

# R-1000iA

**PAYLOAD: 80-100KG**

THE FANUC R-1000iA ROBOT IS A COMPACT, HIGH-SPEED SIX AXIS ROBOT WITH AN 80-100KG PAYLOAD CAPACITY. OUTSTANDING MOTION PERFORMANCE COMBINED WITH A STRONG WRIST MAKE THIS ROBOT SUITABLE FOR A WIDE RANGE OF INDUSTRIAL APPLICATIONS:



FANUC R-1000iA/80F



FANUC R-1000iA/100F

- High Density Spot Welding
- Compact Spot Welding
- Packing & Palletizing
- Material Removal
- Machine Load/Unload
- Material Handling
- Dispensing
- General Assembly

#### FEATURES AND BENEFITS:

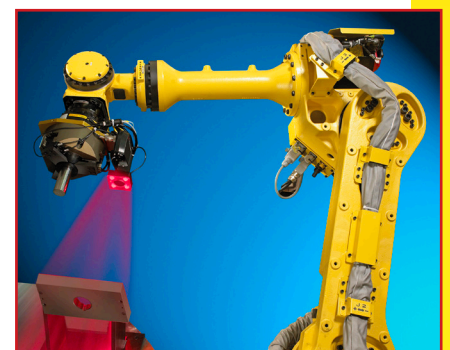
- Highest speed in its class.
- Slim profile design to minimize interference with system peripherals and allow operation in confined spaces.
- Large operating space (including its rear and downward side) due to a serial link configuration.
- High-speed approach from home to working position and fast positioning in short pitch motion can minimize the required process time.
- Optional Solution Arm dressout packages include welding cables, cooling water hoses and signal wires to support spot welding processes.
- "Best in class" wrist moments and inertia meet a variety of handling challenges.
- Proven, reliable FANUC servo drives provide highest uptime and productivity.
- Stationary outer arm simplifies hose and cable dressout and prolongs service life.
- Rugged, IP67 rated wrist design performs reliably even in the harshest manufacturing environments.
- Wrist motors located at the rear of J3 keep them isolated from hot, wet or dirty environments.
- The R-30iA robot controller enables intelligent functions including integrated vision and networking options.
- Invert mount installation is possible where space is a concern.



