

FANUC Robot M-410

FEATURES

- M-410 is a palletizing robot which contributes to the robotization of the palletizing system.
- Suitable robot models can be selected according to the workpieces.

| | |
|-------------------|---------------|
| M-410/110F-24C | Payload 110kg |
| M-410/140F-29B-5X | Payload 140kg |
| M-410/185F-31C | Payload 185kg |
| M-410/315F-31C | Payload 315kg |
| M-410/500F-31C | Payload 500kg |
| M-410/800F-32C | Payload 800kg |

- M-410/110F-24C has a compact body and a high throughput.
- M-410/185F-31C, /315F-31C, /500F-31C 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's maximum height. It is suitable for low ceiling location or integrating into other manufacturing system.

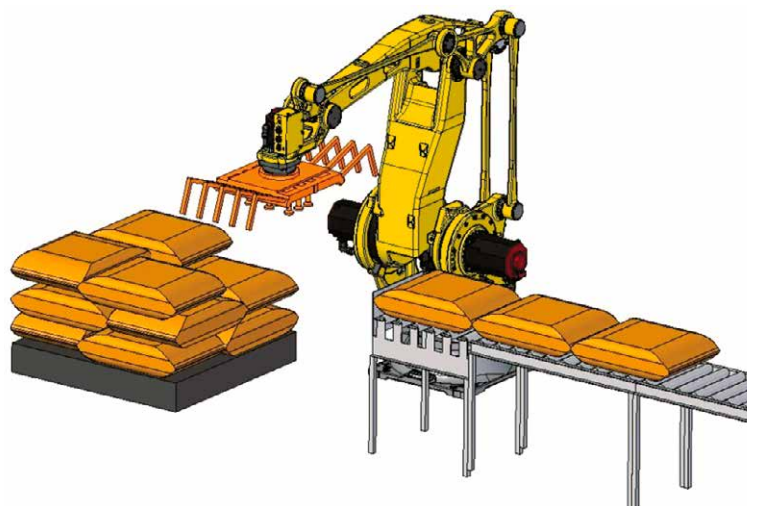
- M-410/185F-31C, /315F-31C, /500F-31C, /800F-32C have the hollow wrist that enables easy wiring to a gripper.
- Advanced intelligent functions are available as an option, such as *i*RVision (integrated robot vision).



