

FANUC Robot R-1000iA



FEATURES

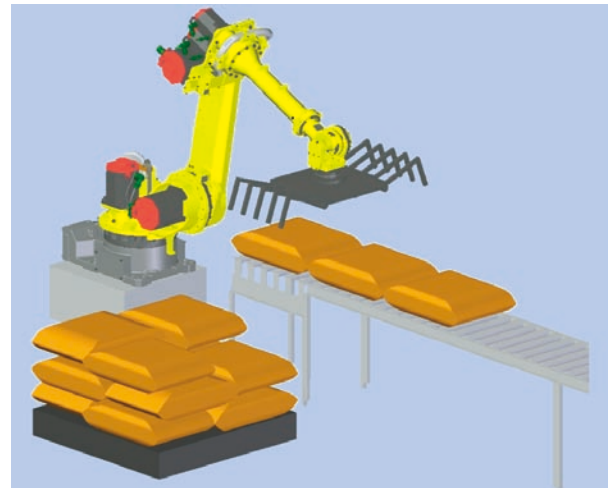
The FANUC Robot R-1000iA is a compact and high-speed robot having a wrist capacity of 80kg and 100kg. Compact mechanical unit and outstanding motion performance are suitable for handling, spot welding and palletizing in dense layout work cells.

- Three models are available to meet a variety of applications.
 - FANUC Robot R-1000iA/80F, /100F
These robots have a large operating space (including its rear and downward side) and can also be installed in an upside down. To be made as slim as possible in width makes a point of accessibility to neighboring robots, fixtures and workpieces. High-speed approach from home to working position and fast positioning in short pitch motion can minimize the required time of process.
 - 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 the factory.
- Latest intelligent functions with *i*RVision (integrated vision) and force sensor are available.

Application system



High speed spot welding by R-1000iA/80F

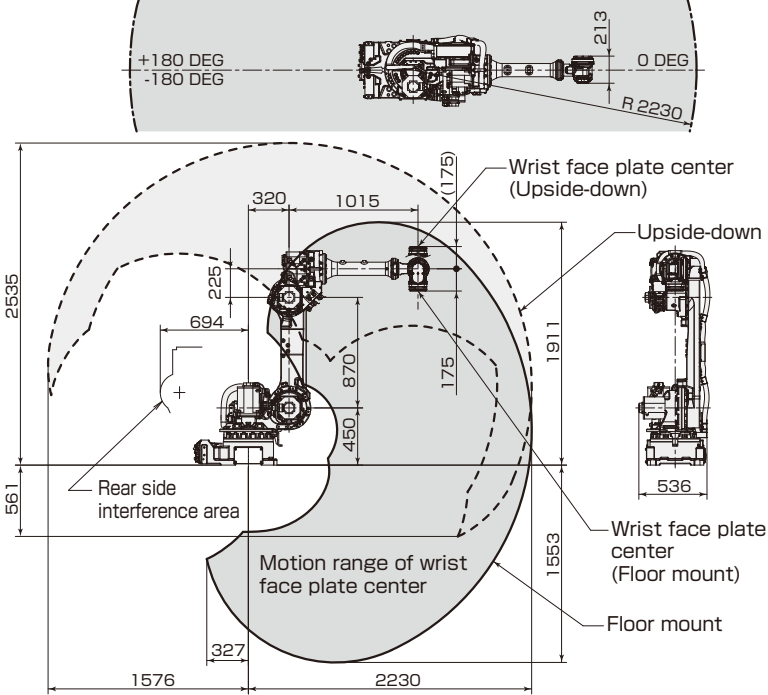
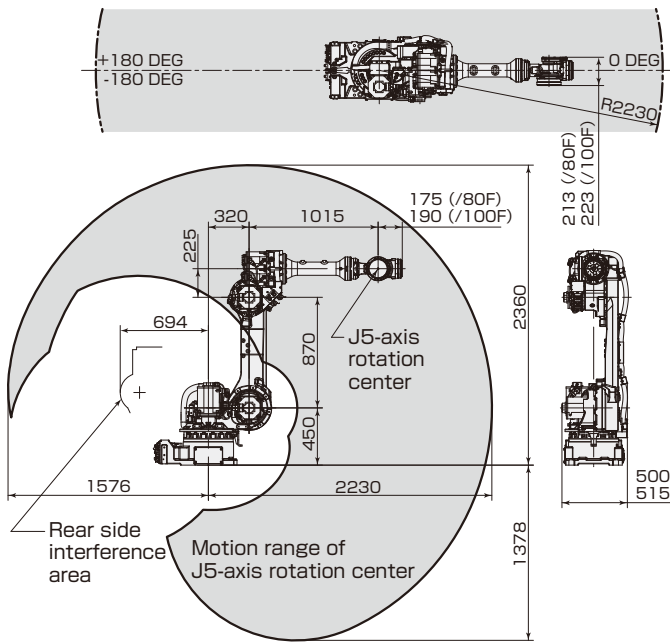


Bag palletizing by R-1000iA/80H

FANUC Robot R-1000iA

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

Operating space (R-1000iA/80H)



Specifications

Item	Specifications			
	R-1000iA/80F	R-1000iA/100F	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° (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° (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)	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)	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)	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)	-
Max. load capacity at wrist	80 kg (A)	100 kg		
Max. load capacity on J3 arm	-	(A)+(B)< 80kg	80 kg (A)	
Max. load capacity on J3 casing	15 kg (B)	20 kg (C)	20 kg (D)	(C)+(D)< 20kg
Allowable load moment at wrist	J4 axis	380 N·m 38.8 kgf·m	690 N·m 70.4 kgf·m	Note 3)
	J5 axis	380 N·m 38.8 kgf·m	690 N·m 70.4 kgf·m	
	J6 axis	200 N·m 20.4 kgf·m	260 N·m 26.5 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	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	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	-
Drive method	Electric servo drive by AC servo motor			
Repeatability	± 0.2 mm			
Mass Note 4)	620 kg	665 kg	610 kg	
Installation environment	Ambient temperature : 0 ~ 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) Without controller

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