

Motion Control Dispense Systems

Robots

Available in both Benchtop and SCARA model types, Loctite® brand robots are designed to simplify the dispensing of adhesives and sealants onto complex surface configurations. They allow manufacturers to repeatedly and reliably dispense patterns of liquid material on a programmed basis, resulting in improved process efficiencies, minimal material waste, and reduced production costs.



Robot Types

Benchtop robots are beam or gantry style robots designed to be placed on a bench. These robots carry one or more parts that are captured in a fixture that is mounted on the work surface. Motion in the X axis is achieved by moving the work surface forward and backward. The Y and Z axes are achieved by moving the tool head left and right and up and down, respectively, on the beam or gantry. When applicable, the 4th axis (R axis) is achieved by rotating the mounting shaft that protrudes from the tool head.

SCARA is an acronym for Selective Compliance Assembly Robot Arm. The robot is a multi-jointed arm that moves above the work surface. It must be mounted near the work surface by the user. The X and Y axes are achieved by changing the angles of the two arms. This creates a kidney shaped dispensing area that is approximately 880 mm (34.6") wide and 440 mm (17.3") tall at the center. The Z axis is achieved by moving both arms up and down. On the 4 axis models, the R axis is achieved by rotating the mounting shaft that protrudes from the end of the arm.



| | | Loctite® 200 Series | Loctite® 300 Series | Loctite® 400 Series | Loctite® S440 Series |
|-----------------------------|--------------|------------------------|------------------------|------------------------|-------------------------|
| Type | | Benchtop | Benchtop | Benchtop | SCARA |
| Number of controllable axes | | 3 to 4 | 3 to 4 | 3 to 4 | 3 to 4 |
| Range of operation | X axis | 200 mm | 300 mm | 400 mm | Arm 1) 260 mm ± 90° |
| | Y axis | 200 mm | 320 mm | 400 mm | Arm 2) 180 mm ± 150° |
| | Z axis | 50 mm | 100 mm | 150 mm | 100 mm |
| | R axis | ± 360° | ± 360° | ± 360° | ± 360° |
| Portable weight limitations | Work Surface | 7.0 kg | 11.0 kg | 11.0 kg | N/A |
| | Tool Head | 3.5 kg | 6.0 kg | 6.0 kg | 5.0 kg |
| Speed | PTP (X,Y) | 5 - 500 mm/s | 8 - 800 mm/s | 8 - 800 mm/s | 15 - 1500 mm/s |
| | PTP (Z) | 2.5 - 250 mm/s | 3.2 - 320 mm/s | 3.2 - 320 mm/s | 3.2 - 320 mm/s |
| | PTP (R) | 6 - 600 °/s | 8 - 800 °/s | 8 - 800 °/s | 10 - 1,000 °/s |
| | CP (X,Y) | 0.1 - 500 mm/s | 0.1 - 800 mm/s | 0.1 - 800 mm/s | 0.1 - 800 mm/s |
| | CP (Z) | 0.1 - 250 mm/s | 0.1 - 800 mm/s | 0.1 - 800 mm/s | 0.1 - 800 mm/s |

Loctite® 200 Series Benchtop Robot

The Loctite® 200 Series Benchtop Robot has a 200 by 200 mm (7.9 by 7.9") range of operation. This robot is available in eight different configurations offering: 3 or 4 axes, 110 or 220V power, standard or CE certified. The simultaneous control over all axes provides for 3D linear and arc interpolations that are required for complicated dispensing processes. Henkel Corporation has special application software that simplifies programming of the robot.

Robot Configurations

| | |
|-------|-------------------------------------|
| 98279 | 200 x 200 mm, 3 axis, 110V |
| 98280 | 200 x 200 mm, 3 axis, 100V CE Rated |
| 98281 | 200 x 200 mm, 3 axis, 220V |
| 98282 | 200 x 200 mm, 3 axis, 220V CE Rated |
| 98283 | 200 x 200 mm, 4 axis, 110V |
| 98284 | 200 x 200 mm, 4 axis, 100V CE Rated |
| 98285 | 200 x 200 mm, 4 axis, 220V |
| 98286 | 200 x 200 mm, 4 axis, 220V CE Rated |

Features

- Integrated solution - plug and play
- Low cost operation and ownership
- Compact size
- Application specific software
- Teach point programming
- 100 program, 6,000 point memory card
- Wide variety of mounting hardware

Programming

Simple to program using either a multi-line backlit teach pendant with user-friendly prompts or Windows 98/2000 software. The program allows for continuous path motion and automatically interpolates any line or arc in all axes. The manual provides step-by-step instructions for programming the robot. No previous experience is required.

