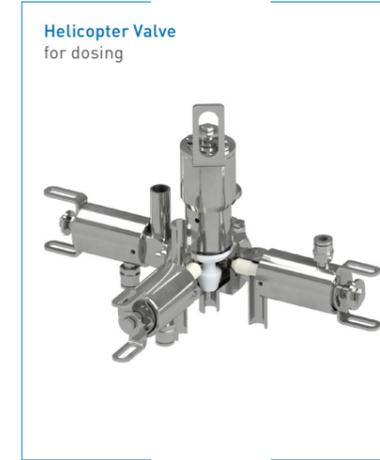
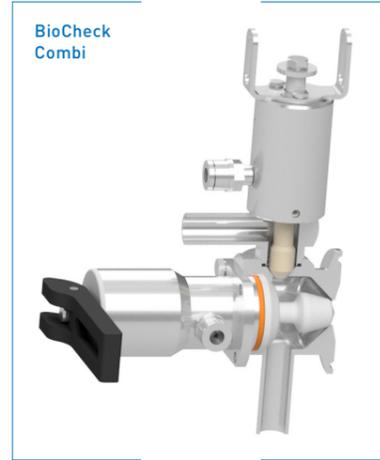
For more details
on the versions and
pricing, request
our catalogue.



1 only for Classic 2 only for Mini 3 only for Compact 4 only for Combi



WE OFFER THE RIGHT SAMPLING VALVE FOR YOUR APPLICATION



CHEMICAL OR PHYSICAL SAMPLING

- / BioCheck Classic
- / BioCheck Compact

CHEMICAL OR PHYSICAL OR MICROBIOLOGICAL SAMPLING

- / BioCheck Classic
- / BioCheck Compact
- / BioCheck Mini

CHEMICAL OR PHYSICAL OR MICROBIOLOGICAL SAMPLING

- / BioCheck Combi

Classic DN 10 for insulated tanks



Process Connection Ingold Nozzle



SAMPLING VALVE WITH 1 PORT

- / CIP only during main cleaning of process possible
- / Standard for low sensitive media, such as juice, beer, CIP, etc.

SAMPLING VALVE WITH 2 PORTS

- / CIP/SIP directly before sampling
- / Standard for sensitive products, e.g. in Biotechnologies, dairy products, etc. also for bacterial counts

Please also consider the associated process.

SAMPLING VALVE WITH ADDITIONAL CIP/SIP VALVE - DIRECTLY ATTACHED WITHOUT DEADSPACE (0 D)

- / CIP/SIP directly before sampling without backflow in process line
- / Standard for sensitive products, e.g. in Biotechnologies, dairy products, etc. also for bacterial counts

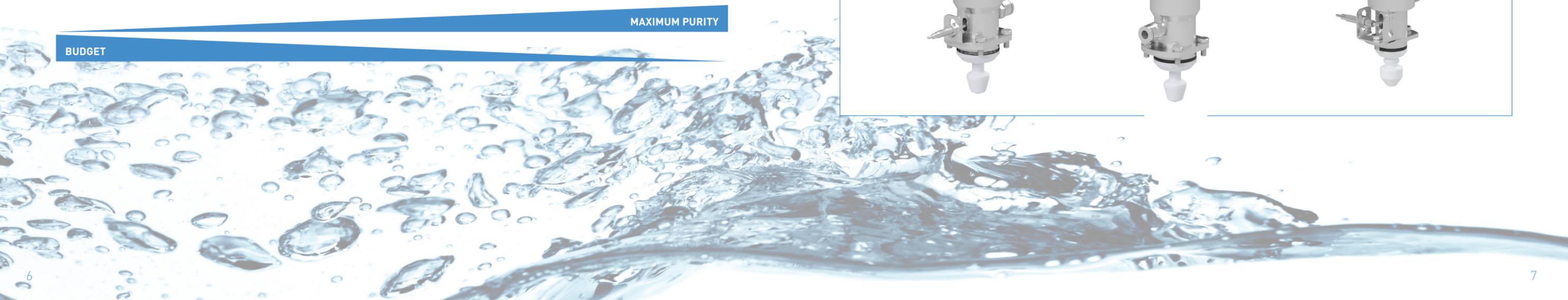
Please also consider the associated process.

