

R29 Series

Semi-automatic printer with vision



R29 Series

Semi-automatic solder paste screen printer

Overview:

The all new **R29 series** of screen printers bring major advances in the technology and functionality of mid-range stand-alone solder paste printers. Providing features and user benefits previously only found in more expensive SMT printers, the **R29 series** delivers unrivalled performance at affordable prices.

An easy-to-use Windows™ based interface combined with state-of-the-art microcontroller based servo electronics, provides precise repeatable control of all printer functions.

High accuracy, fine pitch printing is achievable with the easy-to-use vision system which along with the low running costs and outstanding reliability make the **R29 series** of printers the ideal choice for a wide range of production environments.

Features at a glance:

- 29" standard frame – universal adaptor available for different frames sizes
- Easy-to-use twin camera vision system with digital zoom for ultra-fine pitch printing
- Closed loop servo motion control
- Dual, self-levelling squeegee print carriage
- Automatic stencil frame positioning and clamping
- Vertical motion profile for stencil/PCB separation
- Interlocks incorporated for safe operation
- Comprehensive product and machine statistics
- *Optional under stencil cleaner* – fully programmable with wet & dry clean modes and vacuum assist

Easy to operate:

All functions of the **R29 Series** can be controlled via the custom written Windows™ based interface. Operators need no special expertise and minimal training. Using the unique button-driven cursor, this user-friendly program allows easy access to the extensive feature set:

- Fully programmable print parameters including the vertical motion profile for stencil/PCB separation, so critical in fine pitch and hybrid circuit applications
- Unlimited product data storage
- Backup of product file database to disc or network
- Product setup wizard for fast, reliable product configuration
- User password access protection
- Extensive built-in diagnostics
- Comprehensive product and machine statistics
- Select between imperial and metric measuring units
- Alternative language options available



MENU-DRIVEN
CONTROL
FEATURES



Simple, low cost maintenance:

From inception, the **R29 Series** has been designed for minimal maintenance. The print carriage with its ball screw drive system and quality bearings require virtually no maintenance. Lateral and vertical worktable movement also uses hardwearing, precision linear bearings. Protection is provided to moving parts to minimise contamination from paste and other debris. The on-board computer, electronic and pneumatic control units are easily accessible from the front of the machine allowing fast module replacement. A dedicated maintenance menu is provided within the user interface program to further reduce downtime and expense.



Absolute precision:

Exceptional printing accuracy, quality and repeatability are achieved using a dedicated state-of-the-art motor control system combined with a robust, precise mechanical structure and a simple-to-use yet highly sophisticated vision alignment system. The print carriage moves on hard-wearing, high-precision linear bearings. A fixed print head structure secured in all four corners combined with self-levelling squeegee holders provide exceptional printing results. Pinpoint alignment is achieved using the vision system in combination with micrometers for X, Y and radial adjustment of the worktable.

Servo motor control of the worktable and print carriage, coupled with the independently programmable dual squeegee mechanism ensures unbeatable printing every time.

