

Intelligent palletizing robot

# FANUC Robot M-410*i*B



## Features

- The M-410*i*B series is the ideal intelligent solution for automation of palletizing systems.
- The wide range of M-410*i*B robot variations make it suitable for any application and payload.
  - FANUC Robot M-410*i*B/140H  
140kg payload, high speed type
  - FANUC Robot M-410*i*B/160  
160kg payload, high speed type
  - FANUC Robot M-410*i*B/300  
300kg payload, heavy payload type
  - FANUC Robot M-410*i*B/450  
450kg payload, heavy payload type
  - FANUC Robot M-410*i*B/700  
700kg payload, super heavy payload type
- The M-410*i*B robot series comes *i*RVision ready and can be programmed and simulated through ROBOGUIDE.
  - Detection of height of workpieces
  - Discrimination of a part size or type
  - Visual inspection
  - Sorting of workpieces
  - Depalletizing the load on a received pallet
  - Easy to create a palletizing program
  - Motion optimization of a program

## Application Systems



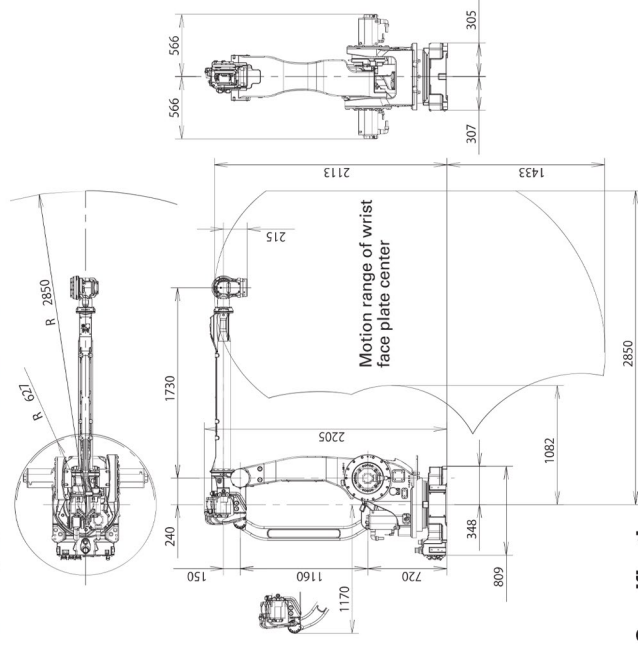
Box Palletizing



Bag Palletizing

# FANUC Robot M-410iB/140H, 160, 300, 450

Operating space ( M-410iB/140H )

