LOCTITE®

One Henkel Way
Rocky Hill, CT 06067
Technical Information Help Line 1-800-562-8483
www.equipment.loctite.com

Product Description Sheet

EQ RB40 500D Benchtop Robot
Item # 2103369

North American Engineering Center

PRODUCT DESCRIPTION

The Loctite® EQ RB40 500D Benchtop Robot has features and accessories that are custom tailored for adhesive dispensing processes. The range of operation is 500 mm by 500 mm by 100 mm (X-Y-Z). This unit is fully compliant with RIA (Robotic Industry Association) safety guidelines. Programming accessories, dispensing equipment, integration cables and mounting hardware are sold separately.

TECHNICAL SPECIFICATIONS

Attribute		Value
Number of controllable axes		3
Range of operation	X axis	500 mm
	Y axis	500 mm
	Z axis	100 mm
Portable weight	Work Surface	10.0 kg*
	Tool Head	5.0 kg*
Maximum Speed	PTP (X,Y)	600 mm/s
	PTP (Z)	320 mm/s
Repeatability accuracy	X, Y, Z axis	$\pm$ 0.01 mm, 3 Sigma
Resolution		0.001 mm
Needle Calibration Kit Accuracy (Kit purchased separately)		$\pm$ 0.02 mm, 3 Sigma
CPU		32 bit
Display		Teach Pendant LCD
Control method		Point to Point and Continuous Path
Drive method		3-phase stepping motor
I/O Signals		8 inputs / 8 outputs
Teaching Method		Teach Pendant
Program capacity		100 programs
Data memory capacity		4,000 points/program
Dimensions	Width	685 mm
	Depth	701 mm
	Height	597 mm
Weight		45 kg
Power source – auto switching		95-132 VAC 150 watt 180-250 VAC 150 watt
Working environment	Temperature	0 - 40°C
	Humidity	20 - 90% RH

Parts Included:
- Robot and Operating Manual
- Syringe Holder, 30-55 ml. fixed. Item # 1328355
- External Control Shorting Connector; 7-pin female.
- Dispensing Cable; 3-pin round female to 9-pin male "D" shell.
- Mounting Screw for Syringe Holder
- AC Power Cord

Remarks:
*The moving speed will affect the portable weight of each axis.

PRODUCT FEATURES
- Designed for adhesive dispensing.
- Independent dispense on / off purge control button on front panel allows adhesive to be purged from a dispense valve to prevent curing or for aiding initial set-up. No special programming required. Useful for set-up and purging of two-part materials that have a very short pot life.
- Integrated solution – plug and play accessories.
- Needle tip calibration capable.
- Software utility program compensates for positional offsets when dispense needle tips or barrels are changed.
- Teach Pendant program storage capabilities allows dispense program to be easily transferred from Robot to Robot.
- Over-speed error indicator prevents Robot from traveling too fast during the execution of the program.
- 100 programs, 4,000 points memory per program
- No programming experience required.
- Low-cost robot has 3-axis control and 120 VAC or 220 VAC operation with a 24 VDC output signal.

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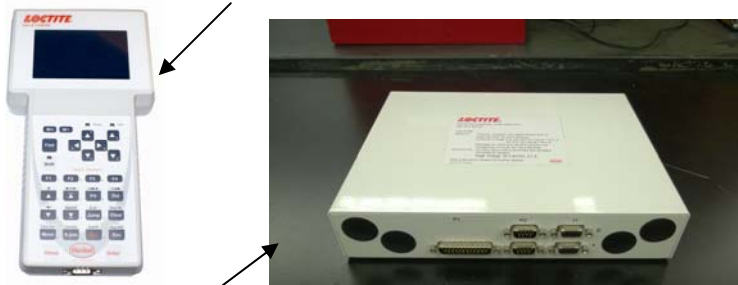
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PROGRAMMING

The Robot utilizes a specially designed, multi-line, Teach Pendant that allows for simple programming with user-friendly prompts. The Operating Manual provides step-by-step instructions for programming. No previous programming experience is required.

INTEGRATION ACCESSORIES (not included):
Loctite® brand cables and junction boxes provide plug-and-play Integration solutions for a variety of Loctite® dispensing systems.

