

FANUC Robot M-1*i*A



FEATURES

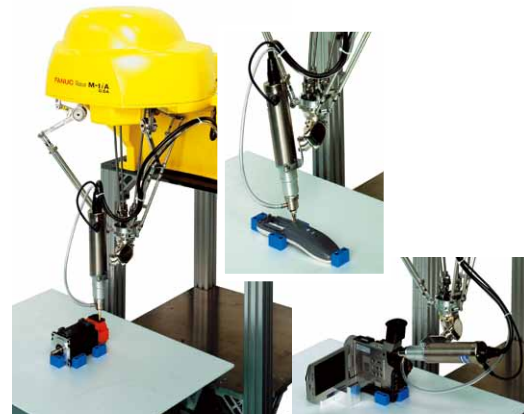
FANUC Robot M-1*i*A is a light weight and compact high speed assembly robot.

- Light weight and compact mechanical unit enables to install to narrow space. Free angle installation is also acceptable.
- Provide variety on degree of freedom at wrist and operating area to meet different application request.
 - Robot total 6 axes
3 axes in wrist, the flexible wrist motion is suitable for assembling.
 - Robot total 4 axes
Single axis in wrist, high speed 3000deg/s wrist is suitable for picking.
 - Robot total 3 axes
Total 3 axes and 1kg payload robot, this model is suitable for high speed picking of plenty work pieces on the conveyor.
 - Long arm type
Covers more wider operating area with longer arm.
- Unique parallel link mechanism enables quick motion.
- Selectable installation type of no stand, desktop stand and ceiling mount. It makes easy integration into a machine.
- A camera for *i*RVision (integrated vision) can be integrated in the mechanical unit.

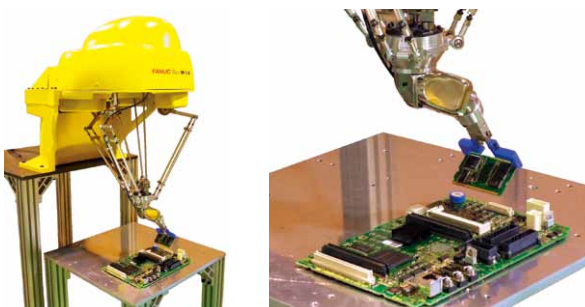
Application Examples



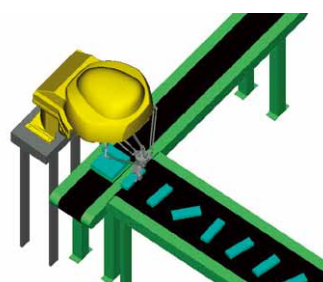
Key board assembling



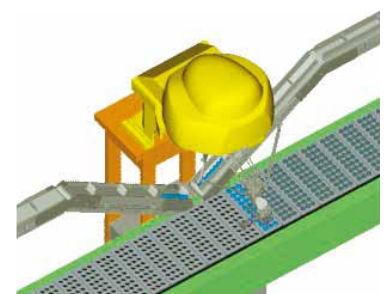
Screwing



Circuit board insert



Contact lens product packaging

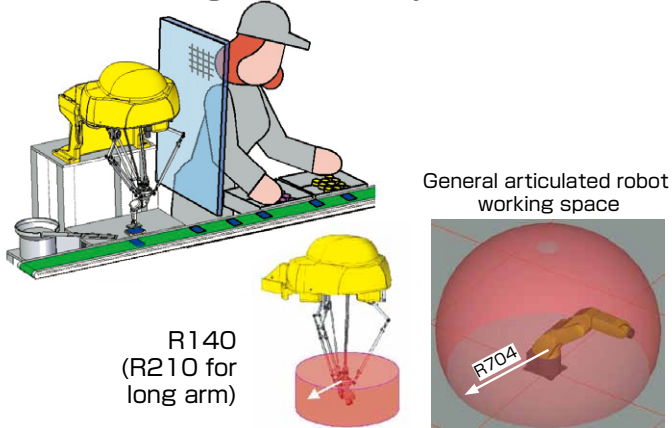


Set lens on the LED illuminator

Compact, Flexibility, High speed and Intelligence

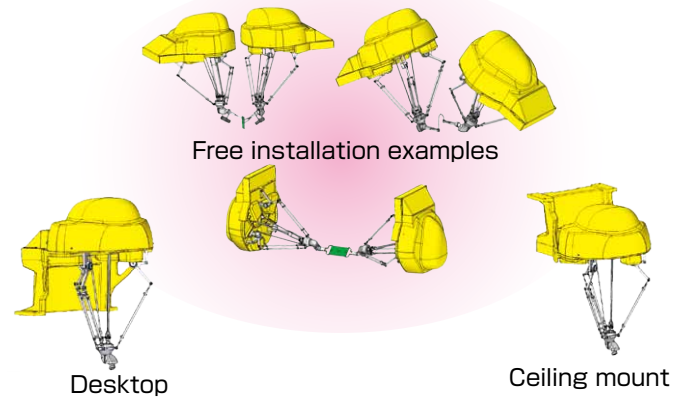
Space saving

Work envelope is closed around operation object so that the total installation space can be minimized. It enables to place the robot and the worker along the manufacturing line effectively.



