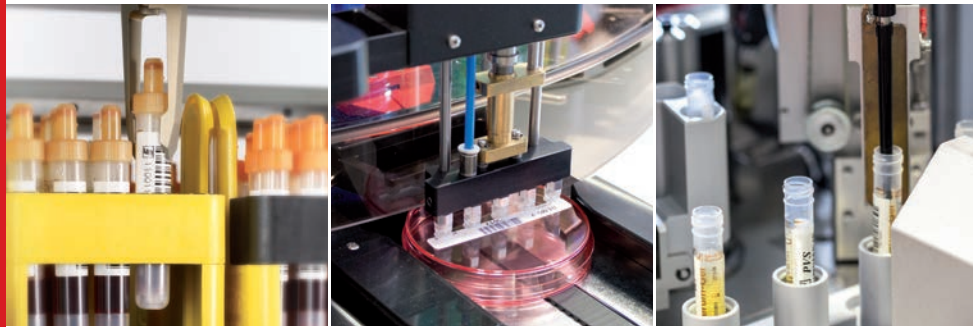


# Systematic Workflow

Laboratory Automation for Pre- and Post-Analytcs



System Solutions



for Clinical Laboratories and Microbiology

# SARSTEDT International

Your partner in medicine and science worldwide



## The Company – Foundation and History

Ever since the company was established in 1961, progress has been a top priority. Today, the SARSTEDT Group is a global company with 13 production sites in Europe, North America and Australia and 2,600 employees.

For decades, research and purpose-oriented product development using innovative technologies, along with constant dialogue with the customer, have been decisive factors in asserting our current market position as a leading supplier of laboratory and diagnostic products.

## Quality under one roof – from product idea through to delivery

From development through to production and sales – all our services come from a single source.

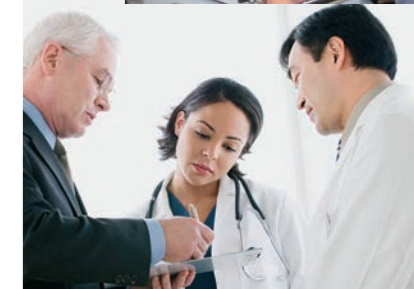
**PRODUCT DEVELOPMENT** at our R&D center is based on close dialogue with users and state-of-the-art technologies – from the initial idea through to the final product!

**PRODUCTION** is carried out at company-owned production sites around the world using high-tech equipment. More than 90% of the products in our portfolio are produced by SARSTEDT.

Our products are used directly on patients as well as in research and development laboratories and must therefore meet a high **QUALITY STANDARD**. We meet this demand through our modern integrated quality management system in accordance with EN ISO 13485.

International **MARKETING & SALES** of SARSTEDT products is primarily carried out via our 33 sales organizations. An extensive dealership network also attends to our customers' needs.

Our team of skilled product specialists provides our customers with optimum and reliable advice and **SERVICE**.



*“Optimally compatible modular system components and tailor-made service for the whole system: that’s what we expect from high quality laboratory technology! And that is what we get with SARSTEDT!”*



**Clinical Laboratories**

**Stand-Alone Solutions for Decapping & Recapping**

Page 8

- DC 1200
- RC 1200
- RC 1200 S



RC 1200

**The Compact, Combined Solution for Decapping, Recapping and Sorting**

Page 10

- 900 Flex ID
- DC 900 Flex
- RC 900 Flex
- DC/RC 900 Flex



DC/RC 900 Flex

**The Compact Standalone Aliquoter**

Page 12

- AL- Flex

**Bulk Loader – An Efficient and Safe Solution for Sample Entry**

Page 14

- BL 1200
- HCTS2000 MK2



BL 1200

**Modular Solutions for Complete Pre- and Post-Analytics**

Page 16

- HSS
- PVS 1625 / 2125 / 2625



PVS 1625

**Function Modules – The Choice is Yours**

Page 20

**Microbiology**

**Petri Dish Organization System**

Page 24

- POS 720/2

**Petri Dish Transfer System**

Page 26

- PTS

**Software**

Page 28

**Consumables for Laboratory Automation**

Page 30

**The SARSTEDT product range**

Page 31



PTS



# Clinical Laboratories

## Automation for Clinical Laboratories

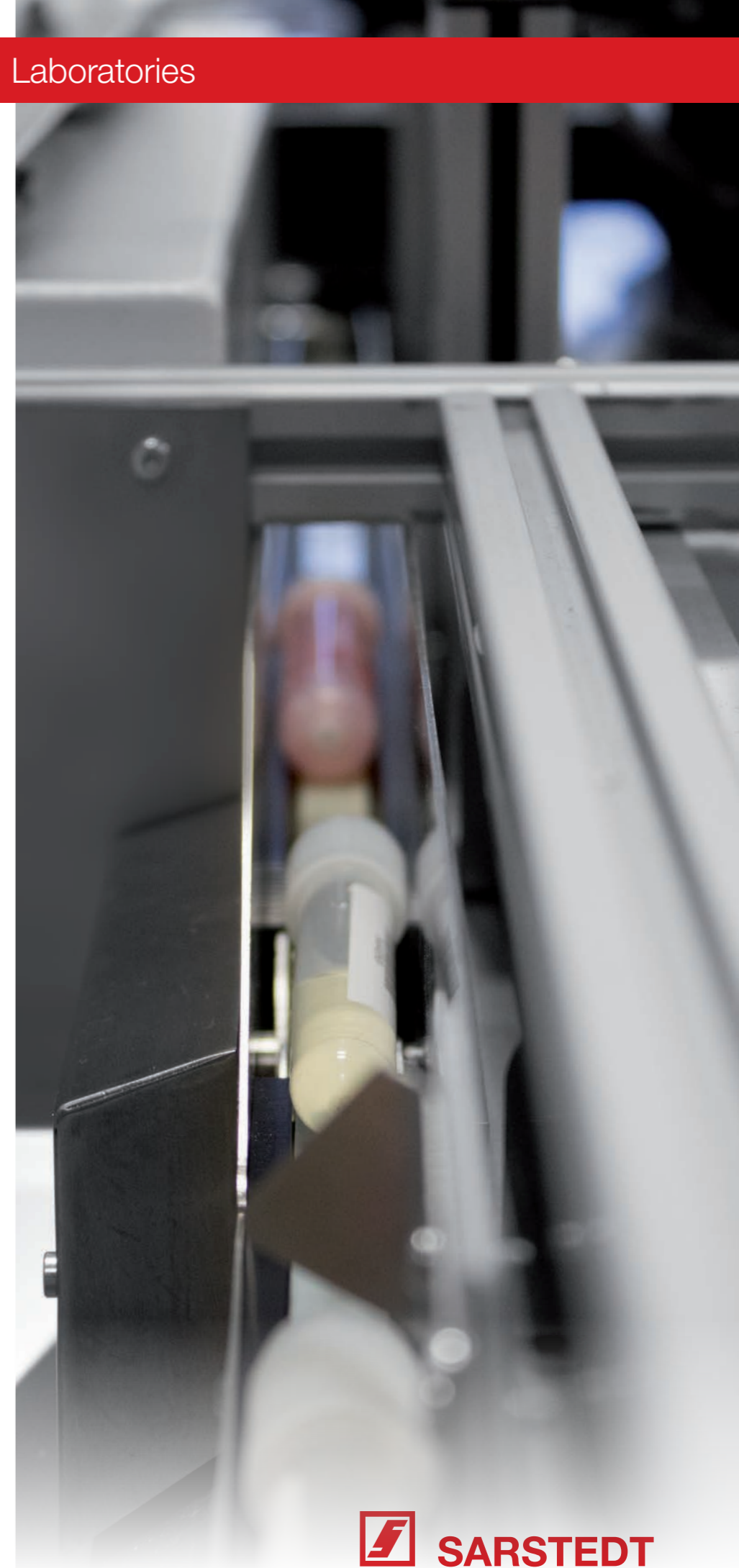
The importance of laboratory automation has grown considerably in recent years. Saturated markets, intense competition and high cost pressures inevitably require the organization, optimization and automation of laboratory processes.

