# Robotics

F5200N.1 3-Axis Inline Gantry Robot

The model F5200N.1 is a compact and versatile gantry robot with all moving axes above the work piece. The Unitop™ design is suitable for applications requiring a mount that provides open access under the robot.

This robot is ideal for conveyor-fed automation or installed in work cells, operating as a stationary robot. When higher workloads or part size prevent using standard benchtop robots, the F5200N.1 can meet these demands.

Programming is simply carried out by a teach pendant (included) using the industry's leading dispensing software that walks the user through step-by-step instructions to create a sophisticated dispensing operation in minutes.

Features

- Gantry-style design allowing for flexible operation

- Separate control box for reduced footprint

- Z-axis reach allows for larger applications

- Tip alignment routine for quick program offsets

- Durable linear belt drive for industrial environments

- In-line capability for increased throughput

- Step and repeat functionality
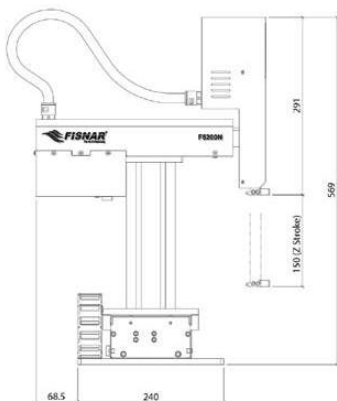
Item Number	Description
F5200N.1	3-Axis Inline Gantry Robot

Specifications

Item Number	F5200N.1
Working Area X/Y/Z (mm)	200 x 200 x 150mm
Maximum Speed (X&Y/Z)	500 / 320mm / secs
Tool Load-Z-Axis	2kg
Repeatability	+/- 0.02mm / axis
Resolution	0.001mm / axis
Motion Control	PTP & CP
Drive System	Micro stepping motors
Data Memory	1-100 programs 50,000 points/program
I/O Signals	8 inputs / 8 outputs
External Interface	USB / RS232
Power Supply	Auto-switching AC 100-240 VAC, 320 watts
Dimensions (W/D/H)	485 x 383.5 x 569mm
Weight	25kg

F4200N.1 Compact Benchtop Robot

The F4200N.1 is a compact and ergonomically designed benchtop robot created to support most general dispensing applications requiring a high performance standard and consistent repeatable results.

Programming the F4200N.1 is simple with the included teach pendant and optional tip alignment.

Using the industry's market-leading software, the teach pendant provides users with step-by-step instructions resulting in a sophisticated dispensing operation in minutes.

Features

- Repeatability 0.02mm
- Small footprint for bench space reduction
- Step and repeat functionality
- USB port for data transfer and back up
- Optional PC programming
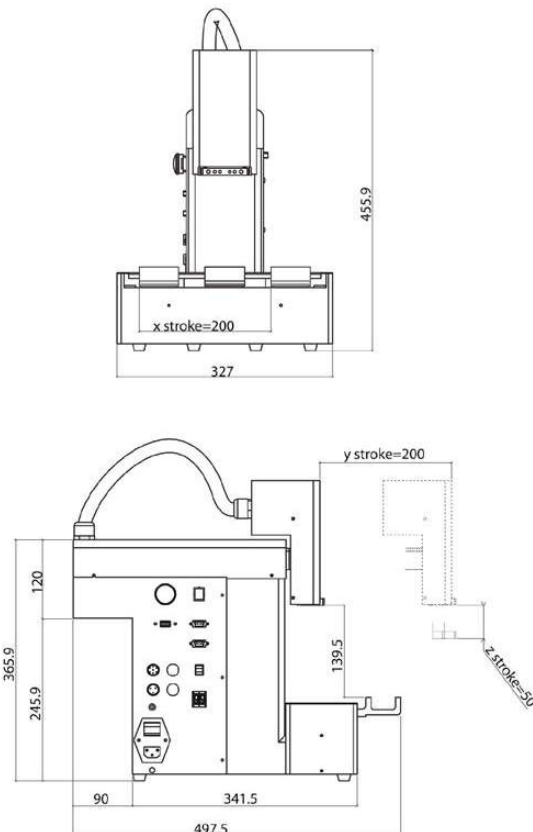
Item Number	Description
F4200N.1	Compact Benchtop Robot

Specifications

Item Number	F4200N.1
Working Area X/Y/Z (mm)	200 x 200 x 50mm
Maximum Speed (X&Y/Z)	500 / 200mm / secs
Work Load	3kg
Tool Load-Z-Axis	2kg
Repeatability	+/- 0.02mm / axis
Resolution	0.001mm / axis
Motion Control	PTP & CP
Drive System	Micro stepping motors
Data Memory	1-100 programs 50,000 points/program
I/O Signals	8 inputs / 8 outputs
External Interface	USB / RS232
Power Supply	Auto-switching AC 100-240 VAC, 320 watts
Dimensions (W/D/H)	324 x 500 x 465mm
Weight	20kg

F4000 Advance Series 3-Axis Robot

Fisnar F4000 Advance 3-axis benchtop robots are designed to ensure precise fluid placement and positioning. When configured with a syringe, cartridge, or valve system, a high level of accuracy and repeatability is achieved. Specifically built for fluid dispensing processes, the F4000 proprietary robot software is user friendly and enables the creation of complex dispensing routines (dots, lines, circles, arcs, and fills) that can be set up and operational in just minutes using the teach pendant (included).

The proprietary windows programming software allows for DXF files to be imported into the software and have dispense lines or dots quickly created from the imported CAD data. This feature dramatically reduces programming time for complex dispense patterns or when there is a high number of dispense positions.

The F4000 Advance can be supplied individually or as a complete stand-alone machine system by integrating into a safety enclosure.*

Required to conform to European CE safety regulations (Machinery Directive 2006/42/EC).

Models

Item Number	Description
F4303	3-Axis Robot - 300x300x100mm Work Area
F4403	3-Axis Robot - 400x400x100mm Work Area
F4503	3-Axis Robot - 500x500x150mm Work Area
F4603	3-Axis Robot - 600x500x150mm Work Area

Features

- Modular connectivity for easy installation of accessories at any time such as the CCD vision kit, tip-alignment, or height sensor

- USB Port for data transfer and back-up

- Program selector switch and fluid purge button

- True 3D interpolation and simultaneous motion control

- Teach pendant included for easy programming

Benefits

- High positional accuracy improves dispense results

- Proprietary user-friendly software allows programs to be easily and quickly set up using the teach pendant or PC

- Increased productivity due to faster cycle times and less rejects

- Windows software provides greater control and visibility of complete dispense program
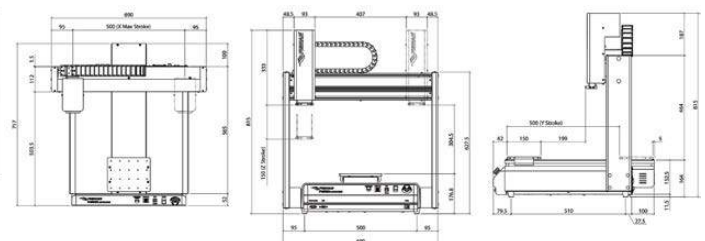
F4000 Series 3-Axis Robots

Specifications

Item Number	F4303	F4403	F4503	F4603
Maximum Working Area X/Y/Z	300 x 300 x 100mm (12 / 12 / 4")	400 x 400 x 100mm (16 / 16 / 4")	500 x 500 x 150mm (20 / 20 / 6")	600 x 500 x 150mm (24 / 20 / 6")
Maximum Speed (X&Y/Z)	800 / 320mm / secs (31 / 13" / secs)			
Work Load	10kg (22lb)			
Tool Load	5kg (11lb)			
Repeatability	+/- 0.008mm**			
Motion Control	PTP & CP			
Drive System	3-phase micro stepping motors			
Data Memory	1-100 programs | 1-50,000 points / program			
I/O Signals	8 inputs / 8 outputs			
External Interface	USB / RS232			
Power Supply	Auto-switching AC 100 - 240 VAC, 320 watts			
Dimensions (W/D/H)	490 x 645 x 517mm (19 x 25 x 20")	590 x 645 x 617mm (23 x 25 x 24")	690 x 815 x 717mm (27 x 32 x 28")	810 x 815 x 717mm (32 x 32 x 28")
Weight	21kg (46lb)	39.5kg (87lb)	44.5kg (98lb)	47kg (104lb)
Approvals	CE, RoHS, WEE			