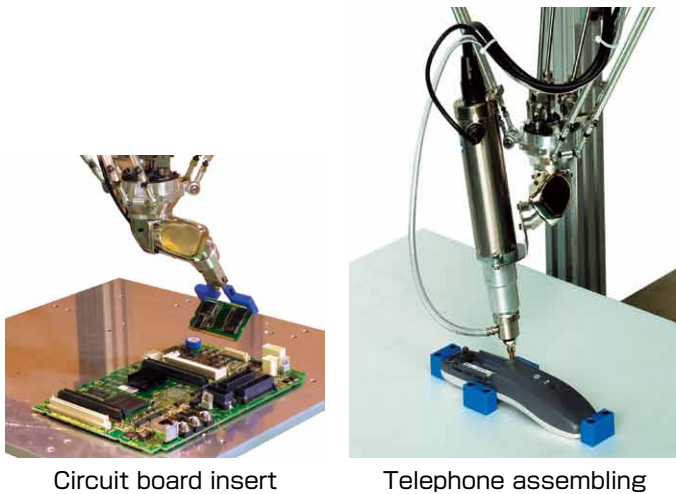
Free installation

The stand is selectable and reversible, and the robot installation direction can also be free. Therefore, it increases flexibility for the robot integration into a machine.



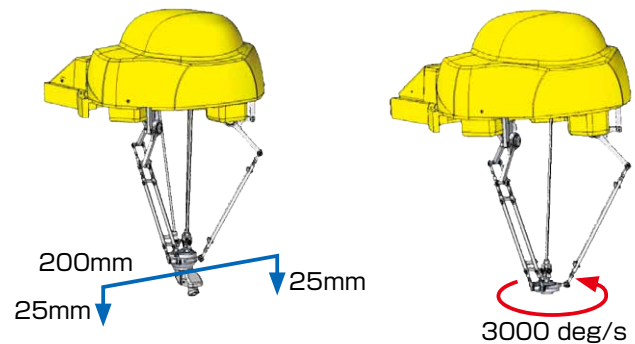
Complex assembling

The new six axes parallel link configuration enables complex assembling application.



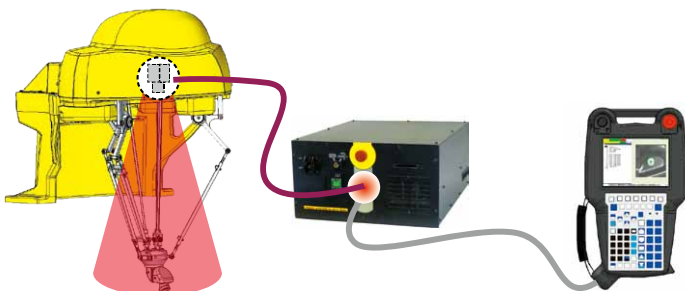
High speed motion

The high speed motion increases productivity. 25-200-25mm pick and place motion time is 0.3 sec. The rotation axis of four axes type rotates 3000deg/s. It makes to change the work pieces direction quickly.



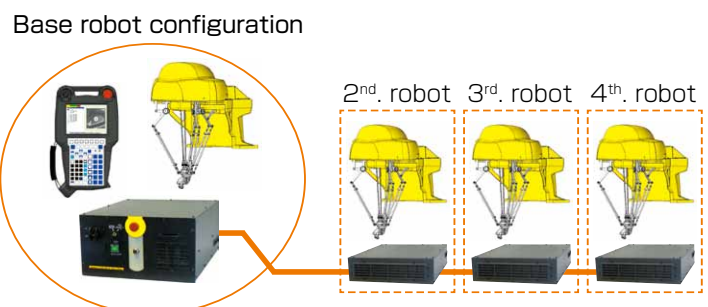
Integrated Vision

A camera for *i*RVision (integrated vision) can be integrated in the mechanical unit.(option) Integrated hardware realizes high reliable image processing. Tight integration between vision and robot functions enables advanced robot control.



