

# Catalina Series

## Full-featured Benchtop Dispense System

- Automatic Vision
- Automatic Nozzle Calibration
- Laser Sensing & Profiling



Our Catalina benchtop system is a full-featured platform. These are just some of the standard features: automatic vision, laser surface sensing, and nozzle alignment.

Our tabletop dispensing robot provides you with **accurate and repeatable** dispense results. Any model in the Catalina Series can be configured with an optional, **heated work area**.

- Easy to learn, computer-based software with Windows operating system.
- Easy point-based teaching for all axis movement. Able to set point jobs and various parameters.
- Automatic alignment and positioning with high resolution camera.
- Create dispense paths using camera teach or on-screen graphic editing.
- Import DXF files for complex path programming.
- I/O ports provide the flexibility to add advanced features/equipment.

### Models

#### **Catalina L**

High repeatability with contact probe or non-contact laser surface sensing.

#### **Catalina TR**

Dispense with **Tilt and Rotate** function.



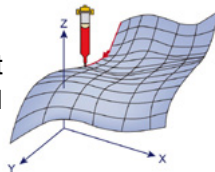
#### **Catalina Mini**

For dispensing on small substrates. Work area: 200 mm x 200 mm (7.9" x 7.9")

### Standard Features

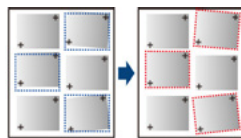
#### *Automatic Vision*

System automatically locates alignment points to account for product shift and rotation.



#### *3D Dispensing*

Laser traces the dispense path and measures surface variation, then adapts height of the dispense tip to maintain a consistent gap.



#### *Image Alignment*

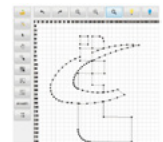
Vision system locates alignment points to account for product rotation.

#### *Automatic XYZ Nozzle Calibration*

Locates dispense tip in X, Y, Z for accurate fluid placement.

#### *Graphic Edit & DXF Support*

User-friendly graphic editing to create a dispense path. AutoCAD DXF files are supported.



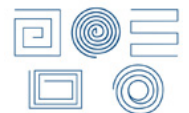
#### *Matrix Dot Dispensing*

Easily duplicate a common pattern in a matrix.



#### *Fill Area*

Multiple types of fill area and dispense patterns. Easy to teach.



#### *Laser*

Non-contact surface sensing.



# Benchtop Manufacturing

## Add-On Options

| Common Options*        | Description   |
|------------------------|---|
| FPC                    | Real time process control for pump(s).                |
| Heated Work Table      | For heating substrates up to 120° C (248° F).         |
| Fluid Level Detect     | Notifies operator when fluid level attains set point. |
| Contact Surface Sensor | Alternative to laser surface sensor.                  |
| Laptop Computer        | Runs the software.                                    |
| Teaching Pendant       | Remotely controls tabletop robot.                     |

\* Contact GPD Global about additional options and features.

## Pump Compatibility

| Application  | Pumps / Accessories  |
|--|--|
| High viscosity pastes, glues, adhesives.                   | Precision Auger Pump   |
| High speed, low viscosity.                                 | Jetting Pump (NCM5000)   |
| No drip, volumetric repeatability.                         | Volumetric Pump (PCD)  |
| Simple liquid dispense applications, low-to-mid viscosity. | Time Pressure  |
| Real time process control.                                 | Fluid Pressure Control (FPC) for use with Precision Auger & Jetting (NCM5000) pumps, as well as Time Pressure Dispensing |

## Specifications

| Specification                                 | Catalina L  | Catalina TR                                   | Catalina Mini                                 |
|---|---|---|---|
| Dispense Pump Capacity                        | Single  |   |   |
| Height Sensing                                | Contact or non-Contact (Laser)  | Non-Contact (Laser)                           | —   |
| Range of Operation                            | X, Y, Z Axes  | 400 x 400 x 150 mm                            | 200 x 200 x 50 mm                             |
|   | R-Axis (rotation)   | —   | ±360°   |
| Payload                                       | X-Axis (workpiece)  | 14 kg (30.9 lbs)                              | 7 kg (15.4 lbs)                               |
|   | Y-Axis (pump)   | 5 kg (11.0 lbs)                               | 3.5 kg (7.7 lbs)                              |
| Speed, maximum Point to Point                 | X & Y Axes  | 800 mm/sec (31.5"/sec)                        | 700 mm/sec (27.56"/sec)                       |
|   | Z Axis  | 400 mm/sec (15.75"/sec)                       | 250 mm/sec (9.84"/sec)                        |
|   | R-Axis (rotation)   | —   | 900°/sec                                      |
| Speed, maximum Continuous Path                | X, Y, Z combined  | 850 mm/sec (33.46"/sec)                       | 600 mm/sec (23.62"/sec)                       |
| Resolution                                    | X, Y, Z Axes  | 0.001 mm                                      |   |
|   | R-Axis (rotation)   | —   | ±0.01°  |
| Repeatability                                 | X & Y Axes  | ±0.007 mm                                     | ±0.01 mm                                      |
|   | Z Axis  | ±0.007 mm                                     | ±0.01 mm                                      |
|   | R-Axis (rotation)   | —   | 0.008°  |
| Interpolation Function                        | 3D linear and arc   |   |   |
| Data Storage                                  | On-board and backed up via PC Software when connected and downloaded  |   |   |
| Dimensions (W x D x H) (excludes protrusions) | 651 x 668 x 715 mm<br>(25.6" x 26.3" x 28.1")   | 651 x 668 x 844 mm<br>(25.6" x 26.3" x 33.2") | 323 x 387 x 554 mm<br>(12.7" x 15.2" x 21.4") |
| Weight - Robot (approximate)                  | 51 kg (112.4 lbs)   | 55 kg (121.3 lbs)                             | 20 kg (44.1 lbs)                              |
| Simple PLC Function                           | Up to 100 programs with up to 1,000 steps/1 program   |   |   |
| Program Capacity                              | 999 programs  |   |   |
| User Input/Output                             | 16 Inputs / 16 Outputs (I/O-Sys Port)   |   |   |
|   | 8 Inputs / 8 Outputs, includes 4 relay outputs (I/O-1 Port)   |   |   |
|   | RS232C  |   |   |
|   | USB memory connector  |   |   |
|   | PoE Industrial Hub connection   |   |   |
| Drive Method                                  | 5 phase pulse/stepping motor  |   |   |
| Programming Method and Teaching               | Easy point-based teaching for all axis movement. Able to set point jobs and various parameters.<br>Remote Teaching (JOG) / Manual Data Input (MDI)<br>PC Teach / Graphic Edit |   |   |
| Power   | 110-220 Volts AC  |   |   |
| Air Pressure                                  | 5.86-6.89 bar (85-100 psi)  |   |   |
| Work Temperature                              | 0-40° C (32-104° F)   |   |   |
| Working Relative Humidity                     | 35-85% no condensation  |   |   |
| Automatic Vision                              | Standard  |   | —   |