

Better Control for Biocontrol

The latest Rotronic Monitoring System installation with associated data loggers and HygroClip probes helps UK-based Bioline Agrosciences optimize its production of invertebrate biocontrol organisms software with ideal growth conditions, enhanced batch control and more responsive monitoring.

Bioline Agrosciences produces a wide range of invertebrate biocontrol organisms. Biocontrol organisms are used to control insect pests that can impact a wide variety of crops. Using this natural solution ensures better crop management, reduced pesticide use and does not result in resistance to chemical pesticides. From the humble ladybird to a <1 mm parasitic wasp Bioline grow and package these live organisms in innovative ways ensuring they are released controllably to do their work.

The Application

Just like humans invertebrates need ideal conditions to grow. Many of the Bioline pest control products must be developed, produced and stabilised at just the right stage of their life cycle. Controlling temperature and humidity is key. Bioline utilise over 30 growth chambers in the UK production site alone. Following successful production, the growth chambers must be sterilised to prevent cross contamination. The simplest way to achieve this is heat treatment-raising the chamber temperature for a fixed period.

The Challenge

Bioline found that they were lacking reliable monitoring information on the environmental conditions. Should a batch fail the first question would be, were the conditions suitable? They also needed to ensure that chambers were successfully sterilized at high temperature prior to the next production run. Manual checks were tedious and time consuming. A complex site with many workers meant that the system had to be simple, easy to use and reliable.

Robust probes for challenging applications

Invertebrate growth rooms are certainly not the most challenging location for humidity measurement, but they do come with inevitable challenging conditions that are



RMS controls humidity and temperature in the breeding of beneficial organisms, which are uniformly released in special bags for plant protection.

not ideal for modest humidity probes as standard. Dust, high humidity, wide temperature swings, cleaning fluids and sanitisers and rogue invertebrates themselves all present challenges for a humidity probe.

The Rotronic HygroClip combines a thin film humidity sensor, latest digital electronics, robust housing along with stringent manufacturing and factory calibration processes. All of which combines the accumulated 55+ years' experience that Rotronic has in developing solutions for industrial humidity measurements. The latest HC2A-S and HCD-S probe has a new sensor, improved filter design, updated electronics and a new housing that is fully potted. Long term testing in a wide range of applications both internally and with our customers show it is our most robust probe. Industrial versions including ATEX are available that can operate at temperatures up to 200 °C.





Useful organisms (ladybirds/slip wasps) bred in a controlled climate.

Project Overview

Like most RMS projects the project lead at Bioline needed confidence not simply in the hardware and software but also the complete delivery of the solution and on-going support. The system if used correctly would impact many staff and would be relied upon as an immutable record for the conditions during production, storage and sterilisation. By working closely with the customer and supplying a range of installation and IT services beyond the simple hardware and software ensured the project ran smoothly and quickly. On going support and training was never far away. Initial discussions made it clear that an on-premises model was preferred. However, Bioline IT quickly

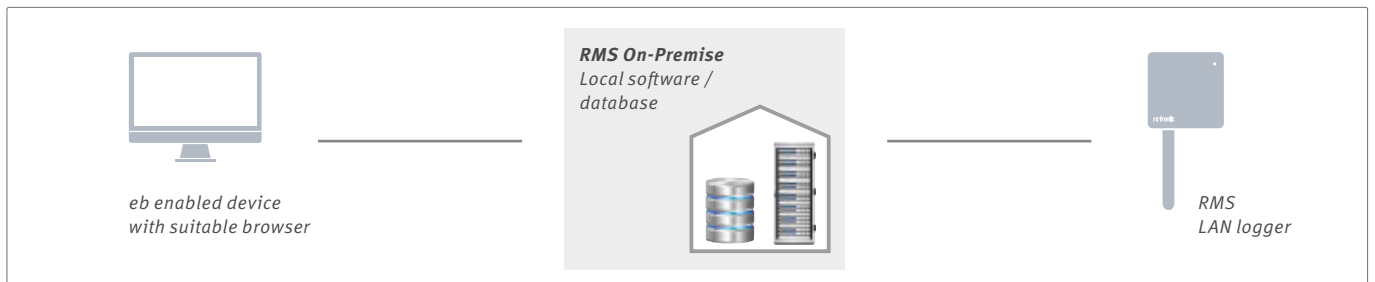


Clear, customisable layouts.

ensured the locally installed and managed RMS website was accessible from the internet so that key maintenance staff could review live alerts without having to visit the site out of hours.

«Thanks to the Rotronic Monitoring System, the tedious and time-consuming manual checks are no longer necessary.»

Irvine Wright, Bioline Agrosience, UK



Easy access to all RMS functions from any web-enabled device. Secure on-site installation. Robust LAN connectivity.

Rotronic Monitoring System RMS

rotronic.com/rms

- On premise or cloud software solution
- Support for Wired and Wireless data loggers
- No local end user software required just a web-browser
- Full historic record and summary reporting
- High accuracy and high frequency ambient temperature and humidity monitoring



Bioline Agrosiences

biolineagrosiences.com

- Over 30 biological invertebrates produced
- Suitable for several common crops
- Founded in 1979 in Britain's oldest recorded town
- Products available to target over 15 pests including Aphids, Caterpillars, Spider Mite and Whitefly
- Production sites in UK, France, Spain and USA

