

## Kawasaki Heavy Industries, Ltd

### Robot Business Division

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



**Kawasaki Robostage (showroom)**  
<https://kawasakirobotics.com/jp-sp/robostage/en/>



# Kawasaki Robot

## Large Robots up to 300kg payload

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

### Global Network

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Warrington Cheshire, WA5 7ZB, United Kingdom  
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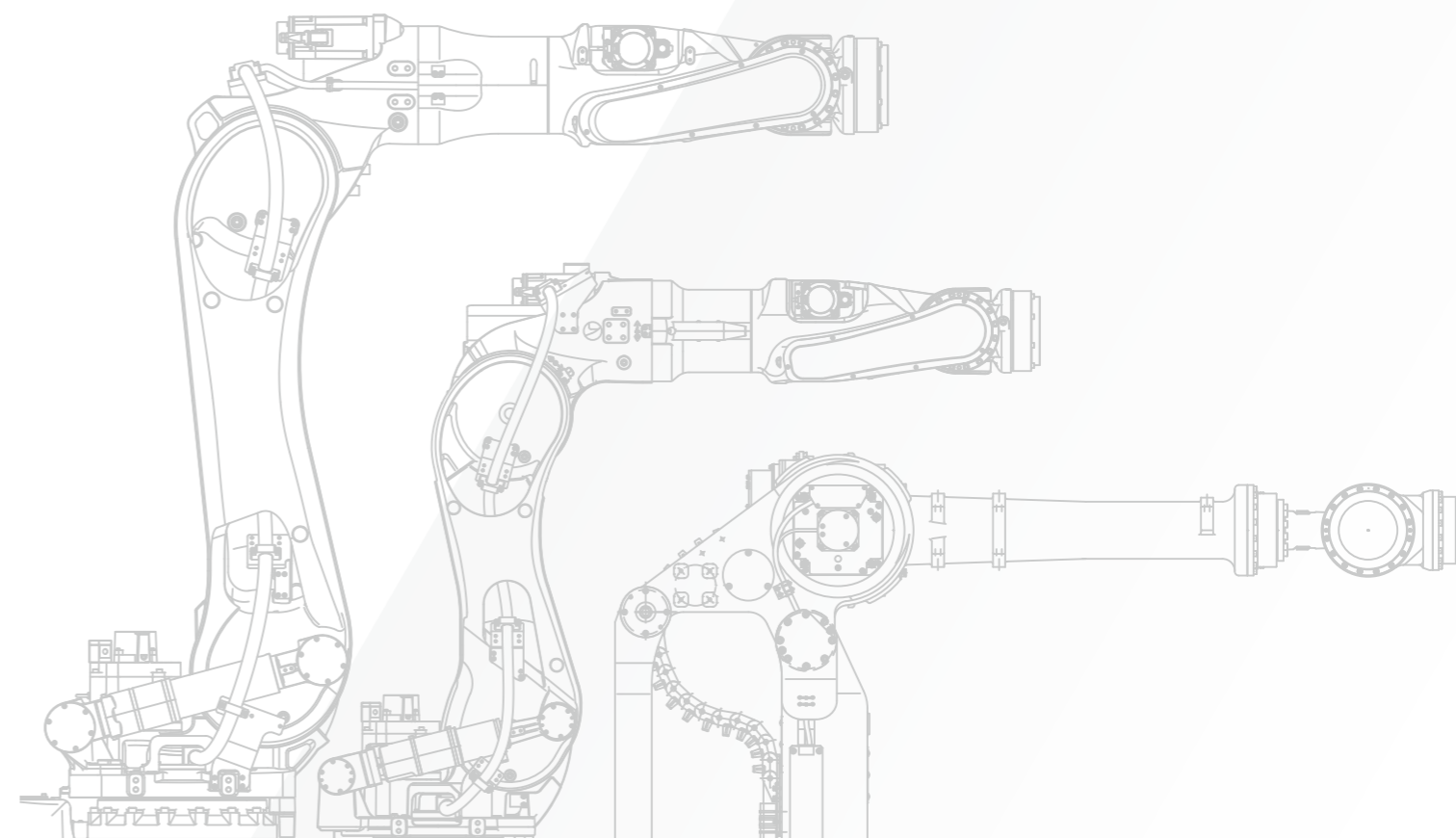
#### Kawasaki Robotics India Pvt. Ltd.

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Phone: +91-124-437-1845



#### 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.

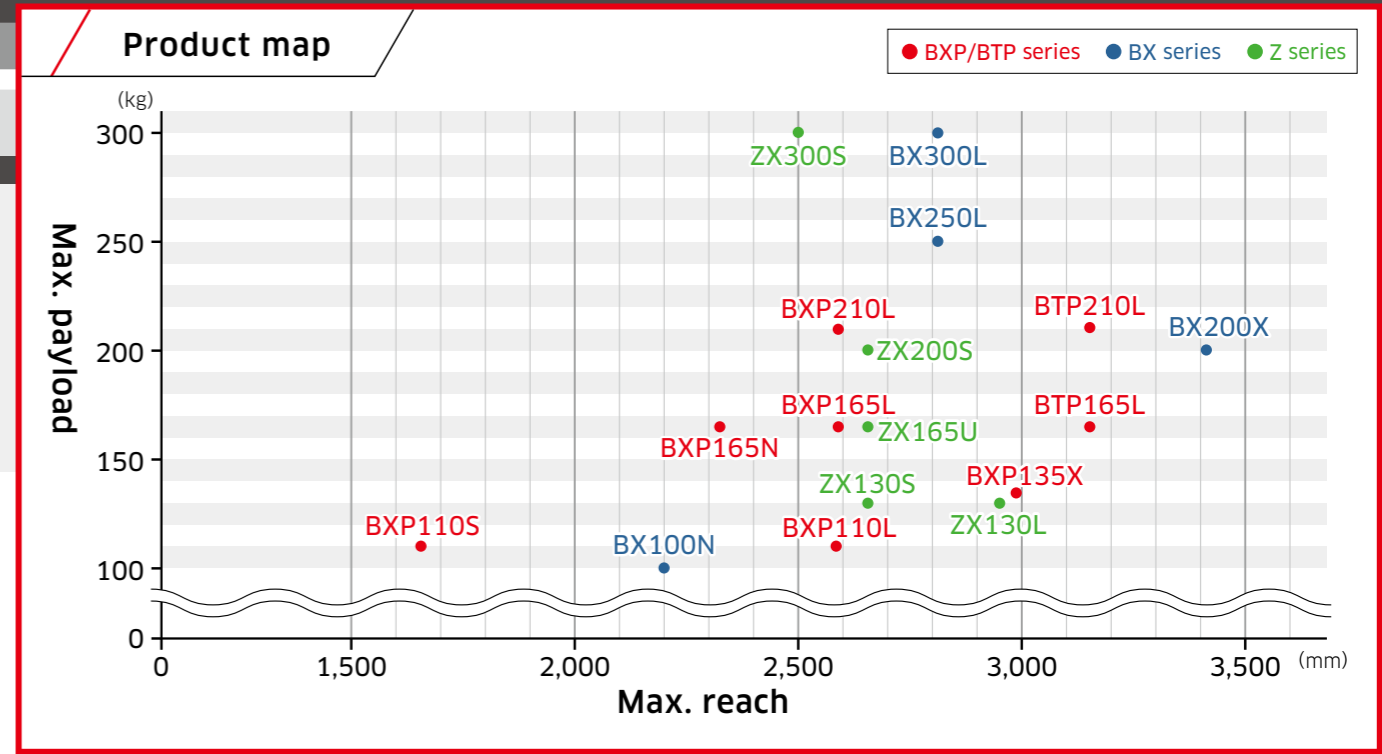


# Large general-purpose robots

Kawasaki's large general-purpose robots (100-300kg payload) are used in diverse industries, such as the automobile, aerospace, machinery, metal working, electric, electronics and food industries. With high versatility, they can be used for a wide range of applications including assembling, handling and spot welding.

## BXP/BTP series

The BXP/BTP series features slim bodies, high rigidity and performance. They have evolved from the BX series robots.



## BX series

The BX series robots are equipped with hollow wrists and arms. They have a wide motion range and are used for diverse industries and applications.



## ZX series

The ZX series robots are long-run products with a great number of supply records. They are suitable for harsh environment thanks to wrist motors located at the shoulder.



