

# F-200iB™

## Basic Description

The F-200iB is a six degrees of freedom servo-driven parallel link robot designed for use in a variety of manufacturing and automotive assembly processes. The F-200iB is engineered for applications requiring extreme rigidity and exceptional repeatability in a compact, powerful package.

## F-200iB, the Solution for:

- Sub-compact robot welding
- Pedestal welding
- Part loading/positioning
- Nut running
- Vehicle lift and locate
- Flexible/convertible fixturing
- Material Removal
- Dispense

## Benefits

- Provides flexibility and convertability – the ability to reprogram the F-200iB facilitates rapid and cost-effective model changeovers.
- Reduces capital expense – F-200iB process solutions take less time and money to process and design. They also reduce tooling and build costs.
- Lowers operating expense – using the F-200iB reduces tooling complexity, resulting in less maintenance and down time.
- Optimizes use of floorspace – the sub-compact F-200iB can fit in spaces too cramped for serial link robots.
- Makes it feasible to perform more welds per station, thus reducing the number of stations per system.
- New process possibilities – the F-200iB opens the door to new process solutions not available with current tools.



- Provides additional options for line balancing.
- Easy and quick to set up, tune-in and debug – F-200iB uses the same software as other FANUC robots.
- No special electrical or mechanical training needed – basics are the same as any other robot.
- Standardized system requires less retraining at changeover.
- Compact size adds application versatility.

## Features

### Mechanical:

- Six degrees of freedom
- Simple, robust, low-maintenance design
- Electric AC servo motors
- Precision gear drives
- Fail-safe brake on each leg
- Components protected from weld flash, grease, chemicals and water

- Spare part requirements minimized by commonality of design; six identical actuators
- ISO faceplate
- 31,000 hour life at 100% duty cycle

### Control:

- R-J3iB Controller
- Common controller components with other FANUC robot controllers
- Easy connection to built-in digital I/O

### Software:

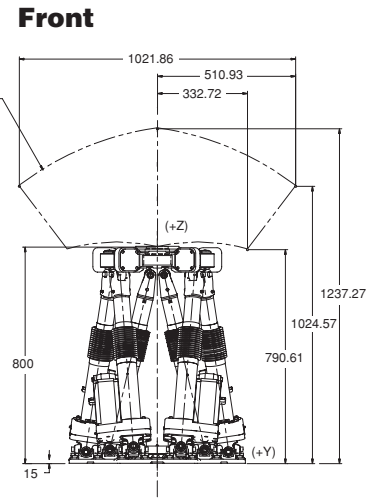
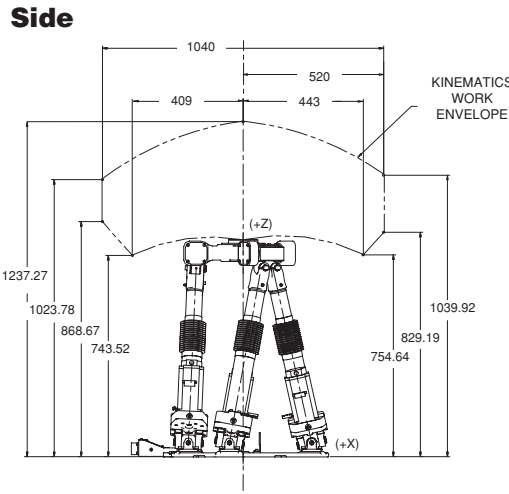
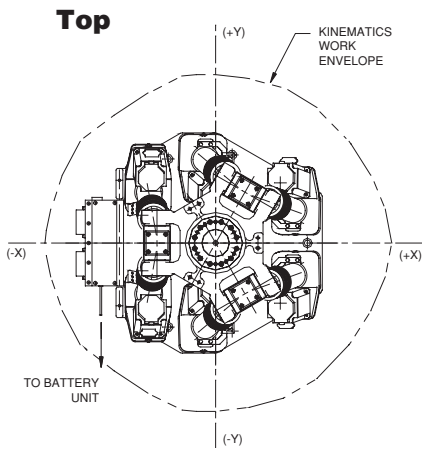
- F-200iB is supported on the following “Tool” packages
  - SpotTool Plus
  - DispenseTool
  - HandlingTool
  - PaintTool

