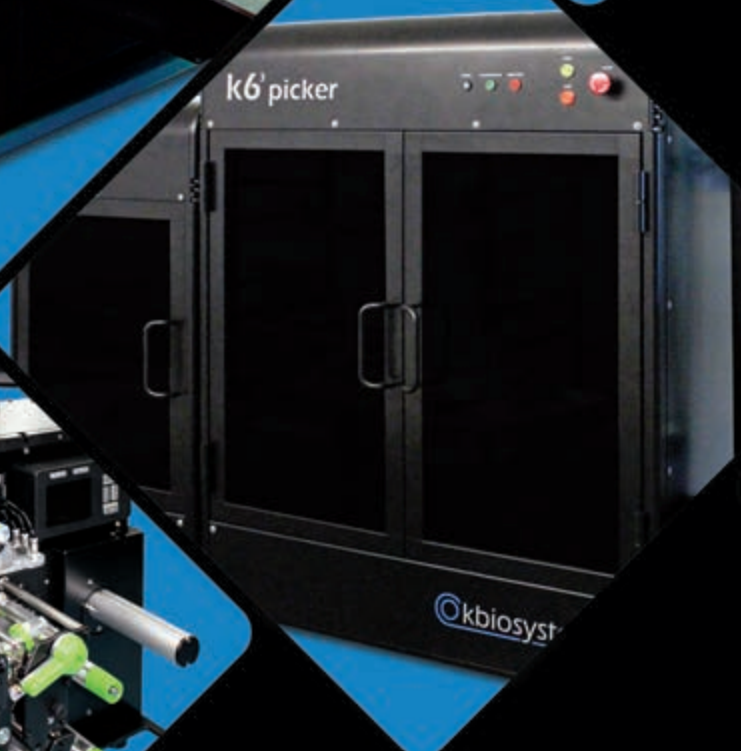




Automated laboratory solutions



kbiosystems

kbiosystems has established itself as a leading global designer and manufacturer of robust, innovative robotic automation solutions to the life sciences Industry.

Our flexible approach has seen our client portfolio increase significantly since our inception in 1987 and we are committed to bringing an after-sales service that is regarded as one of the best. Our team have a breadth of knowledge and expertise that enables us to follow the full cycle of our products from concept design, software, electrical and mechanical engineering through to final manufacture and installation.

As well as providing off-the-shelf innovative small benchtop laboratory automation instruments, we specialise in custom automation for all industries, plate and tube sealing technology, barcode printing and application systems, colony picking instrumentation, thermal cyclers, software solutions and the OEM supply of custom design and manufactured products.



Scorpion Stackers / Plate Handling systems

The Scorpion Plate Handling Series is ideal for laboratories requiring reliable, consistent automated plate and tube handling.



- ◆ The Scorpion comes in 4 standard formats. These are standard left or right feed, offering side placement from plate centre to plate centre of a maximum arc to 280mm or the extended version (XT), left or right feed, offering side placement from plate centre to plate centre of a maximum arc to 342mm
- ◆ Integrator friendly, for use with any other plate handling device
- ◆ Plates are handled in portrait format allowing the use of non-lidded and lidded plates
- ◆ Offering complete versatility, the Scorpion works with a wide range of plates, tube racks and custom application shallow and deep well formats
- ◆ Plate restack option allows the user to feed and retrieve plates from a secondary piece of equipment
- ◆ Plates can be reprocessed internally, into their original line format
- ◆ With the addition of the lid removal upgrade, the Scorpion can remove the plate lid prior to placement on the liquid dispensing system, helping decrease possible contamination issues



eSeal

Fully automated microplate and tube rack sealer

The eSeal is an automated heat-applied microplate and tube rack sealer. The unit uses a roll of surface modified aluminium or plastic film approximately 78mm wide and 600mm long. The roll is positioned to the rear of the sealing section via a removeable stand.

Using a total inline method, the film is

pulled through the main unit, cut to between 116mm and 128mm in length, and then applied to the plate top surface to create the seal between plate and film.