With more than **20 years' experience** in the development, manufacturing and distribution of laboratory automation systems, we are competent consultant for our customers in this area. Our customer-specific automation solutions guarantee maximum flexibility and help you to make your processes safer, more effective and more economical.

As a provider of system solutions, we have a broad product portfolio of compact devices and modular automation solutions for pre- and post-analytical processes in clinical and microbiological laboratories. Our many years of experience and specialization in pre- and post-analytics mean that we are able to respond to individual, complex laboratory requirements and offer customer-specific automation solutions for the laboratory processes in question. We have expertise in the following areas:

- Sample loading
- Sample identification
- Decapping of samples
- Aliquoting
- Recapping
- Sorting, distribution and archiving

We would be happy to discuss the options with you. You can find contact details on the back of the brochure.



DC 1200  
RC 1200  
RC 1200 S

## DECAPPING



Throughput of up to 1,200 tubes per hour

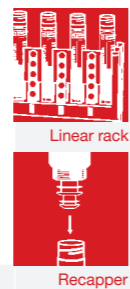


**DC 1200**  
Automated **decapping** for tube diameters of 11–16 mm

- Tubes from various manufacturers with screw caps or push caps are opened in a mixed operation
- Decapping is carried out in the analysis rack – no reloading required
- Throughput of up to 1,200 tubes per hour
- Available for many common linear racks
- Prevents chronic repetitive strain injury (RSI)

## RECAPPING

Evaporation protection



Throughput of up to 1,200 tubes per hour



**RC 1200**  
Automated **recapping** for tube diameters of 13–16 mm

- Minimizes evaporation
- Prevents contamination
- Archiving push cap fits all standard tubes with a diameter of 13–16 mm
- Automated re-processing (decapping/recapping)
- Throughput of up to 1,200 tubes per hour
- Available for many common linear racks
- Prevents chronic repetitive strain injury (RSI)

Distribution



Throughput of up to 1,200 tubes per hour



**RC 1200 S**  
Automated **recapping with a screw cap** for Sarstedt tubes with a diameter of 13 or 15 mm

- Perfect recapping of tubes to preserve sample quality
  - Eliminates cross-contamination from previously used caps
  - Prevents evaporation
  - Fulfills all requirements for sample transport
  - Ideally suited for sample archiving
- Automated further processing (decapping/recapping)
- Throughput of up to 1,200 tubes per hour
- Available for many common linear racks
- Prevents chronic repetitive strain injury (RSI)



The compact, combined solution for decapping, recapping and sorting



DC/RC 900 Flex

- Pre- and post-analytics in the one compact device
- High throughput of up to 900 tubes per hour
- For tubes 11–16 mm in diameter
- Compatible with all common rack or carrier systems
- Online and offline operation
- Opens tubes with stoppers and screw caps
- Can sort by order, barcode, material, etc.
- Recapping of tubes with archiving push cap
- Closes 13 or 15 mm Ø Sarstedt tubes with screw caps, e.g. the S-Monovette®
- Can be retrofitted with decapping or recapping modules

The DC/RC 900 Flex combines pre- and post-analytics in a single compact standalone system. This ensures optimum utilization of materials along with superior economic efficiency. Repetitive manual work, such as the strain of recapping and decapping sample tubes, is eliminated, thereby protecting human resources.

All tubes 65–100 mm in length and 11–16 mm in diameter are processed in a mixed operation without pre-sorting (other tube sizes can be accommodated upon request). Whether caps or screw caps, all caps are safely removed and disposed of hygienically.

The customizable working platform can be configured for common rack and carrier systems, for both analyzers and archiving. The control software can be programmed with any tube-processing criteria and is designed for both online and offline operation. Tubes with a diameter of 13–16 mm are closed with an archiving cap. The modular concept makes it possible to include only the decapper or recapper module at first and then retrofit the other function at a later stage.



Decapping



Recapping: Archiving cap



Recapping: Screw cap

- 900 Flex ID
- DC 900 Flex
- RC 900 Flex
- DC/RC 900 Flex



For subdistribution into secondary tubes



AL-Flex

- Intelligent volume management
- Contamination-free pipetting
- Integrated barcode labeling of aliquot tubes immediately before filling
- Compatible with aliquot tubes in three sizes
- All source and target carriers are freely configurable

To achieve the shortest analysis time possible, tests must be conducted on several analysis devices at the same time. For this purpose, sample material from a primary tube is distributed into one or several secondary tubes.

Compared with other pre-analytical work steps, the subdistribution of samples into secondary tubes is a slow process. It therefore benefits the throughput times of patient samples to separate this processing step from others in the preparation of samples. The AL-Flex provides the required technical solution for this.

Open primary tubes intended for subdistribution are loaded into the system in predefined source carriers. In the laboratory information system (LIS), a query for every primary tube retrieves the information required for the secondary tubes. The AL-Flex labels each secondary vessel with a copy of the primary barcode and pipettes the required volume into it. Conductive disposable tips facilitate precise fill-level measuring and contamination-free pipetting. Secondary and primary vessels are both transferred onto previously defined target carriers and manually brought to the analysis unit for further processing.



Sampling from a primary tube



Conductive disposable tips for precise fill-level measuring and contamination-free pipetting



Aliquot tubes in three sizes  
 92 x 15 mm (5 ml)  
 75 x 13 mm (2.5 ml)  
 75 x 13 mm (5 ml)

Loading of unracked sample tubes



BL 1200  
HCTS2000 MK2

- Ideal in combination with any analysis line
- Sample tubes can be fed in bulk, no pre-sorting or pre-packing required
- Process any closed tube type 75–120 mm in length and 11–19 mm in diameter (each with cap), including those with false bottoms
- For all sample types (serum/plasma, serum gel/plasma gel, EDTA, citrate, blood sugar, urine)
- Integral ID module
- Automated sample entry accessioning
- Task-orientated sorting into a variety of carrier systems or bins
- Safe, rapid and error-free continuous operation

**System range:**

**BL 1200 – from bulk loader to rack**

- Throughput of up to 1,200 tubes per hour
- Up to 600 tubes per platform sorting surface,
- Up to 1,200 tubes with two platforms

**HCTS2000 MK2 – from bulk loader to bin**

- Throughput of up to 2,000 tubes per hour
- Up to 22 distribution targets plus 1 faulty sample compartment
- Up to 200 tubes per target bin

The innovative bulk loader completely revolutionizes sample entry in the clinical laboratory. Closed specimen tubes (e.g. the S-Monovette®) are simply poured into the chute of the bulk loader, without having to handle each individual tube separately.

After mechanical separation, the tubes are identified by their tube type and ID number (barcode) via the integrated ID module.

According to customer specifications, samples can be distributed and sorted into centrifuge adapters, feeder/exit trays for laboratory lines, analysis device racks, standard carriers, BL 1200 archive carriers or HCTS2000 MK2 target bins. Tubes are distributed either according to pre-defined parameters or to sample-related information received from the LIS. Plausibility checks detect and separate out faulty samples.

BL 1200  
HCTS2000 MK2

Video at [www.sarstedt.com](http://www.sarstedt.com)



Loading of unracked sample tubes



Sorting into BL 1200 target rack



Sorting into HCTS2000 MK2 target bins





Multifunctional concept with high sample throughput

Up to 1,200 tubes per hour!

