

Sterisart®

Redefining Industry Standards

Simplifying Progress

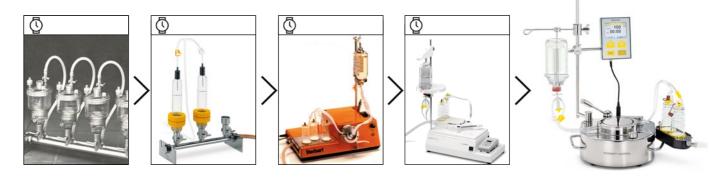
SARTURIUS

Our History-Sterility Testing

Sartorius, established in 1870, has a rich and diverse history. Founded as a company developing precision measuring instruments for academic research laboratories, it has transformed into a global enterprise supporting the biopharmaceutical industry through innovative technologies. These technologies enable our customers to develop therapies more efficiently, more economically, and ensures that these therapies remain safe for patient use.

In 1927, Sartorius co-founded a company manufacturing membrane filters which for the first time made the sterilisation of heat-sensitive solutions possible. These membranes have been continually enhanced for a range of applications and remain at the core of our current offering.

In the late 1960's, identifying a major need to ensure that pharmaceuticals are free of microbial contamination, Sartorius partnered with leading scientific institutes and the German pharmaceutical industry to develop the appropriate methods and tools. Besides sterilising grade membranes, Sartorius developed membrane filters for use in the predecessor of the modern single-use sterility test system. The 'Schiller system', as it was known in Germany, was part of the Sartorius portfolio and was the first closed, reusable sterility test which was in widespread use in Europe in the early 70's. Its successor, the Sterisart® family, through small but judicious innovations, has been at the vanguard and continues to redefine the standards of sterility testing today.



Innovation Timeline

Two Decades of Innovation



We believe in continuous improvement and are committed to serving the needs of our customers. Through regular discussions with our customers we have continually adapted and bettered our range of sterility testing solutions. In doing so we have redefined industry standards.

Sterisart® NF System

For more information please click on the +



State-of-the-art closed filtration system for lot-release sterility testing of sterile pharmaceuticals.

The Sterisart® NF system is easy to use and ensures the maximum reliability of your sterility test results.

The portfolio includes a number of devices adapted to cater to your specific sterility testing needs and is fully compliant with all pharmacopeial and regulatory requirements.



See Brochure





See Datasheet

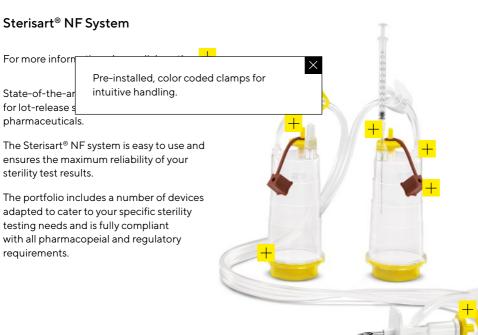


See Second Supplier Validation Guide

Key Features and Benefits:

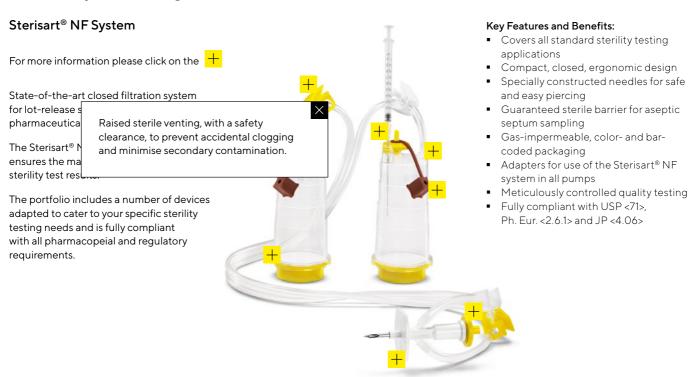
- Covers all standard sterility testing applications
- Compact, closed, ergonomic design
- Specially constructed needles for safe and easy piercing
- Guaranteed sterile barrier for aseptic septum sampling
- Gas-impermeable, color- and barcoded packaging
- Adapters for use of the Sterisart® NF system in all pumps
- Meticulously controlled quality testing
- Fully compliant with USP <71>, Ph Fur <2.6.1> and IP <4.06>





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Carefully chosen Sartochem® regenerated cellulose and cellulose acetate membranes to cover all sterility testing applications.

