

FANUC Robot R-2000iB series



The FANUC R-2000iB robot is an intelligent robot for versatile applications. This highly reliable robot with intelligence and network collaboration provides the best cost performance and ease of use for applications with integrated versatile process solutions such as spot welding, material handling and assembly.

Simple and compact mechanical unit

The R-2000iB provides a slim and compact body with a simplified, vertical articulated arm, while maintaining the largest motion area and the heaviest payload in its class.

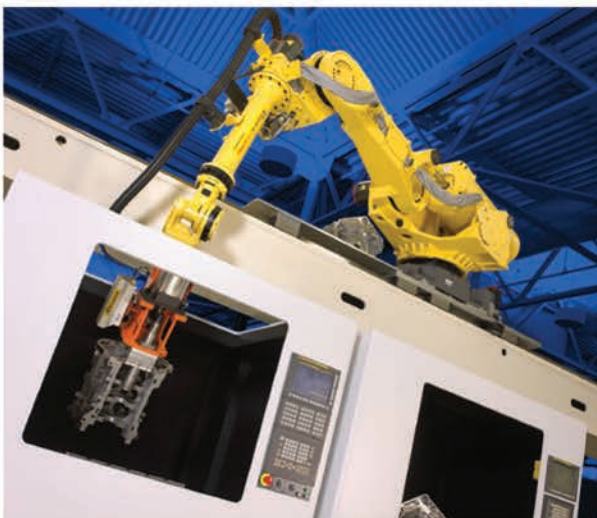
- Compact wrist unit
- Minimum interference at rear side
- Dense installation of multi-robot

Intelligence and networking

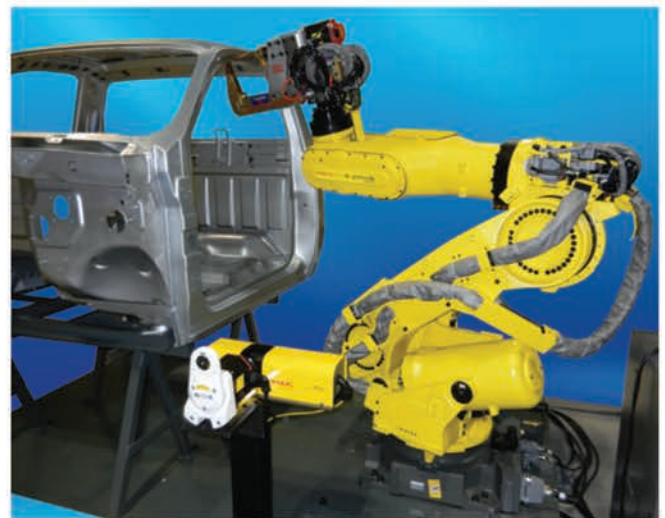
The newly developed robot controller provides enhanced CPU performance. This includes the latest software function and the most up-to-date intelligence and networking features.

- Higher motion performance
- Integrated vision
- Bin picking function
- Diagnostics function