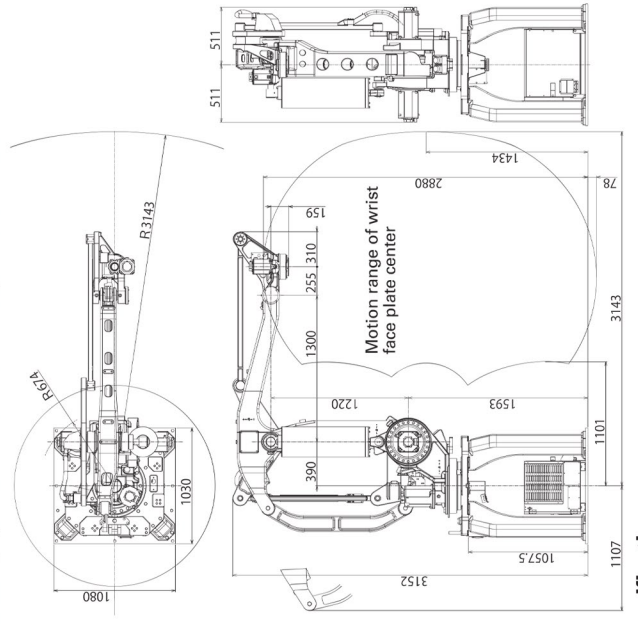


## Specifications

Item	Specifications
Type	M-410iB/140H
Controlled axes	Articulated Type 5 axes (J1,J2,J3,J4,J5)
Reach	2,850mm
Installation	Floor
Motion range (Maximum speed) (Note1)	J1 axis rotation 360° (140°/s) J2 axis rotation 155° (115°/s) J3 axis rotation 112° (135°/s) J4 axis wrist swing (Note2) 20° (135°/s) J5 axis wrist rotation 720° (420°/s)
Max. load capacity at wrist	Max. 140kg
Max. load capacity at J2 base	550kg
Max. load capacity at J3 arm (Note3)	140kg
Allowable load inertia at wrist	147 kg · m <sup>2</sup> 1500 kgf · cm · s <sup>2</sup>
Inertia at wrist	53 kg · m <sup>2</sup> 540 kgf · cm · s <sup>2</sup>
Throughput (Note4)	1900 cycles/hour
Drive method	Electric servo drive by AC servo motor
Repeatability	± 0.2 mm
Mass (Note5)	1,200 kg
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) The wrist interface is always toward to downward. The angle is variable up to 20 degrees width.  
 Note 3) Max. payload capacity at wrist are changed by wrist load.  
 Note 4) With 45kg payload, the horizontal range is 2000mm and vertical one is 400mm. (with fan option )  
 Note 5) Without controller

Operating space ( M-410iB/160, M-410iB/300 )

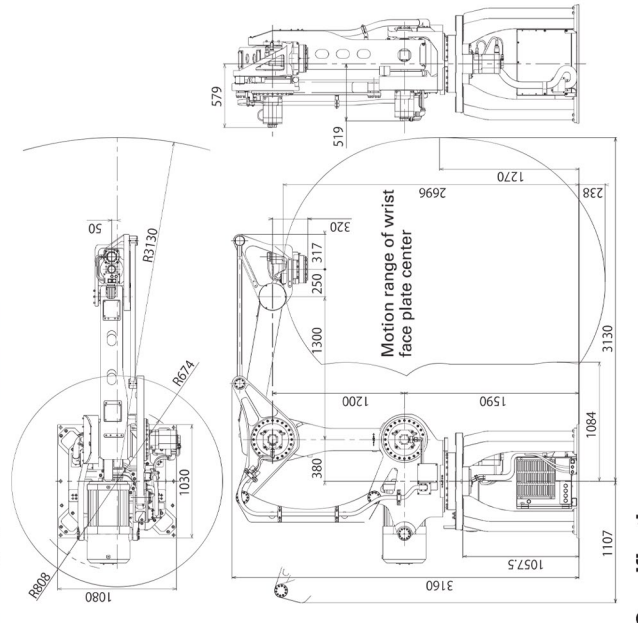


## Specifications

Item	Specifications
Type	M-410iB/160
Controlled axes	Articulated Type 4 axes (J1,J2,J3,J4)
Reach	3,143mm
Installation	Floor
Motion range (Maximum speed) (Note1)	J1 axis rotation 360° (130°/s) J2 axis rotation 144° (130°/s) J3 axis rotation 136° (135°/s) J4 axis rotation 540° (300°/s)
Max. load capacity at wrist	Max. 160 kg
Allowable load inertia at wrist	78 kg · m <sup>2</sup> 800 kgf · cm · s <sup>2</sup>
Throughput (Note2)	1500 cycles/hour
Drive method	Electric servo drive by AC servo motor
Repeatability	± 0.5 mm
Mass (Note3)	1940 kg
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) With maximum payload, the horizontal range is 2000mm and vertical one is 400mm.  
 Note 3) Controller mass (120kg) is included.