Robust membranes to meet low adsorption, chemical compatibility, flow rate and microbial retention requirements.

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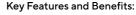
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Large protective plate for safe and easy piercing of stoppers and containers.

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Specially constructed dual-needle with built-in sterile venting for closed sample containers.

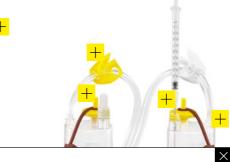
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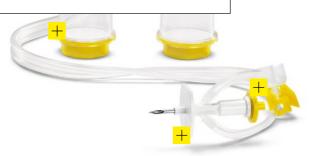
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Tethered, extra-large, grip-optimized filter caps.

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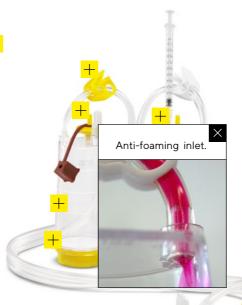
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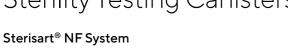
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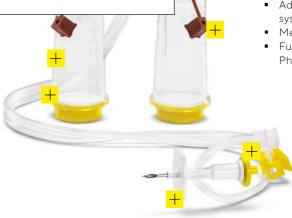
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Septum versions guarantee a sterile barrier

for aseptic sampling.

Canister Types



Yellow Base

Regenerated Cellulose



White Base

Cellulose Acetate

Material of construction

- Housing: Styrene acrylonitrile (SAN)
- Tubing: PVC (double lumen) & silicone
- Standard sampling needle: Polycarbonate & stainless steel
- Dual needle: Acrylonitrile butadiene styrene (ABS) & stainless steel
- Wing nuts: Polyethylene (PE)
- Filter plugs: Silicone
- Septum: Polyisoprene and acrylonitrile butadiene styrene (ABS)

Maximum operating pressure:

3 bar at 20 °C

$\label{eq:maximum operating temperature:} \\$

50°C

Burst pressure of the housing:

> 5 bar

Capacity:

120 ml (graduations at 50 ml, 75 ml and 100 ml)

Venting filter

- Hydrophobic polytetrafluoroethylene (PTFE) membrane
- Penetration pressure > 3 bar

Sterilization:

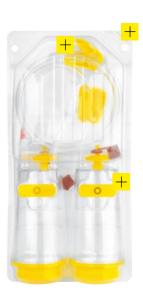
Gamma irradiation











Packaging SARTURIUS SJISCISAS Color- and bar-coded packaging for easy identification and traceability.





Double packed for easy and secure transfer into a clean-room, laminar flow hood or isolator.































Corner reinforcement for easy-peeling and hanger holes.









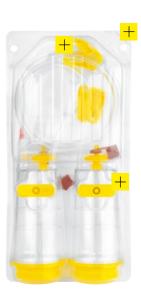












Sterisart® Septum

During growth incubation, sampling of the culture medium may be required for any one of the following reasons:

- The growth media is rendered turbid by microbial growth, following incubation, and necessitates the identification of the micro-organism as part of a root cause analysis.
- The product renders the growth medium turbid, prior to incubation, and requires subculturing | dilution.
- Samples are supplemented with agents to counteract anti-microbial components of the tested product.
- Samples are drawn to test for microbial contamination by rapid detection methods

Sampling via the tubing can compromise the integrity of the sterility test and preclude reincubation of the sterility testing canisters. The aseptic sampling port not only eliminates the risk of introducing false positives through external contamination but also ensures operator safety and prevents accidental spillage during sampling.