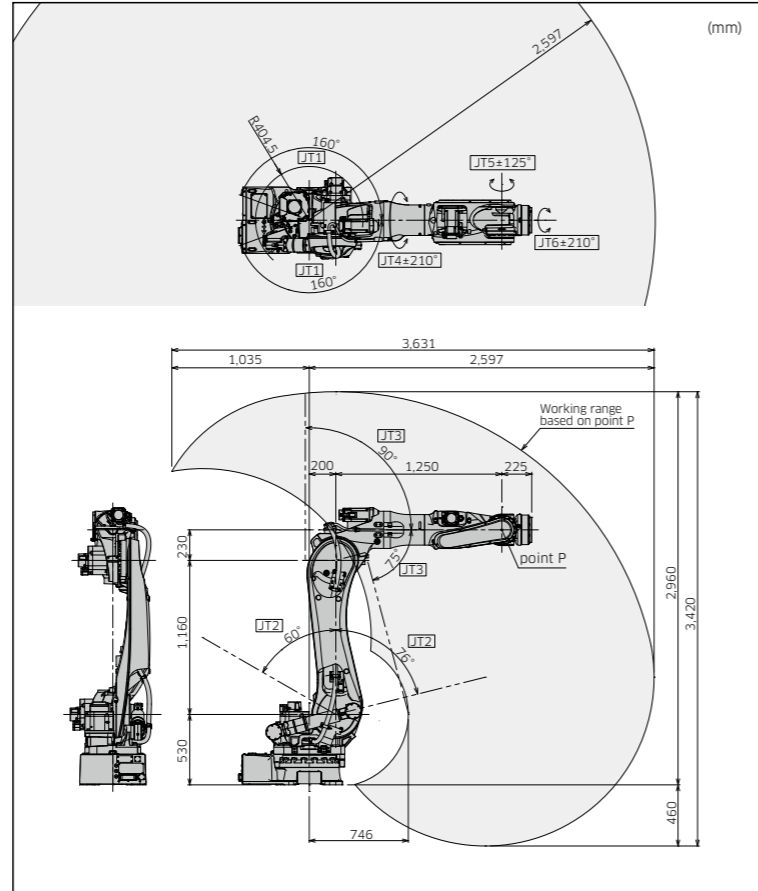


## BXP165L

### Standard Specifications

| Type                                |                          | Articulated robot                                       |
|-------------------------------------|--------------------------|---|
| Degree of freedom (axes)            |                          | 6   |
| Payload (kg)                        |                          | 165   |
| Max. reach (mm)                     |                          | 2,597   |
| Position repeatability*1 (mm)       |                          | ±0.06   |
| Motion range (°)                    | Arm rotation (JT1)       | ±160  |
|                                     | Arm out-in (JT2)         | +76 - -60   |
|                                     | Arm up-down (JT3)        | +90 - -75   |
|                                     | Wrist swivel (JT4)       | ±210  |
|                                     | Wrist bend (JT5)         | ±125  |
|                                     | Wrist twist (JT6)        | ±210  |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 140   |
|                                     | Arm out-in (JT2)         | 115   |
|                                     | Arm up-down (JT3)        | 130   |
|                                     | Wrist swivel (JT4)       | 190   |
|                                     | Wrist bend (JT5)         | 180   |
|                                     | Wrist twist (JT6)        | 290   |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 960   |
|                                     | Wrist bend (JT5)         | 960   |
|                                     | Wrist twist (JT6)        | 520   |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 105   |
|                                     | Wrist bend (JT5)         | 105   |
|                                     | Wrist twist (JT6)        | 50  |
| Mass (kg)                           |                          | 870   |
| Mounting                            |                          | Floor   |
| Installation environment            | Ambient temperature (°C) | 0 - 45  |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed)                     |
| Degree of protection                |                          | Wrist: IP67 or equivalent Base axes: IP54 or equivalent |
| Controller/Power requirements       |                          | F02/7.5kVA  |

\*1: Conforms to ISO9283

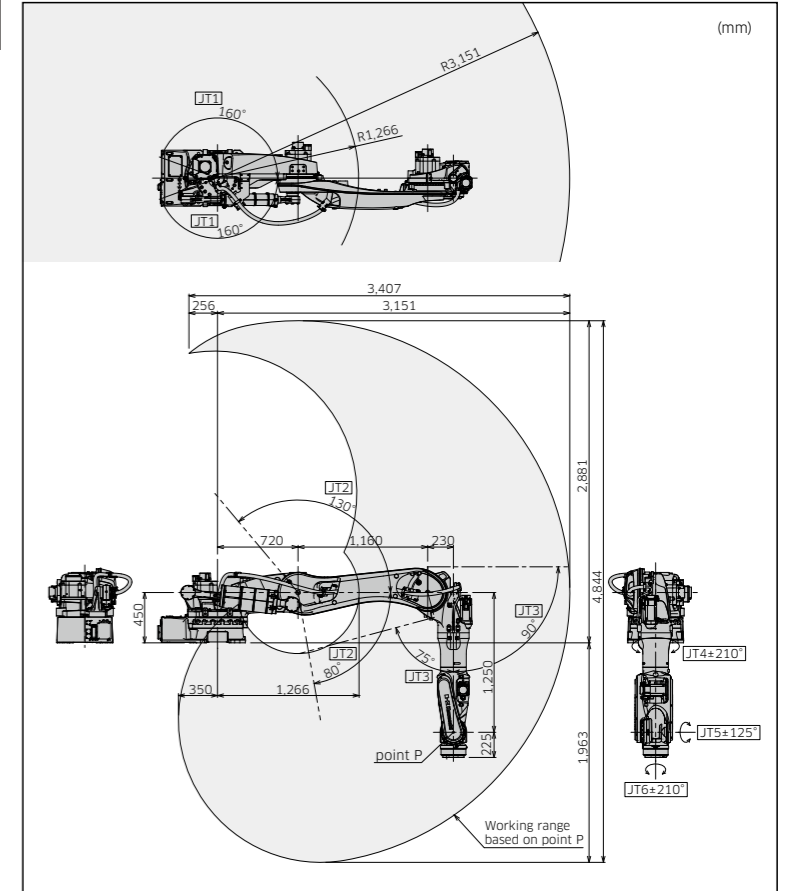


## BTP165L

### Standard Specifications

| Type                                |                          | Articulated robot                                       |
|-------------------------------------|--------------------------|---|
| Degree of freedom (axes)            |                          | 6   |
| Payload (kg)                        |                          | 165   |
| Max. reach (mm)                     |                          | 3,151   |
| Position repeatability*1 (mm)       |                          | ±0.08   |
| Motion range (°)                    | Arm rotation (JT1)       | ±160  |
|                                     | Arm out-in (JT2)         | +80 - -130  |
|                                     | Arm up-down (JT3)        | +90 - -75   |
|                                     | Wrist swivel (JT4)       | ±210  |
|                                     | Wrist bend (JT5)         | ±125  |
|                                     | Wrist twist (JT6)        | ±210  |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 125   |
|                                     | Arm out-in (JT2)         | 115   |
|                                     | Arm up-down (JT3)        | 130   |
|                                     | Wrist swivel (JT4)       | 190   |
|                                     | Wrist bend (JT5)         | 180   |
|                                     | Wrist twist (JT6)        | 290   |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 960   |
|                                     | Wrist bend (JT5)         | 960   |
|                                     | Wrist twist (JT6)        | 520   |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 105   |
|                                     | Wrist bend (JT5)         | 105   |
|                                     | Wrist twist (JT6)        | 50  |
| Mass (kg)                           |                          | 1,030   |
| Mounting                            |                          | Shelf   |
| Installation environment            | Ambient temperature (°C) | 0 - 45  |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed)                     |
| Degree of protection                |                          | Wrist: IP67 or equivalent Base axes: IP54 or equivalent |
| Controller/Power requirements       |                          | F02/7.5kVA  |