The R-1000iA/80F is equipped with iRVision and other intelligent functions



The R-1000iA/100F features factory installed process cable routing



The R-1000iA/80F is ideal for spot welding or material handling

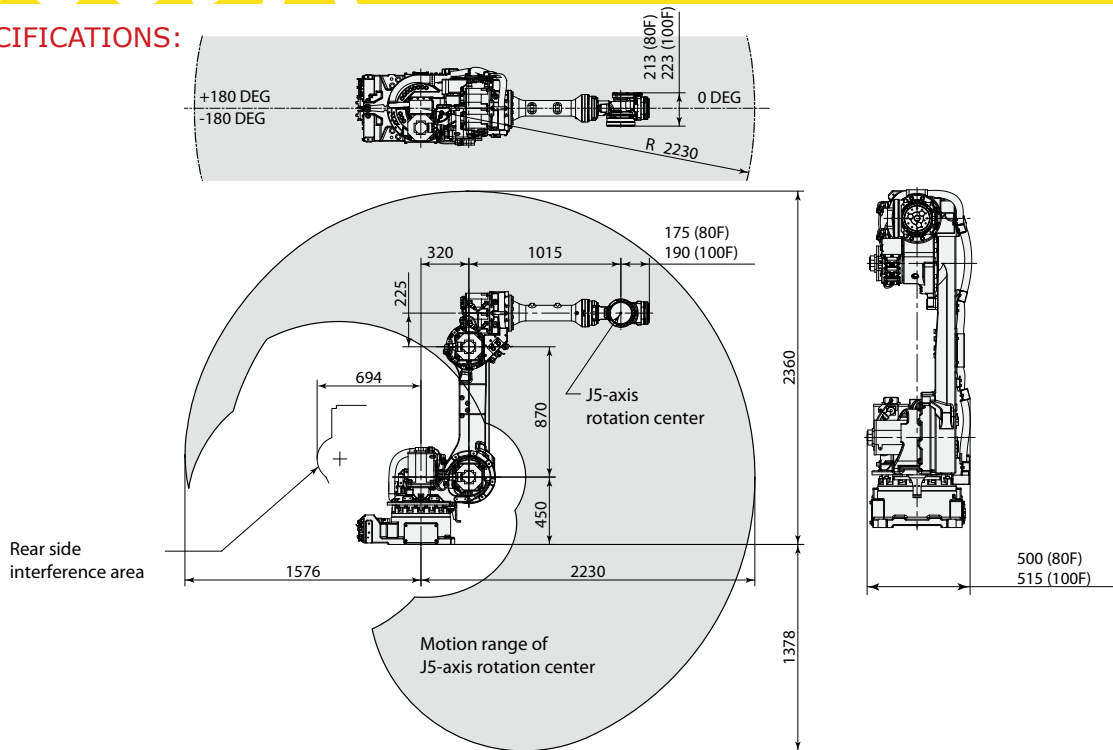
intelligent **ROBOT** solutions

**FANUC**  
Robotics

# R-1000iA

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**R-1000iA SERIES SPECIFICATIONS:**



Item	Specifications				
	R-1000iA/80F		R-1000iA/100F		
Controlled Axes	6 (J1, J2, J3, J4, J5, J6)				
Reach	2230 mm				
Installation	Floor, Inverted				
Motion range (Maximum speed) (Note 1)	J1 axis rotation	360° (170°/sec)	6.28 rad (2.97 rad/sec)	360° (130°/sec)	6.28 rad (2.27 rad/sec)
	J2 axis rotation	245° (140°/sec)	4.28 rad (2.44 rad/sec)	245° (110°/sec)	4.28 rad (1.92 rad/sec)
	J3 axis rotation	360° (160°/sec)	6.28 rad (2.79 rad/sec)	360° (120°/sec)	6.28 rad (2.09 rad/sec)
	J4 axis wrist rotation	720° (230°/sec)	12.57 rad (4.01 rad/sec)	720° (170°/sec)	12.57 rad (2.97 rad/sec)
	J5 axis wrist swing	250° (230°/sec)	4.36 rad (4.01 rad/sec)	250° (170°/sec)	4.36 rad (2.97 rad/sec)
	J6 axis wrist rotation	720° (350°/sec)	12.57 rad (6.11 rad/sec)	720° (250°/sec)	12.57 rad (4.36 rad/sec)
Max load capacity at wrist	80 kg (A)	(A)+(B)<80	100 kg		
Max load capacity on J3 arm	-		20 kg (C)	(C)+(D)<20	
Max load capacity on J3 casing	15 kg (B)		20 kg (D)		
Allowable load moment at wrist	J4 axis	380 N·m	38.8 kgf·m	690 N·m	70.4 kgf·m
	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 <sup>2</sup>	306.1 kgf·cm·s <sup>2</sup>	57 kg·m <sup>2</sup>	581.6 kgf·cm·s <sup>2</sup>
	J5 axis	30 kg·m <sup>2</sup>	306.1 kgf·cm·s <sup>2</sup>	57 kg·m <sup>2</sup>	581.6 kgf·cm·s <sup>2</sup>
	J6 axis	20 kg·m <sup>2</sup>	204.1 kgf·cm·s <sup>2</sup>	32 kg·m <sup>2</sup>	326.5 kgf·cm·s <sup>2</sup>
Drive Method	Electric servo drive AC servo motor				
Repeatability	± 0.2 mm				
Mass (Note 2)	620 kg		665 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:	0.5G or less			

Note 1) In case of short distance motion, the axis does not reach its maximum speed.  
 Note 2) Without controller



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