Programming Accessories

The specially designed, easy-to-use Teach Pendant is the preferred device for programming and operating the robot. A laptop computer loaded with the Teach Point Software can also be used as an alternative.

| | |
|--------|---------------------------------|
| 987453 | Teach Pendant |
| 987454 | Teach Point Software |
| 987491 | Additional Dispense Memory Card |

Cables

98312 and 98313 provide connectivity with the two most common dispensers. When other dispensers are used or an additional I/O is required, the 98356 cable with junction box provides an integrated solution.

| | |
|-------|--|
| 98312 | Cable for Loctite® Analog Syringe Dispense System (98021) |
| 98313 | Cable for Loctite® Analog Syringe Dispense System (97006) |
| 98356 | Cable with Junction Box for 1 Optically Isolated Dispenser, 3 Input and 6 Output |
| 98354 | I/O-1 Customizable Cable, 16 Input and 16 Output with Bare Wire Pigtail |
| 98355 | Laptop Cable |

List of Loctite® Brand Parts Supplied

| | |
|----------------|--------------------------|
| (1) Robot | (1) Dispense Memory Card |
| (1) Power Cord | (1) CD-ROM Manual |

Dispensing Options

988000 Solenoid valve module for pneumatic control by the robot

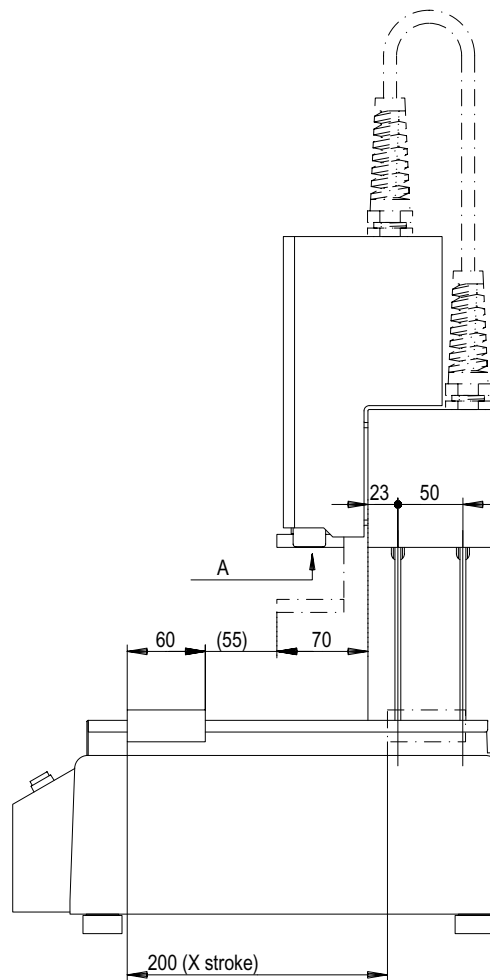
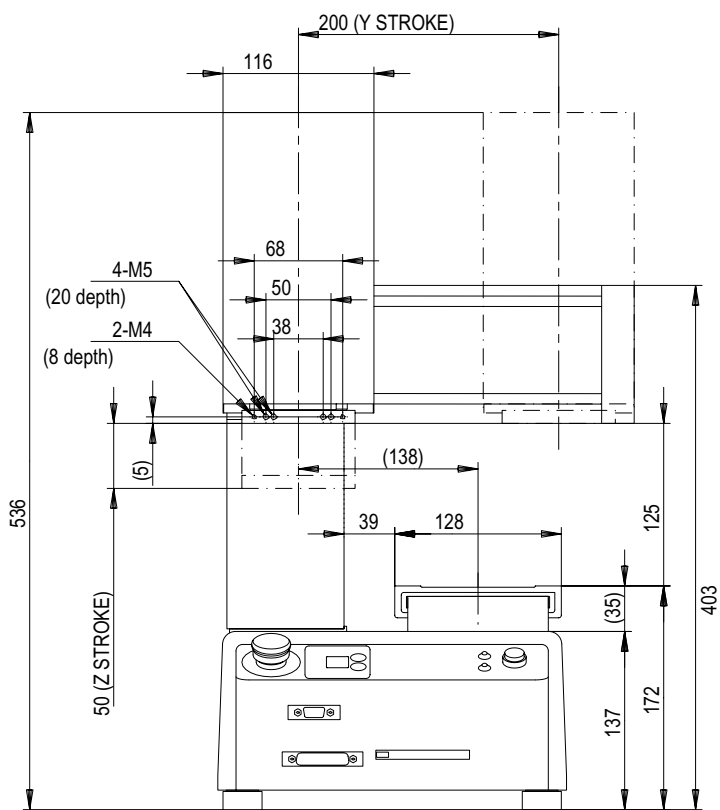
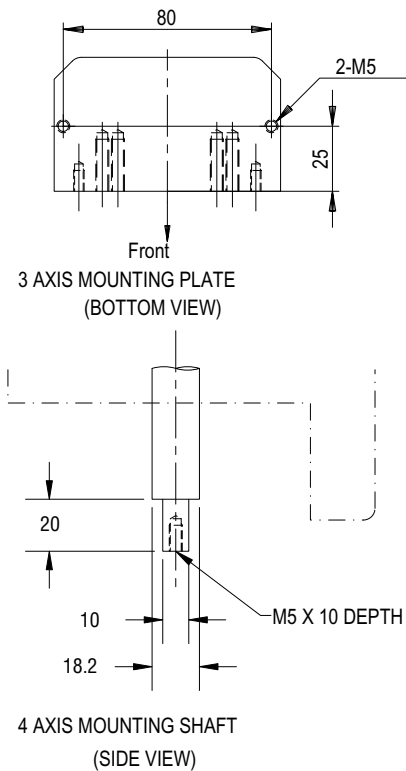
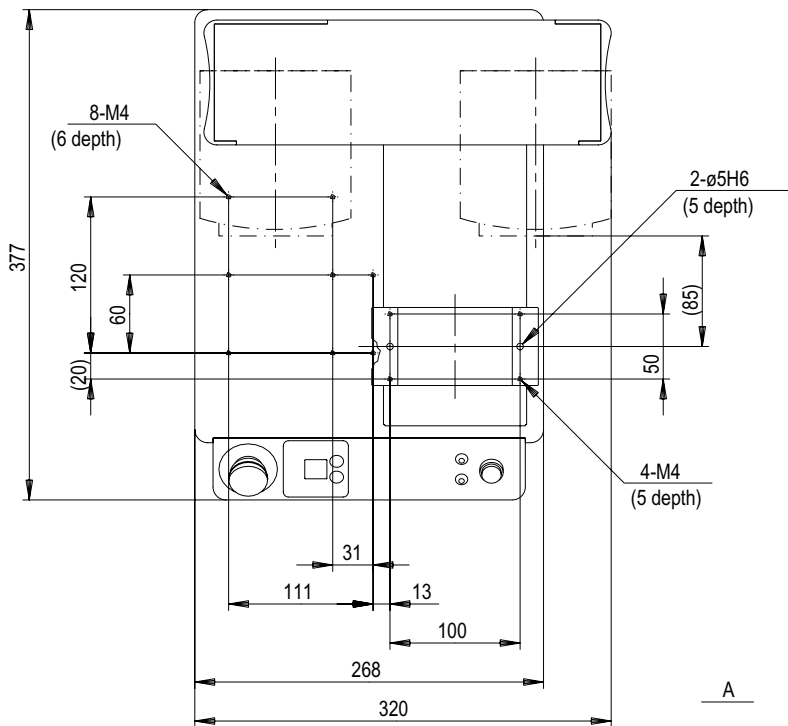
Additional Information

