



Standard Specifications

BX165L-C50x

BX165L-F50x

1st ed. 28-Sep-16

3rd ed. 17-Nov-20

Kawasaki Heavy Industries, Ltd.
Robot Business Division

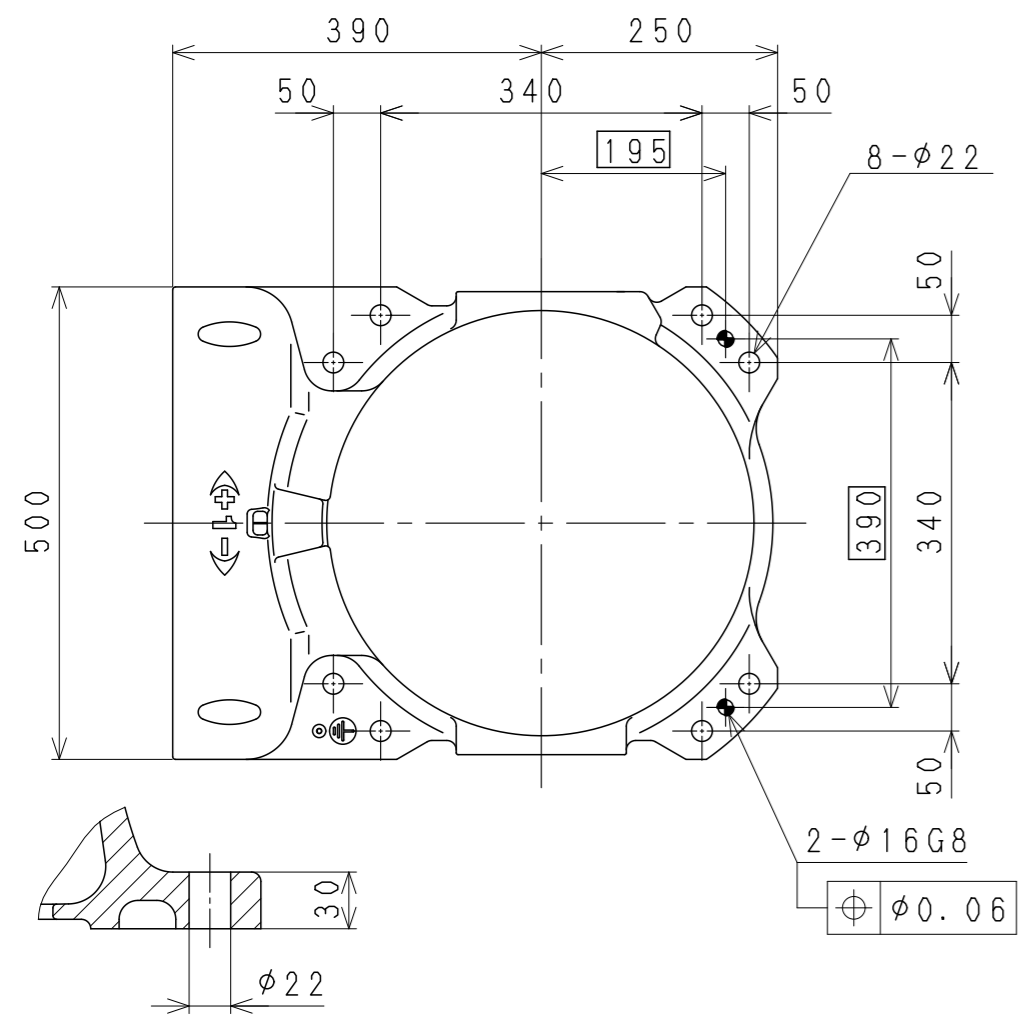
Specification number : 90151-0169DEC

Materials and specifications are subject to change without notice.

