

## Kawasaki Heavy Industries, Ltd

### Robot Business Division

#### Tokyo Head Office/Robot Division

1-14-5, Kaigan, Minato-ku, Tokyo 105-8315, Japan  
Phone: +81-3-3435-2501 Fax: +81-3-3437-9880

#### Akashi Works/Robot Division

1-1, Kawasaki-cho, Akashi, Hyogo 673-8666, Japan  
Phone: +81-78-921-2946 Fax: +81-78-923-6548

#### Nishi-Kobe Works/Robot Division

234, Matsumoto, Hasetani-cho, Nishi-ku, Kobe, Hyogo 651-2239, Japan  
Phone: +81-78-915-8136 Fax: +81-78-915-8274

Kawasaki Robotics website  
<https://kawasakirobotics.com/>



### Global Network

#### Kawasaki Robotics (USA), Inc.

28140 Lakeview Drive, Wixom, MI 48393, U.S.A.  
Phone: +1-248-446-4100 Fax: +1-248-446-4200

#### Kawasaki Robotics (UK) Ltd.

Unit 4 Easter Court, Europa Boulevard, Westbrook  
Warrington Cheshire, WA5 7ZB, United Kingdom  
Phone: +44-1925-71-3000 Fax: +44-1925-71-3001

#### Kawasaki Robotics GmbH

Im Taubental 32, 41468 Neuss, Germany  
Phone: +49-2131-34260 Fax: +49-2131-3426-22

#### Kawasaki Robotics Korea, Ltd.

NO. 6-10, 14th floor, 1dong, 135, Gasan digital 2-ro,  
Geumcheon-gu, Seoul, Republic of Korea  
Phone: +82-32-821-6941 Fax: +82-32-821-6947

#### Kawasaki Robotics (Tianjin) Co., Ltd.

1-2/F, Building 6, No.19 Xinhuan Road, TEDA, China  
Phone: +86-22-5983-1888 Fax: +86-22-5983-1889

#### Taiwan Kawasaki Robot Center

3F, No.31, Ln.216, Gongyuan Rd., Hsinchu City  
30069, Taiwan(R.O.C)  
Phone: +886-3-562-0518

#### Kawasaki Motors Enterprise (Thailand) Co., Ltd.

(Rayong Robot Center)  
119/10 Moo 4 T.Pluaek Daeng, A.Pluaek Daeng, Rayong 21140  
Thailand  
Phone: +66-38-955-040-58 Fax: +66-38-955-145

#### Singapore Kawasaki Robot Center

100G Pasir Panjang Road #06-10  
Singapore 118523  
Phone: +65-6513-3145

#### Kawasaki Robotics India Pvt. Ltd.

1/5, Village-Khandsa, Khasra No. 1364,599/2/2/1,  
Hero Honda Chowk,Gurgaon-122001, Haryana  
Phone: +91-124-608-5500

# Kawasaki Robot

## Medical & Pharmaceutical Robots

Small-to-medium robots  
up to 80kg payload

Large robots  
up to 300kg payload

Extra large robots  
up to 1,500kg payload

Dual-arm Collaborative robots

Explosion-proof painting robots

Sealing robots

Arc welding robots

Palletizing robots

Medical & pharmaceutical robots

Picking robots

Wafer transfer robots

Self-Propelled Robot



#### CAUTIONS TO BE TAKEN TO ENSURE SAFETY

- For those persons involved with the operation / service of your system, including Kawasaki Robot, they must strictly observe all safety regulations at all times. They should carefully read the Manuals and other related safety documents.
- Products described in this catalogue are general industrial robots. Therefore, if a customer wishes to use the Robot for special purposes, which might endanger operators or if the Robot has any problems, please contact us. We will be pleased to help you.
- Be careful as Photographs illustrated in this catalogue are frequently taken after removing safety fences and other safety devices stipulated in the safety regulations from the Robot operation system.



