



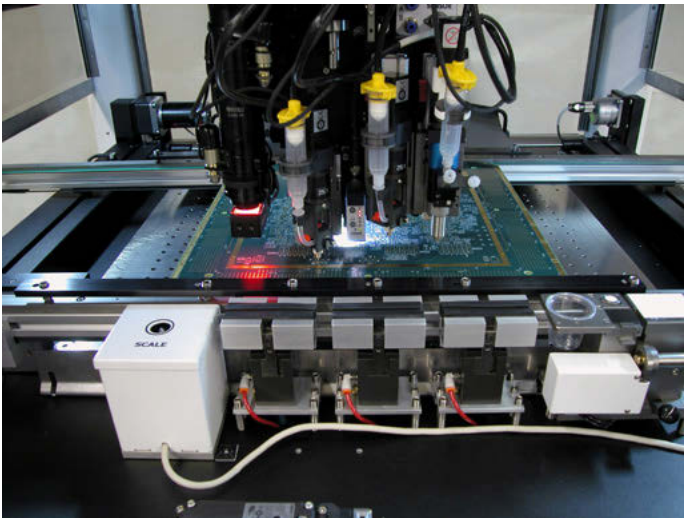
DS Series

Large/Versatile Board Processing Dispense System

- *Work Area: up to 24" x 24"*
- *Pump Capability: Up to Three Pumps*

All DS Series™ models are robust and versatile platforms designed to handle various types of applications with ease. The DS Series includes models that can be configured with or without heat, and models configured with or without a conveyor. At the root of the DS Series is a heavy duty, open frame with easy access that lends itself to simple loading, unloading, and process set up by an operator.

Each DS Series platform can handle up to three different pumps or tools. The large work area in these systems can handle most processes.



Proprietary FLOWare® software controls all aspects of system operation and even handles the control of Pick-and-Place tools for special applications. All systems are configured with ease-of-operation in mind using auto vision, auto XYZ nozzle calibration, a nozzle cleaner, and tool-less Taper-Lock™ mounting hardware. These features ensure a consistent set up and process with minimal operator intervention.

DS Series dispensers maintain high accuracy across the entire work area with GPD Global's highly regarded Contour Mapping™ package. When your applications call for versatility and functionality, the DS Series is the platform to use.

Common Applications

Dispense Material	Application
Solder Paste	Dots as small as 150 µm.
Conductive Adhesive	Small volume, complex patterns.
SMT Adhesive	High speed glue dots.
LED Encapsulation	Silicone and phosphor mix.
Potting Compounds	Silicone or epoxy fills.
Underfill	Low viscosity for bottom-side die encapsulation.
Dam & Fill	Two pump application dispensing high viscosity fluids.
COB Encapsulation	Encapsulate small wire bonds.

* Contact GPD Global about additional applications.

Standard Features

- Large Format System
- Tool-less Mounting for Single Pump
- Computer-controlled Syringe Pressure
- Automatic Backlit XYZ Nozzle Calibration Station
- Contact Surface Sensor
- Automatic Nozzle Cleaning
- Automatic Digital Vision Alignment
- Red/Blue Illuminator for Camera
- FLOWare® Operating Software with Smart Path Optimization (UltiPath™)

Add-On Options

Common Options*	Description
Heat Capability	Heating of the substrate in the work area for applications requiring heat.
Pre-Heat	An external module used for pre-heating the substrate before it enters system.
Post-Heat	An external module used for continued heating after a substrate leaves system.
2nd & 3rd Dispense Stations	Enables a second and third dispense pump to be mounted.
Process View Camera	1, 2, or 3 stations. View the dispense process at dispense tip on external monitor.
ClearVu™ Vision	Programmable zoom and focus camera.
Laser	Non-contact surface sensing.
Weight Scale	Process/Pump calibration.
FPC	Real time process control for pump(s).
UPS	Uninterrupted power source. Safely shuts down system in case of power loss.

* Contact GPD Global about additional options and features.



DS Series Dispense System

Pump Compatibility

Application	Pumps / Accessories
Paste, glue, adhesive.	Precision Auger Pump
High speed, low viscosity.	Jetting Pump (NCM5000)
No drip, volumetric repeatability.	Volumetric Pump (PCD)
Real time process control.	Fluid Pressure Control (FPC)

Specifications

Capacity

Dispense pumps Up to 3 pumps
Heat (optional) Ambient to 150° C ± 3° C (302° F ± 5° F)

Performance

Accuracy* ±0.038 mm (±0.0015")
Repeatability (per axis) ±0.0152 mm (±0.0006")
Speed Up to 28,000+ DPH
Linear Speed 51 cm/sec (20"/sec)

*With system mapping over standard work area.

Dimensions & Weight

Work Area (X, Y, height):

Pump Stations*	Model DS9000	Model DS9100
3	37 x 46 x 7.6 cm (14.4 x 18 x 3")	50 x 61 x 7.6 cm (19.6 x 24 x 3")
2	42 x 46 x 7.6 cm (16.5 x 18 x 3")	55 x 61 x 7.6 cm (21.7 x 24 x 3")
1	46 x 46 x 7.6 cm (18 x 18 x 3")	61 x 61 x 7.6 cm (24 x 24 x 3")

*Pump selection may impact work area dimensions.