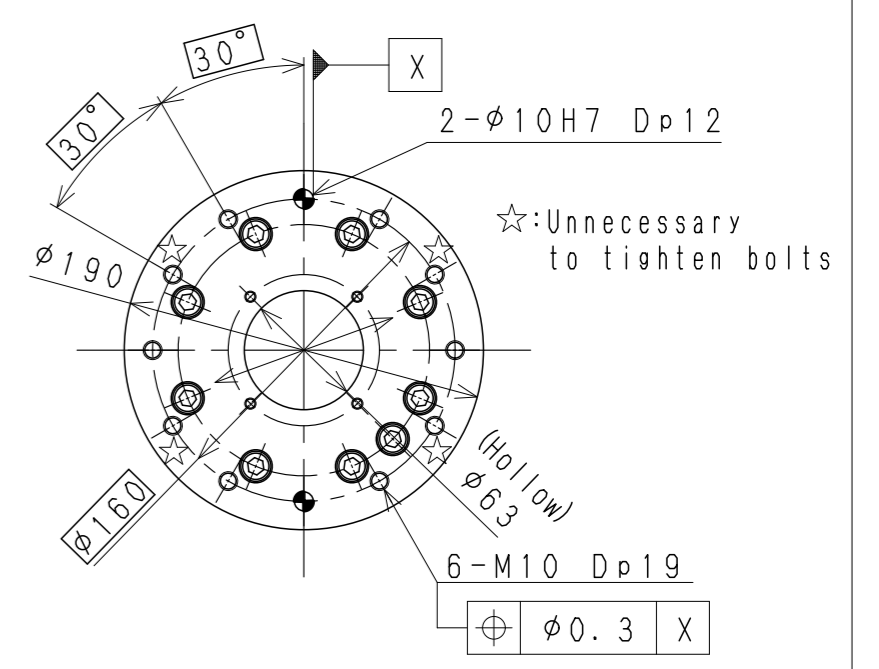
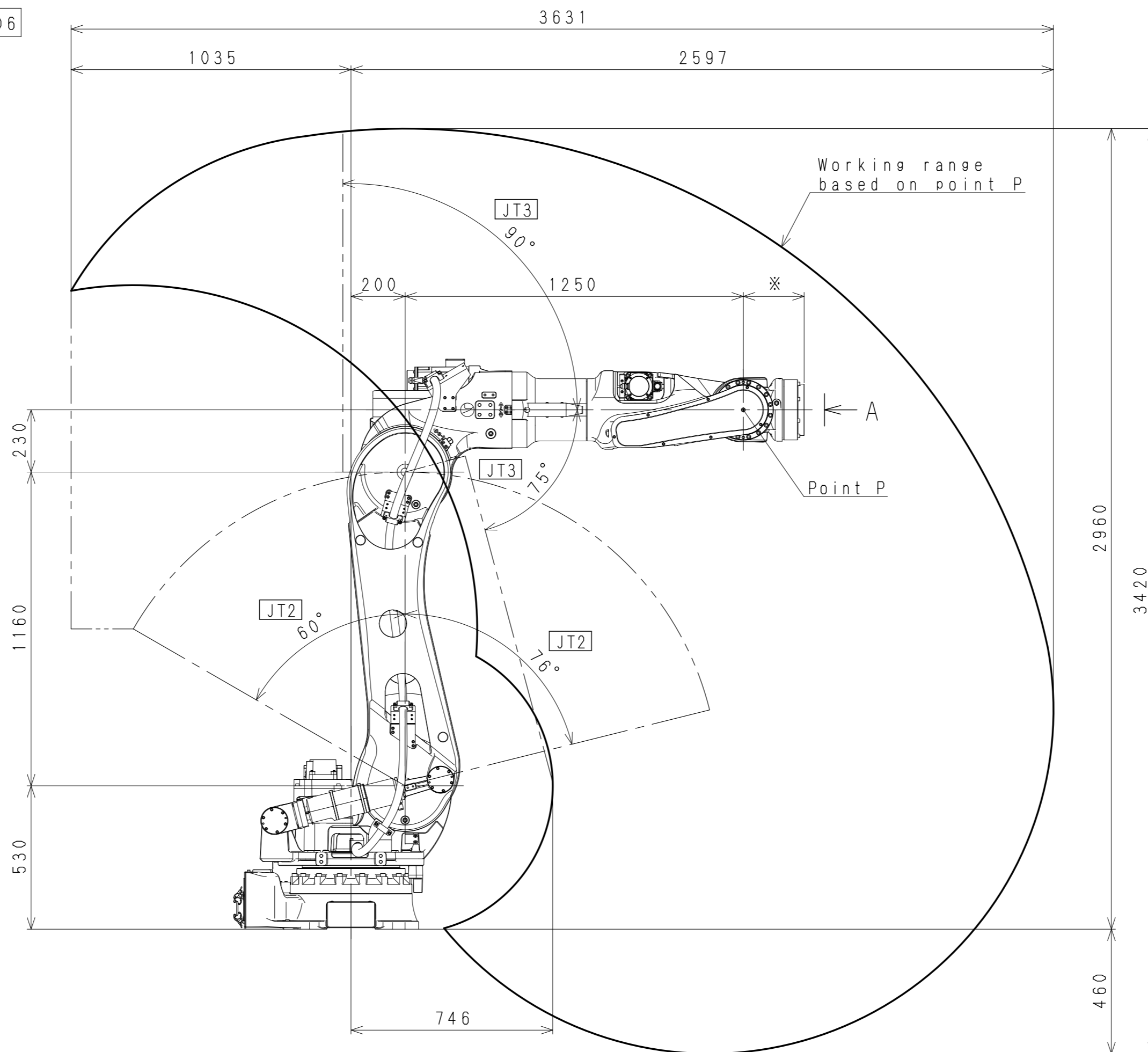