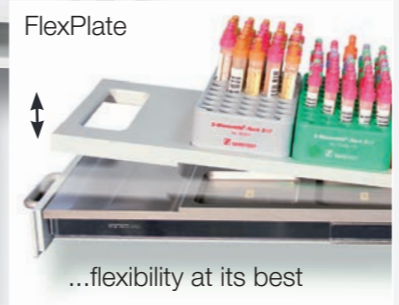
HSS 1625

- Sample accessioning
- Tube decapping
- Sorting into analyzer racks
- Tube recapping after analysis
- Sorting tubes into archiving racks
- Pre- and post-analytics in one compact device
- High throughput of up to 1,200 tubes per hour
- Compatible with all common rack and carrier systems
- Barcode reader and camera for tube identification
- Recapping of tubes with archiving push cap
- Recapping Sarstedt tubes 13 or 15 mm in diameter with screw caps
- Can be retrofitted with decapping or recapping modules

At a throughput of up to **1,200 tubes per hour**, the HSS is ideally suited for rapid and efficient sorting of sample tubes before and after analysis tasks. Depending on the sample material, centrifuged or non-centrifuged tubes are placed directly onto the HSS feeder platform in their respective racks.

The HSS registers the barcode and tube type, opens the sample tubes according to the workstation and then transfers them into any common rack types (e.g. Abbott, Beckman, Roche, Siemens, etc.) for analysis. After routine analysis, the sample tubes can be sorted again or taken directly from the analysis racks, recapped and transferred to archiving racks.

The customer-specific configuration of the layout for various carriers can be easily and completely modified by means of a **FlexPlate**, enabling the use of a variety of source and target carriers for routine or archival processing, for example.



Short cycle time



Flexible platform



Pre- and post-analytical applications



Ideal for aliquoting...



PVS 1625



- All-in-one system for pre- and post-analytics
- Scalable from 1625 to 2625 track
- Ideal in combination with any analysis line
- Modular configuration according to customer needs with:
  - Sample loading in racks or in bulk
  - ID module
  - Decapper
  - Recapper
  - Aliquoter
  - Sorter
- For all common tube types: 13–16 mm in diameter and 65–100 mm in length
- Compatible with most racks and carrier types

The PVS 1625 is a tailor-made automation system for **pre- and post-analytical processing of samples**. It is not bound to a particular rack or carrier system, but can process any source or target carrier. As an open system, it is complementary to any analysis line or can be used independently.

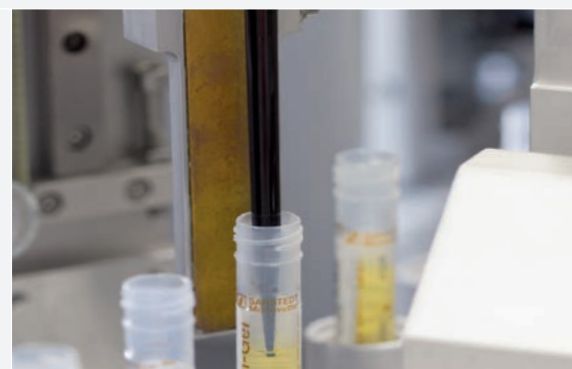
Unracked sample tubes are loaded via the **Bulk Loader** (see p. 14) or in racks via the loading platform. This makes it equally capable of handling closed and open tubes.

**ID modules** for reading barcodes and identifying tube types are available.

Barcoded secondary tubes are produced and the requested volumes pipetted into them at the **aliquoter**. Sample mix-ups are eliminated and the available sample amount will be used in the most efficient way.

Two types of **recapper modules** are available for archiving or for send-out samples. Tubes are either closed with an archiving push cap (for any diameter between 13 and 16 mm) or with a screw cap (for Sarstedt tubes with a 13 or 15-mm diameter, e.g. S-Monovette®).

For aliquot tubes and caps, see p. 30.



Sampling from a primary tube



Dispensing into a secondary tube



Aliquot unit



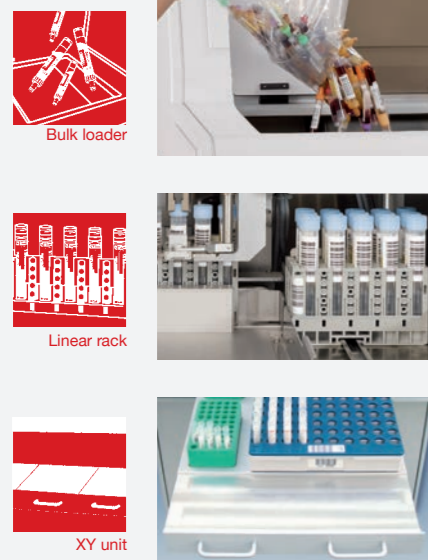


Assemble a system tailored to your individual needs!



- Sample loading
- Identification
- Decapping
- Aliquoting
- Recapping
- Sorting/archiving

Sample loading



Closed sample tubes are loaded by pouring them into the chute of the **Bulk Loader** module without having to handle each individual tube separately.

Alternatively, open or closed sample tubes in any rack or tray are placed onto the loading platform and fed from there into the system. Use of the FlexPlate provides the maximum number of options for sample carriers (see p. 17)

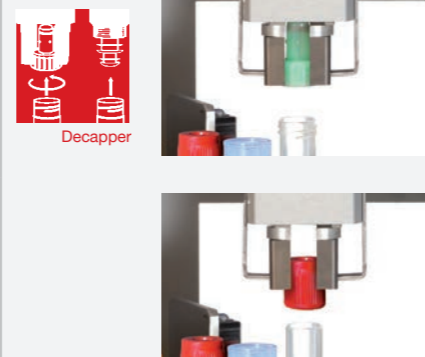
Identifying



- Barcode
- Tube type: Cap color, length, diameter
- Plausibility check

For precise sample processing, each tube must be identified by the barcode, which can also include information about the sample material to be analyzed. The tube type is also identified to ensure trouble-free processing. **ID modules** with a range of functions are available for the reading of barcodes and identification of tube types via camera.

Opening (decapper)



- Push cap
- Screw cap

The **decapper** module removes screw caps and push caps alike. All tubes 11–19 mm in diameter and 75–120 mm in length (each with cap) are processed in a mixed operation and without prior sorting (different sizes upon request).

The push caps and screw caps are safely removed and disposed of hygienically.

Aliquoting



The **aliquoter** produces barcoded secondary tubes and fills these with the requested volumes. Sample mix-ups are avoided and the available sample volume is used in the most efficient way. Refer to p.30 for information on available secondary tubes.

The **AMC** module can pipette small volumes into multiwell plates or cluster tubes for space-saving long-term archiving or for bio-banking. This enables archiving to become part of routine processes – there is no need for a separate work step.

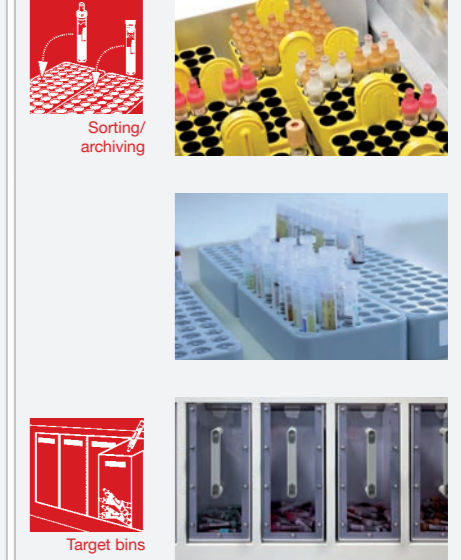
Closing (recapper)



- Archiving push caps
- Screw caps for Sarstedt tubes (e.g. S-Monovette®)

Two types of **recapper** modules are available. Tubes are either closed with a universal stopper suitable for any diameter between 13 and 16 mm, or with a screw cap for Sarstedt tubes (e.g. S-Monovette®) with a diameter of 13 or 15 mm.

