FANUC Delta Robot series



FEATURES

M-1iA Series

- These models are light weight and compact high speed assembly robots.
- Installation types of no stand, desktop stand and ceiling mount are selectable. It makes easy integration in narrow space.
- A variety of wrist configurations (6 or 4 axes) and operating area (standard or long arm) are selectable to meet different application needs.
- ullet A camera for $oldsymbol{i}$ RVision (integrated vision) can be integrated in the mechanical unit.

M-2iA, M-3iA, DR-3iB Series

- These are parallel link robots for high speed picking and assembly.
- According to applications, weights of objects, necessity of posture change of the objects and size of workspace, extensive models are lined up from a middle size (operating space Φ800mm) to a large size (operating space Φ1600mm).
- The enclosed structure realizes IP67 environmental resistance (water/dust proof). There are also IP69K options which withstand high-pressure washing (M-2iA/DR-3iB).
- NSF H1 food grade oil/grease are applied as lubricants for all robot types. Materials and surface finishing for food sanitary can be selected (options).
- The metal surface of DR-31B/6 STAINLESS is all stainless and can withstand daily washdown / sterilization. This robot can be operated more hygienically.
- $m{i}$ Various intelligent functions are available, such as $m{i}$ RVision (integrated vision) and $m{i}$ RPickTool.

M-2iA/3S

Dia.800

M-2iA/3SL

Dia.830

Dia.1130

Specifications

Work envelope

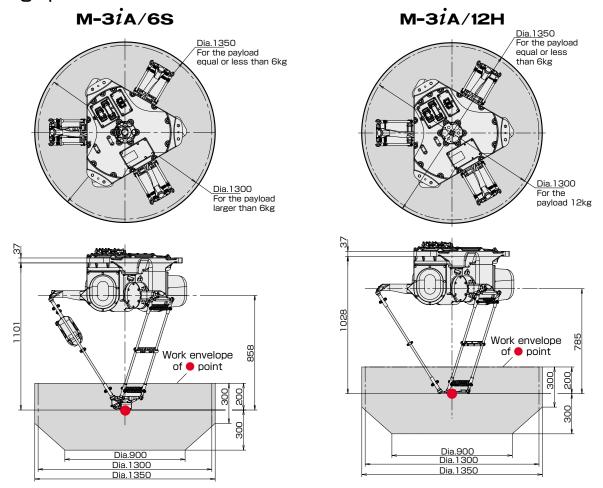
(opart motion)

Model		M-2 <i>i</i> A/3S	M-2 <i>i</i> A/3SL	
Type		Parallel link mechanism		
Controlled axes		4 axes (J1, J2, J3, J4)		
Installation		Ceiling mount		
Motion range	J1-J3	Diameter 800 mm, height 300 mm	Diameter 1130 mm, height 400 mm	
(Maximum speed) Note 1)	J4	720° (3500°/s) 12.57 rad (61.06rad/s)		
Max.payload at wrist		3 kg		
Repeatability Note 2)		± 0.03 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note 3)		130 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/s²(0.5G) or less		

Work envelope

(opart motion)

Note 1) During short distance motions, the axis speed may not reach the maximum value stated. Note 2) Compliant with ISO9283. Note 3) Without controller.



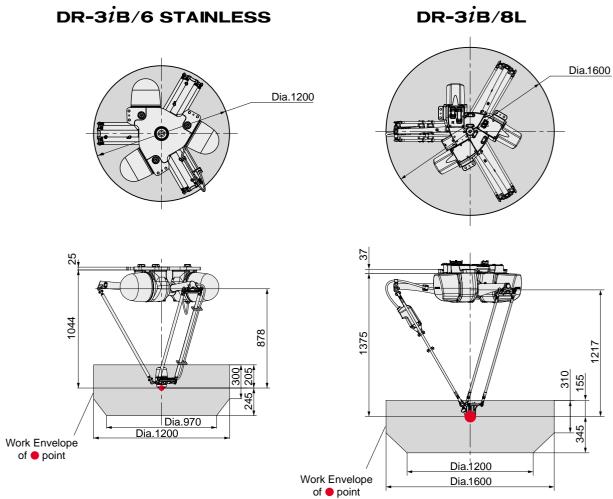
Specifications

		•	•
Model		M-31A/6S	M-3 <i>1</i> A/12H
Type		Parallel link mechanism	
Controlled axes		4 axes (J1, J2, J3, J4)	3 axes (J1, J2, J3)
Installation		Ceiling mount	
Motion range (Maximum J1-J3		Diameter 1350 mm, height 500 mm Note 4)	
speed) Note 1)	J4	720° (4000°/s) 12.57 rad (69.81 rad/s)	_
Max.payload at wrist		6 kg (8 kg with an option)	12 kg
Repeatability Note 2)		±0.03 mm	
Drive method		Electric servo drive by AC servo motor	
Mass Note 3)		160 kg	155 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/s²(0.5G) or less	

Note 1) During short distance motions, the axis speed doesn't reach maximum one. Note 2) Compliant with ISO9283.

