PROTEC

FDS Series

FDS-1500

Future Dispenser System

Features

- Fully automatic for unassisted in-line IC encapsulation and underfill production.
- High quality guarantee ±1% 3sigma in constant pressure viscosity.
- 1.5% 3 sigma in various pressure viscosity by WMS. (Weight Measuring System)
- Vision system options to reliably locate dispensing sites in both wirebonded die and flip-chip orientations.
- The 3 dimensions position embodiment by checking X-Y-Z-R.
- Syringe air:1-80psi electrical control. (parameters setting)
- Automated, integrated needle prime, purge and clean station simplifies needle maintenance.
- Industry-standard windows based software environment minimizes operator training.
- Increment(Absolute) Encoder servo system for self-position.
- Mechanical and laser non-contact Z-axis height detetion to compensate for substrate variations.
- Automation options including low fluid alarm and low pressure sensor support high yield prodution environments.

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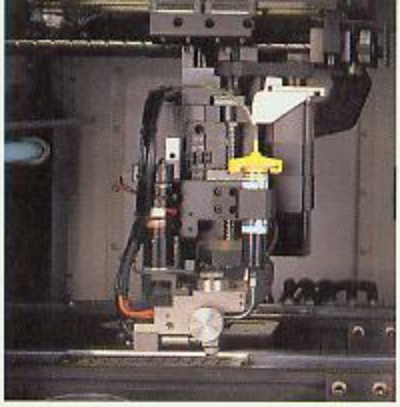


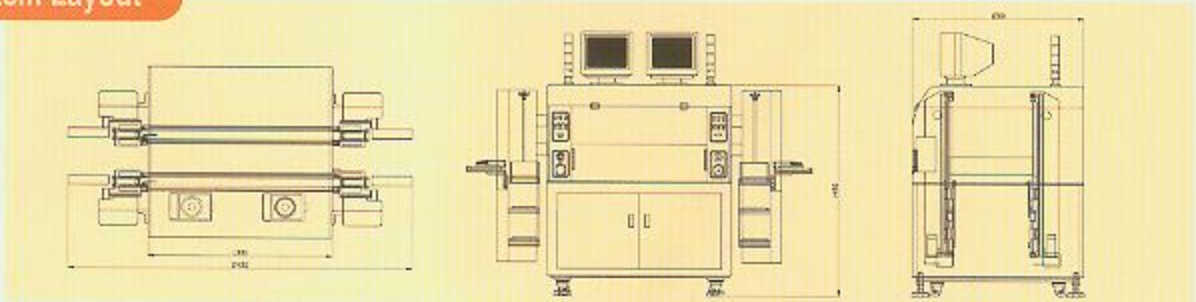
The FDS Series technology to high volume IC packaging applications. Specifically designed to provide closed- loop control of key process parameters for IN-LINE IC encapsulation, the FDS-1500 platform assures reliable dispensing performance for glob top, dam and fill, cavity fill, underfill and other critical dispensing application in IC package assembly.

Process Step

Specification

Apply package	μBGA (Underfill), EBGA (Dam)
Dispense material specification	Material-Epoxy, silicon, Phenol Viscosity-5,000 to 1,500,000cps @ 25℃ Catridge-5cc, 10cc, 30cc, 50cc option 150cc
Magazine dimension	50×150×144~100×260×160(width×length×height)mm
Carrier Type	AUER boats, lead frames or customer's option
Carrier Size	50×150×0.2t~100×200×2t(width×length×height)mm
Machine	
Machine dimension	2,432×1,200×1,480 (W×D×H/mm)
Power Requirements	AC220V, 50/60Hz, 2.2KW
Air Pressure	690Kpa, 6.9 Bar, 28 liters/mim(100 psi, 3 SCFM)
Weight	1,400 kg
Loader & unloader	No. of Magazine 12ea/set Up/down:AC servo motor
Conveyor	Speed-Maximum 600mm/s (23.6 in./s) Manual handing adjustment. Repeatability:±0.15mm
Dispensing	Pattern writing. New patten program:maximum less than 30min
Head unit	2 head unit
Dispensing pump	Rotary positive displacement pump & Linear pump
Dispensing accuracy	±0.1mm
Height sensor type & accuracy	Laser sensor type, ±0.01mm (0.001mm Resolution)
X-Y-Z Position accuracy (Substrate / Units type all)	±0.025mm (±0.001 In)
X-Y-Z Position Repeatability (Substrate / Units type all)	±0.02mm (±0.001 In)
Vision accuracy	±0.013mm (±0.0005 In)
Vision recognition time (sec/unit)	0.3(sec)
Temperature Management	Needle Heater Ambient to 50℃ with ±2℃. Resolution 0.1℃
Temperature Control	Closed-loop PID controllers
Operating System	Windows NT Environment

System Layout



※Specifications are subject to change without notice for improvement.

PROTEC

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