R. SCHÜTT

HIDDEN CHAMPION IN SOUTH WESTPHALIA

Experienced, Innovative, Trusted since 1989 – Simplex

High-quality sampling systems for the food and beverage industry

R. SCHÜTT

World market leader for sampling systems
Made in Germany
www.rschuett.de

Content

R. Schütt GmbH

Our Simplex products are high-quality microbiological sampling systems for the food and beverage industry.

The company R. Schütt GmbH was founded on 01.10.1989 by Rolf Schütt and has been managed by the new owner Benedikt Kruse as Managing Director since 01.01.2020.

Over the last 35 years, the Simplex sampling systems have been developed, continuously improved and adapted to customer requirements. The customer base has now grown to over 1300 in 89 countries worldwide.

Customers include breweries, wineries, mineral springs, juice and lemonade producers, dairies, cocoa and chocolate companies, coffee extract, supply and wastewater plants.

All liquid media that need to be tested continuously and authentically can be tested with this system, from manual to fully automatic processes.

R. Schütt GmbH

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We have a great variety of sampling products to offer - from common manual samplers, to continuously controllable samplers, as well as complex variations thereof.

We also provide corresponding accessories and individually optimized controls. We are always open to customized solutions based on customer's requests.

What can you expect from R. Schütt GmbH?

As the market leader, all around service is a matter of course. This ranges from the design, to the production, to the maintenance of our products.

In addition, our customers appreciate the constant availability, short lead times and, of course, the consistent high quality.

Are you interested in hearing more about our unique, high-quality products? Then please feel free to

contact us.

R. Schütt GmbH

For over 30 years R. Schütt GmbH has been developing, designing, manufacturing, and distributing Simplex sampling systems - made in Germany - in 89 countries worldwide.

**We are a ‘Hidden Champions’ and ‘Technology World Market Leader’ for sampling systems.
Manual and automatic samplers have established themselves in the food and beverage industry.**

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Laborator Vest

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INDUSTRIAL HYGIENE SOLUTIONS

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Instrumentación Analítica

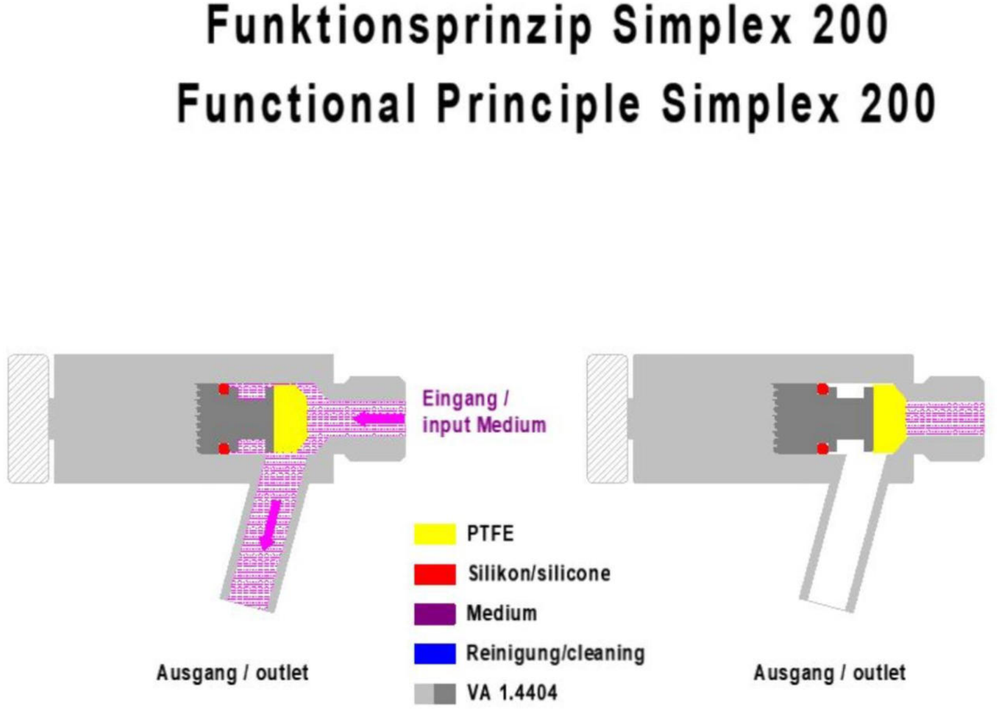
LEIBFACHER CBB CONSULTING AB
CREATIVE BREW AND BEVERAGE
REPRESENTING BEWERTUNGS- UND VERMITTLUNGSBÜRO WEIHENSTEPHAN GMBH

Hand sampler Simplex 200

Manual sampler in the Simplex 200 version with a standard DN6 pipe outlet.

Simplex 200

Functional prinziple Simplex



Simplex 200 Technical data

Sampler:	Version with handwheel
Seal:	PTFE sealing cone, O-ring silicone (FDA approved)
Material:	1.4404 in contact with product; 1.4301 not in contact with product
Line pressure:	from 0 to 12 bar
Line pressure surge:	up to max. 20 bar without opening, depending on manual closing pressure
Opening travel:	approx. 5 mm
Flow size:	Ø 6 mm
Variation:	various sample inlets according to customer requirements, sample outlet DN6
Weight depending on version:	0.4 to 0.8 kg
Inch ID no.:	8481 8019
Maintenance required:	2 seals, time required to change approx. 2 minutes
Maintenance interval:	depending on medium and cleaning interval, every 3 - 12 months

Connection variants

Simplex 200			
Article-#:	**AE00.1200.#.#**		
Article-#:	**AE00.1200.#Input.#Output**		
#	**Sampler input**	**#**	**Sampler output**
.1	1/2" Standard	.1	Rohr DN6
.2	1/2" Aseptik		
.3	DN10 Milk pipe		
.4	welding connection		
.5	Bio-Con-connection		
.6	Tri-Clamp 1 1/2"		
.7	DN20 Milk pipe		
.8	DN15 Milk pipe		
.9	1/2" Cromer		
Example: **AE00.1200.1.1** **Sampler Simplex 200** **Inlet connection 1/2" standard,** **Sample outlet pipe DN6**			
Optional: **Installation in a varivent cover** **Article-#: AE01.3017 (Large lid type N)** **Article-#: AE01.3017a (Small lid type F)**			