Given the interest in rapid sterility testing solutions, Sartorius has partnered with Charles River to pair our Sterisart® Septum canisters with the Celsis® detection platform.



See Application Note

Click here for a study on how the Sterisart® Septum facilitates the recurrent sterile extraction of samples



Learn More

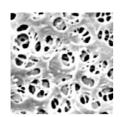
Learn more about our partnership with Charles River here:



Membranes

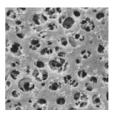
Regenerated Cellulose

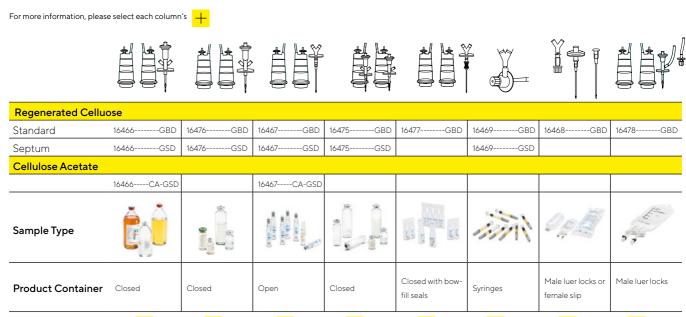
Material	Regenerated cellulose, reinforced with non-woven cellulose
Properties	 Combines excellent chemical resistance and thermal stability with very low adsorption characteristics Hydrophilic
Chemical Compatibility	Aqueous solutions (pH 3-12) and organic solvents
Pore size	0.45 µm
Flow Rate for Water per cm² (DIN 58355:)	30 ml/min at Dp =1 bar ~15 psi
Thickness (DIN 53105)	150 – 170 µm
Wetting time	<1 second, with deionised water



Cellulose Acetate

Material	Cellulose acetate
Properties	 Combines high-flow rates and thermal stability with very low adsorption characteristics, making it ideal for difficult-to-filter, viscous substances Hydrophilic
Chemical Compatibility	Aqueous solutions (pH 4-8), oils, alcohols and several organic solvents
Pore size	0.45 µm
Flow Rate for Water per cm² (DIN 58355:)	65 ml/min at Dp =1 bar ~15 psi
Thickness (DIN 53105)	115 – 145 µm
Wetting time	<1 second, with deionised water
	·

