Biotest

From Nature for Life

RCS High Flow Touch

Microbial safety at your fingertips

- Reliable – Proven RCS High Flow technology
- Convenient – Flexible operation with an easy touch
- Validated – Complete system with standardized agar media

Reliable air sampling with an easy touch

Reliable – Proven RCS High Flow technology

Cleanrooms and isolators in the pharmaceutical, medical and food industries are subjected to thorough microbial air monitoring routines to ensure high product quality, to maintain a safe work environment, and to meet regulatory requirements such as ISO 14698-1 (Biocontamination Control).

The new RCS High Flow Touch has been designed to meet these requirements and, furthermore, to provide maximum ease of handling. Employing the renowned RCS High Flow technology, the instrument ensures reliable and reproducible results along with comprehensive validation documentation.

New instrument features such as a high resolution color touch-screen, an intuitive software, a new battery concept with advanced control options and a modern, ergonomic design allow for maximum reliability in monitoring ambient air and compressed gas.

RCS High Flow Touch – Reliable air monitoring with an easy touch

Fast

- Short sampling times with a flow rate of 100 L/min
- Convenient programming with an easy touch
- From preparation to start of measurement within a minute

Flexible

- Portable, battery-driven and light weight
- Horizontal and vertical installation, measurement at heights of up to 3 meters
- User-defined sampling options like individual volumes, time delay, interval sampling

Reliable

- Proven technology using standardized agar media
- Innovative battery concept with advanced control options
- Compatible with common sterilization and disinfection methods

RCS technology

For more than 30 years RCS Microbial Air Samplers have been successfully used by leading pharmaceutical companies worldwide. All RCS Samplers employ the principle of centrifugal impaction according to Reuter – the pioneer technology for portable, battery-driven microbial air samplers – and provide the following key benefits:

- Low impaction speed
- Low turbulence and controlled air stream
- Even distribution of microorganisms
- No local drying of the agar
- High physical and biological collection efficiencies
- Complete system with standardized agar media
- Easy disinfection, autoclave-able sampling head

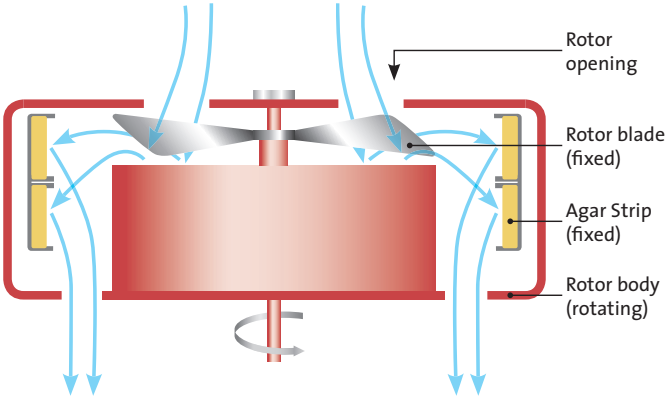


Fig. 1: Illustration of the Reuter Centrifugal Impaction Principle

Technical specifications

Sampling principle	Centrifugal impaction (Reuter Centrifugal Sampler, RCS)
Operation	Portable device, integrated color touchscreen
Electrical supply	Rechargeable Lithium-ion battery, power supply, (optional) docking station
Air flow rate	100 L/min (1000 L in 10 min)
Sample volumes	7 pre-set, 3 user-defined (1-2000 L)
Rotor speed	8200 rpm
Dimension (H x W x D)	300 x 130 x 110 mm
Weight	1500 g
Connection	Serial RS232, USB adapter, standard tripod thread
Material	Housing: Makrolon® Polycarbonate; head: aluminium/stainless steel (autoclave-able)
Validation	According to ISO 14698 with agar media
Calibration	Automated calibration (CalibSo Software, anemometer), calibration reminder
User-defined settings	Date/time, language; time delay, interval sampling, QA Management

Convenient – Flexible operation with an easy touch

The RCS High Flow Touch Microbial Air Sampler is equipped with a high-resolution color touchscreen and intuitive software for maximum ease-of-use. Self-explaining icons quickly guide through the menus.

New color touchscreen makes operation easy

- Modern design for fast and easy handling
- Commonly used symbols and functions
- Quick change of menus, easy programming

Intuitive user interface for user-friendly navigation

- Key information and setting changes on a single screen
- Standardized settings and flexible sampling options
- Management of up to ten rotors
- Acoustic signaling
- Language options

Fig. 2: Main window for volume selection and activation of sampling at the touch of a button

Innovative software solutions easily integrated

- RCS Management Software – Safety, control and flexibility
- HYCON-ID – Barcode management and wireless data transfer
- CalibSo Software – Automated calibration with Biotest Anemometer

Fig. 3: Settings menu for user defined options

Greater operating reliability with an innovative battery concept

To operate battery-driven instruments reliably easy recharging mechanisms and visual control options are required.

