

M-430iA/2F™

Basic Description

The M-430iA is a revolutionary design optimized for high-speed, sustained picking and packing. To meet the needs of the food industry, the M-430iA was designed not only for secondary food handling, but even primary food handling.

The M-430iA is a five-axis, articulated, electric servo-driven robot. It is supported by the intelligent robot control system and can work with FANUC's high-speed visual tracking. The robot offers flexibility in mounting, including floor, wall and invert configurations.

M-430iA, the Solution for:

- High-speed picking
- High-speed packing

Typical Products

- Food
- Beverages
- Candy/sweets
- Medical supplies
- Cosmetics
- Household products
- Office supplies
- Other consumer products

Benefits

- Can withstand food washdown.
- Manufactured with food-grade grease, and USDA-certifiable parts.
- Ability to withstand acidic and alkaline food industry cleaners used in daily washdown operations.
- Clean design and smooth surface finish with no food particle retention areas to resist bacteria growth and rust.
- Hollow arm to avoid air line and electric cable exposure.
- IP67 rating for the entire robot.
- Capable of working with primary (unpackaged) and secondary (packaged) food products.
- No grease used in wrist axis unit.



- Compact construction, slim arm, and can be mounted in a variety of positions including floor, wall or invert, which maximizes flexibility for tight workspaces.
- Best speed in class at higher payloads (100 cycles/minute at 2 kg).
- Best-in-class wrist moment specifications
- Intelligent robot controller adds *iRVision™* (Integrated Robot Vision) capability without need to use an external PC.
- FANUC's *iRVision* Option for Visual Line Tracking provides an integrated vision based solution for locating randomly-oriented product on a moving line for robotic picking and packing operations.

Features

- 5 axes motion, 2 kg capacity.
- 120 cycles/minute at 1 kg; 100 cycles/minute at 2 kg.
- Large work envelope with 1130 mm reach developed around picking applications.
- Repeatability of ± 0.5 mm at full speed and full payload within entire work envelope.

- Dedicated pneumatic and electrical connections at wrist to simplify user's end-of-arm tooling design and integration.
- *iPendant™*, a color, Internet-ready teach pendant for even easier programming and custom cell user interface design.
- Utilizes proven, reliable FANUC servo motors providing the greatest uptime and productivity.

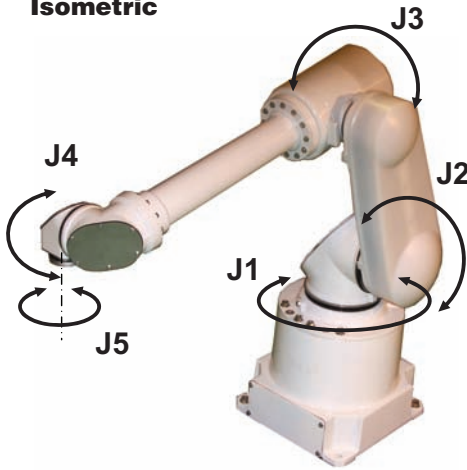
Options

- Various robot connection cable lengths are available for flexible cable placement.
- Line tracking.
- Visual line tracking.
- Supports industry-leading software package for multiple robot setup (picking application, simulation and operations software).
- FANUC's *iRVision* system delivers high performance 2-D and 3-D machine vision capabilities with FANUC reliability. Additional option for Error Proofing can provide integrated vision based capabilities to check for product completeness before product is packaged or further operations are performed.

