



# TSR2000 Series 3-Axis Bench Top Dispensing Robot



**OKInternational**

# Reasons To Offer Robots

- To provide a complete dispensing solution to our customers
- As labour costs keep increasing, more manufacturing companies are switching from a manual process to a semi-automated or fully automated process
- Help improve our productivity
- Increased throughput, excellent process control, repeatable process, reduction in reject parts
- No need to transfer manual work to low cost countries



# Available Platforms



## **TSR2201**

Working Area = 200 x 200 x 100mm



## **TSR2301**

Working Area = 300 x 300 x 100mm



## **TSR2401**

Working Area = 400 x 400 x 100mm



# SPECIFICATIONS



Features		TSR2201	TSR2301	TSR2401
Power Supply		100V ~ 240V AC		
Power Consumption		80W		
Number of Controllable Axes		3 axis		
Moving Range	X axis	200mm	300mm	400mm
	Y axis	200mm	300mm	400mm
	Z axis	100mm	100mm	100mm
Speed Range	X/Y axis	0.1 ~ 600 mm/sec		
	Z axis	0.1 ~ 200 mm/sec		
Repeatability Accuracy	X/Y/Z axis	0.02mm		
Resolution	X/Y/Z axis	0.01mm		
Loading Weight	Tool	5 Kg	7 Kg	7 Kg
	Head	2 Kg	4 Kg	4 Kg
Storage for Processing Files		Max. 255 files.		
Working Ambient	Temperature	0 ~ 40°C		
	Relative Humidity	20% ~ 90% (no condensation)		
Dimension (W×D×H)		303x377x521 mm	418x513x521 mm	518x613x521 mm

# Robot Features



- Easy to program and simple to operate
- Programmable interface via teach pendant
- Compatible with all Techcon Systems syringes, valves and Jet dispensing systems.
- Suitable for wide range of fluid dispensing applications
- Rugged and reliable construction
- Small footprint





# What's included with the Robot?

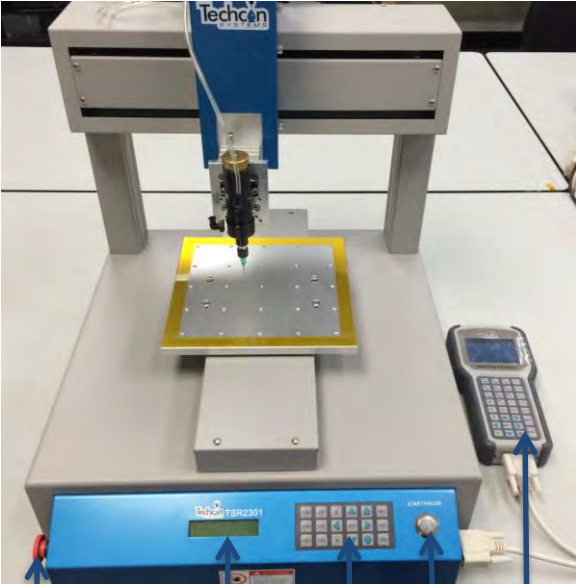


➤ The robot is shipped in a robust packaging box and includes the following items:

- Main Robot
- Teach Pendant and cable
- Key box
- Power cord
- Syringe bracket
- Universal valve bracket
- DB37 connector
- Comms cable for dispenser
- User guides