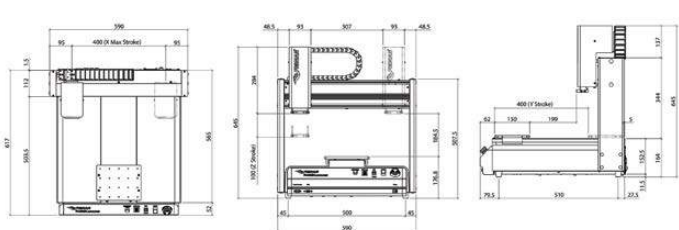**Repeatability value will vary depending on measurement method.
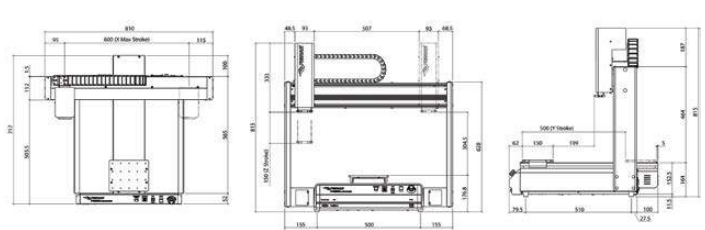
F4303
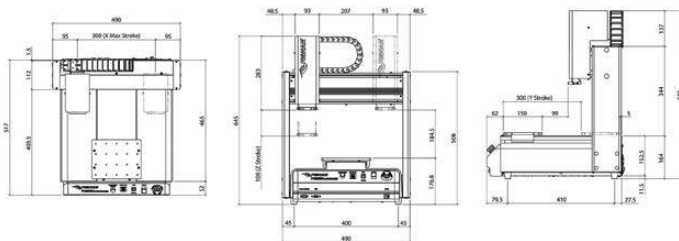
F4503

F4403

F4603

F4000 Advance Series 4-Axis Robot

Fisnar F4000 Advance series 4-axis benchtop robots are designed to ensure precise fluid placement and positioning.

Specifically made for fluid dispensing processes, the F4000 proprietary robot software is user friendly and enables the creation of complex dispensing routines (dots, lines, circles, arcs, and fills) that can be set up and operational in just minutes using the teach pendant (included).

The additional 4th rotational (R) axis allows for dispensing at a user-specified, fixed angle around the 360° rotational plane, allowing it to access hard-to-reach areas and vertical surfaces.

The F4000 Advance can be supplied individually or as a complete stand-alone machine system by integrating into a safety enclosure.*

Required to conform to European CE safety regulations (Machinery Directive 2006/42/EC).

Models

Item Number	Description
F4304	4-Axis Robot - 300x300x150mm Work Area
F4404	4-Axis Robot - 400x400x150mm Work Area
F4504	4-Axis Robot - 500x500x150mm Work Area
F4604	4-Axis Robot - 600x500x150mm Work Area

Features

- Integral tip position adjustment routine
- USB port for data transfer and back-up
- Program selector switch and fluid purge button
- True 3D interpolation and simultaneous motion control
- Modular connectivity design for the simple installation of productivity enhancement tools

Benefits

- High positional accuracy improves dispense results
- Proprietary user-friendly software allows programs to be easily and quickly set up using the teach pendant
- Increased productivity due to faster cycle times and less rejects

F4000 Series 4-Axis Robots

Specifications

Item Number	F4304	F4404	F4504	F4604
Maximum Working Area X/Y/Z	300 x 300 x 150mm (12 / 12 / 6")	400 x 400 x 150mm (16 / 16 / 6")	500 x 500 x 150mm (20 / 20 / 6")	600 x 500 x 150mm (24 / 20 / 6")
Max Working Area (R)	+/- 720°			
Maximum Speed (X&Y/Z)	800 / 320mm / secs (31 / 13" / secs)			
Maximum Speed (R)	720° / secs			
Work Load	10kg (22lb)			
Tool Load	5kg (11lb)			
Repeatability	+/- 0.008mm**			
Motion Control	PTP & CP			
Drive System	3-phase micro stepping motors			
Data Memory	1-100 programs | 1-50,000 points / program			
I/O Signals	8 inputs / 8 outputs			
External Interface	USB / RS232			
Power Supply	Auto-switching AC 100 - 240 VAC, 320 watts			
Dimensions (W/D/H)	540 x 914 x 552mm (21 x 36 x 22")	640 x 914 x 652mm (25 x 36 x 30")	740 x 914 x 752mm (29 x 36 x 30")	860 x 914 x 752mm (32 x 36 x 30")
Weight	41kg (90lb)	46kg (101lb)	48 kg (106lb)	52 kg (115lb)
Approvals	CE, RoHS, WEE			

**Repeatability value will vary depending on measurement method.
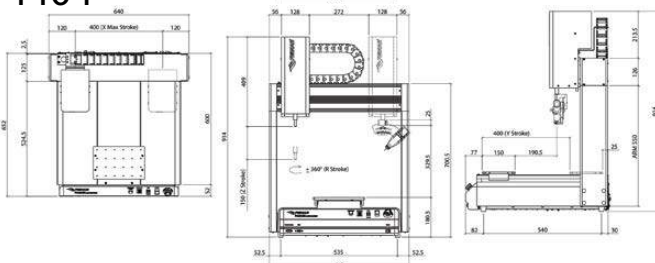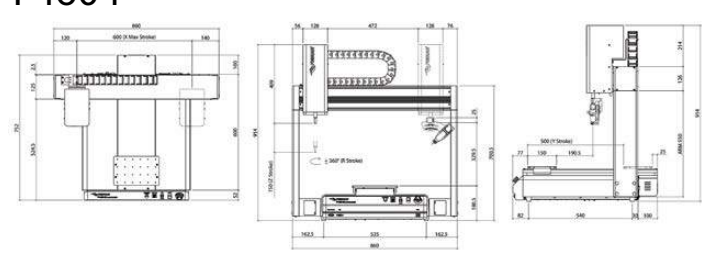
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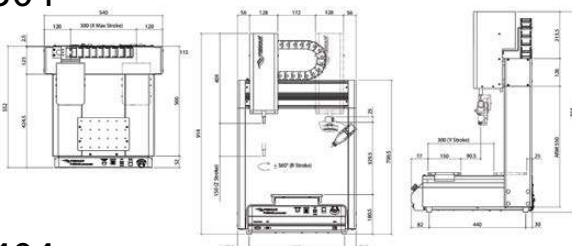
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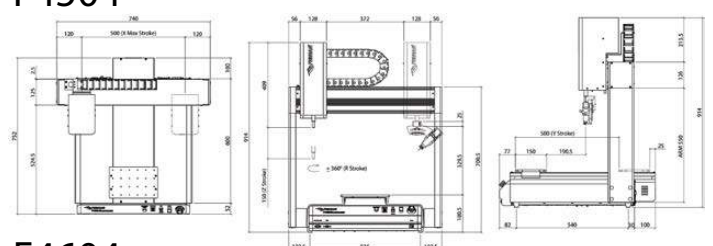
F4404

F4604

F4000 Advance 5-Axis Robot

Fisnar F4000 Advance 5-axis benchtop robot provides both a rotational vertical (B) axis and horizontal (U) axis for applying adhesives and sealants on curved, vertical, or difficult to reach applications.

The F4000 proprietary robot software is user friendly and enables the creation of complex dispensing routines (dots, lines, circles, arcs, and fills) that can be set up and operational in just minutes.

