

FANUC Robot R-1000iA

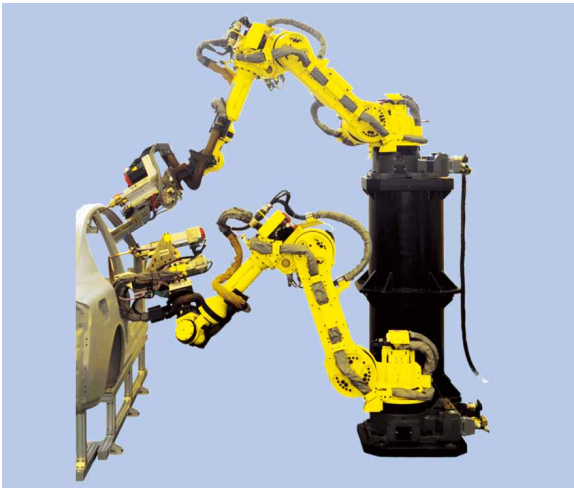


FEATURES

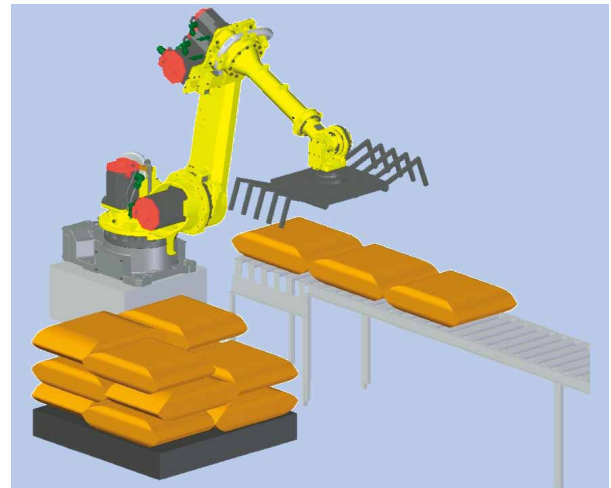
The FANUC Robot R-1000iA is a compact and high-speed robot having a wrist capacity of 80kg to 130kg. Compact mechanical unit and outstanding motion performance are suitable for handling, spot welding and palletizing in dense layout work cells.

- Four models are available to meet a variety of applications.
 - FANUC Robot R-1000iA/80F, /100F, /130F
These robots have a large operating space (including its rear and downward side) and can also be installed upside down.
The slimmest design in width makes it possible to locate the robot close to neighboring robots, fixtures and workpieces.
High-speed approach from home to working position and fast positioning in a short pitch motion can minimize a throughput.
 - FANUC Robot R-1000iA/80H
This model is 5 axes type robot that is suitable for the high speed transfer.
Compact mechanical unit can reduce installation space in factories.
- Latest intelligent functions with *i*RVision (integrated vision) and force sensor are available.