Variants

Simplex 200
½“ - Aseptik, Standard, Cromer

Simplex 200
Welding connection

Simplex 200
Tri-Clamp

Simplex 200
Bio-Con

Simplex 200
DN10

Simplex 200
DN15

Simplex 200
DN20

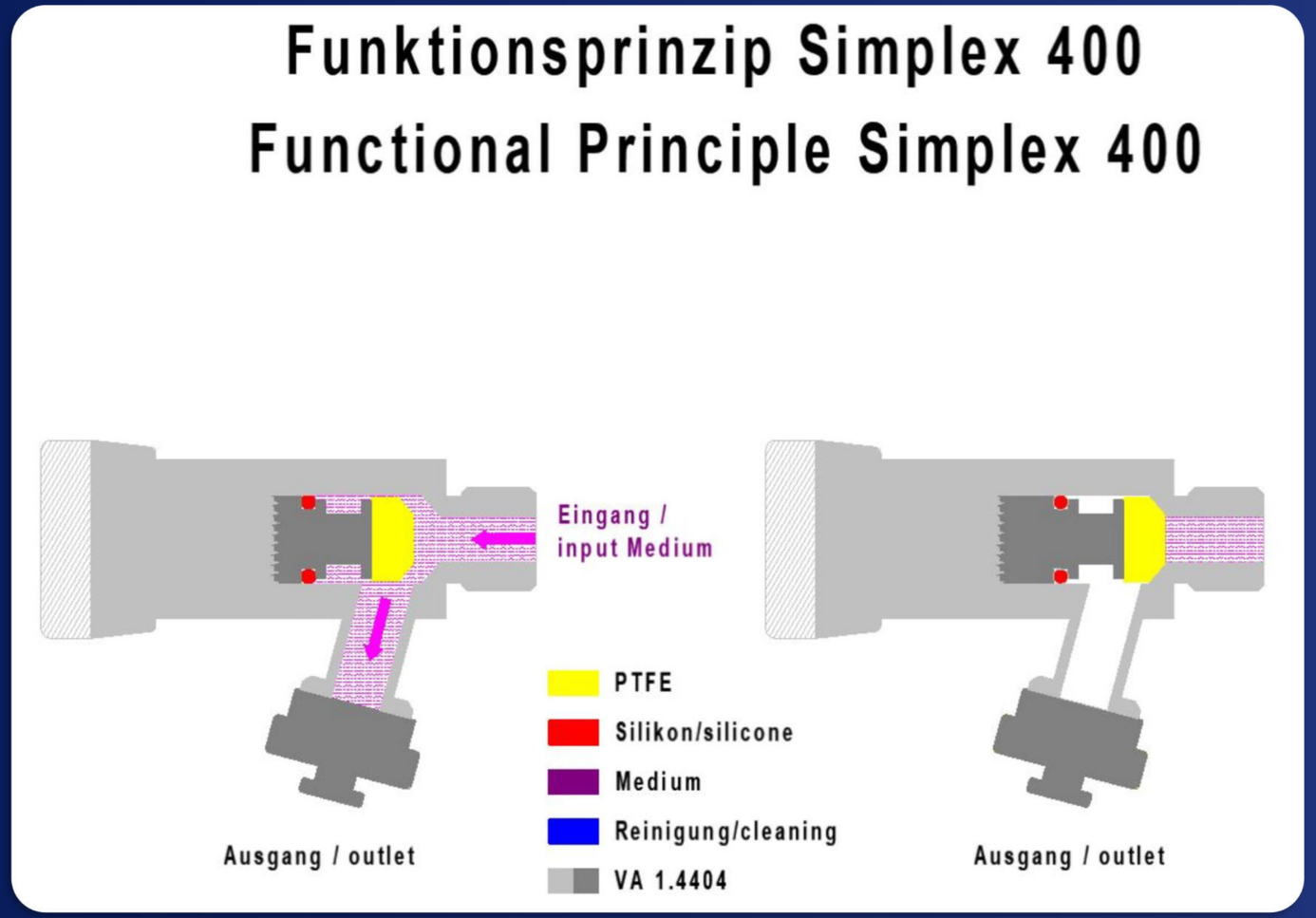
andere Anschlussvarianten
auf Anfrage möglich

Hand sampler Simplex 400

Hand samplers in the types Simplex 400 with one outlet for product.

Simplex 400

Functional prinziple Simplex 400



Hand sampler Simplex 450

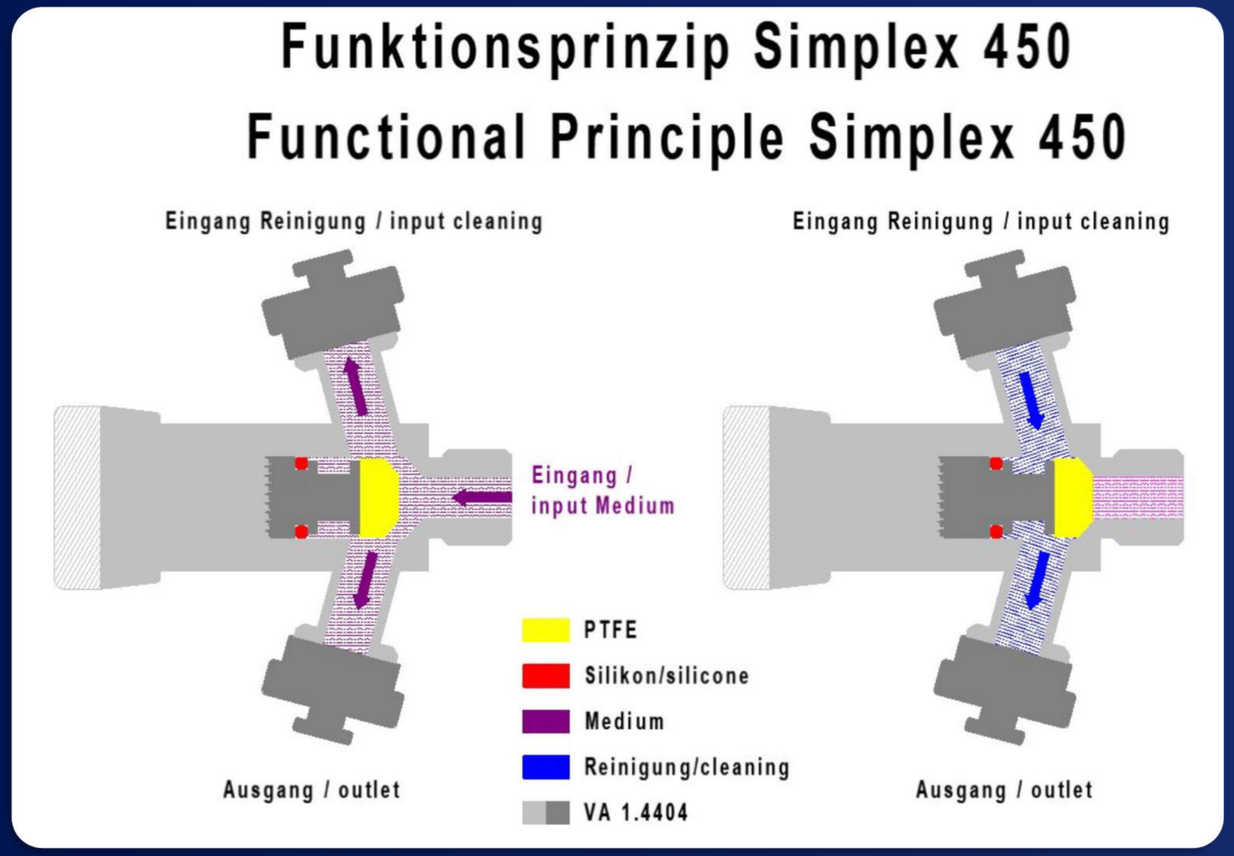
Manual sampler in the Simplex 450 version with two outlets for cleaning and disinfecting the sampler.