Application system



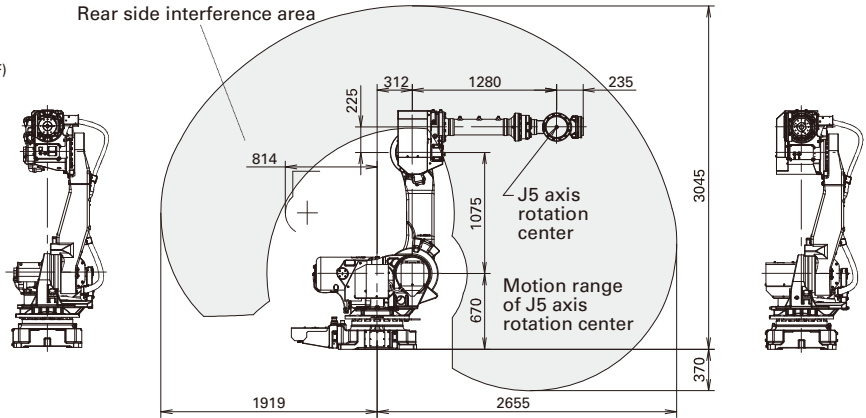
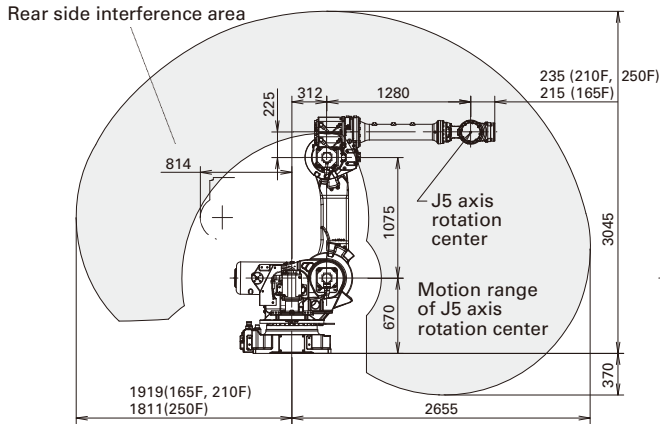
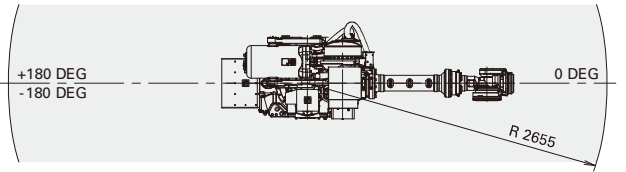
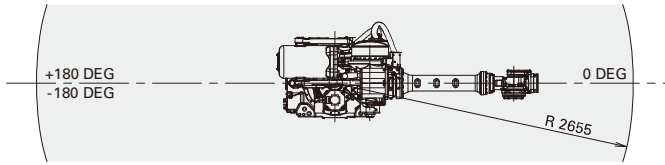
Machine tending



Cable integrated spot welding

FANUC Robot R-2000iB/165F, 210F, 250F, 210WE

Operating space (R-2000iB/165F, 210F, 250F) Operating space (R-2000iB/210WE)



