

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.

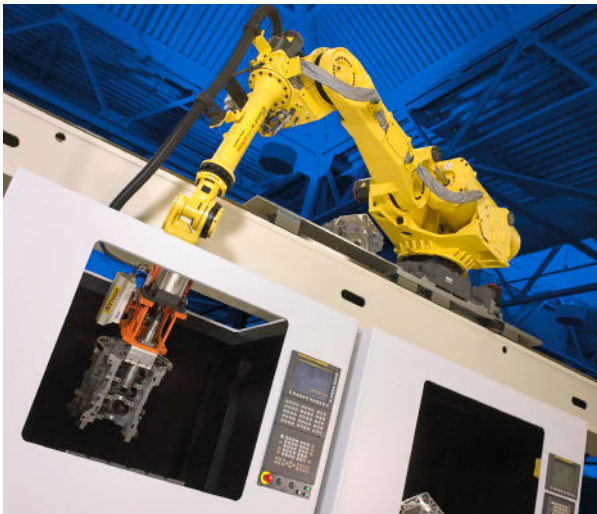
- Compact wrist unit
- Minimum interference at rear side
- Dense installation of multi-robot

Intelligence and networking

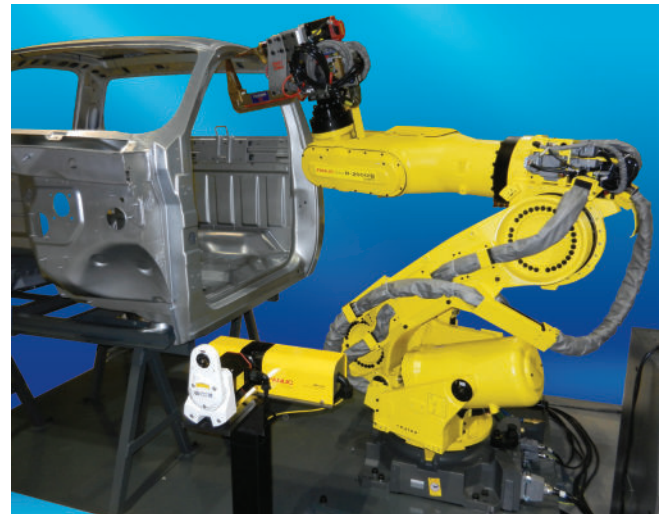
The newly developed robot controller provides enhanced CPU performance. This includes the latest software function and the most up-to-date intelligence and networking features.

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

Application system

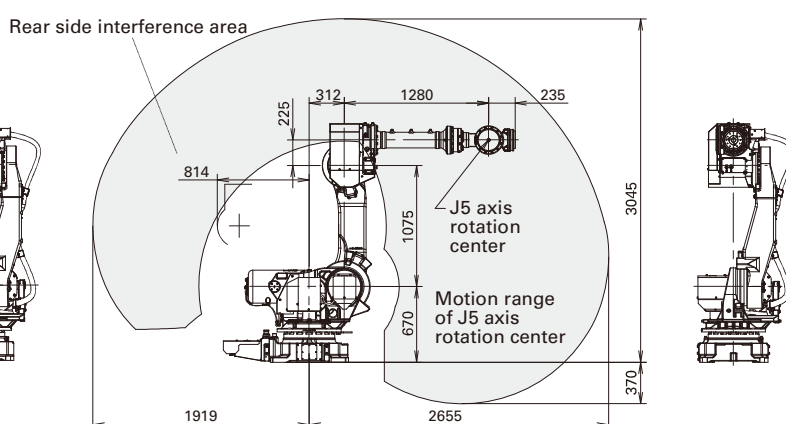
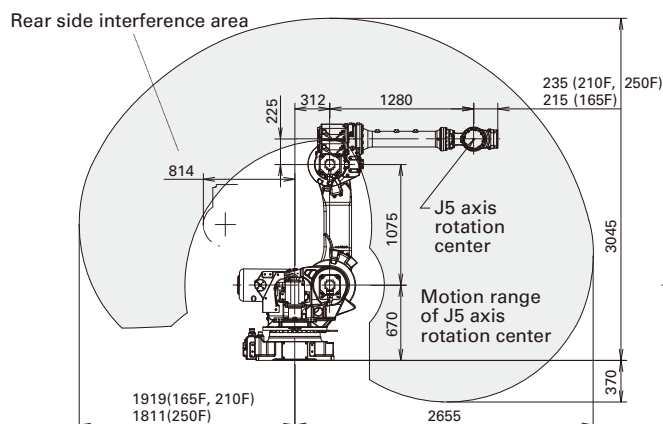
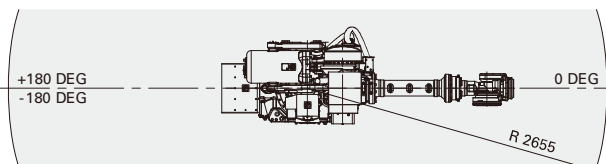
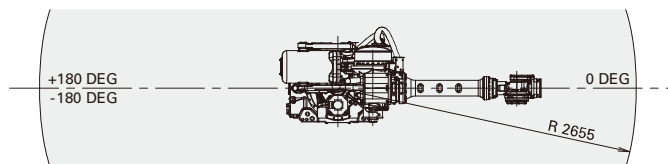