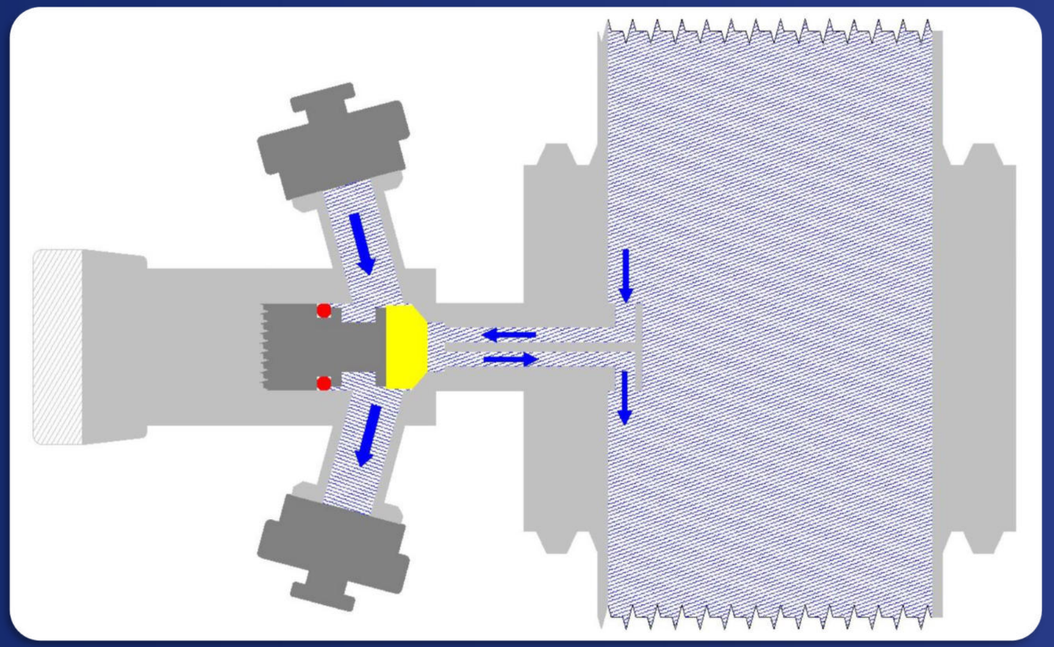
The sampler can be kept sterile between samples.

Simplex 450 with continuous purgingat the sampler inlet without dead spaces.

Simplex 450 installed in a Varivent cover with hose nozzle and cleaning bottle (for cleaning and disinfecting the sampler)

Functional principle Simplex 450





Simplex 450 with continuous purgingat the sampler inlet without dead spaces.

Simplex 400/450 Technical data

Sampler:	Version with handwheel
Seal:	PTFE sealing cone, O-ring silicone (FDA approved)
Material:	1.4404 product-contacted; 1.4301 not product-contacted
Line pressure:	from 0 to 12 bar
Line pressure shock:	up to max. 20 bar without opening, depending on manual closing pressure
Opening travel:	approx. 5 mm
Flow size:	Ø 6 mm
Variation:	various inlets and outlets depending on customer requirements
Weight depending on version:	0.5 to 1.1 kg
Inch ID no.:	8481 8019
Maintenance required:	max. 5 seals, time required to change approx. 3-5 minutes
Maintenance interval:	depending on medium and cleaning interval, every 3 - 12 months

Accessories

A wide range of accessories is available for
the Simplex 400 and 450 samplers, also customised.

Cooling spiral with 5 turns
(2 or 4 mm inner diameter)

Cooling spiral with 10 turns
(2 or 4 mm inner diameter)

Various tube spouts and
straight outlets are available.

Connection variants

Simplex 400 / 450			
Article-#:	AE00.1400.#.# / AE00.1450.#.#		
Article-#:	AE00.1400.#input.#output / AE00.1450.#input.#output		
#	**Sampler input**	**#**	**Sampler output**
.1	1/2" Standard	.1	1/2" Standard
.2	1/2" Aseptik	.2	1/2" Aseptik
.3	DN10 Milk pipe	.3	5/8" Standard
.4	Welding connections	.4	1/2" Cromer
.5	Bio-Con-thread	.5	Quick-release coupling DN5
.6	Tri-Clamp 1 1/2"	.6	3/8" Standard
.7	Bio-Con input	.7	Pipe-Ø DN6
.8	DN15 Milk pipe		
.9	DN20 Milk pipe		
Example: **AE00.1400.1.1** **Sampler Simplex 400** **Inlet connection 1/2" standard,** **Sample outlet 1/2" standard,** **with sealing cap**		**Example:** **AE00.1450.1.1** **Sampler Simplex 450** **Inlet connection 1/2" standard,** **cleaning inlet and sample outlet 1/2" standard,** **both with sealing cap**	
Optional: **Installation in a Varivent cover** **Article-#: AE01.3017 (Large cover type N / DN40 - DN125)** **Article-#: AE01.3017a (Small cover type F / DN25 - DN32)**			

