

## FANUC Robot M-2000iA



### FEATURES

“Super Heavy Payload Robot” FANUC Robot M-2000iA is the heavy payload robot with a payload capacity of 900kg - 2300kg.

- Four models are available to meet a variety of applications.
  - **FANUC Robot M-2000iA/1200**  
**FANUC Robot M-2000iA/2300**  
These models are heavy payload Types which have 1200kg (1350kg option) and 2300kg payload capacity, and have 3.7m reach and 4.6m vertical stroke.  
They can be applied to handling of heavy work piece such as large castings and structures.
  - **FANUC Robot M-2000iA/900L**  
**FANUC Robot M-2000iA/1700L**  
These models are long arm Types which have 900kg and 1700kg payload, and have 4.7m reach and 6.2m vertical stroke. These models have a wide motion envelope and can be applied to lifting and handling large size structures.
- The wrist can be used safely in harsh environment because it has IP67-equivalent resistance to environmental conditions (dust and dips).
- Latest intelligent functions with iRVision (integrated vision) are available.

### Application Examples



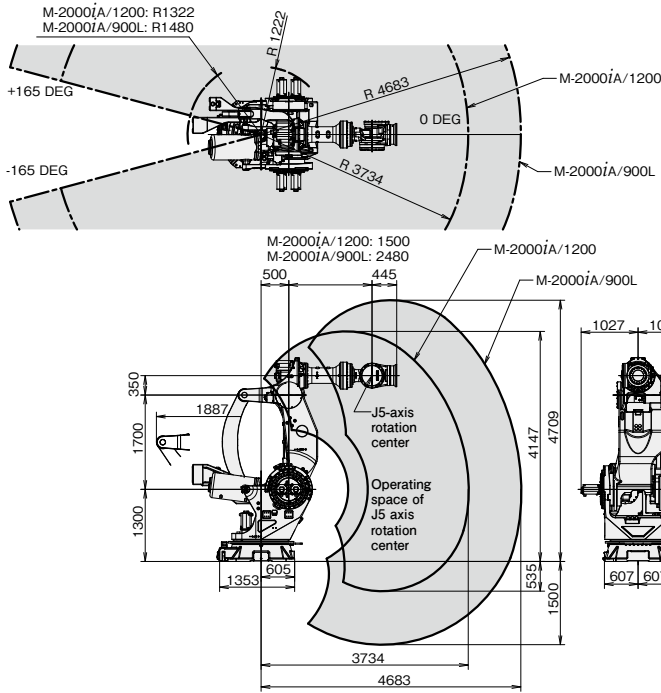
Completed car handling by M-2000iA/1700L



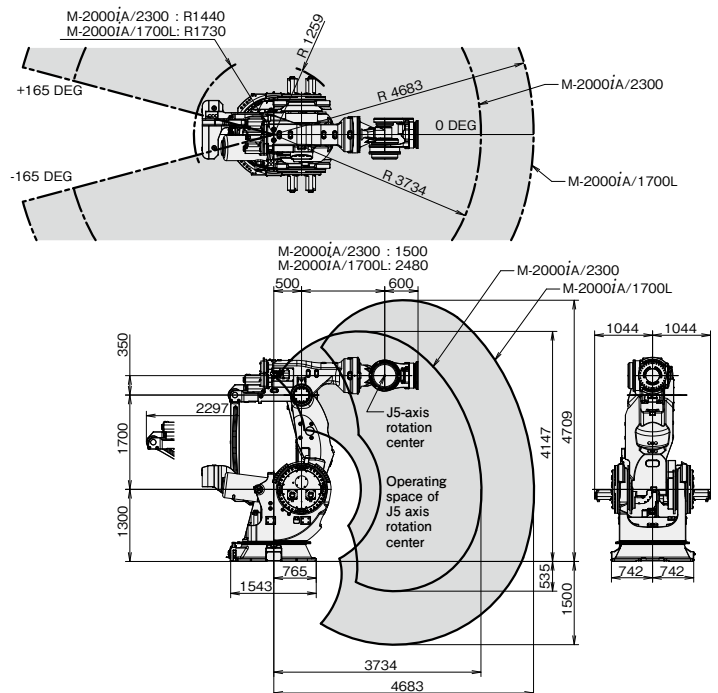
Large casting machine tending  
by M-2000iA/1200