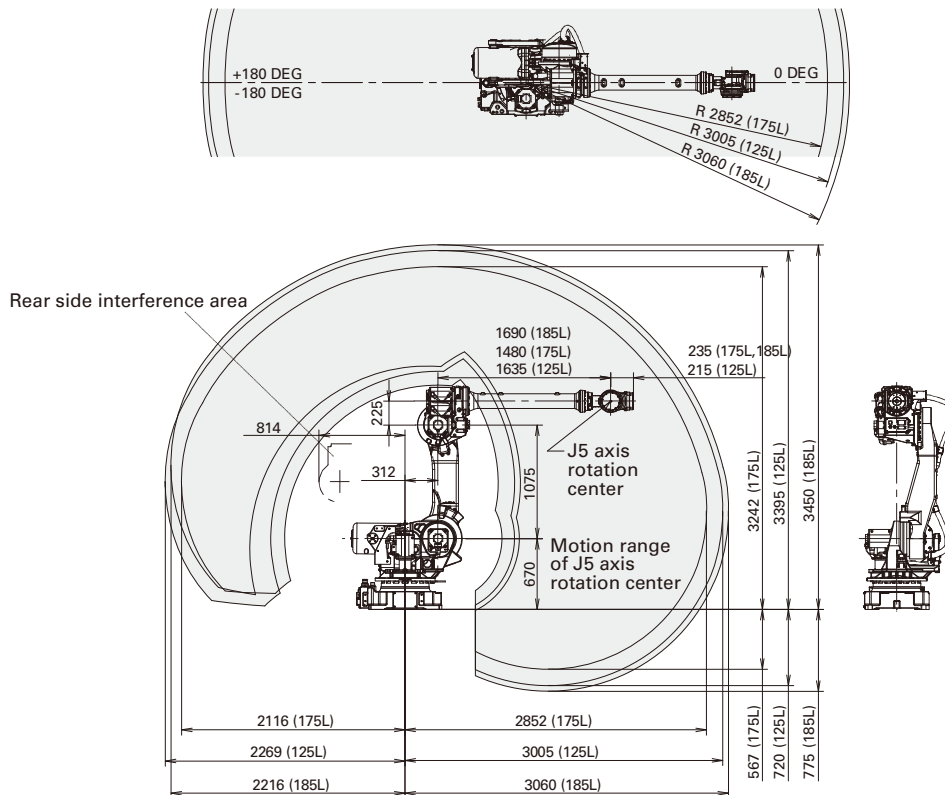
Specifications

Item	Specifications				
	R-2000iB/165F	R-2000iB/210F	R-2000iB/250F	R-2000iB/210WE	
Type	Articulated type				
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)				
Reach	2.66m	2.66m	2.66m	2.66m	
Installation	Floor				
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (95°/s) 6.28rad (1.66rad/s)	360° (95°/s) 6.28rad (1.66rad/s)	360° (95°/s) 6.28rad (1.66rad/s)
	J2 axis rotation	136° (110°/s) 2.37rad (1.92rad/s)	136° (90°/s) 2.37rad (1.57rad/s)	136° (85°/s) 2.37rad (1.48rad/s)	136° (90°/s) 2.37rad (1.57rad/s)
	J3 axis rotation	362° (110°/s) 6.32rad (1.92rad/s)	362° (95°/s) 6.32rad (1.66rad/s)	357° (88°/s) 6.23rad (1.54rad/s)	362° (95°/s) 6.32rad (1.66rad/s)
	J4 axis rotation	720° (150°/s) 12.57rad (2.62rad/s)	720° (120°/s) 12.57rad (2.09rad/s)	720° (120°/s) 12.57rad (2.09rad/s)	720° (120°/s) 12.57rad (2.09rad/s)
	J5 axis wrist rotation	250° (150°/s) 4.36rad (2.62rad/s)	250° (120°/s) 4.36rad (2.09rad/s)	250° (120°/s) 4.36rad (2.09rad/s)	250° (120°/s) 4.36rad (2.09rad/s)
	J6 axis wrist rotation	720° (220°/s) 12.57rad (3.84rad/s)	720° (190°/s) 12.57rad (3.32rad/s)	720° (190°/s) 12.57rad (3.32rad/s)	720° (190°/s) 12.57rad (3.32rad/s)
	Max load capacity at wrist	165kg	210kg	250kg	210kg
Max load capacity at J2 base	550kg	550kg	550kg	550kg	
Max load capacity on J3 arm	25kg	25kg	25kg	25kg	
Allowable load moment at wrist	J4 axis	921N · m 94kgf · m	1333N · m 136kgf · m	1382N · m 141kgf · m	1333N · m 136kgf · m
	J5 axis	921N · m 94kgf · m	1333N · m 136kgf · m	1382N · m 141kgf · m	1333N · m 136kgf · m
	J6 axis	461N · m 47kgf · m	706N · m 72kgf · m	715N · m 73kgf · m	706N · m 72kgf · m
Allowable load inertia at wrist	J4 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J5 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J6 axis	40.2kg · m ² 410kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²	196kg · m ² 2000kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²
Drive method	Electric servo drive by AC servo motor				
Repeatability	±0.2mm	±0.3mm	±0.3mm	±0.3mm	
Mass Note 2)	1,170kg	1,240kg	1,270kg	1,280kg	
Installation environment	Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less				

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) Without controller.

Operating space (R-2000iB/125L, 175L, 185L)



