

## **Munters provides absolute control of test conditions for sensitive probecards.**

When international household-name companies depend on your products to test their silicon chips, there is no margin for error in QA. So it is with East Kilbride-based Cerprobe Europe, who rely on Munters dehumidifiers to ensure optimum conditions in their analyser room and QA room.

Cerprobe Europe is the UK arm of an international company that manufactures probecards. These tiny PCBs are used to test silicon wafers for electrical resistance and current leakage. They contain minute needles which, at their tip, are just a thousandth of an inch thick, made to a tolerance of  $\pm 10$  per cent. The needles contact the aluminium connections on the wafer to test it.

They are supplied to the semiconductor industry for components used in computers, and in countless other industries including aerospace and automotive.

In such a situation, quality control must be absolute, and Munters desiccant dehumidification technology plays a critical role in this. When the products are manufactured they first go into an analyser room, where highly sensitive instruments costing half a million dollars each are calibrated to test them.

These instruments measure down to a 0.1 of a micron (1,000th of a millimetre) and carry out electrical tests to a resolution of  $10^{-9}$  amps. To ensure accurate results, temperature and humidity levels must be controlled at constant levels. Temperature variations would cause expansion, which would affect the measurements, and humidity would cause condensation on the boards, which would give a false reading indicating high leakage.

Following tests in the analyser room, the components pass to a QA room where they are given a visual inspection. The conditions in this area must be identical

to those in the analyser room, to ensure consistent results. Here, too, Munters dehumidifiers are used to ensure optimum conditions.

In the past, Cerprobe Europe had hired Munters dehumidifiers to control conditions, but when they planned to move into a new manufacturing unit, they chose to retain a consultant to design an advanced humidity and temperature control system. A refrigeration-based air conditioning solution was installed, but the results were most unsatisfactory.

The company's applications engineer, Alan Pellow, explained: "The new system just didn't meet the specification. We were aiming for a constant 40% relative humidity (RH) at 20 °C, but the temperature varied considerably and RH reached as high as 60%."

He contacted Munters who evaluated their needs and provided a desiccant dehumidifier for Cerprobe to use in trials. These proved highly successful and following more detailed consultation, two Munters MH 270 systems were installed - one in the analyser room, the other in the QA department.

These systems use Munters' advanced desiccant rotor technology, whereby moisture is extracted from air that passes through a slowly-revolving rotor coated with a desiccant material such as silica gel or lithium chloride. For Cerprobe, they were managed by temperature controllers and humidistats to ensure that conditions remain constant.

The system was commissioned in time for the move into the new premises in March last year and the results have delighted Alan Pellow. He expressed that in an e-mail to Munters in which he said:

"We have successfully installed the two units in our test rooms and are delighted with their performance. I would like to thank you for your prompt attention and assistance in determining our requirements and proving the equipment's performance.

"For the past few weeks we have monitored the humidity in our analyser room and it has never been out of control. On our chart recorder we see 'tramlines'."



## PRESSRELEASE

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Munters is the world leader in moisture control with products and services for dehumidification, humidification and cooling of air. Operations are divided into three geographic regions – Europe, the Americas and Asia. Manufacturing and sales are carried out via the Group's own companies in 25 countries. The Group has 1,936 employees. Munters is listed on the Stockholm Stock Exchange.