The 5-axis simultaneous positioning is also ideal for dispensing around ledges, lips, and inside channels with form-in-place gasketing materials or staking / ruggedizing electrical components on a PCB with a silicone RTV material. The F4000 Advance can be supplied individually or as a complete stand-alone machine system by integrating into a safety enclosure.*

Required to conform to European CE safety regulations (Machinery Directive 2006/42/EC).

Item Number	Description
F4505	5-Axis Robot - 500x500x150mm Work Area

Features

- Integral tip position adjustment routine
- USB port for data transfer and back-up
- Program selector switch and fluid purge button
- True 3D interpolation and simultaneous motion control
- Modular connectivity design for the simple installation of productivity enhancement tools

Benefits

- High positional accuracy improves dispense results
- Proprietary user-friendly robot software allows programs to be easily and quickly set up using the teach pendant or PC
- Increased productivity due to faster cycle times and less rejects

F4000 Series 5-Axis Robots

Specifications

Item Number	F4505
Maximum Working Area X/Y/Z	500 x 500 x 150mm (20 / 20 / 6")
Max Working Area (R)	+/- 720°
Maximum Speed (X&Y/Z)	800 / 320mm / secs (31 / 13" / secs)
Maximum Speed (R)	720° / secs
Work Load	10kg (22lb)
Tool Load	1kg (2.2lb)
Repeatability	+/- 0.008mm**
Motion Control	PTP & CP
Drive System	3-phase micro stepping motors
Data Memory	1-99 programs │ 1-50,000 points / program
I/O Signals	8 inputs / 8 outputs
External Interface	USB / RS232
Power Supply	Auto-switching AC 100 - 240 VAC, 320 watts
Dimensions (W/D/H)	740 x 914 x 752mm (29 x 36 x 30")
Weight	48 kg (106lb)
Approvals	CE, RoHS, WEE

**Repeatability value will vary depending on measurement method.

F4505
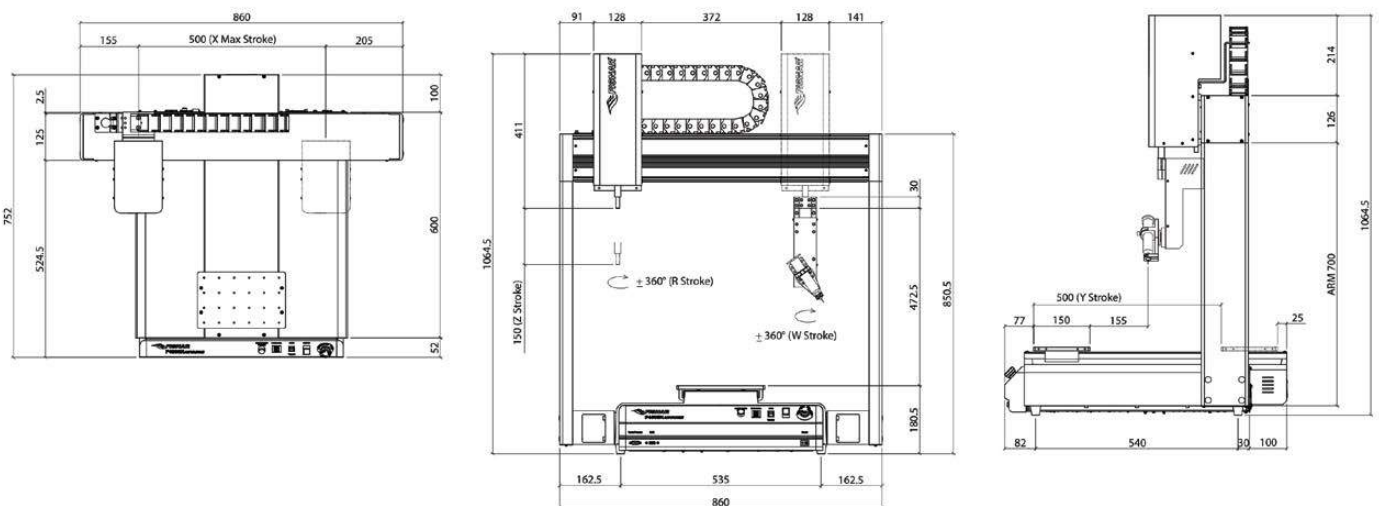
F4000 Advance Series
Dual Table Robot

F4000 Advance dual table benchtop robots are designed to ensure precise fluid placement and positioning.

The unique dual-table design allows for high speed manufacturing due to the elimination of part changeover and loading time. This is made possible with the removal of finished parts and the loading of new parts on the fixture of one table, while the other table is being processed by the robot.

Furthermore, the dual-table design provides users the option to carry out two different dispensing routines sequentially, thus eliminating the requirement for batch production.

The F4000 Advance can be supplied individually or as a complete stand-alone machine system by integrating into a safety enclosure.*

Required to conform to European CE safety regulations (Machinery Directive 2006/42/EC).

Models

Item Number	Description
F4553	3-Axis Robot - 500x500x100mm Work Area
F4554	4-Axis Robot - 500x500x150mm Work Area

Features

- Unique dual-table design for high speed manufacturing

- USB port for data transfer and back-up

- Program selector switch and fluid purge button

- True 3D interpolation and simultaneous motion control

- Modular connectivity feature

Benefits

- Dual-table design increases production rates

- Independent control of each table

- High positional accuracy improves dispense results

- Proprietary user-friendly robot software allows programs to be easily and quickly set up using the teach pendant

- Increased productivity due to faster cycle times and less rejects

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F4000 Advance Series Dual Table Robot

Specifications

Item Number	F4553	F4554
Maximum Working Area X/Y/Z	500 x 500 x 100mm (20 / 20 / 4")	500 x 500 x 150mm (20 / 20 / 6")
Maximum Working Area (R)	+/- 720°	
Maximum Speed (X&Y/Z)	800 / 320mm / secs (31 / 13" / secs)	
Maximum Speed (R)	720° / secs	
Work Load	10kg (22lb)	
Tool Load	5kg (11lb)	
Repeatability	+/- 0.008mm**	
Motion Control	PTP & CP	
Drive System	3-phase micro stepping motors	
Data Memory	1-100 programs │ 1-50,000 points / program	
I/O Signals	8 inputs / 8 outputs	
External Interface	USB / RS232	
Power Supply	Auto-switching AC 100 - 240 VAC, 320 watts	
Dimensions: (W/D/H)	740 x 659 x 717mm (30 x 26 x 28")	740 x 916 x 717mm (30 x 36 x 28")
Weight	52kg (115lb)	56kg (123lb)
Approvals	CE, RoHS, WEE	