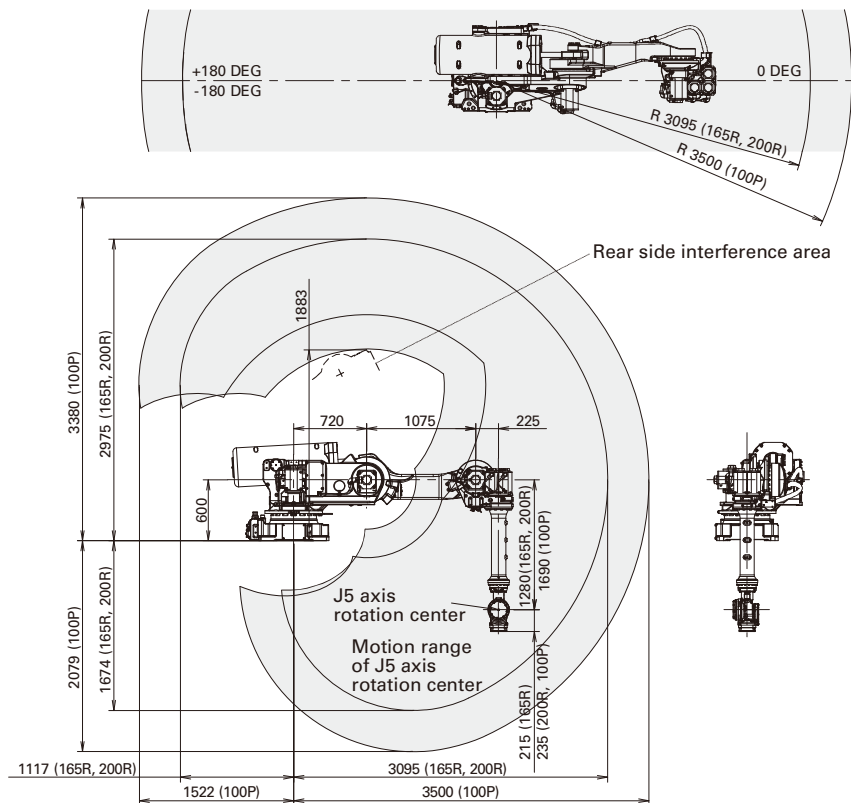
Specifications

Item		Specifications			
		R-2000iB/125L	R-2000iB/175L	R-2000iB/185L	
Type		Articulated type			
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)			
Reach		3.01m	2.85m	3.06m	
Installation		Floor			
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (95°/s) 6.28rad (1.66rad/s)	360° (95°/s) 6.28rad (1.66rad/s)	
	J2 axis rotation	136° (110°/s) 2.37rad (1.92rad/s)	136° (90°/s) 2.37rad (1.57rad/s)	136° (85°/s) 2.37rad (1.48rad/s)	
	J3 axis rotation	352.6° (110°/s) 6.15rad (1.92rad/s)	356.1° (95°/s) 6.21rad (1.66rad/s)	346° (88°/s) 6.04rad (1.54rad/s)	
	J4 axis wrist rotation	720° (170°/s) 12.57rad (2.97rad/s)	720° (120°/s) 12.57rad (2.09rad/s)	720° (120°/s) 12.57rad (2.09rad/s)	
	J5 axis wrist swing	250° (170°/s) 4.36rad (2.97rad/s)	250° (120°/s) 4.36rad (2.09rad/s)	250° (120°/s) 4.36rad (2.09rad/s)	
	J6 axis wrist rotation	720° (260°/s) 12.57rad (4.54rad/s)	720° (190°/s) 12.57rad (3.32rad/s)	720° (190°/s) 12.57rad (3.32rad/s)	
	Max load capacity at wrist		125kg	175kg	185kg
	Max load capacity at J2 base		550kg	550kg	550kg
Max load capacity on J3 arm		20kg	20kg	—	
Allowable load moment at wrist	J4 axis	588N · m 60kgf · m	1225N · m 125kgf · m	1225N · m 125kgf · m	
	J5 axis	588N · m 60kgf · m	1225N · m 125kgf · m	1225N · m 125kgf · m	
	J6 axis	343N · m 35kgf · m	706N · m 72kgf · m	706N · m 72kgf · m	
Allowable load inertia at wrist	J4 axis	58.8kg · m ² 600kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	
	J5 axis	58.8kg · m ² 600kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²	
	J6 axis	22.5kg · m ² 230kgf · cm · s ²	196kg · m ² 2000kgf · cm · s ²	196kg · m ² 2000kgf · cm · s ²	
Drive method		Electric servo drive by AC servo motor			
Repeatability		±0.2mm	±0.3mm	±0.3mm	
Mass Note 2)		1,190kg	1,260kg	1,290kg	
Installation environment		Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less			

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) Without controller.

Operating space (R-2000iB/165R, 200R, 100P)



