

Neuroscience Drug Discovery Company Uses Peristaltic Pumps in New Design

Value for life



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Mark Johnson
Managing Director
Scientifica Ltd

THE CHALLENGE

Scientifica Ltd, a specialist in micromanipulation, works with companies across the globe in the design and manufacture of drug testing and discovery units.

The company, based in Harpenden, focuses on a technique called electrophysiology, and has been commissioned by major pharmaceutical firms to provide tailor-made drug discovery systems.

At the beginning of the drug discovery process, compounds have to be screened to see if they have the desired effect on certain cells. An important part of this stage of discovery is the perfusion system, performing the role of dispensing the compounds onto cells to be tested. For this particular application, the control and management of drug flow requires a precise and reliable metering system that can handle the fluids involved without contamination occurring.

**WATSON
MARLOW** PUMPS
Bredel

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THE SOLUTION

Faced with this challenge, Scientifica Ltd turned to Watson-Marlow Bredel and the company's range of peristaltic pumps.

The three channel peristaltic pump now used by Scientifica uses manifold tubing in a wide variety of bore sizes and allows laboratory workers to alter the speed of perfusion to enable different drug solutions to flow at different specified rates. This is essential when handling drug concentrations that are hard to manipulate.

Because the fluid does not come into contact with the pump itself, problems associated with instrument contamination are also eliminated. As a result, cleaning of the pump internals is not required, this is particularly important when dealing with 'sticky drugs' that are difficult to remove.

THE OUTCOME

The perfusion application is a programmable computer-controlled valve management system, which can apply a potentially unlimited amount of agents onto a singular cell or group of cells. Using a series of two or three way pinch valves, which again have the benefit of non contamination, in conjunction with the peristaltic pump, ultimate fluid control can be achieved.

Mark Johnson, Managing Director of Scientifica Ltd talks about the product development: “When developing the drug discovery system we had to meet the highest of specifications. The perfusion system is a vital part of the process and needs a reliable pump at the heart of it.”

Commenting on pump choice, Mark added: “We looked at various peristaltic pumps but nothing could meet the standards of Watson-Marlow Bredel. Not only does the product work well, but the support from the team is also head and shoulders above other companies in the market place.”