# Functions

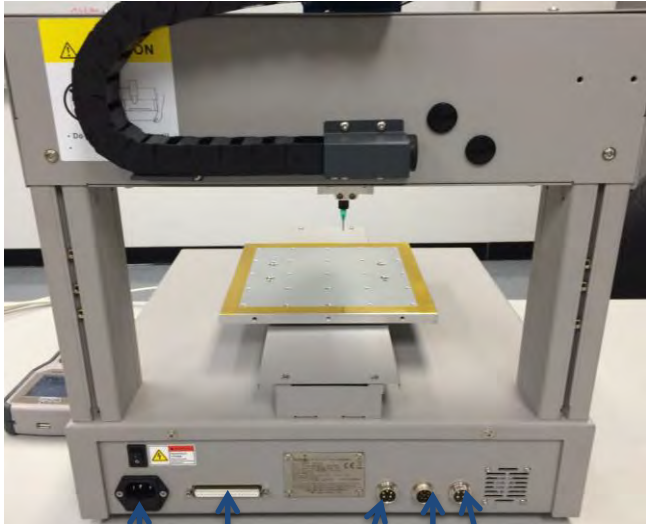


E-STOP

DISPLAY

START,  
PAUSE

CONTROL PANEL  
TEACH PENDANT



DB37  
I/O

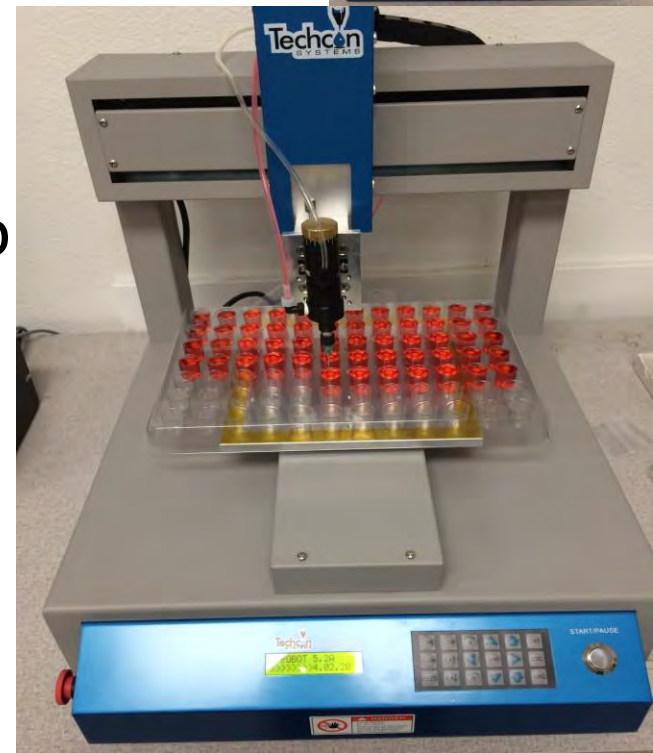
MAIN I/O

POWER INLET  
AUX I/O

ACTIVATION  
BOX PORT

# APPLICATIONS

- Dispense dots of solder paste on PCBA
- Filling pre-set volume of solution in to cavities
- Dispense sealant material for form-in-place gasket
- Encapsulation
- Bonding – Apply instance adhesives to speaker assemblies
- Spray oil to lubricate O-rings
- Spray marking inks





# Typical Patterns



## Dot



Increasing feed on time

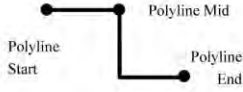
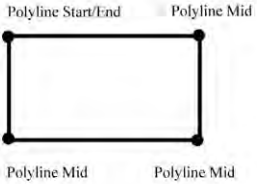
## Line



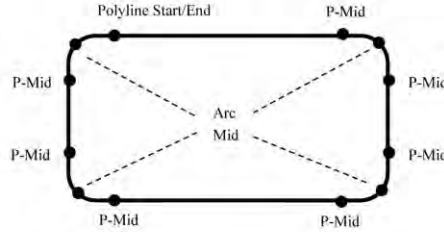
Line Start

Line

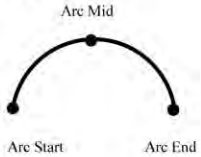
## Polyline



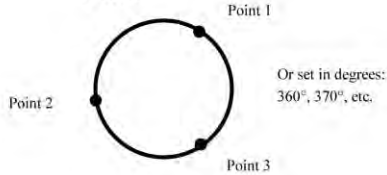
## Polyline with round edges



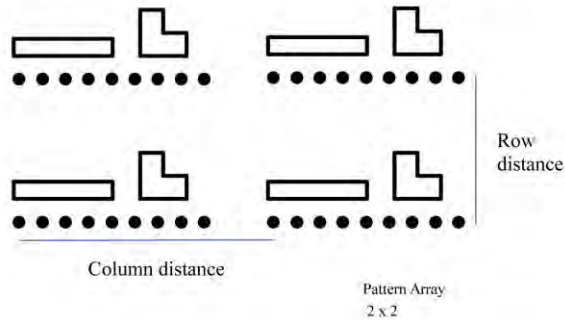
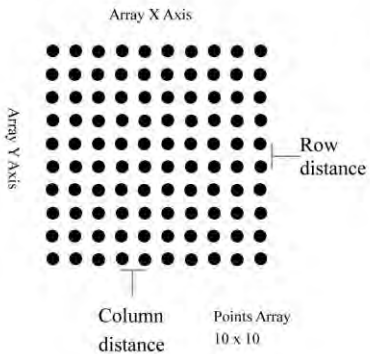
## Arc



