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.

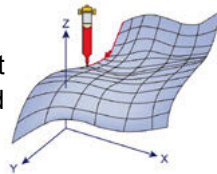#### Catalina TR

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.
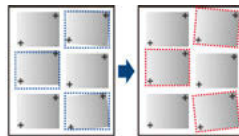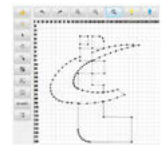
Image Alignment

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.
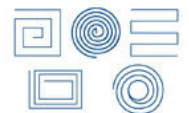
Matrix Dot Dispensing

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.

GPD Global
Precision Dispensing Systems

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Catalina - Benchtop Dispensing

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	±0.006 mm
	Z Axis	±0.007 mm	±0.01 mm	±0.006 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 (25.6" x 26.3" x 28.1")	651 x 668 x 844 mm (25.6" x 26.3" x 33.2")	323 x 387 x 554 mm (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. Remote Teaching (JOG) / Manual Data Input (MDI) 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		—

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