Varianten

Simplex 450
½“ - Aseptik, Standard, Cromer

Simplex 450
Welding connection

Simplex 450
Tri-Clamp

Simplex 450
Bio-Con

Simplex 450
DN10

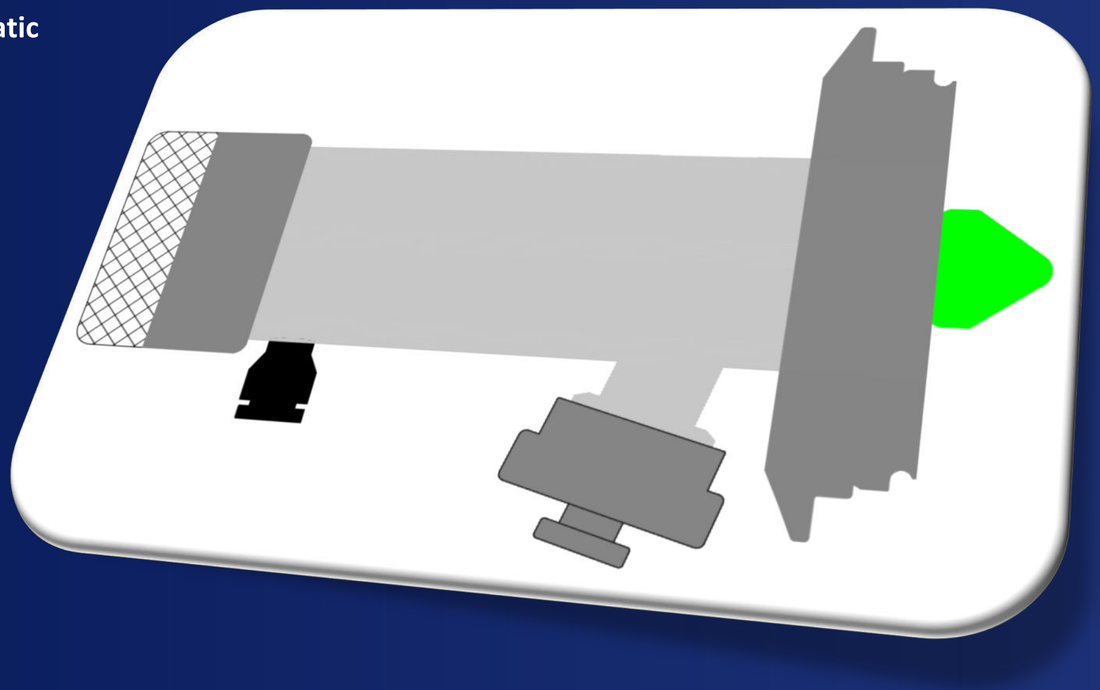
Simplex 450
DN15

Simplex 450
DN20

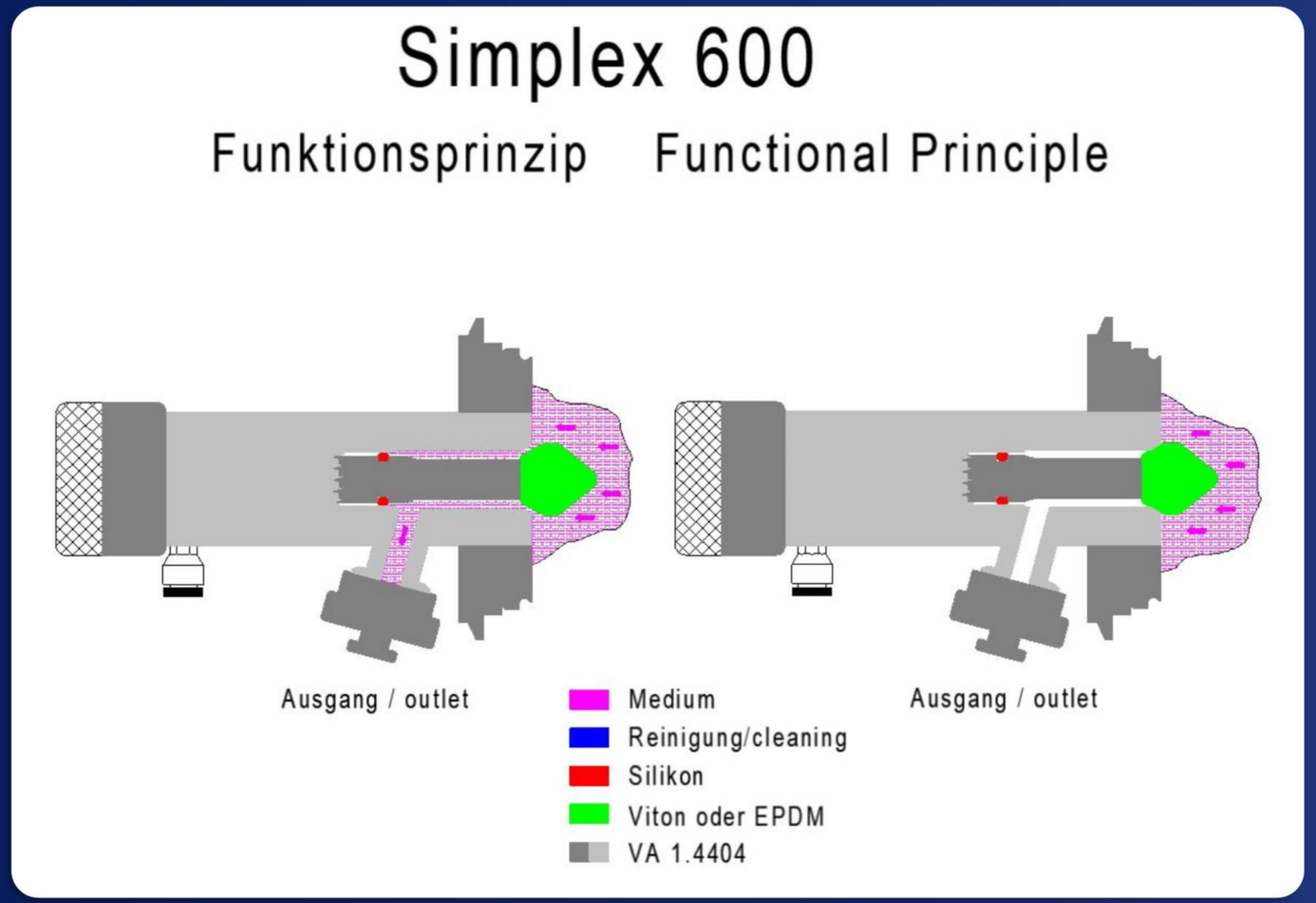
andere Anschlussvarianten
auf Anfrage möglich

Manual and pneumatic sampler Simplex 600

Semi-automatic sampler in the Simplex 600 version with one sampler output, in manual and pneumatic versions.



