



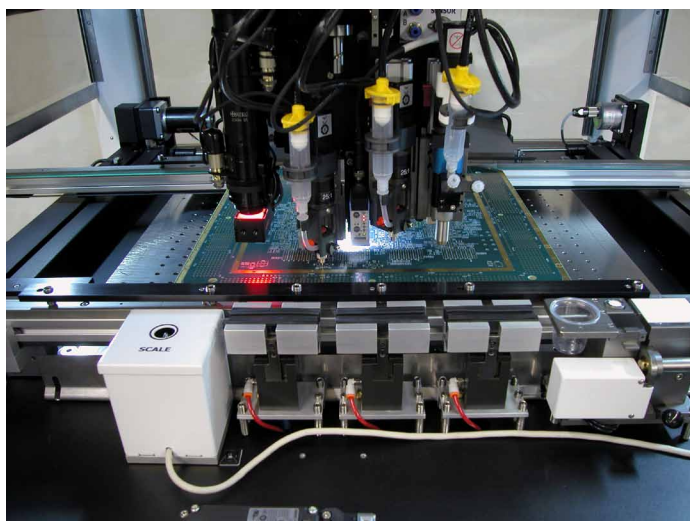
# DS Series

## 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                   | 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") |                      |

## 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.



www.gpd-global.com • request@gpd-global.com

Headquarters 611 Hollingsworth Street, Grand Junction, CO 81505 USA • T: +1.970.245.0408 • F: +1.970.245.9674  
GPD Global (Asia Pacific) Bayan Lepas, Penang, 11900 Malaysia • T: +60.12.555.0909