For information on mounting hardware to be used with this robot, please see page 69.



Technical Specifications

| Attribute | | Value |
|-----------------------------|----------------|-----------------------------------|
| Number of controllable axes | | 3 to 4 |
| Range of operation | X axis | 200 mm |
| | Y axis | 200 mm |
| | Z axis | 50 mm |
| | R axis | ± 360° |
| Portable weight | Work Surface | 7.0 kg |
| | Tool Head | 3.5 kg |
| Speed | PTP (X,Y) | 5 - 500 mm/s |
| | PTP (Z) | 2.5 - 250 mm/s |
| | PTP (R) | 6 - 600 °/s |
| | CP (X,Y) | 0.1 - 500 mm/s |
| | CP (X,Y) | 0.1 - 250 mm/s |
| Repeatability accuracy | X, Y, Z axis | ± 0.01 mm |
| | R axis | ± 0.02° |
| CPU | | 32 bit |
| Control method | | Point-to-Point or Continuous Path |
| Drive method | | 5-phase stepping motor |
| I/O | | 16 |
| Data storage | | Memory Card |
| Program capacity | | 100 programs |
| Data memory capacity | | 6,000 points |
| Dimensions | Width | 320 mm |
| | Depth | 377 mm |
| | Height, 3 axis | 536 mm |
| | Height, 4 axis | 655 mm |
| Weight | | 18 kg |
| Power source | | 110 or 220 VAC / 50-60 Hz |
| Consumption current | | 200 VA |
| Working environment | Temperature | 0 - 40°C |
| | Humidity | 20 - 95% RH |



NOTE: ALL DIMENSIONS IN MILLIMETERS

Loctite® 300 Series Benchtop Robot

The Loctite® 300 Series Benchtop Robot has a 300 by 320 mm (11.8 by 12.6") range of operation. This robot is available in eight different configurations offering: 3 or 4 axes, 110 or 220V power, standard or CE certified. The simultaneous control over all axes provides for 3D linear and arc interpolations that are required for complicated dispensing processes. Henkel Corporation has special application software that simplifies programming of the robot.