Machine tending



Cable integrated spot welding

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



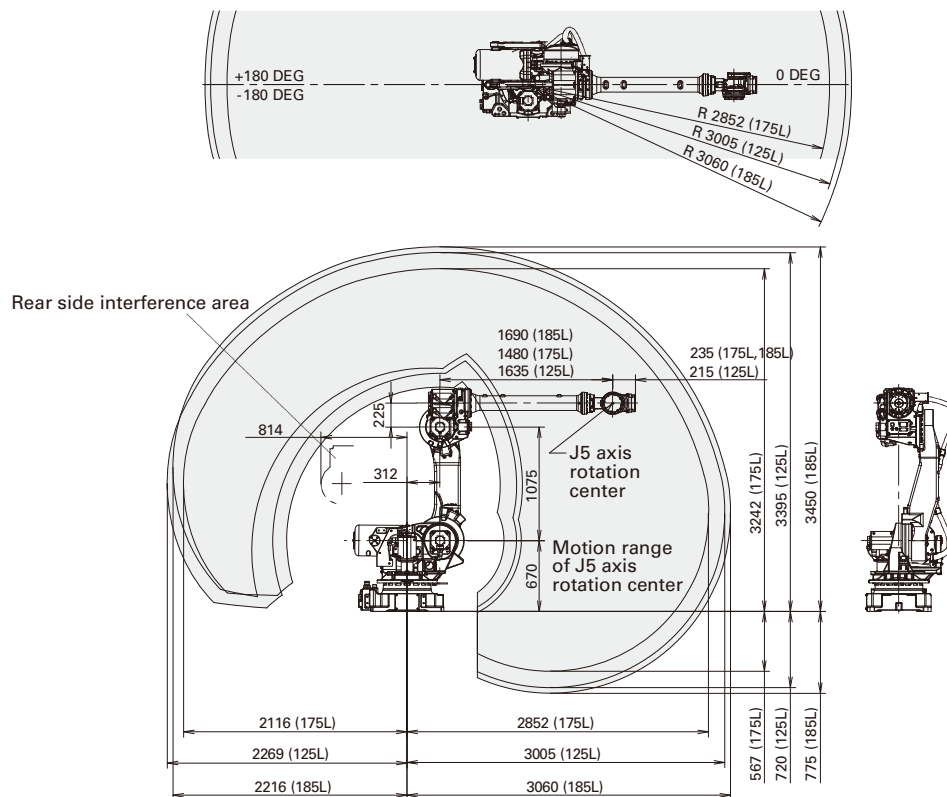
Specifications

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 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 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
	J6 axis	47kgf · m	72kgf · m	73kgf · 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
	J6 axis	410kgf · cm · s ²	800kgf · cm · s ²	2000kgf · cm · s 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)



