

FANUC Robot M-410*i*B, M-410*i*C



FEATURES

- M-410*i*B and M-410*i*C are palletizing robots which contribute to the robotization of the palletizing system.
- Suitable robot models can be selected according to the work pieces.

M-410 <i>i</i> B/140H	Payload 140kg
M-410 <i>i</i> B/700	Payload 700kg
M-410 <i>i</i> C/110	Payload 110kg
M-410 <i>i</i> C/185	Payload 185kg
M-410 <i>i</i> C/315	Payload 315kg
M-410 <i>i</i> C/500	Payload 500kg

- M-410*i*C/110 has a compact body and a high throughput.
- M-410*i*C/185, /315 and /500 support two types of base.

Pedestal type base :

The controller can be placed under the pedestal. It eliminates cabling at installation and saves the installation space.

Compact base :

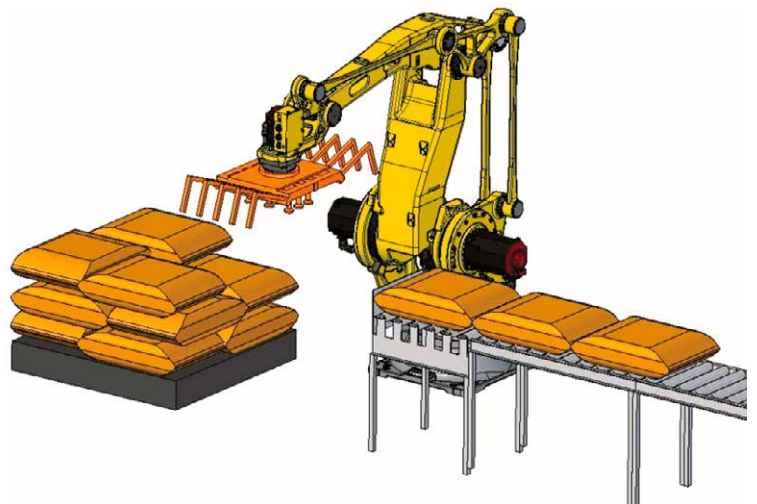
The base minimizes the robot maximum height. It is suitable for low ceiling location or for integrating into a manufacturing system.

- M-410*i*B/700, M-410*i*C/185, /315, /500 have the hollow wrist that enables easy wiring to a gripper.
- Advanced intelligent functions are available as an option, such as *i*RVision (integrated vision).