Robot Configurations

| | |
|-------|-------------------------------------|
| 98287 | 300 x 320 mm, 3 axis, 110V |
| 98288 | 300 x 320 mm, 3 axis, 100V CE Rated |
| 98289 | 300 x 320 mm, 3 axis, 220V |
| 98290 | 300 x 320 mm, 3 axis, 220V CE Rated |
| 98291 | 300 x 320 mm, 4 axis, 110V |
| 98292 | 300 x 320 mm, 4 axis, 100V CE Rated |
| 98293 | 300 x 320 mm, 4 axis, 220V |
| 98294 | 300 x 320 mm, 4 axis, 220V CE Rated |

Features

- Integrated solution - plug and play
- Low cost operation and ownership
- Compact size
- Application specific software
- Teach point programming
- 100 program, 6,000 point memory card
- Wide variety of mounting hardware

Programming

Simple to program using either a multi-line backlit teach pendant with user-friendly prompts or Windows 98/2000 software. The program allows for continuous path motion and automatically interpolates any line or arc in all axes. The manual provides step-by-step instructions for programming the robot. No previous experience is required.

Programming Accessories

The specially designed, easy-to-use Teach Pendant is the preferred device for programming and operating the robot. A laptop computer loaded with the Teach Point Software can also be used as an alternative.

| | |
|--------|---------------------------------|
| 987453 | Teach Pendant |
| 987454 | Teach Point Software |
| 987491 | Additional Dispense Memory Card |

Cables

98312 and 98313 provide connectivity with the two most common dispensers. When other dispensers are used or an additional I/O is required, the 98356 cable with junction box provides an integrated solution.

| | |
|-------|--|
| 98312 | Cable for Loctite® Analog Syringe Dispense System (98021) |
| 98313 | Cable for Loctite® Digital Syringe Dispense System (97006) |
| 98356 | Cable with Junction Box for 1 Optically Isolated Dispenser, 3 Input and 6 Output |
| 98354 | I/O-1 Customizable Cable, 16 Input and 16 Output with Bare Wire Pigtail |
| 98355 | Laptop Cable |

Dispensing Options

| | |
|--------|--|
| 988000 | Solenoid valve module for pneumatic control by the robot |
|--------|--|

List of Loctite® Brand Parts Supplied

- (1) Robot
- (1) Power Cord
- (1) Dispense Memory Card
- (1) CD-ROM Manual

Additional Information

For information on mounting hardware to be used with this robot, please see page 69.



Technical Specifications

| Attribute | | Value |
|-----------------------------|----------------|-----------------------------------|
| Number of controllable axes | | 3 to 4 |
| Range of operation | X axis | 300 mm |
| | Y axis | 320 mm |
| | Z axis | 100 mm |
| | R axis | ± 360° |
| Portable weight | Work Surface | 11.0 kg |
| | Tool Head | 6.0 kg |
| Speed | PTP (X,Y) | 8 - 800 mm/s |
| | PTP (Z) | 3.2 - 320 mm/s |
| | PTP (R) | 8 - 800 °/s |
| | CP (X,Y, Z) | 0.1 - 800 mm/s |
| Repeatability accuracy | X, Y, Z axis | ± 0.01 mm |
| | R axis | ± 0.02° |
| CPU | | 32 bit |
| Control method | | Point-to-Point or Continuous Path |
| Drive method | | 5-phase stepping motor |
| I/O | | 16 |
| Data storage | | Memory Card |
| Program capacity | | 100 programs |
| Data memory capacity | | 6,000 points |
| Dimensions | Width | 560 mm |
| | Depth | 529 mm |
| | Height, 3 axis | 649 mm |
| | Height, 4 axis | 840 mm |
| Weight | | 35 kg |
| Power source | | 110 or 220 VAC / 50-60 Hz |
| Consumption current | | 200 VA |
| Working environment | Temperature | 0 - 40°C |
| | Humidity | 20 - 95% RH |

Loctite® 400 Series Benchtop Robot

The Loctite® 400 Series Benchtop Robot has a 400 by 400 mm (15.7 by 15.7") range of operation. This robot is available in eight different configurations offering: 3 or 4 axes, 110 or 220 V power, standard or CE certified. The simultaneous control over all axes provides for 3D linear and arc interpolations that are required for complicated dispensing processes. Henkel Corporation has special application software that simplifies programming of the robot.

Robot Configurations

| | |
|-------|-------------------------------------|
| 98295 | 400 x 400 mm, 3 axis, 110V |
| 98296 | 400 x 400 mm, 3 axis, 100V CE Rated |
| 98297 | 400 x 400 mm, 3 axis, 220V |
| 98298 | 400 x 400 mm, 3 axis, 220V CE Rated |
| 98299 | 400 x 400 mm, 4 axis, 110V |
| 98300 | 400 x 400 mm, 4 axis, 100V CE Rated |
| 98301 | 400 x 400 mm, 4 axis, 220V |
| 98302 | 400 x 400 mm, 4 axis, 220V CE Rated |

Features

- Integrated solution - plug and play
- Low cost operation and ownership
- Compact size
- Application specific software
- Teach point programming
- 100 program, 6,000 point memory card
- Wide variety of mounting hardware

Programming

Simple to program using either a multi-line backlit teach pendant with user-friendly prompts or Windows 98/2000 software. The program allows for continuous path motion and automatically interpolates any line or arc in all axes. The manual provides step-by-step instructions for programming the robot. No previous experience is required.