KEY FEATURES

- ◆ All-electric operation, removing the risk of cross-contamination inherent in compressed air powered sealers
- ◆ No need for expensive compressed air supply
- ◆ Intuitive touchscreen user interface
- ◆ Variable foil length – 115mm-128mm
- ◆ Closed-loop seal force monitoring and control system; use of force sensors allows dynamic feedback during entire sealing process to ensure homogenous sealing
- ◆ Sealing force tolerance allows the force applied to be defined within the software
- ◆ Preset user macros for sealing
- ◆ Tool-free foil loading; gas permeable films can be processed
- ◆ Automatically compensates for plate heights
- ◆ Integrator friendly design
- ◆ User-controlled variable seal time and pressures via screen or comm
- ◆ Simple set up
- ◆ Quieter than conventional pneumatically driven units
- ◆ Quick change maintenance modules for fast service response

e-Fly 2

Semi-automated microplate and tube rack sealer

The e-Fly 2 is a semi-automated heat-applied microplate and tube rack sealer. The unit uses pre-cut sheets of surface modified aluminium or plastic film approximately 78mm wide and 130mm in length, which is then applied to the plate top surface to create the seal between plate

and film. The sheets are manually placed upon the plate surface and a draw section pushed closed to actuate the sealing plate and apply a monitored time and temperature sealing action.



KEY FEATURES

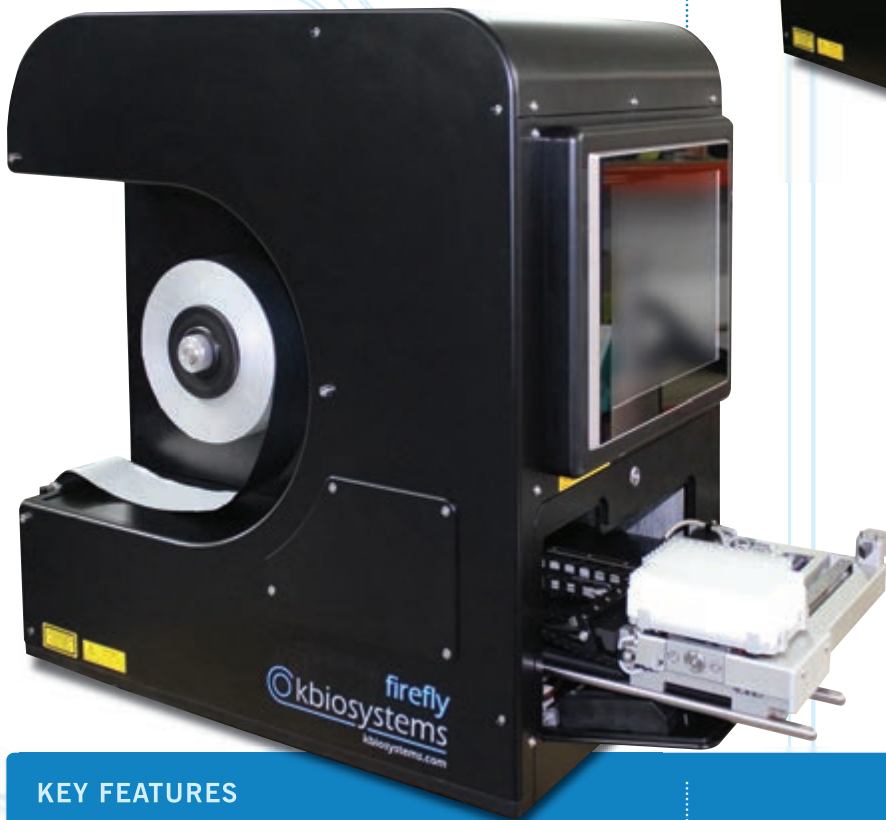
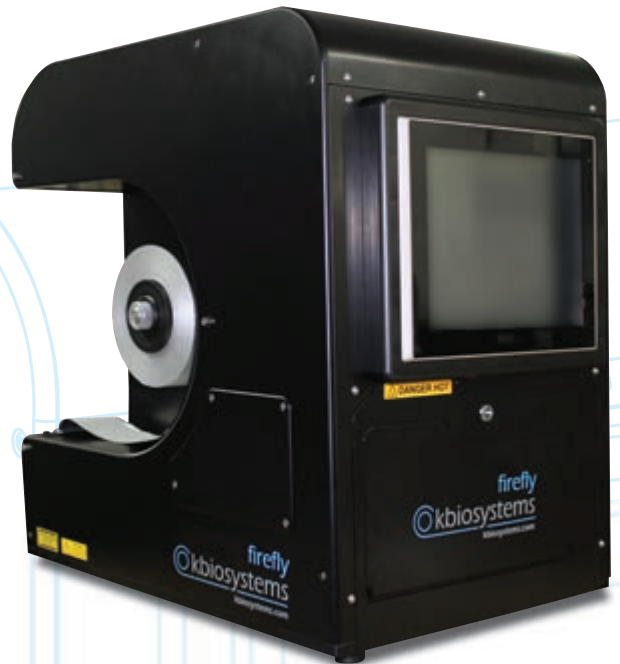
- ◆ Desktop semi-automatic heat-applied plate sealing system
- ◆ Seal SBS format micro-well plates
- ◆ Seal plate height with no adjustment from 9-48mm high
- ◆ Temperature range from ambient to 200°C
- ◆ Seal time from 0.1 – 9.9 seconds
- ◆ Simple slide operation
- ◆ Automatic eject when timed seal completed
- ◆ Combined temperature and seal time display
- ◆ Lightweight system only 6kgs (14lbs)
- ◆ 110/220 vac power compatible
- ◆ No compressed air required