**Repeatability value will vary depending on measurement method.
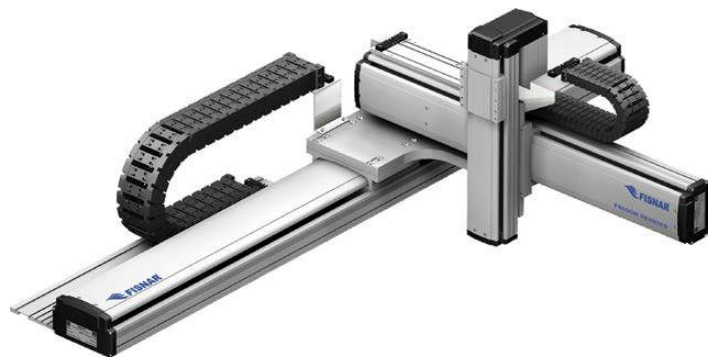
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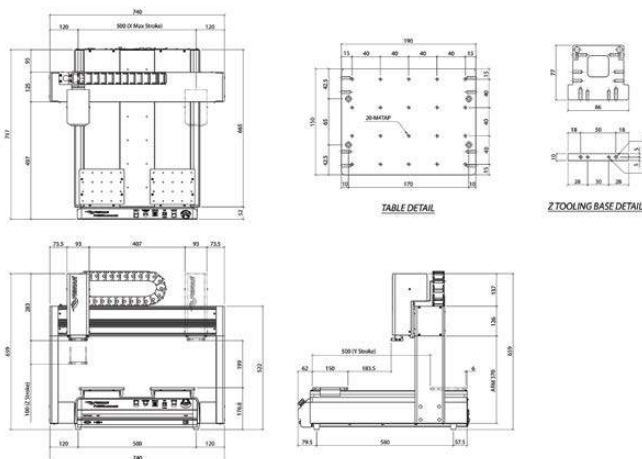
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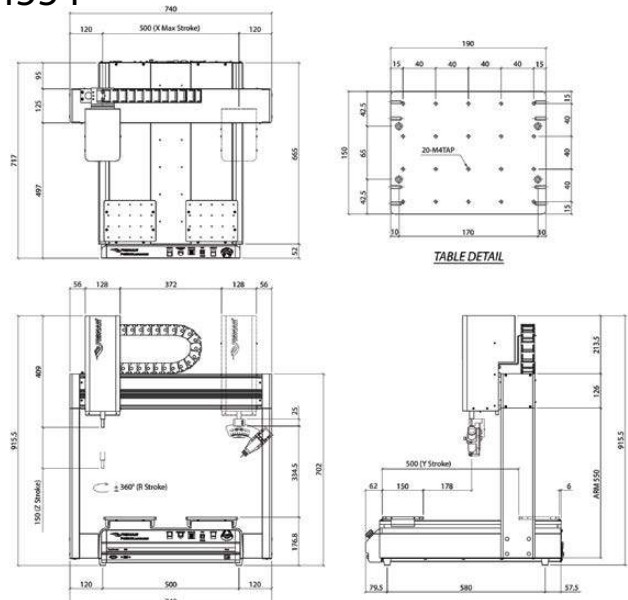
F8000N Series Cantilever Industrial Robots

The F8000N series of robots are servo motor-driven, ball screw design, cantilever robots. A heavy duty aluminum structure prevents flexing and vibration while maintaining functionality. Ideal for conveyor-fed applications.

Where applications require all moving axes to be above the workstation, the F8000N series provides the capability.

Custom robot sizes available upon request.

Features

- AC servo motors
- Available in three and four axis models
- Repeatability of 0.02mm
- Highly rigid frame structure
- Open access design for in-line operation
- 100 programs on board

ROBOTICS

Models

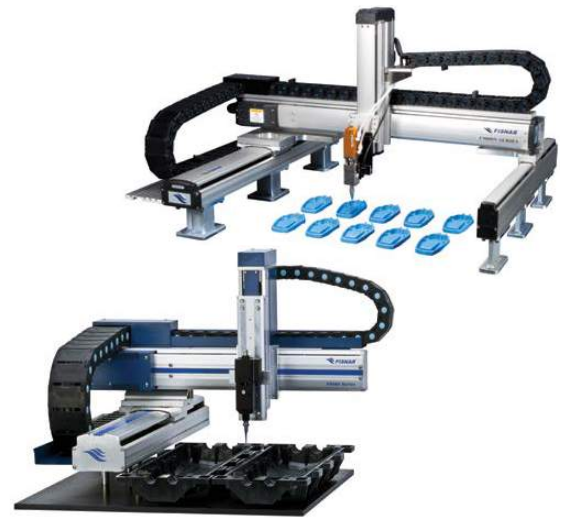| Item Number	Description
F8100N	3-axis Robot - 1,000x800x200mm Work Area
F8104N	4-axis Robot - 1,000x800x200mm Work Area
F8800N	3-axis Robot - 800x600x200mm Work Area
F8804N	4-axis Robot - 800x600x200mm Work Area

Specifications

Item Number	F8100N Series	F8800N Series
Working Area X/Y/Z	1,000 x 800 x 200mm (+/- 360°)	800 x 600 x 200mm (+/- 360°)
Maximum Tool Load (R)	5kg (11lb)	
Maximum Speed X&Y/Z	1000 & 500mm / secs (360°)	
Repeatability (R)	+/- 0.02mm/axis (+/- 0.058³)	
Resolution (R)	0.001mm (+/- 0.001°)	
Data Memory	100 programs / 20,000 steps / 20,000 points	
Drive System	AC servo motor	
Motion Control	PTP & CP	
System I/O, User I/O	24 inputs / 6 outputs, 32 inputs / 6 outputs	
Dimensions (W/D/H)	1425 x 1630 x 627mm (56.1 x 64.17 x 24.72")	1110 x 1380 x 565mm (43.7 x 54.33 x 22.24")
Weight	F8100N: 15kg, F8401N: 124kg (F8100N: 254lb, F8401N: 273lb)	F8800N: 72kg, F8804N: 81kg (F8800N: 159lb, F8804N: 179lb)

F9000N Series Gantry Industrial Robots

The F9000N gantry-cartesian robotic systems can be easily integrated with in-line industrial automation.

Gantry industrial robots have all their axes above the work area making them ideal for large dispensing applications and jobs requiring a fourth axis, such as when using a spray valve.

These robots can be manufactured to accommodate custom sizes up to 8m x 6m.

Custom robot sizes available upon request.

Features

- AC servo motors
- Available in three and four axis models
- Repeatability of 0.02mm
- Highly rigid frame structure
- Open access design for in-line operation
- 100 programs on board

Models

Item Number	Description
F9300N	3-axis Robot - 300x300x200mm Work Area
F9304N	4-axis Robot - 300x300x200mm Work Area
F9600N	3-axis Robot - 600x600x200mm Work Area
F9604N	4-axis Robot - 600x600x200mm Work Area
F9800N	3-axis Robot - 800x600x200mm Work Area
F9804N	4-axis Robot - 800x600x200mm Work Area

Specifications

Item Number	F9300N Series	F9600N Series	F9800N Series
Working Area X/Y/Z	300 x 300 x 200mm (+/- 360°)	600 x 600 x 200mm (+/- 360°)	800 x 600 x 200mm (+/- 360°)
Maximum Speed X&Y/Z (R)	1,000 & 500mm / secs (360°/secs)		
Maximum Tool Load (R)	7kg (1kg)		
Resolution (R)	0.001mm (+/- 0.001°)		
Data Memory	100 programs / 20,000 steps / 20,000 points		
System I/O, User I/O	24 inputs / 6 outputs, 32 inputs / 32 outputs		
External Interface	USB / RS232		
Power Supply	100 - 240 VAC		
Dimensions (W/D/H)	679 x 696 x 505mm (26.73 x 27.40 x 19.88")	979 x 1022 x 505mm (38.54 x 40.24 x 19.88")	1179 x 1022 x 505mm (46.4 x 40.24 x 19.88")
Weight	28.94kg (64lb)	36.92kg (81lb)	42.9kg (94.5lb)

ROBOTICS

F2004N 4-Axis
SCARA Robot

F2004N is a 4-axis high-speed, industrial SCARA robot. SCARA is an acronym for Selective Compliance Assembly Robot Arm. Designed to be used with conveyors and work cells, it is ideal for high volume and large area dispensing applications requiring greater flexibility for automated manufacturing environments.

The F2004N dispensing robot can also be used for pick and place applications.