Manual and pneumatic sampler Simplex 600

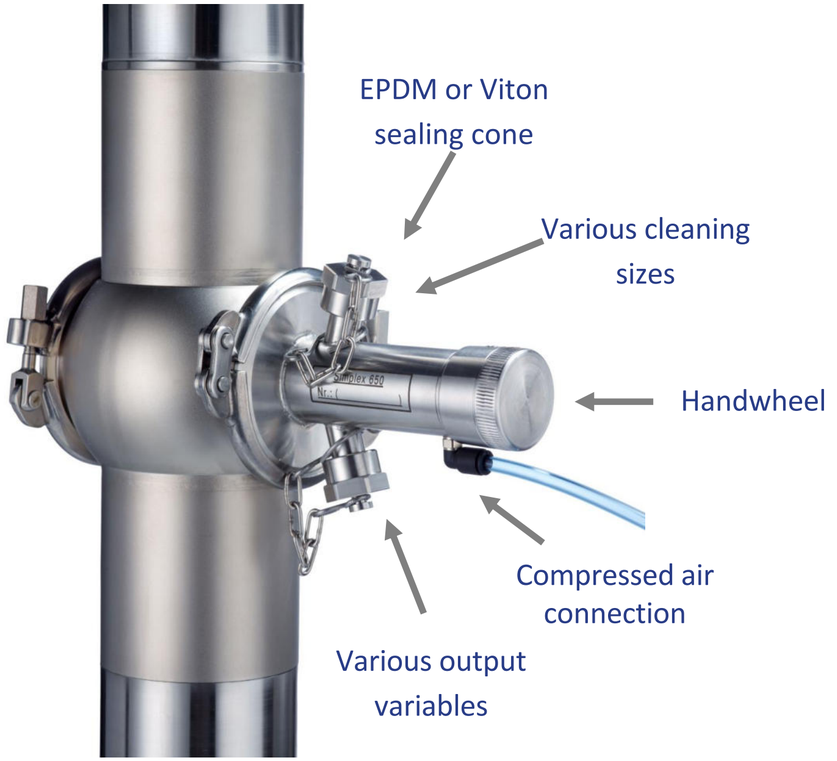


Manual and pneumatic sampler Simplex 600

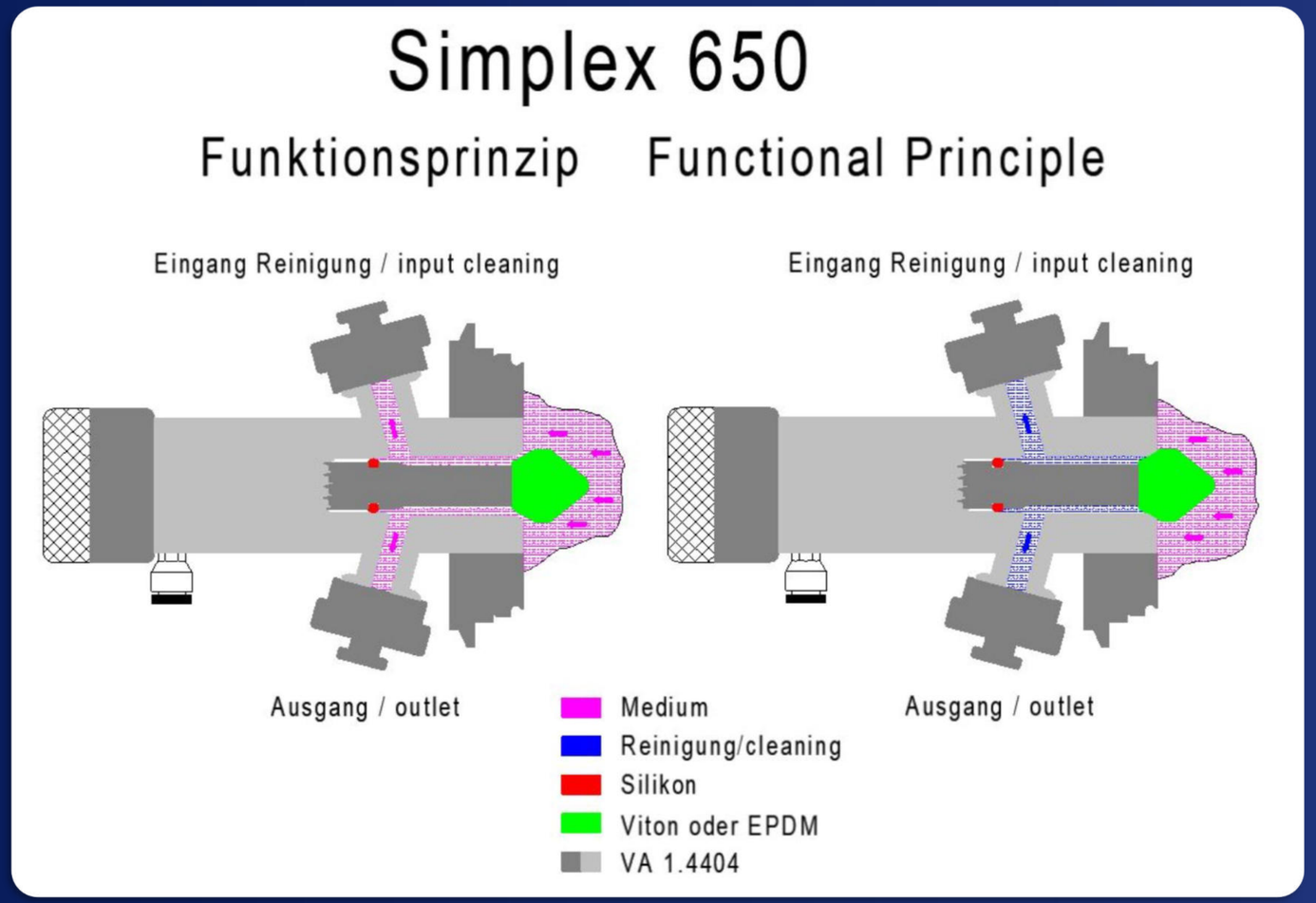
Semi-automatic sampler in the Simplex 650 version with one outlet and one cleaning inlet for cleaning and disinfecting the sampler, in manual and pneumatic versions.

Simplex 600/650 Technical data

Sampler:	Pneumatic and hand lever version
Seal:	Viton sealing cone, O-ring silicone (FDA approved)
Material:	1.4404 in contact with product; 1.4301 not in contact with product
Line pressure:	from 0 to 10 bar opening at 6 bar compressed air up to 16 bar with hand lever
Line pressure shock:	up to max. 40 bar without opening,
Compressed air connection:	DN 6 quick-release coupling
Opening travel:	approx. 3 mm
Flow size:	DN 5 mm
Connection inlet:	Varivent connection from DN25/32 and DN40/150mm
Dampable:	up to 125°C
Tightness:	up to 18 bar with liquid medium, up to 8 bar with air/CO2/nitrogen
Weight:	1.2 kg
Inch-Id-No.:	8481 8019
Maintenance effort:	max. 2 seals, time required to change approx. 1-2 minutes
Maintenance interval:	depending on medium and cleaning interval, every 3 - 12 months



Manual and pneumatic sampler Simplex 600



Accessories

A wide range of accessories is available for
the Simplex 600 and 650 samplers, also customised.

Cooling spiral with 5 turns
(2 or 4 mm inner diameter)

Cooling spiral with 10 turns
(2 or 4 mm inner diameter)

Various tube spouts and
straight outlets are available.

Connection variants

Simplex 600 / 650			
Article-#:	AE00.1600.#.# / AE00.1650.#.#		
Article-#:	AE00.1600.#input.#output / AE00.1650.#input.#output		
#	**Sampler input**	**#**	**Sampler output**
.1	Varivent cover	.1	Quick-release coupling DN5
	Typ N	.2	1/2" Aseptik
.2	Varivent cover	.3	1/2" Standard
	Typ F	.4	5/8" Standard
.3	Thread connection	.5	Customer specification
	Bio-Con	.6	1/2" Cromer
.4	Tri-Clamp 1 1/2"	.7	3/8" Standard
Example: **AE00.1600.1.1** **Sampler Simplex 600** **Inlet connection Varivent cover type N, sample outlet quick-coupling DN5**		**Example:** **AE00.1650.1.1** **Sampler Simplex 650** **Inlet connection Varivent cover type N, cleaning inlet and sample outlet quick-release coupling DN5**	
Optional: **Sensor for monitoring the open/closed switching status**			

Automatic sampler Simplex 2700

Complete sampler Simplex 2700

Complete Simplex 2700 sampler with an attached 3/2-way pneumatic valve.

Bio-Con pipe connection

There are various options for the pipe connection:

1. Bio-Con for pipe Ø DN40 - DN125 (other sizes on request)
2. Welding connection
3. Bio-Con building construction for pipe systems close to the ground for pipe Ø DN40 - DN125 (other sizes on request)

Bio-Con shrink-wrapped in a blind cover fora Varivent housing.

