

# Microbial safety at your fingertips RCS<sup>®</sup> High Flow Touch



# Proven – renowned 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 (Bio-contamination 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 touchscreen, 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 – standardized air monitoring with an easy touch

### Reliable

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

### Fast

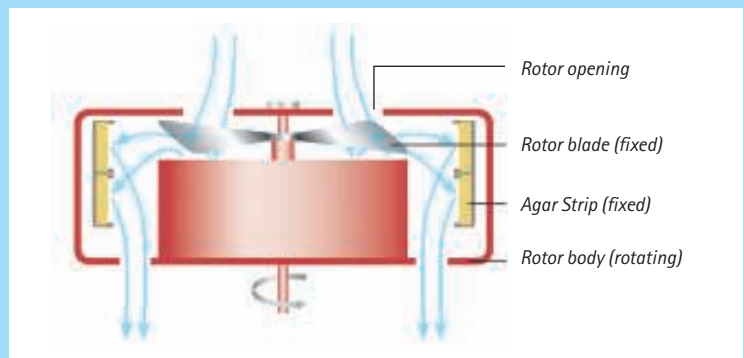
- Short sampling times with a flow rate of 100 L/min
- Convenient programming with an easy touch
- From preparation to start of measurement within a minute



## 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



*Illustration of the Reuter Centrifugal Impaction Principle*

## 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

# Convenient – flexible operation with an easy touch

The RCS® High Flow Touch Microbial Air Sampler is equipped with a high-resolution color touch-screen 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
- Acoustic signaling
- Management of up to ten rotors
- Language options

## Innovative software solutions easily integrated

- RCS® Management Software: Safety, control and flexibility
- CalibSo Software: Automated calibration with HYCON® Anemometer



# Innovative – operating reliability with 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 30 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

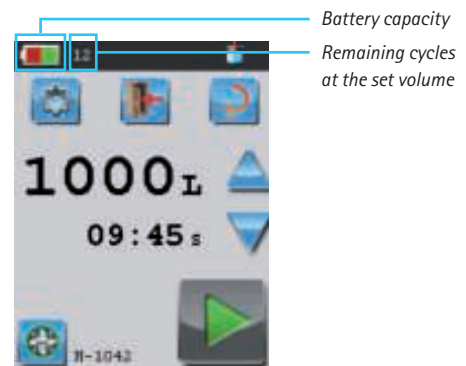


LED-controlled docking station for easier charging of the integrated battery

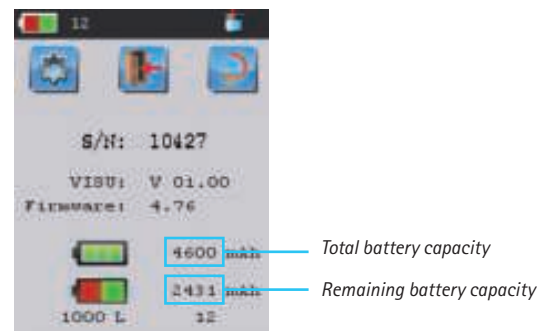
## Instrument status now easily monitored

The RCS® High Flow Touch Software offers two control options for monitoring the battery status.

- **Main window with status bar**  
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.
- **System information window displaying battery capacities**  
The total and actual capacities of the integrated battery are shown on the system's information screen.



Main window with status bar



System information window displaying battery capacities

# Robust – minimal service and maintenance

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 Merck and by authorized service partners
- Instrument qualification plans and comprehensive validation documentation support provided upon installation
- Calibration training on how to use the HYCON® Anemometer and the CalibSo Software conducted by our instrument specialists



*RCS® High Flow Touch  
Microbial Air Sampler with  
HYCON® Anemometer*

## 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             | 300 x 130 x 110 mm (H x W x D)  |
| Weight                | 1500 g  |
| Connection            | Serial RS232, USB adapter, standard tripod thread                                 |
| Material              | Housing: Lexan polycarbonate; head: aluminium/stainless steel (autoclave-able)    |
| Validation            | According to ISO 14698 with agar media  |
| Calibration           | Automated calibration (CalibSo Software, HYCON® Anemometer), calibration reminder |
| User-defined settings | Date/time, language, time delay, interval sampling, QA Management                 |