\*1: Conforms to ISO9283

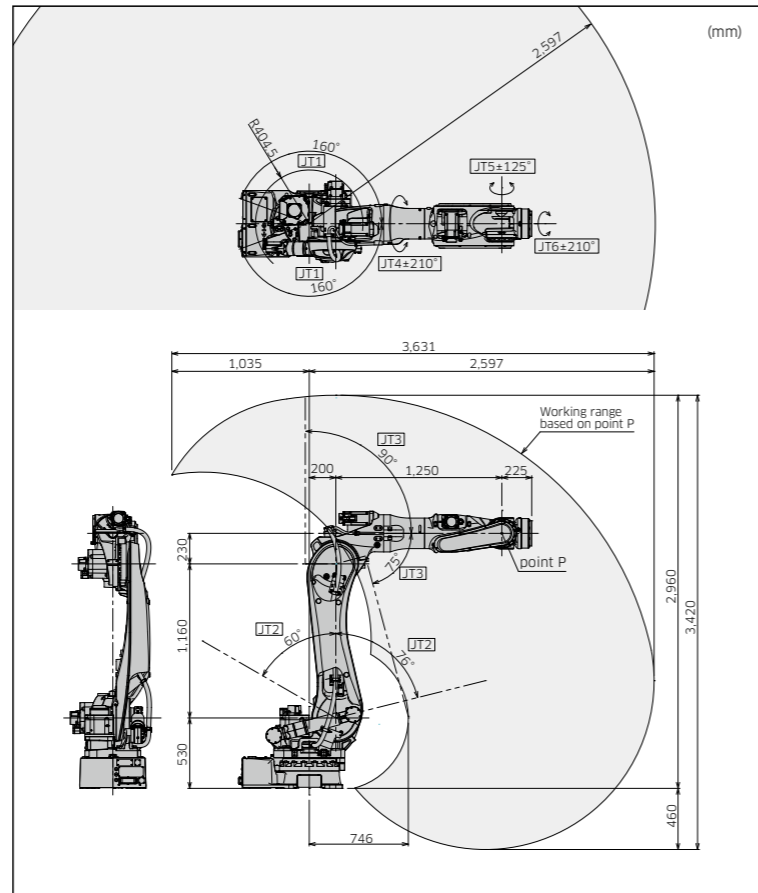


## BXP210L

### Standard Specifications

| Type                                |                          | Articulated robot                                       |
|-------------------------------------|--------------------------|---|
| Degree of freedom (axes)            |                          | 6   |
| Payload (kg)                        |                          | 210   |
| Max. reach (mm)                     |                          | 2,597   |
| Position repeatability*1 (mm)       |                          | ±0.06   |
| Motion range (°)                    | Arm rotation (JT1)       | ±160  |
|                                     | Arm out-in (JT2)         | +76 - -60   |
|                                     | Arm up-down (JT3)        | +90 - -75   |
|                                     | Wrist swivel (JT4)       | ±210  |
|                                     | Wrist bend (JT5)         | ±125  |
|                                     | Wrist twist (JT6)        | ±210  |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 140   |
|                                     | Arm out-in (JT2)         | 105   |
|                                     | Arm up-down (JT3)        | 115   |
|                                     | Wrist swivel (JT4)       | 140   |
|                                     | Wrist bend (JT5)         | 135   |
|                                     | Wrist twist (JT6)        | 240   |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 1,380   |
|                                     | Wrist bend (JT5)         | 1,380   |
|                                     | Wrist twist (JT6)        | 600   |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 205   |
|                                     | Wrist bend (JT5)         | 205   |
|                                     | Wrist twist (JT6)        | 160   |
| Mass (kg)                           |                          | 870   |
| Mounting                            |                          | Floor   |
| Installation environment            | Ambient temperature (°C) | 0 - 45  |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed)                     |
| Degree of protection                |                          | Wrist: IP67 or equivalent Base axes: IP54 or equivalent |
| Controller/Power requirements       |                          | F02/7.5kVA  |

\*1: Conforms to ISO9283

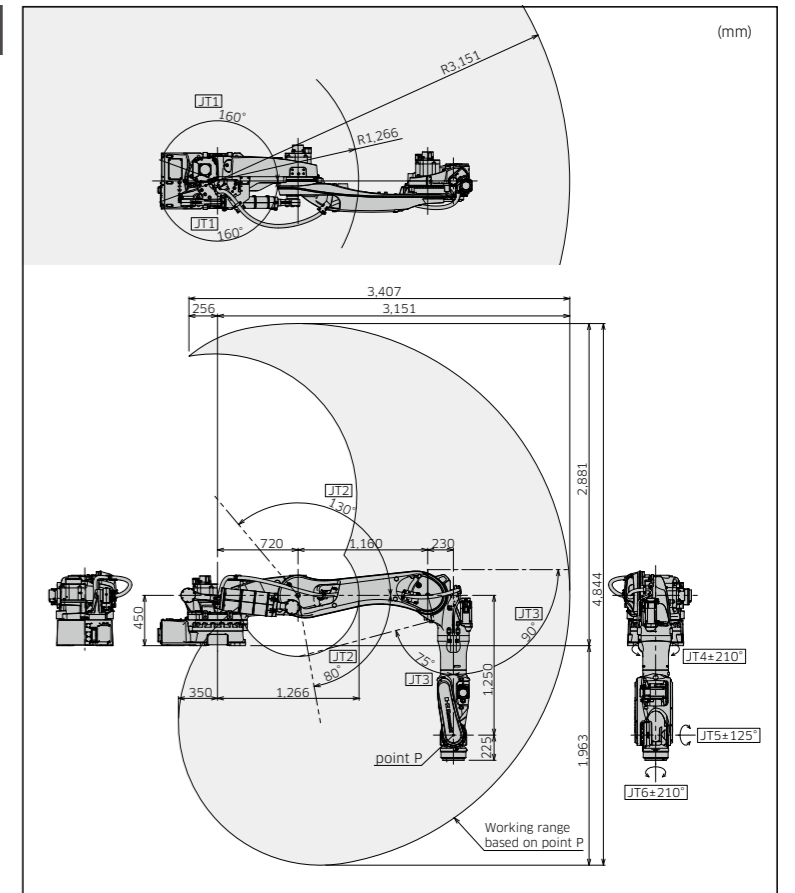


## BTP210L

### Standard Specifications

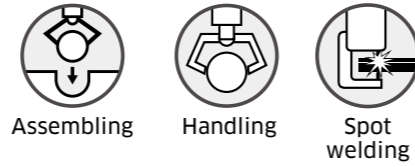
| Type                                |                          | Articulated robot                                       |
|-------------------------------------|--------------------------|---|
| Degree of freedom (axes)            |                          | 6   |
| Payload (kg)                        |                          | 210   |
| Max. reach (mm)                     |                          | 3,151   |
| Position repeatability*1 (mm)       |                          | ±0.08   |
| Motion range (°)                    | Arm rotation (JT1)       | ±160  |
|                                     | Arm out-in (JT2)         | +80 - -130  |
|                                     | Arm up-down (JT3)        | +90 - -75   |
|                                     | Wrist swivel (JT4)       | ±210  |
|                                     | Wrist bend (JT5)         | ±125  |
|                                     | Wrist twist (JT6)        | ±210  |
| Max. speed (°/s)                    | Arm rotation (JT1)       | 115   |
|                                     | Arm out-in (JT2)         | 90  |
|                                     | Arm up-down (JT3)        | 115   |
|                                     | Wrist swivel (JT4)       | 140   |
|                                     | Wrist bend (JT5)         | 135   |
|                                     | Wrist twist (JT6)        | 240   |
| Allowable moment (N·m)              | Wrist swivel (JT4)       | 1,380   |
|                                     | Wrist bend (JT5)         | 1,380   |
|                                     | Wrist twist (JT6)        | 600   |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)       | 205   |
|                                     | Wrist bend (JT5)         | 205   |
|                                     | Wrist twist (JT6)        | 160   |
| Mass (kg)                           |                          | 1,030   |
| Mounting                            |                          | Shelf   |
| Installation environment            | Ambient temperature (°C) | 0 - 45  |
|                                     | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed)                     |
| Degree of protection                |                          | Wrist: IP67 or equivalent Base axes: IP54 or equivalent |
| Controller/Power requirements       |                          | F02/7.5kVA  |

