

P-50iA™ Series

Basic Description

FANUC Robotics' P-50iA is a compact robot engineered to provide a precise, reliable, and affordable solution for coating a variety of consumer goods including appliances and automotive components. Its small size is ideal for companies with floor space constraints. The P-50iA offers easy setup and maintenance, a large work envelope, and fast acceleration, resulting in minimized cycle times and lower production costs.

The design of the six-axis P-50iA is based on the success of nine generations of coating robots. It has a modular construction, is electric servo-driven, able to operate in hazardous environments, and is supported by our extensive service and parts network.

P-50iA, The Solution for:

- General industrial coating
- Dispensing
- Lens coating
- Mask painting
- Space limitations

Features and Benefits

- Floor, invert, and wall mounting permits versatility when unusual workpiece access is required.
- P-50iA/3L variant available for applications that require greater reach.
- Patented, production proven, hollow wrist and through arm hose routing provide a clean application environment.
- Grease fittings on all lubrication points allow for quick and easy maintenance.
- Absolute serial encoders eliminate the need for calibration at power-up.



- Patented purge system for operation in hazardous environments.
- Approved for use in hazardous locations; see specifications for details.
- Flexible field hose allows fast installation.
- Lifting fixture for easy installation of wall or ceiling mount. (Option)
- Large envelope capable of working on both sides of the robot.
- Narrow base minimizes booth space and impact to airflow.
- Handles a variety of applicators including conventional and electrostatic air spray guns and rotary atomizers.
- Integrated micro valve color changer for short color change times and waste reduction. (Option)
- Able to use manifold-mount robot spray guns and rotary atomizer.
- ROBOGUIDE® PAINTPRO™ software is a user-friendly Windows®-based graphical programming interface for creating, viewing, editing and simulating robot programs. (Option)
- Extremely fast acceleration and deceleration motion results in faster cycle times.
- Line tracking and stationary applications.

Process Advantages

- User-friendly ACCUFLOW™ closed-loop fluid delivery system automatically maintains programmed flow rates, providing consistent material delivery and high finish quality. (Option)
- Collision Guard™ monitors for unexpected interference to reduce machine and applicator

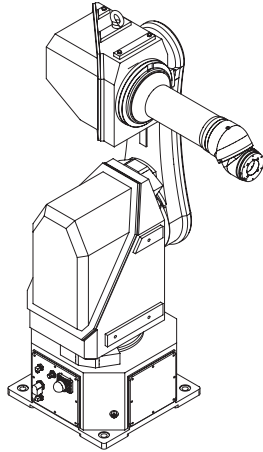
Reliability and Maintenance Benefits

- Standard RV Drives
- Fully sealed drives
- Long lube cycle
- Designed for painting environment

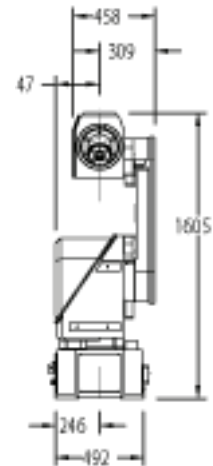
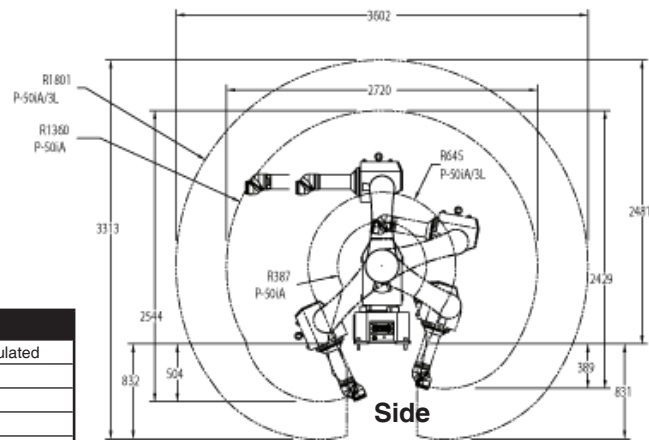
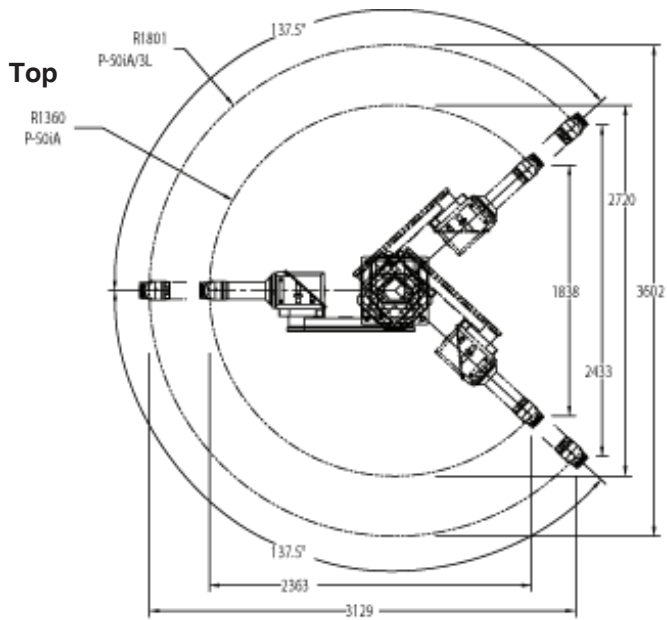
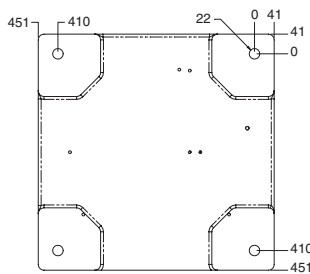
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Robotics