Features

- Highly rigid frame structure

- Positioning repeatability 0.020mm

- Performs continuous path and point-to-point motions

- Software tip alignment routine for quick program offsets when changing dispensing tips

- Digital servo controlled motors

- Multiple I/O communications

- High speed movement up to 5,000mm/s
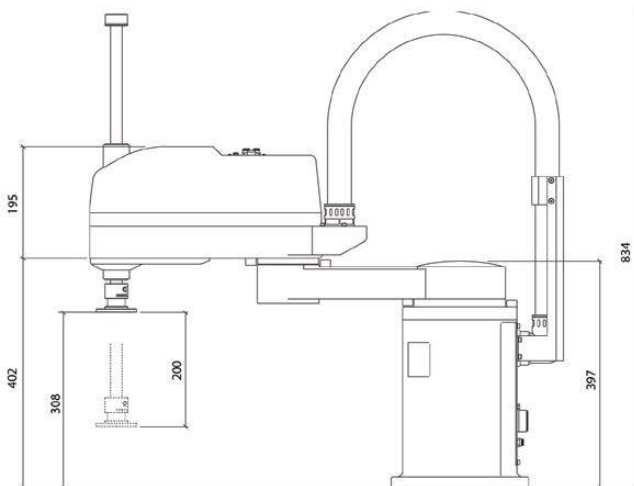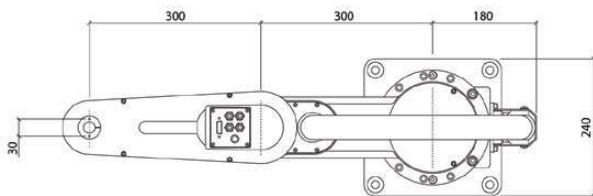
Item Number	Description
F2004N	4-axis SCARA Robot

Specifications

Item Number	F2004N
Rated/Max Payload (J1 & J2 arm)	2 / 7kg
Arm Length	300 x 300mm
Repeatability (J1 & J2 arm, J3, J4)	+/- 0.03, +/- 0.02, +/- 0.03mm
Operation Range	+/- 125°, +/- 125°, 200 mm, +/- 360°
Maximum Speed	5.6 m/s, 1 m/s, 720°/secs
Allowable J4 Inertia	0.003 kgfm.s2
Data Memory Capacity	100 programs, 1,000 points / program
Drive System	Full digital AC Servo
Motion Control	PTP & CP
Interpolation	All axes
I/O Signals	24 inputs / 6 outputs, 32 inputs / 32 outputs
External Interface	RS232
Working Temperature	0 - 40 °C
Relative Humidity	20 - 90%
Dimensions (WxDxH)	240 x 828 x 834mm
Manipulator Weight	37kg
Controller Weight	10kg

ROBOTICS

F1300N Rotary Table

The F1300N rotary table provides an efficient method of dispensing a circular pattern on areas that are difficult to access. The tilting Z-axis allows controlled rotary dispensing on a fixed angle.

Used for dispensing adhesives, silicones, grease, and lubricants, the F1300N is fully adjustable in rotation speed, circle diameter and dispensing time. Dispense from barrels, cartridges or valves mounted on the Z-axis.

The Z-axis tilt is easily adjusted to dispense either on a vertical wall within a cylindrical part or on an outside wall. The system is fully programmable to control dispense delay, degree of rotation, and wait period before cycling.

Features

- Touch screen LCD display for easy set up and operation
- Fully programmable for accurate dispensing
- 9 user programmable memories
- Password-protected operator lock-out mode
- I/O interface

Item Number	Description
F1300N	Rotary Table

Specifications

Item Number	F1300N
Cycle Initiation	Manual or automatic
Vertical Travel	50mm (2.00") other lengths optional
Rotation Speed	0-60rpm
Air Input	70-100psi (5-7bar)
Air Output	1-100psi (5-7 bar)
Dimensions (W/D/H)	635 x 642 x 850mm
Work Load	2kg
Tool Load	10kg
Working Area (Diameter)	12" (300mm)
Weight	20kg
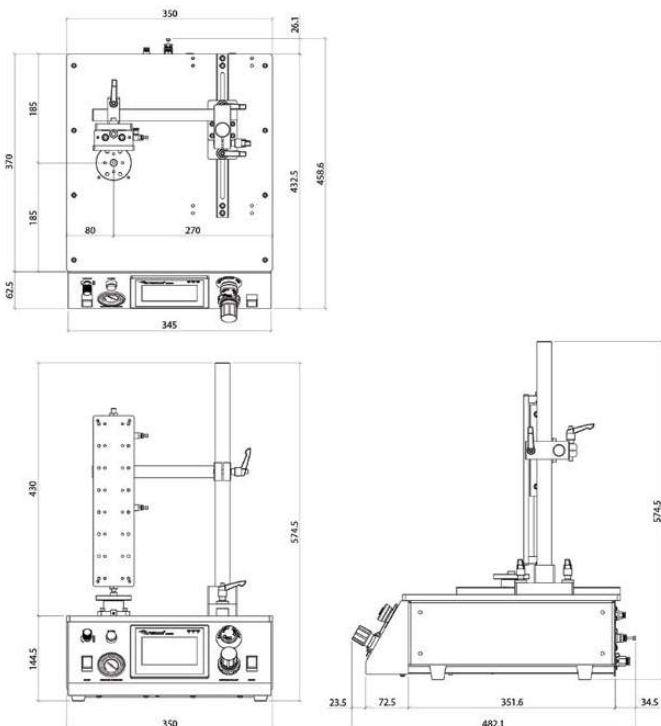
Mechanical Tip Alignment

The TA360U-KIT is a mechanical tip adjustment kit allowing the mounting hardware attached to the robot to be mechanically adjusted in the X Y & Z axis.

The TA360U-KIT allows the dispense tip to be quickly and easily adjusted by re-aligning it to a known location of the robot program.

Re-alignment can be carried out remotely to the program and adjustments can be easily made by users not trained in robot programming.

Item Number
TA360U-KIT

Automatic Tip Alignment

A series of tip alignment modules designed for precise dispensing applications that require frequent material or tip changes, which could alter the position of the dispensing needle.

With the tip alignment module installed, the user can simply run a function on the robot that will automatically offset the program based on the new dispense tip position. This ensures consistent dispense results and minimal production downtime.

This functionality can also be run through an external control making it simple for use in a production environment.

Models

Item Number	Description
F4000AKIT-TA3	Tip Alignment Module for F4000 ADVANCE 3-Axis Robots
F4000AKIT-TA4	Tip Alignment Module for F4000 ADVANCE 4-Axis Robots
TA9000N	Tip Alignment Module for F8000 & F9000 3-Axis Robots
TA4200N	Tip Alignment Module for F4200N.1 & F5200N.1 Robots

Height Sensor

The height sensor automatically adjusts the dispense tip height in the event of any variation of the height of workpiece being dispensed upon. Setup and programming of the height sensor is carried out by following a user friendly step-by-step procedure pre-installed onto the robot software.

By comparing the actual workpiece height against the original stored datum value in the robot program, any deviation found in the workpiece height results in the Z-axis coordinate data being automatically offset accordingly. Multiple height checks can be made within one robot program in the event of multiple workpieces being processed or a single workpiece with differing heights.

Item Number
F4000AKIT-HDS

CCD Camera Vision System

A powerful and intelligent CCD vision programming and auto adjustment system for creating both simple and complex dispense routines. This results in improved quality due to precise dispense positioning alongside improved production yield and reduced processing time and costs.

Dispense programs are created quickly and easily in the Fisnar proprietary vision-controlled Fluid-In-Motion (FIM) software by using the displayed camera image to jog the robot to the exact required dispense location, and then selecting the operation wished to be carried out (dispense dot, line start etc).

Vision System software is supplied with an auto-part alignment function to guarantee fluid is being dispensed at the exact required location. This is achieved by the system capturing an image of two separate fiducial locations on the component and using pattern recognition software to compare the live image against a stored image. Any difference found in X or Y position results in the dispense coordinates being automatically adjusted to suit.

Dispense positional accuracy and repeatability is further optimised by the simple auto-calibration routine and part alignment function.