\*1: Conforms to ISO9283



# BX series

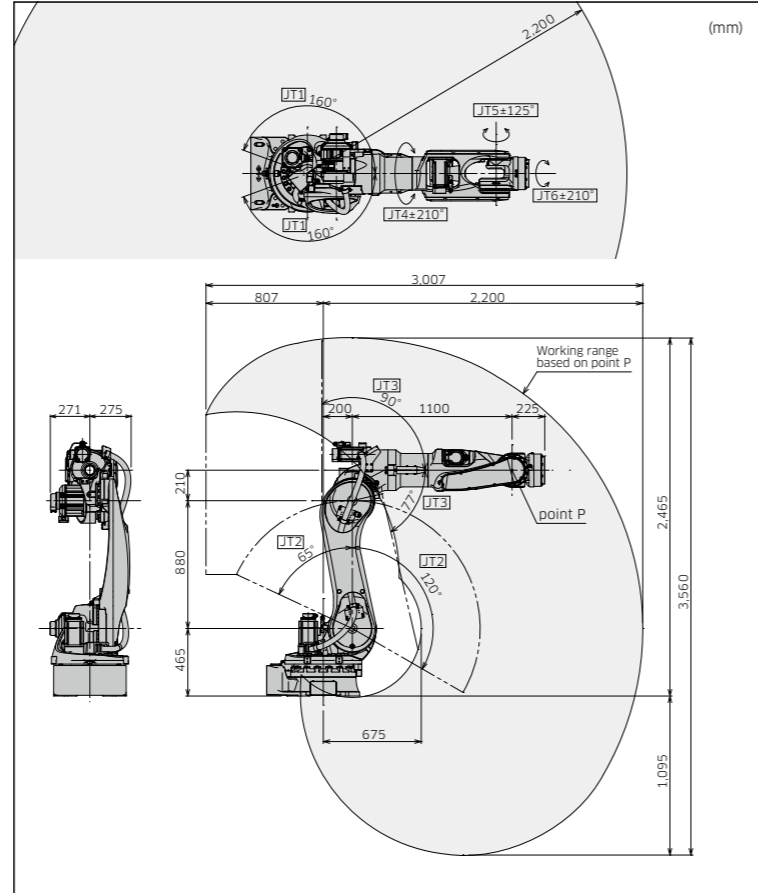
## [Applications]



## BX100N

### Standard Specifications

| Type                                | Articulated robot   |                                     |
|-------------------------------------|---|-------------------------------------|
| Degree of freedom (axes)            | 6   |                                     |
| Payload (kg)                        | 100   |                                     |
| Max. reach (mm)                     | 2,200   |                                     |
| Position repeatability*1 (mm)       | ±0.06   |                                     |
| Motion range (°)                    | Arm rotation (JT1)  | ±160                                |
|                                     | Arm out-in (JT2)  | +120 - -65                          |
|                                     | Arm up-down (JT3)   | +90 - -77                           |
|                                     | Wrist swivel (JT4)  | ±210                                |
|                                     | Wrist bend (JT5)  | ±125                                |
|                                     | Wrist twist (JT6)   | ±210                                |
| Max. speed (°/s)                    | Arm rotation (JT1)  | 135                                 |
|                                     | Arm out-in (JT2)  | 110                                 |
|                                     | Arm up-down (JT3)   | 140                                 |
|                                     | Wrist swivel (JT4)  | 200                                 |
|                                     | Wrist bend (JT5)  | 200                                 |
|                                     | Wrist twist (JT6)   | 300                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)  | 588.4                               |
|                                     | Wrist bend (JT5)  | 588.4                               |
|                                     | Wrist twist (JT6)   | 294.2                               |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)  | 60                                  |
|                                     | Wrist bend (JT5)  | 60                                  |
|                                     | Wrist twist (JT6)   | 30                                  |
| Mass (kg)                           | 740   |                                     |
| Mounting                            | Floor   |                                     |
| Installation environment            | Ambient temperature (°C)                                  | 0 - 45                              |
|                                     | Relative humidity (%)                                     | 35 - 85 (No dew, nor frost allowed) |
| Degee of protection                 | Wrist : IP67 or equivalent Base axes : IP54 or equivalent |                                     |
| Controller/Power requirements       | F02/7.5kVA  |                                     |

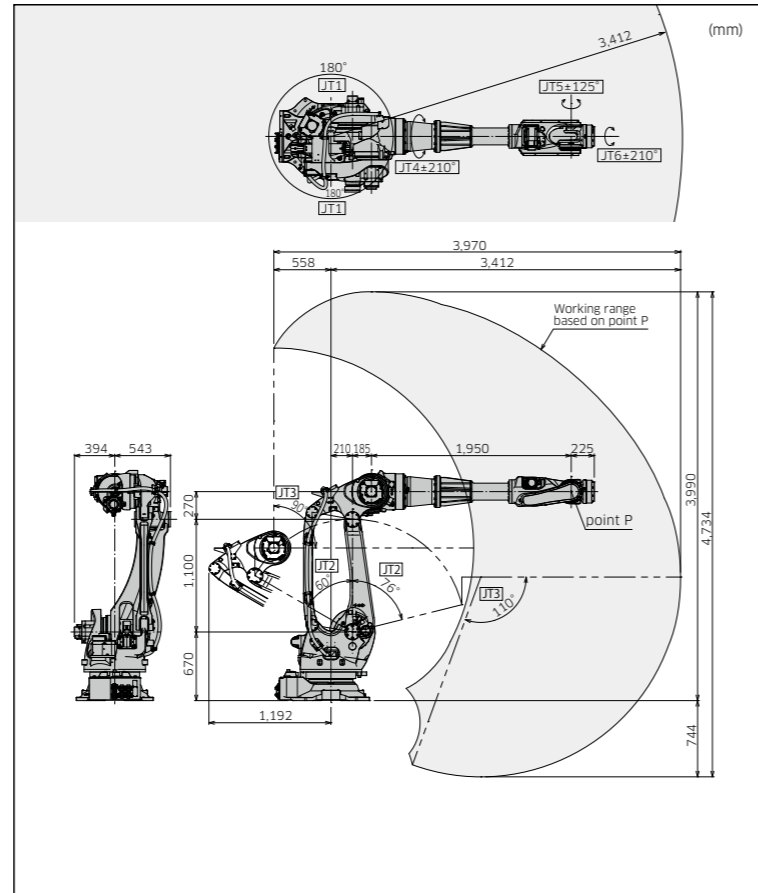


\*1: Conforms to ISO9283

## BX200X

### Standard Specifications

| Type                                | Articulated robot   |                                     |
|-------------------------------------|---|-------------------------------------|
| Degree of freedom (axes)            | 6   |                                     |
| Payload (kg)                        | 200   |                                     |
| Max. reach (mm)                     | 3,412   |                                     |
| Position repeatability*1 (mm)       | ±0.07   |                                     |
| Motion range (°)                    | Arm rotation (JT1)  | ±180                                |
|                                     | Arm out-in (JT2)  | +76 - -60                           |
|                                     | Arm up-down (JT3)   | +90 - -110                          |
|                                     | Wrist swivel (JT4)  | ±210                                |
|                                     | Wrist bend (JT5)  | ±125                                |
|                                     | Wrist twist (JT6)   | ±210                                |
| Max. speed (°/s)                    | Arm rotation (JT1)  | 125                                 |
|                                     | Arm out-in (JT2)  | 102                                 |
|                                     | Arm up-down (JT3)   | 85                                  |
|                                     | Wrist swivel (JT4)  | 105                                 |
|                                     | Wrist bend (JT5)  | 120                                 |
|                                     | Wrist twist (JT6)   | 200                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)  | 1,334                               |
|                                     | Wrist bend (JT5)  | 1,334                               |
|                                     | Wrist twist (JT6)   | 588                                 |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)  | 199.8                               |
|                                     | Wrist bend (JT5)  | 199.8                               |
|                                     | Wrist twist (JT6)   | 154.9                               |
| Mass (kg)                           | 1,450   |                                     |
| Mounting                            | Floor   |                                     |
| Installation environment            | Ambient temperature (°C)                                  | 0 - 45                              |
|                                     | Relative humidity (%)                                     | 35 - 85 (No dew, nor frost allowed) |
| Degee of protection                 | Wrist : IP67 or equivalent Base axes : IP54 or equivalent |                                     |
| Controller/Power requirements       | F02/7.5kVA  |                                     |