Sorting/archiving



The sample tubes are **sorted** according to analysis requests from the LIS (laboratory information system) or according to strict distribution rules, e.g. cap color. All common rack and carrier systems can be used (see FlexPlate, p.17).

For the Bulk Loader HCTS2000 MK2, tubes are sorted into **target bins** for individual working areas.

Tubes sorted for archiving are logged with sample ID, carrier number, position on the carrier and time stamp. Complete sample tracking enables immediate access to all samples.



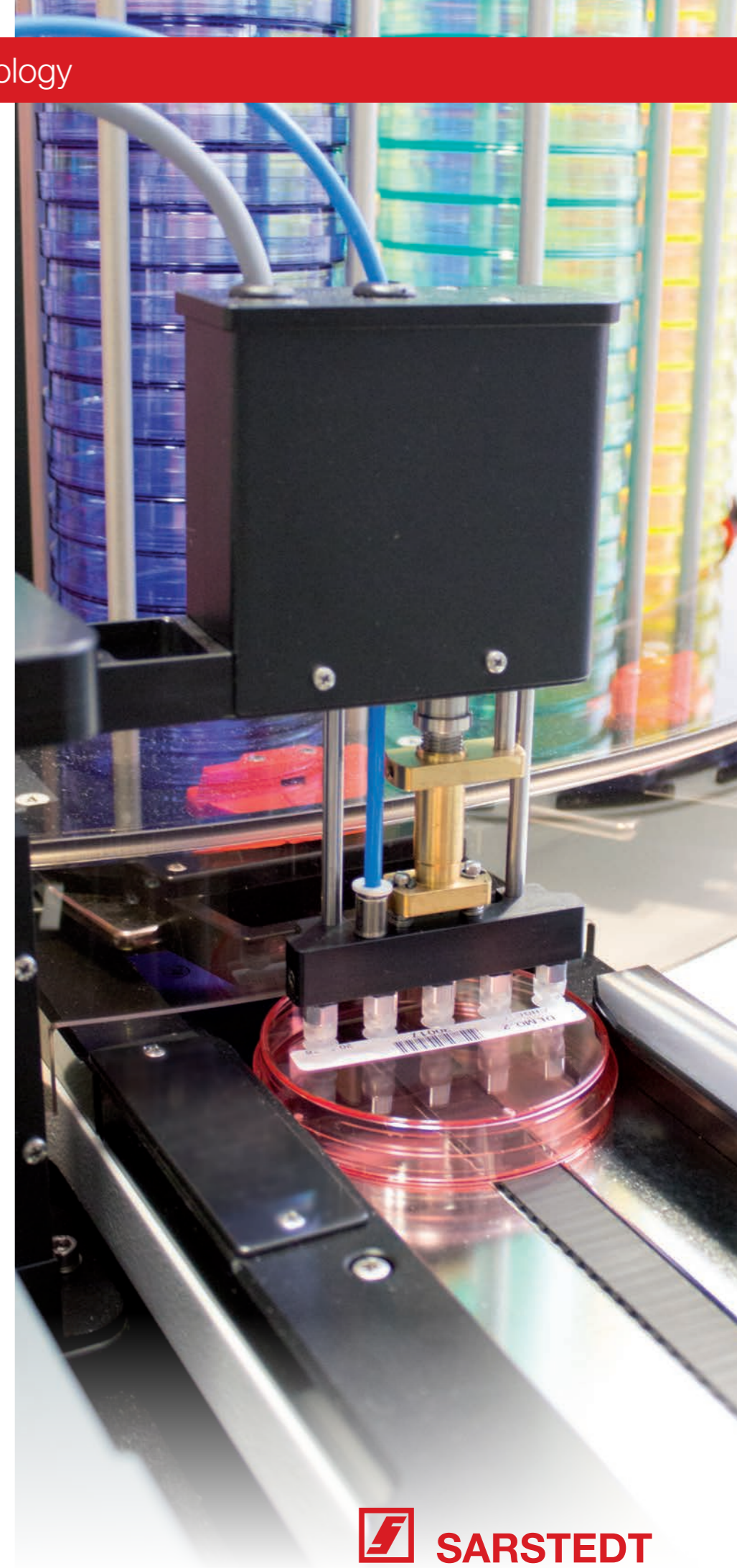
# Microbiology

## Automation in Microbiology

As product quality requirements increase and human resources decrease, the field of microbiology too must make increasing use of automation. New developments in collection materials and increasing standardization are helping to take this process forward. Sarstedt has 20 years' experience in this area too.

Our **Petri Dish Organization System** makes the working steps required to prepare culture medium dishes more transparent, safer, and more efficient. Mix-ups are avoided while maintaining a consistently high throughput.

Our **Petri Dish Transfer System** makes laboratory processing procedures significantly faster by automatically transporting stacked sets of Petri dishes to workstations.



Petri Dish Organization System

Up to 700 Petri dishes per hour!

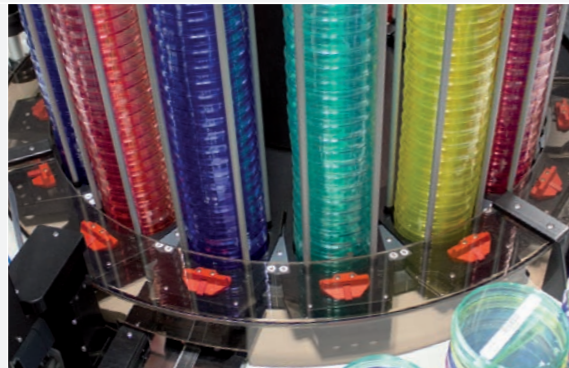
POS 720/2

- Labor-saving and easy to operate
- Reliable provision of all required Petri dishes
- Accurate machine-readable labeling of dishes with barcode and plain text
- Reliable identification of dishes throughout processing
- Additional labels for special media and bouillons available at the workstations

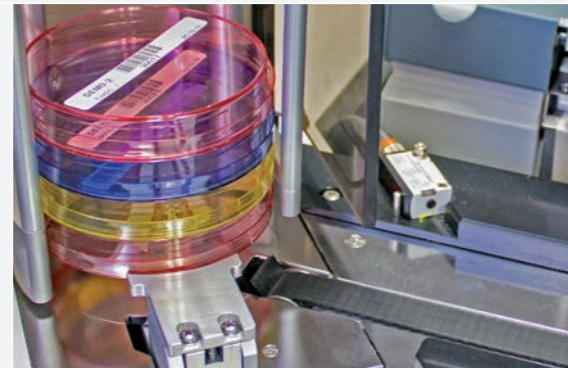
With POS 720/2, up to 700 Petri dishes per hour are labeled and stacked in sets in a fully automatic process.

Designed to accommodate 600 dishes (15 magazines of 40 dishes each), the system is characterized by high capacity and flexibility. Labeling and reading errors in microbiology laboratories are reduced and processes are made more transparent, improving quality and competitiveness.

Space for up to 8 stacks, each with 18 dishes



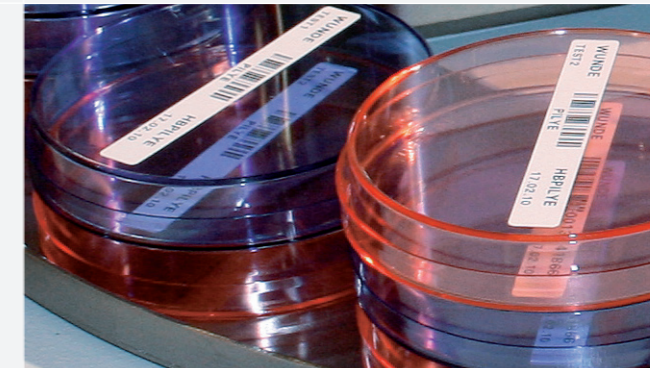
Dish magazine for up to 15 dish stacks



Stacker for dish sets



Dishes can be labeled on the side...