Item Number

F4000AKIT-VISION

Features

- Auto 3-axis tip calibration function
- Auxillary camera to monitor dispense process live
- High resolution CCD camera
- LED Light & Brightness Controller
- Simple & fast transfer of CAD data (.DXF/Gerber) into software
- Quick to set up and easy to program/operate using proprietary
- Industrial windows based PC system included
- Glue Check/Verification function*

Benefits

- Vision system can be easily installed at any time onto a F4000
- ADVANCE 3-axis robot using plug and play system design
- Peripheral hardware is mounted directly onto robot reducing space envelope taken up
- Images can be captured and stored for quality and process control purposes
- QR codes can be scanned by the camera, causing the relating program to be automatically selected

ROBOTICS

Proprietary User Interface
For simple user setup, programming and operation.
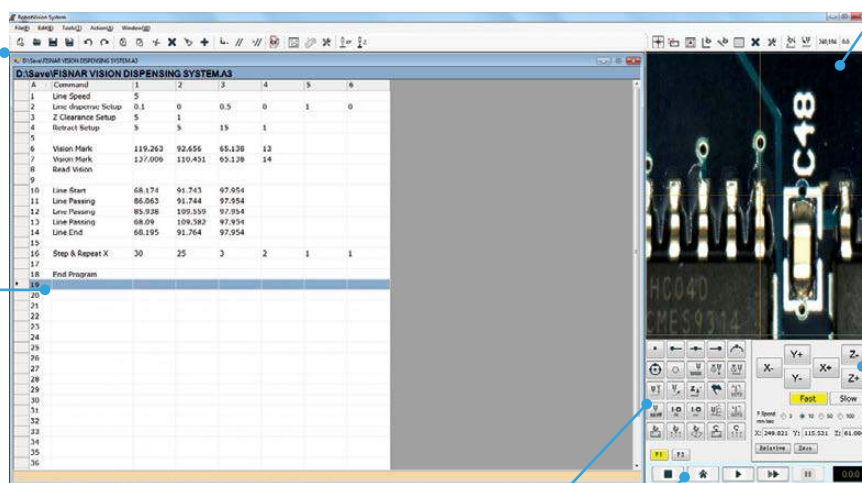
Tool Ribbon
Used for quickly accessing program setup and management functions.

Programming Window
Gives full and simple view of complete dispense program. Values can be edited directly by clicking on the line.

*Glue check function not suitable for all applications. To be certified by Fisnar application team.

Camera Display
Real time view of camera viewing area. Cross hair designates dispense location to ensure precise positional control. Clicking on imaging area will jog robot to position clicked on.

Robot Movement
Icons used to control robot movement and speed while also displaying absolute/relative dispense coordinates.

Dispense Function
Graphical icons used for quick robot programming.

Robot Actuation
Icons used to start, stop and view robot program.

1 F4000 ADVANCE Desktop Robot

Highly robust and durable based on their cast aluminium base and heavy duty extruded aluminium twin vertical side pillars supporting the horizontal X-axis. This rigid design concept allows for long term precision dispensing and dependable repeatability.

2 PC

Industrial specification PC installed with Windows 7 and supplied installed with Fluid-In-Motion (FIM) software ready to use. Unit mounted directly onto robot to reduce overall space envelope. TFT LCD monitor, keyboard & mouse included.

3 CCD Camera

For high resolution color and greyscale image capturing.

4 LED Ring Light & Controller

For optimising image contrast and definition. Adjustable light brightness controller is mounted directly onto the robot to reduce the overall space envelope.

5 Tip Calibration Module

Works by the camera capturing an image of the purged fluid and uses pattern recognition to compare it against a pre-defined datum image. Any difference found between the center positions result in the X and Y coordinate values being automatically adjusted and dispense program re-aligning to suit. The Z-axis is automatically calibrated by the dispense tip contacting a touch pad.

6 Aux Camera

Displays a live image on the TFT LCD monitor allowing the user to clearly monitor the fluid being dispensed onto the component part while a dispense cycle is taking place.

Auxiliary Rotation Axis

The Auxiliary rotation module allows an additional axis to be quickly and easily mounted onto a F4000 ADVANCE 3-Axis robot. The device can be mounted in two different ways:

Horizontal Mounting: When 4-Axis (R) rotation is required, but is not possible due to the size or weight of the dispense equipment that is normally attached to the robot Z-Axis that would typically rotate on a conventional 4-Axis robot. This configuration set-up results in the workpiece rotating instead, achieving the same end dispense result. Horizontal mounting also allows the CCD vision system to be used in application processes requiring 4-axis motion.

Vertical Mounting: In applications that require dispensing onto multiple planes on a single workpiece.

Dispensing onto cylindrical components can be made easy with the device mounted in either a horizontal or vertical position depending on the specific application process.

Item Number
F4000AKIT-AUX

I/O Expansion Module

The I/O Expansion module increases the number of inputs and outputs while simplifying connection of external devices (e.g. sensors) to the robot.

The I/O expansion module increases the number of robot inputs to 16 channels and outputs to 20 channels. Two different models (NPN or PNP) are available depending on the I/O signal type of the external devices. The use of this device also prevents any damage caused to the PCB's inside the robot due to incorrect wiring or failure of the external device.

Item Number	Description
F4000AKIT-IONPN	I/O Expansion Module - NPN Signal
F4000AKIT-IOPNP	I/O Expansion Module - PNP Signal

Remote Operation Box

The remote operation box allows users to operate the robot from a safe distance or in instances when the robot is housed within a safety enclosure.

A version is also available with a safety relay (Category 3, PL d) incorporated directly inside allowing a light curtain or safety switch to be easily connected to the control box. This eliminates the need for additional cost for an unnecessary electrical control panel to be fitted.

Item Number	Description
F4000AKIT-EXTBOX	Remote Operation Box
F4000AKIT-EXTBOX-SR	Remote Operation Box with Safety Relay

N.1 Robot Upgrade Kit

The upgrade kit can be installed onto a Fisnar F4300N.1, F4400N.1 or F4500N.1 robot, making it compatible with the following robot accessory kits: CCD Camera Vision System, Automatic Tip alignment, Height Sensor, I/O Expansion Module, Remote Operation Box.

Item Number	Description
F4000AKIT-N.1ADV-3	Upgrade Kit for F4300N.1
F4000AKIT-N.1ADV-4	Upgrade Kit for F4400N.1
F4000AKIT-N.1ADV-5	Upgrade Kit for F4500N.1

Universal Robot Holder Assemblies

High quality valve and cartridge holder assemblies for use with Fisnar's line of robots and dispense systems.

Kitted for easy out of the box plug and play assembly, designed to create a smoother and convenient installation, removal, and setup experience.

Their unique design allows for valves to be quickly removed for maintenance requirements and then re-installed without losing the original datum mounting position.

The Z-axis mounting position can also be adjusted to reduce working movement to the workplace in order to reduce robot cycle times.

Suitable for use with the following platforms:

- F4000 Series Benchtop (3, 4, and 5-axis)
- F5000 Series Benchtop (3-axis)
- F8000 Series Gantry (3-axis)
- F9000 Series Gantry (3-axis)
- F1300 Rotary Table

ROBOTICS
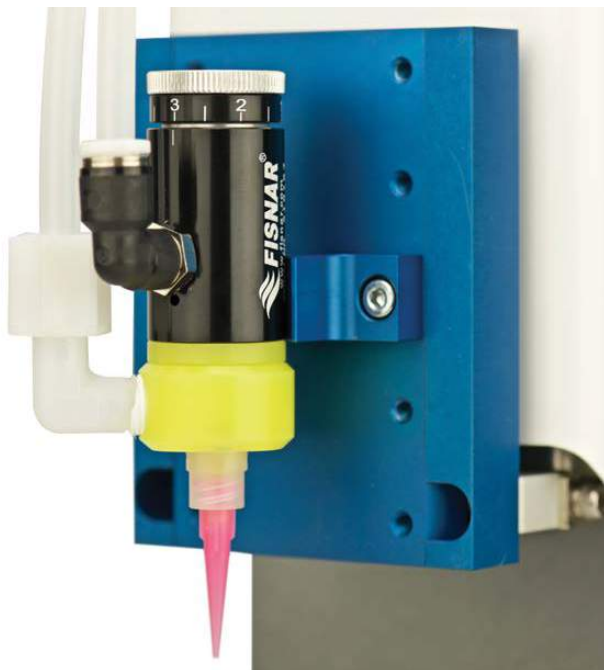
# Universal Syringe, Valve & Cartridge Retainer Holders