Actuators with brackets for proximity switch



MAXIMUM PURITY

BUDGET





With the BioCheck sampling system, samples can be taken from sealed systems like tanks and pipelines simply and safely. In the design of this sterile valve, special attention was paid to an aseptic and at the same time highly compact design. That incorporation in both sterile and CIP/SIP circuits is straightforward and, above all, the sampling is without contamination.



Picture 1

**STERILE BOTTLE SAMPLING**

- / Utilizes standard laboratory bottles
- / Connection thread GL45 ISO
- / For 100 ml to 2,000 ml samples
- / No air contamination
- / Autoclavable
- / Fully aseptic system
- / Including adapter for sterile air filter

**STEPS OF SAMPLING PROCEDURE**

1. The product flows through the pipeline. The BioCheck valve 3 and CIP/SIP valve 1 are closed.
2. After the bottle including bottle head (see picture 1) has been sterilized in the autoclave, connect the bottle to the sampling port. Both valves on the bottle (valve 5 and valve 6) are closed.
3. Open the CIP/SIP valve 1 and bottle valve 5 for sterilization. The steam sterilizes the entire system but not the bottle. This was sterilized before in the autoclave (see 2.).
4. Close the CIP/SIP valve 1 and the bottle valve 5.
5. Open the BioCheck valve 3 and the valve for sampling in the bottle 6. The product flows into the bottle.
6. When sampling is completed, close the BioCheck valve 3.
7. After the piping has been drained 4 close the valve for bottle sampling 6 on the bottle. The entire system is now sealed.
8. Remove the sampling bottle.



Scan QR Code and watch the video of the sampling procedure.

**BIOCHECK INCLINED SEAT VALVE**

Based on the BioCheck Sampling Valve, the BioCheck Inclined Seat Valve is the real aseptic alternative to diaphragm valves in the industry. Based on the long life sealing elements, they are also used in filling machines.

**FEATURES AND BENEFITS**

- / One-piece sealing
- / No dead-legs
- / Completely drainable



**PIPE CONNECTIONS**

... also with quick-coupling (comparable to existing systems)



BioShut



**WE ALSO STOCK THE FOLLOWING ACCESSORIES FOR THE BIOCHECK SERIES:**

- / Hose couplings
- / PTFE hoses
- / Rubber caps with grommets or quick-couplings for higher pressures