1328356 Teach Pendant for 200D, 300D, 400D & 500D Benchtop Robots

2182205 EQ ACCE D-Series Junction Box, 200D, 300D, 400D & 500D Robots. Provides a convenient connection point between robots and up to 8 external devices including all Loctite® dispensers, UV Wands, Loctite® light curtains, LED cure systems, Posi-Link™ Volumetric Dispensing System. Allows multiple systems integration simultaneously. This junction box accepts up to 8 inputs and 8 outputs, 24 VDC operation.

1569523 The Robot Needle Calibration Kit is designed to allow the user to quickly calibrate needle tip location after change over. The Kit is designed to work with Loctite® 24V D-Series Robots which are equipped with software version H1.30 or higher.
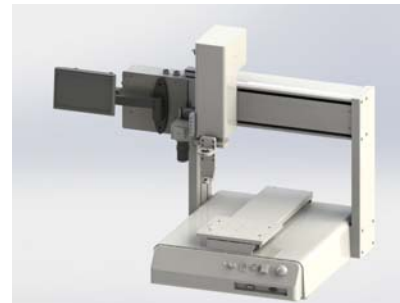

1329222 - Interface Cable for 200D, 300D, 400D & 500D Benchtop Robots.

988000 – Solenoid Valve Module, 24 VDC operation for 200D, 300D, 400D & 500D General Purpose Benchtop Robots.

1912406 - RB30 Robot Camera
RB30 Robot Camera offers an easy way for program teaching. It can be mounted on 200D, 300D, 400D and 500D robots. Helps operator to program in a small area.

SYRINGE DISPENSING EQUIPEMENT
Syringe dispensing is commonly used as a low cost fluid delivery system when the dispensing volumes are small.

Part No.	Description
Dispensers	
883976	Syringe dispensing system, digital
97006	Syringe dispensing system, precision digital
See Web site	Posi-Link™ Volumetric Dispensing System
Syringes	
98479	3 ml, clear syringe barrel and piston
98481	3 ml, black syringe barrel and piston
98483	5 ml, clear syringe barrel and piston
98485	5 ml, black syringe barrel and piston
97207	10 ml, clear syringe barrel kit
97263	10 ml, black syringe barrel kit
97244	30 ml, clear syringe barrel kit
97264	30 ml, black syringe barrel kit
98314	55 ml clear syringe barrel kit
98315	55 ml black syringe barrel kit
Air Line Adapters	
98656	3 ml syringe air line adapter
98657	5 ml syringe air line adapter
97208	10 ml syringe air line adapter
97245	30 and 55 ml syringe air line adapter

Document # 8906120, Date: 11/09/2016

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2148218 - EQ ACCE D-Series Robot Software
With EQ ACCE D-Series Robot Software, operator can program on PC and upload dispensing program to robot.

Loctite® Item Number	Description
Accessories	
1328356	Teach Pendant, Benchtop Robots
1329222	Interface Cable, Benchtop Robots
2182205	EQ ACCE D-Series Junction Box 24V
988000	Solenoid Valve Module, 24V, Benchtop Robots
1912406	RB30 Robot Camera
2148218	EQ ACCE D-Series Robot Software

300 ML CARTRIDGE DISPENSING EQUIPMENT

300 ml cartridge dispensing is commonly used as a low cost fluid delivery system when the dispense volumes are large.

Part No.	Description
Dispensers	
883976	Syringe dispensing system, digital
97006	Syringe dispensing system, digital precision
300 ml cartridge adapter	
98319A	300 ml pneumatic cartridge adapter
98022	300 ml cartridge pusher

VALVE DISPENSING EQUIPMENT

Valve dispensing is typically used with large dispense volume to minimize the downtime associated with package change-out and to improve the bead precision, particularly the knit line.

Part No.	Description
Valves	
98009	Light cure dispense valve
98013	Cyanoacrylate dispense valve
97113	Stationary dispense valve with 1/4" feedline
97114	Stationary dispense valve with 3/8" feedline
983914	Poppet valve
Controller and Reservoirs	
982720	Bond-A-Matic 3000 Reservoir, 0-15 psi with low level sensor.
982723	Bond-A-Matic 3000 Reservoir, 0-100 psi with low level sensor.
982726	Bond-A-Matic 3000 Reservoir, 0-15 psi with out low level sensor.
982727	Bond-A-Matic 3000 Reservoir, 0-100 psi with out low level sensor.
1390321	Integrated Semi-Automatic Controller and Reservoir, 0-100 psi with low level sensor.
1390322	Integrated Semi-Automatic Controller and Reservoir, 0-15 psi with low level sensor.
Solenoid Valve Module	
988000	Used to control pneumatic devices such as dispense valves or other dispensing equipment using the I/O from the robot to control air on/off.