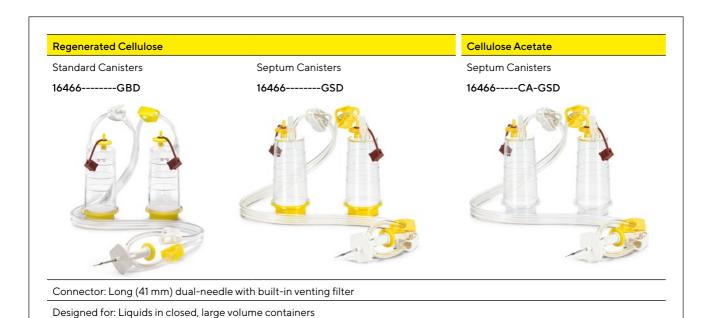


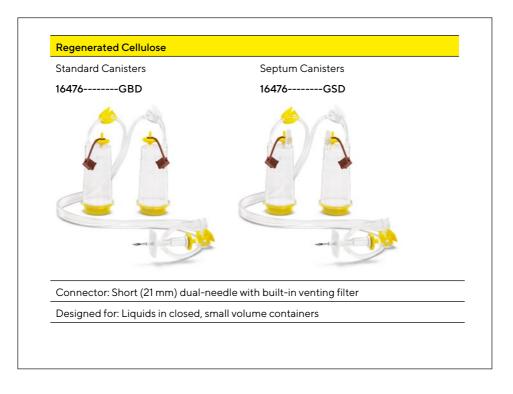


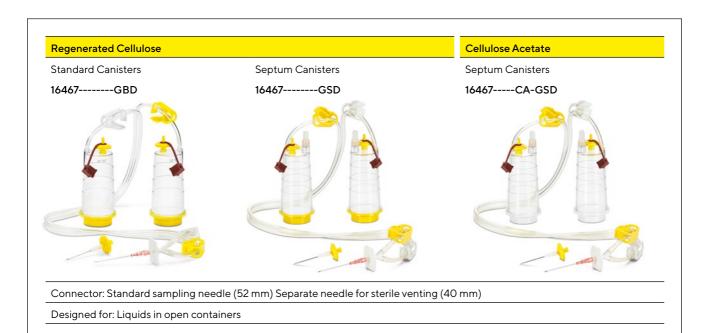
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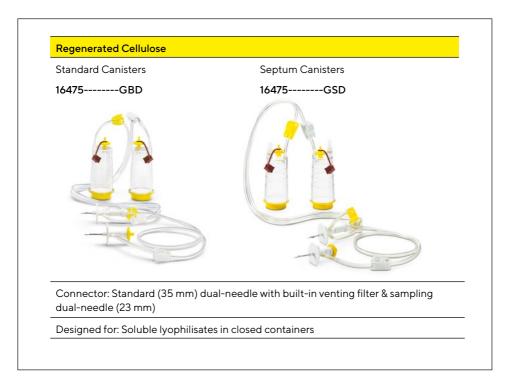


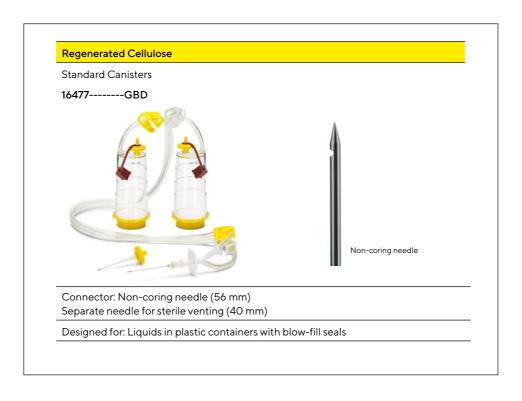
Sterility Testing Solutions for Liquid Transfer and Dilution (for liquid transfer) (for liquid transfer) (for sample prep and dilution) 16470-----GBD 16471-----GBD 16472-----GBD Sample Type Transfer To Closed container Open Container Open/Vented Container

