

P-50

Basic Description

FANUC Robotics' P-50 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-50 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-50 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-50, 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 work piece access is required.
- 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.
- FM and CE Hazardous approval



- for Class I and II, Div. 1, Groups C, D, E, F, G environments.
- 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.

Process Advantages

- User-friendly Accuflow™ closed-loop fluid delivery system automatically maintains programmed flow rates, providing consistent material delivery and high finish quality.
- Collision Guard™ monitors for unexpected interference to reduce machine and applicator damage and maximize uptime.
- Integrated micro valve color changer for short color change times and waste reduction. (Option)
- Able to use manifold-mount robot

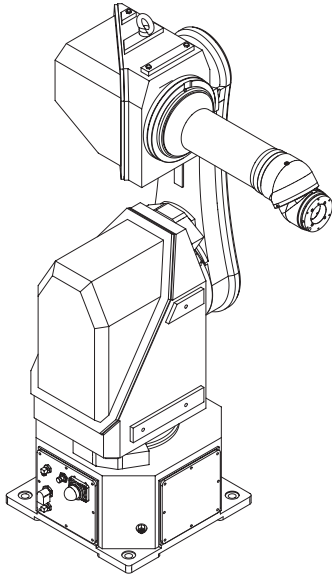
- spray guns and rotary atomizers.
- Extremely fast acceleration and deceleration motion results in faster cycle times.

Reliability and Maintenance Benefits

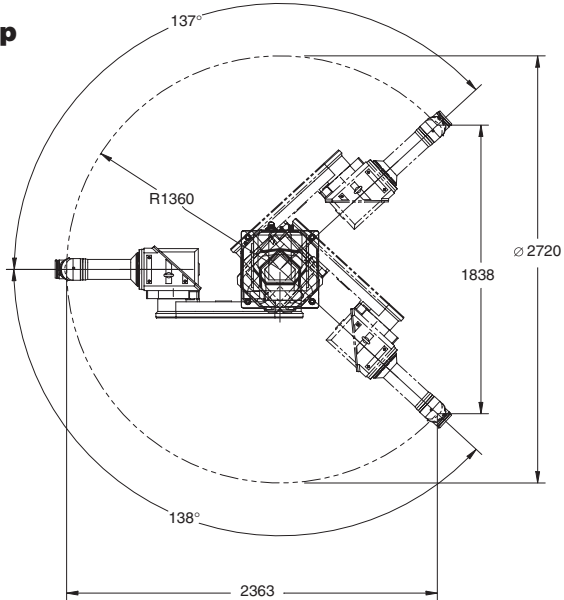
- Standard RV drives
- Fully sealed drives
- Long lube cycle
- Designed for painting environment

P-50 Dimensions

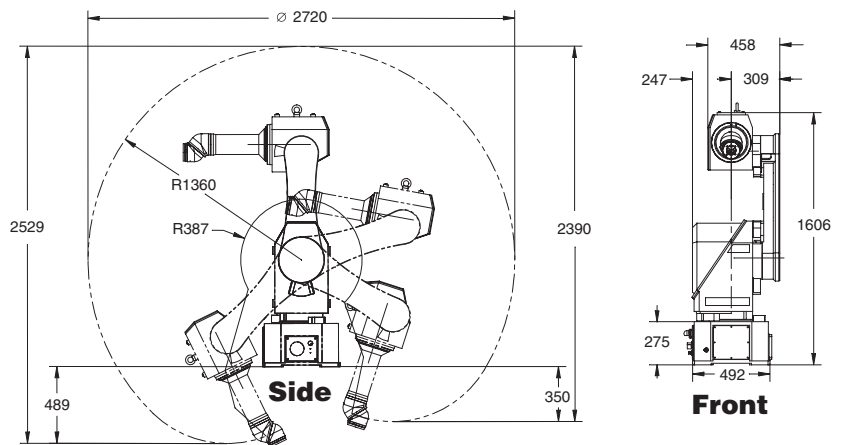
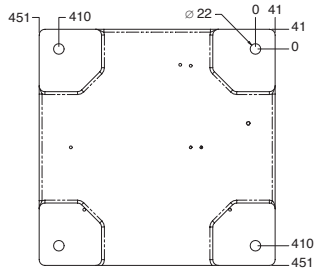
Isometric



Top



Footprint



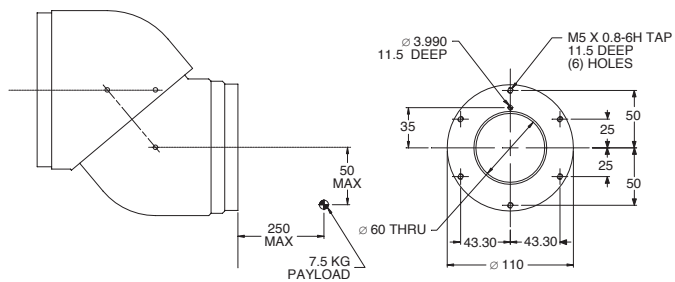
P-50 Specifications

| Items | | |
|---------------------------------------|--|--------|
| Configuration | 6-axis vertically articulated | |
| Axes | 6 | |
| Payload - wrist (kg) | up to 7.5 | |
| Outer Arm Payload ^(A) (kg) | up to 5 | |
| Maximum Reach (mm) | 1360 | |
| Static Repeatability (mm) | ±1 | |
| Motion range (degrees) | J1 | ±137.5 |
| | J2 | ±136 |
| | J3 | ±147 |
| | J4 | ±540 |
| | J5 | ±540 |
| | J6 | ±540 |
| Motion speed (degrees/sec.) | J1 | 160 |
| | J2 | 160 |
| | J3 | 160 |
| | J4 | 460 |
| | J5 | 480 |
| | J6 | 600 |
| Coating speed (mm/sec.) | up to 1500 | |
| Drive Type | Electric AC servo motor | |
| Position Encoders | Absolute pulse coders | |
| Mechanical brakes | Axes 2, 3, (1, 4, 5 & 6 optional) | |
| Mechanical weight (kg) | 254 (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 0.5 G | |
| Certification | FM Class I, II, III/Div. I, Group A, B, C, D, E, F, G | |

Notes:

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

Wrist



Note: Dimensions are shown in millimeters.

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