The innovative battery concept of the RCS High Flow Touch Microbial Air Sampler combines flexible charging options and reliable battery status reporting.

- Integrated high capacity, long-life lithium-ion battery
- Capacity to perform more than 35 x 1000 L measurements with one full charging cycle
- Continuous capacity measurement of the battery
- Easy cable-based recharging, or use of an optional docking station with LED control at any time

Fig. 4: LED-controlled docking station for easier charging of the integrated battery

Instrument status now easily monitored

The RCS High Flow Touch Software offers two control options for monitoring the battery status. First, the status bar in the main window contains a battery status icon visualizing the remaining capacity of the battery. Dependent on the selected sampling volume, it also displays the remaining number of measurements. Second, the total and current capacities of the integrated battery are shown on the system's information screen.

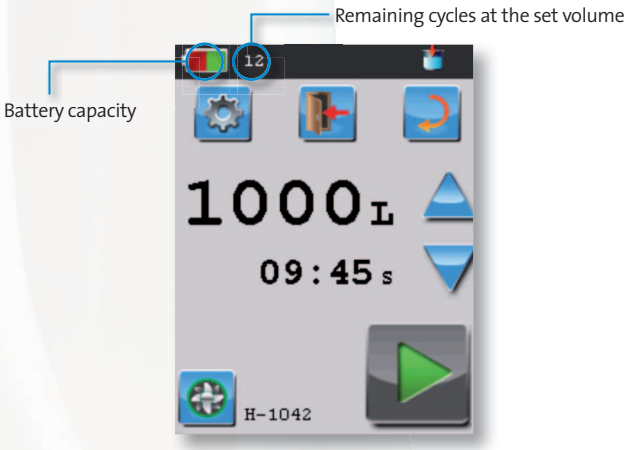


Fig. 5: Main window with status bar

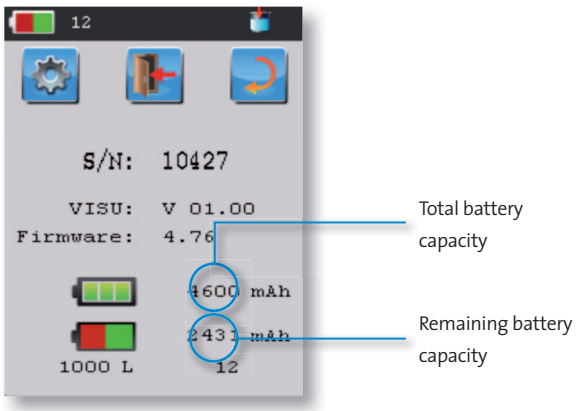


Fig.6: System information window displaying battery capacities

Validated – Complete system with standardized agar media

The RCS High Flow Touch Microbial Air Sampler is used with standardized agar media. These are manufactured under strictly controlled aseptic conditions. Thus, the RCS High Flow Touch Microbial Air Sampler provides a complete system, which has been extensively validated according to ISO 14698-1. The agar media for the RCS System possess some unique features:

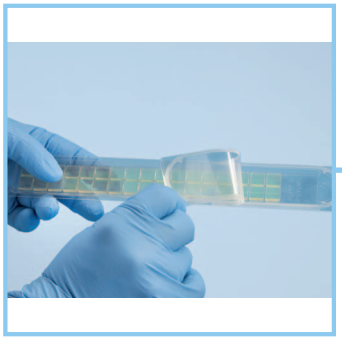
- Total count and specialized agar media
- Additionally available: Gamma-irradiated products in double packaging for higher cleanroom classes
- Individually packaged Agar Strips to ensure sterility
- Rigorous quality control during production, including visual inspection of each Agar Strip
- Performance, packaging and storage extensively validated
- Storage at room temperature, ablity to resist repeated gassing cycles
- Incubation and evaluation within re-sealed packaging

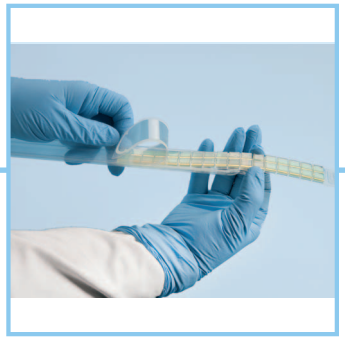
Technical services and support

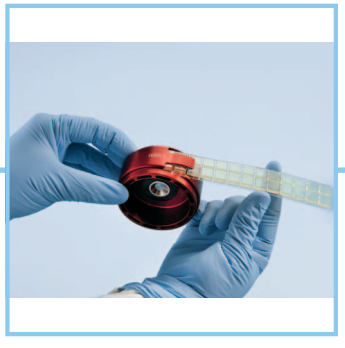
The RCS High Flow Touch Microbial Air Sampler is a robust instrument that requires minimal service and maintenance. To ensure its continued and reliable operability the rotor should be calibrated every year.