Bio-Con

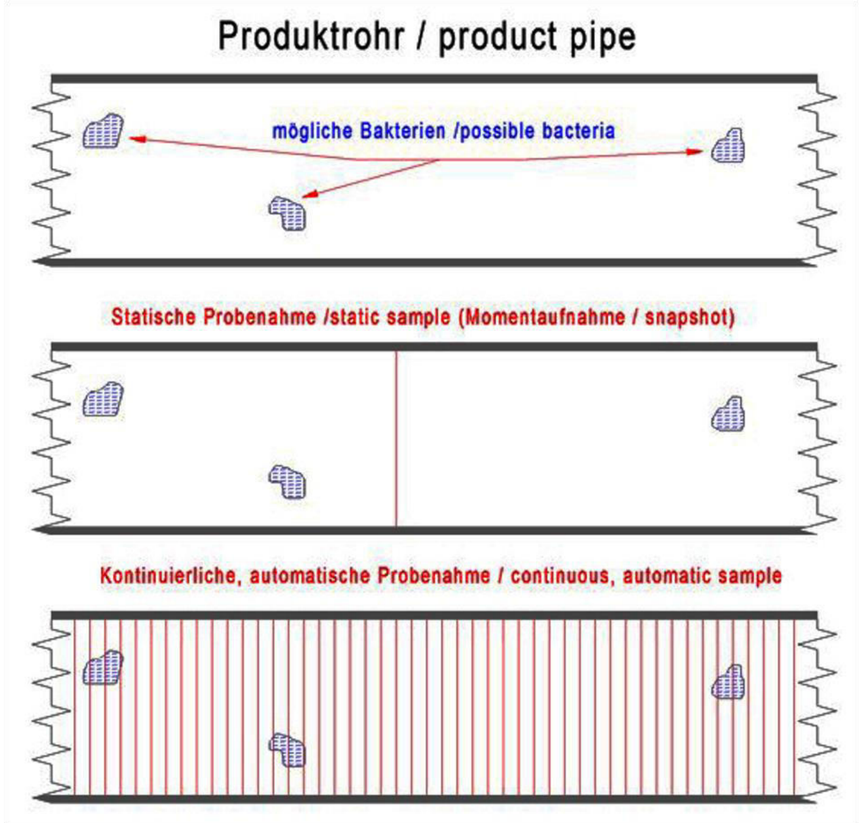
Bio-Con-Input

Bio-Con-Output

Different methods of sampling

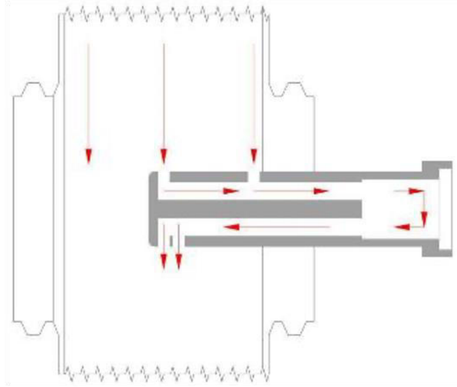
The diagrams illustrate the difference between a single manual sample (middle diagram) and an automated periodic sampling (bottom diagram).
With a manual sample only a short sample is collected as shown by the single red line.

With automated sampling samples are taken periodically
giving a more complete crosscut of the production run.



Types of pipe connections

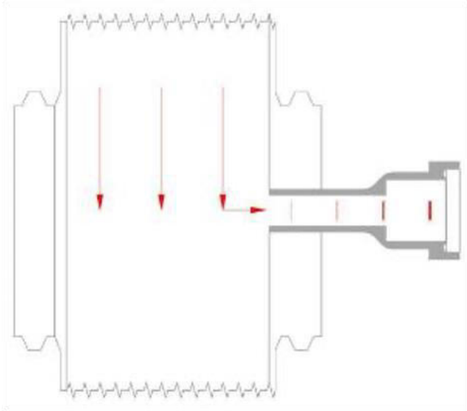
Two options are available for determining the location the sample is taken from.



1. The Bio-Con

The Bio-Con takes the sample from two locations simultaneously –the edge and the center of the pipe. Studies at Weihenstephan Technical University record a 99.99% capture rate of bacteria.

Another advantage of the Bio-Con is it creates a continual flow-through of the product at the sample point and therefore a more representative sample overall.



2. The welded connection

The disadvantage of the welded connection is a portion of the potential microorganisms will be missed.

The same study as above records a capture rate of 90-92% of the potential microorganisms with a welded connection.

Simplex 2700 sampler

Simplex 2700 with and without manual operation

Simplex 2700 with and without manual operation
The Simplex 2700 sampler is the current model in the proven Simplex 2000 series. It closes with pneumatic pressure and operates in a range of 0.5 to 12 bar. The design insures a normally closed position up to pressures of 40 bar.

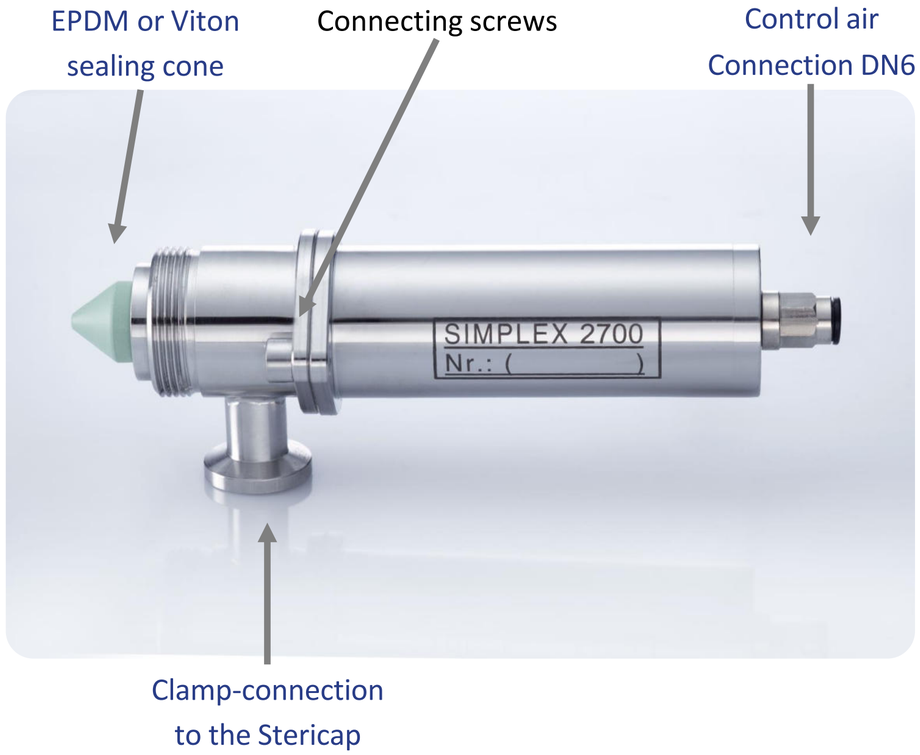
At the interface between the pneumatics and the sampler, the Simplex 2700 is sealed with an aseptic membrane and clamp connection.
This ensures aseptic conditions.

An optional variant of the Simplex 2700 is to add a hand lever allowing manual opening of the sampler.
This is the ideal solution for occasional manual sampling, maintenance, or performing a “push-through” during CIP cleaning.

The Simplex 2700 model can beinterchanged with other 2000 series models without a problem, provided the connection to the sample bottle is clamp to clamp.

