

AUTOSAMPLER S140

140 POSITION DUAL OR SINGLE PROBE SAMPLER



Introduction

The carousel sample changer S140 incorporates a spiral table configuration that allows for a 75% increase in sample numbers compared to the standard Burkard 80+ sampler but within the same small footprint.

Flexibility and reliability are the principles behind the sampler design. The sampler is micro-processor based and all electronic functions are achieved via the instrument keyboard or computer (optional). Sequence prompts during programming and sampling are indicated on a liquid crystal display. The various parameters include sample and wash times, numbers of samples set, and 'start' and 'end' cup/tube positions.

The processor has battery-backed memory into which details of the sample table and cup/tube sizes can be stored. The S140 tables accept a range of cup/tube sizes. Samples can be processed using the single, double or triple rows provided, and are programmable from the keyboard.

The sampler can be interfaced with the Burkard Microstream Data Processor allowing full automatic control. Connected to the Microstream and with the Random Access option, samples can be taken from a cup/tube in any position. This is ideal for re-analysis of samples and for placing calibration material in large sample pots in reserved areas of the sample table.

The sampler may be interfaced with any system such as the Burkard SFA2000, FIA2000 and SIA2000 Automatic Analysers. The S140 electronic autosampler is the ultimate in simple operation and represents a significant advance.

Sampling flexibility

The standard sampling capacity provides 140 places in a spiral configuration for unknowns, standards, drift controls, and blanks. The increased capacity of the S140 sampler now allows for greater efficiency of operation in that longer batches of samples can now be run. A close-fitting tray cover protects the samples from aerial contamination and reduces evaporation from the sample cups, an essential feature for long sample runs. A new probe pecking action may also be enabled to minimise carry-over.

The standard table is able to hold 0.5ml, 2ml or 4ml cups/tubes. Alternative table options are also offered. The batch may be increased during the run with the addition of more samples without interrupting the programme, a convenience facility that is available with the computer link or keypad.

Position 1 in the sampling cup line is selected by a home key and sensor which return the table rapidly and smoothly to the start position on completion of a run or whenever required by the operator. The programme also allows the operator to select both the start and finish cup numbers, to abort a run at any time via the keyboard or computer, or to set a plateau.

Integrated wash reservoir

The sampler has an integrated wash reservoir which is carried on the probe arm providing high speed washing of the probe tip to avoid carry-over. Unlike open wash reservoirs, the new reservoir is completely enclosed to avoid aerial contamination. The probe movement from sample to wash is closely controlled with programmable times for taking the optimised sample-wash separation bubble.

Automatic dilution and standards preparation

Combined with the automatic system switch on/off capability of the Series 2000 systems, overnight unattended running is now significantly extended. The sampler is designed to complement the AMD2000 automatic dilutor and standards preparation unit which automatically creates a range of standards from a single working standard as well as creating all drift and blank controls. This leaves the new sampler holding just the unknown samples as there is no need to occupy cup positions with standards, drift controls and blanks.

This combination increases the capacity to 140 actual samples as well as providing the automatic dilution of samples known to be overrange by a factor of up to 1:500.

Safety

The S140 electronic autosampler has been designed for safety. In case of any accidental loss of liquid a plastic spillage tray located beneath the sample cups/tubes seals off the electronic circuitry and a waste pipe passes the liquid out to the rear of the instrument.

Standard Table Capacities

- 140 x 4ml Sample cup
- 60 x 10ml PS Tube
- 140 x 4ml PS Tube
- 40 x 35ml PP or PS Pot
- Special table layouts to order

Mechanical Specification

Model type	S140 electronic carousel
Preset timing	Sample and wash up to 999 secs
Sample cup/tube size	Up to 10ml capacity
Maximum table capacity	Up to 140
Cup size	Up to 35 ml capacity
Probe size (maximum 2)	0.036", 0.047", 0.062" (collet retention)
Programmable keypad entry	Displayed (LCD)
Computer interface	Battery backed memory
Mains voltage	100/240v 50-60Hz
Net weight	9kg
Packed weight	14kg
Overall dimensions	15.5" (L) x 13" (H) x 8" (W) (394mm x 330mm x 23mm)

Ordering Information

Product Code	Description
BS02611	Autosampler S140

The S140 and AMD2000 are available as an OEM option for other instruments manufacturers needing high capacity sampling with automatic standardisation. The company reserves the right to make changes to the specification without notice.