Programming Accessories

The specially designed, easy-to-use Teach Pendant is the preferred device for programming and operating the robot. A laptop computer loaded with the Teach Point Software can also be used as an alternative.

| | |
|--------|---------------------------------|
| 987453 | Teach Pendant |
| 987454 | Teach Point Software |
| 987491 | Additional Dispense Memory Card |

Cables

98312 and 98313 provide connectivity with the two most common dispensers. When other dispensers are used or additional I/O is required, the 98356 cable with junction box provides an integrated solution.

| | |
|-------|--|
| 98312 | Cable for Loctite® Analog Syringe Dispense System (98021) |
| 98313 | Cable for Loctite® Digital Syringe Dispense System (97006) |
| 98356 | Cable with Junction Box for 1 Optically Isolated Dispenser, 3 Input and 6 Output |
| 98354 | I/O-1 Customizable Cable, 16 Input and 16 Output with Bare Wire Pigtail |
| 98355 | Laptop Cable |

List of Loctite® Brand Parts Supplied

- (1) Robot
- (1) Power Cord
- (1) Dispense Memory Card
- (1) CD-ROM Manual

Dispensing Options

988000 Solenoid valve module for pneumatic control by the robot

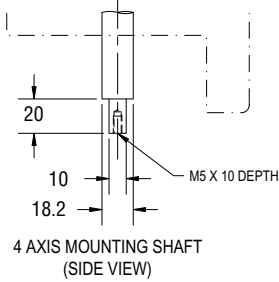
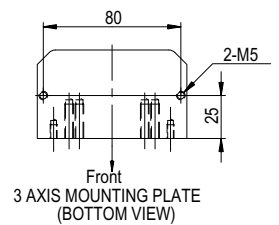
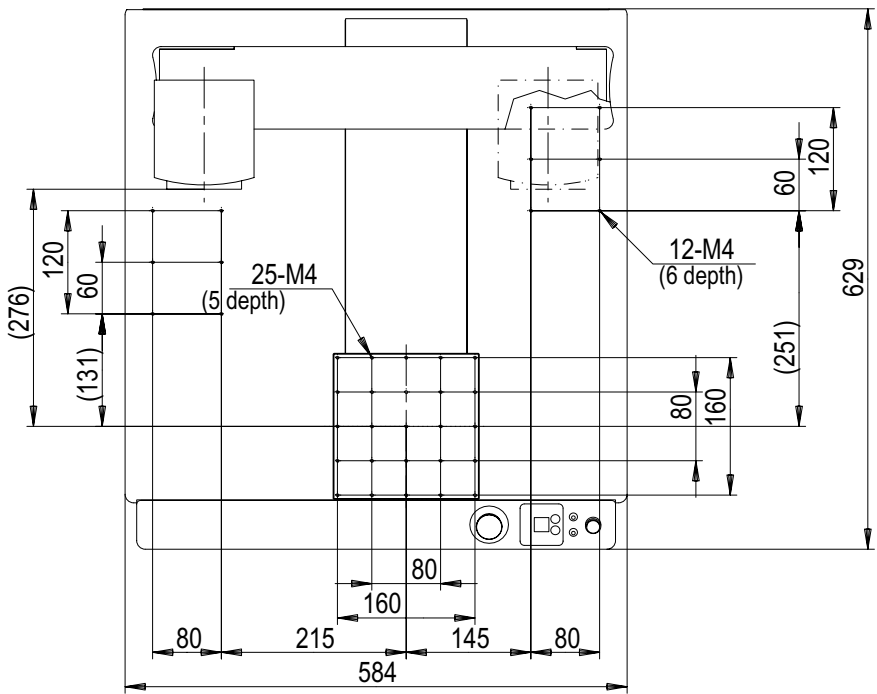
Additional Information

For information on mounting hardware to be used with this robot, please see page 69.