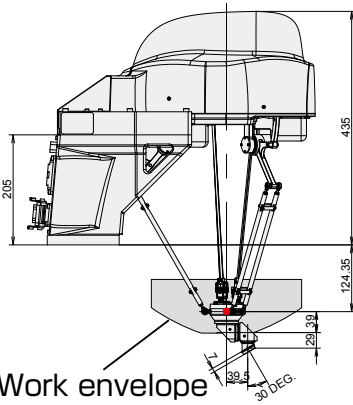
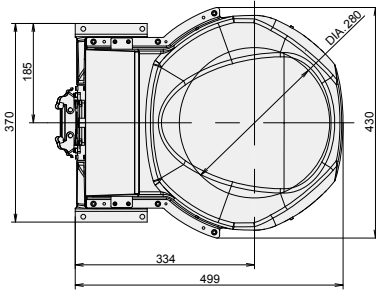
Multi-arm control

The controller can control maximum four robots. Additional robots configuration is very simple, such as mechanical unit and amplifier box combination.

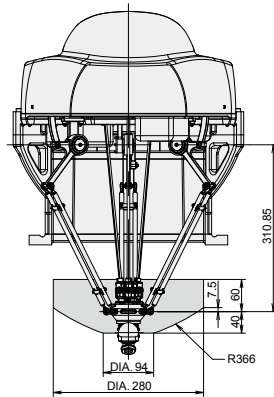


Operating space

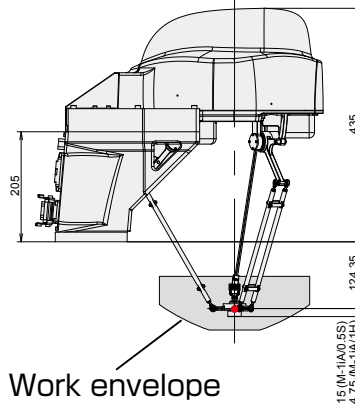
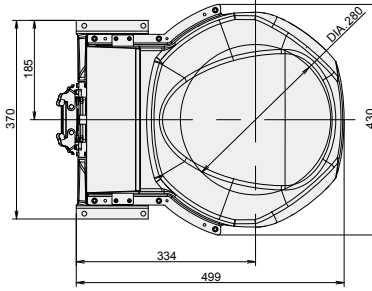
M-1*i*A/0.5A



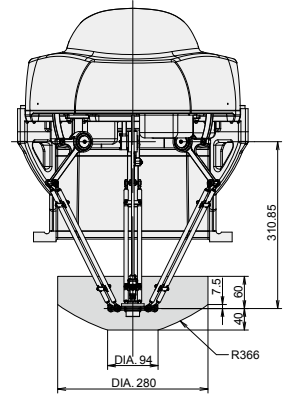
Work envelope
(● part motion)



M-1*i*A/0.5S, M-1*i*A/1H



Work envelope
(● part motion)



Specifications

Model		M-1 <i>i</i> A/0.5A	M-1 <i>i</i> A/0.5S	M-1 <i>i</i> A/1H
Type		Parallel link mechanism		
Controlled axes		6 axes (J1,J2,J3,J4,J5,J6)	4 axes (J1,J2,J3,J4)	3 axes (J1,J2,J3)
Installation		Floor, angle and ceiling mount	Floor and ceiling mount	Floor and ceiling mount
Motion range (Maximum speed) Note 1)	J1-J3	Diameter 280 mm, height 100 mm		
	J4	720° (1440°/s) 12.57 rad (25.13 rad/s)	720° (3000°/s) 12.57 rad (52.34 rad/s)	—
	J5	300° (1440°/s) 5.24 rad (25.13 rad/s)	—	—
	J6	720° (1440°/s) 12.57 rad (25.13 rad/s)	—	—
Max.payload at wrist		0.5 kg (1 kg with an option)		1 kg
Repeatability Note2)		±0.02 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note3)		17 kg	14 kg	12 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 : 4.9m/s ² (0.5G) or less		

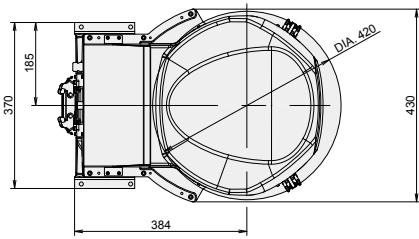
Note 1) During short distance motions, the axis speed may not reach the maximum value stated.

Note 2) Compliant with ISO9283.