Firefly

Desktop automated heat sealer and laser cutting platform

The FireFly uses a fiber laser to generate a beam using a core laser source and amplify it in specially designed glass fibers, supplied with energy via pump diodes. With a wavelength of 1.064 micrometres, the beam produces an extremely small focal diameter, making the intensity up to 100 times greater than conventional CO₂ lasers.

The FireFly is highly suited for metal cutting, or marking metal or light range absorbent materials for high-contrast plastic marking or cutting. The unit is maintenance-free, and promises a long service life of at least 25,000 laser hours.



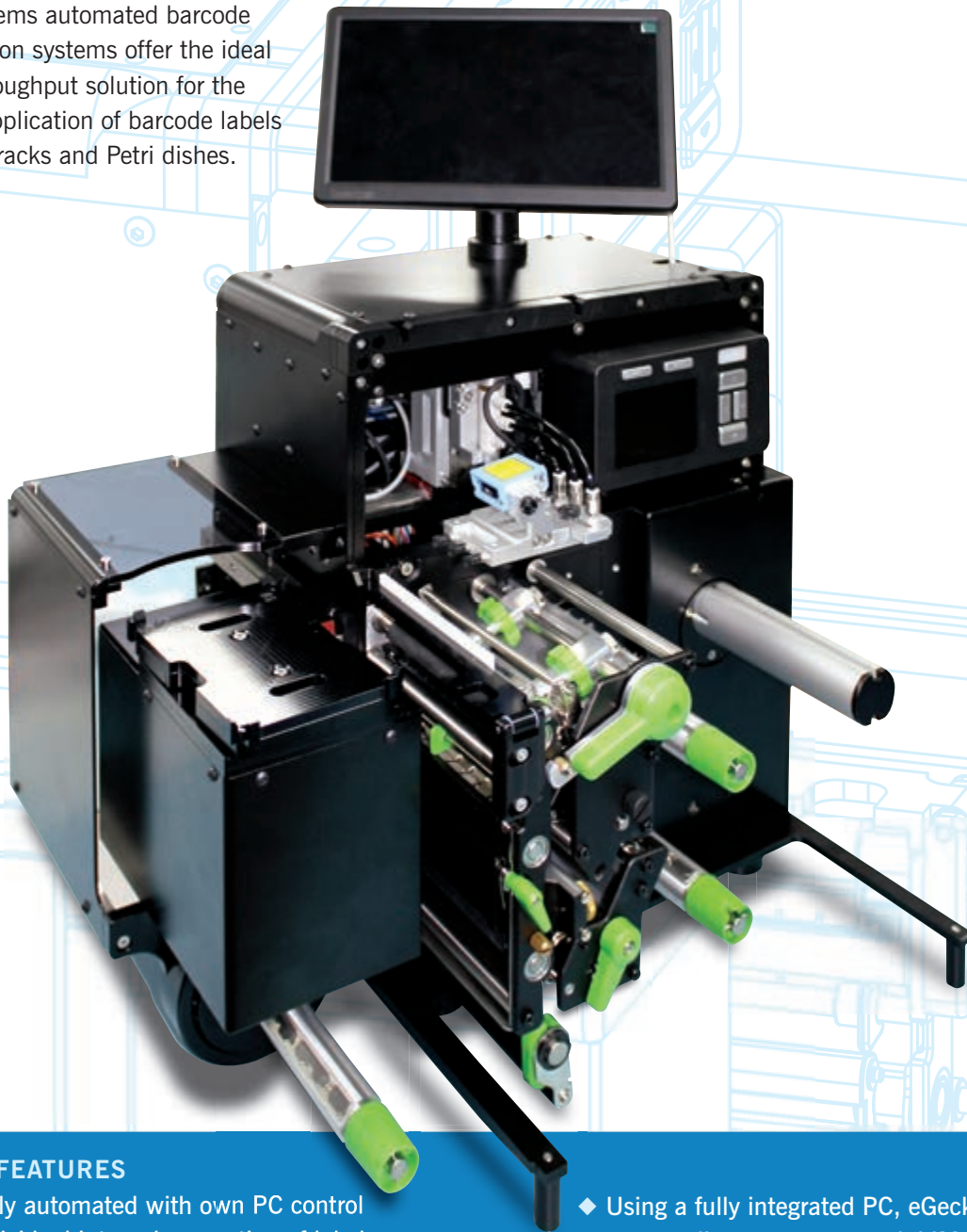
KEY FEATURES

- ◆ Designed for SBS format tube racks
- ◆ Custom applications and cut profiles upon request
- ◆ Plates/tube racks can be pre-scored leaving minimal seal thickness to reduce tip/probe piercing pressures
- ◆ Tubes can be individualised to allow random access in any format, also allowing seal or cut only processing
- ◆ Plate/tube rack heights with no adjustment from 7mm to 48mm high
- ◆ Seal pierce operational compliant, allows plates to be stored fully sealed then pre-pierced to reduce tip damage
- ◆ Auto plate/rack present sensing
- ◆ Foil present sensing
- ◆ Low air sensing
- ◆ Inbuilt touch panel PC-based GUI controlled
- ◆ Stacker compatible with kbiosystems Scorpion stacker for increased throughput
- ◆ Integrator friendly
- ◆ Plate density independent, 96, 384, 1536, 3456 and higher
- ◆ Plates can be resealed and then re-pierced multiple times
- ◆ Minimal heat transfer from laser
- ◆ Uses latest fibre laser technology for long process life
