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



# Kawasaki Robot

## Arc Welding 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

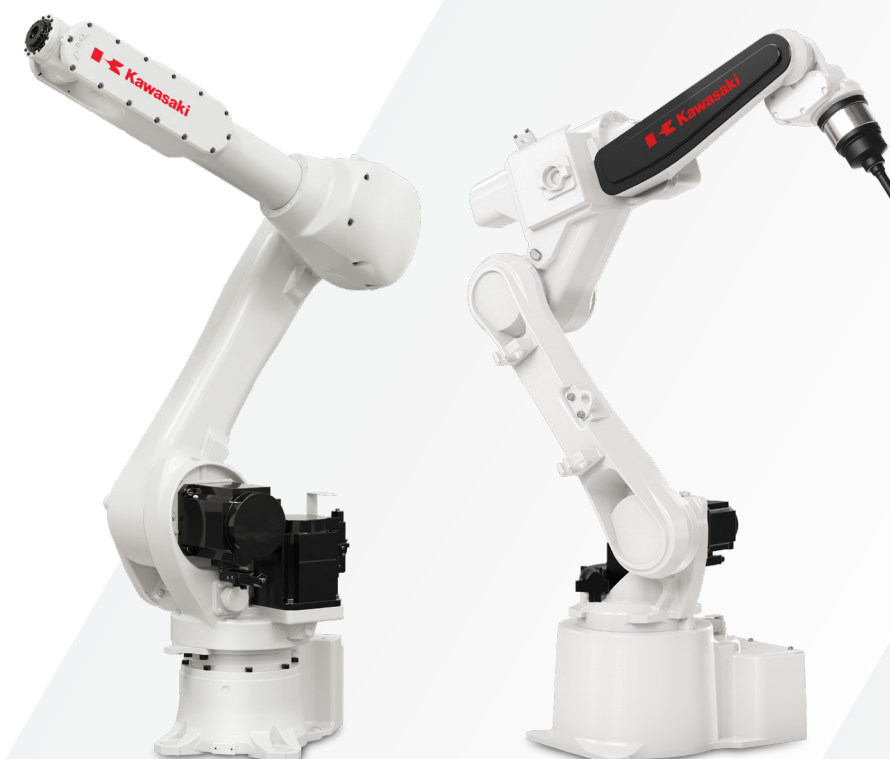
Wafer transfer robots

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.



# Arc Welding Robots

Kawasaki arc welding robots offer simple and friendly operations. They can be installed with ease thanks to one-cable connection between the robot and the welding equipment. Many hardware and software options are available, which support high quality arc welding.

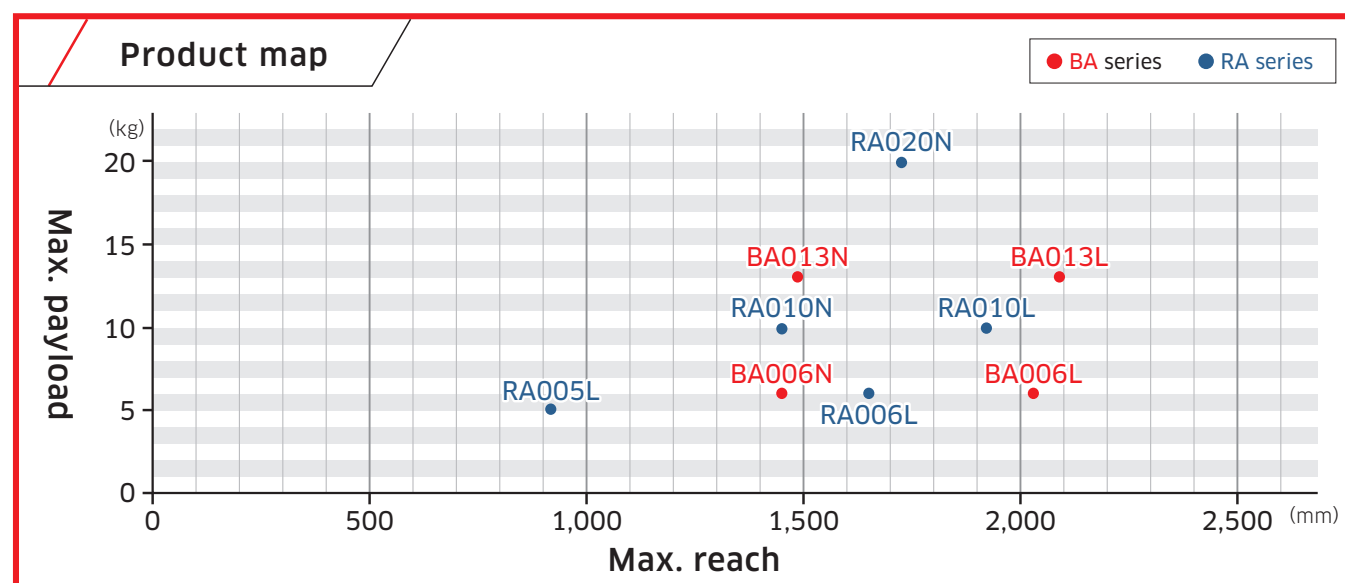
## BA series

The hollow arm enables hoses and cables to be installed inside the arm. It prevents interference with peripheral equipment and shortens off-line teaching time.