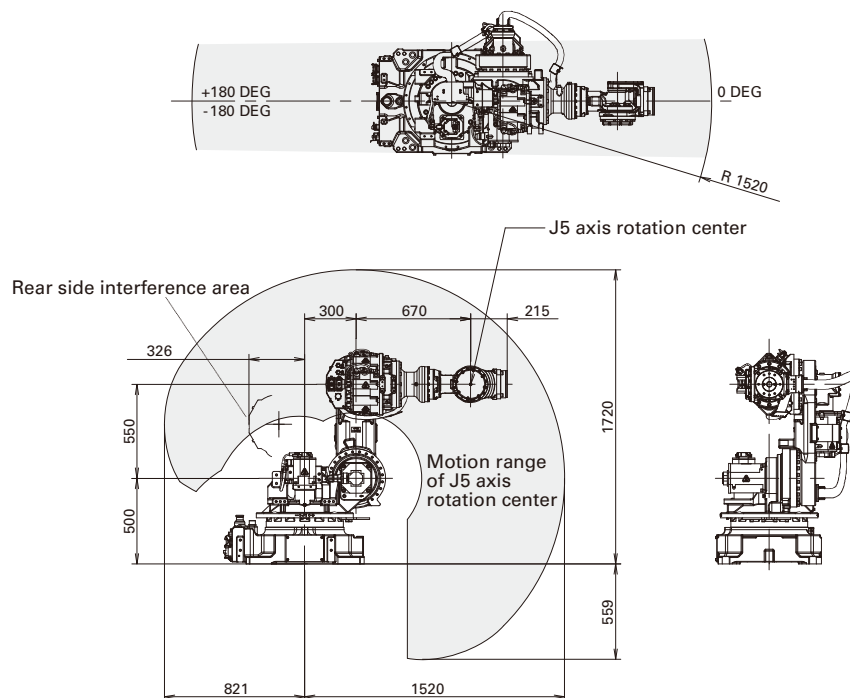
Specifications

Item		Specifications		
		R-2000iB/165R	R-2000iB/200R	R-2000iB/100P
Type		Articulated type		
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)		
Reach		3.09m	3.09m	3.50m
Installation		Rack mount		
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (90°/s) 6.28rad (1.57rad/s)	360° (110°/s) 6.28rad (1.92rad/s)
	J2 axis rotation	185° (100°/s) 3.23rad (1.75rad/s)	185° (85°/s) 3.23rad (1.48rad/s)	185° (90°/s) 3.23rad (1.57rad/s)
	J3 axis rotation	365° (110°/s) 6.37rad (1.92rad/s)	365° (95°/s) 6.37rad (1.66rad/s)	365° (110°/s) 6.37rad (1.92rad/s)
	J4 axis wrist rotation	720° (150°/s) 12.57rad (2.62rad/s)	720° (120°/s) 12.57rad (2.09rad/s)	720° (120°/s) 12.57rad (2.09rad/s)
	J5 axis wrist rotation	250° (150°/s) 4.36rad (2.62rad/s)	250° (120°/s) 4.36rad (2.09rad/s)	250° (120°/s) 4.36rad (2.09rad/s)
	J6 axis wrist rotation	720° (220°/s) 12.57rad (3.84rad/s)	720° (190°/s) 12.57rad (3.32rad/s)	720° (190°/s) 12.57rad (3.32rad/s)
	Max load capacity at wrist		165kg	200kg
Max load capacity at J2 base		550kg	550kg	550kg
Max load capacity on J3 casing		25kg	—	25kg
Allowable load moment at wrist	J4 axis	921N · m 94kgf · m	1333N · m 136kgf · m	980N · m 100kgf · m
	J5 axis	921N · m 94kgf · m	1333N · m 136kgf · m	980N · m 100kgf · m
	J6 axis	461N · m 47kgf · m	706N · m 72kgf · m	706N · m 72kgf · m
Allowable load inertia at wrist	J4 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²
	J5 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²	225.4kg · m ² 2300kgf · cm · s ²
	J6 axis	40.2kg · m ² 410kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²	196kg · m ² 2000kgf · cm · s ²
Drive method		Electric servo drive by AC servo motor		
Repeatability		±0.3mm	±0.3mm	±0.3mm
Mass Note 2)		1,480kg	1,540kg	1,560kg
Installation environment		Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less		

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) Without controller.

Operating space (R-2000iB/170CF)