560920U Universal Syringe Holder
For use with 3, 5, 10, 30, and 55cc syringes

562151U Universal Valve Holder
For use with VP300, VD510, and SV2000N

562088U Valve Holder
For use with SV1000SS

5601801U Universal Valve Holder
For use with VMP30H, PDV-1000, VMS400, and VDP150

5601800U DTD50 Holder
For use with DTD50 2K Applicator and TS5000DMP
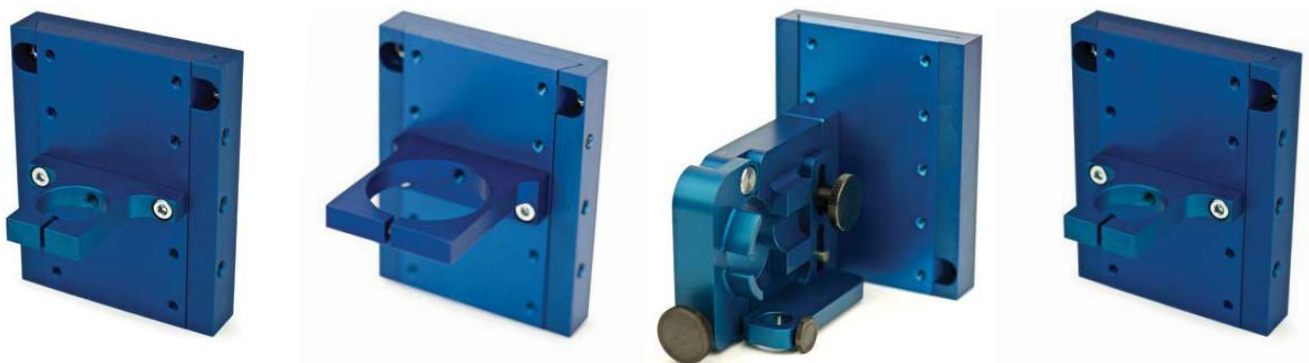
560928U Universal Valve Holder
For use with MV-0180LF

560927U Universal Valve Holder
For use with 790HP-LF

561355U Universal Valve Holder
For use with 710PT-LF

562064U Universal Valve Holder
For use with CV629

560926-EU E-type Cartridge Retainer Holder

560926-TU Cartridge Retainer Holder T-type

561785U 1/10th Gallon Retainer Holder

562297-EU 20oz Cartridge Retainer Holder E-type

562297-TU 20oz Cartridge Retainer Holder T-type

Modular Syringe & Valve Configurations

0401-08-000525

0401-08-000484

0401-08-000485

0401-08-000483

0401-08-000248

0401-08-000491

0401-08-000524

0401-08-000523

0401-08-000766

0401-08-000542

0401-08-001357

Modular Cartridge Retainer Configurations

0401-08-000489

0401-08-000486

0401-08-000487

0401-08-000490

0401-08-001408

0401-08-000488

Spare parts identifier guide located on pages 102 and 103.

4-Axis Universal Gantry & SCARA Holder Assemblies

Holder Assemblies for 4 Axis gantry and SCARA style robot platforms.

Allows for valves, syringes and cartridge retainers to be mounted directly to the bracket and fixed at an angle from 0° - 90°.

High quality assemblies for use with Fisnar's line of robots and dispense systems.

Kitted for easy out of the box plug and play assembly, designed to create a smoother and convenient installation, removal and setup experience.

Their unique design allows for valves to be quickly removed for maintenance requirements then re-installed without losing the original datum mounting position.

The Z-axis mounting position can also be adjusted to reduce working movement to the workplace in order to minimize robot cycle times.

Suitable for use with the following platforms:

-F8000 Series Gantry (4 Axis)
-F9000 Series Gantry (4 Axis)
-F2004N SCARA (4 Axis)

ROBOTICS

4-Axis Universal Syringe, Valve & Cartridge Retainer Holders

ROBOTICS

562195BU
Gantry Syringe Holder 4-Axis

562195VU
Gantry Valve Holder 4-Axis
For use with VP300, SV2000N, and VD510 Series

562089U
Gantry Valve Holder 4-Axis
For use with SV1000SS

562220U
Gantry Valve Holder 4-Axis
For use with 790HP Series Valves

562158U
Gantry Valve Holder
For use with MV-0180 Valve

562055-TU
T-type Cartridge Retainer Holder

562055-EU
E-type Cartridge Retainer Holder

562050U
1/10th Gallon Cartridge Retainer Holder

4-Axis Modular Syringe & Valve Configurations

0401-08-000485

0401-08-000483

Bushing included.
0401-08-000246

0401-08-000491

0401-08-000524

0401-08-000766

0401-08-001499

0401-08-000523

0401-08-000542

4-Axis Modular Cartridge Retainer Configurations

Bushing included.
0401-08-000246

0401-08-000489

0401-08-000488

0401-08-000487

Spare parts identifier guide located on pages 102 and 103.

Cartridge Retainer & Valve Backplate

Compatible with 3-axis robots and corresponding cartridge retainers. Ideal for feeding a valve from a prefilled cartridge system while optimizing fluid flow rate.

Suitable for use with the following platforms:

- F4000 Series Desktop (3-axis)
- F5000 Series Desktop (3-axis)

Example Configuration
CR300 with 790HP-LF valve.

Syringe, Valve & Cartridge Retainer Modular Configurations

0401-08-000489

0401-08-000490

0401-08-001408

0401-08-000487

0401-08-000488

0401-08-000249

0401-08-00483

0401-08-00484

0401-08-00525

0401-08-000250

0401-08-000766

0401-08-000542

0401-08-000491
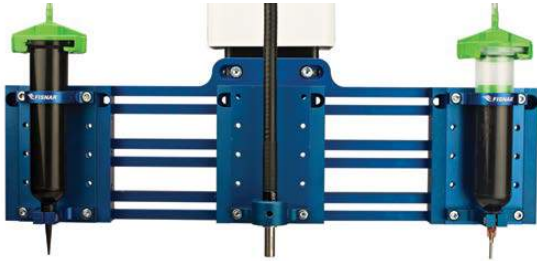
0401-08-000524

0401-08-000523

Spare parts identifier guide located on pages 102 and 103.

Backplate Syringe & Valve Holder

Compatible with all 3-axis robots and corresponding cartridge retainers. Ideal for simultaneous dispensing from syringes, valves, and cartridges when increased productivity is required.

Suitable for use with the following platforms:
- F4000 Series Benchtop (3-axis)
- F5000 Series Benchtop (3-axis)

Example configuration dual syringe and light guide.

Example configuration 790HP valve and CR300 cartridge retainer.

Multi-Syringe, Valve, or Cartridge Retainer Modular Backplate Configurations

0401-08-00543

0401-08-000489   0401-08-000487   0401-08-000525   0401-08-000483   0401-08-000484

0401-08-000488

0401-08-000766 0401-08-000542 0401-08-000491 0401-08-000524 0401-08-000523

0401-08-000490   0401-08-000250   0401-08-001408   0401-08-001357   0401-08-000248

Spare parts identifier guide located on pages 102 and 103.