## RA series

The RA series covers a wide range of payload from 5 to 20 kg, thus allowing diverse arc welding workpieces.



## BA series

[Applications] Arc welding

### Features

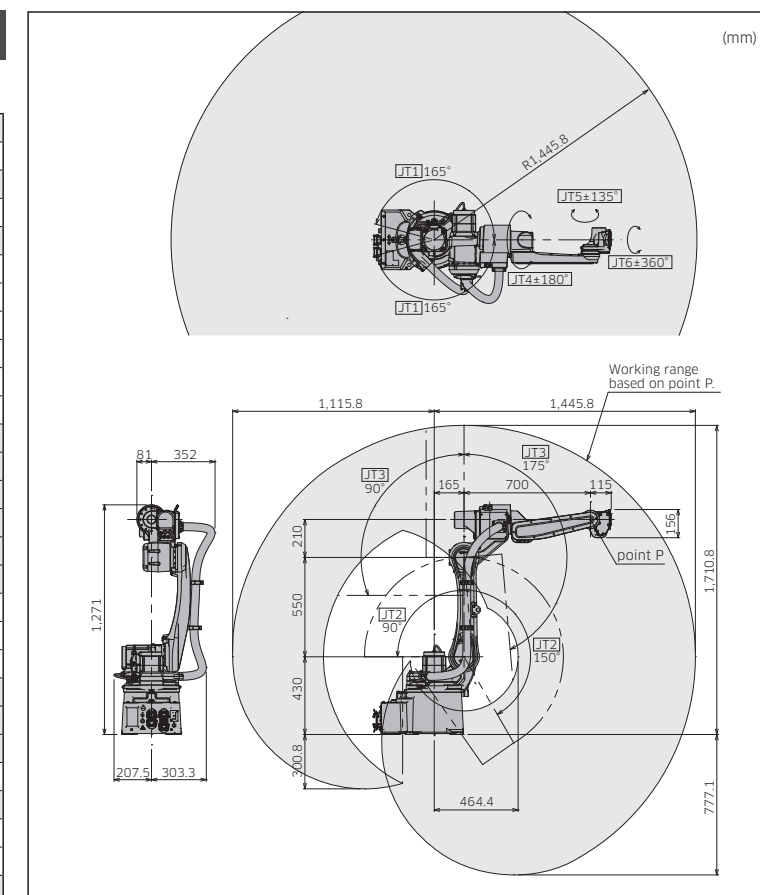
- Built-in cables
- Connection with a single cable between robot and welder.

### BA006N

#### Standard Specifications

|                                     |                          |                                     |
|-------------------------------------|--------------------------|-------------------------------------|
| Type                                | Articulated robot        |                                     |
| Degree of freedom (axes)            | 6                        |                                     |
| Payload (kg)                        | 6                        |                                     |
| Max. reach (mm)                     | 1,445                    |                                     |
| Position repeatability*1 (mm)       | ±0.06                    |                                     |
| Motion range (°)                    | Arm rotation (JT1)       | ±165                                |
|                                     | Arm out-in (JT2)         | +150 - -90                          |
|                                     | Arm up-down (JT3)        | +90 - -175                          |
|                                     | Wrist swivel (JT4)       | ±180                                |
|                                     | Wrist bend (JT5)         | ±135                                |
|                                     | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 240                                 |
|                                     | Arm out-in (JT2)         | 240                                 |
|                                     | Arm up-down (JT3)        | 220                                 |
|                                     | Wrist swivel (JT4)       | 430                                 |
|                                     | Wrist bend (JT5)         | 430                                 |
|                                     | Wrist twist (JT6)        | 650                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 12                                  |
|                                     | Wrist bend (JT5)         | 12                                  |
|                                     | Wrist twist (JT6)        | 3.75                                |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 0.4                                 |
|                                     | Wrist bend (JT5)         | 0.4                                 |
|                                     | Wrist twist (JT6)        | 0.07                                |
| Mass (kg)                           | 150                      |                                     |
| Mounting                            | Floor, Ceiling           |                                     |
| Installation environment            | Ambient temperature (°C) | 0 - 45                              |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements       | F60/2.0kVA, F01/5.6kVA   |                                     |

