

# SINGLE STATION BENCHTOP DISPENSING MACHINE GR-300S



## Description:

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The GR300S is an automated desktop type dispensing robot with a variety of dispensing valve and material feeding system to meet different material dispensing requirement.

- X/Y/Z 3 axis step motor control
- Hand-held teach pendant for programming
- Max 300\*300mm PCB width
- Built in dispensing controller with independent air regulator
- Various dispensing valve meet different requirement
- Customized glue feeding system is optional
- Double dispensing head is optional.

## Features:

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- The GR300S is an automated desktop type dispensing robot with a variety of dispensing valve and material feeding system to meet different material dispensing requirement.
- High quality step motor with high precision linear guide rail and its driving system, ensure stable and precise run of motion system.
- Machine can fit various quality dispensing valve which can meet different requirement. Built in dispensing controller with independent air regulator.
- Customized glue feeding system like cartridge with cylinder pusher, pressure tank, syringe with heating device is optional to meet different dispensing requirement.
- Handheld teaching pendant with powerful software, all English interface, easy to operate. Powerful software has the painting point, straight line, multi line segment, three-dimensional arc (spatial arc), round, rectangular, runway, coating, automatic corner rounding, irregular 3D spline curve and other graphical elements; rich handmade teaching function and graphical preview function.
- Powerful software has route copy and array copy function, park location setting function, coordinate offset correction function, different dispensing height and lifting height setting function, pause and continue running function etc.

# Specifications

| Items              | Model           | GR300S                                                    | GR300D          | GR300S2Y            | GR300D2Y            |
|--------------------|-----------------|-----------------------------------------------------------|-----------------|---------------------|---------------------|
| Stroke (mm)        | NumberofAxis    | 3                                                         | 3               | 4                   | 4                   |
|                    |                 | SingleheadX,Y,Z                                           | DoubleheadX,Y,Z | SingleheadX,Y1,Y2,Z | DoubleheadX,Y1,Y2,Z |
|                    | X-aixs          | 300                                                       | 300             | 300                 | 300                 |
|                    | Y-aixs          | 300                                                       | 300             | 300                 | 300                 |
|                    | Z-aixs          | 80                                                        | 80              | 80                  | 80                  |
| Speed (mm/s)       | Zaixs           | 2.5-250                                                   | 2.5-250         | 2.5-250             | 2.5-250             |
|                    | XYaixs          | ±0.05mm                                                   | ±0.05mm         | ±0.05mm             | ±0.05mm             |
| Repeatability (mm) | Z-aixs          | ±0.05mm                                                   | ±0.05mm         | ±0.05mm             | ±0.05mm             |
| Dimensions (mm)    | WxDxH           | 550x640x660                                               | 550x640x660     | 850 x 650 x 660     | 850 x 650 x 660     |
| Weight             | NetWeight       | 50kg                                                      | 55kg            | 80kg                | 85kg                |
| Power source       | Voltage/Freq    | AC220V,singlephase,50/60Hz                                |                 |                     |                     |
|                    | Capacity        | 750W                                                      |                 |                     |                     |
| Motor              | Type            | Step motor                                                |                 |                     |                     |
|                    | Operation       | MicroStep                                                 |                 |                     |                     |
| Programming        | Techingmethod   | Hand-heldteachpendant,ManualDatainput                     |                 |                     |                     |
|                    | Motioncontrol   | PTP,CP(3dimensionalstraightline/circulararcinterpolation) |                 |                     |                     |
|                    | Programcapacity | 2G memory ,100 programs or instruction ≤8000              |                 |                     |                     |
| MaximumLoad        |                 | X-YAxes:15Kg(33lbs.)ZAxis:6Kg(13lbs.)                     |                 |                     |                     |
| WorkingTemperature |                 | 0 - 40°C(32-104°F)                                        |                 |                     |                     |
| AirInput           |                 | 5 Kg/cm²(approx.70psi)                                    |                 |                     |                     |



## Details

Built-in a fully-integrated dispensing controller with independent air regulator and suck back function.

Hand-held teach pendant with powerful software is easy for programming.



Various valves with glue feeding system meet different fluid dispensing requirements, for examples: UV adhesive, EPOXY (black adhesive), white adhesive, SILICON, epoxy resin, grease, conformal coating fluid, and other kinds of fluid dispensing.

Application: 310ml cartridge with GR-H25 valve for grease and thermal conductive silicone dispensing.



## Dispensing valve

### Micrometer high precision valve GR-D2121



Plunger structure, flow rate can be adjusted precisely by micrometer, small size and corrosion-resistant, it is suitable for UV glue, paint, oil etc. low viscosity, and good fluidity glue.

|                       |                 |
|-----------------------|-----------------|
| Model                 | GR-D2121        |
| Air pressure          | 0.4-0.7Mpa      |
| Min Dispensing volume | 0.01ml          |
| Applicable viscosity  | 1-3000 cps      |
| Operating frequency   | <400 points/min |
| Glue inlet dimension  | 1/8"            |

### Adjustable precision valve GR-H2222



Plunger structure, small flow rate valve, flow rate can be adjusted small size and corrosion-resistant, it is suitable for medium-high viscosity, and poor fluidity glue, such as silicon glue, epoxy glue, grease, red glue, etc.

|                       |                 |
|-----------------------|-----------------|
| Model                 | GR-H2222        |
| Air pressure          | 0.4-0.7Mpa      |
| Min Dispensing volume | 0.02ml          |
| Max viscosity         | 1-100,000 cps   |
| Operating frequency   | <400 points/min |
| Glue inlet dimension  | 1/8"            |

### Suck back valve GR-H25



The GR-H25 Suck-Back Valve is designed to prevent extra protection against postdispense dripping when dispensing medium to high viscosity liquids such as silicone, grease, etc.

|                       |                 |
|-----------------------|-----------------|
| Model                 | GR-H25          |
| Air pressure          | 0.4-0.7Mpa      |
| Min Dispensing volume | 0.02ml          |
| Max viscosity         | 1-100,000 cps   |
| Operating frequency   | <400 points/min |

## Dispensing valve

Coating thickness can be adjusted by changing air pressure and moving speed.

Coating width can be adjusted by changing air pressure.

V-1000 coating valve is applied to areas where:

1. most of coating.

Spraying swath: 6-8mm

edge definition: 1mm

Valve stroke: 0.01mm-5mm

Air pressure: 0.2-0.4Mpa

Applied to max viscosity of the glue : 1000cps

|                 |            |
|-----------------|------------|
| Model           | V-1000     |
| Spraying Swath  | 6-8mm      |
| Air Pressure    | 0.2-0.4Mpa |
| Max viscosity   | 1000 cps   |
| Edge Definition | 1mm        |



## Standard Configuration

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- X/Y/Z/ 3 Axis dispensing Machine.
- Handheld teaching pendant.

## Option

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- Double dispensing head
- GR-H2222 precision dispensing valve
- GR-D2121 precision dispensing valve
- GR-H25 suck back valve
- V-1000 selective coating valve
- 310ml silicon cartridge with cylinder pusher
- 2L SUS pressure tank
- 5L SUS pressure tank
- Safety over
- Fume extractor QBDX-1001
- Syringe heating device