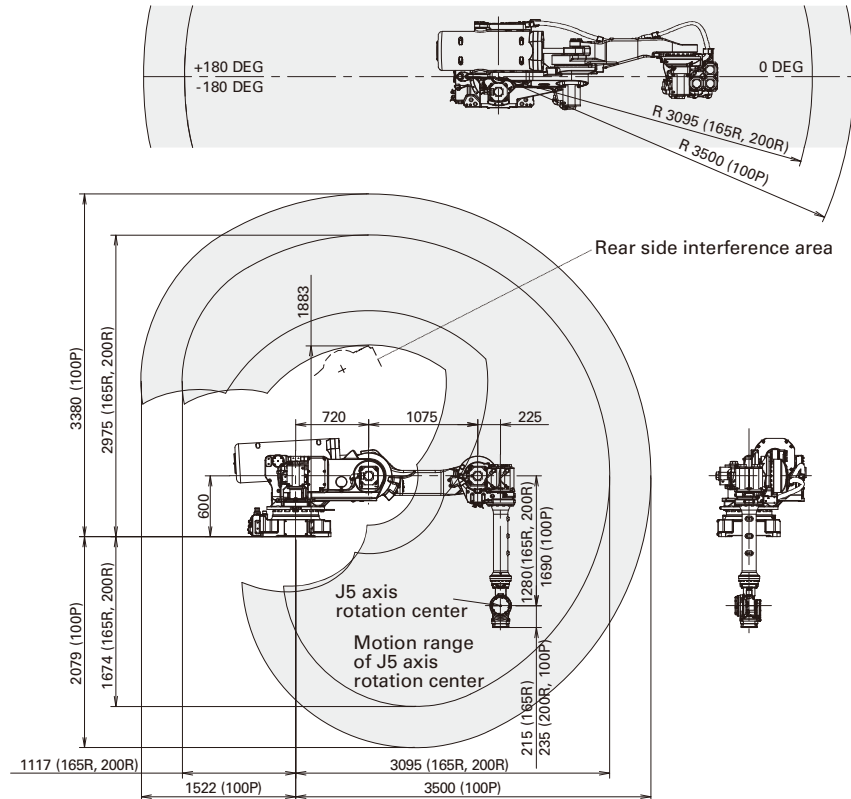
Specifications

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
	J4 axis	58.8kg · m² 600kgf · cm · s²	225.4kg · m² 2300kgf · cm · s²	225.4kg · m² 2300kgf · cm · s²
Allowable load inertia at wrist	J5 axis	58.8kg · m² 600kgf · cm · s²	225.4kg · m² 2300kgf · cm · s²	225.4kg · m² 2300kgf · cm · s²
	J6 axis	22.5kg · m² 230kgf · cm · s²	196kg · m² 2000kgf · cm · s²	196kg · m² 2000kgf · cm · s²
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)

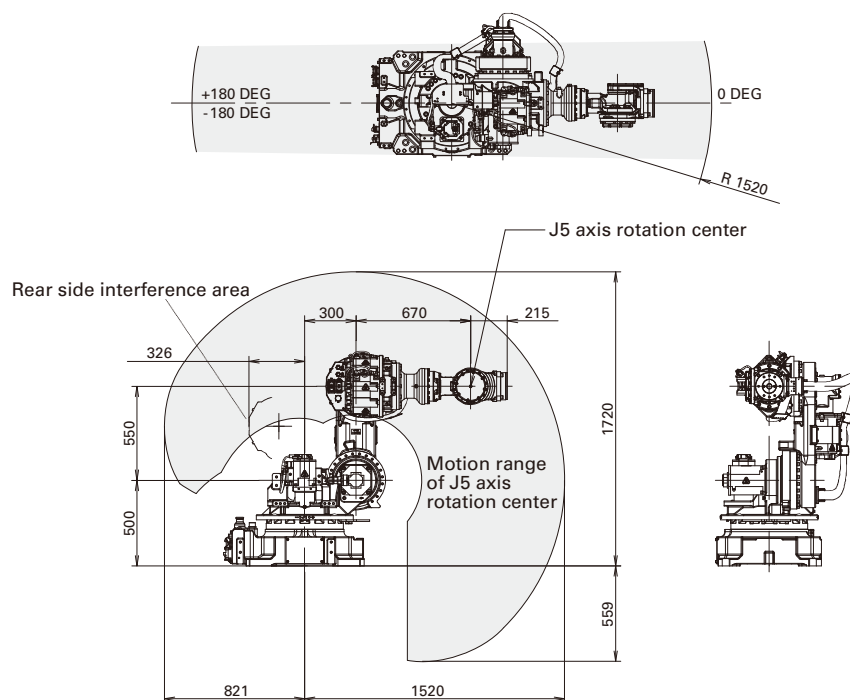


Specifications

Item		Specifications		
Type		R-2000iB/165R	R-2000iB/200R	R-2000iB/100P
Controlled axes		Articulated type		
Reach		6 axes (J1, J2, J3, J4, J5, J6)		
Installation		3.09m	3.09m	3.50m
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 swing	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	100kg
	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
	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
Allowable load inertia at wrist	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
	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
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