\*1: Conforms to ISO9283

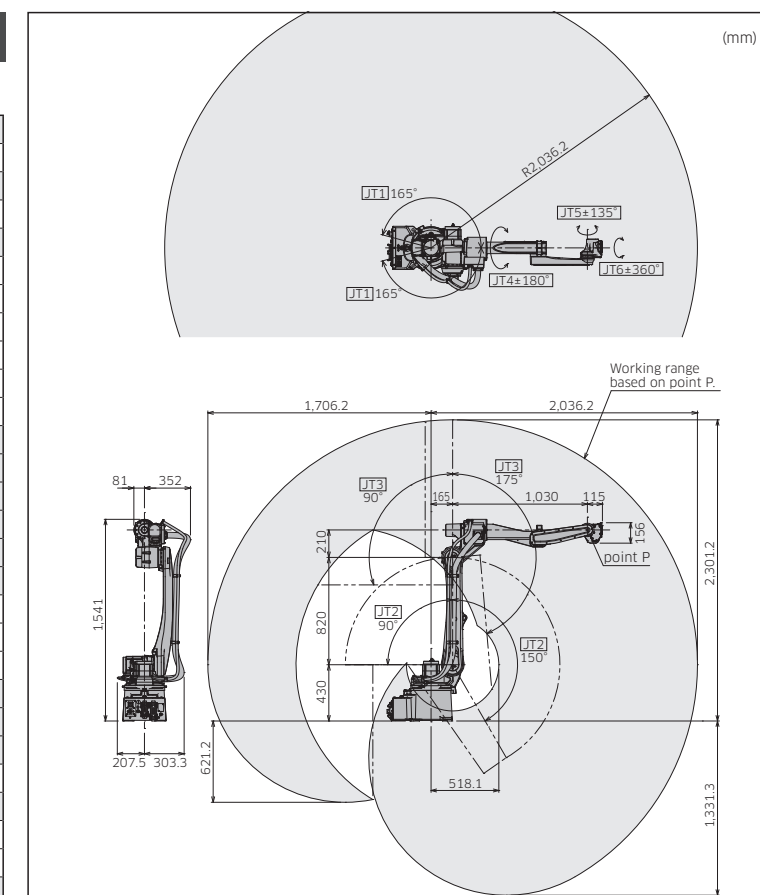


### BA006L

#### Standard Specifications

|                                     |                          |                                     |
|-------------------------------------|--------------------------|-------------------------------------|
| Type                                | Articulated robot        |                                     |
| Degree of freedom (axes)            | 6                        |                                     |
| Payload (kg)                        | 6                        |                                     |
| Max. reach (mm)                     | 2,036                    |                                     |
| Position repeatability*1 (mm)       | ±0.08                    |                                     |
| Motion range (°)                    | Arm rotation (JT1)       | ±165                                |
|                                     | Arm out-in (JT2)         | +150 - -90                          |
|                                     | Arm up-down (JT3)        | +90 - -175                          |
|                                     | Wrist swivel (JT4)       | ±180                                |
|                                     | Wrist bend (JT5)         | ±135                                |
|                                     | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 210                                 |
|                                     | Arm out-in (JT2)         | 210                                 |
|                                     | Arm up-down (JT3)        | 220                                 |
|                                     | Wrist swivel (JT4)       | 430                                 |
|                                     | Wrist bend (JT5)         | 430                                 |
|                                     | Wrist twist (JT6)        | 650                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 12                                  |
|                                     | Wrist bend (JT5)         | 12                                  |
|                                     | Wrist twist (JT6)        | 3.75                                |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 0.4                                 |
|                                     | Wrist bend (JT5)         | 0.4                                 |
|                                     | Wrist twist (JT6)        | 0.07                                |
| Mass (kg)                           | 160                      |                                     |
| Mounting                            | Floor, Ceiling           |                                     |
| Installation environment            | Ambient temperature (°C) | 0 - 45                              |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements       | F60/2.0kVA, F01/5.6kVA   |                                     |

