

# AS8000

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Liquid Handling

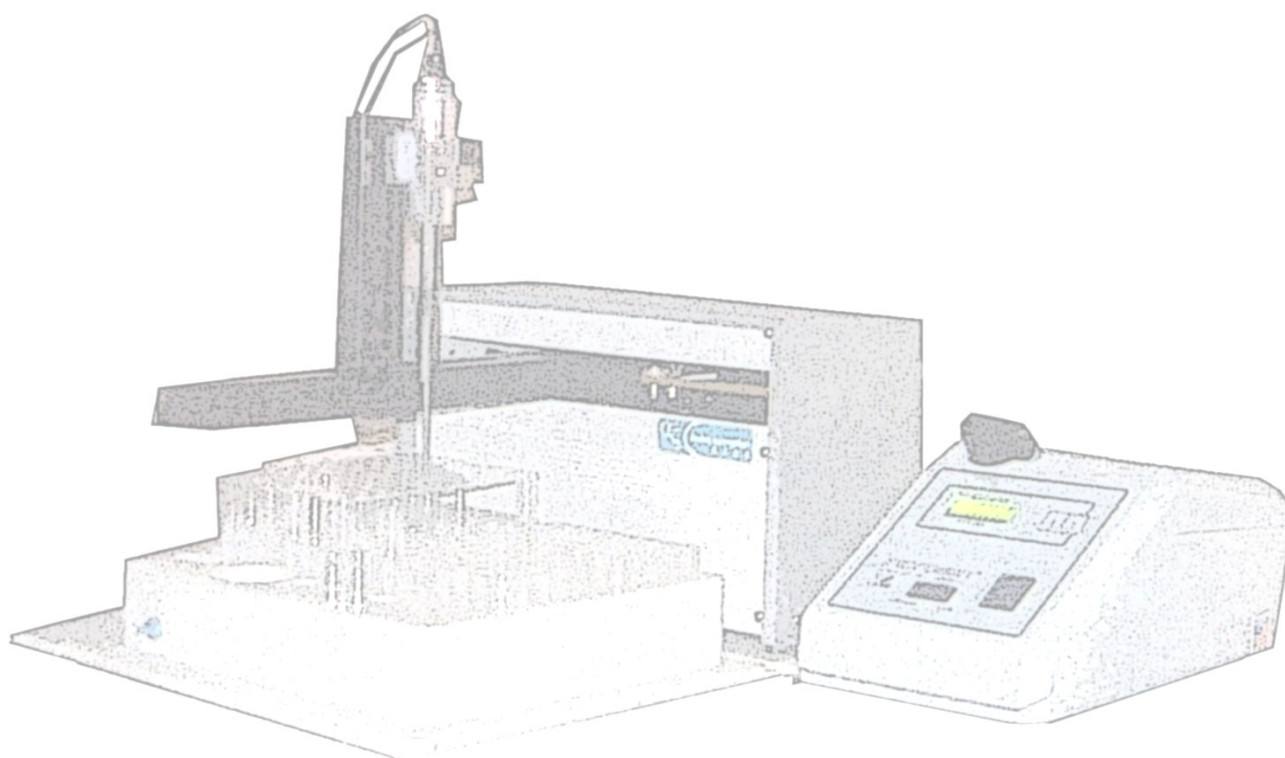
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Sample Introduction

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Analysis Automation

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## **Random Access XYZ Autosampler**

***Flexible, Reliable and Cost-effective***



***The AS8000 XYZ Autosampler provides a robust and reliable design at a very competitive price***

- ✚ Gilson™ reliability for half the price
- ✚ Can be supplied in your own livery
- ✚ XYZ random access capability
- ✚ Serial port control from immediate commands or from routines held in buffer
- ✚ Flexible rack configuration within a platform area of 750cm<sup>2</sup>
- ✚ Fast – up to 20 cm/sec
- ✚ Metal abrasion kept to a minimum
- ✚ Software support for integration with a variety of OEM applications
- ✚ Low-jolt trapezoid movements
- ✚ Syringe pumps and peristaltic pumps can be integrated

## Quality

Made in Cambridge, one of Europe's foremost technology centres, the 8000 series autosampler has been designed specifically for the OEM market as a robust, reliable yet low cost liquid handler.

It is controlled through a standard RS232 serial port and incorporates quality motors and control electronics, uses timing belt drives on each axis and quality servomotors and digital encoders.

This, coupled with its tightly toleranced engineering, makes it one of the smoothest running, low noise, yet low cost liquid handlers on the market.

## Flexibility

Apart from price, the real benefit for the OEM customer is flexibility.

With our in-house software support the autosampler routines can be varied by you (or us) to suit your particular methods. Vial sizes, tray sizes, needle assemblies, the rinse station, rinse routines and additional sample components can be configured to suit your preferences.

Subject to batch size, the livery used can be as specified by the customer, or if other changes are required, for example the standard arm reach needs to be altered, this can be done.