### Options

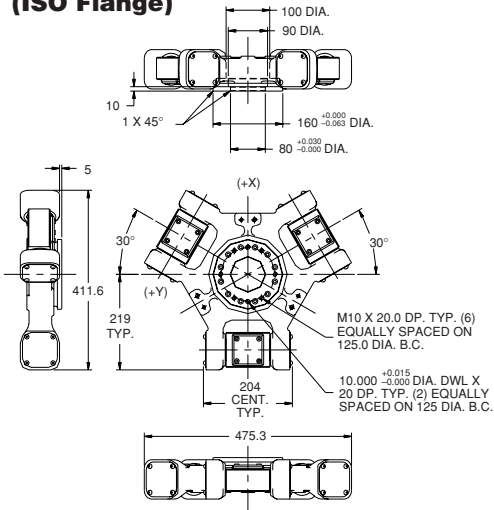
- Harsh environment skirting
- Insulated Faceplate

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# F-200iB Dimensions



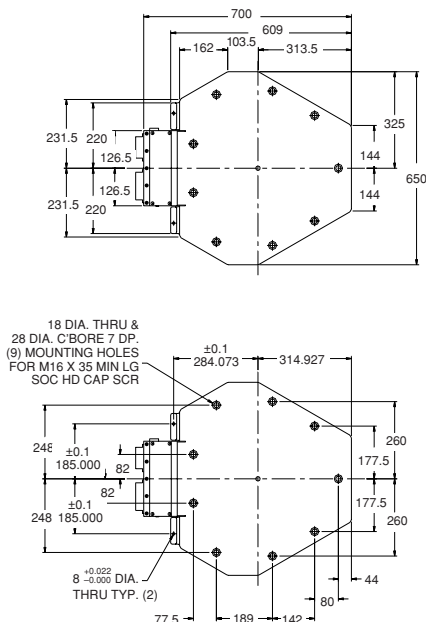
## Faceplate (ISO Flange)



## F-200iB Specifications

| Items  |  |
|--|--|
| Degrees of freedom   | Six  |
| Payload (kg)   | 100 (Higher payloads permissible with FANUC approval)  |
| Allowable load moment at faceplate (kgf-m)                   | 60   |
| Allowable load inertia at faceplate (kgf-cm-s <sup>2</sup> ) | 367  |
| Motion range (degrees)                                       | As noted (pitch, yaw and roll vary depending upon the position of the faceplate within the envelope) |
| Motion speed (mm/s)  |  |
| Vertical (Z)   | 300  |
| Horizontal (X & Y)   | 1500   |
| Repeatability (mm)   | ± 0.1  |
| Mounting method  | Floor and inverted. Wall mount permissible with FANUC approval.                                      |
| Installation environment                                     |  |
| Ambient temperature °C                                       | 0 to 45  |
| Humidity   | Normally: 75% or less Short term (within a month): 95% or less. No condensation                      |
| Vibration (m/s <sup>2</sup> )                                | 0.5G or less   |
| Mechanical brakes  | All actuator legs  |
| Mechanical weight (kg)                                       | 190  |
| Controller   | R-J3/B   |
| Level of protection:   |  |
| Mechanical   | IP54   |
| Electrical   | IP54   |
| Controller   | IP54   |

## Baseplate



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



**FANUC Robotics America, Inc.**  
 3900 W. Hamlin Road  
 Rochester Hills, MI 48309-3253  
 (248) 377-7000  
 Fax (248) 276-4133

Charlotte, NC  
 (704) 596-5121

Chicago, IL  
 (847) 898-6000

Toronto, Canada  
 (905) 812-2300

Montréal, Canada  
 (450) 492-9001

**For sales or technical information, call:**  
 1-800-47-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](mailto:marketing@fanucrobotics.com)  
[www.fanucrobotics.com](http://www.fanucrobotics.com)

Toledo, OH  
 (419) 866-0788