\*1: Conforms to ISO9283

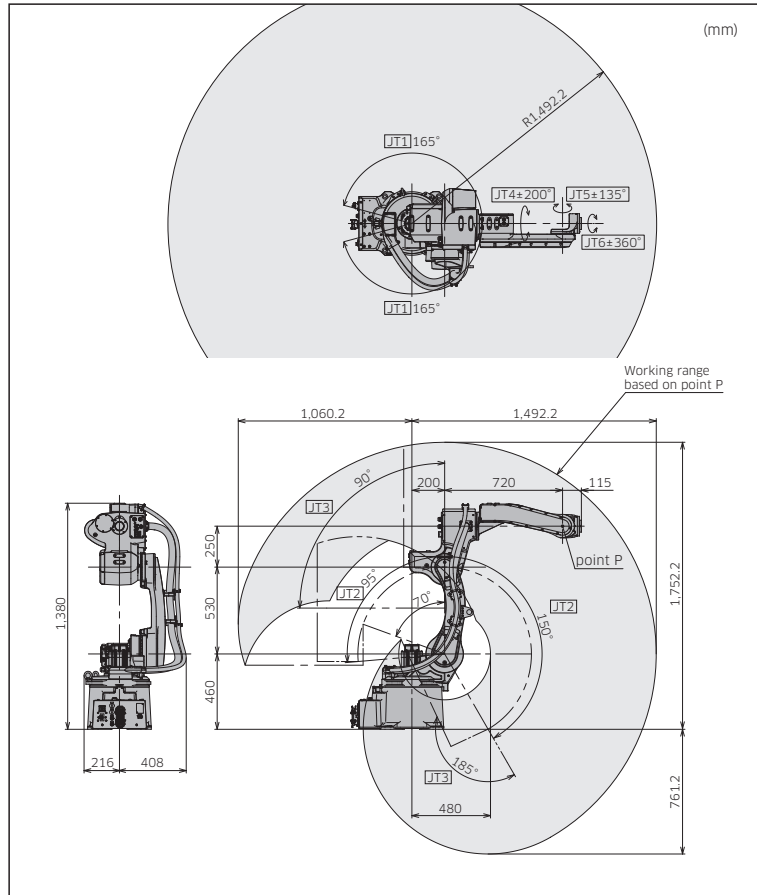


## BA013N

## Standard Specifications

| Type                                             |                          | Articulated robot                   |
|--------------------------------------------------|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         |                          | 6                                   |
| Payload (kg)                                     |                          | 13                                  |
| Max. reach (mm)                                  |                          | 1,492                               |
| Position repeatability*1 (mm)                    |                          | ±0.04                               |
| Motion range (°)                                 | Arm rotation (JT1)       | ±165                                |
|                                                  | Arm out-in (JT2)         | +150 - -95                          |
|                                                  | Arm up-down (JT3)        | +90 - -185                          |
|                                                  | Wrist swivel (JT4)       | ±200                                |
|                                                  | Wrist bend (JT5)         | ±135                                |
|                                                  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 265                                 |
|                                                  | Arm out-in (JT2)         | 250                                 |
|                                                  | Arm up-down (JT3)        | 265                                 |
|                                                  | Wrist swivel (JT4)       | 470                                 |
|                                                  | Wrist bend (JT5)         | 475                                 |
|                                                  | Wrist twist (JT6)        | 730                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 26                                  |
|                                                  | Wrist bend (JT5)         | 26                                  |
|                                                  | Wrist twist (JT6)        | 10                                  |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 0.9                                 |
|                                                  | Wrist bend (JT5)         | 0.9                                 |
|                                                  | Wrist twist (JT6)        | 0.3                                 |
| Mass (kg)                                        |                          | 260                                 |
| Mounting                                         |                          | Floor, Ceiling                      |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|                                                  | Relative humidity (%)    | 25 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    |                          | F01/5.6kVA                          |