Note 3) Without controller.

Note 4) In case the payload is larger than 6 kg, there is a limitation on the work envelope.



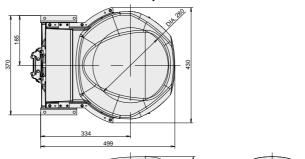
Specifications

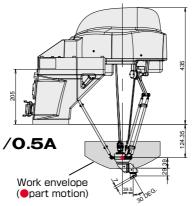
Opecifications				
Model		DR-3 <i>i</i> B/6 STAINLESS	DR-3 <i>i</i> B/8L	
Type		Parallel link mechanism		
Controlled axes		4 axes (J1, J2, J3, J4)		
Installation		Ceiling mount		
Motion range(Maximum speed) Note 1)	J1-J3	Diameter 1200 mm, height 450 mm	Diameter 1600 mm, height 500 mm	
	J4	720° (1714°/s) 12.57 rad (29.91rad/s)	720° (2000°/s) 12.57 rad (34.91rad/s)	
Max.payload at wrist		6 kg	8 kg	
Repeatability Note 2)		±0.03 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note 3)		250 kg	170 kg	
Installation environment		Ambient temperature : 0 to 45°C Ambient humidity Normally : 75%RH or less (No condensation allowed) Short term (within one month) : Max. 95%RH or less (No condensation allowed) Vibration : 4.9m/s² (0.5G) or less		

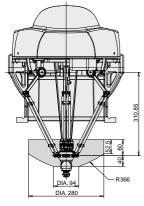
Note 1) During short distance motions, the axis speed may not reach the maximum value stated. Note 2) Compliant with ISO9283. Note 3) Without controller.

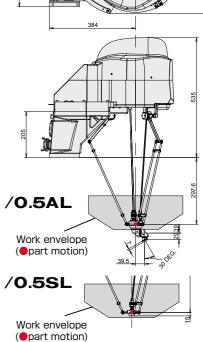
$M-1\dot{i}A/O.5A$, $M-1\dot{i}A/O.5S$

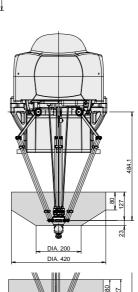


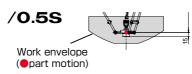


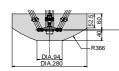


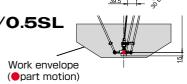


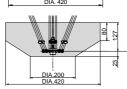












Specifications

Model		M-1 <i>i</i> A/0.5A	M-1 <i>1</i> A/0.5S	
Type		Parallel link mechanism		
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)	4 axes (J1, J2, J3, J4)	
Installation		Floor, angle 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)		
Repeatability Note 2)		±0.02 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note 3)		17 kg	14 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/s² (0.5G) or less		

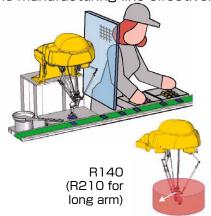
Model		M-1 <i>i</i> A/0.5AL	M-1 <i>i</i> A/0.5SL	
Type		Parallel link mechanism		
Controlled axes		6 axes (J1, J2, J3, J4, J5, J6)	4 axes (J1, J2, J3, J4)	
Installation		Floor, angle and ceiling mount	Floor and ceiling mount	
Motion range (Maximum speed) Note 1)	J1-J3	Diameter 420 mm, height 150 mm		
	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)		
Repeatability Note 2)		±0.02 mm		
Drive method		Electric servo drive by AC servo motor		
Mass Note 3)		20 kg	17 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/s² (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"

Space saving M-11A

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.



General articulated robot working space

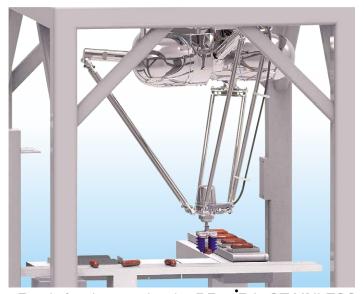




Pouched goods arranging by DR-31B/8L



High speed arranging the foods by M-3iA/6S



Fresh food arranging by DR-31B/6 STAINLESS

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