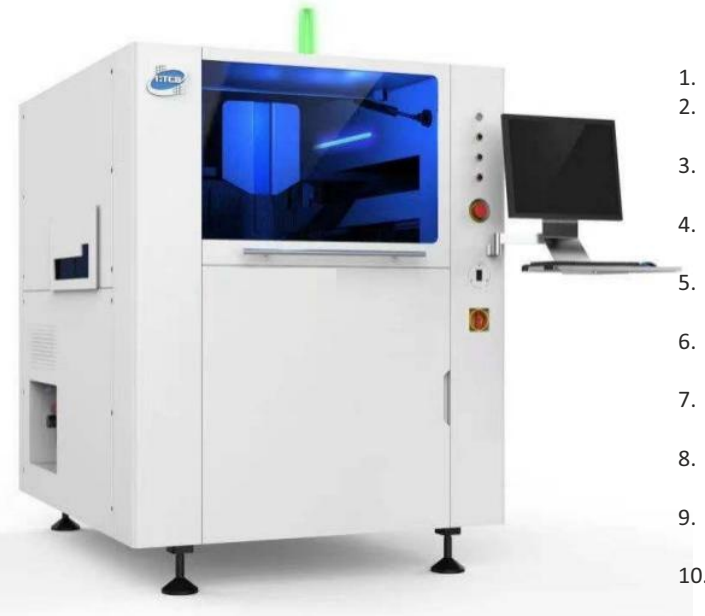
AUTOMATIC SOLDER PASTE PRITER ND-1



1. **Precision:** Repeat accuracy of ± 12.5 microns (±0.0005")@6σ, Cp ≥ 2.0.
2. **Special Adjustment Platform:** UVW module drive and triangle Z-shaft lifting mechanism for stability and ultra-fine drive.
3. **Programmable Suspension Stepper Motor Drive:** Independent stepper motor control with accurate pressure system for flexible printing.
4. **PCB Orientation System:** Flat belt drive, stepper motor for transport speed, auto-adaptation to PCB thickness, and configurable vacuum control.
5. **Cleaning System:** Automatic cleaning with dry, wet, and vacuum methods; user-settable parameters and easy-access components.
6. **High Adaptive Steel Frame Clamp System:** Supports various mesh frame sizes (370mm x 470mm; 737mm x 737mm) with Y auto-positioning.
7. **Electric Control System:** Modular integrated circuits for safety and maintenance; advanced parameter modification during operation.
8. **Image and Optical-Path System:** Uniform annular light, adjustable four-way light source for identifying various PCB types and colors.
9. **Simple Operation Interface:** Windows XP system with graphical human-machine interface, bilingual menu, error diagnostics, and optical alarm functions.
10. **2D Printing Quality Inspection and SPC Analysis:** Fast detection for printing issues and SPC software for machine CPK analysis.

The ND1 offers high precision with a repeat accuracy of ±12.5 microns and a Cp ≥ 2.0. Its special adjustment platform ensures stability and ultra-fine drive, while the programmable stepper motor drive provides flexible printing. Additional features include automatic cleaning, a high adaptive steel frame clamp system, modular electric control, advanced image and optical-path systems, and a simple operation interface.

Specifications:

Print Parameters	
Print head	Closed-loop print head straight line motor
Template frame size	370mm x 470mm ~ 737mm x 737mm
Max. print area (X x Y)	450mm x 350mm
Scraper type	Steel scraper/ Rubber scraper (Angle 45º/ 55º/60º match selection by print process)
Scraper length	220mm ~ 500mm
Scraper height	65 ±1mm
Scraper blade thickness	0.25mm Diamond-like carbon coating
Print mode	Single or Twin scraper print
Mold unloading length	0.02mm to 12mm
Print speed	0 ~ 200mm/second
Print pressure	0.5KG to 10KG
Printing process	±200mm (from center)

Image Parameters	
Image view (FOV)	6.4mm x 4.8mm
Platform adjustment range	X, Y: ±7.0mm, θ: ±2.0º
Base point type	Standard shape reference point (SMEMA standard), solder paste/open hole
Camera system	Individual camera, up or down individual imaging vision system, geometrical matching positioning

Equipment	
Power	AC220V ±10%, 50/60HZ, 15A
Compressed air	4 ~ 5KG/cm², 10.0 diameter pipe
Operating system	Windows XP
Exterior size	L (1140mm) x W (1400mm) x H (1480mm)
Machine weight	1000KG

Temperature and Humidity Control Module	
Ambient temperature	23 ±3 ºC
Relative humidity	45 ~ 70% RH

PCB Parameters	
Max. plate size (X x Y)	450mm x 350mm
Minimum plate size (Y x X)	50mm x 50mm
PCB thickness	0.6mm ~ 14mm
Warping quantity	Max. PCB diagonal 1%
Max. plate weight	10KG
Plate edge clearance	Configuration to 3mm
Maximum bottom clearance	20mm
Transmission speed	1500mm/second (Max)
Transfer height from the ground	900 ±40mm
Transfer track direction	Left
Transmission mode	Section-type track
PCB clamp mode	Software adjustable pressure of the elastic side pressure Options: 1. Overall bottom suction chamber vacuum 2. Bottom multipoint partial vacuum 3. Edge lock clamping plate
Board support method	Magnetic thimble, special work holding device (option: Grid-Lok)

Performance Parameters	
Image calibration repeat accuracy	± 12.5 micron (± 0.005") @6 σ, Cp < or = 2.0
Printing repeatability	± 25 micron (±0.001") @6 σ, Cp < or = 2.0
Loop time	> 7 seconds
Line change time	> 5 minutes