# Medical and Pharmaceutical Robots

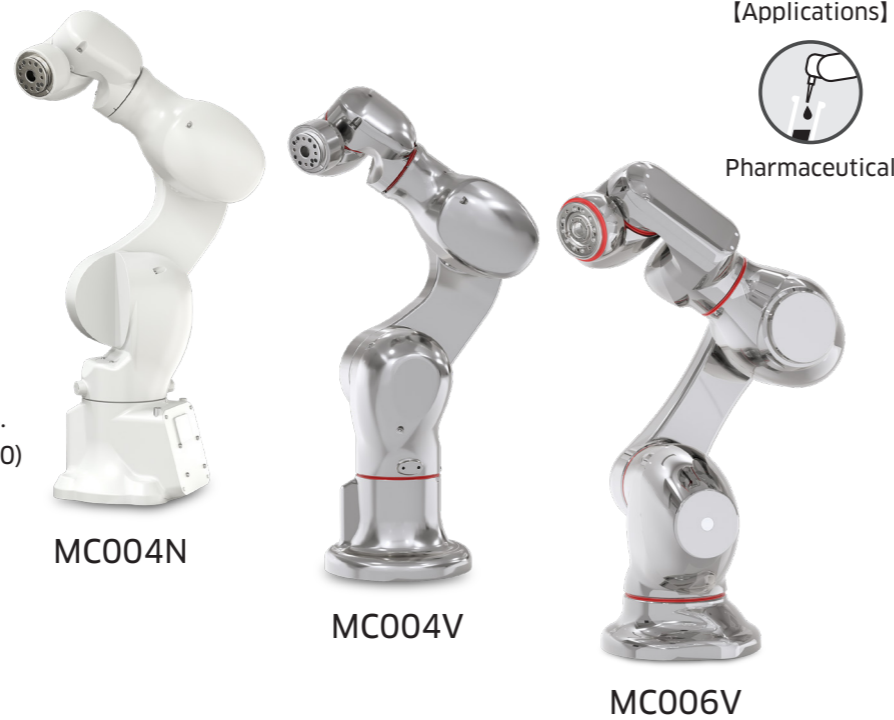
Robotics automation is required in the medical and pharmaceutical industries to avoid human errors, contamination and exposure risks to high potency active pharmaceutical ingredients such as anticancer drugs.

## MC series

The streamlined arm with a special surface treatment is chemical-resistant, allowing for sterilization by VHP.

### Features

- Hollow wrist for built-in cables and hoses.
- Compatible with ISO Class 5 (Fed-class 100) without vacuum piping.
- Special sealing material that enables sterilization by VHP. (MC004V/MC006V)
- Improved glossy plating, which offers a resistance to a wider range of chemicals. (MC006V)



[Applications]