Simplex 2700 technical data

Gasket:	Metal cone with complete EPDM or Viton coating with the line pressure closing
Working air pressure:	min. 6 bar max. 8 bar
Technical data:	Version with EPDM or Viton sealing cone
Line pressure:	from 0.1 to 12 bar
Functionality:	up to 12 bar line pressure -control air pressure 8 bar
Line pressure surge:	up to max. 30 bar, without opening, no damage
Opening travel:	2 to 2.5 mm
Flow rate:	Medium water 6° Celsius; line pressure 2 bar; filling pipe Ø1 mm; approx. 300- 400ml/minute
Defect indicator:	Leakage hole next to the cylinder connection
Weight:	0.9 kg
Inch ID no.:	8479 8997
Maintenance effort:	approx. 2-3 minutes
Maintenance interval:	depending on the medium and cleaning interval, every 3 - 12 months



Simplex 2700 options

Optional: External cleaning / CO2

The sampler can also be optionally equipped with a cleaning valve. With this variant, it is possible to carry out intermediate cleaning or sterilisation between the normal CIP cleanings. It is also possible to fit an additional CO2 valve in order to maintain any required anaerobic condition in the sample bottle.

Automatic sampler with an automatic cleaning / CO2 valve.

Alternatively also available individually.

Variants

Simplex 2700 Standard

Simplex 2700 with attached
3/2-way pneumatic valve.

Simplex 2700 with membrane filter

Variants

Simplex 2700 with sensor

Simplex 2700 with all sensors,3/2-way pneumatic valves, Steam or Co2 valve

Simplex 2700 with all sensors,3/2-way pneumatic valves, vapour and Co2 valve

Bottle connection

The Stericap

The Stericap is attached to the sampler with a clamp. For CIP cleaning, the sealing cap of the Stericap is pressed firmly against the Stericap body with a clamping bracket and thus tightly sealed. The cleaning liquids flow out via the Vacu-Compens (lost cleaning)and thus guarantee the cleaning and sterilisation of the system down to the last component.

Bottle connection

The sample bottle is inserted into the centre of the Stericap using the special screw ring with membrane and the clamping ring and fixed in place with the clamping clip. The bottle is now tightly and firmly secured to the Stericap.

The recontamination-free, sterile venting of the bottle takes place via the Vacu-Compens, but only when it is filled with alcohol. This tight, sterile connection to the bottle achieves a very high, almost 99.9% sterile safety.

It is also possible to fill the sample into a plastic bottle or plastic bag. Special solutions exist or can be provided for special designs for filling the sample material.

Stericap-options

There are optional sensors for the Stericap, which have a wide variety of tasks. These can be ordered separately for each position.

Sampler open/closed
Stericap open/closed, important for CIP cleaning
Sample bottle filled
Sample bottle present

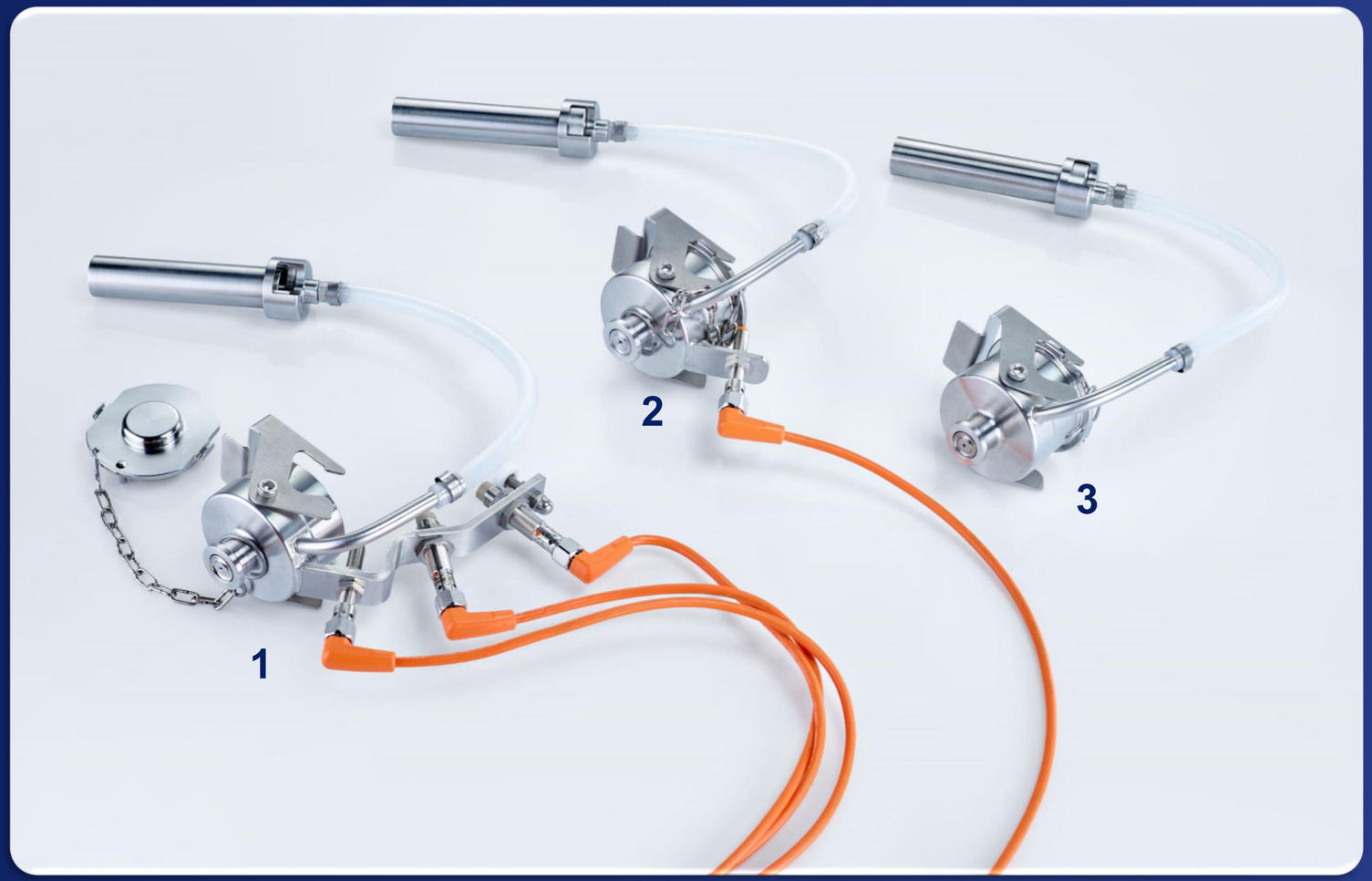
These sensors are extremely useful or even indispensable when samplers are controlled via plant control systems or in view of the shortage of skilled workers.

Stericap - options

1) Stericap with three sensors
Stericap lid closed = yes/no
Bottle full = yes/no
Bottle present = yes/no

2) Stericap with one sensor
Stericap lid closed = Yes/No

3) Stericap single, without sensors



Laboratory accessories

Various bottles and bottle sizes are available for transporting the sample material. The closures are also available in various designs, for needle systems and Stericap. Septum stoppers, discs and special septum multiple membranes are included in the range.

Alternative versions are also available:

- UV-resistant amber glass
- Autoclavable PP bottles
- PE bags

Laboratory accessories

A correct mounting of the multiple membrane “plain surface“ is guaranteed by a mounting device. The membrane will be fit properly in a very short time.