FANUC
Robotics

M-430iA Dimensions

Isometric



High Speed

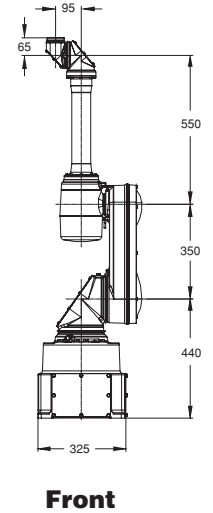
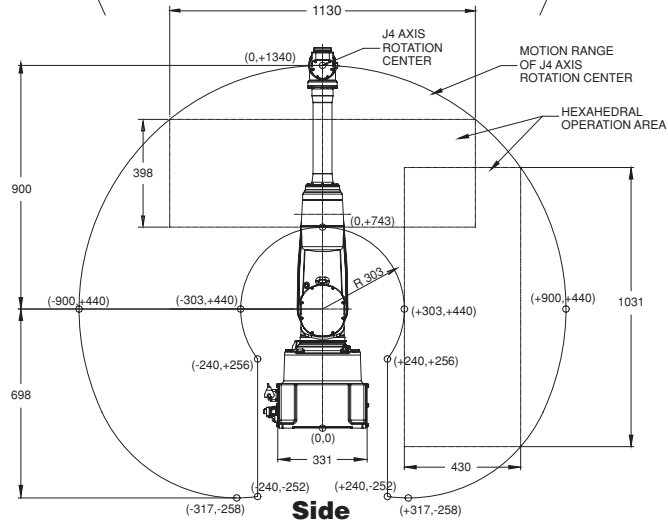
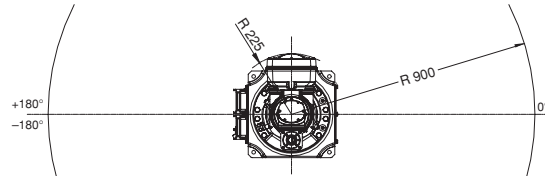
Cycle time

max. payload
2 kg

300 mm
25 mm 25 mm

120 cpm
(1 kg)
100 cpm
(2 kg)

Top

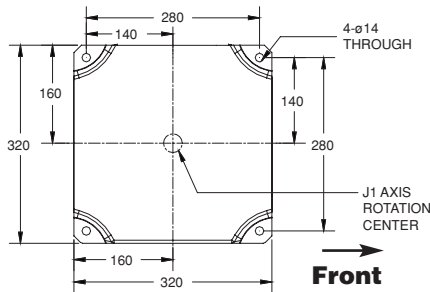


M-430iA/2F Specifications

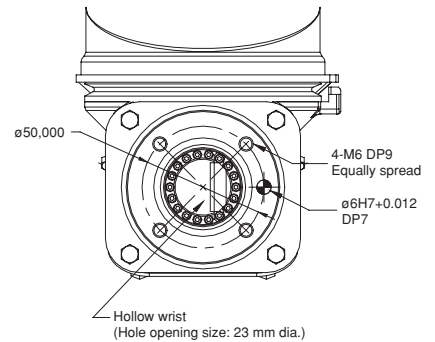
Items	Food Robot	
Axes	5	
Payload - Wrist (kg)	2	
Reach (mm)	900	
	1130X398, 1031X430	
Repeatability (mm)	±0.5	
Motion range (degrees)	J1	360
	J2	230
	J3	400
	J4	300
	J5	540
Motion speed (degrees/s)	J1	300
	J2	320
	J3	320
	J4	360
	J5	1200
Wrist moment ⁽¹⁾ N-m (kgf-m)	J4	3.5 (0.36)
	J5	1.5 (0.15)
Wrist inertia ⁽¹⁾ (kg-m ²)	J4	0.032
	J5	0.0065
Mechanical weight (kg)	55	
Mounting method	Floor, ceiling, wall mount	
Installation environment		
Ambient temperature °C	0 to 45	
Vibration (G)	0.5	
Voltage (V)	480 standard (optional 220, 380, 550)	
IP Rating	IP67 (entire robot)	

Notes:
(1) The number indicates the value at maximum payload.
Allowable load moment and inertia at wrist are changed by load.

Footprint



Wrist



Note: Dimensions are shown in millimeters.
Detailed CAD data are available upon request.

Intelligent Robot Solutions



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