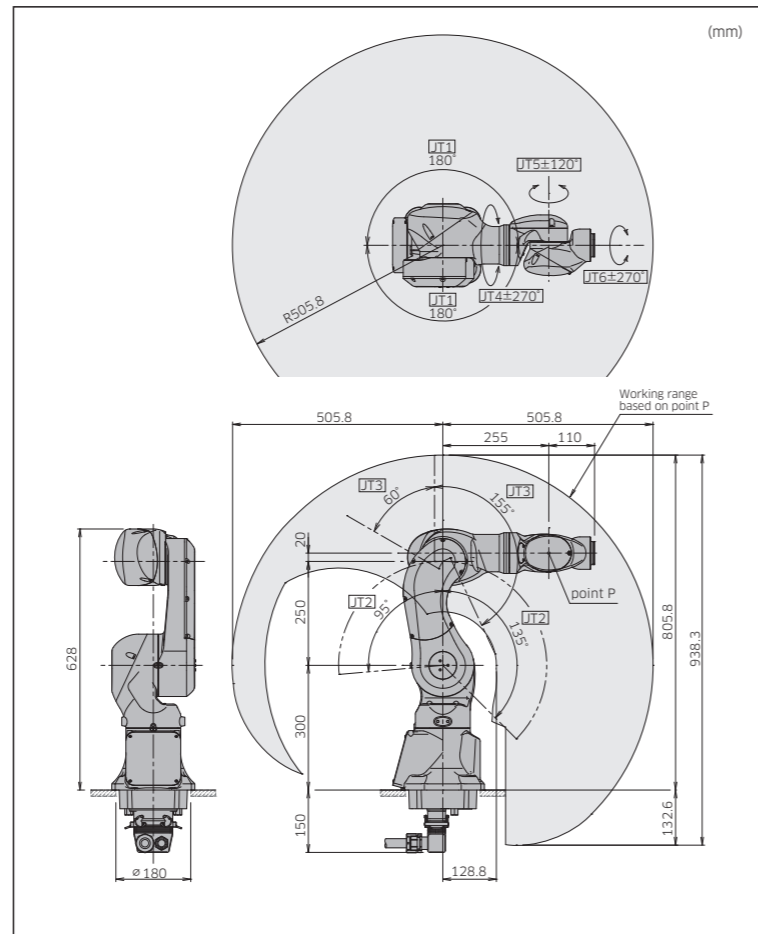


Pharmaceutical

## MC004N / MC004V

### Standard Specifications

Type	Articulated robot	
Degree of freedom (axes)	6	
Payload (kg)	4	
Max. reach (mm)	505.8	
Position repeatability*1 (mm)	±0.028	
Motion range (°)	Arm rotation (JT1)	±180
	Arm out-in (JT2)	+135 - -95
	Arm up-down (JT3)	+60 - -155
	Wrist swivel (JT4)	±270
	Wrist bend (JT5)	±120
	Wrist twist (JT6)	±270
Max. speed (°/s)	Arm rotation (JT1)	200
	Arm out-in (JT2)	180
	Arm up-down (JT3)	225
	Wrist swivel (JT4)	700
	Wrist bend (JT5)	500
	Wrist twist (JT6)	350
Allowable moment (N·m)	Wrist swivel (JT4)	8.5
	Wrist bend (JT5)	8.5
	Wrist twist (JT6)	4.0
Allowable moment of inertia (kg·m <sup>2</sup> )	Wrist swivel (JT4)	0.2
	Wrist bend (JT5)	0.2
	Wrist twist (JT6)	0.1
Mass (kg)	25	
Mounting	Floor, Ceiling	
Installation environment	Ambient temperature (°C)	10 - 35
	Relative humidity (%)	35 - 85 (No dew, nor frost allowed)
Degree of protection*2	Wrist : IP67 or equivalent Base axes : IP65 or equivalent	
Controller/Power requirements	F60/2.0kVA	



\*1: Conforms to ISO9283  
\*2: The flange must be closed in case of using the built-in piping.  
\*3: Special sealing material that enables sterilization by VHP. (MC004V)

# F60

### Features

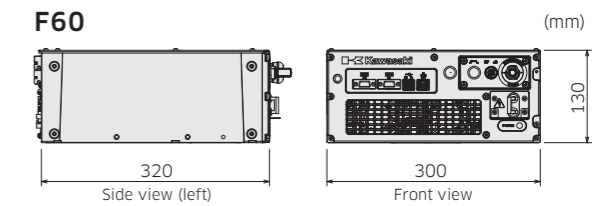
- Universal controller has common specifications to be used worldwide.
- Drastic downsizing has achieved very compact dimensions and light weight (8.3kg). It is easy for a person to carry the controller.

### Standard Specifications

Dimensions (mm)	W300×D320×H130	
Type	Open type indirect cooling system (IP20 or equivalent)	
Controlled (axes)	6	
Memory capacity (MB)	16	
I/O signals	External operation	Motor power off, Hold
	Input (Channels)	16
Cable length	Teach pendant (m)	5
	Robot-controller (m)	5
Mass (kg)	8.3	
Power requirements	AC200 - AC230V ±10%, 50/60Hz, 1Φ Max. 2.0kVA	
Installation environment	Ambient temperature (°C)	0 - 45
	Relative humidity (%)	35 - 85 (No dew, nor frost allowed)
Teach pendant	TFT color LCD display with touch-panel, E-Stop switch, Teach lock switch, Enable switch	
Operation panel	E-stop switch, teach/repeat switch	



