

# SPIDER Automatic Dispensing System

Version 1.0, April 2016

## Configuration

		SPIDER
Machine base	In Line type (Conveyor 3 stage, support pins, manual width adjust.)	●
	Dispensing basic kit (Dot plate, purge and z-height calibration station)	●
	Interior lighting LED	●
	Signal tower (3 color)	●
PCB Handling	SMEMA interface	●
	Conveyor direction L/R, R/L, batch mode R/R, L/L	●
	Automatic width adjustment	○
	Conveyor extensions	○
	PCB inspection station on conveyor	○
Control and software	ePlace Dispensing software (En, De, Ru, Pl, Zh, Es, Cs, Ja)	●
	Machine PC with Windows OS and touch screen	●
	Technical support software	●
Alignment systems	eVision (standard fiducial recognition)	●
	Cognex Base Vision license (extended fiducial recognition)	○
Dispensing valves (Cartridge sizes)	Piezo Jet valve (excl. heating) (5, 10, 30 cm <sup>3</sup> )	○
	Pneumatic Jet valve (incl. heating) (5, 10 cm <sup>3</sup> )	○
	Time/pressure valve (5, 10, 30 cm <sup>3</sup> )	○
	Archimedean screw valve (5, 10, 30 cm <sup>3</sup> )	○
Dispensing options	Laser height measurement <sup>1)</sup>	⊙
	Jet package for Basic Speed	○
	Jet package for Standard Speed	○
	Jet package for High Speed	○
	High precision scale (only for Jet valves)	○
	Jet valve heating system (only for Piezo Jet valve)	○
	Vacuum cleaning station for needles	○
	Cartridge level control	○
	Disp. Process Control Adjustment & Stabilization (PCAS)	○
	Lifting table with heating or vacuum	○
Various	Second touch screen for machine backside	○
	Clean room option ISO7 (class 10'000)	○
	Basic User Level Management	○
	Bad mark sensing with vision	○
	Universal CAD conversion	○
	Maintenance kit	●

● standard feature   ○ optional feature   ⊙ mandatory option, model to choose

## Specifications

		SPIDER	
Process	Dispensing speed up to <sup>2)</sup>	Piezo Jet valve            150'000 dots/h Pneumatic Jet valve      80'000 dots/h Time/pressure valve      28'000 dots/h Archimedean screw valve 24'000 dots/h	
	Dispensing mode	dot, line, 3D, curve, interpolated curves on multiple layers	
	Programmable z-stroke	80 mm (3.35")	
	Process height	± 18 mm (0.71") from zero height <sup>3)</sup>	
	Accuracy	Linear encoder resolution (x,y)	0.2 µm
Dispensing accuracy XY dots		40 µm (3σ) <sup>4)</sup>	
Positioning accuracy Z axis		20 µm (3σ)	
PCB	Min. PCB dimensions	50 x 50mm (2 x 2")	
	Max. PCB dimensions	406 x 305 mm (16 x 12")	
	PCB thickness	0.5 – 5.0 mm (0.02 - 0.2")	
	PCB edge clearance	Top side	3.0 mm (0.11")
		Bottom side	5.0 mm (0.2")
	Max. Board weight	4 kg (8.8 lb)	
	Conveyor height	SMEMA 940 – 965 mm	
Clearance below PCB	40 mm (1.57")		