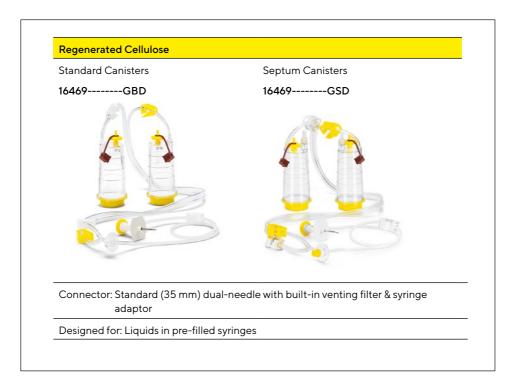


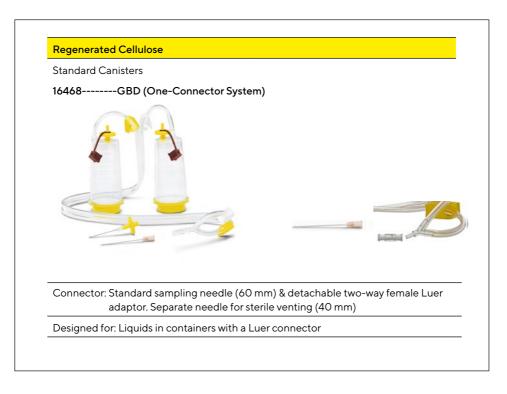


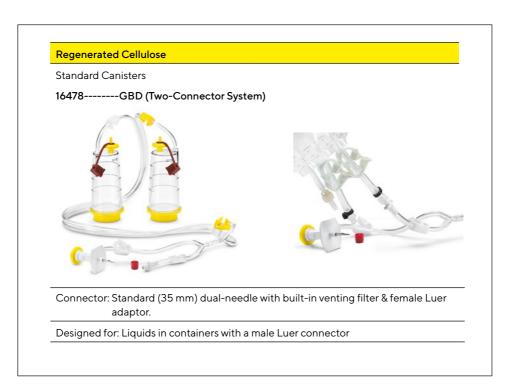


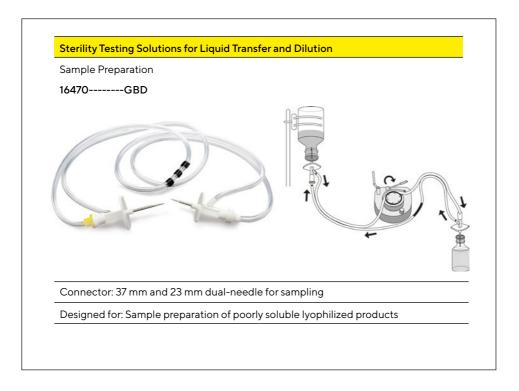


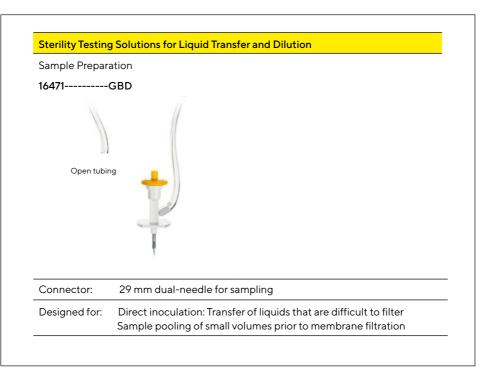












Sterility Testing Solutions for Liquid Transfer and Dilution

Sample Preparation

16472-----GSD



Connector: 17 mm dual-needle and 80 mm standard needle for sampling

Designed for: Direct inoculation: Transfer of liquids that are difficult to filter

Sample pooling of small volumes prior to membrane filtration

Quality Assurance

Routine testing of every lot includes:

- Incoming Materials Testing
 Qualification of the membrane filters, plastic and tubing
- Rigorous In-Process Controls
 Physical integrity test of the housing container, tubing and venting filter
- Stringent Final Release Testing
 Includes a physical integrity test, bacterial challenge test and growth promotion test.

A quality assurance certificate is delivered with every unit for your records.

A comprehensive validation/ qualification guide is available on request.



For more information please click on the +



The Sterisart® Universal Pump, can be used in isolators, laminar flow hoods, biosafety cabinets and cleanroom benches. Since space is often at a premium, the pump features a compact architecture with a space-saving footprint.

We have designed our pump focusing on your convenience. Combined with our Sterisart® sterility testing canisters, we offer you complete confidence in your sterility test results

16420



Model No.

- Versatile pump designed for bench-top use or integration into an isolator
- Compact, low-profile for comfortable use
- Pioneering closed pump chassis design with built-in passive cooling to prevent particulate emission
- Effortlessly detachable components to facilitate easyaccess for cleaning
- Robust & durable: Rugged stainless-steel body that is compatible with all commonly used chemical sterilants and fully VHPresistant
- Easy tube-placement with convenient, malfunction-proof, locking mechanism
- Open-design: compatible with other filtration devices on the market

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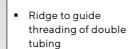
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Design precludes damage to tubing