...or on the base



## Petri Dish Transfer System



PTS

- System for transporting stacks of dishes to the workstations
- Customized configuration of the track length and route
- Labor-saving and easy to operate
- Reliable provision of all required Petri dishes
- Reliable identification of dishes throughout processing
- Additional labels for special media and bouillons available at the workstations

The Petri Dish Transfer System **PTS** transports the dish stacks pre-sorted by the POS 720 to the streaking stations. The system can be customized to meet individual customer needs and is free-standing and height-adjustable within a defined range. Laboratory tables and benches can be conveniently positioned close to the **PTS**.

The design is based on the individual requirement of the culture medium at the workstation in question. Samples are identified by barcode and the dishes required thus specified. These are sorted and labeled by the POS 720/2 and transported by the PTS to the required workstation.



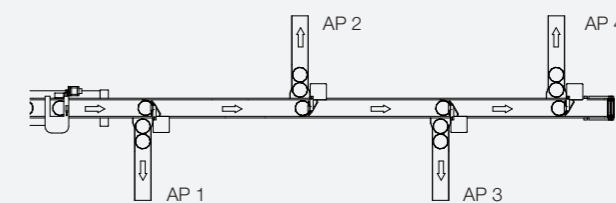
Dish labeled with required information



Dish transport



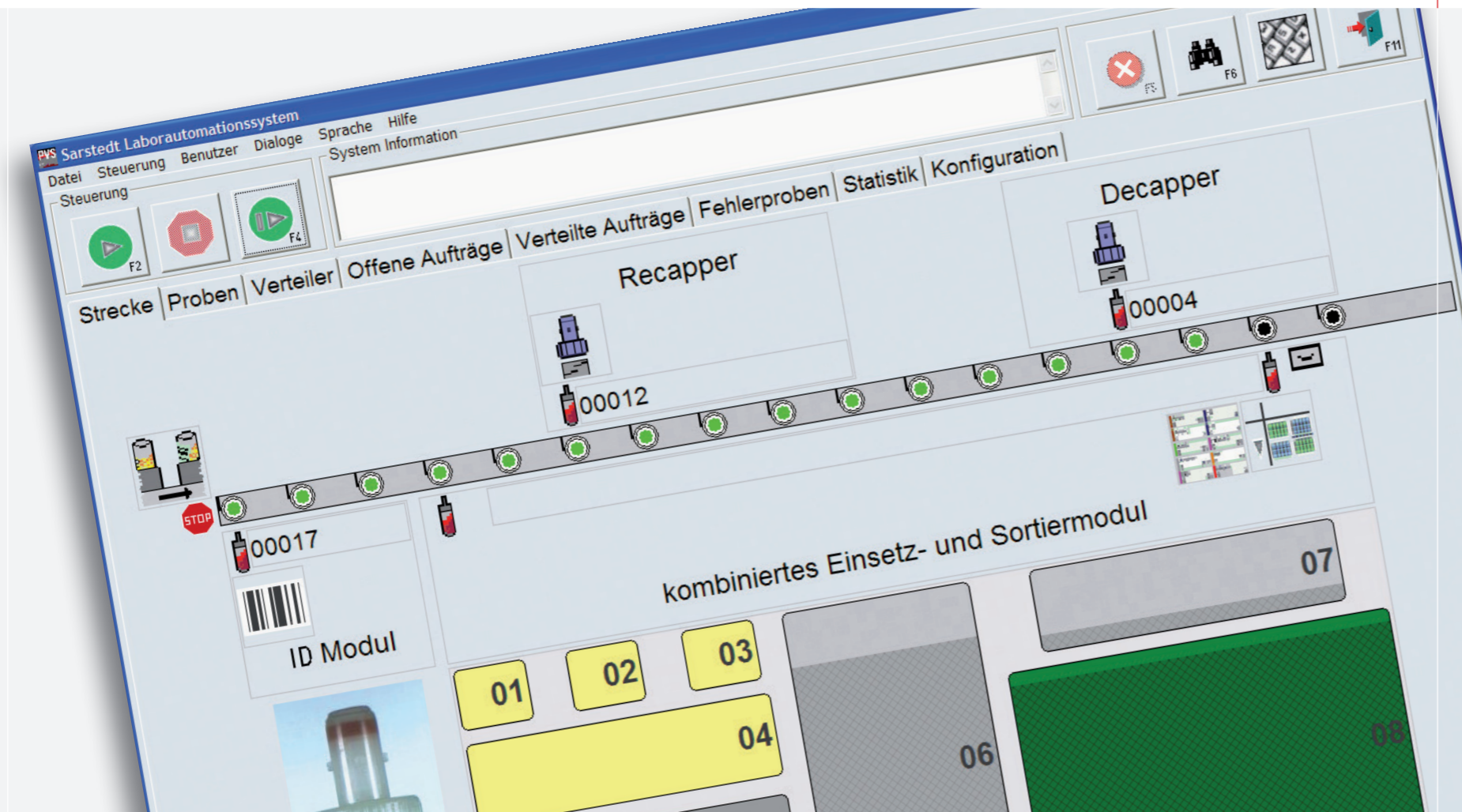
Transfer to workstations



Layout example for PTS with four workstations (AP1-AP4)



Intelligent distribution, transparent configuration and intuitive handling



The control and operating software is so versatile, just like the laboratory automation systems themselves. Software development, maintenance and system know-how are among Sarstedt's areas of expertise.

Special features:

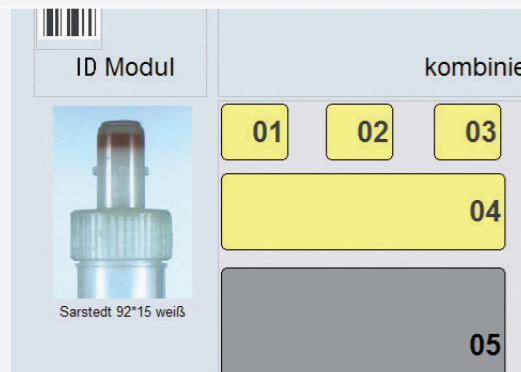
- Easy-to-learn system operation
- Swift and simple configuration
- Transparent system status layout
- Effortless sample tracking
- Optimal archiving sample administration
- Plausibility check
- Completeness check
- Easy access to information on faulty samples
- Comprehensive statistical functions

The program is available on a Windows-based touch panel PC which is an integral system component. As a "user interface", it links both the user to the automation system and the automation system to the laboratory information system (LIS) or to any middleware installed. Enabling easy visualization of system components, it displays internal sample transport paths, logistical transfer, the orientation and filling status of the carriers on the feeding and release platforms, as well as the current status of the functional modules.

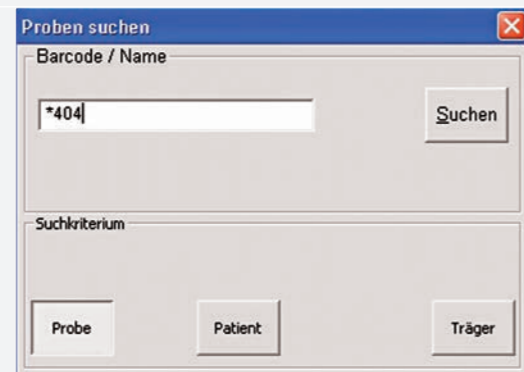
There are almost no limits to the configuration of workstations, carriers, tests and the processing of special distribution rules and priority criteria.