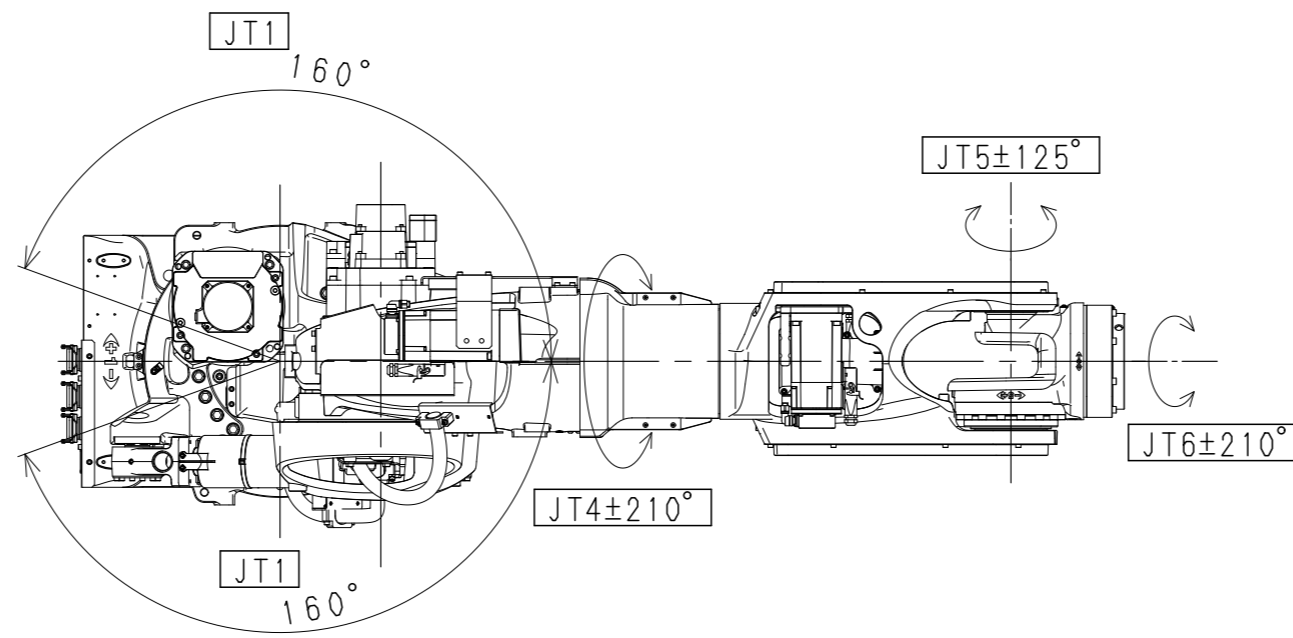
Robot specifications

