



PACIFIC TRINETICS  
CORPORATION

# PTC SCREEN PRINTER



- Servo Driven Squeegee Drive
- Servo Driven Z axis
- Manual X, Y,  $\theta$  Stage Alignment
- Pneumatic Screen Frame Clamp

# PTC RT Series Screen Printer

The RT08001/06001 universal screen printing machine is designed and manufactured for today's high-precision printing needs on ceramic substrates as well as green ceramic sheets. The most advanced motion control system is combined with proprietary control and UI software to ensure accurate and precision prints every cycle. The RT Series has user-selectable one-way and two-way printing functions for increased process flexibility.

The RT08001/06001 has a servo-driven squeegee and a servo-driven "Z" axis adjustment. This allows squeegee speed, squeegee lift and end points, and screen snap off to be computer programed and adjusted through the GUI.

Machine setup is easy. Simple printing registration adjustment and locking is easily done once the workpiece, held by vacuum on the printing stage, moves under the print screen. Mechanical alignment accuracy is maintained at  $\pm 0.005\text{mm}$  while the relative parallelism between the screen and the workpiece is precisely adjusted by the servo motor driving the printing platform for precise lifting and lowering based on user-selected parameters. As the servo-driven squeegee travels back and forth over the screen, the squeegee pushes the paste through the open areas of the mesh onto the workpiece.

A double squeegee mechanism allows a secondary printing. Precise pressure control is used to ensure high precision fine line printing. A coarse and fine adjustment is available to achieve highest quality of pressure precision.

## FEATURES OVERVIEW

- Servo Driven Squeegee Drive
- Servo Driven Z axis
- Manual X, Y,  $\theta$  Stage Alignment
- Pneumatic Screen Frame Clamp
- Graphical User Interface
- Computer Control System w/Setup Recipe Save and Restore



RT Series Printer

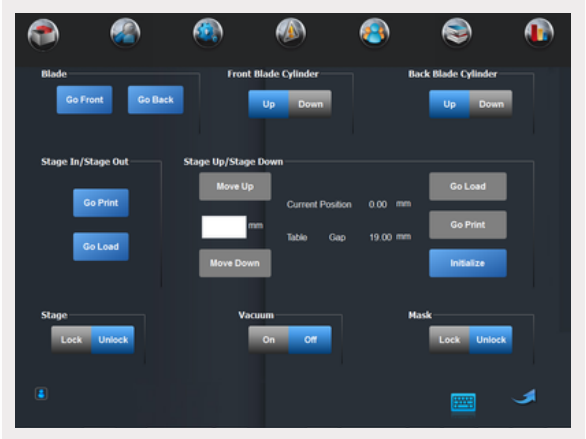
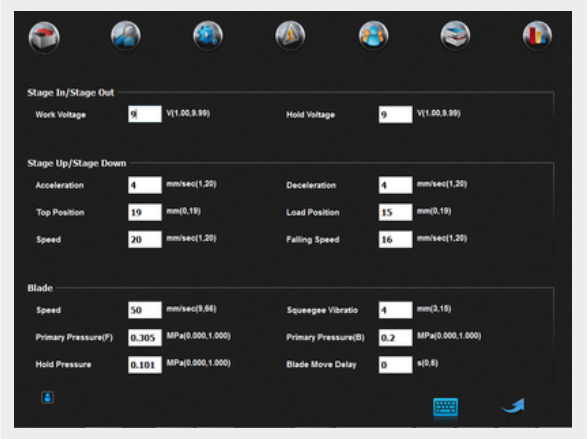
# SPECIFICATIONS

Maximum printing area:	210mm x 210mm
Screen Frame Dimensions (OD, ID):	450mm x 450mm x 25mm
X, Y and $\theta$ adjustment range:	X, Y axes $\pm 5\text{mm}$ $\theta \pm 5^\circ$
Repeated positioning accuracy of worktable:	$\pm 0.005\text{mm}$
Travel speed of printing stage:	0 ~ 100 mm/s
Squeegee speed:	0 ~ 250mm/s
Squeegee pressure:	0 ~ 12 Kg
Squeegee Stroke:	
Graphic camera alignment system:	Two-way CCD, cross-hair center-point alignment, an adjustable brightness LED upper lighting
Recognizable positioning marks:	Printed crosshairs, micro-holes and other precision marks
Positioning adjustment method:	Manually adjust the worktable to move the registration mark in three directions to align with the visual mark
Control system:	Industrial computer & LCD monitor
Operating system:	Windows
Operating software:	PTC special printing machine software
Motor control system:	Direct drive servo-driven squeegee and stage
Left and right camera position adjustment:	Manual adjustment
Screen fixing method:	Four-point compression lock at the top and adjustable support point at the bottom
Printing Stage:	Porous stone precision vacuum table. Flatness 0.05mm
Squeegee:	Special double-edged linear profiled scraper, which can be re-grinded and repaired.
Clamping system:	Pneumatic
Squeegee printing pressure:	Pneumatic backpressure self-balancing floating mechanism. Digital pressure display
The scraper is equivalent to the straightness of the worktable:	The center axis support swing adaptive mode
Movement speed of scraper and worktable:	Printing program setting method
Printing mode:	One, Two or Multiple-way printing
Slurry spreading method:	Metal hanging board, the same as the adjustment method of scraper