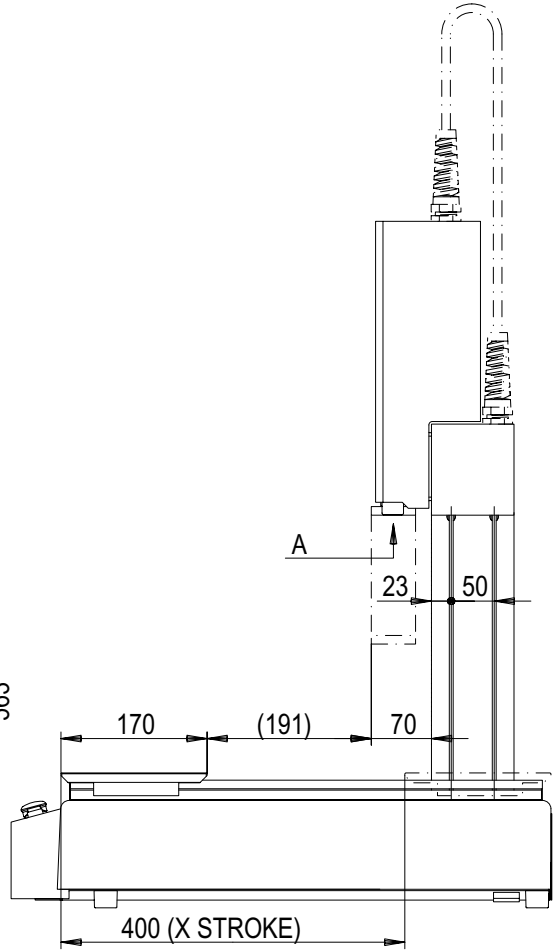
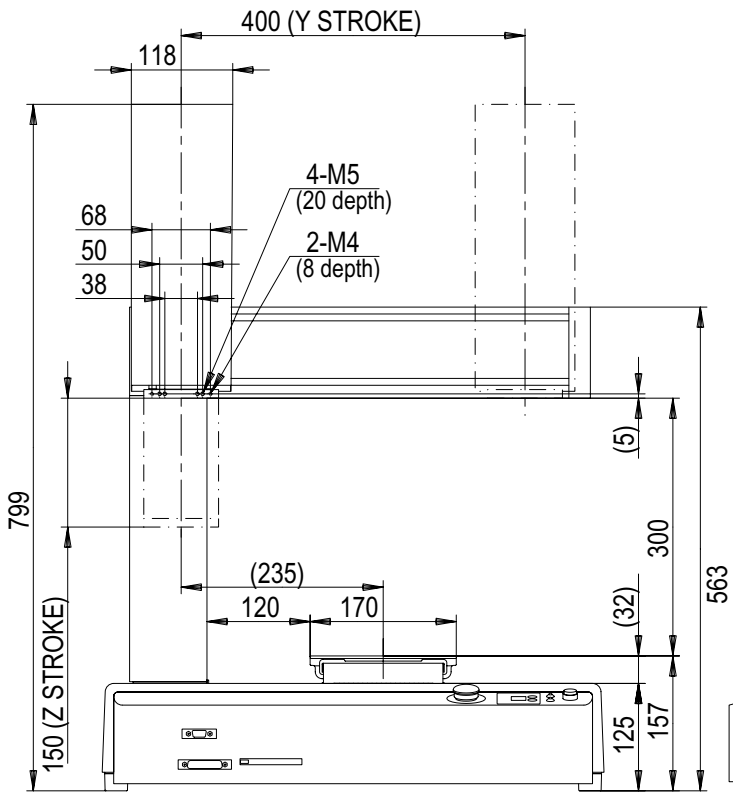


Technical Specifications

| Attribute | | Value |
|-----------------------------|----------------|-----------------------------------|
| Number of controllable axes | | 3 to 4 |
| Range of operation | X axis | 400 mm |
| | Y axis | 400 mm |
| | Z axis | 150 mm |
| | R axis | ± 360° |
| Portable weight | Work Surface | 11.0 kg |
| | Tool Head | 6.0 kg |
| Speed | PTP (X,Y) | 8 - 800 mm/s |
| | PTP (Z) | 3.2 - 320 mm/s |
| | PTP (R) | 8 - 800 °/s |
| | CP (X,Y, Z) | 0.1 - 800 mm/s |
| Repeatability accuracy | X, Y, Z axis | ± 0.01 mm |
| | R axis | ± 0.02° |
| CPU | | 32 bit |
| Control method | | Point-to-Point or Continuous Path |
| Drive method | | 5-phase stepping motor |
| I/O | | 16 |
| Data storage | | Memory Card |
| Program capacity | | 100 programs |
| Data memory capacity | | 6,000 points |
| Dimensions | Width | 584 mm |
| | Depth | 629 mm |
| | Height, 3 axis | 799 mm |
| | Height, 4 axis | 890 mm |
| Weight | | 42 kg |
| Power source | | 110 or 220 VAC / 50-60 Hz |
| Consumption current | | 200 VA |
| Working environment | Temperature | 0 - 40°C |
| | Humidity | 20 - 95% RH |



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NOTE: ALL DIMENSIONS IN MILLIMETERS

Loctite® S440 Series SCARA Robot

The Loctite® S440 Series SCARA Robot provides the maximum flexibility for complex dispensing applications. The robot is multi-jointed similar to a human arm with a kidney shaped dispensing area determined by two arm lengths: 1) 260 mm and 2) 180 mm. SCARA is an acronym for Selective Compliance Assembly Robot Arm. This robot is available in eight different configurations offering: 3 or 4 axes, 110 or 220V power, standard or CE certified. The simultaneous control over all axes provides for 3D linear and arc interpolations that are required for complicated dispensing processes. Henkel Corporation has special application software that simplifies programming of the robot.