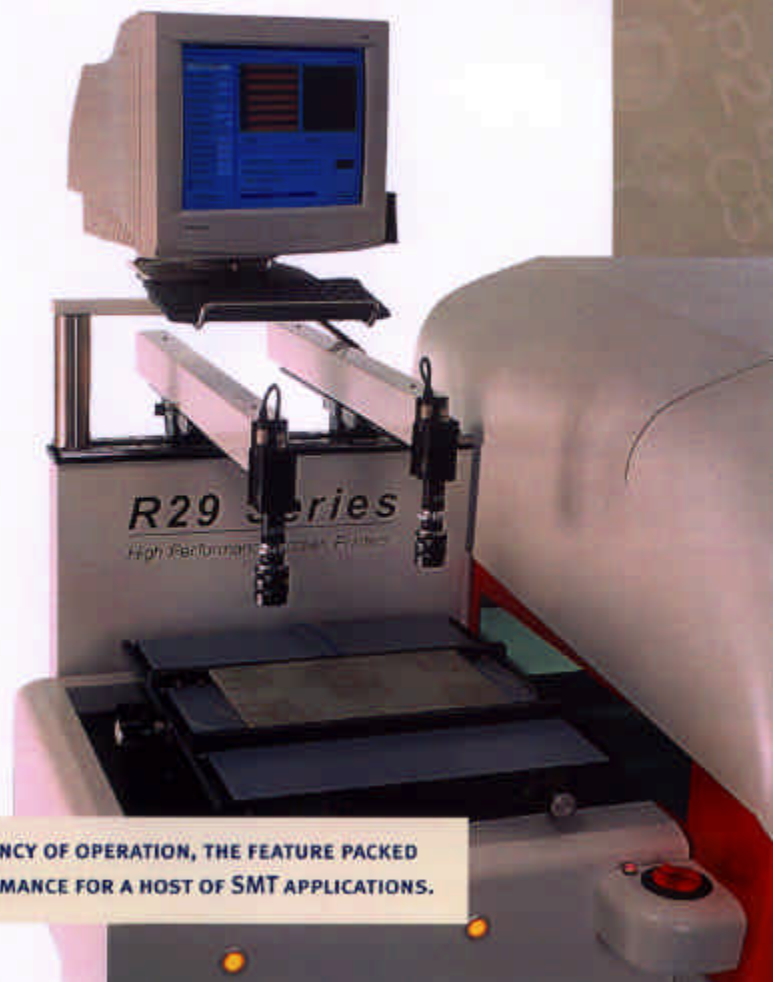
Post print snap-off speed and distance, so critical in fine pitch and hybrid applications is easily programmable and accurately controlled by the **R29 Series** printer.

Vision system:

The **R29 Series** twin camera vision system is the most advanced, yet simplest-to-use in its class. With an all-new easy glide pneumatically operated camera positioning system, printer vision has never been so easy to use.

System highlights include:

- Intuitive point and click set-up
- Digital zoom facility for ultra-fine pitch printing
- Four types of image overlay to choose from
- Programmable print tolerance
- Print inhibit feature assures quality printing
- Selective paste inspection
- **R29-S** version available without vision system



DESIGNED FOR REPEATABILITY, HIGH YIELD AND CONSISTENCY OF OPERATION, THE FEATURE PACKED **R29 Series** OF PRINTERS DELIVERS UNSURPASSED PERFORMANCE FOR A HOST OF SMT APPLICATIONS.



TECHNICAL SPECIFICATION

Maximum board size	800 x 560mm
Minimum board size	50 x 25mm
Maximum board weight	5Kg
Maximum board thickness	10mm
Maximum underside clearance	20mm
Minimum board edge clearance	Zero
Registration repeatability	± 10 microns
Print area	515 x 470mm
Printing modes	Print/Print, Print/Flood, Flood/Print, 1 or 2 deposits. Others available on request.
Stencil frame size	735 x 735mm (external) – 29 inches
Stencil frame adapters	Available up to maximum stencil frame dimensions
Stencil location	Auto stencil positioning and clamping
X/Y stencil alignment range	± 10mm
Radial stencil alignment range	± 4°
Squeegee type	Metal or polyurethane
Squeegee widths	75 – 620mm
Squeegee pressure	0 – 20Kg (0.1Kg increments)
Print speed	5 – 200mm/sec (1mm/sec increments)
Snap-off speed	0.3 – 20mm/sec (0.1mm/sec increments)
Print gap	Up to 25mm depending on tooling
Tooling posts	2 – 20mm diameter
Throughput time	Typically 10 seconds excluding print time
Board file storage	Limited only by available hard disk capacity
Power supply	90 – 240V, 50/60Hz, 400W
Internal power supply	12 & 24V d.c.
Air supply	5 bars clean air
User Interface	Microsoft® Windows™ – Language options available
Interface control	Unique button-driven cursor and keyboard
Vision system:	
Image overlays	4 types, Boundary, whole image, crosshairs and ellipse/circles
Fiducials	Pads or standard fiducials
Ultra fine pitch	0.3mm or less
Digital zoom facility	Yes
Options:	
Under Screen cleaner	Wet/dry modes with optional vacuum assist

DISTRIBUTOR

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