Specifications

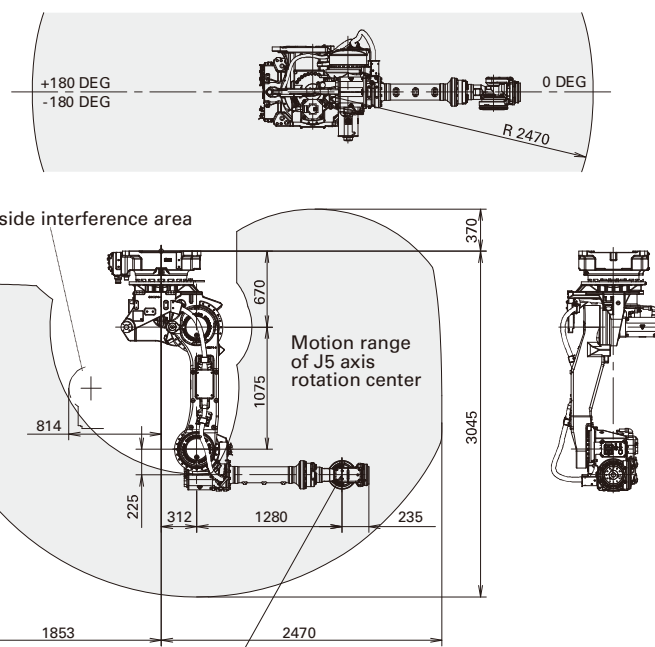
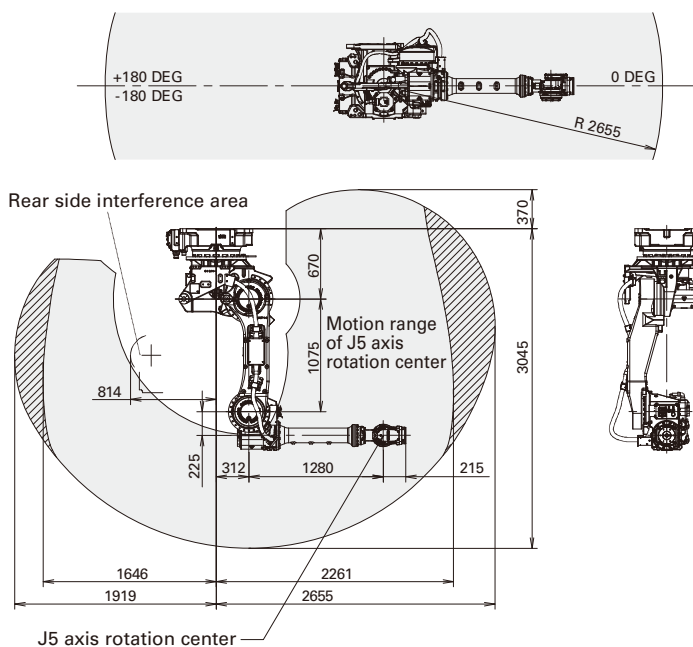
Item		Specifications
		R-2000iB/170CF
Type		Articulated type
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)
Reach		1.52m
Installation		Floor, Upside-down
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)
	J2 axis rotation	190° (110°/s) 3.32rad (1.92rad/s)
	J3 axis rotation	332° (110°/s) 5.79rad (1.92rad/s)
	J4 axis wrist rotation	720° (150°/s) 12.57rad (2.62rad/s)
	J5 axis wrist swing	250° (150°/s) 4.36rad (2.62rad/s)
	J6 axis wrist rotation	720° (220°/s) 12.57rad (3.84rad/s)
	Max load capacity at wrist	
Max load capacity at J2 base		550kg (Floor mount only)
Max load capacity on J3 casing		25kg
Allowable load moment at wrist	J4 axis	921N · m 94kgf · m
	J5 axis	921N · m 94kgf · m
	J6 axis	461N · m 47kgf · m
Allowable load inertia at wrist	J4 axis	78.4kg · m ² 800kgf · cm · s ²
	J5 axis	78.4kg · m ² 800kgf · cm · s ²
	J6 axis	40.2kg · m ² 410kgf · cm · s ²
Drive method		Electric servo drive by AC servo motor
Repeatability		±0.15mm
Mass Note 2)		800kg
Installation environment		Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) Without controller.

Operating space (R-2000iB/150U)

Operating space (R-2000iB/220U)



The robot may be restricted to rest in the hatched area depending on its payload and position.