Information on the sample processing status and orders can be easily retrieved, and empirical data compiled and printed. The information storage period on the database can be defined according to customized requirements.

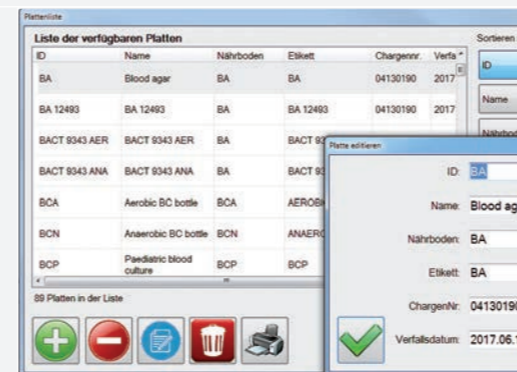
Communication between the automation system and the LIS proceeds in query or batch mode.



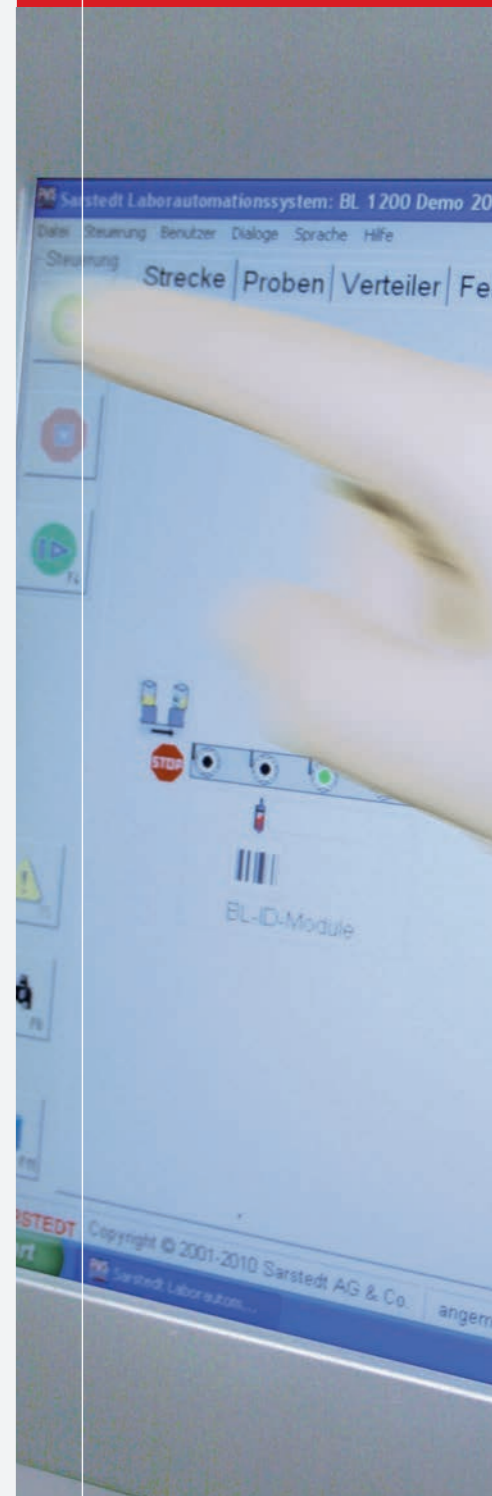
Tube type identification



Sample traceability



Definition of culture media for POS 720/PTS





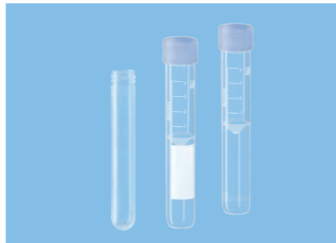
## Clinical Laboratories

### S-Monovette®



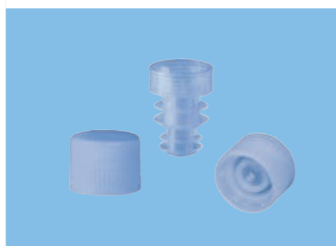
Following the introduction of automation in clinical labs, the requirements for blood collection tubes have changed. These tubes must comply with a range of defined preconditions for sample identification using barcode readers, centrifugation, decapping, recapping, subdistribution, and the transportation of samples in pucks in analysis lines. The S-Monovette® 75 x 13 mm is ideally suited to meet these requirements and available with any preparation.

### Aliquot tubes



Depending on the application, aliquot tubes are available in a diameter of 13 or 15 mm, with or without false bottom, and with a push or screw cap. If required, the tubes are automatically recapped. Screw cap tubes are ideal for long-term storage and transport.

### Archiving push caps and screw caps



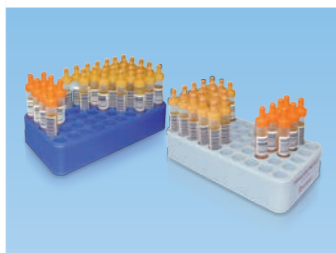
Archiving push caps for any tube 13–16 mm in diameter are ideal to minimize the evaporation of sample material during storage. Tubes can be automatically capped and decapped. Screw caps are recommended for long-term storage and transport.

### Pipette tips



A conductive black tip is used to dispense samples into aliquot tubes. The fluid level is determined conductively. During the pipetting process, the tip descends as the fluid level drops. The slim design enables pipetting from narrow tubes.

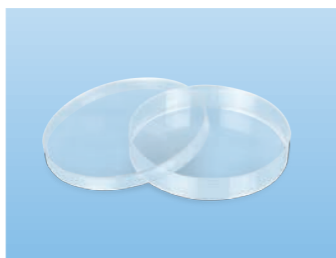
### Racks



The universal block rack made from polypropylene is highly resilient, stackable and autoclavable. It makes an ideal target carrier for various workstations as well as an archiving rack. The double- or quadruple-block options, in particular, provide a space-saving solution for the storage of samples. Racks are available in a range of colors for easy identification and organization.

## Microbiology

### Petri dishes



Made from crystal-clear polystyrene, our Petri dishes for use with hot agar are heat-resistant to 80°C. Thanks to their enhanced dimensional stability, they are particularly suited for all automated processing steps from labeling, stacking, streaking and incubation through to automated analysis.

### Blood Collection and Diagnostic Products

- Venous blood collection
- Capillary blood collection
- Prepared tubes
- Urine and feces collection
- Sputum vessels
- Miscellaneous tests



### Laboratory Products

- Special tubes and centrifuge tubes
- Reagent tubes and screw cap micro tubes
- PCR, liquid handling, bacteriology
- Cell and tissue culture
- CryoPure freezing system
- Cuvettes, special vessels, micro test plates
- General laboratory products



### Medical/Hospital Products

- Urine drainage systems
- Incontinence care
- Infusion/transfusion systems
- Transfusion medicine
- Anesthesia
- Miscellaneous medical products