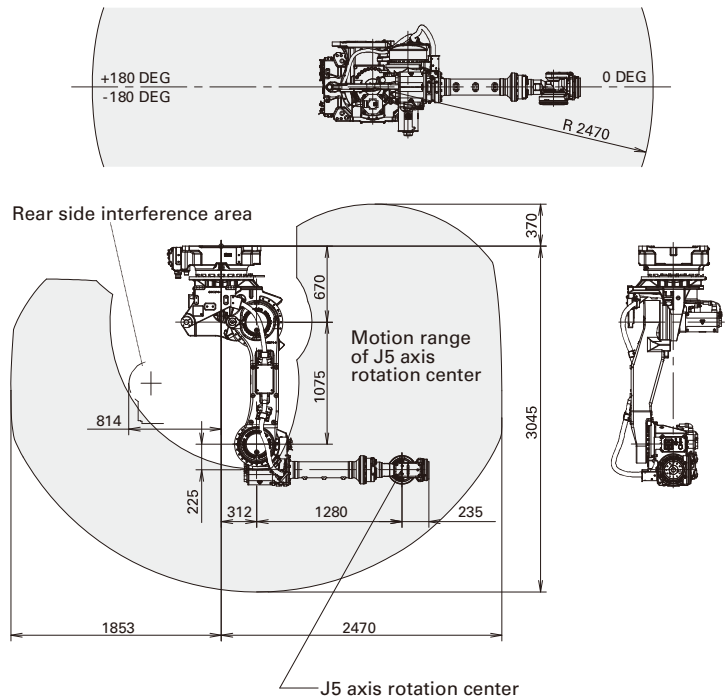
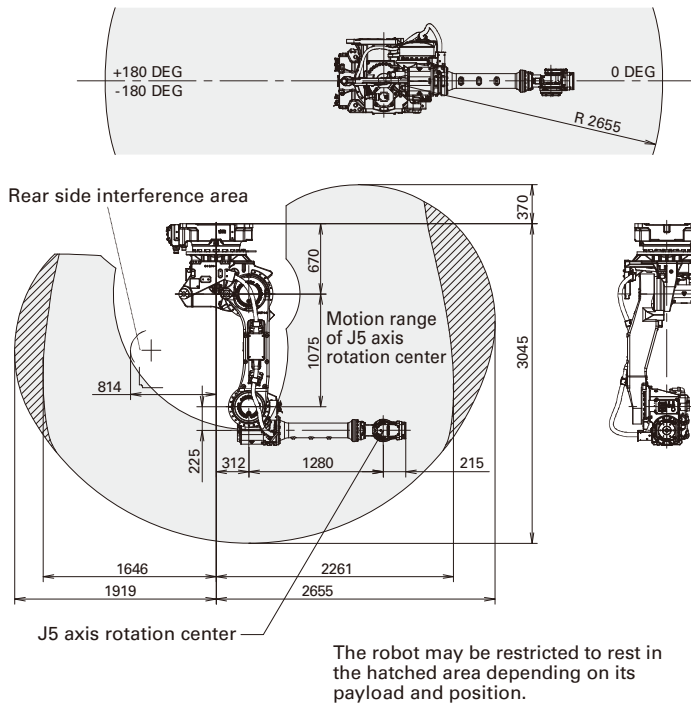
Item		Specifications
		R-2000iB/170CF
Type		Articulated type
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)
Reach		1.52m
Installation		Floor, Upside-down
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)
	J2 axis rotation	190° (110°/s) 3.32rad (1.92rad/s)
	J3 axis 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		170kg
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)