J5 axis rotation center

Specifications

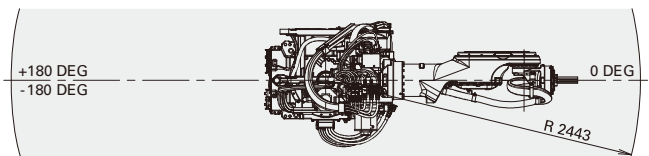
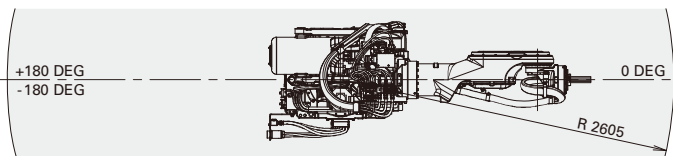
Item	Specifications		
	R-2000iB/150U	R-2000iB/220U	
Type	Articulated type		
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)		
Reach	2.66m	2.47m	
Installation	Upside-down		
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (95°/s) 6.28rad (1.66rad/s)
	J2 axis rotation	136° (85°/s) 2.37rad (1.48rad/s)	136° (85°/s) 2.37rad (1.48rad/s)
	J3 axis rotation	362° (110°/s) 6.32rad (1.92rad/s)	362° (95°/s) 6.32rad (1.66rad/s)
	J4 axis rotation	720° (150°/s) 12.57rad (2.62rad/s)	720° (120°/s) 12.57rad (2.09rad/s)
	J5 axis wrist swing	250° (150°/s) 4.36rad (2.62rad/s)	250° (120°/s) 4.36rad (2.09rad/s)
	J6 axis rotation	720° (220°/s) 12.57rad (3.84rad/s)	720° (190°/s) 12.57rad (3.32rad/s)
	Max load capacity at wrist	150kg	220kg
	Max load capacity at J2 base	—	—
Max load capacity on J3 arm	10kg	25kg	
Allowable load moment at wrist	J4 axis	833N · m 85kgf · m	1333N · m 136kgf · m
	J5 axis	833N · m 85kgf · m	1333N · m 136kgf · m
	J6 axis	421N · m 43kgf · m	706N · m 72kgf · m
	J6 axis	421N · m 43kgf · m	706N · m 72kgf · m
Allowable load inertia at wrist	J4 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J5 axis	78.4kg · m ² 800kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J6 axis	40.2kg · m ² 410kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²
	J6 axis	40.2kg · m ² 410kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²
Drive method	Electric servo drive by AC servo motor		
Repeatability	±0.2mm	±0.3mm	
Mass Note 2)	1,070kg	1,150kg	
Installation environment	Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less		

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

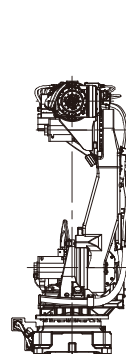
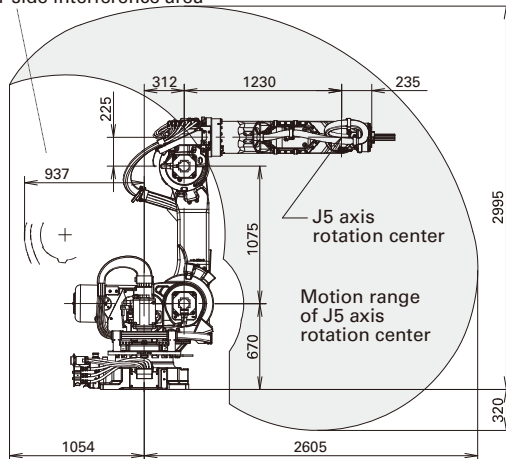
Note 2) Without controller.

Operating space (R-2000iB/210FS)

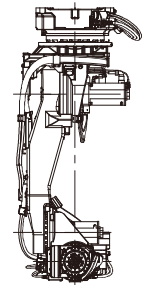
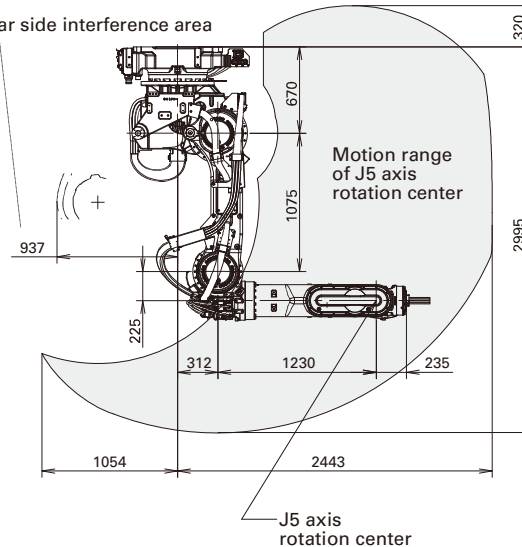
Operating space (R-2000iB/220US)