### Medical/Laboratory Equipment

- Sample preparation
- Analyzers
- Electrophoresis
- Thin-layer chromatography



### Transfusion medicine

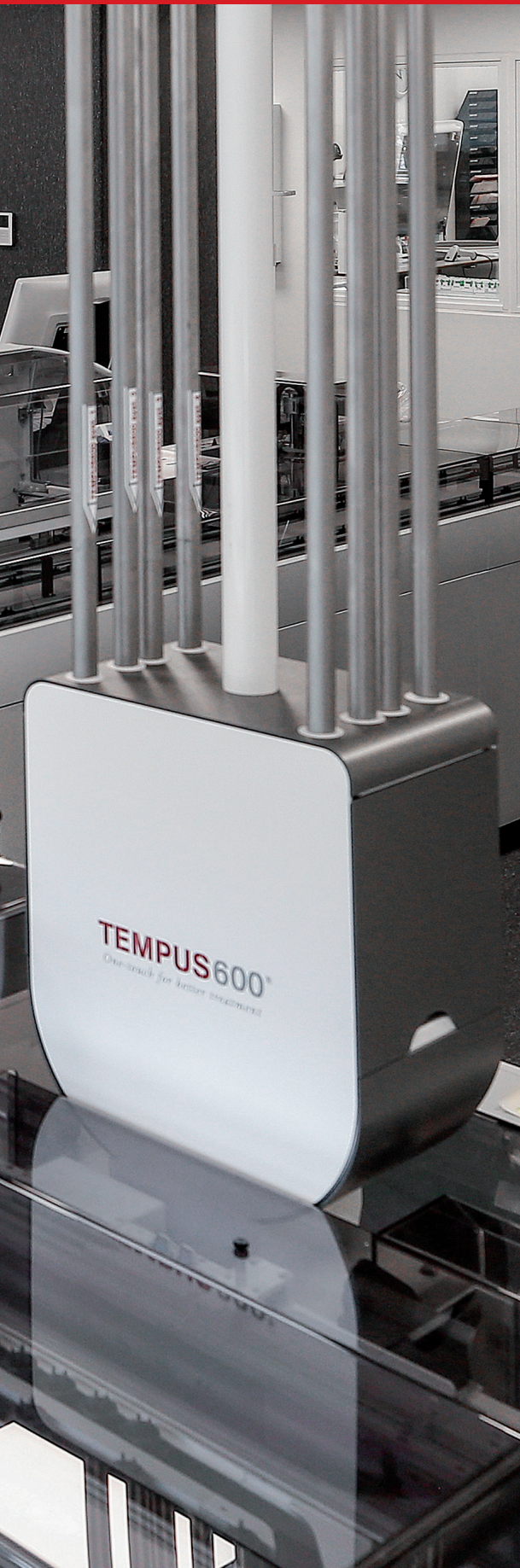
- Blood mixing and weighing devices and donor beds
- Tube sealing systems
- Incubators/agitators
- Cool transport and indicators
- Plasma thawers/warmers
- Blood bag systems and accessories





# Tempus600®

Point-to-point transportation of clinical sample tubes



**TEMPUS600®**  
*One-touch for better treatment*



Predictable and faster transportation time  
for clinical sample tubes

## Vita

### Bringing the laboratory to every department

The Tempus600® Vita sending station makes it easy to send clinical samples directly to the laboratory as a single tube transport, arriving safely seconds after they are obtained.

The sample tubes are sent immediately after being drawn without further packaging. As soon as a sample tube is loaded, the system is ready for the next.

The slim and minimalistic design ensures the sending station fits into most locations, occupying very little space.



Sample tubes are placed directly into the insertion point of the Vita.



### Features

- Easy and intuitive to use – minimal training required
- Compatible with all sample tubes of:  
Length 80–110 mm, diameter 12–18 mm  
(including cap)
- Dimensions:  
HxWxD = 157x37.5x41 cm

### Benefits

- Predictable and improved total turnaround time (ToTAT)
- Handles up to 810 sample tubes per hour
- Just 2 week installation time, for new and existing buildings
- Minimal maintenance

# Quantit

## Drop & Go

The Tempus600® Quantit allows several samples to be dispatched at the same time without any packaging.

Simultaneously and repeatedly, up to 25 samples can be placed in the drawer, and the system will then send the samples one by one. Tubes do not even have to be oriented, as Quantit manages that.

An optional urgency module can be added to Quantit. It allows you to access the system at any time and manually place urgent samples for immediate processing.



## Features

- Multiple inlet for up to 25 samples at a time
- Samples always oriented correctly by the system
- Compatible with all sample tubes of:  
Length 80–110 mm, diameter 12–18 mm  
(including cap)
- Dimensions:  
HxWxD = 124x63x49 cm
- Incompatible samples automatically rejected

## Benefits

- Minimal time spent placing samples in the system
- Significant reduction in steps needed to send and receive samples
- Meets the demand for sending both high volume and urgent samples
- Capacity to handle up to 1050 sample tubes per hour
- Just 2 week installation time, for new and existing buildings



Multiple inlet for up to 25 samples at a time.



Urgency module

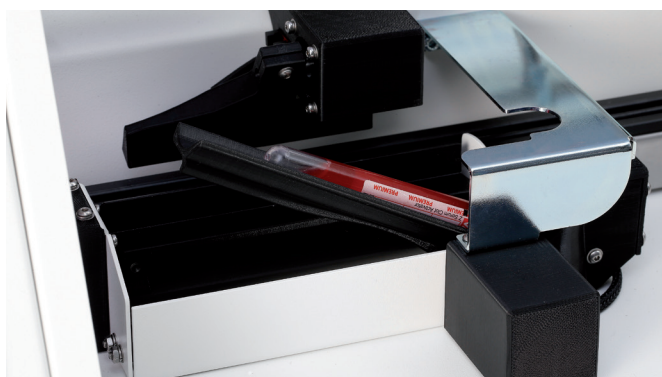
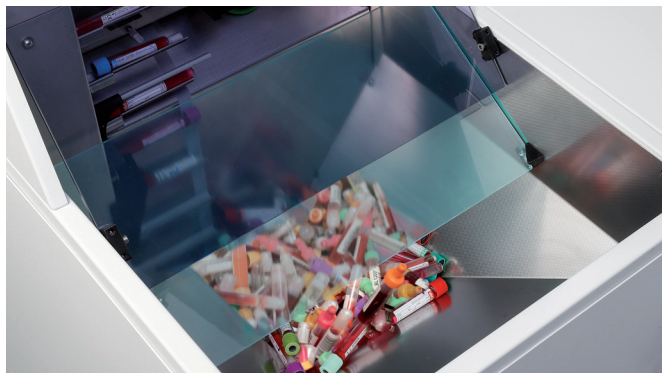
## Necto

### Handling large quantities of samples – up to 600 at a time

The Tempus600® Necto is a cost-effective, automated solution for high throughput sample processing and transportation over long distances.

Necto streamlines the entire registering and sorting process, allowing samples to be transferred to up to six different locations – four distant destinations and two local bins.

The easy usage and maintenance of Necto is ideal for busy labs, where staff can now focus on other tasks at hand.



Sending module

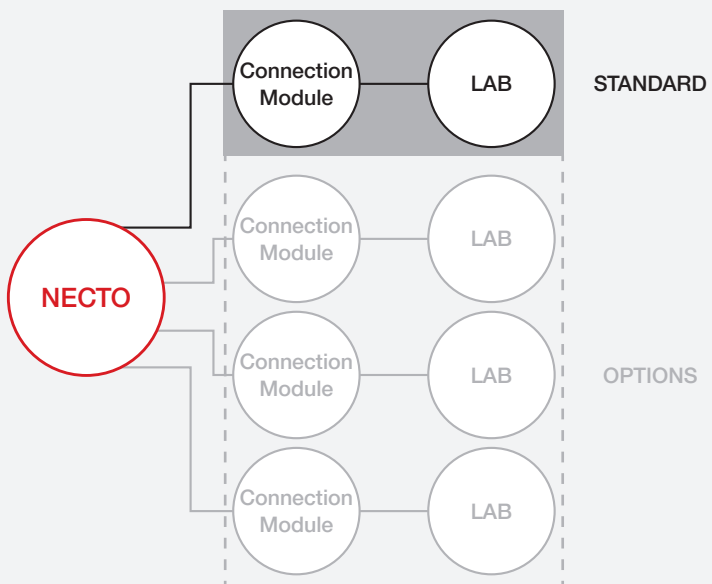
### Features

- Compatible with sample tubes from well-known suppliers
- Can be connected to lab automation and optional communication with LIS
- Remote access & support, minimum maintenance and easy cleaning
- One, two or three extra sending modules can be purchased for the Necto system
- Dimensions basic system:  
HxWxD = 110x110x60 cm
- Dimensions per extra module:  
HxWxD = 110x40x60 cm
- Compatible with all sample tubes of following dimensions:  
Length 80–110 mm, diameter 12–18 mm (including cap)

### Benefits

- Multiple inlet for up to 600 sample tubes at a time – capacity to handle up to 1050 sample tubes per hour
- Sample sorting by means of barcodes, dimensions or as a combination
- Option: Sample sorting by means of cap color
- Dual function – sample tubes can be loaded while the machine is sending
- Just 2 week installation time, for new and existing buildings





## Receiving Tray

### Ensures a gentle arrival in the laboratory

The Receiving Tray is located in the laboratory, receiving sample tubes from Tempus600® sending stations.

