

Medium Payload Handling Intelligent Robot

FANUC Robot M-710iC



FEATURES

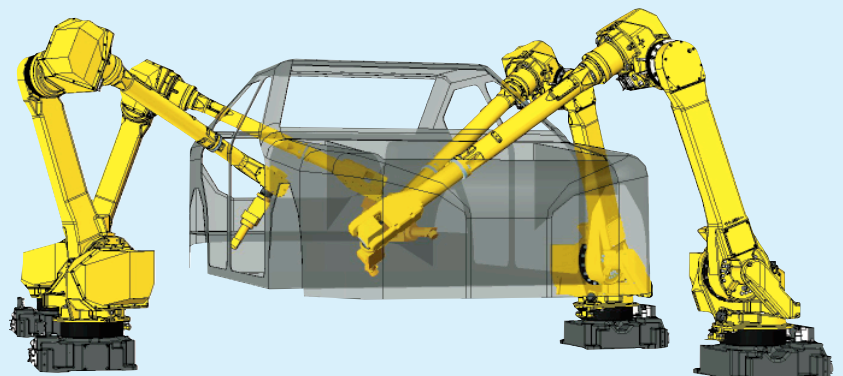
FANUC Robot M-710iC is the medium payload handling robot whose wrist payload is 20, 50 and 70kg.

- Four models are available to meet a variety of application.
 - FANUC Robot M-710iC/50, 70
This model has a longest reach in the medium payload handling robot. The wrist capacity is enhanced drastically, and the strong wrist enables to handle large panel.
M-710iC/50 : Payload capacity 50kg
M-710iC/70 : Payload capacity 70kg
 - FANUC Robot M-710iC/50S
This model has a compact body without reducing strong wrist capacity. It's suitable in narrow area operation. (Payload capacity 50kg)
 - FANUC Robot M-710iC/20L
Long reach and high motion performance are suitable for various applications, such as handling, sealing and arc welding. (Payload capacity 20kg)
- The robot can be used safely by putting full cover in various applications, such as load / unload for a variety of machined parts, de-burring and die cast handling, because it has IP67-equivalent resistance to environmental conditions (dust and dips).
- M-710iC can be installed on the floor, upside-down or inclined at any angle.
- The latest intelligent functions can be applied using vision sensor or force sensor.

Application system



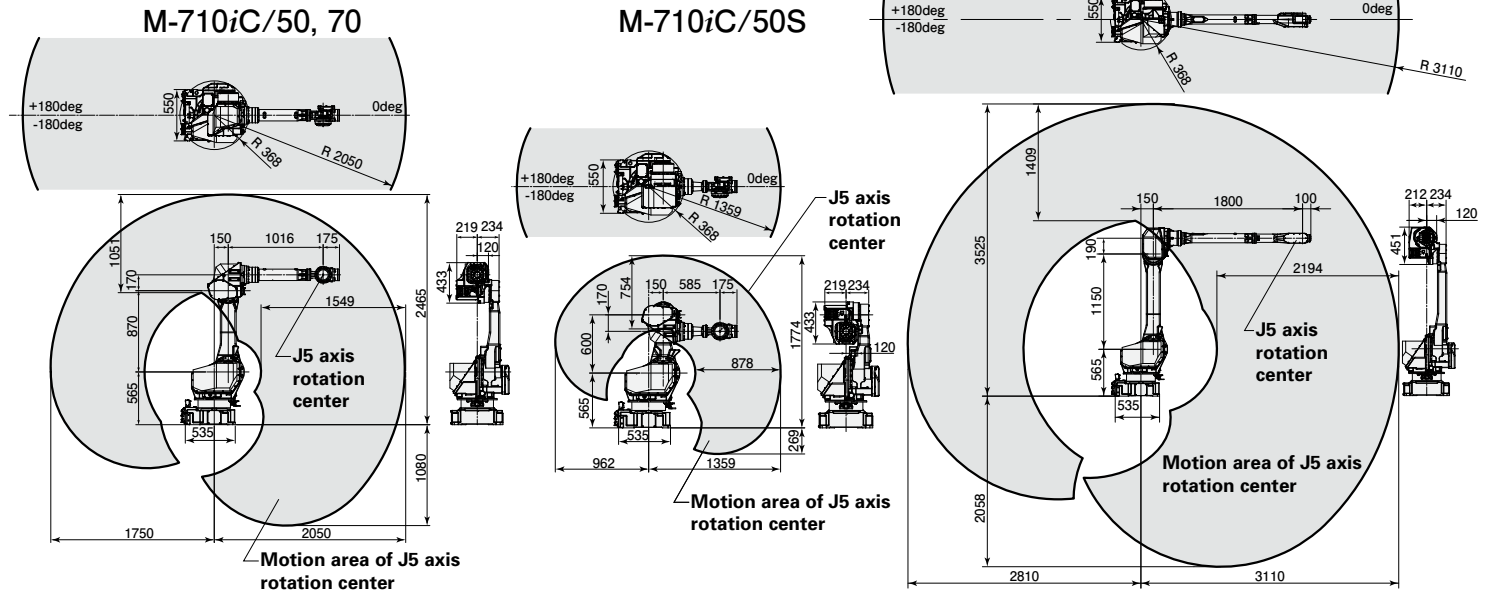
Bin picking of cylindrical parts by M-710iC/50