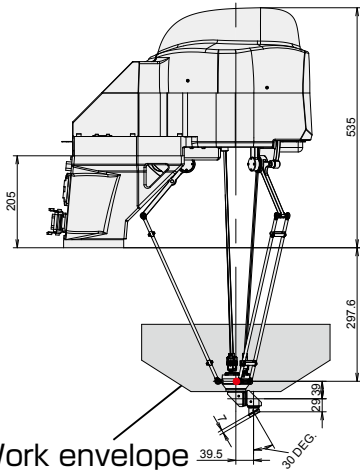
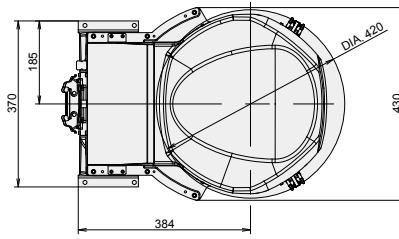
Note 3) In case of "No stand"

Operating space

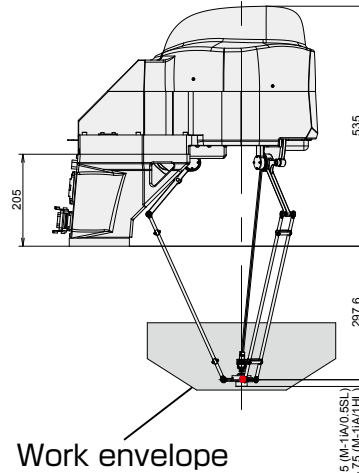
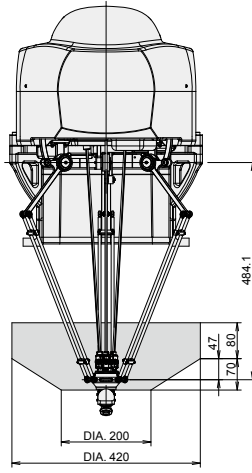
M-1*IA*/0.5AL



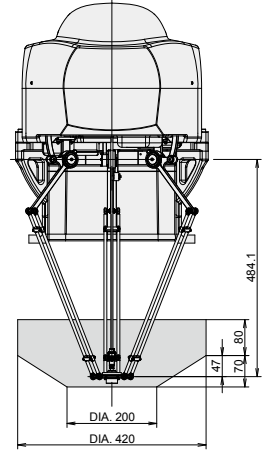
M-1*IA*/0.5SL, M-1*IA*/1HL



Work envelope
(●part motion)



Work envelope
(●part motion)



Specifications

Model		M-1 <i>IA</i> /0.5AL	M-1 <i>IA</i> /0.5SL	M-1 <i>IA</i> /1HL
Type		Parallel link mechanism		
Controlled axes		6 axes (J1,J2,J3,J4,J5,J6)	4 axes (J1,J2,J3,J4)	3 axes (J1,J2,J3)
Installation		Floor, angle and ceiling mount	Floor and ceiling mount	Floor and ceiling mount
Motion range (Maximum speed) Note 1)	J1-J3	Diameter 420 mm, height 150 mm		
	J4	720° (1440°/s) 12.57 rad (25.13 rad/s)	720° (3000°/s) 12.57 rad (52.34 rad/s)	—
	J5	300° (1440°/s) 5.24 rad (25.13 rad/s)	—	—
	J6	720° (1440°/s) 12.57 rad (25.13 rad/s)	—	—
Max.payload at wrist		0.5 kg (1 kg with an option)		1 kg
Repeatability Note2)		±0.02 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note3)		20 kg	17 kg	15 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 : 4.9m/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 ISO9283.

Note 3) In case of "No stand"

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
TAIWAN FANUC CORPORATION
FANUC INDIA PRIVATE LIMITED
FANUC SINGAPORE PTE. LTD.
FANUC THAI LIMITED
FANUC MECHATRONICS (MALAYSIA) SDN. BHD.

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 Ests, Spartan Ext.2 P.O.Box 219, Isando 1600, Republic of South Africa

Phone: 1-248-377-7000 Fax: 1-855-774-7051
Phone: 352-727777-1 Fax: 352-727777-403
Phone: 86-21-5032-7700 Fax: 86-21-5032-7711
Phone: 82-55-278-1200 Fax: 82-55-284-9826
Phone: 886-4-2359-0522 Fax: 886-4-2359-0771
Phone: 91-80-2852-0057 Fax: 91-80-2852-0051
Phone: 65-6567-8566 Fax: 65-6566-5937
Phone: 66-2-714-6111 Fax: 66-2-714-6120

Phone: 60-3-7628-0110 Fax: 60-3-7628-0220
Phone: 62-21-4584-7285 Fax: 62-21-4584-7288
Phone: 61-2-8822-4600 Fax: 61-2-8822-4666
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 CORPORATION, 2009

RM-1*IA*(E)-06, 2018.4, Printed in Japan