Application Examples



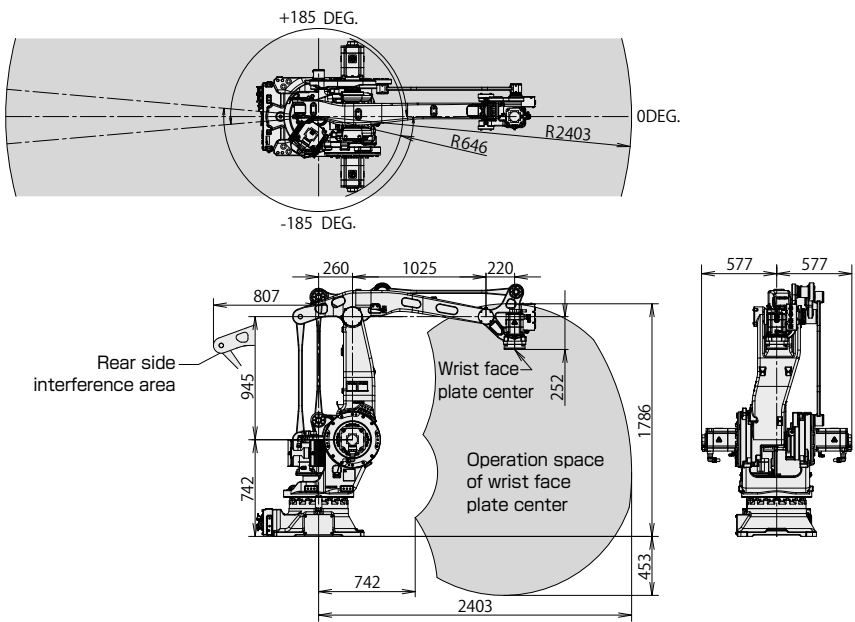
Boxes Palletizing



Bags Palletizing

Operating Space

M-410/110F-24C



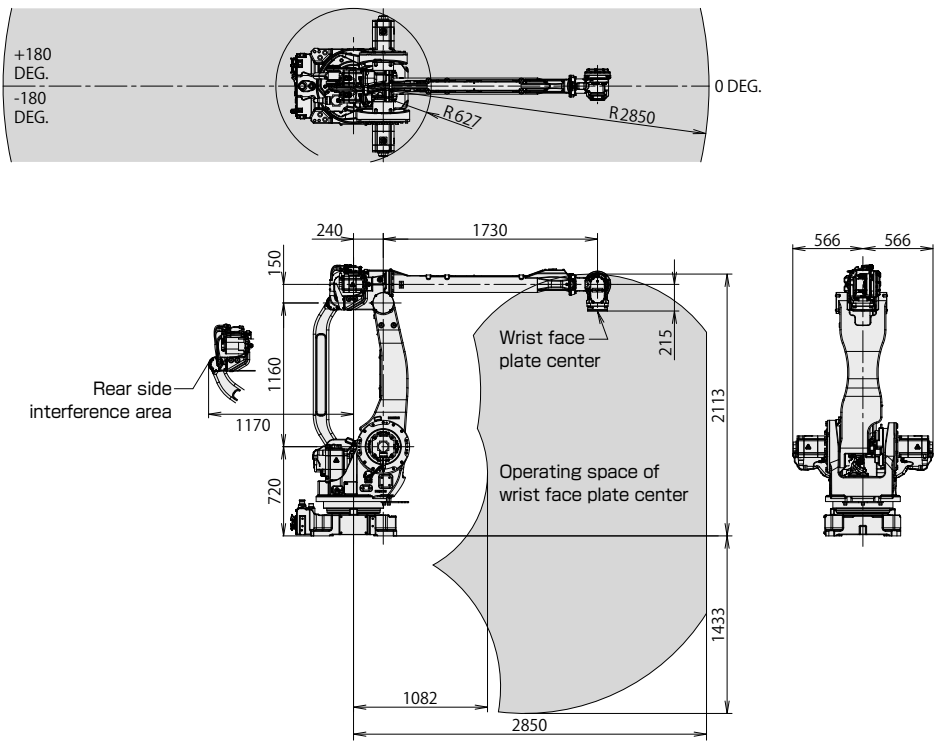
Specifications

| Model | | M-410/110F-24C |
|--|------------------------|---|
| 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 servo motor |
| Repeatability Note 3) | | ± 0.05 mm |
| Mass Note 4) | | 1030 kg |
| Installation environment | | Ambient temperature : 0 to 45°C Ambient humidity : Normally 75%RH or less (No condensation allowed.) Short term (Within one month) 95%RH or less (No condensation allowed.) 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 is not included.