\*1: Conforms to ISO9283

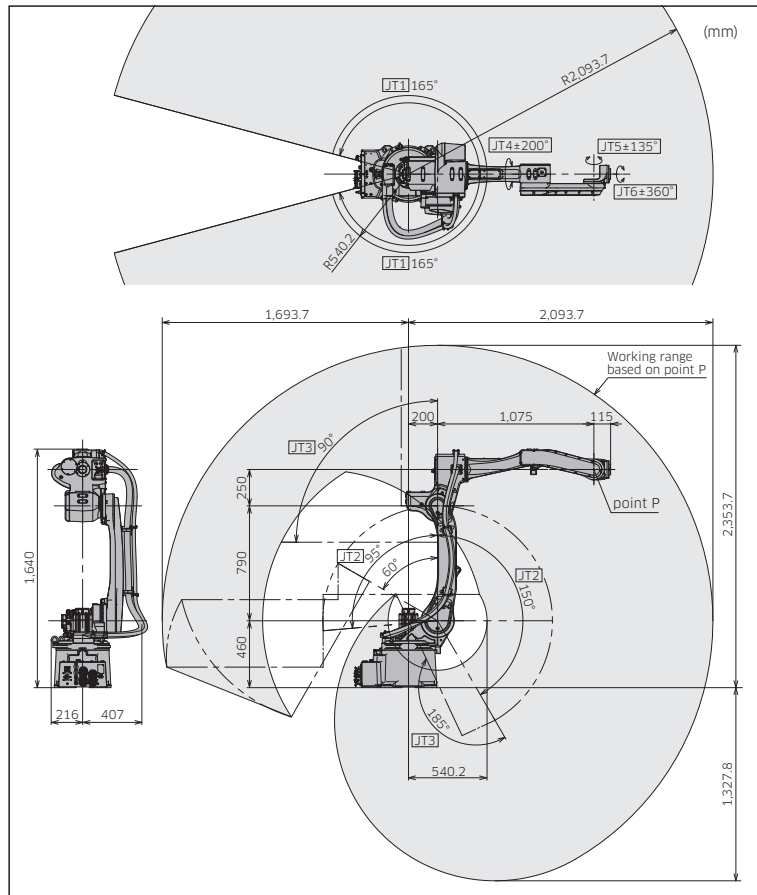


## BA013L

## Standard Specifications

| Type                                             |                          | Articulated robot                   |
|--------------------------------------------------|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         |                          | 6                                   |
| Payload (kg)                                     |                          | 13                                  |
| Max. reach (mm)                                  |                          | 2,093                               |
| Position repeatability*1 (mm)                    |                          | ±0.06                               |
| Motion range (°)                                 | Arm rotation (JT1)       | ±165                                |
|                                                  | Arm out-in (JT2)         | +150 - -95                          |
|                                                  | Arm up-down (JT3)        | +90 - -185                          |
|                                                  | Wrist swivel (JT4)       | ±200                                |
|                                                  | Wrist bend (JT5)         | ±135                                |
|                                                  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 215                                 |
|                                                  | Arm out-in (JT2)         | 215                                 |
|                                                  | Arm up-down (JT3)        | 270                                 |
|                                                  | Wrist swivel (JT4)       | 440                                 |
|                                                  | Wrist bend (JT5)         | 475                                 |
|                                                  | Wrist twist (JT6)        | 730                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 26                                  |
|                                                  | Wrist bend (JT5)         | 26                                  |
|                                                  | Wrist twist (JT6)        | 10                                  |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 0.9                                 |
|                                                  | Wrist bend (JT5)         | 0.9                                 |
|                                                  | Wrist twist (JT6)        | 0.3                                 |
| Mass (kg)                                        |                          | 280                                 |
| Mounting                                         |                          | Floor, Ceiling                      |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|                                                  | Relative humidity (%)    | 25 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    |                          | F02/7.5kVA                          |

\*1: Conforms to ISO9283



## RA005L

## Standard Specifications

| Type                                             |                          | Articulated robot                   |
|--------------------------------------------------|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         |                          | 6                                   |
| Payload (kg)                                     |                          | 5                                   |
| Max. reach (mm)                                  |                          | 903                                 |
| Position repeatability* <sup>1</sup> (mm)        |                          | ±0.03                               |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|                                                  | Arm out-in (JT2)         | +135 - -80                          |
|                                                  | Arm up-down (JT3)        | +118 - -172                         |
|                                                  | Wrist swivel (JT4)       | ±360                                |
|                                                  | Wrist bend (JT5)         | ±145                                |
| Max. speed (°/s)                                 | Wrist twist (JT6)        | ±360                                |
|                                                  | Arm rotation (JT1)       | 300                                 |
|                                                  | Arm out-in (JT2)         | 300                                 |
|                                                  | Arm up-down (JT3)        | 300                                 |
|                                                  | Wrist swivel (JT4)       | 460                                 |
| Allowable moment (N·m)                           | Wrist bend (JT5)         | 460                                 |
|                                                  | Wrist twist (JT6)        | 740                                 |
|                                                  | Wrist swivel (JT4)       | 12.3                                |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist bend (JT5)         | 12.3                                |
|                                                  | Wrist twist (JT6)        | 7                                   |
|                                                  | Wrist swivel (JT4)       | 0.4                                 |
| Mass (kg)                                        | Wrist bend (JT5)         | 0.4                                 |
|                                                  | Wrist twist (JT6)        | 0.12                                |
|                                                  | Wrist swivel (JT4)       | 0.12                                |
| Mass (kg)                                        |                          | 37                                  |
| Mounting                                         |                          | Floor, Ceiling                      |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|                                                  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    |                          | F60/2.0kVA                          |