Application System



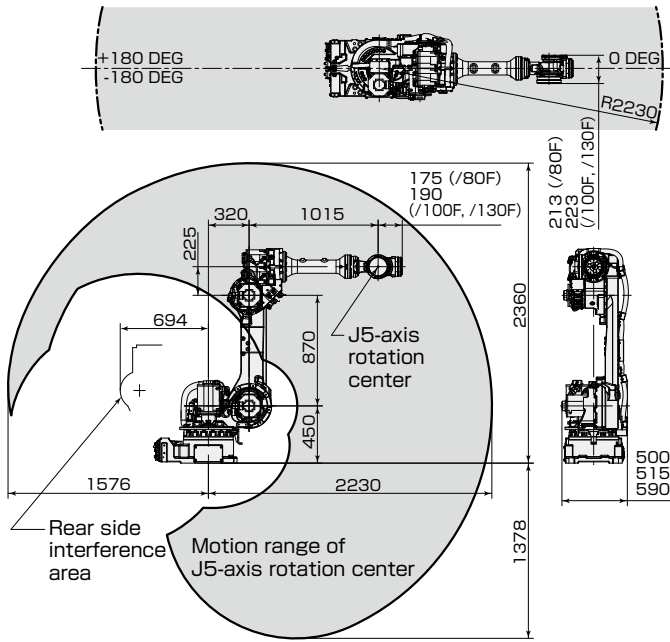
High Speed Spot Welding by R-1000iA/80F



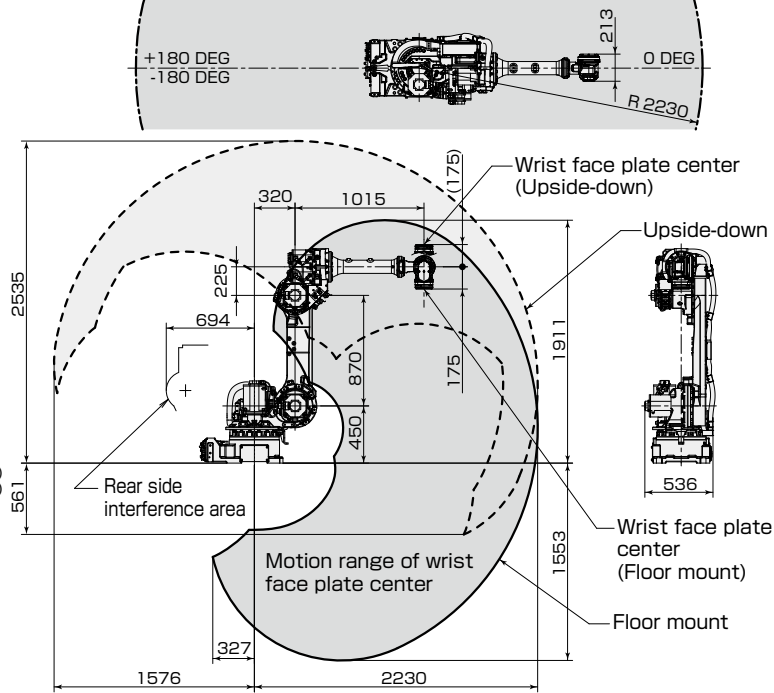
Bag Palletizing by R-1000iA/80H

FANUC Robot R-1000iA

Operating space (R-1000iA/80F, /100F, /130F)



Operating space (R-1000iA/80H)



Specifications

Model		R-1000iA/80F	R-1000iA/100F	R-1000iA/130F	R-1000iA/80H
Type		Articulated Type			
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)			5 axes (J1, J2, J3, J4, J5)
Reach		2230 mm			
Installation		Floor, Upside-down			
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (170°/s) 6.28 rad(2.97 rad/s)	360° (130°/s) 6.28 rad(2.27 rad/s)	360° (130°/s) 6.28rad(2.27rad/s)	360° (185°/s) 6.28 rad(3.23 rad/s)
	J2 axis rotation	245° (140°/s) 4.28 rad(2.44 rad/s)	245° (110°/s) 4.28 rad(1.92 rad/s)	245° (110°/s) 4.28rad(1.92rad/s)	245° (180°/s) 4.28 rad(3.14 rad/s)
	J3 axis rotation	360° (160°/s) 6.28 rad(2.79 rad/s)	360° (120°/s) 6.28 rad(2.09 rad/s)	360° (120°/s) 6.28rad(2.09rad/s)	215° (180°/s) 3.75 rad(3.14 rad/s)
	J4 axis wrist rotation (/80H:wrist swing)	720° (230°/s) 12.57 rad(4.01 rad/s)	720° (170°/s) 12.57 rad(2.97 rad/s)	720° (170°/s) 12.57rad(2.97rad/s)	20° (180°/s) 0.35 rad(3.14 rad/s) Note 2)
	J5 axis wrist swing (/80H:wrist rotation)	250° (230°/s) 4.36 rad(4.01 rad/s)	250° (170°/s) 4.36 rad(2.97 rad/s)	250° (170°/s) 4.36rad(2.97rad/s)	720° (500°/s) 12.57 rad(8.73 rad/s)
	J6 axis wrist rotation	720° (350°/s) 12.57 rad(6.11 rad/s)	720° (250°/s) 12.57 rad(4.36 rad/s)	720° (250°/s) 12.57rad(4.36rad/s)	-
Max. load capacity at wrist	80 kg (A)	100 kg		130 kg	80 kg (A)
Max. load capacity on J3 arm	-	(A)+(B) < 80kg	20 kg (C)	20 kg (D)	(A)+(B) < 80kg
Max. load capacity on J3 casing	15 kg (B)	20 kg (C)	(C)+(D) < 20kg	20 kg (D)	15 kg (B)
Allowable load moment at wrist	J4 axis	380 N·m 38.8 kgf·m	690 N·m 70.4 kgf·m	800 N·m 81.6 kgf·m	Note 3)
	J5 axis	380 N·m 38.8 kgf·m	690 N·m 70.4 kgf·m	800 N·m 81.6 kgf·m	
	J6 axis	200 N·m 20.4 kgf·m	260 N·m 26.5 kgf·m	360 N·m 36.7 kgf·m	
Allowable load inertia at wrist	J4 axis	30 kg·m ² 306.1 kgf·cm·s ²	57 kg·m ² 581.6 kgf·cm·s ²	71 kg·m ² 724.5 kgf·cm·s ²	48 kg·m ² 489.8 kgf·cm·s ²
	J5 axis	30 kg·m ² 306.1 kgf·cm·s ²	57 kg·m ² 581.6 kgf·cm·s ²	71 kg·m ² 724.5 kgf·cm·s ²	25 kg·m ² 255.1 kgf·cm·s ²
	J6 axis	20 kg·m ² 204.1 kgf·cm·s ²	32 kg·m ² 326.5 kgf·cm·s ²	38 kg·m ² 387.8 kgf·cm·s ²	-
Drive method	Electric servo drive by AC servo motor				
Repeatability Note 4)	± 0.05 mm				
Mass Note 5)	620 kg	665 kg	675 kg	610 kg	
Installation environment	Ambient temperature : 0 to 45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term 95%RH or less (within one month) Vibration acceleration : 4.9m/s ² (0.5G) or less				

Note 1) In case of short distance motion, the axis speed may not reach the maximum value stated.

Note 2) The wrist interface is always controlled downward. It can be made fine adjustment from -10 to +10 degrees.

Note 3) Distance from the center of gravity of the load to the wrist flange center is limited by the wrist load and load inertia.

In case of the wrist load and load inertia are maximum, the center of gravity of the load can be offset up to 254mm in the horizontal direction and up to 400mm in the vertical direction from the wrist flange center.

Note 4) Compliant with ISO 9283.

Note 5) Without controller.

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