## Low-jolt

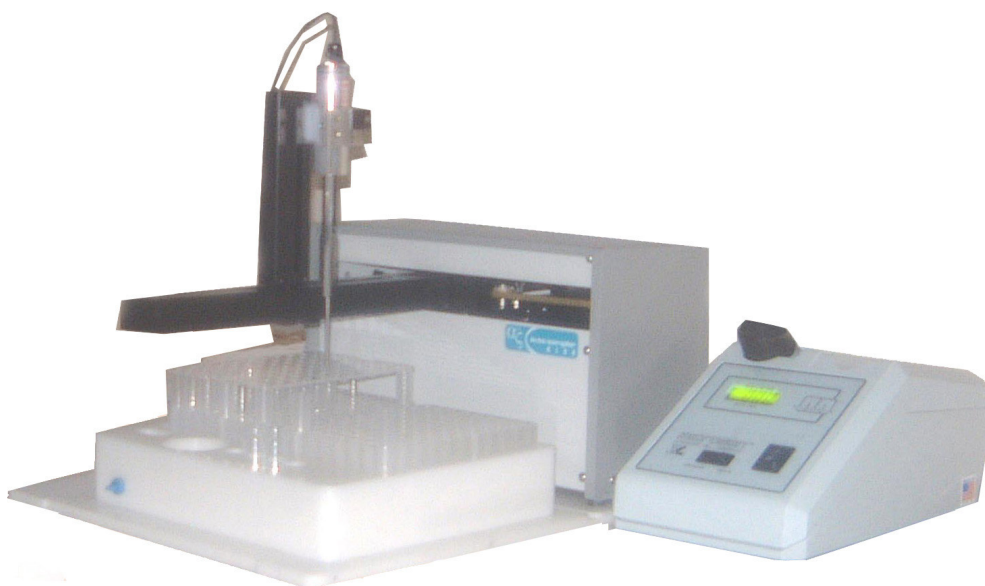
Unlike many samplers, the velocity profile is trapezoid on every axis and includes acceleration at the beginning of the movement and also end-of-travel deceleration, all of which is designed to minimize jolting.

To reduce contamination on ultra-low level analysis, metal abrasion is kept to a minimum by using the latest polymer bearings.

## Liquid Pumping

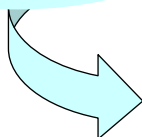
Pumping systems can be integrated into the Model 8000 Sampler. Standard options are either a syringe or peristaltic pump and are incorporated into the Sampler casing and power supply.

This allows the 8000 series autosampler to be used as part of an analytical suite or as a stand-alone instrument for general laboratory liquid handling applications.



With its precise probe positioning and fast sample delivery the 8000 OEM autosampler is a truly high-throughput workhorse.

User friendly Windows™ platform software allows the AS8000 to be set up for different vial rack geometries and methods.



Analytical Sciences can provide software packages to integrate the AS8000 with a main analyser

## Model 8000 Sampler

<b>Working Area</b>	
X Dimension	400 with syringe pump
Y Dimension	242
Z Dimension	120 (or 180 long arm)
<b>Dimensions(mm)</b>	
Width	527
Depth (Y axis)	156 (490 with arm)
Height (Z axis)	221 (358 with arm)
Weight	10 kg
<b>Arm Speeds</b>	
Horizontal (X/Y)	0.1-20.0 cm/sec
Vertical	0.1- 8.1 cm/sec
<b>Accuracy(mm)</b>	
Horizontal (XY)	<0.3
Vertical	<0.5
<b>Positioning precision(mm)</b>	
Horizontal (XY)	<0.1
Vertical	<0.2
<b>Septum Piercing Force</b>	>4 kg
<b>Syringe Sizes (µl)</b>	25, 50, 100, 250, 500, 1000, 2500, 5000, 10ml
<b>Computer Interface</b>	RS232 Serial
<b>Power</b>	24 Volts DC @ 2.0 Amps 2,5 mm (0.1") centre pin Mains Adaptor

## Model 2000 Single Channel Syringe Pump

<b>Syringe Volume</b>	25 µl to 10 ml
Injection Volumes from	2 µl
Accuracy	<1%
Precision	<0.01%
Resolution	2000 steps @ 60µm
Syringe Speed	Max 1 second full stroke
Valve Speed	¼ to ½ second switch
Valve	Teflon & Kel-F 3-way
<b>Power</b>	
Syringe drive	1.10 amp @ 24 VDC
Valve Drive	0.95 amp @ 24 VDC
Sensor	5 VDC optical (totem pole output )

The zero backlash mechanism of this pump allows greater speed, less syringe wear and no need for backlash compensating programming. It is compatible with clinical diagnostic industry standard syringes and controllers and is also available with an inert valve and interconnect components to make it compatible with standard diagnostic fluids and reagents.

## Model 3000 Four Channel Peristaltic Pump

<b>Syringe Volume</b>	25 µl to 10 ml
Gear Ratios	100:1 or 60:1
Rotation speeds	min 5 to 80 rpm
Flow rates (ml/min)	max 1.75 to 28
Pump Rollers	8
Tubing type	3-stop collared
Tubing i.d	0.13–3.17mm
Cassettes	MS/CA, POM

The above peristaltic pump is used as standard. However, most pumping systems can, subject to batch sizes/dimensions etc., be incorporated into the sampler.

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