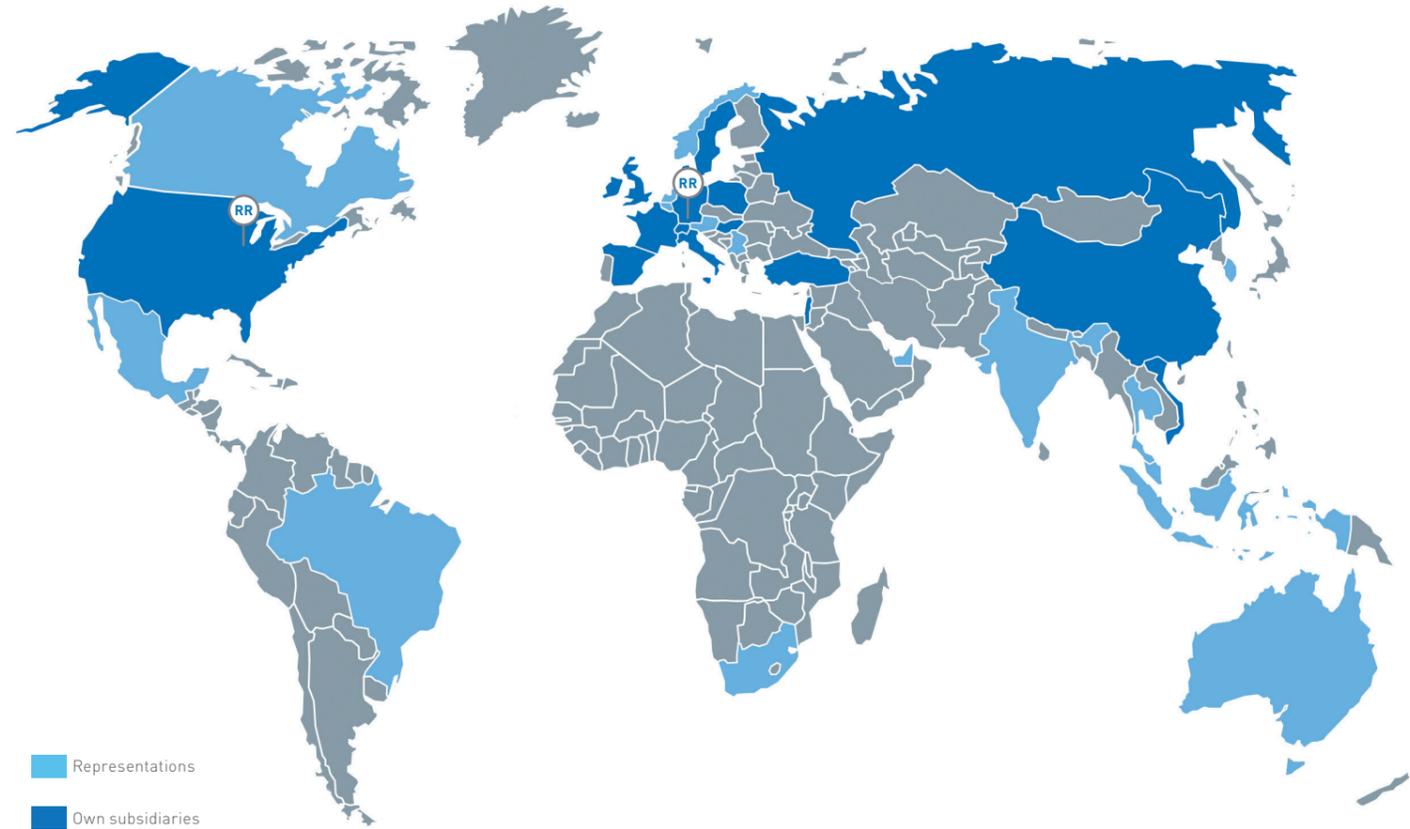




## Technical Data

<b>MATERIAL</b>	/ in contact with product	1.4404/AISI 316L
	/ optional	1.4435/AISI 316L
	/ not in contact with product	1.4301/AISI 304
	/ all valves are available in special alloys, such as Hastelloy® C-22, 1.4539/904L, 1.4529, AL-6XN® and others	
<b>TEMPERATURES</b>	/ continuous operation	until 121°C* (250 °F)*
	/ steam sterilization	max. 135°C* (275 °F)* for max. 20 min.
<b>PRESSURE</b>	/ product pressure	max. 10 bar (145 psi)
		opt. 16 bar (232 psi)
<b>SURFACES</b>	/ in contact with product	Ra ≤ 0,8 µm (32 µm) mechanically polished
	/ not in contact with product	Ra ≤ 1,6 µm (63 µm) mechanically polished
	/ higher quality surface finishes and e-polishing available upon request	

\* dependent upon operating conditions



## YOU DON'T HAVE TO CHANGE YOUR PROCESS. WE ADAPT OUR VALVES TO YOUR PROCESS!

With our longstanding experiences and our specialized production we can offer the suitable valve for almost every application.

Make an appointment today for a free consultation for your specific application.

The **NEUMO Ehrenberg Group** is a family run holding, which is operating worldwide with more than 2.100 employees.

Since 1958 **Gebr. Rieger** has been a member of the NEUMO Ehrenberg Group. In our department valve technology Gebr. Rieger is successfully working in the **fields of valves, customized solutions**, such as **valve blocks** and **tubular structures** as well as **system engineering**, which includes **valve clusters, units, CIP-systems** and all kinds of **plug and play solutions**.

By its global approach Rieger gained international attention in the markets of **food, beverage** and **pharmaceutical industries**.

Besides the **Sampling Valves** the valve range also includes **Mix Proof Valves, Filling Valves** and **Pigging Systems**.

## FURTHER BROCHURES



Further Rieger valve types upon request and in our catalogue. Contact your dedicated sales manager in our sales team in your area.



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**YOU DIDN'T FIND THE RIGHT VALVE?**

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