Specifications

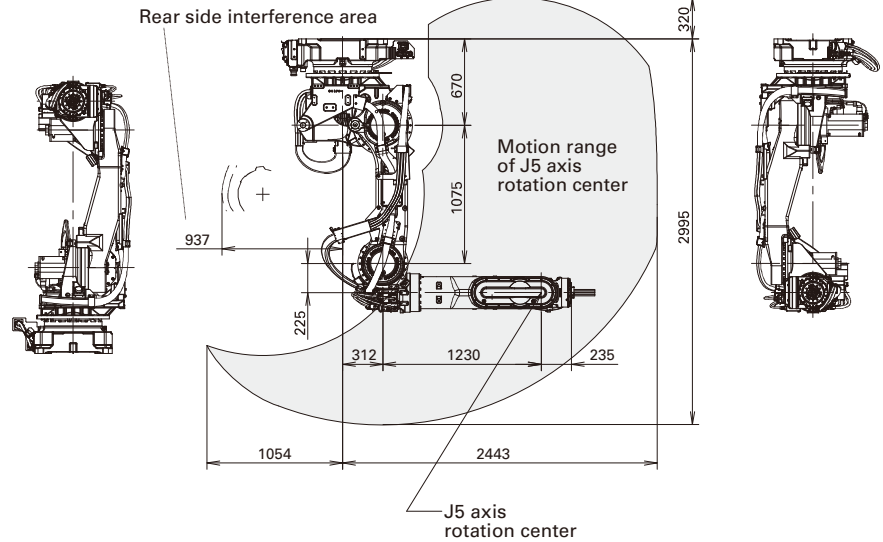
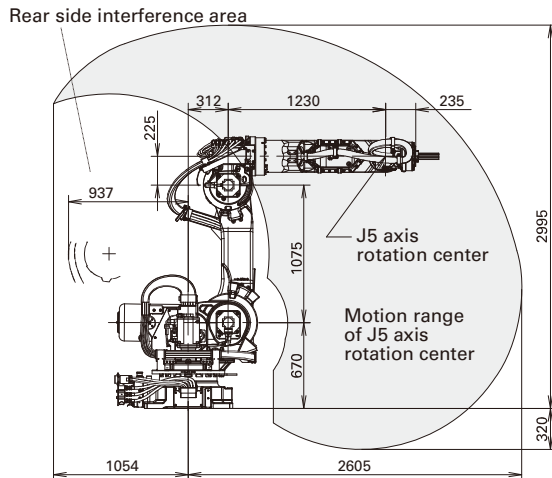
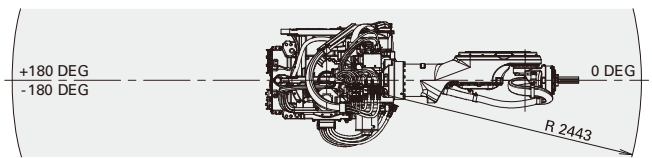
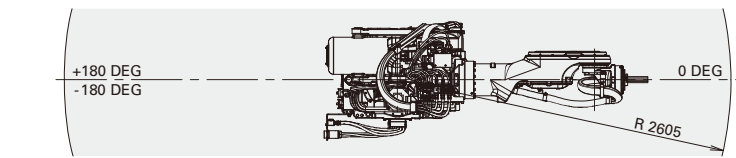
Item		Specifications	
		R-2000iB/150U	R-2000iB/220U
Type		Articulated type	
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)	
Reach		2.66m	2.47m
Installation		Upside-down	
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (110°/s) 6.28rad (1.92rad/s)	360° (95°/s) 6.28rad (1.66rad/s)
	J2 axis 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 rotation	250° (150°/s) 4.36rad (2.62rad/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)
	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	43kgf · 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	410kgf · cm · s 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)



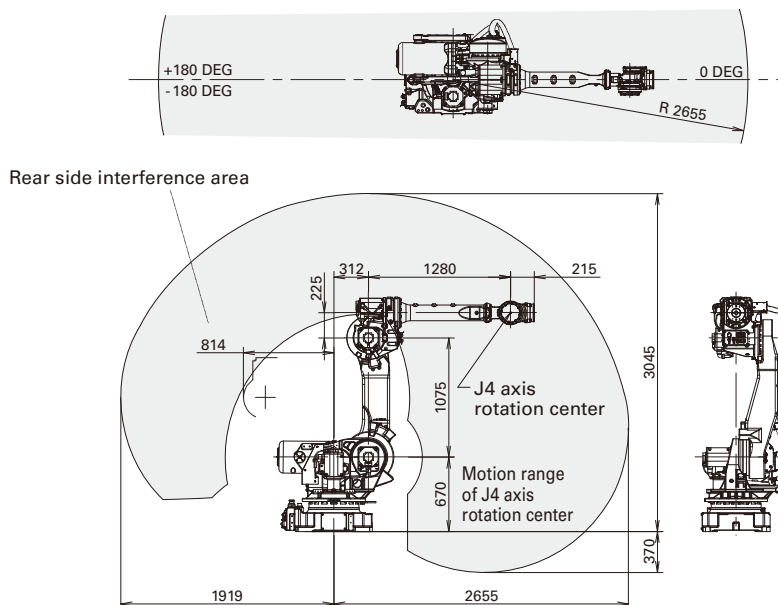
Specifications

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)
	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
	J6 axis	72kgf · 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
	J6 axis	800kgf · cm · s 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)
	J5 axis wrist rotation	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.