\*1: Conforms to ISO9283

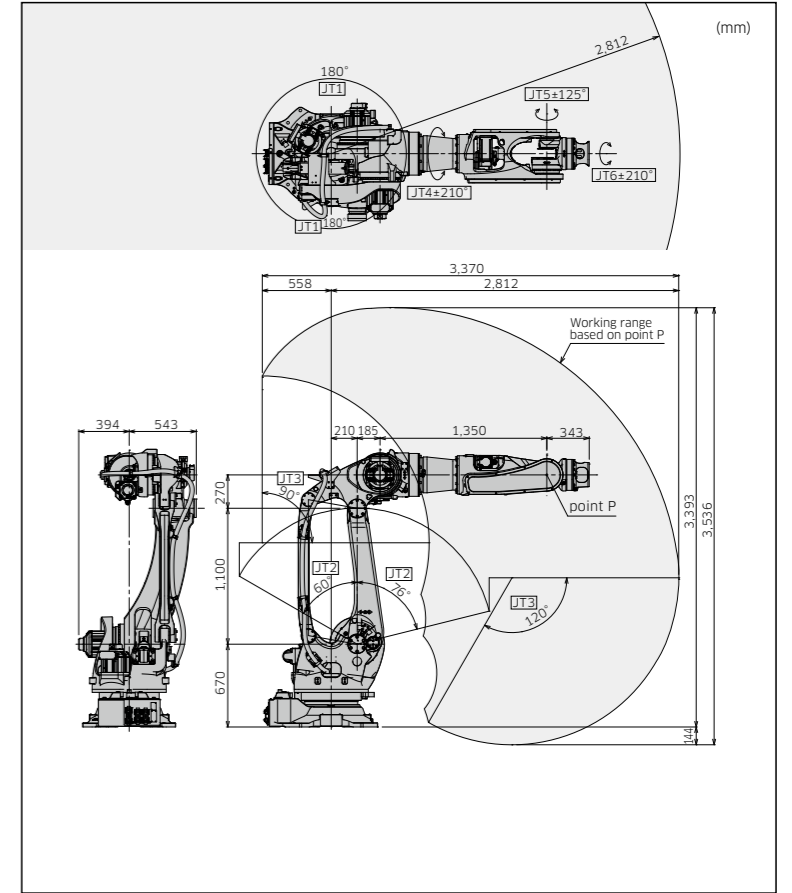
## Features

- Built-in cables and hoses
- Slim arm design for high-density installation.

## BX250L

### Standard Specifications

| Type                                | Articulated robot   |                                     |
|-------------------------------------|---|-------------------------------------|
| Degree of freedom (axes)            | 6   |                                     |
| Payload (kg)                        | 250   |                                     |
| Max. reach (mm)                     | 2,812   |                                     |
| Position repeatability*1 (mm)       | ±0.07   |                                     |
| Motion range (°)                    | Arm rotation (JT1)  | ±180                                |
|                                     | Arm out-in (JT2)  | +76 - -60                           |
|                                     | Arm up-down (JT3)   | +90 - -120                          |
|                                     | Wrist swivel (JT4)  | ±210                                |
|                                     | Wrist bend (JT5)  | ±125                                |
|                                     | Wrist twist (JT6)   | ±210                                |
| Max. speed (°/s)                    | Arm rotation (JT1)  | 125                                 |
|                                     | Arm out-in (JT2)  | 120                                 |
|                                     | Arm up-down (JT3)   | 100                                 |
|                                     | Wrist swivel (JT4)  | 140                                 |
|                                     | Wrist bend (JT5)  | 140                                 |
|                                     | Wrist twist (JT6)   | 200                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)  | 1,800                               |
|                                     | Wrist bend (JT5)  | 1,800                               |
|                                     | Wrist twist (JT6)   | 750                                 |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)  | 200                                 |
|                                     | Wrist bend (JT5)  | 200                                 |
|                                     | Wrist twist (JT6)   | 165                                 |
| Mass (kg)                           | 1,460   |                                     |
| Mounting                            | Floor   |                                     |
| Installation environment            | Ambient temperature (°C)                                  | 0 - 45                              |
|                                     | Relative humidity (%)                                     | 35 - 85 (No dew, nor frost allowed) |
| Degee of protection                 | Wrist : IP67 or equivalent Base axes : IP54 or equivalent |                                     |
| Controller/Power requirements       | F02/7.5kVA  |                                     |

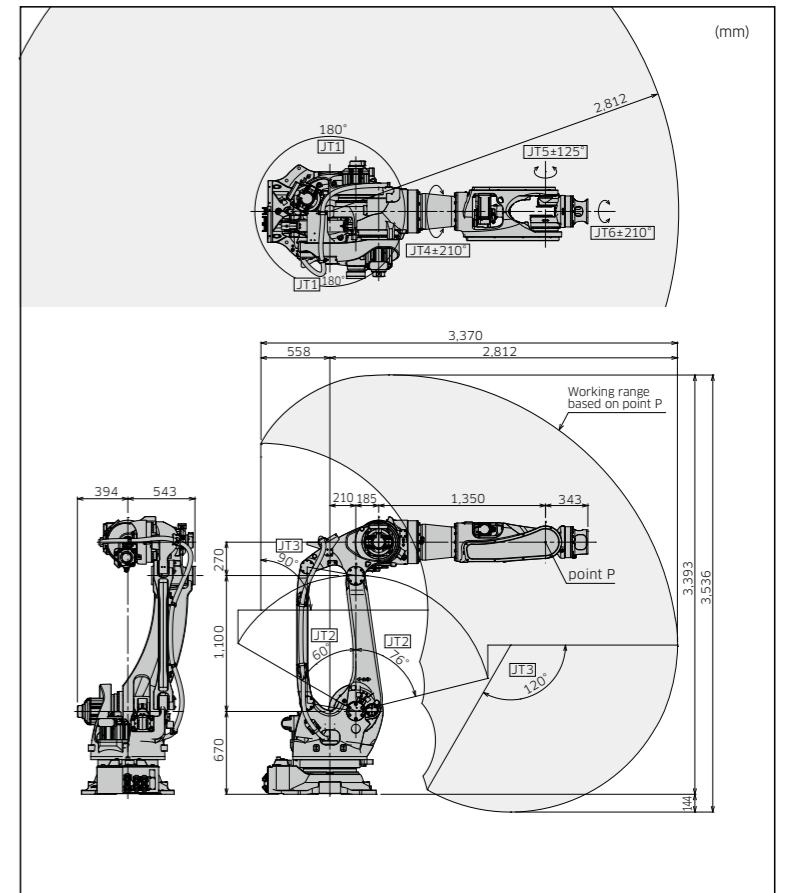


\*1: Conforms to ISO9283

## BX300L

### Standard Specifications

| Type                                | Articulated robot   |                                     |
|-------------------------------------|---|-------------------------------------|
| Degree of freedom (axes)            | 6   |                                     |
| Payload (kg)                        | 300   |                                     |
| Max. reach (mm)                     | 2,812   |                                     |
| Position repeatability*1 (mm)       | ±0.07   |                                     |
| Motion range (°)                    | Arm rotation (JT1)  | ±180                                |
|                                     | Arm out-in (JT2)  | +76 - -60                           |
|                                     | Arm up-down (JT3)   | +90 - -120                          |
|                                     | Wrist swivel (JT4)  | ±210                                |
|                                     | Wrist bend (JT5)  | ±125                                |
|                                     | Wrist twist (JT6)   | ±210                                |
| Max. speed (°/s)                    | Arm rotation (JT1)  | 125                                 |
|                                     | Arm out-in (JT2)  | 102                                 |
|                                     | Arm up-down (JT3)   | 85                                  |
|                                     | Wrist swivel (JT4)  | 105                                 |
|                                     | Wrist bend (JT5)  | 110                                 |
|                                     | Wrist twist (JT6)   | 180                                 |
| Allowable moment (N·m)              | Wrist swivel (JT4)  | 2,300                               |
|                                     | Wrist bend (JT5)  | 2,300                               |
|                                     | Wrist twist (JT6)   | 1,000                               |
| Allowable moment of inertia (kg·m²) | Wrist swivel (JT4)  | 240                                 |
|                                     | Wrist bend (JT5)  | 240                                 |
|                                     | Wrist twist (JT6)   | 200                                 |
| Mass (kg)                           | 1,460   |                                     |
| Mounting                            | Floor   |                                     |
| Installation environment            | Ambient temperature (°C)                                  | 0 - 45                              |
|                                     | Relative humidity (%)                                     | 35 - 85 (No dew, nor frost allowed) |
| Degee of protection                 | Wrist : IP67 or equivalent Base axes : IP54 or equivalent |                                     |
| Controller/Power requirements       | F02/7.5kVA  |                                     |



