

Compact and High-speed Robot

FANUC Robot R-1000iA

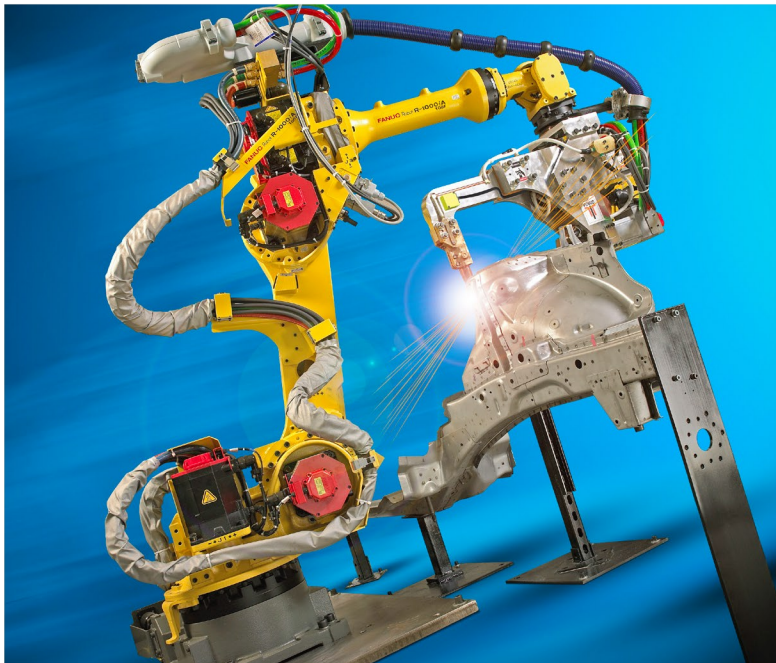


Features

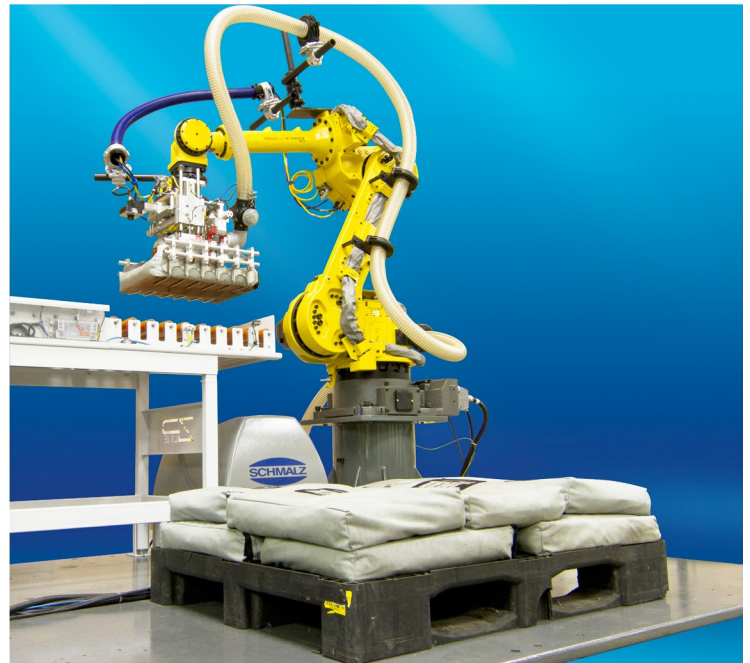
The R-1000*i*A is a compact and high-speed robot with a wrist capacity of 80kg and 100kg. A compact mechanical unit combined with outstanding motion performance make this robot ideal for material handling or spot welding processes. A narrow footprint allows more robots to fit into a work cell, helping save valuable floor space.

- Three models are available to meet a variety of applications
 - The R-1000*i*A 80F/100F has a large operating space (including its rear and downward side) due to a serial link configuration. This robot can be installed up side down. A slim profile, high speed approach and fast short pitch motion combine for reduced process time.
 - The R-1000*i*A 80H is a 5 axis variant that produces faster transfer speed in a compact unit.
- A slim design allows for easy access to adjacent robots, fixtures and work pieces. The R-1000*i*A can be floor or invert mounted.
- The latest intelligent features with *i*RVision and force sensing are available, as well as a range of other features with the R-30*i*B controller.