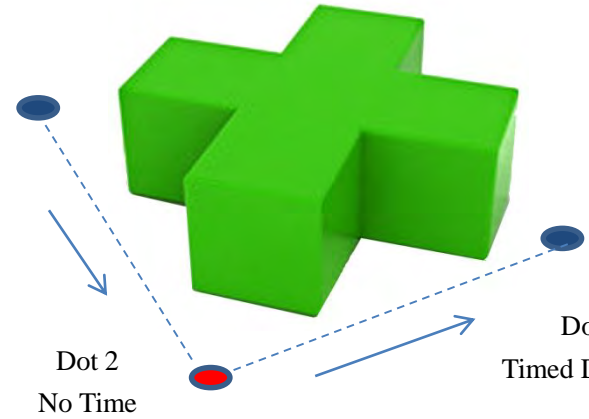
## Circle



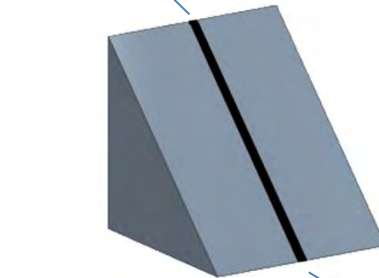
## Array



Dot 1  
Timed Dispense



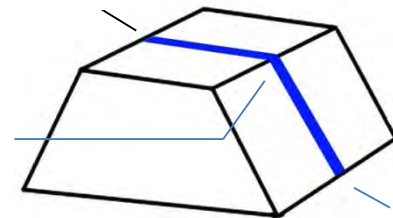
Line End



Line End

Line Start

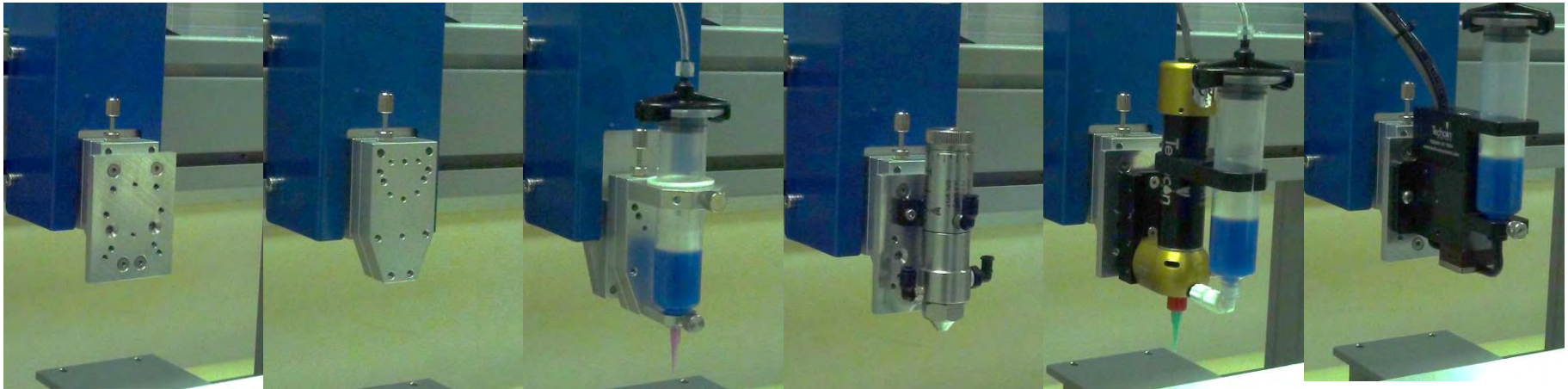
Line Mid



Line Start

# Integration

- The bench-top dispensing robot series is compatible with all Techcon Systems dispensing equipment such as:
- Syringe dispensing
  - Auger valves
  - Pneumatic valves
  - Jet valve



Primary  
Plate

Secondary  
Plate

Syringe

Pneumatic

Rotary

Jet

# Safety Marking



- Robots and safety covers have passed all CE testing requirements. The CE testing was done by third party TUV Lab. Techcon cannot issue “A declaration of Conformity” because the robot, with safety cover, is still considered as not a complete unit. A complete unit must have the valve, or other equipment to be used, on the robot to be certified. A “Declaration of Incorporation” is sent with every unit shipped. This is acceptable to CE.
- The use of a Safety Cover is a CE requirement. We have a responsibility to inform that you must use one to comply with the CE regulations, although it does not have to be ours. If you choose not to use one, then it becomes your own risk.
- Safety cover is a light curtain type
- Each robot will have its own cover