\*1: Conforms to ISO9283

## [Applications]



Assembling

Handling

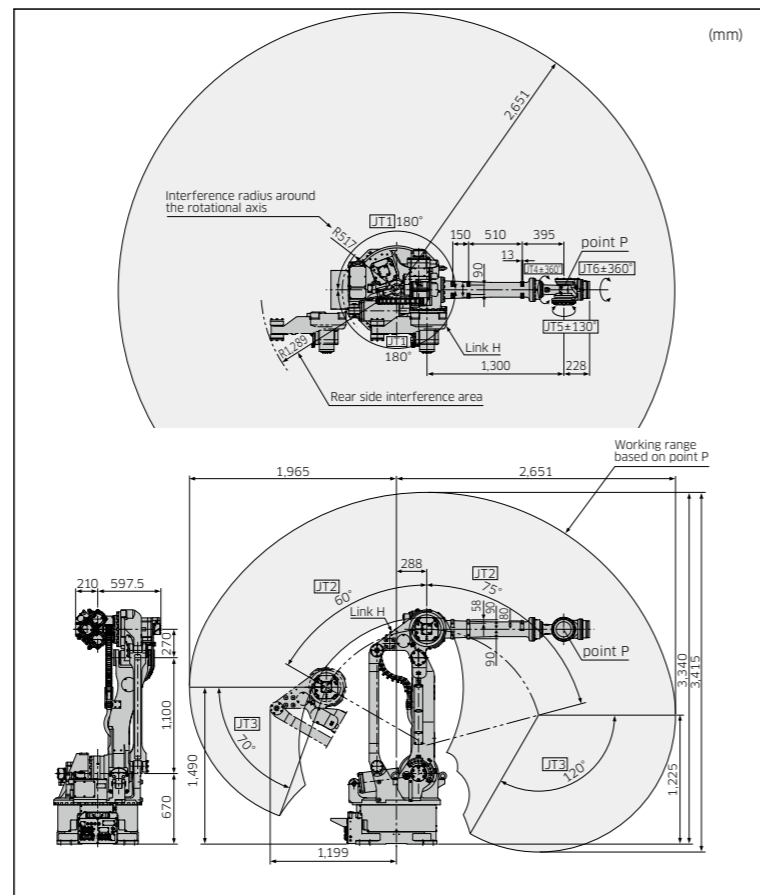
Spot welding

## ZX130S / ZX165U

### Standard Specifications

| Type   | Articulated robot        |                                     |
|--|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         | 6                        |                                     |
| Payload (kg)                                     | 130/165                  |                                     |
| Max. reach (mm)                                  | 2,651                    |                                     |
| Position repeatability*1 (mm)                    | ±0.3                     |                                     |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|  | Arm out-in (JT2)         | +75 - -60                           |
|  | Arm up-down (JT3)        | +250 - -120                         |
|  | Wrist swivel (JT4)       | ±360                                |
|  | Wrist bend (JT5)         | ±130                                |
|  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 130/110                             |
|  | Arm out-in (JT2)         | 130/110                             |
|  | Arm up-down (JT3)        | 130/115                             |
|  | Wrist swivel (JT4)       | 180/140                             |
|  | Wrist bend (JT5)         | 180/155                             |
|  | Wrist twist (JT6)        | 280/260                             |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 735/911.4                           |
|  | Wrist bend (JT5)         | 735/911.4                           |
|  | Wrist twist (JT6)        | 421/450.8                           |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 51.9/78.4                           |
|  | Wrist bend (JT5)         | 51.9/78.4                           |
|  | Wrist twist (JT6)        | 27.4/40.2                           |
| Mass (kg)  | 1,350                    |                                     |
| Mounting   | Floor                    |                                     |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    | E02/7.5kVA               |                                     |

\*1: Conforms to ISO9283



## Features

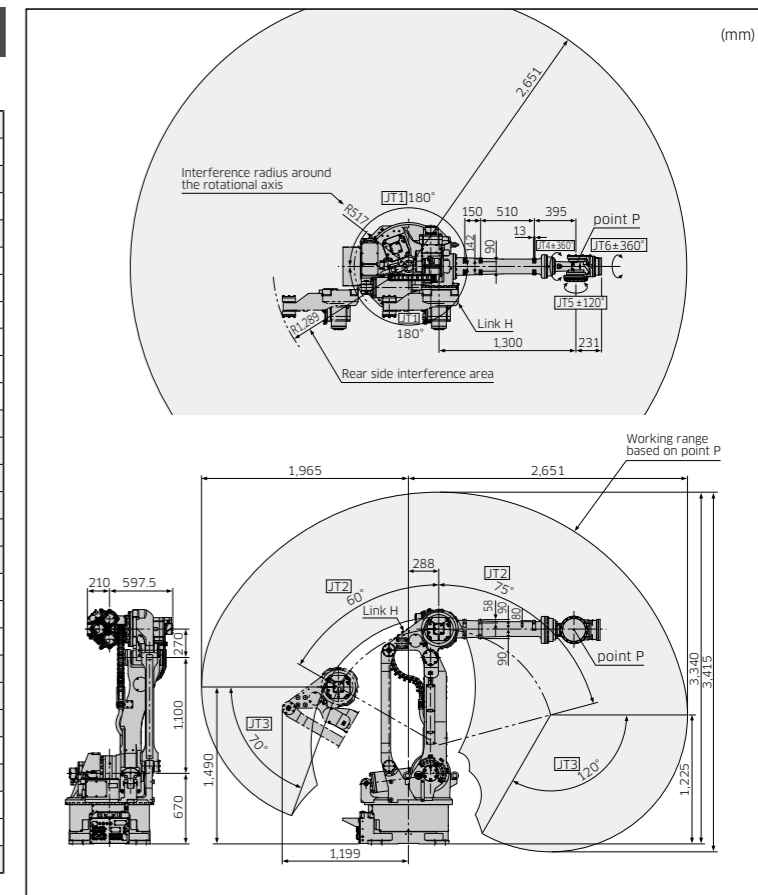
- Wide range of applications for every industry.
- Wide motion range of 360°
- Suitable for harsh environment thanks to wrist motors located at the shoulder.

## ZX200S

### Standard Specifications

| Type   | Articulated robot        |                                     |
|--|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         | 6                        |                                     |
| Payload (kg)                                     | 200                      |                                     |
| Max. reach (mm)                                  | 2,651                    |                                     |
| Position repeatability*1 (mm)                    | ±0.3                     |                                     |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|  | Arm out-in (JT2)         | +75 - -60                           |
|  | Arm up-down (JT3)        | +250 - -120                         |
|  | Wrist swivel (JT4)       | ±360                                |
|  | Wrist bend (JT5)         | ±130                                |
|  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 105                                 |
|  | Arm out-in (JT2)         | 110                                 |
|  | Arm up-down (JT3)        | 105                                 |
|  | Wrist swivel (JT4)       | 120                                 |
|  | Wrist bend (JT5)         | 120                                 |
|  | Wrist twist (JT6)        | 200                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 1,274                               |
|  | Wrist bend (JT5)         | 1,274                               |
|  | Wrist twist (JT6)        | 686                                 |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 117.6                               |
|  | Wrist bend (JT5)         | 117.6                               |
|  | Wrist twist (JT6)        | 63.7                                |
| Mass (kg)  | 1,400                    |                                     |
| Mounting   | Floor                    |                                     |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    | E02/7.5kVA               |                                     |

