

R-2000iA/200T

Basic Description

FANUC Robotics' R-2000iA/200T overhead rail-mounted robot is the latest-generation, heavy-payload member of the Toploader family of six-axis, modular construction, electric servo-driven robots designed for material handling and machine tending.

The R-2000iA/200T also has the ability to perform value-added post-processing operations. The robot is engineered for precision, high-speed operation, userfriendly setup and maximum reliability, supported by our extensive service and parts network. The R-2000iA/200T is ideal for heavy and very heavy material handling challenges.

R-2000iA/200T, the Solution for:

- Material handling
- Machine tool tending and post-process operations
- Injection mold machine unload and post-process operations
- Spot welding
- Die casting extraction
- Die spray
- Dispensing
- Part transfer
- Palletizing

Mechanical Features

- Modular rails can be attached to free-standing support legs with variable height attachment or to the fixed platen of an injection mold or die machine.
- Based on proven, reliable standard FANUC Robotics product (R-2000iA).
- 200 kg payload capacity
- Two configurations available to maximize either vertical extraction stroke (sideslung) or symmetrical work envelope (underslung).



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- Standard rail travel lengths from 5.5 m to 13.0 m.
- Family of standard support columns provide multiple robot height options
- +/- 0.3 mm repeatability (robot without rail)
- Fail-safe brakes on all six axes.
- Brushless AC servo motors minimize motor maintenance.
- Robust rack and pinion rail drive.

Benefits

- Combines the advantages of a linear gantry (large, scalable work envelope with limited floorspace requirements) and a FANUC six-axis, articulated robot (dexterity, high reliability and maintainability).
- Services multiple vertical and/or horizontal machines.
- Adapts easily to existing plant layouts.
- Stationary outer arm simplifies hose and cable dressout, prolonging service life.
- Improves machine productivity by as much as 30 percent.
- Reduces capital and maintenance costs by allowing

simple devices to replace complex material handling peripherals.

- Minimizes installation time and startup expense through easy installation alignment.
- Balances asynchronous processes by maintaining in-process part buffers.
- Performs value-added processing operations such as gauging, deburring, deflashing and labeling, in addition to basic material handling tasks.

Options

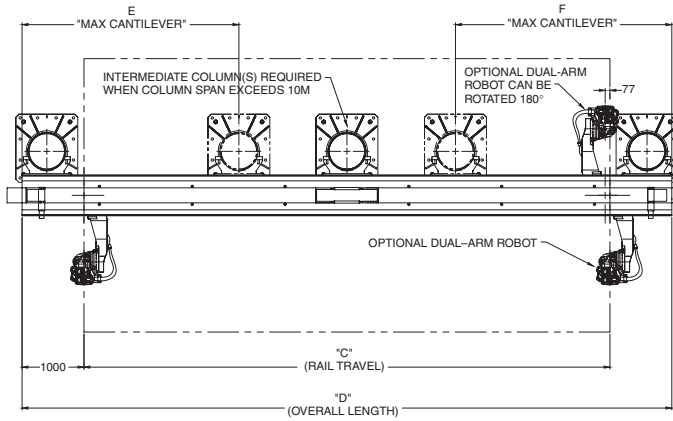
- Dual robot arms on a single rail
- Distance Robot/Controller 40m max.
- Linetracking
- Profibus
- Devicenet
- Auxiliary axis
- Vision (V-500i – V-510i)

TABULATED DIMS.				
C*	D	E	F	E + F
Single-piece rails 5500, 7000, 8500, 10000, 11500, 13000	"C" + 2000	4500	4500	9000
Two-piece rails Combine any two single-piece lengths	"C" + 2000	4500	4500	9000
Multi-piece rails 9750 or 15000 center rail + add one or two single-piece lengths	"C" + 2000	4500	4500	9000

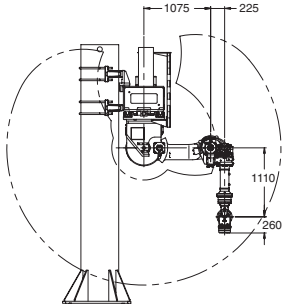
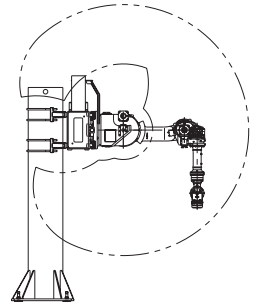
*NOTE: FOR DUAL-ARM CONFIGURATION, USABLE RAIL STROKE IS REDUCED BY 1.6 M FOR EACH ARM

TABULATED DIMS.	
A	B
2500 – 4500 in 250 increments	Sideslung "A" + 1000 Underslung "A" + 1700

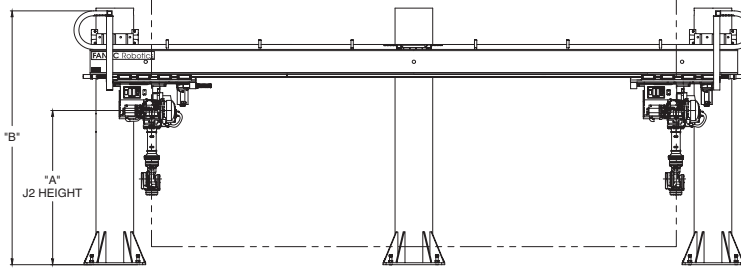
Top View "Underslung"



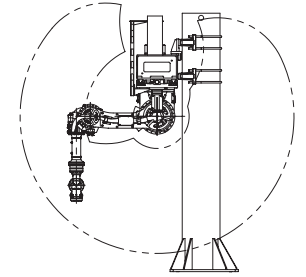
Sample Elevation "Sideslung"



Right Elevation



Front Elevation "Underslung"

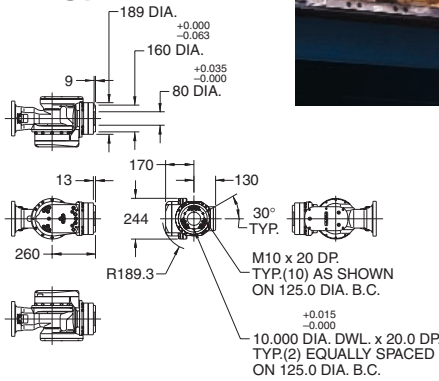


Left Elevation

R-2000iA/200T Specifications

Items	
Axes	6
Payload - Wrist (kg)	200
- J3 Arm (kg)	30 (J3 + Wrist ≤ 200)
Reach (mm)	2207
Repeatability (mm)	± 0.3
Interference radius (mm)	518
Motion range (degrees)	J1 5.5 m - 26.5 m J2 245 J3 406 J4 720 J5 250 J6 720
Motion speed (degrees/sec.)	J1 2500 mm/sec. J2 70 J3 90 J4 110 J5 110 J6 155
Wrist moment (N·m)	J4 1274 J5 1274 J6 686
Wrist inertia (kg·m ²)	J4 117,6 J5 117,6 J6 58,8
Mechanical brakes	All axes
Mechanical weight (kg)	1080 (robot arm only)
Mounting method	Sideslung or underslung
Installation environment	
Ambient temperature °C	0 to 45
Humidity	Normally: 75% or less Short term (within a month): 95% or less No condensation (No dew or frost)
Vibration (m/s ²)	4.9 or less (0.5G or less)
IP Rating(s)	Wrist & J3 arm IP67, rest IP54, rail IPO (IP55 & rail bellows optional)
Purpose	Overhead rail mount

Wrist



Dual Arm

Note: Dimensions are shown in millimeters.

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Perpetual Motion

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