- ◆ Extraction port if required, fitted to system top

eGecko

Automated barcode application system

kbiosystems automated barcode application systems offer the ideal high throughput solution for the single application of barcode labels to plate racks and Petri dishes.



KEY FEATURES

- ◆ Fully automated with own PC control
- ◆ Individual internal generation of labels
- ◆ Works directly with OEM label creation software via application card
- ◆ Individual programmable macros stored in PC
- ◆ Uses robust and proven label print engines
- ◆ A completely integrated combined printer and application unit in one, with only the need for an electrical supply
- ◆ Easy-swap head offers the ability to apply labels to flat and curved surfaces with one simple change
- ◆ Using Z-axis motion offers integrators the ultimate applicator
- ◆ Using a fully integrated PC, eGecko allows you to connect live to your network LIMs system to allow data transfer and validation of the application label
- ◆ Using the on-board optional verification mode, you can print and verify all labels to ensure no unreadable labels enter your work flow
- ◆ No need to adjust between plate types and label position, simply call the application macro and apply the label allowing the use of ultra-shallow to deep well blocks, Petri dishes to multi labels, per face
- ◆ The Z-axis drive also allows for the movement and verification of labels as opposed to a static single-try barcode reader

Colony Pickers

kbiosystems' automated colony picking systems offer automation to laboratories requiring a reliable, consistent identification and extraction system for sample recovery.