Easy access for tube insertion

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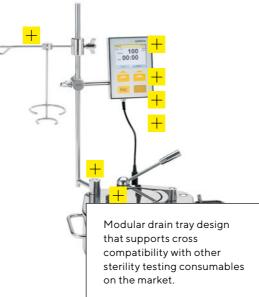
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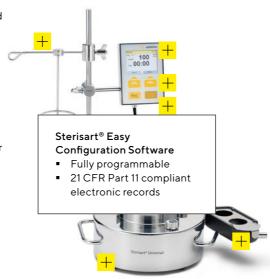
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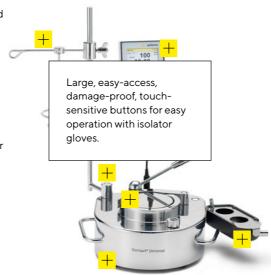
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Model No.	Description	
1ZE0040	Communication Kit	+
1Z0004	Sterisart® Easy Configuration Software	+
1ZW0002	Ampoule breaker	+
1ZGD0031	Protective stainless-steel rotor cover/shield	+
1ZA0024	Syringe adaptor/ support for pre-filled syringes	+
1ZE0033	Foot switch	
1EE0009	Extension cable control unit/ display	
1ZG0024	Stainless steel drain cover/ adaptor for Millipore sterility test units	+
1ZE0050	Isolator installation kit	_
1ZGF0020	Transport tray (10-canister holder)	+





1Z---0040 - Communication Kit

Contains:

- 1GBSD card
- USB male to female converter
- RS-232 to RS-232 converter
- RS-232 cable (approx. 2 m)
- Driver CD, USB to serial port
- Card reader, RS-232 to SD

1ZE0050	Isolator installation kit
1ZGF0020	Transport tray (10-canister holder)

Model

1ZE---

1Z----(

1ZW-

1ZGD-

1ZA----

1ZE---

1EE---

17G--

1ZE---

1ZGF-



1ZE---0004 - Sterisart® Easy Configuration Software

- Designed to increase the process reliability for sterility testing
- Intuitive drag-and-drop programming of sterility testing workflow
- Step-by-step guidance of the operator through each programmed sterility test
- User account management, audit trail and password protection
- Scanning, saving and printing of process-relevant material data
- FDA 21 CFR Part 11 compliant electronic records



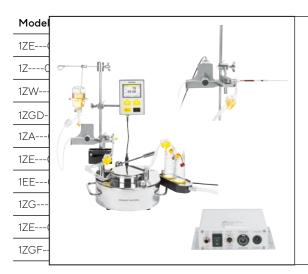
See Datasheet

1ZE---0040 1Z----0004 1ZW---0002 1ZGD--0031 1ZA---0024 1ZE---0009 1ZG---0024 1ZE---0050

1ZGF--0020



Model No.	
1ZE0040	1ZGD0031 - Stainless Steel Rotor Cover
1Z0004	
1ZW0002	
1ZGD0031	
1ZA0024	
1ZE0033	
1EE0009	
1ZG0024	
1ZE0050	
1ZGF0020	



1ZA---0024- Syringe adaptor for pre-filled syringes

For liquids in pre-filled syringes

For use with 16469------GBD or 16469------GSD.

A foot-switch controls both the operation of the pump and the pinch-valve, which acts as a flow restrictor, through a communication hub. The valve regulates the flow of the rinsing fluid through the tubing and thereby eliminates the need to overturn the rinsing fluid bottle between sample injections. The Sterisart® syringe adaptor can also be attached to the main support rod of the pump to minimize the space used.



1ZE---(1ZW---1ZM---(1ZA---(1ZE---(1ZE---(1ZG---(1ZE---(1ZG---(1ZG---(1ZG---(1ZG---(1ZG---(

1ZGF--0020 - Transport tray (10-canister holder)



Service Support

Service life cycle management is a critical element when purchasing your equipment. This routinely involves:

- Proper installation of the equipment
- Basic user training
- Routine preventative maintenance visits (IQ/OQ)

These services will increase the longevity of the unit, while reducing the downtime.

We serve customers around the globe – with service contracts and a full range of services to suit every need. If you have questions about our service offerings or are in need of technical support, we are here for you. Just provide us with detailed information in our contact form, and we will promptly get in touch with you.





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