

## Heavy Payload Robot

# FANUC Robot M-950 FANUC Robot M-1000



## Features

FANUC Robot M-950 / M-1000 is a heavy payload robot series with the capacity of 500kg - 1000kg.

- These series have a J3 arm which can stand upright above and rotate backwards of the robot. Due to the wide motion range, these series can adapt various layout.
- Due to a strong wrist and a high rigidity design, these series are available for handling of large and heavy workpieces.
- Three models are available to meet a variety of applications.

### FANUC Robot M-950/500F-28A

In addition to handling large and heavy workpieces, this model can support the application such as friction stir welding, drilling and riveting.

### FANUC Robot M-1000/1000F-33A

Due to 1000kg payload capacity, this model can handle large and heavy workpieces such as battery units of EVs, long building structures, and is available for machining such as drilling.

### FANUC Robot M-1000/550F-46A

Due to 550kg payload capacity and long reach, this model is available for various application including mold release agent spray and handling work pieces for Giga Cast.

- The wrist has IP67-equivalent resistance to environmental conditions (dust and dips) and can be used in harsh environments with confidence.
- iRVision and various intelligent features are available. These enable to built robot systems flexibly.

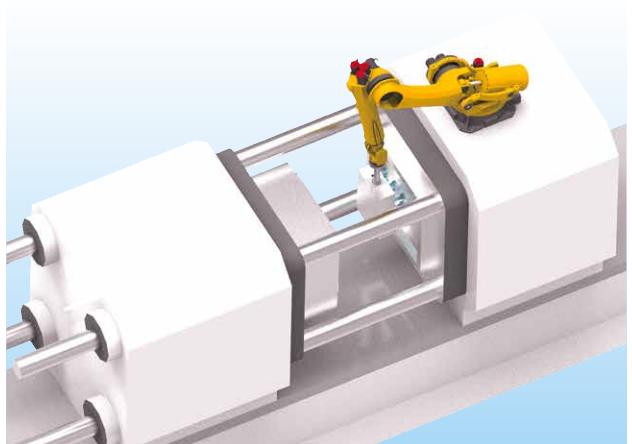
## Application Examples



Large Casting Handling



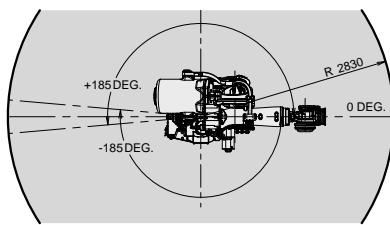
Battery Unit Handling  
(Transporting to backwards of robot)



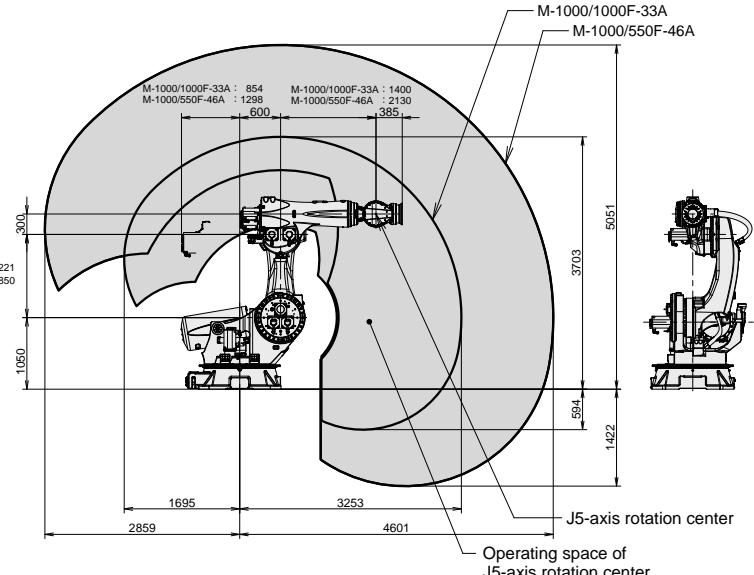
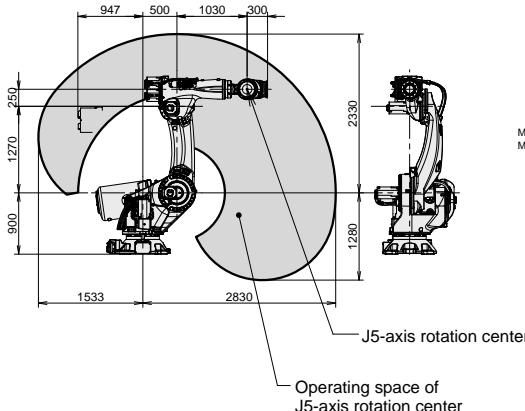
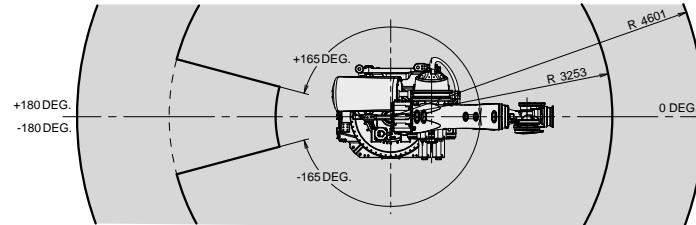
Mold Release Agent Spray  
for Giga Cast