# Ordering information

| RCS® High Flow Touch   | Ord. No.     |
|--|--------------|
| <b>RCS® High Flow Touch Microbial Air Sampler</b><br>Including power supply, serial RS232 cable, USB adapter, RCS® Management Software, rotor, protection cap, carrying case, calibration certificate, quick start guide and user manual | 1.44194.0001 |
| RCS® High Flow Touch Accessories   | Ord. No.     |
| <b>Docking Station</b><br>For recharging the integrated Lithium-ion battery  | 1.44256.0001 |
| <b>RCS® Compressed Gas Adapter Touch</b><br>Autoclave-able adapter for microbial monitoring of compressed gasses; designed for a pressure of 1 bar   | 1.44257.0001 |
| <b>Nozzle Set for RCS® Compressed Gas Adapter</b><br>Set of five nozzles to extend the air inlet pressure from 1 bar to 0.1–7.0 bar  | 1.44235.0001 |
| <b>Sterile Sleeves</b><br>10 pieces; for covering non-autoclave-able housing parts   | 1.44199.0010 |
| <b>Tripod</b><br>For use at heights up to three meters   | 1.44209.0001 |
| <b>Table-top Tripod</b><br>For horizontal operation  | 1.44210.0001 |
| <b>RCS® High Flow Touch Validation Handbook</b><br><b>German version</b>   | 1.44176.0001 |
| <b>English version</b><br>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          | 1.44189.0001 |
| <b>RCS® High Flow Touch Qualification Handbook</b><br><b>German version</b>  | 1.44178.0001 |
| <b>English version</b><br>Plan for instrument qualification of the RCS® High Flow Touch in controlled areas, contains IQ/OQ/PQ   | 1.44192.0001 |
| <b>CalibSo</b><br>Calibration Software for automated, computer-aided calibration and data storage  | 1.44206.0001 |
| <b>HYCON® Anemometer</b><br>Portable device for measuring the air flow rate during calibration of RCS® Microbial Air Samplers  | 1.44205.0001 |
| <b>Rotor</b><br>Spare part, autoclave-able<br>Each combination of sampler and rotor must be calibrated separately  | 1.44196.0001 |
| <b>Protection Cap</b><br>Spare part (stainless steel), autoclave-able<br>For protection of the rotor during air sampling   | 1.44225.0001 |



# 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.

1



*Open HYCON® agar strip wrapper*

2



*Insert HYCON® agar strip into rotor*

3



*Place rotor on instrument*

4



*Close the protection cap – system ready to start*

## Unique features of HYCON® agar strips for RCS® instruments

- 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, ability to resist repeated gassing cycles
- Incubation and evaluation within re-sealed packaging



| Agar Strips – Total Count  | Package Size | Ord. No.     |
|--|--------------|--------------|
| TC<br>Tryptic Soy Agar for determination of the total count, store at 2–25°C   | 50 strips    | 1.44253.0050 |
| TSM<br>Modified Tryptic Soy Agar with neutralizers against disinfectants and growth supplements; for identification of the total count of fastidious and sublethally damaged microorganisms, store at 2–25°C | 50 strips    | 1.44240.0050 |
| TC-γ<br>Gamma-irradiated Tryptic Soy Agar, double-wrapped; for determination of total count in aseptic environments, store at 2–25°C   | 40 strips    | 1.44226.0040 |
| TCI-γ<br>Gamma-irradiated Tryptic Soy Agar with neutralizers, double-wrapped; for determination of total count in aseptic environments and in peroxide-containing air, store at 2–25°C                       | 40 strips    | 1.44228.0040 |
| PEN-γ<br>Gamma-irradiated Tryptic Soy Agar with Penase; for determination of total count in penicillin-containing air in aseptic environments, store at 2–25°C   | 40 strips    | 1.44109.0040 |
| LAC-γ<br>Gamma-irradiated Tryptic Soy Agar with broadspectrum cephalosporinase; for determination of total count in aseptic environments containing antibiotics, store at 2–25°C                             | 40 strips    | 1.44108.0040 |
| Agar Strips – Selective Agar Media   | Package Size | Ord. No.     |
| SDX<br>Sabouraud Dextrose Agar with modified Pharmacopoeia formulation; for determination of yeasts and molds, store at 2–25°C   | 50 strips    | 1.44243.0050 |
| SDX-γ<br>Sabouraud Dextrose Agar with modified Pharmacopoeia formulation; for determination of yeasts and molds in aseptic environments, store at 2–25°C   | 40 strips    | 1.44244.0040 |
| DG-18<br>Dichloran Glycerine Agar; for determination of yeasts and molds, store at 2–25°C  | 25 strips    | 1.44245.0025 |
| YM<br>Rose Bengal Agar with streptomycin; for determination of yeasts and molds, store at 2–25°C   | 50 strips    | 1.44242.0050 |
| C<br>MacConkey Agar; for determination of coliform bacteria, store at 2–15°C   | 25 strips    | 1.44099.0025 |
| S<br>Mannitol Salt Agar; for determination of staphylococci, store at 2–15°C   | 25 strips    | 1.44102.0025 |
| Agar Strips Accessories  | Package Size | Ord. No.     |
| Blank Strip Kit<br>Empty strips for manual production of culture media for special applications  | 50 strips    | 1.44107.0050 |
| Cover Slides<br>Cover slides for agar strips to prevent desiccation during incubation  | 100 slides   | 1.44111.0100 |
| Incubation Rack for Agar Strips<br>Stainless steel, for HYCON® agar strips   | 1            | 1.44249.0001 |

We provide information and advice to our customers on application technologies and regulatory matters to the best of our knowledge and ability, but without obligation or liability. Existing laws and regulations are to be observed in all cases by our customers. This also applies in respect to any rights of third parties. Our information and advice do not relieve our customers of their own responsibility for checking the suitability of our products for the envisaged purpose. The M mark is a trademark of Merck KGaA, Darmstadt, Germany. HYCON® and RCS® are registered trademarks of Merck KGaA, Darmstadt, Germany.

**For more information:**

[www.merckmillipore.com/biomonitoring](http://www.merckmillipore.com/biomonitoring)