\*1: Conforms to ISO9283



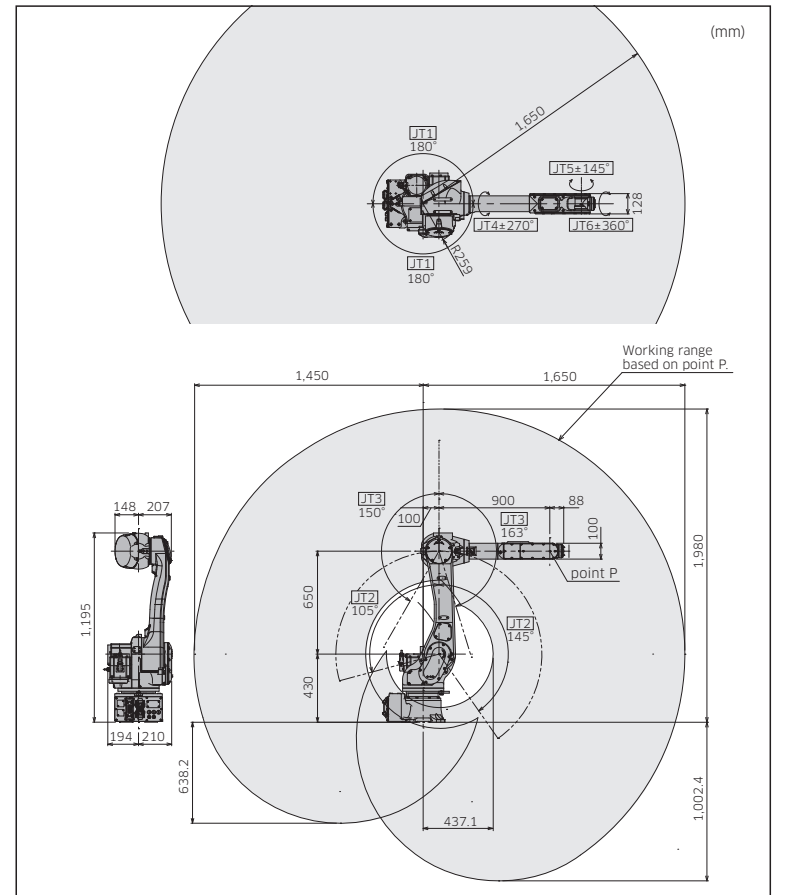
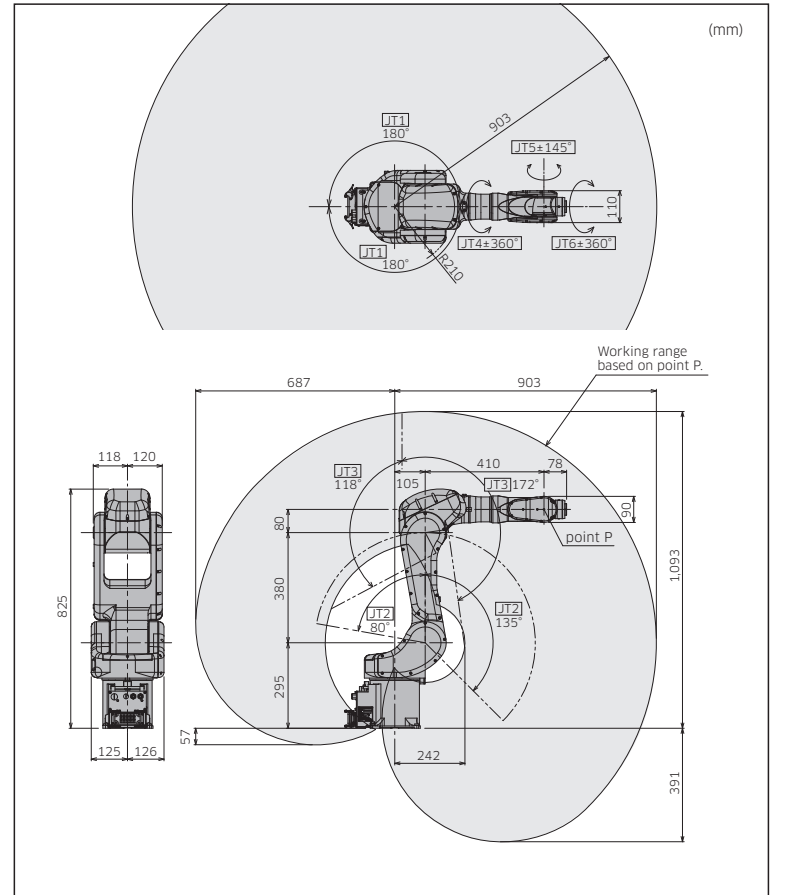
【Applications】  Arc welding

## RA006L

## Standard Specifications

| Type                                             |                          | Articulated robot                   |
|--------------------------------------------------|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         |                          | 6                                   |
| Payload (kg)                                     |                          | 6                                   |
| Max. reach (mm)                                  |                          | 1,650                               |
| Position repeatability*1 (mm)                    |                          | ±0.03                               |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|                                                  | Arm out-in (JT2)         | +145 - -105                         |
|                                                  | Arm up-down (JT3)        | +150 - -163                         |
|                                                  | Wrist swivel (JT4)       | ±270                                |
|                                                  | Wrist bend (JT5)         | ±145                                |
|                                                  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 250                                 |
|                                                  | Arm out-in (JT2)         | 250                                 |
|                                                  | Arm up-down (JT3)        | 215                                 |
|                                                  | Wrist swivel (JT4)       | 365                                 |
|                                                  | Wrist bend (JT5)         | 380                                 |
|                                                  | Wrist twist (JT6)        | 700                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 13                                  |
|                                                  | Wrist bend (JT5)         | 13                                  |
|                                                  | Wrist twist (JT6)        | 7.5                                 |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 0.45                                |
|                                                  | Wrist bend (JT5)         | 0.45                                |
|                                                  | Wrist twist (JT6)        | 0.14                                |
| Mass (kg)                                        |                          | 150                                 |
| Mounting                                         |                          | Floor, Ceiling                      |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|                                                  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    |                          | F60/2.0kVA, F01/5.6kVA              |

\*1: Conforms to ISO9283



## Features

- Wide range of lineup to cover diverse size of parts.
- Connection with a single cable between the robot and the welder.