Application system



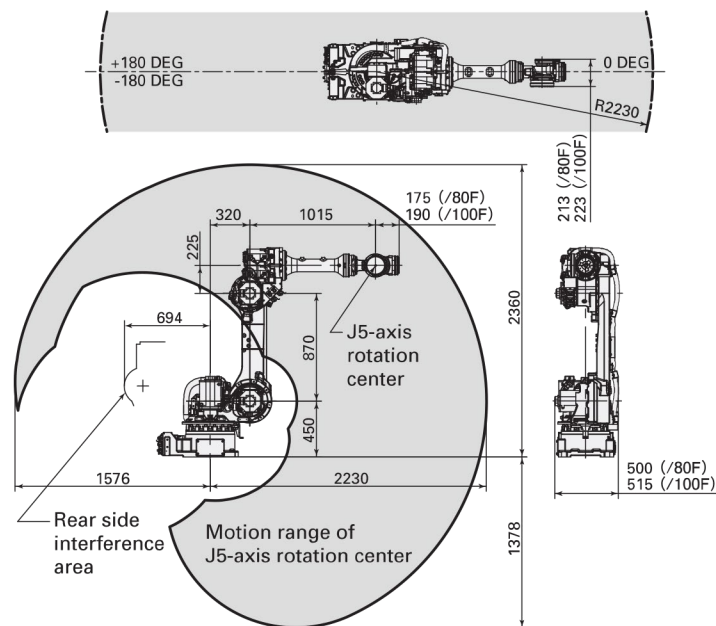
Spot welding with the Learning Robot option



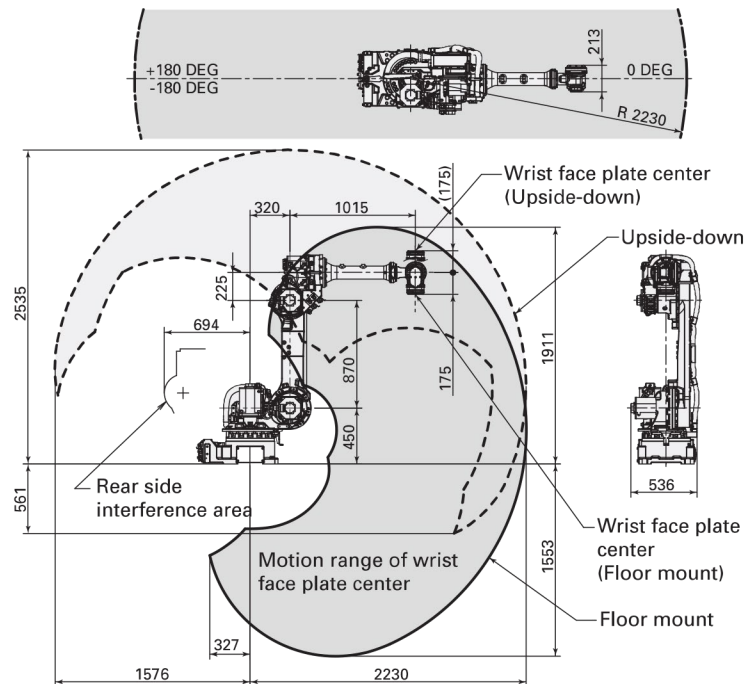
Bag palletizing with R-1000*i*A 80H

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		2,230 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		80 kg (A)	
Max load capacity on J3 arm		-		20 kg (C)		-	
Max load capacity on J3 casing		15 kg (B)		20 kg (D)		15 kg (B)	
		(A) + (B) < 80kg		(C) + (D) < 20kg		(A) + (B) < 80kg	
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 doesn't reach maximum one.

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 is maximum, 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

FANUC



FANUC AMERICA CORPORATION
3900 WEST HAMLIN ROAD
ROCHESTER HILLS MI 48309-3253



MARKETING@FANUCAMERICA.COM

FANUCAMERICA.COM 888-FANUC-US