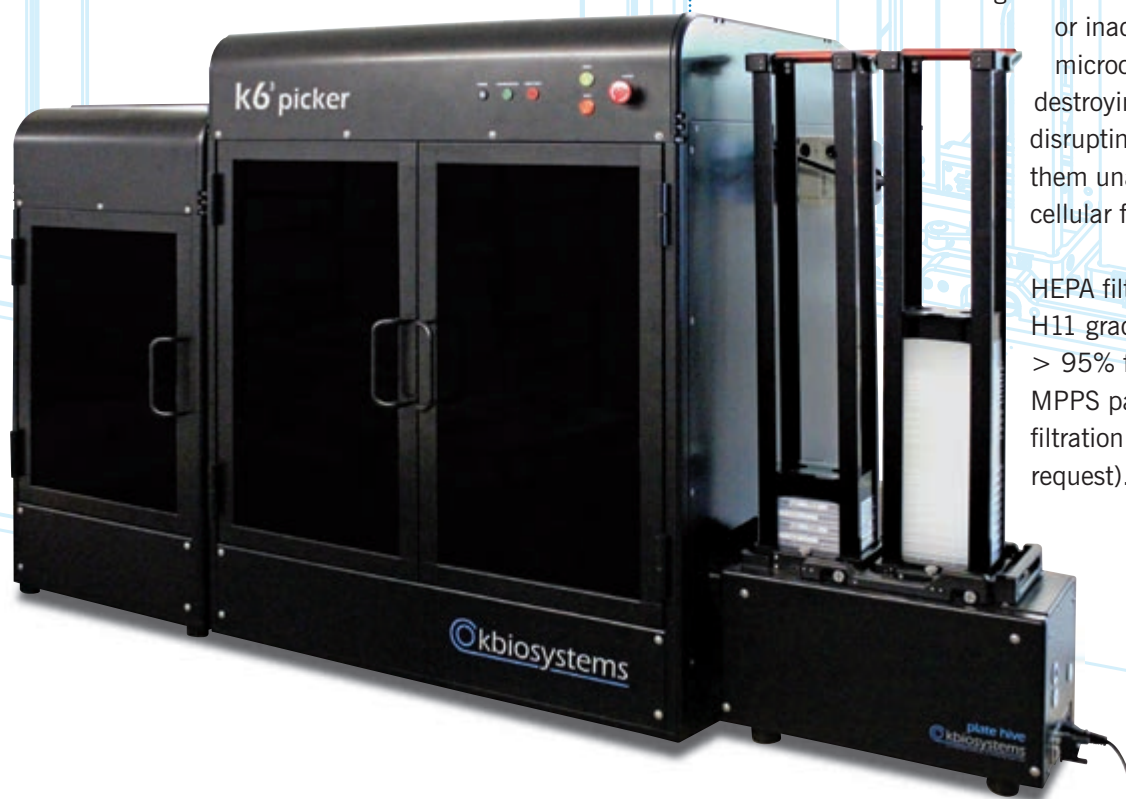
Offering complete versatility, the K Series pickers will work with a wide range of plates for both source and destination, including microplates in 96, 384, shallow and deep well formats, Petri dishes from 4 to 15cms, Omni-style trays, multi-well growth plates and bio assay trays.

- ◆ The modular systems allow capacity to be easily increased with simple upgrades to source and destination capacities.
- ◆ kbiosystems K colony pickers vary in size and throughput ability, offering the user the ability to step up from hand picking to first stage automation, or low throughput production style systems

- ◆ Picking accuracy in excess of 98.5%
- ◆ Use of different pin types allows transfer volumes to be defined
- ◆ All pins are manufactured in 316 stainless steel for ease of cleaning and longevity.
- ◆ System drive has full positional feedback to improve accuracy and speed
- ◆ Imaging is carried out via a USB3 camera system allowing the software algorithms to detect monochromatic scale for standard picking and optional colour differential between emitting organisms if required
- ◆ By fitting optional fibre optic fluorescent excitation light source and emission camera filters, multiple dye ranges can be visualised.

All systems are supplied with ultraviolet germicidal irradiation (UVGI). UVGI is a disinfection method that uses short-wavelength ultraviolet (UV-C) light to kill or inactivate microorganisms by destroying nucleic acids and disrupting their DNA, leaving them unable to perform vital cellular functions.

HEPA filtration, our standard H11 grade filter, offers > 95% filtration against MPPS particles, (higher filtration levels available on request).



 **kbiosystems**
automating today for a changing tomorrow

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