Assembly equipment for multiple membranes

Simplex Easy-Touch control unit

The newly developed Simplex Easy-Touch control units are state of the art with customised software. This means that a sampler can be controlled directly with compressed air (max. hose length 4m) or with an electrical connection.

The advantage of direct electrical control: The distance between the control unit and the sampler can be significantly increased and opening times of the sampler of less than one second are also possible. This allows an increased sample cross-section to be achieved.

The control unit can be extended to several samplers with or without a 3/2-way valve and sensors.

Simplex membrane filter unit

Another customization available on the sampler is to have membrane filtration at the sampling point.

The filter unit is cleaned in the laboratory and sterilized in a steamer or autoclaved. After sterilization the filter unit is allowed to cool. In a sterile environment the unit is opened and the membrane inserted into the filter. The unit is then wrapped in aluminum foil, transport to the sampling site and connected to the sampler.

The sampler is cleaned as normal during the CIP process, and the filter unit is attached after cleaning. The sample is then taken during the regular sampling process, preferably in continuous sampling intervals.

Benefits of this filtration method:
The overall quantity filtered is greater than the quantity filtered in a laboratory.
During the sampling process product quantities of around 4L can flow through the membrane filter without blockage.

Standard quantity in a laboratory is around 2000 ml. These quantities are
influenced by the viscosity of the products being sampled. Overall a more representative sample is taken and there is a time savings in the laboratory.

Polymers (PolyBIND®)
New ways in microbiology

A newly developed method has made it possible for the first time to quickly and easily isolate microorganisms from large sample quantities, viscous and solid-laden liquids.

Further information is available from our partner GEN-IAL GmbH under the following link:
Flyer Polymere

1) Option:
End product control:
With this sampling method, a sample is taken from a ready-filled unit (bottle, KEG) automatically controlled via the polymer. The advantage here is the quantity compared to membrane filtration.

2) Option:
Online sampling:
With this method, a sample is taken directly at the production line via the polymer using our automatic sampler.

Partner of R. Schütt GmbH

TUM SmartBev™ Yeast

- Highly active frozen pure yeast in a tubular bag for inoculating 10-15hl of wort with 1 kg of SmartBev TUM 34/70, TUM 68 or TUM 210 directly in the propagator
- Alternative yeasts for AF beers (NEER) can be prepared directly with 50hl or 500hl of wort
- Ready to use within one hour
  → Thawing in a 30°C water bath / no further activation required
- Certified and consistent purity, Quality & stability
  → Double-secured, guarantees microbiologically flawless pure culture
- 18-month shelf life at -50°C
  → Special freezers enable on-site storage
- Yeast is added via Rolf Schütt's special spiking device (cleanable, steamable) directly on the hand sampler (gusset) → Closed system

- Link: Produktarten / Preise - Brau- und Lebensmittelqualität

Lars Peuker - the beverage technologist

Experienced in beer, drinks and alcocol free beverages since over 20 years. About me:

- Expert for the beverage industry with consulting and auditing engagements in over 1000 companies across 40 countries
- Production manager for brewing and beverage technology (DOEMENS).
- Head brewer apprentice and fellow at Andechs monastery brewery in Bavaria
- Brew master (Masters / WBA) by IHK (chamber of industry and commerce)
- Teacher and lecturer at polytechnics, academies, colleges and universities.

BBGT - Laboratory equipment

• Proprietary culture media for microbiological quality assurance: booster serum, culture agar, culture nectar, detection ambrosia for various applications (world first / PATENT PENDING)

• Consumables for microbiological laboratories

• Swab kit "according to Peuker„

• Pressurised gas test set ‘according to Peuker’ (world first / PATENT PENDING)

• Dispensing system test ‘according to Peuker’ (world first / PATENT PENDING)

Link: getränketechnologie-beratung.de

DGT pressurised gas test set "according to Peuker"

Sterile disposable set for microbiological sampling of technical gases.

Not only for the beverage industry, but also for the entire food industry, pharmaceuticals and all those who rely on clean gases.

There is currently no quick and easy way to microbiologically test technical gases such as compressed air or CO2. This has "actually" always been mandatory for all companies that are IFS Food certified. Now there is finally a suitable solution!

In the event of problems or suspected contamination, after commissioning new compressors or following maintenance, as well as for regular testing of pressurised gases at critical consumers...

Complete ready-to-use set for testing pressurised gases with results (findings YES / NO, possible microscopic suspicion of... in case of findings). PATENT PENDING!

Manufactured in Germany, with the support of R.Schütt GmbH.

Link: BBGT-LABORBEDARF/Druckgas-Testset/

Industry references

Industry references for microbiological Simplex sampling systems

Simplex sampling systems from R. Schütt GmbH are used worldwide in more than 89 countries by more than 1300 customers worldwide.

Microbiological and chemical-technical use in all areas in:

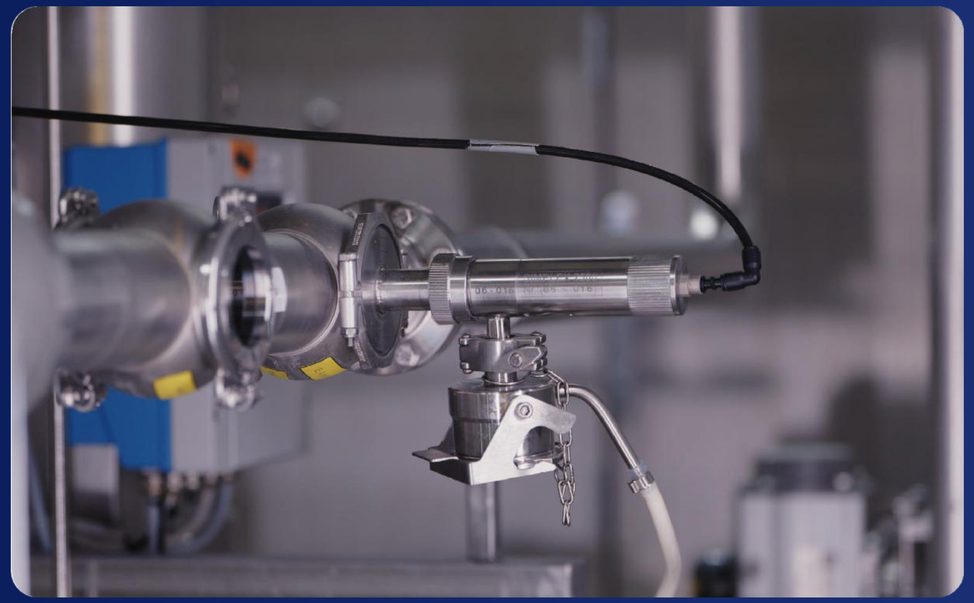
- Breweries
- Wineries
- Dairies
- Mineral springs
- Cider and juice producers
- Lemonade manufacturers
- Cocoa and chocolate industry
- Feed and waste water
- Edible oils
- Extract - coffee

Other sample use in the areas of:

- Biofuel
- Shampoo manufacturers
- Steel industry - coal emission in industrial water
- Radioactively contaminated water

Impressions

Impressions



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Development and production of sampling systems for the food- and beverage industry

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