Robot Configurations

| | |
|-------|--------------------------------------|
| 98303 | SCARA, 440 mm, 3 axis, 110V |
| 98304 | SCARA, 440 mm, 3 axis, 100V CE Rated |
| 98305 | SCARA, 440 mm, 3 axis, 220V |
| 98306 | SCARA, 440 mm, 3 axis, 220V CE Rated |
| 98307 | SCARA, 440 mm, 4 axis, 110V |
| 98308 | SCARA, 440 mm, 4 axis, 100V CE Rated |
| 98309 | SCARA, 440 mm, 4 axis, 220V |
| 98310 | SCARA, 440 mm, 4 axis, 220V CE Rated |

Features

- Integrated solution - plug and play
- Low cost operation and ownership
- Compact size
- Application specific software
- Teach point programming
- 100 program, 6,000 point memory card
- Wide variety of mounting hardware

Programming

Simple to program using either a multi-line backlit teach pendant with user-friendly prompts or Windows 98/2000 software. The program allows for continuous path motion and automatically interpolates any line or arc in all axes. The manual provides step-by-step instructions for programming the robot. No previous experience is required.

Programming Accessories

The operations box is required. The specially designed, easy-to-use Teach Pendant is the preferred device for programming and operating the robot. A laptop computer loaded with the Teach Point Software can also be used as an alternative.

| | |
|--------|---------------------------------|
| 987512 | Operations Box |
| 987511 | Teach Pendant |
| 987454 | Teach Point Software |
| 988334 | Additional Dispense Memory Card |

Cables

98368 and 98370 provide connectivity with the two most common dispensers. When other dispensers are used or additional I/O is required, the 98370 cable with junction box provides an integrated solution.

| | |
|-------|--|
| 98368 | Cable for Loctite® Analog Syringe Dispense System (98021) |
| 98369 | Cable for Loctite® Digital Syringe Dispense System (97006) |
| 98370 | Cable with Junction Box for 1 Optically Isolated Dispenser, 7 Input and 6 Output |
| 98354 | I/O-1 Customizable Cable, 16 Input and 16 Output with Bare Wire Pigtail |
| 98355 | Laptop Cable |

Dispensing Options

| | |
|--------|--|
| 988000 | Solenoid valve module for pneumatic control by the robot |
|--------|--|

List of Loctite® Brand Parts Supplied

| | |
|--------------------------|-------------------------------|
| (1) Robot | (1) I/O-S Short Plug |
| (1) Power Cord | (1) Teach Pendant Short Plug |
| (1) Dispense Memory Card | (1) Operations Box Short Plug |
| (1) I/O-2 Cable | (1) CD-ROM Manual |

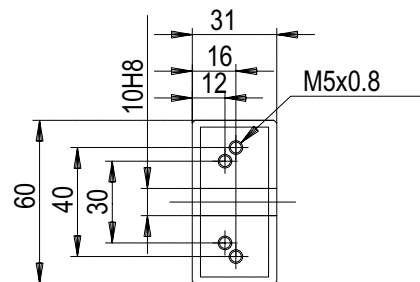


Additional Information

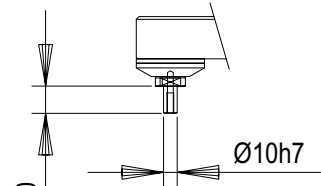
For information on mounting hardware to be used with this robot, please see page 69.