Car body sealing by M-710iC/20L

FANUC Robot M-710iC

Operating space



Specifications

Item	Specification				
	M-710iC/50	M-710iC/50S	M-710iC/70	M-710iC/20L	
Type	Articulated Type				
Controlled axes	6 axes (J1, J2, J3, J4, J5, J6)				
Reach	2.05m	1.36m	2.05m	3.11m	
Installation (Note 1)	Floor, Upside-down, (Angle mount)				
Motion range (Maximum speed) (Note 2)	J1 axis rotation	360° (175°/sec) 6.28 rad (3.05 rad/sec)		360° (160°/sec) 6.28 rad (2.79 rad/sec)	360° (175°/sec) 6.28 rad (3.05 rad/sec)
	J2 axis rotation	225° (175°/sec) 3.93 rad (3.05 rad/sec)	169° (175°/sec) 2.95 rad (3.05 rad/sec)	225° (120°/sec) 3.93 rad (2.09 rad/sec)	225° (175°/sec) 3.93 rad (3.05 rad/sec)
	J3 axis rotation	440° (175°/sec) 7.68 rad (3.05 rad/sec)	376° (175°/sec) 6.56 rad (3.05 rad/sec)	440° (120°/sec) 7.68 rad (2.09 rad/sec)	432° (180°/sec) 7.54 rad (3.14 rad/sec)
	J4 axis wrist rotation	720° (250°/sec) 12.57 rad (4.36 rad/sec)		720° (225°/sec) 12.57 rad (3.93 rad/sec)	400° (350°/sec) 6.98 rad (6.11 rad/sec)
	J5 axis wrist swing	250° (250°/sec) 4.36 rad (4.36 rad/sec)		250° (225°/sec) 4.36 rad (3.93 rad/sec)	280° (360°/sec) 4.89 rad (6.28 rad/sec)
	J6 axis wrist rotation	720° (355°/sec) 12.57 rad (6.20 rad/sec)		720° (225°/sec) 12.57 rad (3.93 rad/sec)	900° (600°/sec) 15.71 rad (10.47 rad/sec)
Max. load capacity at wrist	Max. 50kg		Max. 70kg	Max. 20kg	
Max. Load capacity at J3 arm (Note 3)	15kg			24kg	
Allowable load moment at wrist	J4 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	39.2 N·m 4.0 kgf·m	
	J5 axis	206 N·m 21 kgf·m	294 N·m 30 kgf·m	39.2 N·m 4.0 kgf·m	
	J6 axis	127 N·m 13 kgf·m	147 N·m 15 kgf·m	19.6 N·m 2.0 kgf·m	
Allowable load inertia at wrist	J4 axis	28 kg·m ² 286 kgf·cm·sec ²		0.88 kg·m ² 9.0 kgf·cm·sec ²	
	J5 axis	28 kg·m ² 286 kgf·cm·sec ²		0.88 kg·m ² 9.0 kgf·cm·sec ²	
	J6 axis	11 kg·m ² 112 kgf·cm·sec ²		0.25 kg·m ² 2.5 kgf·cm·sec ²	
Drive method	Electric servo drive by AC servo motor				
Repeatability	± 0.07 mm			± 0.15 mm	
Mass (Note 4)	Approx.560kg	Approx.545kg	Approx.560kg	Approx.540kg	
Installation environment	Ambient temperature : 0~45°C				
	Ambient humidity : Normally 75%RH or less (No dew nor frost allowed) Short term 95%RH or less (within one month)				
	Vibration : 0.5G or less				