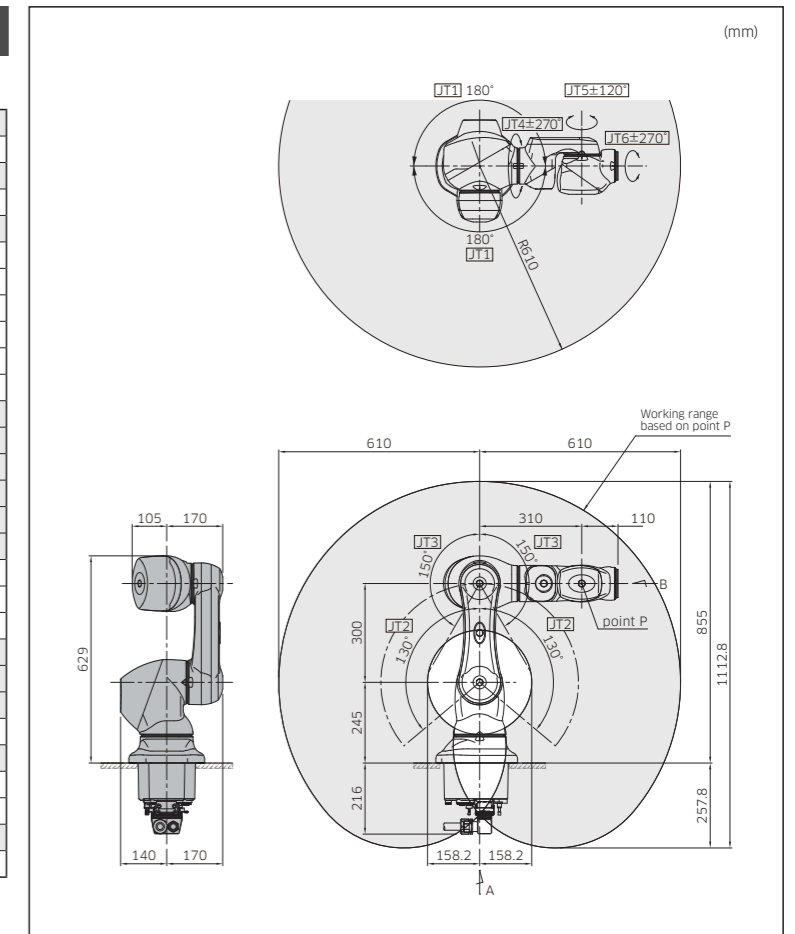
### External view and dimensions



## MC006V

### Standard Specifications

Type	Articulated robot	
Degree of freedom (axes)	6	
Payload (kg)	6	
Max. reach (mm)	610	
Position repeatability*1 (mm)	±0.3	
Motion range (°)	Arm rotation (JT1)	±180
	Arm out-in (JT2)	+130
	Arm up-down (JT3)	+150
	Wrist swivel (JT4)	±270
	Wrist bend (JT5)	±120
	Wrist twist (JT6)	±270
Max. speed (°/s)	Arm rotation (JT1)	400
	Arm out-in (JT2)	300
	Arm up-down (JT3)	420
	Wrist swivel (JT4)	450
	Wrist bend (JT5)	450
	Wrist twist (JT6)	700
Allowable moment (N·m)	Wrist swivel (JT4)	13.0
	Wrist bend (JT5)	13.0
	Wrist twist (JT6)	7.0
Allowable moment of inertia (kg·m <sup>2</sup> )	Wrist swivel (JT4)	0.5
	Wrist bend (JT5)	0.5
	Wrist twist (JT6)	0.2
Mass (kg)	44	
Mounting	Floor, Ceiling, Wall	
Installation environment	Ambient temperature (°C)	10 - 35
	Relative humidity (%)	35 - 85 (No dew, nor frost allowed)
Degree of protection*2	IP67 or equivalent	
Controller/Power requirements	F60/2.0kVA	



\*1: Conforms to ISO9283  
\*2: The flange must be closed in case of using the built-in piping.  
\*3: Special sealing material that enables sterilization by VHP.