

# CONTINUOUS VIABLE PARTICLE MONITORING FOR CRITICAL ENVIRONMENTS

Annex 1



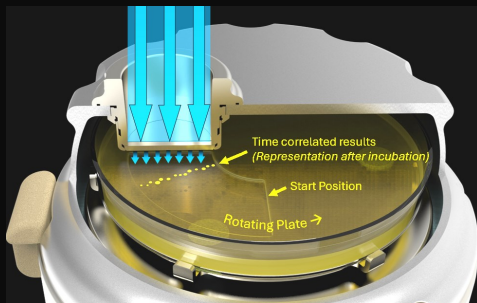
FOR NEW AND FACILITY UPGRADE



Clean Air Monitoring Solutions

# SLIT-TO-AGAR

## ESTABLISHED AND TRUSTED TECHNOLOGY



- Air is sampled on to Agar, a well **established and trusted method**, familiar to all pharma companies, with many years experience and historic data. There is no need to change methods for **full Annex 1 compliance**.
- What is different? Unlike other air samplers, our equipment is designed to sample over very long periods onto a single plate. **4 hours is typical**, but 8+ hours is also possible. This also brings huge **cost savings** on plate usage.
- Our narrow slit inlet and rotating agar ensures the air is impacted onto fresh agar throughout the run, thus minimizing desiccation giving our method the best physical and biological efficiency of any method available. Our standard particle collection efficiency is **0.53µm (D50)**.
- By using agar, **identification to species level** is possible which is a key requirement of Annex 1. **Single organisms can be detected**, another key factor of the standards especially in Grade A and B areas.
- Air → Inlet → Capture. That's it! No false positives, no false negatives and results are colony forming units — **CFU** not 'events'.
- **Fully validated** by UKHSA (PHE) which is the globally recognized laboratory. We share the full validation test reports.
- **Trusted** by AstraZeneca, Novo Nordisk, Ecolab, Lilly and more.

## SOLUTIONS

### MODULAR DESIGN, CHOOSE YOUR OWN SOLUTION

- The CAMS 9cm range is based on a modular design approach. This makes it possible to have multiple product configurations that exactly meet the end user's specific needs throughout the plant.
- All CAMS products are based on the Slit-to-Agar method and are therefore all covered by the same ISO14698 & EN17141 validation. This makes end user validation and training much easier.
- Being a modular design, CAMS solutions are scalable like no other on the market. From single point monitoring to limitless numbers of monitoring points, CAMS has a solution.

### FOR PORTABLE CLEANROOM APPLICATIONS

#### *Impactair-90*

- Desk-top portable
- 9cm agar plates
- Stainless steel
- Large clear GUI
- HEPA filtered exhaust
- Ethernet & MODBUS

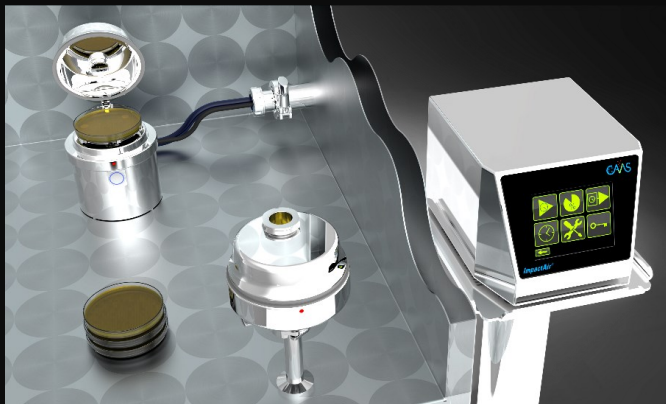


## FOR ISOLATORS

### ISO-CON-90

The ISO-CON-90 is a cleanroom compatible monitoring head and pump unit. A small footprint monitoring head is located within the isolator and the pump and control unit located outside. The monitoring head can be mounted on a hygienic clamp or as a desk-top with feet. A CAMS cable port fitted to a standard clamp ferrule allows for easy installation. This solution is ideal for smaller installations and especially attractive for upgrading existing isolators to be Annex 1 compliant.

- Stainless steel
- Large clear HMI
- HEPA filtered exhaust
- Ethernet & MODBUS



## FOR ISOLATORS

### ISO-CON-IFC Range

The ISO-CON-IFC is a pump and control unit located in the technical area of an isolator system. It connects to the CAMS small footprint monitoring head and is available with built in VHP/H<sub>2</sub>O<sub>2</sub> control valves and pump and with an optional GUI display.

The ISO-CON-IFC SDV is designed to be a **drop in replacement** for the MBV **MAS-100-ISO** system allowing end users to easily **upgrade to fully Annex 1 compliant** viable MONITORING with virtually no engineering effort required.

- Drop-in Annex 1 Upgrade
- Replace MBV or PMS
- Utilize existing pipework
- Minimal engineering effort
- Minimal down-time



## FOR ISOLATORS

### ISO-CON-IFC — Compact

The ISO-CON-IFC is a pump and control unit located in the technical area of an isolator system. It connects to the CAMS small footprint monitoring head and is available with built in VHP/H<sub>2</sub>O<sub>2</sub> control valves and pump and with an optional GUI display.

The ISO-CON-IFC CDV is designed to be a **drop in replacement** for the **PMS** system allowing end users to easily **upgrade to fully Annex 1 compliant** viable MONITORING with virtually no engineering effort required.



- Drop-in Annex 1 Upgrade
- Replace MBV or PMS
- Utilize existing pipework
- Minimal engineering effort
- Minimal down-time

## FOR ISOLATORS

### *ISO-90 Hero*

The *ISO-90 Hero* is a revolutionary product where overall system space is at a premium. The *Hero* monitoring head has a pump built and requires no other hardware.

Not having a built-in HMI, the *Hero* is designed to integrate directly into isolator systems and controlled by the isolator HMI.

For applications where small numbers of monitoring heads are required, or where making changes to the isolator HMI software is not practical, CAMS also provide a mini controller that can control multiple heads.



### *ISO-CON-MHC—multi-head*

## CLEAN AIR MONITORING SOLUTIONS

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