- Reliable calibration and repair services carried out by Biotest AG's Technology Center Microbiology and by authorized service partners
- Calibration training on how to use the Biotest Anemometer and the CalibSo Software conducted by Biotest instrument specialists
- Instrument qualification plans and comprehensive validation documentation support provided upon installation

Fig. 7: RCS High Flow Touch Microbial Air Sampler with Biotest Anemometer







Media ordering information

Total Count Agar Media	Package Size	Article No.
TC Tryptic Soy Agar for determination of the total count	50	941 105
TSM Modified Tryptic Soy Agar with neutralizers against disinfectants and growth supplements; for identification of the total count of fastidious and sublethally damaged microorganisms	50	941 135
TC-γ Gamma-irradiated Tryptic Soy Agar, double packaged; for determination of total count in aseptic environments	40	941 115
TCI-γ Gamma-irradiated Total count Tryptic Soy Agar with neutralizers; double packaged; for determination of total count in aseptic environments and in peroxide-containing air	40	941 125
PEN-γ Gamma-irradiated Tryptic Soy Agar with Penase; for determination of total count in penicillin-containing air in aseptic environments	40	941 716
LAC-γ Gamma-irradiated Tryptic Soy Agar with broad spectrum chephalosporinase for determination of total count in aseptic environments containing antibiotics	40	941 706

Selective Agar Media	Package Size	Article No.
SDX Sabouraud Dextrose Agar with modified Pharmacopoeia formulation; for determination of yeasts and molds	50	941 205
SDX-γ Sabouraud Dextrose Agar with modified Pharmacopoeia formulation; for determination of yeasts and molds in aseptic environments	40	941 215
DG-18 Dichloran Glyerine Agar; for determination of yeasts and molds (compliant with TRBA 430)	25	941 225
YM Rose Bengal Agar with streptomycin; for determination of yeasts and molds	50	941 196
C MacConkey Agar; for determination of coliform bacteria	25	941 505
S Manitol Salt Agar; for determination of staphylococci	25	941 405

Accessories	Package Size	Article No.
Blank Strip Kit Sterile empty strips for manual production of culture media for special applications	50	941 605
Cover Slides Cover slides for Agar Strips to prevent desiccation during incubation	100	941 900

Ordering information

Description	Article No.
RCS High Flow Touch Microbial Air Sampler, power supply, serial RS232 cable, USB adapter, RCS Management Software, rotor, protection cap, carrying case, calibration certificate, quick start guide and user manual	940 217
Docking Station For recharging the integrated Lithium-ion battery after use	940 376
RCS Compressed Gas Adapter Touch Autoclave-able adapter for monitoring microorganisms in compressed gasses; designed for pressure of 1 bar	940 723
Nozzle Set for RCS Compressed Gas Adapter Set of five nozzles to extend the air inlet pressure from 1 bar to 0.1 - 7.0 bar	940 725
Sterile Sleeves 10 pieces; for covering non-autoclave-able housing parts	940 250
Tripod For use at heights up to three meters	940 330
Table-top Tripod For horizontal operation	940 335
RCS Validation Handbook, German version RCS Validation Handbook, English version Comprehensive compendium of validation data for RCS Microbial Air Samplers (RCS High Flow, RCS Isolator, RCS Plus) and Agar Strips; contains RCS Qualification Handbook for RCS High Flow Touch	940 101 940 131
RCS Qualification Handbook, German version RCS Qualification Handbook, English version Plan for instrument qualification of the RCS High Flow Touch in controlled areas, contains IQ, OQ & PQ	940 106 940 136
HYCON-ID Set Contains HYCON-ID Bluetooth Barcode Reader, bluetooth module and HYCON-ID Software; complete solution for wireless identification and documentation of microbial air sampling data	940 360
HYCON-ID USB Barcode Reader Barcode scanner with USB connection for reading barcode data	940 368
HYCON-ID Barcode Printer Set Contains printer, software and labels to create user-specific barcodes	940 365
HYCON-ID Bluetooth Barcode Reader Contains bluetooth scanner and battery; for the extension of the HYCON-ID system to work with additional RCS High Flow instruments	940 361
HYCON-ID Battery Charger Charger for bluetooth barcode scanners	940 362
CalibSo Calibration Software for automated, computer-aided calibration and data storage	940 321
Anemometer Portable device for measuring the airflow rate during calibration of RCS Microbial Air Samplers	940 320
Rotor Autoclave-able spare part for instruments of the RCS High Flow series. Each combination of sampler and rotor must be calibrated separately.	940 230
Protection Cap Spare part (stainless steel), autoclave-able. For protection of the rotor during air sampling	940 415

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