Footprint (W x D x H):

Model	Footprint Dimensions (W x D x H)	Weight (approx.)
DS9000	170 x 146 x 196 cm (67 x 57.5 x 77")	803 kg (1,770 lbs)
DS9100	185 x 166 x 196 cm (73 x 65.5 x 77")	
DS9000 IL	193 x 146 x 196 cm (76 x 57.5 x 77")	1,021 kg (2,250 lbs)
DS9100IL	220 x 166 x 196 cm (86.5 x 65.5 x 77")	

Width and Depth dimensions each include monitor on swivel arm.

Power

Voltage 110-120 Volts AC or 220-240 Volts AC
Frequency 50/60 Hz
Amperage (maximum) 13 amps @ 115 Volts or 7 amps @ 230 Volts
Use dedicated external circuit breaker/fusing or properly rated branch fusing.

Air & Ventilation

Pressure, clean dry air 552-621 kPa (80-90 psi)
Flow rate (maximum) 113 l/min @ 600 kPa (4 CFM @ 87 psi)
Machine 113 l/min @ 600 kPa (4 CFM @ 87 psi)
Nest Vacuum 113 l/min @ 600 kPa (4 CFM @ 87 psi)

Air Fitting Thread† 1/4" NPT
Exhaust port diameter per port‡ 101.6 mm (4")
Ventilation flow rate per port 7,079 l/min (250 CFM)

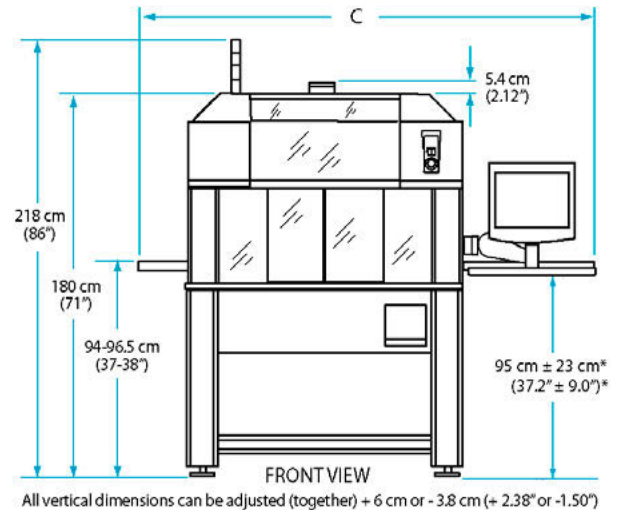
†Customer supplies connection hardware.

‡Customer supplies ducting to exhaust port.



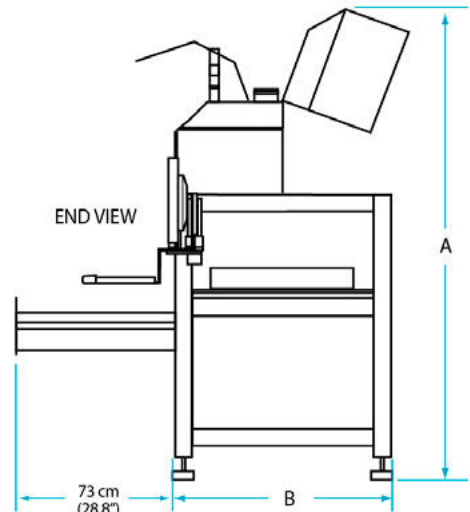
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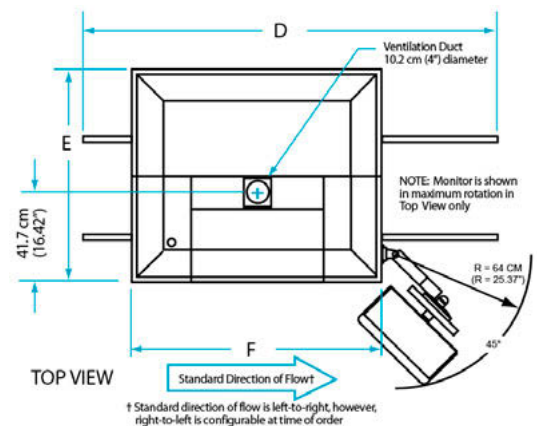


All vertical dimensions can be adjusted (together) + 6 cm or - 3.8 cm (+ 2.38" or -1.50")

	DS9000 Models	DS9100 Models
C	218 cm (86")	244 cm (96")



	DS9000 Models	DS9100 Models
A	239 cm (94")	246 cm (97")
B	99 cm (39")	119 cm (47")



† Standard direction of flow is left-to-right, however, right-to-left is configurable at time of order

	DS9000 Models	DS9100 Models
D	193 cm (76")	220 cm (86.5")
E	99 cm (39")	119 cm (47")
F	117 cm (46")	132 cm (52")