Note 1) Under the installation condition within (), the J1 and J2 axis motion range will be limited.

Note 2) In case of short distance motion, the axis speed doesn't reach maximum one.

Note 3) Max. load capacity at J3 casting is limited by payload at wrist.

Note 4) Without controller.

FANUC LTD

● 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 Robotics America, Inc.	3900 West Hamlin Road, Rochester Hills, MI 48309-3253, U.S.A.	Phone: 1-248-377-7000	Fax: 1-248-377-7477
FANUC Robotics Europe S.A.	Zone Industrielle, L-6468 Echternach, Grand-Duché de Luxembourg	Phone: 352-727777-1	Fax: 352-727777-403
FANUC KOREA CORPORATION	310-1, Bonsan, Jinyong-up, Kimhae City, Kyongnam, Korea	Phone: 82-55-346-0122	Fax: 82-55-346-2548
BEIJING-FANUC Mechatronics CO., LTD	Xixi Zhong Road No.7, Shangdi Information Industry Base, Haidian District, Beijing 100085, P. R. China	Phone: 86-10-6298-4739	Fax: 86-10-6298-4741
FANUC INDIA PRIVATE LIMITED	41-A, Electronics City, KEONICS, Bangalore, 560 100, India	Phone: 91-80-2852-0057	Fax: 91-80-2852-0051
SHANGHAI-FANUC Robotics CO., LTD.	No. 500 Jinyu Road, Jin Qiao, Pu Dong, Shanghai, China	Phone: 86-21-5032-7700	Fax: 86-21-5032-7711
FANUC THAI LIMITED	59/3 Soi Sukhumvit 39, Sukhumvit Road, Khwaeng Klongton, Nua, Khet Wattana, Bangkok 10110, Thailand	Phone: 66-2-662-6111	Fax: 66-2-662-6120
TATUNG-FANUC ROBOTICS COMPANY	22 Chungshan N.Rd., 3rd Sec. Taipei, Taiwan 104, R.O.C.	Phone: 886-2-2592-5252	Fax: 886-2-2598-4565
FANUC MECHATRONICS (MALAYSIA) SDN. BHD.	No.32, Jalan Pengacara U1/48, Temasya Industrial Park, Section U1, Glenmarie, 40150 Shah Alam, Selangor Darul Ehsan, Malaysia	Phone: 60-3-7628-0110	Fax: 60-3-7628-0220
FANUC SINGAPORE PTE. LTD.	No.1 Teban Gardens Crescent, Singapore 608919, Singapore	Phone: 65-6567-8566	Fax: 65-6566-5937
FANUC OCEANIA PTY. LIMITED	10 Healey Circuit, Huntingwood, NSW 2148, Australia	Phone: 61-2-8822-4600	Fax: 61-2-8822-4666
FANUC SOUTH AFRICA (PROPRIETARY) LIMITED	17 Loper Ave. Airport Industrial Ests, Spartan Ext.2 P.O.Box 219, Isand 1600, Republic of South Africa	Phone: 27-11-392-3610	Fax: 27-11-392-3615

● 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.

© FANUC LTD, 2005

RM-710iC(E)-04, 2009.11, Printed in Japan