\*1: Conforms to ISO9283

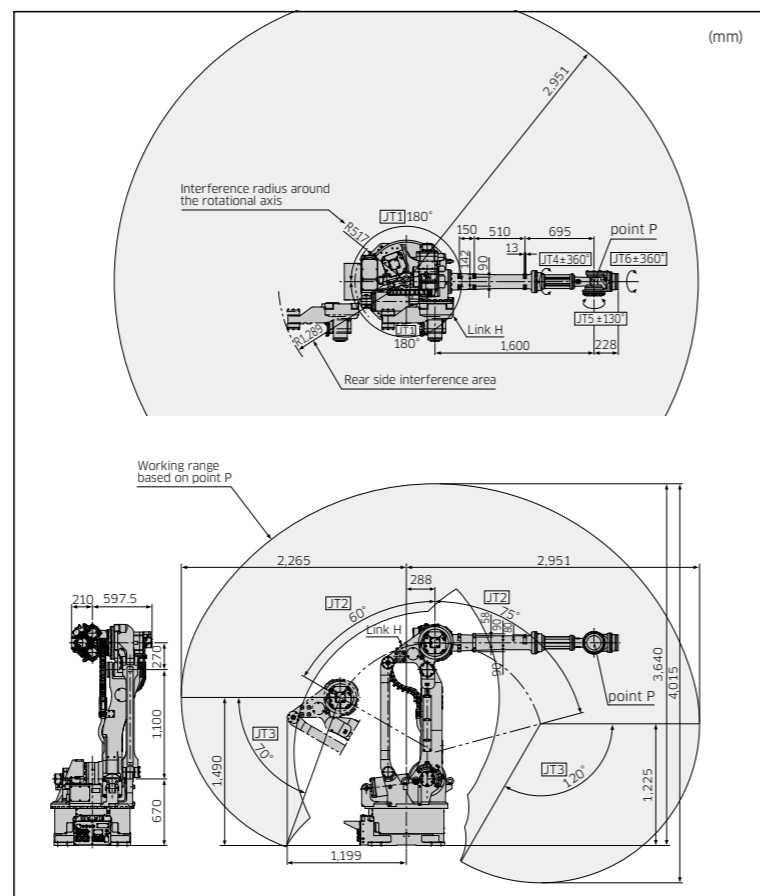


## ZX130L

### Standard Specifications

| Type   | Articulated robot        |                                     |
|--|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         | 6                        |                                     |
| Payload (kg)                                     | 130                      |                                     |
| Max. reach (mm)                                  | 2,951                    |                                     |
| Position repeatability*1 (mm)                    | ±0.3                     |                                     |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|  | Arm out-in (JT2)         | +75 - -60                           |
|  | Arm up-down (JT3)        | +250 - -120                         |
|  | Wrist swivel (JT4)       | ±360                                |
|  | Wrist bend (JT5)         | ±130                                |
|  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 110                                 |
|  | Arm out-in (JT2)         | 110                                 |
|  | Arm up-down (JT3)        | 110                                 |
|  | Wrist swivel (JT4)       | 140                                 |
|  | Wrist bend (JT5)         | 135                                 |
|  | Wrist twist (JT6)        | 230                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 735                                 |
|  | Wrist bend (JT5)         | 735                                 |
|  | Wrist twist (JT6)        | 421                                 |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 51.9                                |
|  | Wrist bend (JT5)         | 51.9                                |
|  | Wrist twist (JT6)        | 27.4                                |
| Mass (kg)  | 1,400                    |                                     |
| Mounting   | Floor                    |                                     |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    | E02/7.5kVA               |                                     |

\*1: Conforms to ISO9283

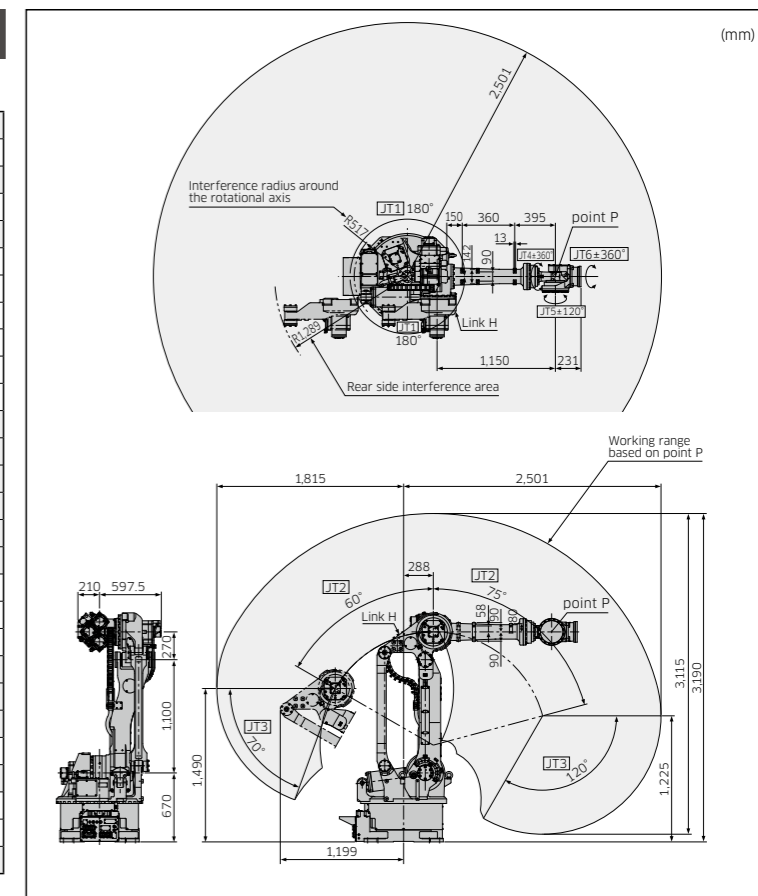


## ZX300S

### Standard Specifications

| Type   | Articulated robot        |                                     |
|--|--------------------------|-------------------------------------|
| Degree of freedom (axes)                         | 6                        |                                     |
| Payload (kg)                                     | 300                      |                                     |
| Max. reach (mm)                                  | 2,501                    |                                     |
| Position repeatability*1 (mm)                    | ±0.3                     |                                     |
| Motion range (°)                                 | Arm rotation (JT1)       | ±180                                |
|  | Arm out-in (JT2)         | +75 - -60                           |
|  | Arm up-down (JT3)        | +250 - -120                         |
|  | Wrist swivel (JT4)       | ±360                                |
|  | Wrist bend (JT5)         | ±130                                |
|  | Wrist twist (JT6)        | ±360                                |
| Max. speed (°/s)                                 | Arm rotation (JT1)       | 100                                 |
|  | Arm out-in (JT2)         | 85                                  |
|  | Arm up-down (JT3)        | 85                                  |
|  | Wrist swivel (JT4)       | 90                                  |
|  | Wrist bend (JT5)         | 90                                  |
|  | Wrist twist (JT6)        | 150                                 |
| Allowable moment (N·m)                           | Wrist swivel (JT4)       | 1,715                               |
|  | Wrist bend (JT5)         | 1,715                               |
|  | Wrist twist (JT6)        | 862                                 |
| Allowable moment of inertia (kg·m <sup>2</sup> ) | Wrist swivel (JT4)       | 166.6                               |
|  | Wrist bend (JT5)         | 166.6                               |
|  | Wrist twist (JT6)        | 107.8                               |
| Mass (kg)  | 1,400                    |                                     |
| Mounting   | Floor                    |                                     |
| Installation environment                         | Ambient temperature (°C) | 0 - 45                              |
|  | Relative humidity (%)    | 35 - 85 (No dew, nor frost allowed) |
| Controller/Power requirements                    | E02/7.5kVA               |                                     |

\*1: Conforms to ISO9283



# 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.)

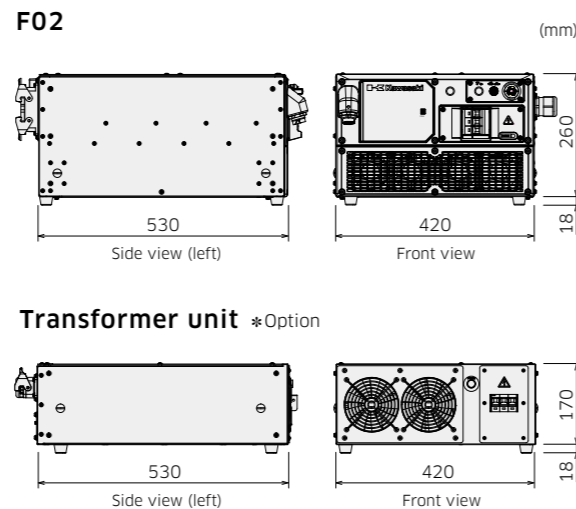


## Standard Specifications

|                          |   |                                     |
|--------------------------|---|-------------------------------------|
| 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)                | 25  |                                     |
| Power requirements       | AC200V - AC220V ±10%, 50/60Hz, 3Φ<br>AC200V - AC230V ±10%, 50/60Hz, 1Φ*1<br>Max. 7.5kVA |                                     |
| Installation environment | Ambient temperature (°C)  | 0 - 45                              |
|                          | Relative humidity (%)   | 35 - 85 (No dew, nor frost allowed) |
| Teach pendant            | Color LCD display with touch-panel, E-Stop switch, Teach lock switch, Enable switch     |                                     |
| Operation panel          | E-stop switch, teach/repeat switch  |                                     |

\*1: 200V single phase is available for some robot models only.