Application Examples



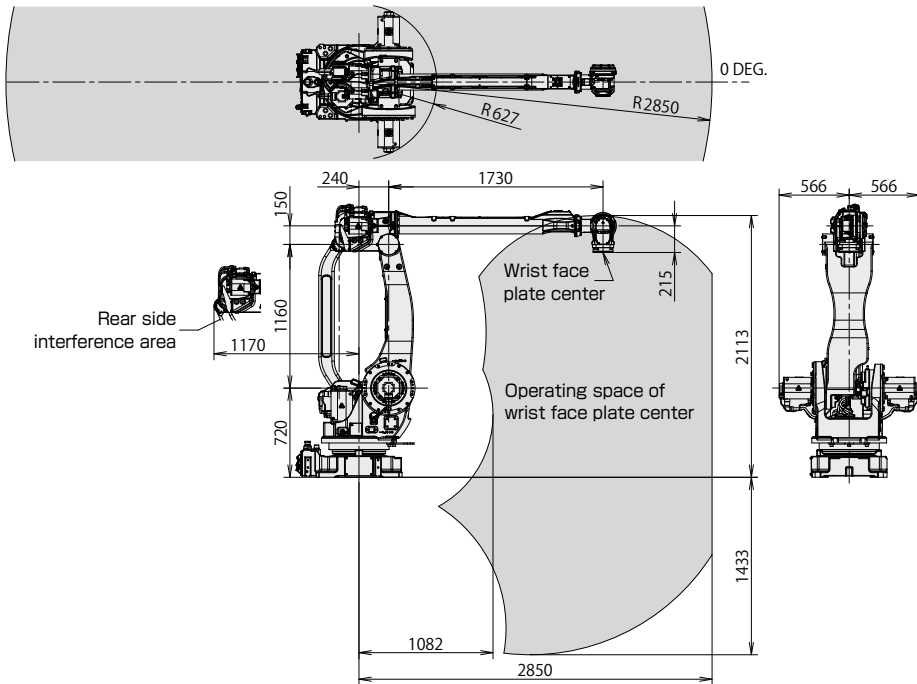
Boxes Palletizing



Bags Palletizing

Operating Space

M-410iB/140H



Specifications

Model		M-410iB/140H
Type		Articulated Type
Controlled axes		5 axes (J1, J2, J3, J4, J5)
Reach		2850 mm
Installation		Floor
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (140°/s) 6.28 rad (2.44 rad/s)
	J2 axis rotation	155° (115°/s) 2.71 rad (2.01 rad/s)
	J3 axis rotation	112° (135°/s) 1.95 rad (2.36 rad/s)
	J4 axis wrist swing Note 2)	20° (135°/s) 0.35 rad (2.36 rad/s)
	J5 axis wrist rotation	720° (420°/s) 12.57 rad (7.33 rad/s)
Max. load capacity at wrist		140 kg
Max. load capacity on J2 base		550 kg
Max. load capacity on J3 arm Note 3)		140 kg
Allowable load inertia at wrist	J4 axis	147 kg·m ² 1500 kgf·cm·s ²
	J5 axis	53 kg·m ² 540 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor
Repeatability Note 4)		± 0.05 mm
Mass Note 5)		1200 kg
Installation environment		Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less

Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) The wrist interface is always toward to down ward. The angle is variable up to 20 degrees width.

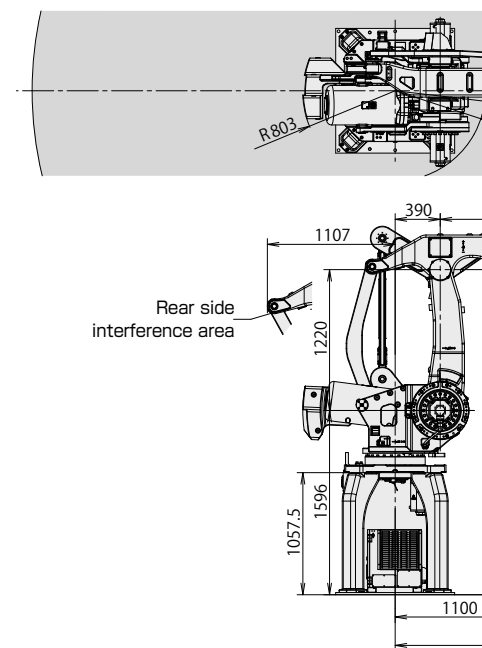
Note 3) Max. load capacity on J3 arm depends on the load at wrist.

Note 4) Compliant with ISO 9283.

Note 5) Without controller.

Operating Space

M-410iB/140H



Specifications

Model		
Type		
Controlled axes		
Reach		
Installation		
Motion range (Maximum speed) Note 1)	J1 axis rotation	
	J2 axis rotation	
	J3 axis rotation	
	J4 axis rotation	
Max. load capacity at wrist		
Allowable load inertia at wrist		
Drive method		
Repeatability Note 2)		
Mass Note 3)		
Installation environment		Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less

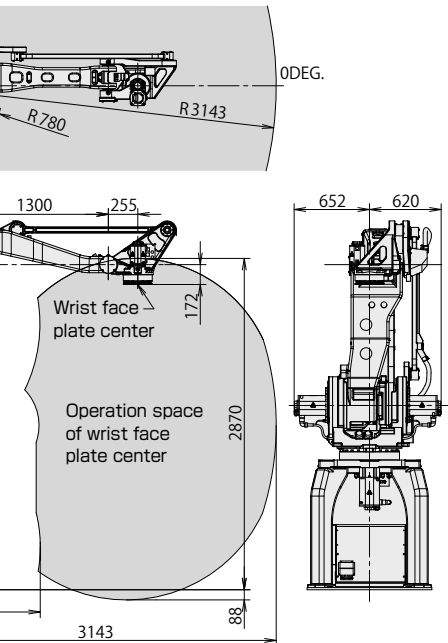
Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Compliant with ISO 9283.