| 1. Model | BX165L-C, BX165L-F | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------|--|---------------------------------|----------------|--------------|--------------------|--------------------|---------|----------------------|------------------|---------------|----------------------|-------------------|---------------|------------------------|--------------------|-------|--------|------------------|-------|--------|-------------------|-------|--------|
| 2. Type | Articulated robot | | | | | | | | | | | | | | | | | | | | | | |
| 3. Degree of freedom | 6 axes (Option 7 axes) | | | | | | | | | | | | | | | | | | | | | | |
| 4. Max. payload | 165 kg | | | | | | | | | | | | | | | | | | | | | | |
| 5. Max. reach | 2,597 mm | | | | | | | | | | | | | | | | | | | | | | |
| 6. Position repeatability | ±0.06 mm (wrist flange surface) conforms to ISO 9283 | | | | | | | | | | | | | | | | | | | | | | |
| 7. Axis specification | <table border="1"> <thead> <tr> <th>Operating axis</th> <th>Motion range</th> <th>Max. speed</th> </tr> </thead> <tbody> <tr> <td>Arm rotation (JT1)</td> <td>±160°</td> <td>120°/s</td> </tr> <tr> <td>Arm out-in (JT2)</td> <td>+ 76° - - 60°</td> <td>110°/s</td> </tr> <tr> <td>Arm up-down (JT3)</td> <td>+ 90° - - 75°</td> <td>130°/s</td> </tr> <tr> <td>Wrist swivel (JT4)</td> <td>±210°</td> <td>170°/s</td> </tr> <tr> <td>Wrist bend (JT5)</td> <td>±125°</td> <td>170°/s</td> </tr> <tr> <td>Wrist twist (JT6)</td> <td>±210°</td> <td>280°/s</td> </tr> </tbody> </table> | | Operating axis | Motion range | Max. speed | Arm rotation (JT1) | ±160° | 120°/s | Arm out-in (JT2) | + 76° - - 60° | 110°/s | Arm up-down (JT3) | + 90° - - 75° | 130°/s | Wrist swivel (JT4) | ±210° | 170°/s | Wrist bend (JT5) | ±125° | 170°/s | Wrist twist (JT6) | ±210° | 280°/s |
| Operating axis | Motion range | Max. speed | | | | | | | | | | | | | | | | | | | | | |
| Arm rotation (JT1) | ±160° | 120°/s | | | | | | | | | | | | | | | | | | | | | |
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| Wrist swivel (JT4) | ±210° | 170°/s | | | | | | | | | | | | | | | | | | | | | |
| Wrist bend (JT5) | ±125° | 170°/s | | | | | | | | | | | | | | | | | | | | | |
| Wrist twist (JT6) | ±210° | 280°/s | | | | | | | | | | | | | | | | | | | | | |
| 8. Load capacity of wrist | <table border="1"> <thead> <tr> <th></th> <th>Max. torque</th> <th>Moment of inertia*</th> </tr> </thead> <tbody> <tr> <td>JT4</td> <td>952 N·m</td> <td>99 kg·m²</td> </tr> <tr> <td>JT5</td> <td>952 N·m</td> <td>99 kg·m²</td> </tr> <tr> <td>JT6</td> <td>491 N·m</td> <td>49.5 kg·m²</td> </tr> </tbody> </table> <p>Note* Each value in this table shows allowable moment of inertia of JT4/JT5/JT6 when max. allowed torque is applied to each axis. If more detailed data is required for your application, please contact Kawasaki.</p> | | | Max. torque | Moment of inertia* | JT4 | 952 N·m | 99 kg·m ² | JT5 | 952 N·m | 99 kg·m ² | JT6 | 491 N·m | 49.5 kg·m ² | | | | | | | | | |
| | Max. torque | Moment of inertia* | | | | | | | | | | | | | | | | | | | | | |
| JT4 | 952 N·m | 99 kg·m ² | | | | | | | | | | | | | | | | | | | | | |
| JT5 | 952 N·m | 99 kg·m ² | | | | | | | | | | | | | | | | | | | | | |
| JT6 | 491 N·m | 49.5 kg·m ² | | | | | | | | | | | | | | | | | | | | | |
| 9. Mass | 890 kg (without options) | | | | | | | | | | | | | | | | | | | | | | |
| 10. Mounting | Floor mounting | | | | | | | | | | | | | | | | | | | | | | |
| 11. Installation Environment | Ambient Temperature: 0 - 45 °C Relative Humidity: 35 - 85 % (with no dew condensation) | | | | | | | | | | | | | | | | | | | | | | |
| 12. Color | Munsell 10GY9/1 equivalent | | | | | | | | | | | | | | | | | | | | | | |
| 13. Degree of protection | Wrist: IP67 equivalent, Arm: IP54 equivalent | | | | | | | | | | | | | | | | | | | | | | |
| 14. Dressing | Cable length between flange and tool is 1.5m. Consult Kawasaki when non-standard dressing will be applied. | | | | | | | | | | | | | | | | | | | | | | |
| 15. Options | Mechanical stopper | Adjustable stoppers JT1/JT2/JT3 | | | | | | | | | | | | | | | | | | | | | |
| | Adapter bracket | between flange and tool | | | | | | | | | | | | | | | | | | | | | |
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Consult Kawasaki about maintenance parts and spare parts.