Operating Space

M-410/140F-29B-5X



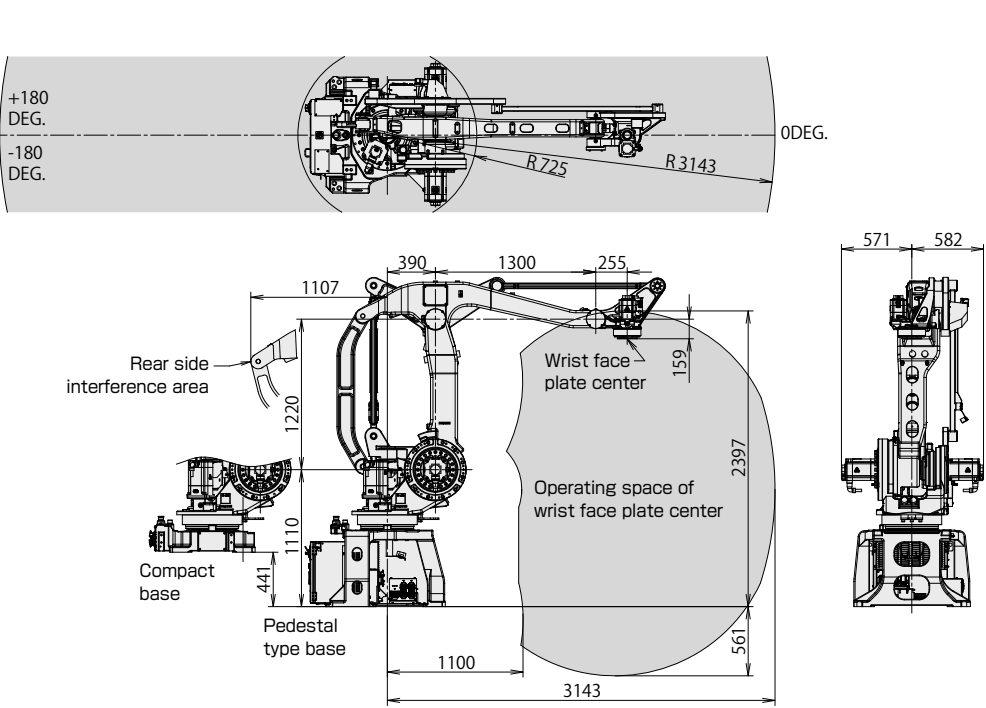
Specifications

| Model | | M-410/140F-29B-5X |
|---|-----------------------------|---|
| 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 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 condensation allowed.) Short term (Within one month) 95%RH or less (No condensation allowed.) 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) Controller mass is not included.

Operating Space

M-410/185F-31C, /315F-31C



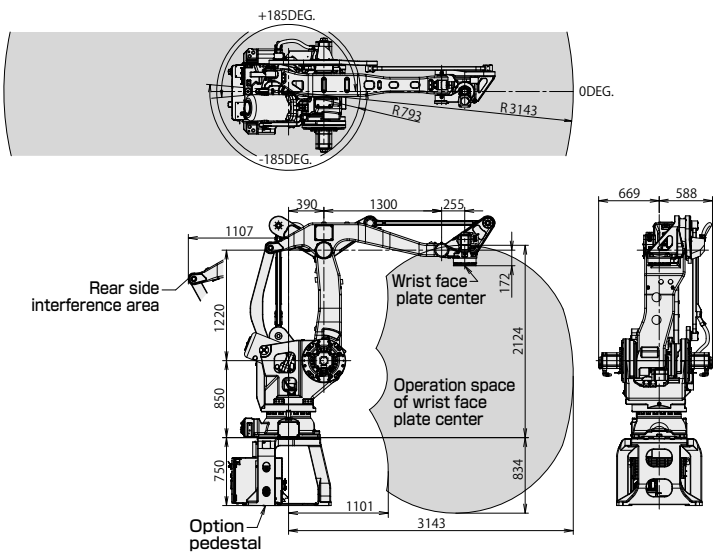
Specifications

| Model | | M-410/185F-31C | M-410/315F-31C |
|--|----------------------------|---|--|
| 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 wrist rotation | 720° (305°/s) 12.57 rad (5.32 rad/s) | 720° (195°/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 servo motor | |
| Repeatability Note 3) | | ± 0.05 mm | |
| Mass | Pedestal type base Note 4) | 1615 kg | |
| | Compact base Note 5) | 1330 kg | |
| Installation environment | | Ambient temperature : 0 to 45°C Ambient humidity : Normally 75%RH or less (No condensation allowed.) Short term (Within one month) 95%RH or less (No condensation allowed.) Vibration acceleration : 4.9 m/s ² (0.5G) or less | |

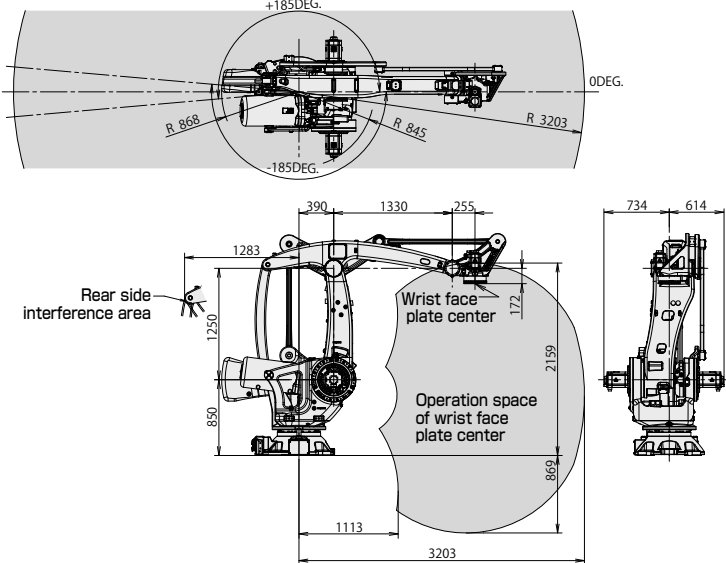
Note 1) During short distance motions, the axis speed may not reach the maximum value stated.
Note 2) Max. load capacity on J3 arm depends on the load at wrist.
Note 3) Compliant with ISO 9283.
Note 4) Controller mass (120kg) is included.
Note 5) Controller mass is not included.