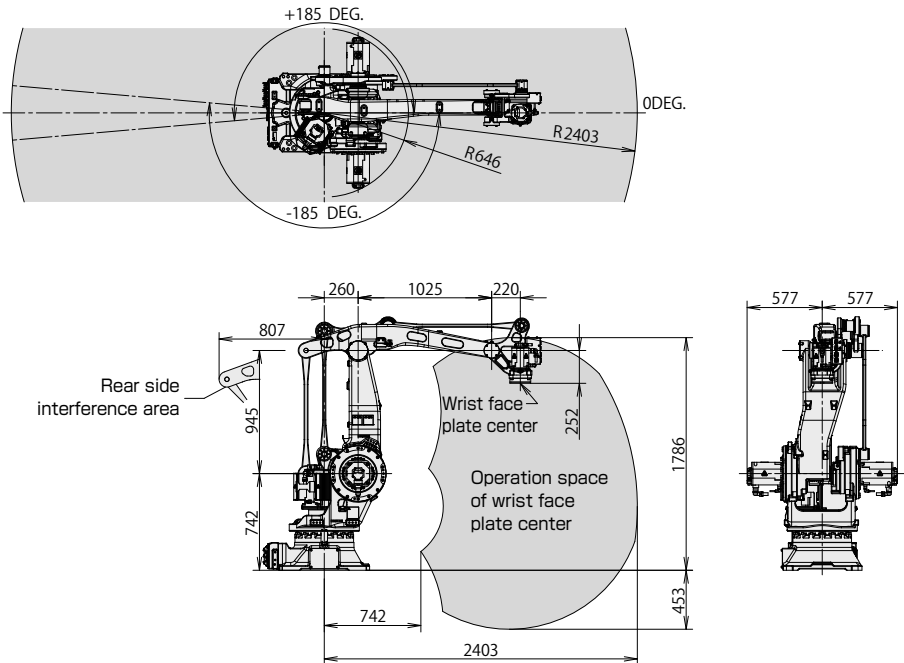
Note 3) Controller mass (120kg) is included.

Operating Space

B/700



M-410iC/110



Specifications

M-410iB/700
Articulated Type
4 axes (J1, J2, J3, J4)
3143 mm
Floor
360° (60°/s)
6.28 rad (1.05 rad/s)
144° (60°/s)
2.51 rad (1.05 rad/s)
136° (60°/s)
2.37 rad (1.05 rad/s)
540° (120°/s)
9.42 rad (2.09 rad/s)
700 kg
490 kg·m ² 5000 kgf·cm·s ²
Electric servo drive by AC servo motor
± 0.05 mm
2700 kg
Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less

Maximum speed may not reach the maximum value stated.

Model		M-410iC/110
Type		Articulated Type
Controlled axes		4 axes (J1, J2, J3, J4)
Reach		2403 mm
Installation		Floor
Motion range (Maximum speed) Note 1)	J1 axis rotation	370° (145°/s) 6.46 rad (2.53 rad/s)
	J2 axis rotation	125° (130°/s) 2.18 rad (2.27 rad/s)
	J3 axis rotation	140° (140°/s) 2.44 rad (2.44 rad/s)
	J4 axis wrist rotation	720° (420°/s) 12.57 rad (7.33 rad/s)
Max. load capacity at wrist		110 kg
Max. load capacity on J2 base		550 kg
Max. load capacity on J3 arm Note 2)		30 kg
Allowable load inertia at wrist		53 kg·m ² 540 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor
Repeatability Note 3)		± 0.05 mm
Mass		1030 kg Note 4)
Installation environment		Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less

Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

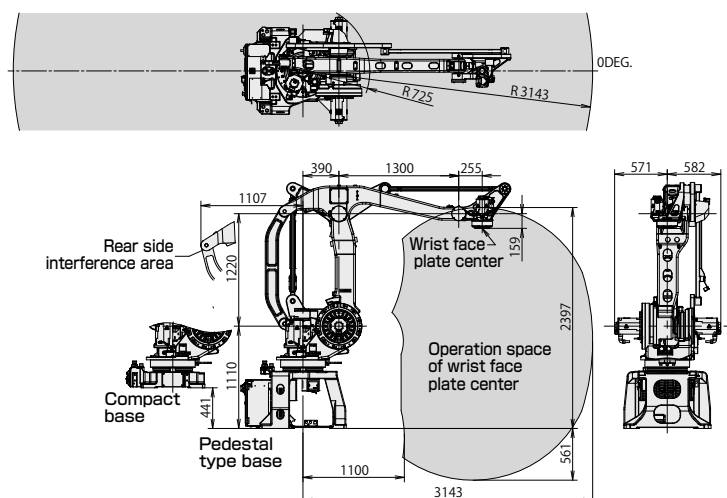
Note 2) Max. load capacity on J3 arm depends on the load at wrist.

Note 3) Compliant with ISO 9283.