## External view and dimensions



# E02

## Features

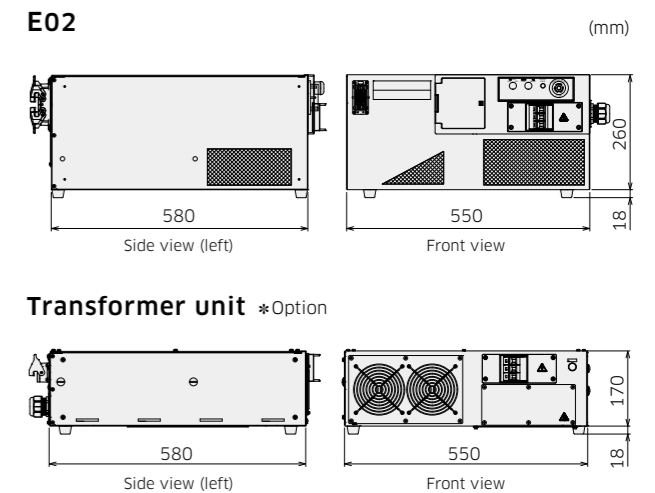
- Universal controller with common specifications to be used worldwide.
- Higher performance in a smaller cabinet compared to the previous controller



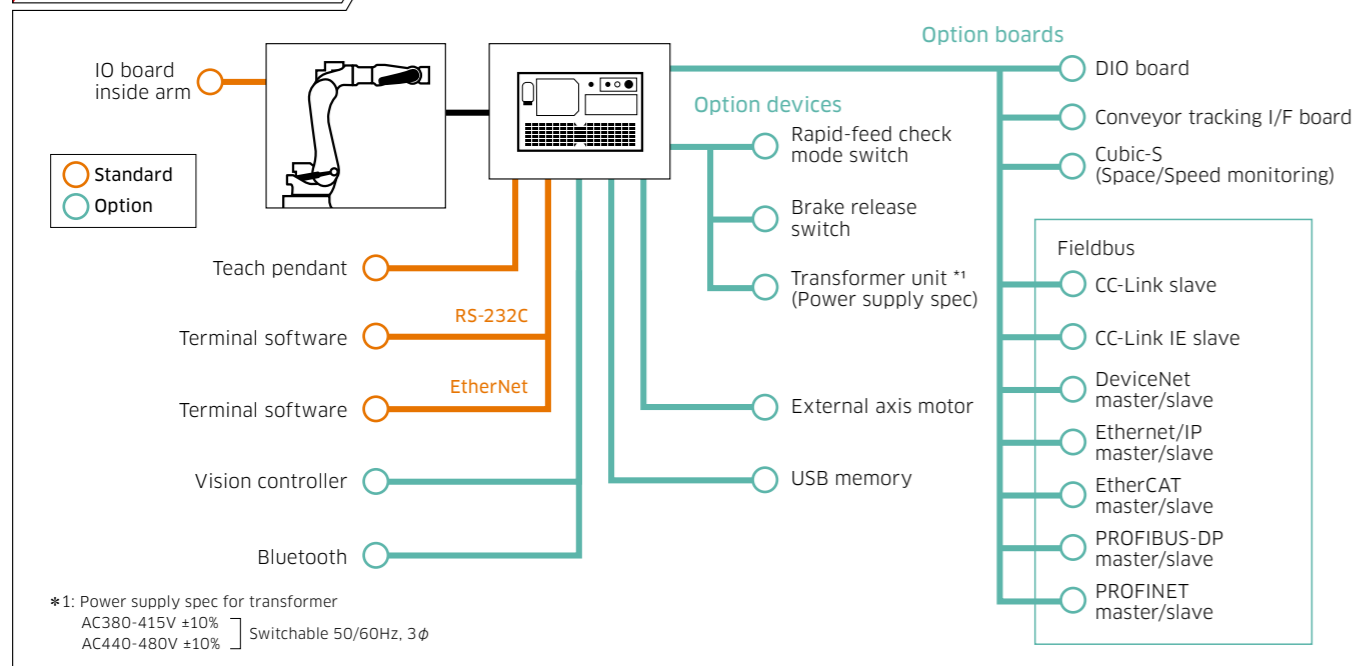
## Standard Specifications

|                          |   |                                     |
|--------------------------|---|-------------------------------------|
| Dimensions (mm)          | W550×D580×H278  |                                     |
| Type                     | Enclosed type direct cooling system   |                                     |
| Controlled (axes)        | 7   |                                     |
| Memory capacity (MB)     | 8   |                                     |
| 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)                | 40  |                                     |
| Power requirements       | AC200 - AC220V ±10%, 50/60Hz, 3Φ<br>Max. 7.5kVA                                     |                                     |
| Installation environment | Ambient temperature (°C)  | 0 - 45                              |
|                          | Relative humidity (%)   | 35 - 85 (No dew, nor frost allowed) |
| Teach pendant            | Color LCD display with touch-panel, E-Stop switch, teach lock switch, Enable switch |                                     |
| Operation panel          | E-stop switch, teach/repeat switch, control power lamp                              |                                     |

## External view and dimensions

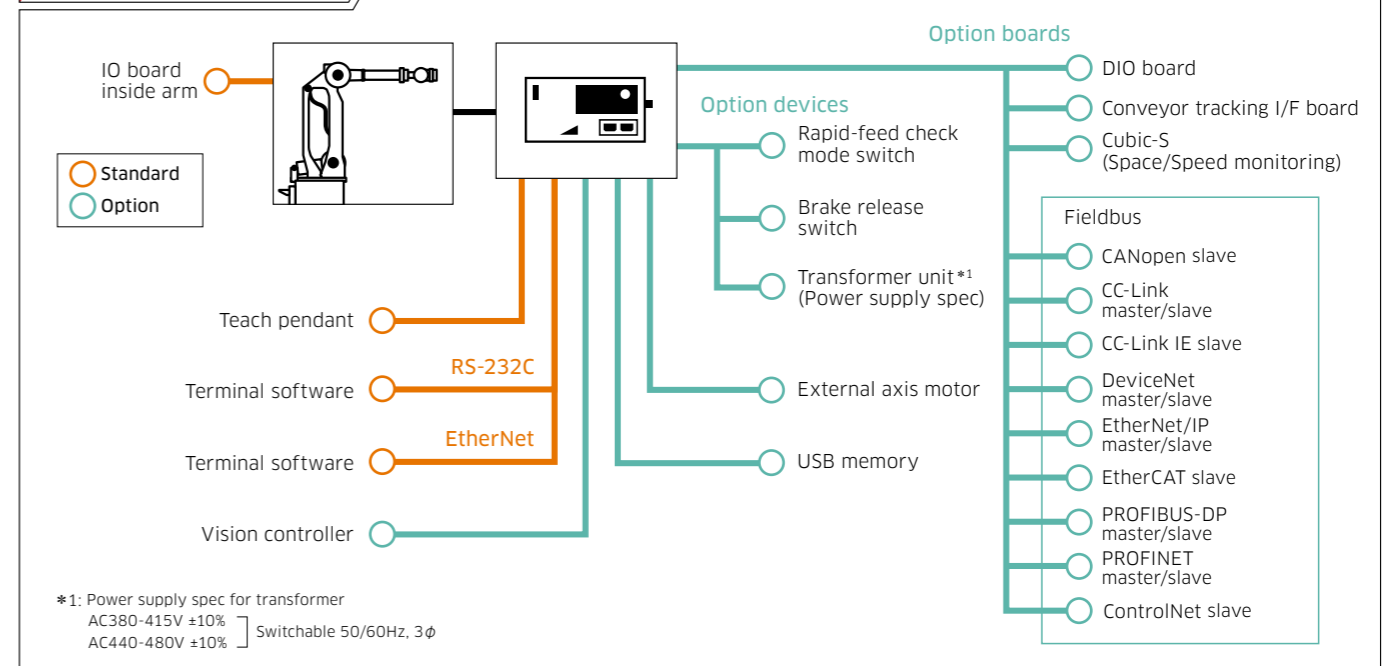


## System configuration



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

## System configuration



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