Spare Parts

Item Number	Description
0401-08-000483	Sliding Bracket Holder
0401-08-000484	3-Axis Sliding Plate Holder
0401-08-000525	3-Axis Sliding Square Plate Holder
0401-08-000485	4-Axis Angled Sliding Plate Holder
0401-08-000491	Universal Valve Holder - For use with VP300, VD510, and SV2000N Series Valves
0401-08-000523	Universal Valve Holder For use with MV-0180LF Valve
0401-08-001499	Syringe Holder Bottom Plate For use with 3, 5, 10, 30, and 55cc syringes
0401-08-000524	Universal Valve Holder For use with 790HP-LF Valve
0401-08-000766	Universal Valve Holder For use with SV1000SS Valve
0401-08-000542	Universal Valve Holder For use with CV629 Valve
0401-08-001357	Universal 710PT Valve Holder
0401-08-000246	4-Axis Gantry and SCARA Mounting Bracket
0401-08-000486	3-Axis Cartridge Retainer Holder
0401-08-000489	Universal Cartridge Retainer Holder 2.5, 6, 8, and 12oz E-Type
0401-08-000490	Universal Cartridge Retainer Holder 20oz T-Type
0401-08-001408	Universal Cartridge Retainer Holder 20oz E-Type

Spare Parts

Item Number	Description
0401-08-000488	Universal Cartridge Retainer Holder 2.5, 6, 8, and 12oz T-Type
0401-08-000487	Universal Cartridge Retainer Holder 300ml (1/10th Gallon)
0401-08-000775	UV Light Guide Holder
0401-08-000249	3-Axis Backplate Holder
0401-08-000543	Multi-Syringe, Valve, and Cartridge Retainer Backplate
0401-99-000777	Gantry Robot Holder Plate
0401-99-000769	Benchtop Robot Spacer Bracket
0401-08-000250	Adapter Nut Holder
0401-99-000770-1	Sleeve Bushing for RobotKit-EADP400-85MLTPU
0401-99-000770-2	Sleeve Bushing for RobotKit-EA200-400MLTPU and Robotkit-300PBMLTPU
0401-99-000770-3	Sleeve Bushing for RobotKit-EADP200-70MLTPU
0401-99-000281	Mixer Sleeve Bushing Holder without Screws
0401-99-000282	Mixer Sleeve Bushing - 8mm
0401-99-000283	Mixer Sleeve Bushing - 10mm
0401-99-000284	Mixer Sleeve Bushing - Blank

ROBOTICS

Valve/Bracket/Holder & Stand Compatibility Chart

ROBOTICS

	Benchtop Robot		Gantry Robot		Rotary Table	Stands
Valves	**3 & 5 Axis**	**4 Axis**	**3 Axis**	**4 Axis**	**F1300N**	**Workbench**
790HP-LF	560927U	560927U	560927U	562220U	560927U	560671U
790HPSS-LF	560927U	560927U	560927U	562220U	560927U	560671U
VD510	562151U	562151U	562151U	562195VU	562151U	562143U
VD510-UV	562151U	562151U	562151U	562195VU	562151U	562143U
VD510-SS	562151U	562151U	562151U	562195VU	562151U	562143U
MV-0180LF	560928U	560928U	560928U	562158U	560928U	560536U
MV-0180SS	560928U	560928U	560928U	562158U	560928U	560536U
CV629	562064U	562064U	562064U	-	562064U	562166U
SV2000N	562151U	562151U	562151U	562195VU	562151U	562054U
SV1000SS	562088U	562088U	562088U	562089U	562088U	562054U
710PT-LF	561355U	561355U	561355U	-	561355U	562054U
PDV-1000	5601801U	5601801U	5601801U	-	5601801U	562235U
VMS400	5601801U	5601801U	5601801U	-	5601801U	562235U
VMP30H	5601801U	5601801U	5601801U	-	5601801U	562235U
VP300	562151U	562151U	562151U	562195VU	562151U	562143U
VDP150	5601801U	5601801U	5601801U	-	5601801U	562235U

Syringe/Retainer	**3 & 5 Axis**	**4 Axis**	**3 Axis**	**4 Axis**	**F1300N**	**Workbench**
Syringe Holder 3, 5, 10, 30/55cc	560920U	560920U	560920U	562195BU	560920U	560021U
Cartridge Holder 2.5, 6, 8, 12oz E-Type	560926-EU	560926-EU	560926-EU	562055-EU	560926-EU	-
Cartridge Holder 2.5, 6, 8, 12oz T-Type	560926-TU	560926-TU	560926-TU	562055-TU	560926-TU	560535U
Cartridge Holder 1/10th Gallon	561785U	561785U	561785U	562050U	561785U	560549U
Cartridge Holder 20oz E-Type	562297-EU	562297-EU	562297-EU	-	562297-EU	-
Cartridge Holder 20oz T-Type	562297-TU	562297-TU	562297-TU	-	562297-TU	560534U

Robot Kits

A range of pre-packaged robot kits specially designed to accommodate the most popular dispense applications. Each kit contains the dispense hardware that a user requires to connect to a Fisnar dispensing robot or dispense controller.

Robot Kit 6OZEU

Contains all required bracket components for mounting a 6oz EFD cartridge retainer to 3, 4, and 5-axis benchtop robots in order to directly dispense fluid material from the cartridge.

Includes:

- 6oz EFD Cartridge Retainer
- All additional required dispense accessories

Item Number
ROBOTKIT-6OZEU

Robot Kit 6OZTU

Contains all required bracket components for mounting a 6oz Techcon cartridge retainer to 3, 4, and 5-axis benchtop robots in order to directly dispense fluid material from the cartridge.

Includes:

- 6oz Techcon Cartridge
- All additional required dispense accessories

Item Number
ROBOTKIT-6OZTU

Robot Kit 300MLU

Contains all required bracket components for mounting a CR300 cartridge retainer to 3, 4, and 5-axis benchtop robots in order to directly dispense fluid material from 1/10th gallon (300ml) cartridges.

Includes:

- CR300 Cartridge Retainer
- All additional required dispense accessories

Item Number
ROBOTKIT-300MLU

ROBOTICS

Robot Kit CAU

Contains all required bracket components for mounting a VD510 diaphragm valve to 3, 4, and 5-axis benchtop robot for the dispensing of cyanoacrylate fluid materials. The system ensures cyanoacrylate fluid materials are pressurized and fed to the valve in a safe and controlled manner.

Includes:

- VD510

- IJ2601N-SS-SP

- All additional required dispense accessories

Item Number
ROBOTKIT-CAU

Robot Kit 300+790U

Contains all required bracket components for mounting both a CR300 cartridge retainer and a 790HP-LF high-pressure spool valve to 3-axis benchtop robot.

Reduces material flow path length from fluid material cartridge to dispense valve, resulting in optimized fluid flow rate.

Includes:

- CR300 Cartridge Retainer

- Pressure regulator assembly for controlling fluid pressure inside CR300 Cartridge Retainer

- 790HP-LF high pressure spool valve

- All additional required dispense accessories

Item Number
ROBOTKIT-300+790U

Twin-Pack Robot Kits

Fisnar's line of twin pack robot kits are specifically designed to accommodate 50ml, 200ml, and/or 400ml cartridges from a variety of manufacturers for use with Fisnar's line of 3-axis benchtop robots. Designed to hold and dispense cartridge systems. Setup can be used with or without a pinch tube valve for more precise material shut off for thinner materials.

Robot kits suit the following Fisnar robots:

- F4300N.1
- F4400N.1
- F4500N.1
- F9300N
- F9600N
- F9800N
- F8800N
- F8100N

Kits come complete with the following accessories to begin production testing:

- DCK800 Dispense Needle Selection Kit
- Luer Lock Adapters
- Sample Mix Nozzles for each size kit
- Pinch Tube Samples
- Air Input Line with 1/4" NPT Fitting
- P.E. Tubing 1/4" x 0.170" - Natural 40" long
- Air Line Block Assembly

Robot Kit 400ml

400ml (200ml/200ml) twin pack cartridge kit dispenser with 710PT valve for all 3-axis robots. Contains Sulzer pneumatic dispenser suitable for most low to medium viscosities. Compatible with most F-style and C-style Sulzer 400ml dual cartridges. Ready to use out of the box for 1:1 and 2:1 mix ratios, conversion kits included to adapt to 4:1 and 10:1.

Item Number
ROBOTKIT-EADP400-85MLTPU