## 05

## 05

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05



## 06

## 06

06

06



## 05

## 05

05

05



F60

Features

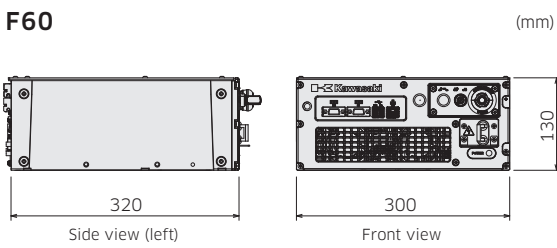
- This universal controller has common specifications to be used worldwide.
- Drastic downsizing has achieved very compact dimensions and light weight (8.3kg). It is easy for a person to carry the controller.



Standard Specifications

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

External view and dimensions



F01/F02

Features

- Dimensions and weight have been reduced from its previous E-controller.
- This universal controller has common specifications that can be used globally. (An optional transformer unit is necessary in the region where the power supply and safety standard differ.)

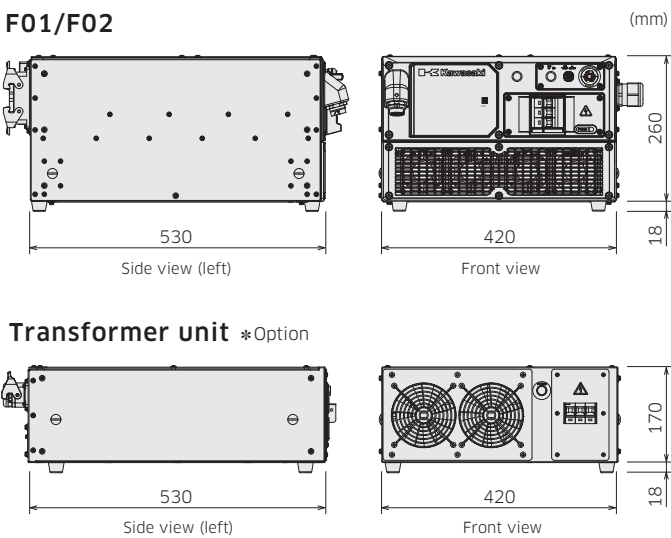


Standard Specifications

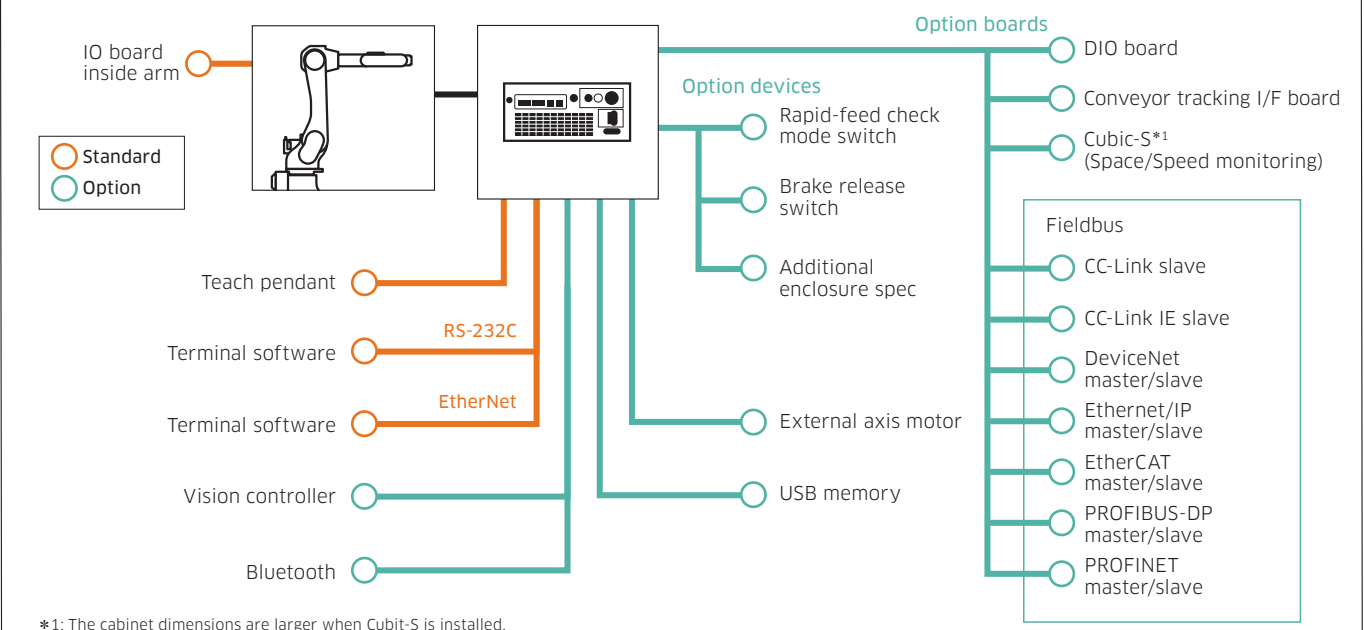
|                          |                          | F01                                                                                       | F02 |
|--------------------------|--------------------------|-------------------------------------------------------------------------------------------|-----|
| Dimensions (mm)          |                          | W420×D530×H278                                                                            |     |
| Type                     |                          | Enclosed type, indirect cooling system (IP54 or equivalent)                               |     |
| Controlled (axes)        |                          | 7                                                                                         |     |
| Memory capacity (MB)     |                          | 16                                                                                        |     |
| I/O signals              | External operation       | Motor power off, Hold                                                                     |     |
|                          | Input (Channels)         | 32                                                                                        |     |
|                          | Output (Channels)        | 32                                                                                        |     |
| Cable length             | Teach pendant (m)        | 5                                                                                         |     |
|                          | Robot-controller (m)     | 5                                                                                         |     |
| Mass (kg)                |                          | 20                                                                                        | 25  |
| Power requirements       |                          | AC200V - AC220V ±10%, 50/60Hz, 3Φ<br>AC200V - AC230V ±10%, 50/60Hz, 1Φ*1<br>Max. 5.6kVA   |     |
| Installation environment | Ambient temperature (°C) | 0 - 45                                                                                    |     |
|                          | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed)                                                       |     |
| Teach pendant            |                          | Color LCD display with touch-panel,<br>E-Stop switch, Teach lock switch,<br>Enable switch |     |
| Operation panel          |                          | E-stop switch, teach/repeat switch                                                        |     |