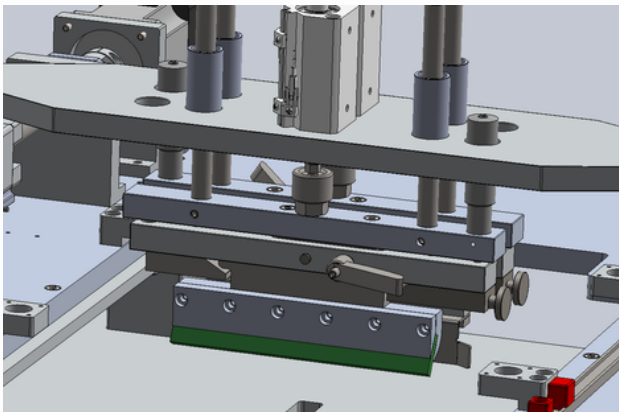
# DEVICE CONFIGURATION

Item	Description	Model/specification and description
1	Computer & Display System	Industrial Computer LCD Screen, Keyboard & mouse
2	Operation System	Windows
3	RT series printing machine special process operation program software	The printing process parameters can be edited and set arbitrarily (within the specified range). With alarm and fault prompt functions. All operating process procedures can be saved.
4	Programmable independent motion control system and operating software	High-precision AC servo motors, motor controllers and encoders.
5	Camera alignment system	Two CCD cameras cooperate with the translational and rotatable slide table to realize the alignment of manual printing marks. The positions of the two CCD cameras can be adjusted independently.
6	Lighting system	LED lighting system. Adjust the brightness of the lighting by adjusting the brightness knob of the lighting control box. The position of the LED can be changed according to the needs, and the lighting angle can be adjusted.
7	Vacuum Stage System (8")	The high-precision porous stone vacuum stage ensures that the printed piece will not be displaced during the printing process. The printed thickness is uniform.
8	Squeegee (8")	Special urethane rubber double-edged linear molding scraper, which can be re-grinded and repaired
9	Scraper, hanging board clamping system	Fast loading and unloading online clamping method
10	Power	220VAC, 1 Ph, 50/60Hz
11	Vacuum System Compressed Air	Vacuum Generator (PIAB) 0.7Mpa 300NL/min
12	Safety Protection System	Electrical interlocking safety protection buttons
13	Frame	Metal body and shell
14	Operation manual, circuit, pneumatic diagram	Provided after purchase

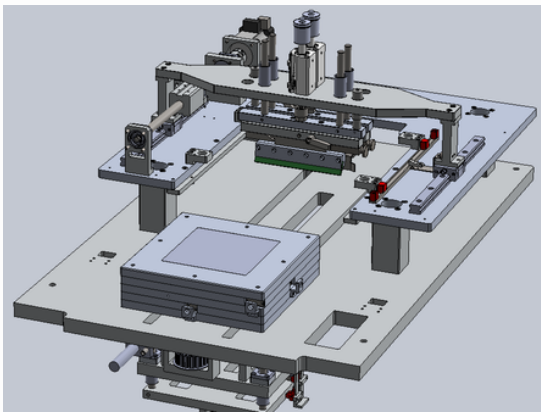
# DETAILED PHOTOS



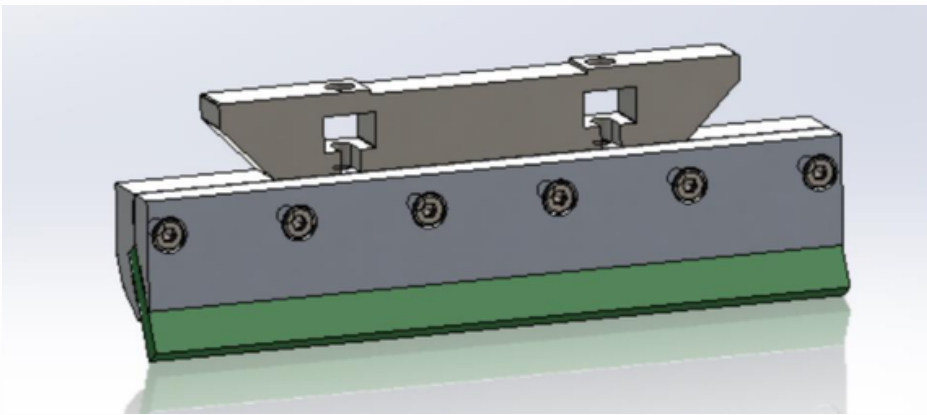
Graphical User Interface



Print Head



Print Head & Stage



Squeegee Holder

# ABOUT US

Pacific Trinetics Corporation (PTC) has been dedicated to providing innovative, state-of-the-art process equipment and automation systems for the electronics industry since 1987.

A U.S. company headquartered in California's Silicon Valley PTC is globally renowned for its equipment quality and durability in the multilayer electronic components industry. From large established names to startups to laboratories in the academia users of our equipment manufacture LTCC, HTCC, MLCC, MLPC, MLI, MLV, and Solid-State Li Batteries.

PTC's Process and Factory Automation Division builds on years of experience, partnering with industry leaders to streamline and automate production facilities towards becoming smart factories. PTC's expertise in automation, IoT and Big Data analysis has helped companies excel in Industry 4.0.

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