

Hollow wrist Heavy payload robot

# MC400L



## ■ Hollow wrist structure

Avoiding interference of cables with peripheral equipment

Improved reliability of cables due to its stable behavior with wrist movement

## ■ High-speed motion

Top level performance in its class

## ■ Powerful wrist

Easy handling for large work-pieces due to the large wrist capacity

A work-piece of large moment of inertia is also available

## ■ Advanced applicability

Wide envelope

5 meter vertical stroke

## ■ Application signals are standard

2 ports for air, 40 application signals, DeviceNet cable, LAN cable

## Robot specifications

Item	Specifications	
Robot model	MC400L-01	
Structure	Articulated	
Number of axes	6	
Drive system	AC servo system	
Max. operating envelope	J1	$\pm 3.14\text{rad}$ ( $\pm 180^\circ$ )
	J2	$-1.83 \sim +1.05\text{rad}$ ( $-105 \sim +60^\circ$ )
	J3	$-2.27 \sim +0.52\text{rad}$ ( $-130 \sim +30^\circ$ )
	J4	$\pm 3.67\text{rad}$ ( $\pm 210^\circ$ )
	J5	$\pm 2.09\text{rad}$ ( $\pm 120^\circ$ )
	J6	Max. : $\pm 6.28\text{rad}$ ( $\pm 360^\circ$ ) Initial setting : $\pm 3.67\text{rad}$ ( $\pm 210^\circ$ ) *4
Max. velocity	J1	1.57rad/s (90°/s)
	J2	1.57rad/s (90°/s)
	J3	1.57rad/s (90°/s)
	J4	1.92rad/s (110°/s)
	J5	1.92rad/s (110°/s)
	J6	3.14rad/s (180°/s)
Payload	Wrist	400kg
	Forearm*1	Max. 50kg
Allowable static load torque for wrist	J4	3450N·m
	J5	3450N·m
	J6	1725N·m
Allowable moment of inertia for wrist*2	J4	600kg·m <sup>2</sup>
	J5	600kg·m <sup>2</sup>
	J6	400kg·m <sup>2</sup>
Position repeatability*3	$\pm 0.09\text{mm}$	
Installation	Floor	
Ambient conditions	Ambient temperature: $0 \sim 45^\circ\text{C}$ *5 Ambient humidity: $20 \sim 85\%$ RH (without condensation) Vibration: Not more than $0.5\text{G}$ ( $4.9\text{m/s}^2$ )	
Robot mass	3,050kg	

1 [rad] =  $180/\pi$  [°], 1 [N·m] =  $1/9.8$  [kgf·m]

\*1: This value changes by placement and load conditions of a wrist.

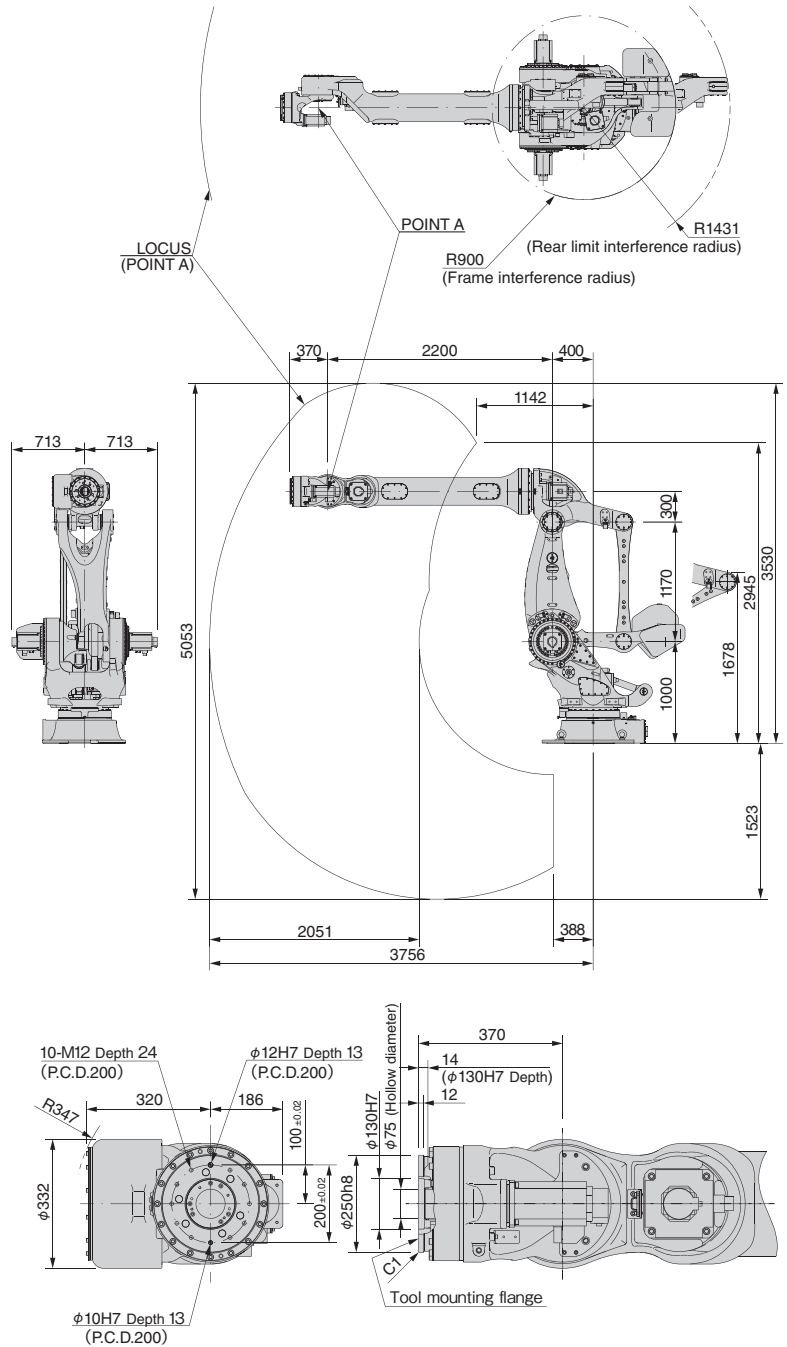
\*2: The Allowable moment of inertia of a wrist changes with load conditions of a wrist.

\*3: This value conforms to "JIS B 8432".

\*4: The initial setting of the software limit is  $\pm 210^\circ$ . When installing the cables in the hollow hole part of J6, please use the robot in the range of  $\pm 210^\circ$ . If the cables do not go through the hollow hole of J6, it is possible to widen the operating envelope of J6 up to  $\pm 360^\circ$  considering the condition.

\*5: Permitted height is not higher than 1,000m above sea level. If used in higher place, permitted temperature is affected by height.

## Exterior dimensions and operating envelope



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● The specifications are subject to changes without notice.

● In case that an end user uses this product for military purpose or production of weapon, this product may be liable for the subject of export restriction stipulated in the Foreign Exchange and Foreign Trade Act. Please go through careful investigation and necessary formalities for export.

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