Rear side interference area



Rear side interference area

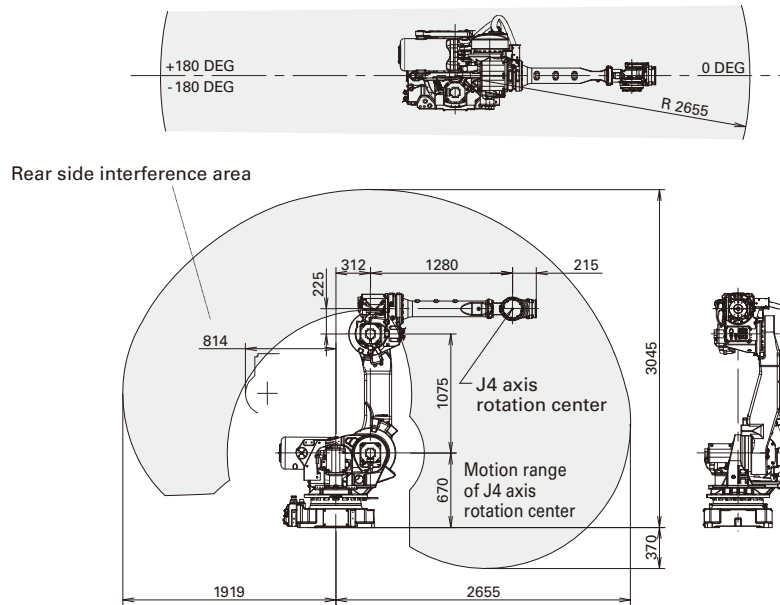


Specifications

Item	Specifications		
	R-2000iB/210FS	R-2000iB/220US	
Type	Articulated type		
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)		
Reach	2.61m	2.44m	
Installation	Floor	Upside-down	
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (110°/s) 6.28rad (1.92rad/s)
	J2 axis rotation	136° (90°/s) 2.37rad (1.57rad/s)	136° (85°/s) 2.37rad (1.48rad/s)
	J3 axis rotation	233.9° (95°/s) 4.08rad (1.66rad/s)	233.9° (95°/s) 4.08rad (1.66rad/s)
	J4 axis rotation	420° (130°/s) 7.33rad (2.27rad/s)	420° (130°/s) 7.33rad (2.27rad/s)
	J5 axis rotation	250° (130°/s) 4.36rad (2.27rad/s)	250° (130°/s) 4.36rad (2.27rad/s)
	J6 axis rotation	420° (200°/s) 7.33rad (3.49rad/s)	420° (200°/s) 7.33rad (3.49rad/s)
	J6 axis wrist rotation	7.33rad (3.49rad/s)	7.33rad (3.49rad/s)
Max load capacity at wrist	210kg	220kg	
Max load capacity at J2 base	550kg	—	
Max load capacity on J3 arm	—	—	
Allowable load moment at wrist	J4 axis	1333N · m 136kgf · m	1333N · m 136kgf · m
	J5 axis	1333N · m 136kgf · m	1333N · m 136kgf · m
	J6 axis	706N · m 72kgf · m	706N · m 72kgf · m
Allowable load inertia at wrist	J4 axis	141.1kg · m ² 1440kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J5 axis	141.1kg · m ² 1440kgf · cm · s ²	141.1kg · m ² 1440kgf · cm · s ²
	J6 axis	78.4kg · m ² 800kgf · cm · s ²	78.4kg · m ² 800kgf · cm · s ²
Drive method	Electric servo drive by AC servo motor		
Repeatability	±0.3mm	±0.3mm	
Mass Note 2)	1,250kg	1,160kg	
Installation environment	Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less		

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.
Note 2) Without controller.

Operating space (R-2000iB/100H)



Specifications

Item		Specifications	
		R-2000iB/100H	
Type		Articulated Type	
Controlled axes		5 axes (J1, J2, J3, J4, J5)	
Reach		2.66m	
Installation		Floor	
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (130°/s) 6.28rad (2.27rad/s)	
	J2 axis rotation	136° (130°/s) 2.37rad (2.27rad/s)	
	J3 axis rotation	362° (130°/s) 6.32rad (2.27rad/s)	
	J4 axis wrist swing	250° (170°/s) 4.36rad (2.97rad/s)	
	J5 axis wrist rotation	720° (360°/s) 12.57rad (6.28rad/s)	
Max load capacity at wrist		100kg	
Max load capacity at J2 base		550kg	
Max load capacity on J3 arm		—	
Allowable load moment at wrist	J4 axis	441N · m 45kgf · m	
	J5 axis	245N · m 25kgf · m	
Allowable load inertia at wrist	J4 axis	39.2kg · m ² 400kgf · cm · s ²	
	J5 axis	15.7kg · m ² 160kgf · cm · s ²	
Drive method		Electric servo drive by AC servo motor	
Repeatability		±0.2mm	
Mass Note 2)		1,150kg	
Installation environment		Ambient temperature : 0~45°C Ambient humidity : Normally 75%RH or less (No dew, nor frost allowed) Short term Max. 95%RH or less (within one month) Vibration : 0.5G or less	

Note 1) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 2) Without controller.

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