Technical Specifications

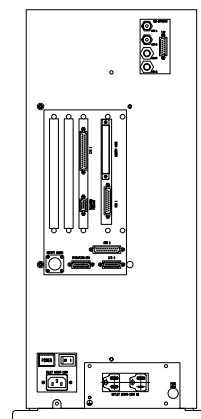
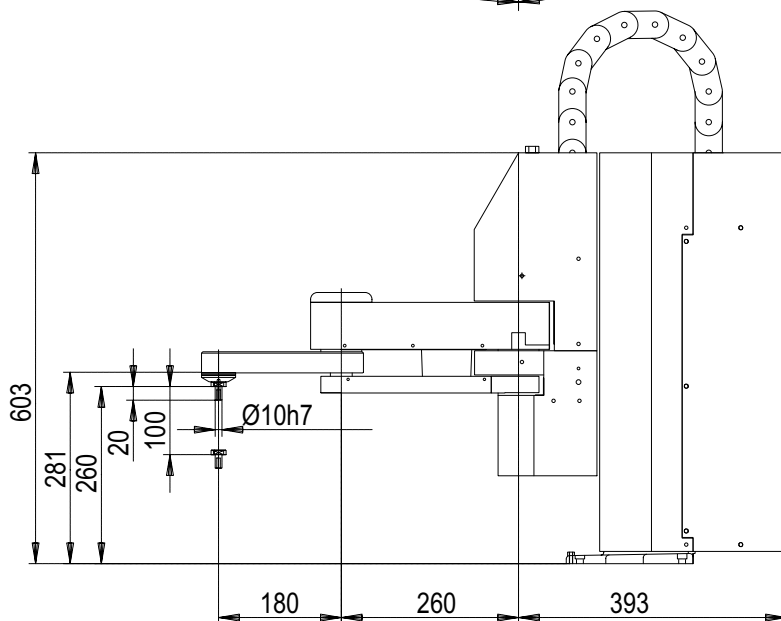
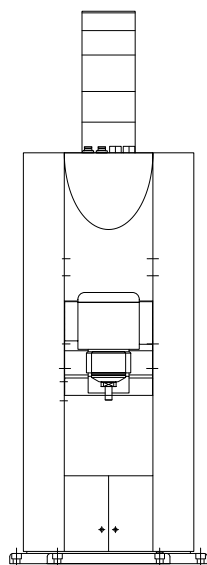
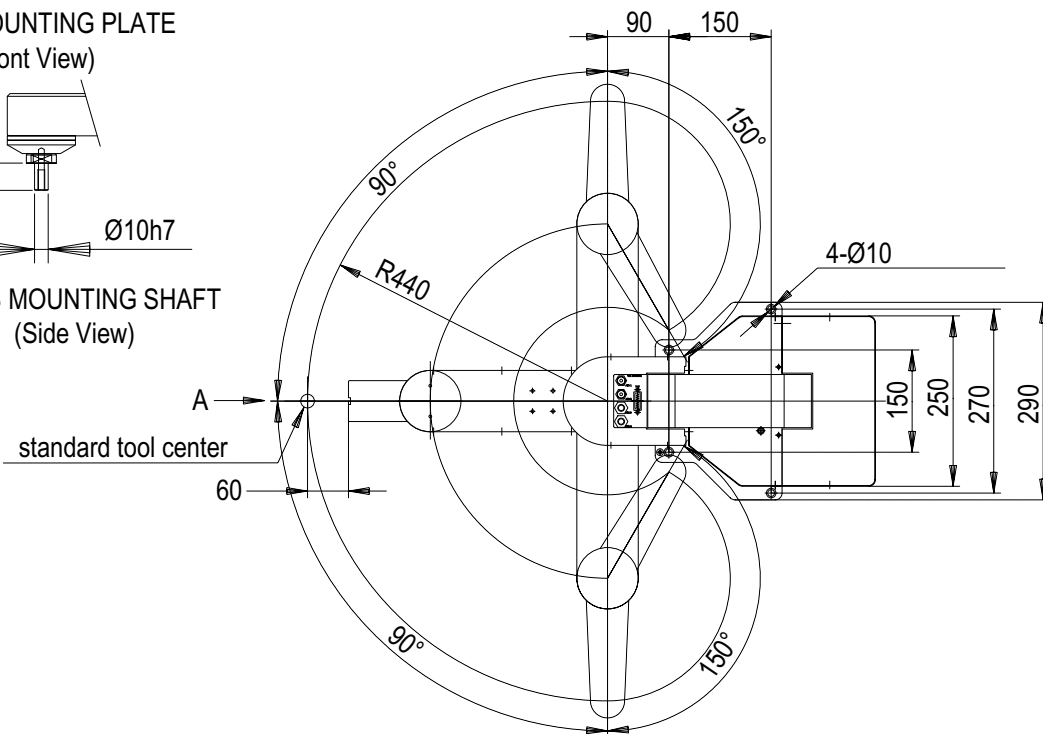
| Attribute | | Value |
|-----------------------------|---------------|-----------------------------------|
| Number of controllable axes | | 3 to 4 |
| Range of operation | Length, Arm 1 | 260 mm ± 90° |
| | Length, Arm 2 | 180 mm ± 150° |
| | Z axis | 100 mm |
| | R axis | ± 360° |
| Portable weight, Tool Head | | 5.0 kg |
| Speed | PTP (X,Y) | 15 - 1500 mm/s |
| | PTP (Z) | 3.2 - 320 mm/s |
| | PTP (R) | 10 - 1,000 °/s |
| | CP (X,Y, Z) | 0.1 - 800 mm/s |
| Repeatability accuracy | X, Y, Z axis | ± 0.02 mm |
| | R axis | ± 0.02° |
| CPU | | 32 bit |
| Control method | | Point-to-Point or Continuous Path |
| Drive method | | 5-phase stepping motor |
| I/O | | 16 + 8 + Safety |
| Data storage | | Memory Card |
| Program capacity | | 100 programs |
| Data memory capacity | | 6,000 points |
| Dimensions | Width | 290 mm |
| | Depth | 773 mm |
| | Height | 840 mm |
| Weight | | 41 kg |
| Power source | | 110 or 220 VAC / 50-60 Hz |
| Consumption current | | 200 VA |
| Working environment | Temperature | 0 - 40°C |
| | Humidity | 20 - 95% RH |



3 AXIS MOUNTING PLATE
(Front View)



4 AXIS MOUNTING SHAFT
(Side View)



NOTE: ALL DIMENSIONS IN MILLIMETERS