## Operating space

### M-950/500F-28A



### M-1000/1000F-33A, 550F-46A



## Specifications

Model	M-950/500F-28A		M-1000/1000F-33A		M-1000/550F-46A					
Type	Articulated Type		6 axes (J1, J2, J3, J4, J5, J6)							
Controlled axes										
Reach	2830 mm		3253 mm		4601 mm					
Installation	J1 axis rotation	370°(100/s) 6.46 rad (1.75 rad/s)	360°(60/s) 6.28 rad (1.05 rad/s)	360°(75/s) 6.28 rad (1.31 rad/s)						
	J2 axis rotation	150°(80/s) 2.62 rad (1.40 rad/s)	145°(50/s) 2.53 rad (0.87 rad/s)	145°(60/s) 2.53 rad (1.05 rad/s)						
	J3 axis rotation	394.5°(80/s) 6.89 rad (1.40 rad/s)	324°(50/s) 5.65 rad (0.87 rad/s)	330°(60/s) 5.76 rad (1.05 rad/s)						
	J4 axis wrist rotation	720°(110/s) 12.57 rad (1.92 rad/s)	720°(70/s) 12.57 rad (1.22 rad/s)	720°(85/s) 12.57 rad (1.48 rad/s)						
	J5 axis wrist swing	244°(110/s) 4.26 rad (1.92 rad/s)	240°(70/s) 4.19 rad (1.22 rad/s)	240°(85/s) 4.19 rad (1.48 rad/s)						
	J6 axis wrist rotation	720°(170/s) 12.57 rad (2.97 rad/s)	720°(85/s) 12.57 rad (1.48 rad/s)	720°(115/s) 12.57 rad (2.01 rad/s)						
Max. load capacity at wrist	500 kg		1000 kg		550 kg					
Max. load capacity at J2 base			550 kg							
Max. load capacity at J3 arm			50 kg							
Allowable load moment at wrist	J4 axis	3420 N·m 349 kgf·m	8800 N·m 898 kgf·m	5280 N·m 539 kgf·m						
	J5 axis	3420 N·m 349 kgf·m	8800 N·m 898 kgf·m	5280 N·m 539 kgf·m						
	J6 axis	1850 N·m 189 kgf·m	5800 N·m 592 kgf·m	2520 N·m 257 kgf·m						
Allowable load inertia at wrist	J4 axis	1100 kg·m <sup>2</sup> 11224 kgf·cm·s <sup>2</sup>	1750 kg·m <sup>2</sup> 17857 kgf·cm·s <sup>2</sup>	1100 kg·m <sup>2</sup> 11224 kgf·cm·s <sup>2</sup>						
	J5 axis	1100 kg·m <sup>2</sup> 11224 kgf·cm·s <sup>2</sup>	1750 kg·m <sup>2</sup> 17857 kgf·cm·s <sup>2</sup>	1100 kg·m <sup>2</sup> 11224 kgf·cm·s <sup>2</sup>						
	J6 axis	445 kg·m <sup>2</sup> 4541 kgf·cm·s <sup>2</sup>	840 kg·m <sup>2</sup> 8571 kgf·cm·s <sup>2</sup>	750 kg·m <sup>2</sup> 7653 kgf·cm·s <sup>2</sup>						
Drive method	Electric servo drive by servo motor									
Repeatability (Note 3)	±0.08 mm		±0.10 mm							
Mass (Note 4)	2500 kg		5300 kg		5800 kg					
Installation environment	Ambient temperature	: 0 to 45°C								
	Ambient humidity	: Normally 75 %RH or less (No condensation allowed)								
	Vibration acceleration	: Short term (within one month) Max. 95 %RH or less (No condensation allowed)								
Note 1) During short distance motions, the axis speed may not reach the maximum value stated.										
Note 2) When a mechanical stopper is installed on the M-1000/1000F-33A, motion range of the J1 axis is limited to 330° (5.76 rad).										
Note 3) Compliant with ISO 9283.										
Note 4) Without controller.										

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