MOUNTING RAILS FOR BENCHTOP ROBOTS

A mounting rail is required when using Loctite® mounting for all 3 axis Benchtop Robots.

Part No.	Description
98328	3 3/4 inch bar with two cap screws
98329	8 3/4 inch bar with two cap screws

3, 5 AND 10 ML SYRINGE ADAPTERS

These adapters are inserted into the 30 ml syringe mounting bracket kit to adapt it for 3, 5 and 10 ml syringes.

Part No.	Description
98320	10 ml adapter for use with 98316
98321	5 ml adapter for use with 98316
98322	3 ml adapter for use with 98316

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TIP LOCATOR BRACKETS

Tip locator brackets position the dispense tip to increase precision and are used to mechanically set the tip height during installation. A mounting bracket and rail, plate or adapter must be purchased separately. These are sized for 1" long, 25 gauge needles and must be modified by the user for larger gauge sizes.

Part No.	Description
98332	Tip locator bracket for 30 ml syringe
98333	Tip locator bracket for 300 ml cartridge
98334	Tip locator bracket for 98009 and 98013 valves
98335	Tip locator bracket for 97113 and 97114 valves
98407	Tip locator bracket for 983914 valve and 986300 Poppet Valve

MOUNTING BRACKETS

Part No.	Description
1328355	Syringe Holder, 30-55ml, Fixed
98316	30ml Syringe Mounting Bracket Kit
98318	300ml Cartridge Mounting Bracket Kit
98326	98009 and 98013 Valve Mounting Bracket Kit
98327	97113 and 97114 Valve Mounting Bracket Kit
98406	983914 and 986300 Poppet Valve Mounting Bracket Kit
98441	98520 Spray and 98084 Micro Needle Valve Mounting Bracket Kit
98646	Universal Syringe Bracket for Posi-Link™
98647	50ml Dual Cartridge Bracket for Posi-Link™
98669	98591 and 98595 LED Mounting Bracket Kit
1034030	98601, 98665, 976418 and 976420 LED Mounting Bracket Kit
98357	Z Height Adjustment Plate
929541	Z Height Adjustment Plate for Posi-Link™ 200-400 nests

LIGHT CURTAIN GUARDING PACKAGE – Item # 989777

This package is an integrated safety enclosure to support Loctite® 400D & 500D Robots. The enclosure has transparent hard guarding on 3 sides (with clear anodized aluminum extrusion frame), and a full-length safety light curtain on the front side. The light curtain guarding will permit loading and unloading of production parts while protecting the users from Robot motion. Included with the package is:

- Electrical enclosure with operator controls of E-Stop button, cycle start pushbutton, and a power On lamp.
- A quad AC power outlet at the rear of the electrical enclosure serves to power the Robot and any other dispense accessory for the application.

Control to the system will be centrally located from this enclosure. The operator E-Stop will remove power from the Quad outlet, disabling all functions when depressed (including the robot). The light curtain can be crossed at any time without affecting the Robot so long as the Robot is not in motion (dispense cycle). If the light curtain is crossed, during a dispense cycle, the power to robot's motors will be removed; and the Robot will have to be re-initialized (with the cycle start switch).

A single 120 VAC outlet is all that is required to power the guarding system. A small access panel is available at the rear of the guarding enclosure for access to the Robot power switch, cables, airlines, edge connectors, etc.
Dimensions: 32" Wide x 36" Deep x 35" High

INTERLOCKED-DOOR GUARDING PACKAGE – Item # 989789

The Guarding Package is offered without the safety light curtain and instead, a sliding door is used to isolate the operator from the Robot motion. This package contains all the same features as the Light Curtain Guarding Package. It requires the user to slide (right to left) the clear polycarbonate door to gain access to the Robot loading platform. A roller arrangement allows for minimal effort in opening and closing.

The door is interfaced with the Robot and will not allow a cycle to start if the door is opened. If the door is opened during a dispense cycle, the Robot will stop and will have to be re-initialized. This package is well suited for slower (long) cycle, or low volume applications. Dimensions: 32" Wide x 36" Deep x 35" High