## Operating space

### M-2000iA/1200,/900L



### M-2000iA/2300,/1700L



## Specifications

| Model                                       |                        | M-2000iA/1200                                                                                                             | M-2000iA/900L               | M-2000iA/2300                       | M-2000iA/1700L              |
|---------------------------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------------|-----------------------------|
| Type                                        |                        | Articulated Type                                                                                                          |                             |                                     |                             |
| Controlled axes                             |                        | 6 axes (J1, J2, J3, J4, J5, J6)                                                                                           |                             |                                     |                             |
| Reach                                       |                        | 3734 mm                                                                                                                   | 4683 mm                     | 3734 mm                             | 4683 mm                     |
| Installation                                |                        | Floor                                                                                                                     |                             |                                     |                             |
| Motion range<br>(Maximum speed)<br>(Note 1) | J1 axis rotation       | 330° (45°/s) 5.76 rad (0.79 rad/s)                                                                                        |                             | 330° (20°/s) 5.76 rad (0.35 rad/s)  |                             |
|                                             | J2 axis rotation       | 160° (30°/s) 2.79 rad (0.52 rad/s)                                                                                        |                             | 160° (14°/s) 2.79 rad (0.24 rad/s)  |                             |
|                                             | J3 axis rotation       | 165° (30°/s) 2.88 rad (0.52 rad/s)                                                                                        |                             | 165° (14°/s) 2.88 rad (0.24 rad/s)  |                             |
|                                             | J4 axis wrist rotation | 720° (50°/s) 12.57 rad (0.87 rad/s)                                                                                       |                             | 720° (18°/s) 12.57 rad (0.31 rad/s) |                             |
|                                             | J5 axis wrist swing    | 240° (50°/s) 4.19 rad (0.87 rad/s)                                                                                        |                             | 240° (18°/s) 4.19 rad (0.31 rad/s)  |                             |
|                                             | J6 axis wrist rotation | 720° (70°/s) 12.57 rad (1.22 rad/s)                                                                                       |                             | 720° (40°/s) 12.57 rad (0.70 rad/s) |                             |
| Max. load capacity at wrist                 |                        | 1200 kg<br>1350 kg (Note 2)                                                                                               | 900 kg                      | 2300 kg                             | 1700 kg                     |
| Max. load capacity at J2 base               |                        | 550 kg                                                                                                                    |                             |                                     |                             |
| Max. load capacity at J3 arm                |                        | 50 kg                                                                                                                     |                             |                                     |                             |
| Allowable load<br>moment at wrist           | J4 axis                | 14700 N·m                                                                                                                 | 1500 kgf·m                  | 29400 N·m                           | 3000 kgf·m                  |
|                                             | J5 axis                | 14700 N·m                                                                                                                 | 1500 kgf·m                  | 29400 N·m                           | 3000 kgf·m                  |
|                                             | J6 axis                | 4900 N·m                                                                                                                  | 500 kgf·m                   | 8820 N·m                            | 900 kgf·m                   |
| Allowable load<br>inertia at wrist          | J4 axis                | 2989 kg·m <sup>2</sup>                                                                                                    | 30500 kgf·cm·s <sup>2</sup> | 7500 kg·m <sup>2</sup>              | 76531 kgf·cm·s <sup>2</sup> |
|                                             | J5 axis                | 2989 kg·m <sup>2</sup>                                                                                                    | 30500 kgf·cm·s <sup>2</sup> | 7500 kg·m <sup>2</sup>              | 76531 kgf·cm·s <sup>2</sup> |
|                                             | J6 axis                | 2195 kg·m <sup>2</sup>                                                                                                    | 22400 kgf·cm·s <sup>2</sup> | 5500 kg·m <sup>2</sup>              | 56122 kgf·cm·s <sup>2</sup> |
| Drive method                                |                        | Electric servo drive by AC servo motor                                                                                    |                             |                                     |                             |
| Repeatability (Note 3)                      |                        | ± 0.18 mm                                                                                                                 |                             |                                     |                             |
| Mass (Note 4)                               |                        | 8600 kg                                                                                                                   | 9600 kg                     | 11000 kg                            | 12500 kg                    |
| Installation environment                    |                        | Ambient temperature : 0 to 45°C                                                                                           |                             |                                     |                             |
|                                             |                        | Ambient humidity : Normally 75 %RH or less (No dew nor frost allowed)<br>Short term Max.95 %RH or less (within one month) |                             |                                     |                             |
|                                             |                        | Vibration acceleration : 4.9 m/s <sup>2</sup> (0.5G) or less                                                              |                             |                                     |                             |

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

Note 2) With 1350kg option.

Note 3) Compliant with ISO 9283.

Note 4) Without controller.

# FANUC CORPORATION

Headquarters Oshino-mura, Yamanashi 401-0597, Japan

Phone: 81-555-84-5555 Fax: 81-555-84-5512 <http://www.fanuc.co.jp>

#### Overseas Affiliated Companies

FANUC America Corporation  
FANUC Europe Corporation, S.A.  
SHANGHAI-FANUC Robotics CO., LTD.  
KOREA FANUC CORPORATION  
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PT. FANUC INDONESIA  
FANUC OCEANIA PTY. LIMITED  
FANUC SOUTH AFRICA (PROPRIETARY) LIMITED

3900 West Hamlin Road, Rochester Hills, MI 48309-3253, U.S.A.  
Zone Industrielle, L-6468 Echternach, Grand-Duché de Luxembourg  
No. 1500 Fulian Road, Baoshan Area, Shanghai, China  
101, Wanam-ro(st), Seongsan-gu, Changwon-si, Gyeongsangnam-do, 642-290 Republic of Korea  
No.10, 16th Road, Taichung Industrial Park, Taichung, Taiwan  
41-A, Electronics City, Bangalore, 560 100, India  
No.1 Teban Gardens Crescent, Singapore 608919, Singapore  
1301 Pattanakarn Road, Kwaeng Suanluang, Khet Suanluang, Bangkok 10250 Thailand  
No.32, Jalan Pengacara U1/48, Temasya Industrial Park, Section U1, Glenmarie,  
40150 Shah Alam, Selangor Darul Ehsan, Malaysia  
JL. Boulevard Bukit Gading Raya Blok R, Jakarta 14240 Indonesia  
10 Healey Circuit, Huntingwood, NSW 2148, Australia  
17 Loper Ave. Aeroport Industrial Ets, Spartan Ext.2 P.O.Box 219, Isando 1600, Republic of South Africa

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

Fax: 1-855-774-7051  
Fax: 352-727777-403  
Fax: 86-21-5032-7711  
Fax: 82-55-284-9826  
Fax: 886-4-2359-0771  
Fax: 91-80-2852-0051  
Fax: 65-6566-5937  
Fax: 66-2-714-6120

Phone: 60-3-7628-0110  
Phone: 62-21-4584-7285  
Phone: 61-2-8822-4600  
Phone: 27-11-392-3610

Fax: 60-3-7628-0220  
Fax: 62-21-4584-7288  
Fax: 61-2-8822-4666  
Fax: 27-11-392-3615

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