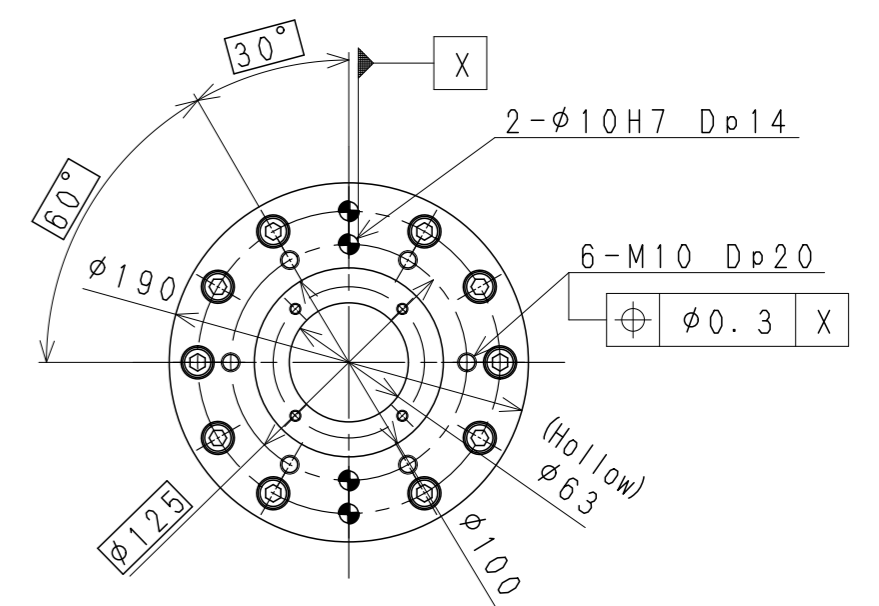


Installation Dimensions



STANDARD FLANGE

※ Dimension: 225

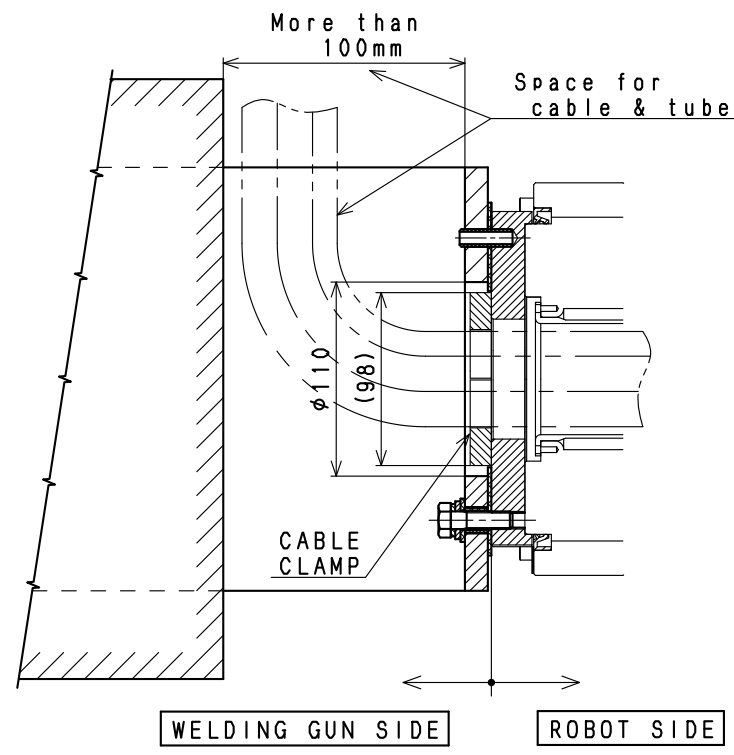


OPTION FLANGE

※ Dimension: 245

VIEW A

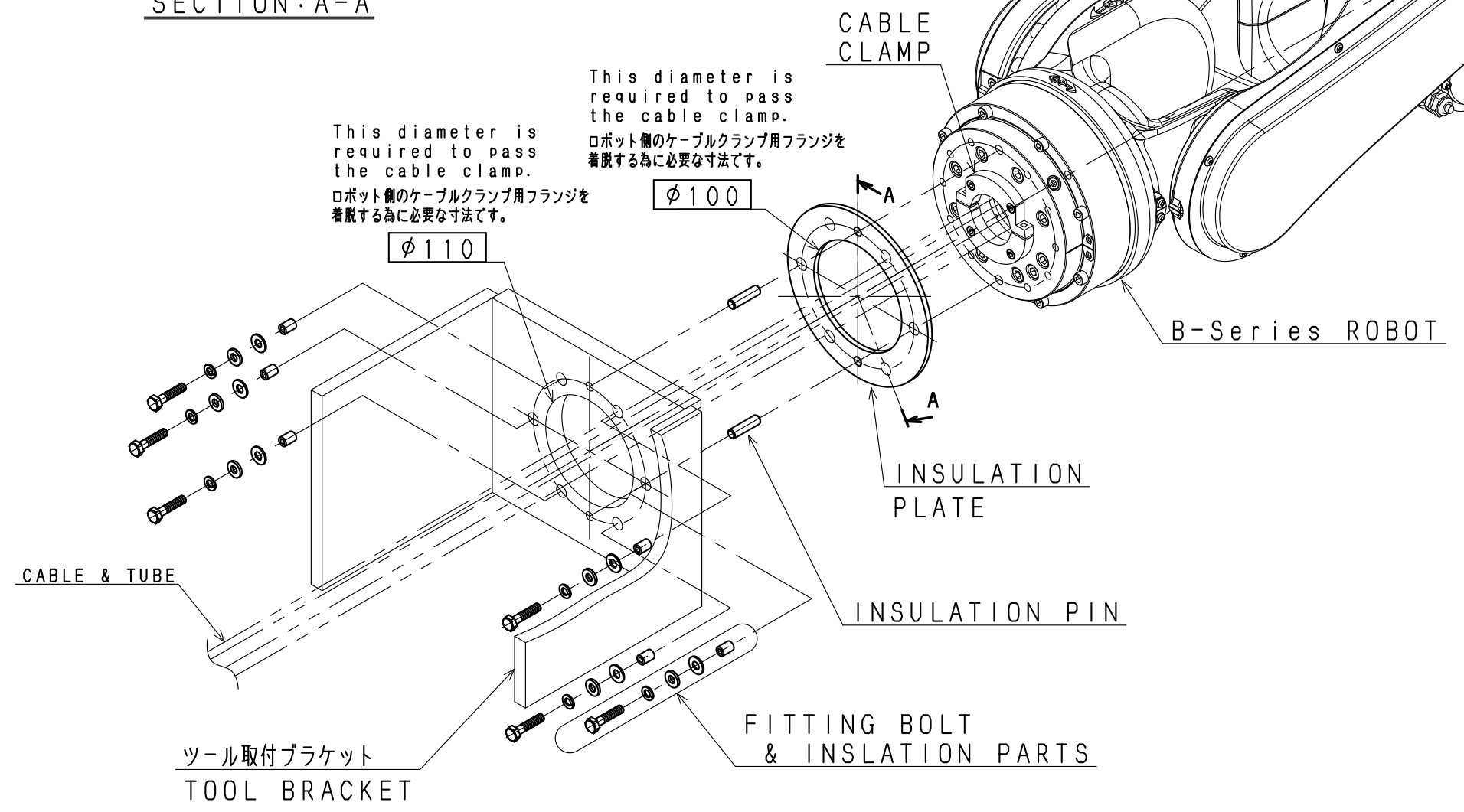
BX100L/165L/200L
WORKING RANGE



NULL POSITION OF THE ROBOT

ロボット標準姿勢

SECTION: A-A



注記
1. 本図は、一例としてロボット手首へのツールの取付要領を示します。

NOTES
1. This figure shows as an example how to install a tool to the robot wrist.

B-Series ROBOT
TOOL INSTALLATION PROCEDURE
(ツール取付要領図)