

R-2000iB/100H™

Compact Palletizer

Basic Description

The R-2000iB/100H is FANUC Robotics' latest-generation palletizing industrial robot. The unit is engineered for precision high-speed/high-payload operation, user-friendly setup, and maximum reliability supported by our extensive service and parts network. The R-2000iB/100H is a five-axis, electric servo-driven robot designed for a wide variety of manufacturing and palletizing system processes.

R-2000iB/100H, the Solution for:

- Case palletizing
- Bag palletizing
- Depalletizing
- General industrial applications
- Material handling

Benefits

- High performance motion yields fast cycle times and high throughputs of 20 cycles/min. case palletizing and 22-24 cycles/min. bag palletizing at 100kg.
- Large allowable wrist loads easily accommodate 100 lb bag palletizing and multi-case palletizing.
- Superior wrist speeds optimized for demanding palletizing requirements such as interlocking patterns.
- Builds 81" high unit loads on a standard 40" x 48" pallet (other pallet sizes and load heights possible).
- Compact dimensions are optimal where ceiling clearance is limited or floorspace is at a premium – perfect for single-infeed/single-outfeed system configurations!
- Small operating interference radius enables compact workcells by allowing tight placement of pallets and conveyors.
- Optional harsh environment package is ideal for heavy dust (non-explosive) environments.
- Proven, reliable FANUC servo technology provides highest uptime and productivity from the world leader in industrial servo controls.
- Easy, fast product setup and changeover enabled by user-friendly graphical interface – no robot programming required!



Features

Mechanical

- 100-120 kg payload capacity for real-world tooling designs and product weights.
- Slim arm and wrist assemblies minimize interference with system peripherals and allow operation in confined spaces.
- Many process attachment points make integration of end-of-arm tooling and supporting controls easier.
- Non-rotating forearm simplifies hose and cable dressout to prolong service life.
- Standard built-in pneumatic and electrical utilities for end-of-arm tooling design, integration and communications (8 digital inputs/outputs, 2-10 mm internal air lines).
- Shares motion range, reach, and all spare parts with FANUC Robotics industry-leading R2000iB/165F.
- Rugged, hardened design for continuous "24 / 7 / 365" operation.

Control

- 40 axes control capability can be used to operate servo-actuated robot tooling, turn tables, collators, precision conveyors and other system peripherals in addition to the robot.
- Fast MTTR including quick change amplifier <5 minutes.
- Fast boot time <30 seconds means robot is "production ready" quickly at startup.

- Two standard Ethernet ports provide simultaneous system communication and network communication.
- External USB interface and internal PCMCIA slot accommodate PC-industry standard storage media for easy backup and recovery.
- Easy connections to a variety of I/O, including a number of distributed I/O networks, allow easy connection and communication to most plant equipment.
- Includes the iPendant™, a color, Internet-ready teach pendant for even easier programming and operator intuition, enabling customized user interface design.
- Built-in support for machine vision applications for bag/box location, visual depalletizing, error proofing and robot guidance, without the need for a PC.

Software

- Supports industry-leading PalletTool® and ROBOGUIDE®/PalletPRO™ software packages (palletizing setup, simulation and operation software).
- Supports CollisionGuard™ protection against exception events, preventing damage to the robot, gripper, cases/bags and peripherals, and ensuring the highest levels of uptime.
- Web-based software tools for remote connectivity, diagnostics and production monitoring via the user's favorite web browser – no special software!

FANUC
Robotics

- FANUC's iRVision® system provides integrated 2-D and 3-D robot guidance capabilities with FANUC reliability. Built-in Error Proofing utilities can check for product completeness before product is packaged or further operations are performed.

- ## Isometric



Items		
General purpose		Heavy payload floor mount
Controlled Axes		5
Payload - wrist (kg)		100/120 for wrist down
Payload - J2 base (kg)		550
Payload - J3 forearm (kg)		0
Horizontal reach (mm)		2655
Repeatability (mm) per JISB 8432		±0.2
J2 interference radius (mm)		582
Motion range (degrees)	J1	360
	J2	136
	J3	362
	J4	250
	J5	720
Motion speed (degrees/s)	J1	130
	J2	130
	J3	130
	J4	170
	J5	360
Wrist moment ⁽¹⁾ N-m (kgf-m)	J4	441 (45)
	J5	225 (25)
Wrist inertia (kg-m ²)	J4	39.2
	J5	15.7
AC electric servo drive		All joints
Fail-safe brakes		All joints
Robot mass (kg)		1150
Installation environment		0 to 45
Temperature (°C)		
Humidity		
		Normally ≤ 75%. Short term (≤ month). ≤ 95% . No condensation (dew or frost).
Vibration (m/s ²)		≤ 0.5
Acoustic noise level (dB)		71.3
Installation altitude		Up to 1000 m above sea level.
IP ratings per BS EN 60529-1992		Standard: IP67 wrist and forearm, IP54 main body

(1) Higher allowable wrist moments are possible with wrist flange facing up or down. Contact FANUC Robotics for details.

Top

Dimensions: $R\ 582$, 2553.5 , $R\ 2655$, 0° , $+180^\circ$, -180° .

Side

Dimensions: 1280 , 215 , 1075 , 670 , 814 , 229 , 312 .

Labels: REAR SIDE INTERFERENCE AREA, J4 AXIS ROTATION CENTER, MOTION RANGE OF J4 AXIS ROTATION CENTER.

Coordinate Points: $(+312, +3045)$, $(+445, +1953)$, $(-1919, +1208)$, $(-1538, +289)$, $(-1099, +305)$, $(-955, +425)$, $(+665, +1004)$, $(+665, +337)$, $(+665, -171)$, $(0,0)$, $(+2655, +930)$.

Front

160 DIA

9

80 DIA

138

114.5

119

214

215

R161.3

M 10 x 16.0 DP.
TYP.(6) EQUALLY SPACED
ON 125.0 DIA. B.C.

10.000 DIA. DWL. X 12.0 DP
TYP.(2) EQUALLY SPACED
ON 125.0 DIA. B.C.

Technical drawing of a square base plate with dimensions and annotations:

- Overall Dimensions:** 540.0 (width) x 540.0 (height).
- Internal Dimensions:** 460.0 (width) x 460.0 (height).
- Mounting Holes:** 24.0 DIA. THRU & 38.0 DIA. C'BORE 5.0 DP. TYP.(8) MOUNTING HOLES.
- Port Equipment:** M20 THRU FOR EYEBOLT OR PORT EQUIPMENT.
- Other Dimensions:** 278.0, 270.0, 230.0, 270.0, 460.0, 540.0, 35.0, 278.0.

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