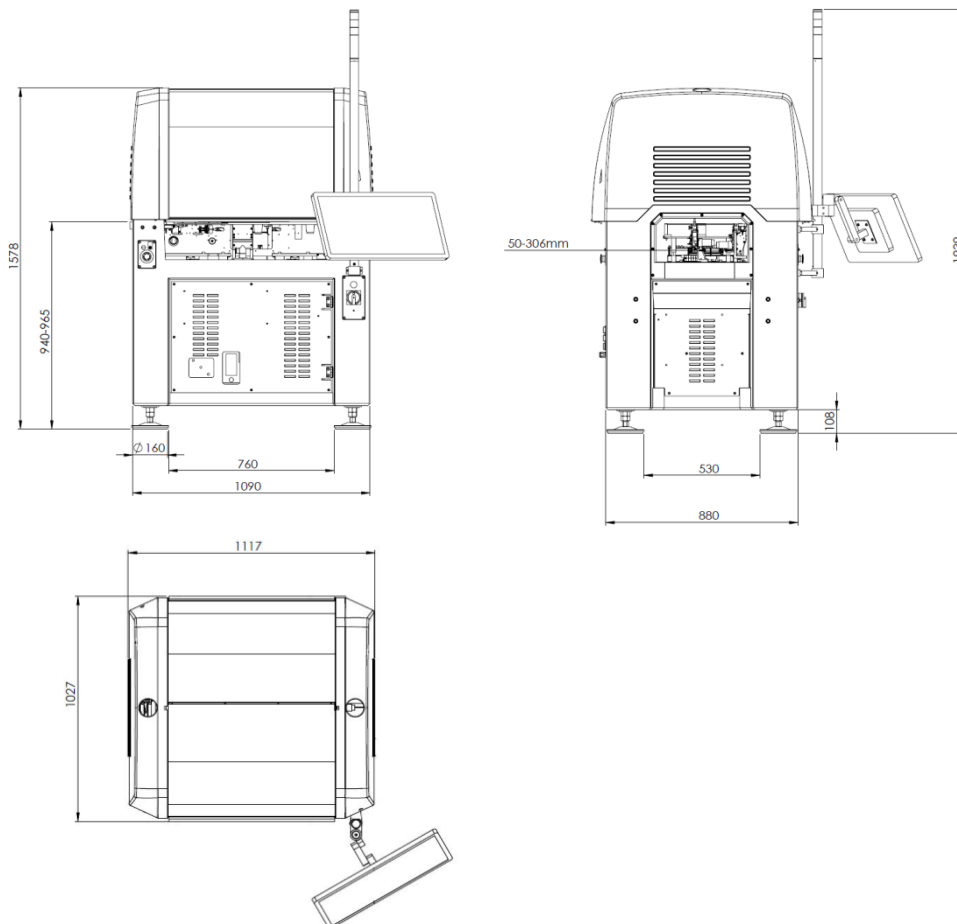


Supplies	Electrical	230V / 50Hz or 120V / 60Hz (with optional transformer)
	Power consumption (average / peak)	0.75 kW / 1.7 kW
	Entry Fuse	13A / 230V
	Min. Wire cross section	1.5 mm <sup>2</sup>
	Electrical connector	230V, CEE-16, 16A, 230V, 3P L+N+PE 6h, blue color 120V, CEE-16, 16A, 120V, 3P L+N+PE 4h, yellow color
	Compressed air	6 - 7 bar (87 - 102 psi), clean and filtered, dry, ISO 8573-1: class 3 (max part diameter 5µm, dew point < -20°C, oil ≤ 1 mg/m <sup>3</sup> )
	Air consumption	max. 25 NI/min. (0.9 cfm) (depends on valve and application)
Environment	Air connection	Push-in connector for outer hose Ø8 mm
	Performance temperature range / humidity	22 - 24°C / 50 - 70% RH
	Operational temperature range / humidity	15 - 30°C / 30 - 70% RH (non condensing)
	Noise level	max. 75 dB (A)

### Machine Dimensions and Packaging

		<b>SPIDER</b>
Machine dimensions	Machine footprint without hood (L x W)	880 x 1090 mm (34.7 x 43")
	Machine footprint with hood (L x W)	1027 x 1117 mm (40.4 x 44")
	Approx. operating floor space (L x W)	1050 x 1150 mm (41.3 x 45.3")
	Machine height (without / with light tower)	1578 mm (62") / 1939 mm (76")
	Approx. machine weight	875 kg (1929 lb)
	Approx. floor loading	912 kg/m <sup>2</sup> (1.3 lb/sq.in)
	Packaging weight	80 kg (176 lb)

### Dimension Drawings



1) Mandatory option: Two laser models available, to choose depending on needed application

- 2) Conditions: Full speed, dot size 0.5mm, dot matrix 0.8 x 0.8 mm, 1000 x dots, fluid Loctite 3621, zero height level and within performance temperature / humidity range. The chosen Jet speed package includes 45% (Basic), 65% (Standard) or 100% (High) of the maximal speed
  - 3) Other heights on request
  - 4) Conditions: Full speed, dot size 1.0 mm, fluid Loctite 3621, zero height level and within performance temperature / humidity range
- For more information ask for the SPIDER System Description and Product Notes. We reserve the right to make changes without notice