Operating space ( M-410iB/450 )



## Specifications

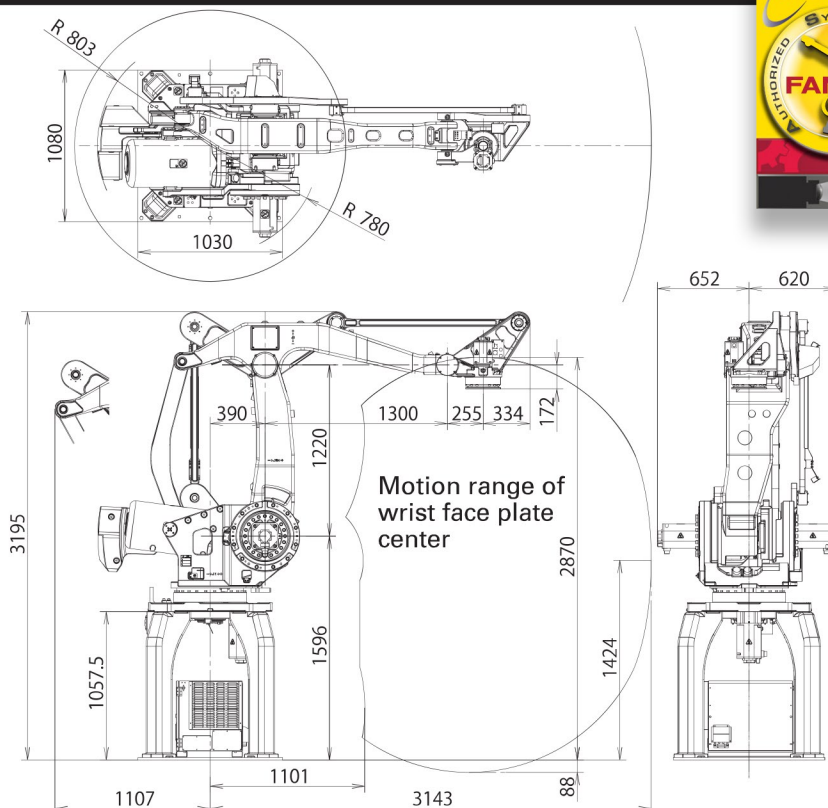
Item	Specifications
Type	M-410iB/450
Controlled axes	Articulated Type 4 axes (J1,J2,J3,J4)
Reach	3,130mm
Installation	Floor
Motion range (Maximum speed) (Note1)	J1 axis rotation 360° (70°/s) J2 axis rotation 145° (70°/s) J3 axis rotation 135° (70°/s) J4 axis rotation 540° (190°/s)
Max. load capacity at wrist	Max. 450 kg
Allowable load inertia at wrist	196 kg · m <sup>2</sup> 2000 kgf · cm · s <sup>2</sup>
Throughput (Note2)	700 cycles/hour
Drive method	Electric servo drive by AC servo motor
Repeatability	± 0.5 mm
Mass (Note3)	2430 kg
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) With maximum payload, the horizontal range is 2000mm and vertical one is 400mm.  
 Note 3) Controller mass (120kg) is included.



# FANUC Robot M-410iB/700

## Operating space



## Specifications

Item		Specifications	
		M-410iB/700	
Type		Articulated Type	
Controlled axes		4 axes (J1,J2,J3,J4)	
Reach		3.14m	
Installation		Floor	
Motion range (Maximum speed) (Note1)	J1 axis rotation	360° ( 60°/s) 6.28 rad (1.05 rad/s)	
	J2 axis rotation	144° ( 60°/s) 2.51 rad (1.05 rad/s)	
	J3 axis rotation	136° ( 60°/s) 2.37 rad (1.05 rad/s)	
	J4 axis rotation	540° (120°/s) 9.42 rad (2.09 rad/s)	
Max. load capacity at wrist		Max.700 kg	
Allowable load inertia at wrist		490 kg · m <sup>2</sup> 5000 kgf · cm · s <sup>2</sup>	
Throughput (Note2)		700 cycles/hour	
Drive method		Electric servo drive by AC servo motor	
Repeatability		± 0.5 mm	
Mass (Note3)		2700 kg	
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) With maximum payload, the horizontal range is 2000mm and vertical one is 400mm.

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

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