P-50iA Dimensions

Isometric



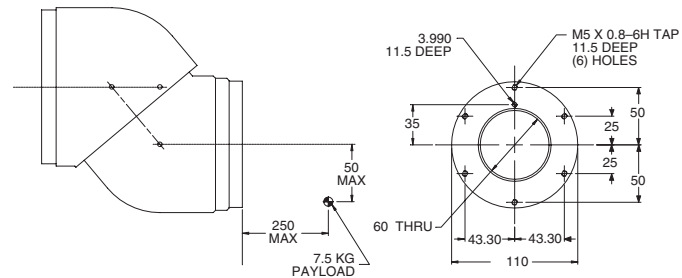
Footprint



P50iA Specifications

Items		
Configuration		6-axis vertically articulated
Axes		6
Payload - wrist (kg)		up to 7.5
Outer Arm Payload ^(A) (kg)		up to 5
Reach (mm)		1360
Static Repeatability (mm)		±.2
Motion range (degrees)	J1	±137.5
	J2	±135
	J3	±147
	J4	
	J5	±540
	J6	
Motion speed (degrees/s)	J1	160
	J2	160
	J3	160
	J4	460
	J5	480
	J6	600
Coating speed (mm/sec.)		1500
Drive Type		Electric AC servo motor
Position Encoders		Absolute pulse encoders
Mechanical Brakes		Axes 2, 3, (1, 4, 5 & 6 optional)
Mechanical weight (kg)		249 (robot arm only)
Mounting method		Floor, Wall ^(B) , Invert
Installation environment		
Ambient Temperature (°C)		0 to 45
Humidity		20-95% RH No condensation
Vibration (m/s ²)		Less than 0.5G
Hazardous Location Certification		Class I, II, III Div. I Group C, D, E, F, G ATEX CE II 2 G c Ex ib px IIB T4 Ta=0°C to +45°C ATEX CE II 2 D c Ex pD 21 T135°C Ta=0°C to +45°C

Wrist



Intelligent Robot Solutions

FANUC Robotics America, Inc.
3900 W. Hamlin Road
Rochester Hills, MI 48309-3253
(248) 377-7000

Charlotte, NC
(704) 596-5121

Toronto, Canada
(905) 812-2300

Chicago, IL
(847) 898-6000

Montréal, Canada
(450) 492-9001

For sales or technical information, call:
1-800-iQ-ROBOT

Cincinnati, OH
(513) 754-2400

Aguaascalientes, Mexico
52 (449) 922-8000

Los Angeles, CA
(949) 595-2700

Sao Paulo, Brazil
(55) (11) 3619-0599

marketing@fanucrobotics.com
fanucrobotics.com

Toledo, OH
(419) 866-0788

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Notes:

- (A) Mounted on top of elbow
- (B) Wall mount requires brakes on axis 1