Operating Space

M-410/500F-31C



M-410/800F-32C



Specifications

| Model | | M-410/500F-31C |
|--|----------------------------|--|
| 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·m² 2550 kgf·cm·s² |
| Drive method | | Electric servo drive by servo motor |
| Repeatability Note 3) | | ± 0.05 mm |
| Mass | Pedestal type base Note 4) | 2410 kg |
| | Compact base Note 5) | 1910 kg |
| Installation environment | | Ambient temperature : 0 to 45°C Ambient humidity : Normally 75%RH or less (No condensation allowed.) Short term (Within one month) 95%RH or less (No condensation allowed.) Vibration acceleration : 4.9 m/s² (0.5G) or less |

Specifications

| Model | | M-410/800F-32C |
|--|------------------------|--|
| Type | | Articulated Type |
| Controlled axes | | 4 axes (J1, J2, J3, J4) |
| Reach | | 3203 mm |
| Installation | | Floor |
| Motion range (Maximum speed) Note 1) | J1 axis rotation | 370° (65°/s) 6.46 rad (1.13rad/s) |
| | J2 axis rotation | 144° (65°/s) 2.51 rad (1.13rad/s) |
| | J3 axis rotation | 136° (65°/s) 2.37 rad (1.13rad/s) |
| | J4 axis rotation | 720° (125°/s) 12.57 rad (2.18rad/s) |
| | J4 axis wrist rotation | 12.57 rad (2.18rad/s) |
| Max. load capacity at wrist | | 800 kg |
| Max. load capacity on J2 base | | 550 kg |
| Max. load capacity on J3 arm Note 2) | | 50 kg |
| Allowable load inertia at wrist | | 830 kg·m² 8470 kgf·cm·s² |
| Drive method | | Electric servo drive by servo motor |
| Repeatability Note 3) | | ± 0.04 mm |
| Mass Note 4) | | 2500 kg |
| Installation environment | | Ambient temperature : 0 to 45°C Ambient humidity : Normally 75%RH or less (No condensation allowed.) Short term (Within one month) 95%RH or less (No condensation allowed.) Vibration acceleration : 4.9 m/s² (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 is not included.

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 is not included.

FANUC CORPORATION

Overseas Affiliated Companies

FANUC America Corporation
FANUC Europe Corporation, S.A.
SHANGHAI-FANUC Robotics CO., LTD.
KOREA FANUC CORPORATION
TAIWAN FANUC CORPORATION
FANUC INDIA PRIVATE LIMITED
FANUC SINGAPORE PTE. LTD.
FANUC THAI LIMITED
FANUC MECHATRONICS (MALAYSIA) SDN. BHD.
PT. FANUC INDONESIA
FANUC OCEANIA PTY. LIMITED
FANUC SOUTH AFRICA (PROPRIETARY) LIMITED

Phone: (+1)248-377-7000
Phone: (+352)727777-1
Phone: (+86)21-5032-7700
Phone: (+82)55-278-1200
Phone: (+886)4-2359-0522
Phone: (+91)80-2852-0057
Phone: (+65)6567-8566
Phone: (+66)2-714-6111
Phone: (+60)3-3082-1222
Phone: (+62)21-4584-7285
Phone: (+61)2-8822-4600
Phone: (+27)11-392-3610

Headquarters 3580, Shibokusa, Oshino-mura, Minamitsuru-gun
Yamanashi, 401-0597, JAPAN
Phone: (+81)555-84-5555 <https://www.fanuc.co.jp/>

<https://www.fanucamerica.com/>
<https://www.fanuc.eu/>
<https://www.shanghai-fanuc.com.cn/>
<https://www.fkc.co.kr/>
<https://www.fanuctaiwan.com.tw/>
<https://www.fanucindia.com/>
<https://www.fanuc.com/fsp/>
<https://www.fanuc.com/ftf/>
<https://www.fanuc.com/fmm/>
<https://www.fanuc.com/fin/>
<https://www.fanucoceania.com.au/>
<https://fanuc.co.za/>

All specifications are subject to change without notice.
No part of this catalog may be reproduced in any form.
The products in this catalog are controlled based on Japan's "Foreign Exchange and Foreign Trade Law". The export from Japan may be subject to an export license by the government of Japan. Further, re-export to another country may be subject to the license of the government of the country from where the product is re-exported. Furthermore, the product may also be controlled by re-export regulations of the United States government. Should you wish to export or re-export these products, please contact FANUC for advice.