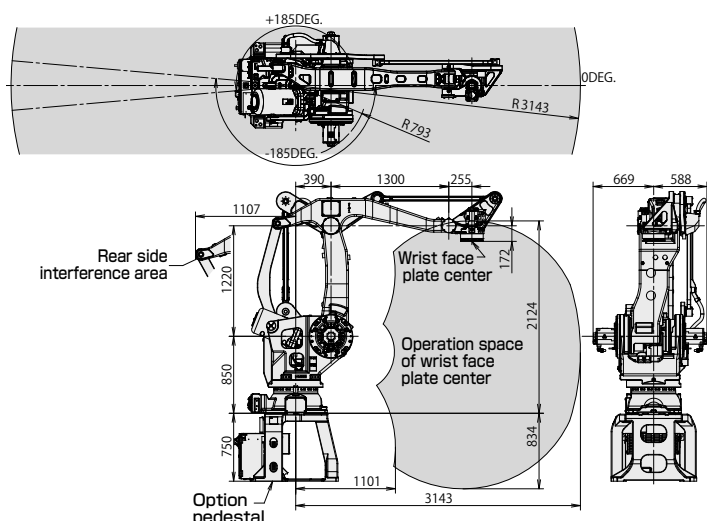
Note 4) Controller mass (120kg) is not included.

Operating Space

M-410iC/185, /315



M-410iC/500



Specifications

Model		M-410iC/185	M-410iC/315
Type		Articulated Type	
Controlled axes		4 axes (J1, J2, J3, J4)	
Reach		3143 mm	
Installation		Floor	
Motion range (Maximum speed) Note 1)	J1 axis rotation	360° (140°/s) 6.28 rad (2.44 rad/s)	360° (90°/s) 6.28 rad (1.57 rad/s)
	J2 axis rotation	144° (140°/s) 2.51 rad (2.44 rad/s)	144° (100°/s) 2.51 rad (1.75 rad/s)
	J3 axis rotation	136° (140°/s) 2.37 rad (2.44 rad/s)	136° (110°/s) 2.37 rad (1.92 rad/s)
	J4 axis rotation	720° (305°/s) 12.57 rad (5.32 rad/s)	720° (195°/s) 12.57 rad (3.40 rad/s)
	J4 axis wrist rotation	12.57 rad (5.32 rad/s)	12.57 rad (3.40 rad/s)
Max. load capacity at wrist		185 kg	315 kg
Max. load capacity on J2 base		550 kg	
Max. load capacity on J3 arm Note 2)		30 kg	
Allowable load inertia at wrist		88 kg·m ² 898 kgf·cm·s ²	155 kg·m ² 1580 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor	
Repeatability Note 3)		± 0.05 mm	
Mass	Pedestal type	1600 kg Note 4)	
	No pedestal	1330 kg Note 5)	
Installation environment		Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less	

Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Max. load capacity on J3 arm depends on the load at wrist.

Note 3) Compliant with ISO 9283.

Note 4) Controller mass (120kg) is included.

Note 5) Controller mass (120kg) is not included.

Specifications

Model		M-410iC/500
Type		Articulated Type
Controlled axes		4 axes (J1, J2, J3, J4)
Reach		3143 mm
Installation		Floor
Motion range (Maximum speed) Note 1)	J1 axis rotation	370° (85°/s) 6.46 rad (1.48 rad/s)
	J2 axis rotation	144° (85°/s) 2.51 rad (1.48 rad/s)
	J3 axis rotation	136° (85°/s) 2.37 rad (1.48 rad/s)
	J4 axis rotation	720° (200°/s) 12.57 rad (3.49 rad/s)
	J4 axis wrist rotation	12.57 rad (3.49 rad/s)
Max. load capacity at wrist		500 kg
Max. load capacity on J2 base		550 kg
Max. load capacity on J3 arm Note 2)		30 kg
Allowable load inertia at wrist		250 kg·m ² 2550 kgf·cm·s ²
Drive method		Electric servo drive by AC servo motor
Repeatability Note 3)		± 0.05 mm
Mass	Pedestal type	2410 kg Note 4)
	No pedestal	1910 kg Note 5)
Installation environment		Ambient temperature : 0 to 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 acceleration : 4.9 m/s ² (0.5G) or less

Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Max. load capacity on J3 arm depends on the load at wrist.

Note 3) Compliant with ISO 9283.

Note 4) Controller mass (120kg) is included.

Note 5) Controller mass (120kg) is not included.

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RM-410iC(E)-06, 2020.7, Printed in Japan