The samples arrive, one by one, and are gently slowed down before arriving in the Receiving Tray. From there, they are ready to be picked up by laboratory staff.

In case of high throughput sample transportation over long distances, a brake module can be fitted to increase sample throughput and ensure failure-free sample receipt.



Samples arrive in the Receiving Tray where they are retrieved.



Brake module



Filter bag for cleaning

### Features

- Soft interior to reduce landing impact
- Lighting signals when samples arrive
- Optional brake module
- Dimensions: HxWxD = 65x28x43 cm

### Benefits

- The Receiving Tray is small and wall mounted for minimal footprint
- Easy to access tray for cleaning
- Minimalistic and user-friendly design

# TM002

## Complete control at your fingertips on an elegant, user-friendly display

TM002 enables you to control and monitor your Tempus600® equipment from one display.

The elegant display in brushed aluminium, provides an intuitive interface and tiered access for users and technicians.

TM002 is built with future expansion in mind. The system is able to monitor up to 44 sending stations simultaneously and the software can be seamlessly updated online.



Intuitive user interface



## Features

- Optional connection to a light signal indicating sample arrival
- Optional connection to a smartphone via text messenger in case of error
- Languages: English and German
- Dimensions: HxWxD = 26.5x32.2x5 cm

## Benefits

- Control TM002 remotely with any smartphone, tablet or desktop computer
- Fast, easy and intuitive operation using shortcut icons
- Option: communicates with total lab automation and sorters.

## Connection Module

### Connect to all automated lab equipment

The Tempus600® Connection Module is designed for the future. It is compatible with laboratory automation systems, including bulk loaders and sorters you already have installed, or plan to introduce, in the laboratory.

The Connection Module, as part of an automated one-touch handling system for sample tubes, provides a wide range of benefits such as fewer work procedures, hands-free sample tube processing and generally faster and safer handling.

In case of high throughput sample transportation over long distances, a brake module can be fitted to increase sample throughput and ensure failure-free tube loading.

### How does it work?

The sample tubes are delivered from the ward to the laboratory through the dedicated point-to-point system in just a few seconds.

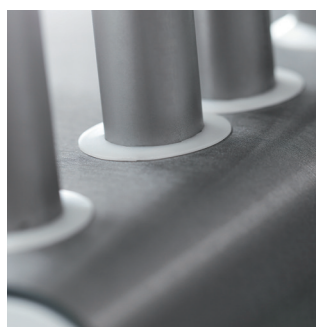
The sample tubes are gently slowed down before landing in the automation module, instantly ready to continue the journey into a bulk loader or sorter. From here they are automatically transferred e.g. onto a track system.

### Features

- Dimensions: HxWxD = 63x38x23 cm
- Up to 8 connections
- Brake module



Brake module







**TEMPUS 600**  
One-touch for faster processing

## BL 1200

### From Tempus600® directly into the analyzer rack

The innovative Bulk Loader BL 1200 in combination with the Tempus600® One-Touch sample transportation system redefines standards for sample reception and accessioning in clinical laboratories. Sample tubes (e.g. S-Monovette®), are automatically loaded into the chute of the Bulk Loader, mechanically separated, and identified by the built-in ID-Module via tube type and ID-number (bar code). Sorting is performed according to lab specific requirements, e.g. into centrifuge racks, input/output trays of track systems, analyzer specific racks, generic- or archive racks. Sorting follows pre-defined sorting rules, or is done according to test orders defined by the laboratory information system (LIS). A plausibility check identifies and separates error samples.



### Features

- Compatible with all closed sample tubes of following dimensions: Length 75–120 mm, diameter 11–19 mm (both including caps)
- Throughput up to 1,200 tubes/hour
- Flexible layout of the 630x450 mm sorting area per sorter unit
- Can be extended by additional sorting units
- Dimensions: HxWxD = 154x175x76 cm

### Benefits

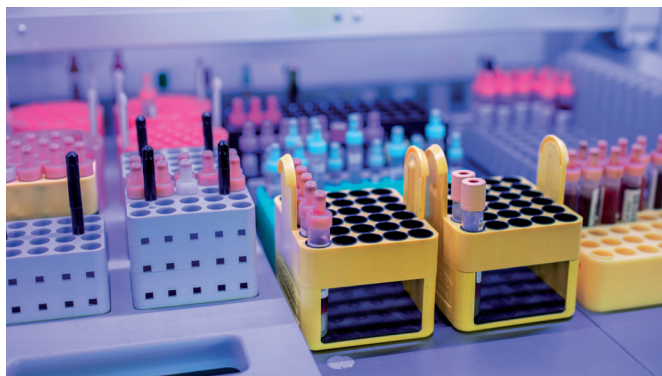
- Automatic sample accessioning
- Can be combined with any track system
- Small footprint, possible to be placed against the wall
- Ideal for high throughput laboratories
- Sorting into any common target racks or into boxes
- Pre-defined sorting rules or acc. test request (LIS)



Loading in bulk



Registering



Automatic Output in Racks

# HCTS2000 MK 2

## From Tempus600® to sorted boxes

Tempus600® combined with Bulk-to-Bulk Sorter HCTS2000 MK 2, simplifies sample reception workflow. The sorter registers and sorts closed bulk sample tubes into different target compartments according to the bar code (sample preparation) or test request specified by the LIS. With an optional camera in use, the system can perform a plausibility check to identify and separate error samples. HCTS2000 MK 2 helps to optimize the workflow at sample entry of biochemistry or hematology labs, thereby reducing the turn-around-time (TAT) of samples.



Sorting into target boxes



## Features

- Compatible with all closed sample tubes of following dimensions: Length 75–120 mm, diameter 11–19 mm (both including caps)
- Throughput up to 2,000 tubes/hour
- Sorting into 7 compartments or boxes (base unit)
- Can be extended by up to 3 extension modules with 5 compartments or boxes each
- Dimensions: HxWxD = 122x143x82 cm

## Benefits

- Automatic sample accessioning
- Can be combined with any track system
- Small footprint, ergonomic design
- Ideal for high throughput laboratories
- Sorting into 7–22 most compact targets
- Pre-defined sorting rules or acc. test request (LIS)

*If you have any questions,  
we'd be happy to help!*

*Visit our websites: [www.sarstedt.com](http://www.sarstedt.com) · [www.tempus600.com](http://www.tempus600.com)*

# TEMPUS600<sup>®</sup>

*One-touch for better treatment*



Technical modifications reserved

This document may contain information on products that may not be available in particular countries

25\_857\_0000\_501

SARSTEDT, Inc.  
1025 St. James Church Road  
P.O. Box 468  
Newton, NC 28658 - 0468  
Toll free: +1 800 257 5101  
Fax: +1 828 465 4003  
[customerservice.us@sarstedt.com](mailto:customerservice.us@sarstedt.com)  
[www.sarstedt.com](http://www.sarstedt.com)

