

Heavy-load bearing robots with hollow wrists

MC600



Wrist with hollow construction

- Compact and easy routing for cables and hoses
- Improved reliability for ancillary cables and hoses

Strong wrist

- Supports large-scale guns and workpieces with substantial wrist torques
- Top of their class wrist torques (1.8 times the wrist capacity compared to our contemporary machines)

High-speed operations

- Top operating performance in their class

Improved applicability

- Large operating envelope to easily replace existing equipment

Signal wires for moving applications are standard equipment

- Air 2 system, signal wires with 40 conductors, DeviceNet cable, LAN cable

Robot specifications

| Item | Specifications | |
|---|---|---|
| Robot model | MC600-01 | |
| 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 | $-2.44 \sim +0.52\text{rad}(-140 \sim +30^\circ)$ |
| | J4 | $\pm 3.67\text{rad}(\pm 210^\circ)$ |
| | J5 | $\pm 2.09\text{rad}(\pm 120^\circ)$ |
| | J6 | Maximum: $\pm 6.28\text{rad}(\pm 360^\circ)$ 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 | 600kg |
| | Forearm ^{*1} | Maximum 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 ² |
| | J5 | 600kg·m ² |
| | J6 | 400kg·m ² |
| Position repeatability ^{*3} | $\pm 0.3\text{mm}$ | |
| Installation | Floor | |
| Ambient conditions | Ambient temperature: $0 \sim 45^\circ\text{C}^{*5}$ Ambient humidity: $20 \sim 85\% \text{RH}$ (without condensation) Vibration: Not more than 0.5G (4.9m/s^2) | |
| Robot mass | 2850kg | |

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

*Explosion-proof is not available.

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

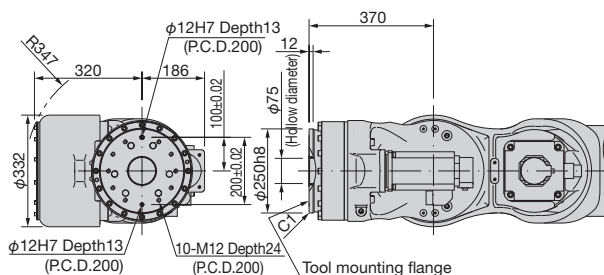
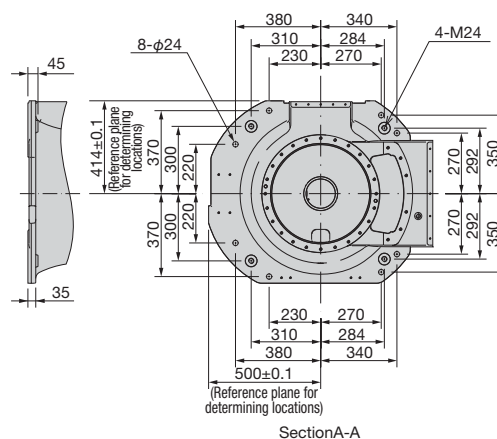
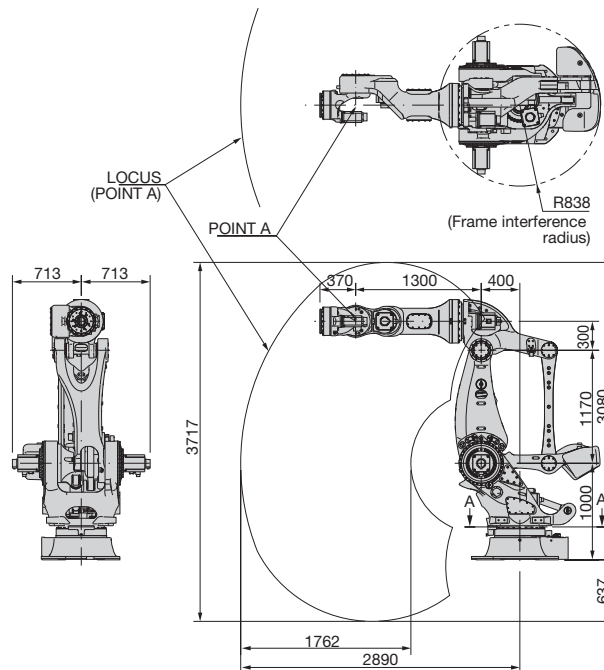
*2: The Allowable moment of inertia of a wrist changes with load conditions of a wrist.

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

*4: The initial settings are $\pm 210^\circ$. When passing cable through the hollow part of the 6th axis, use a range of $\pm 210^\circ$. When a cable is not passed through, the operating envelope can be extended to a maximum of $\pm 360^\circ$, depending on the usage conditions.

*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



● 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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