Stepping up

for a hygenic and precise motion solution

The Wasp spiral plater, is controlled by a SmartDrive stepper system

Used extensively in the food industry to test for safe levels of bacteria, as well as in the pharmaceutical, cosmetics and water industries, the Wasp sprial plater was developed by Don Whitley Scientific.

The spiral plater method eliminates the need for serial dilutions, thus offering time, labour and material savings. To achieve these savings, while ensuring strict quality regulations, it is imperitive that controlof all motion axes is precise, including axis interpolation.

In the plater system, a stylus arm, with a stepper-driven syringe, has been used to dispense liquid samples in an archimedes spiral, either uniformly or as a continuosly decreasing volume across a stepper driven revolving plate. Pre-programmed options allow liquid samples in a variety of way, and self clean at the touch of a button.

For each Wasp platter, SmartDrive produced a 'black-box' sub system, designed jointly with the customer's machine development engineers, to provide the optimum integration and cost effective production.

A simple folded steel housing contains all the electronic parts, including torroidal transformers and EMC filtered IEC mains inlet, a 4-axis motion controller card and a 3-axis microstepping drive card. The cards are plugged into a backplane incorporating power-supply components with a drive for small DC servo and interfaces for the sensors.

A specially developed RS232 serial connected membrane keypad interface circuit board, which also carries LEDs to illuminate programme-selected key positions through the membrane, provides the operator interface to control the machine.