\*1:The 200V, single-phase power can be used for the F01 controller only.

External view and dimensions

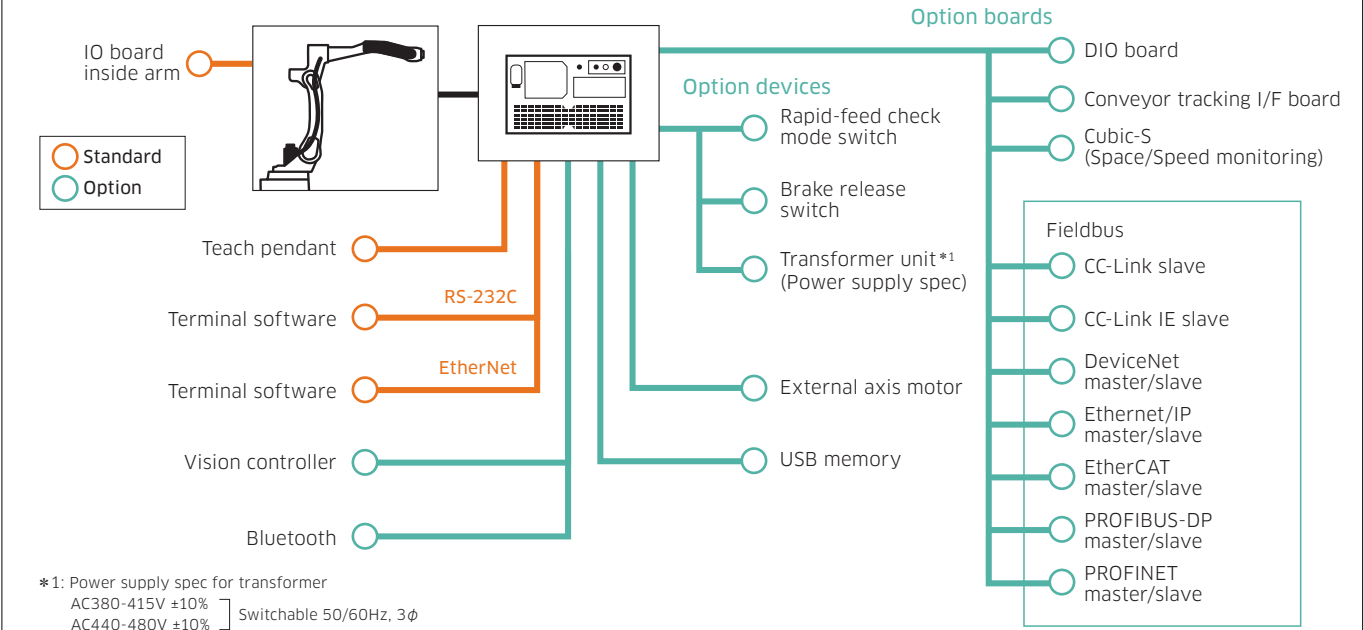


System configuration



\*1: The cabinet dimensions are larger when Cubit-S is installed.

System configuration



\*1: Power supply spec for transformer  
AC380-415V ±10%  
AC440-480V ±10% } Switchable 50/60Hz, 3Φ