



MZ07F | MZ07LF

HIGH SPEED & HIGH PRECISION

CELEBRATE THE POLE POSITION



**Achieves higher speed and precision
while keeping previous lightweight,
compact body and hollow wrist**

NEW

MZ07F

High speed

The world's top class maximum speed for each axis is maintained, and up to 43%* tact time reduction compared to the conventional model by improving acceleration and deceleration performance.

BASIC SPECIFICATION OF ROBOT		
Item	Specifications	
Robot model	MZ07F-01	MZ07LF-01
Structure	Articulated	
Number of axes	6	
Max. reach	723mm	912mm
Installation*4	Floor, Inverted, Wall, Tilted	
Drive system	AC Servodrive	
Max. working envelope	J1	$\pm 2.97\text{rad} (\pm 170^\circ)$
	J2	$-2.36 \sim +1.40\text{rad} (-135 \sim +80^\circ)$
	J3	$-2.37 \sim +4.71\text{rad} (-136 \sim +270^\circ)$ $-2.43 \sim +4.71\text{rad} (-139 \sim +270^\circ)$
	J4	$\pm 3.32\text{rad} (\pm 190^\circ)$
	J5	$\pm 2.09\text{rad} (\pm 120^\circ)$
	J6	$\pm 6.28\text{rad} (\pm 360^\circ)$
Max. speed*1	J1	7.85rad/s (450°/s) 5.24rad/s (300°/s)
	J2	6.63rad/s (380°/s) 4.89rad/s (280°/s)
	J3	9.08rad/s (520°/s) 6.28rad/s (360°/s)
	J4	9.60rad/s (550°/s)
	J5	9.60rad/s (550°/s)
	J6	17.45rad/s (1000°/s)
Payload (max.)	Wrist	7kg
Allowable static load torque	J4	16.9N·m
	J5	16.9N·m
	J6	9.4N·m
Allowable moment of inertia*2	J4	0.49kg·m ²
	J5	0.49kg·m ²
	J6	0.15kg·m ²
Position repeatability*3	$\pm 0.015\text{mm}$	$\pm 0.02\text{mm}$
Air piping	$\varnothing 6 \times 2$	
Application signal wires	20 wires	
Ambient conditions	Ambient temperature: 0~45°C*5 Ambient humidity: 20~85% RH (No dew, nor frost allowed) Vibration: Not more than 0.5G (4.9m/s ²)	
Dust-proof/ Drip-proof performance*6	IP67 equivalent (dust proof and moisture resistant)	
Clean rating*7	Class 4	
Robot mass	41kg	43kg

* Comparison MZ07F vs. MZ07 based on our experimental conditions.

*1 The maximum velocity in the table is the maximum value and varies depending on the operation program and wrist load conditions.

*2 Please note that the allowable wrist moment of inertia depends on the wrist load conditions.

*3 JIS B 8432 conformance

*4 The operating range is limited when mounted on a wall or tilted.
(Example: #1-axis operating range is $\pm 30^\circ$ for wall mount)

*5 Using at an altitude of 1000m or less. Ambient temperature limited when the allowable altitude exceeds.

*6 A liquid that deteriorates the sealing such as organic solvent, acid, alkali, chlorine-based, or gasoline-based cutting fluid cannot be used.

*7 This is based on an in-house assessment that complies with ISO 14644-1. In order to ensure cleanliness, install the robot in a down-flow type clean room. The robot is not in a dust-proof package. Before bringing the robot into the cleanroom, dust and dirt must be removed and wipe it clean.

Note: 1[rad]=180/π[°], 1[N·m]=1/9.8[kgf·m]. Explosion-proof version is not available.
Specifications are subject to change without prior notice for technical changes.

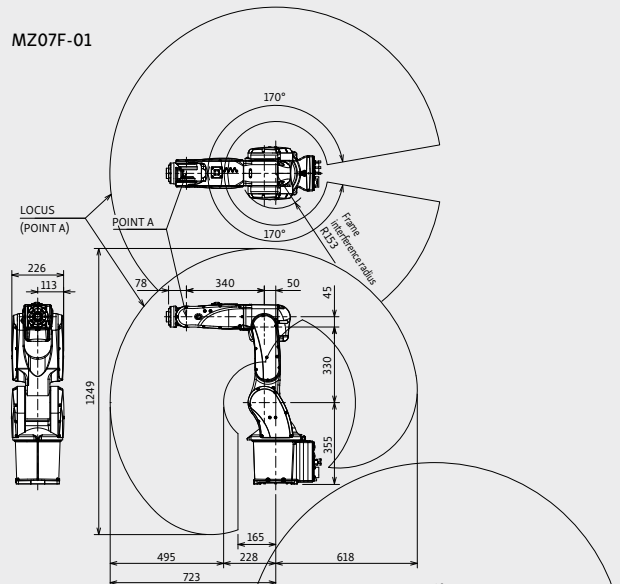
High precision

Pose repeatability: Reduced misalignment to approx. 3/4

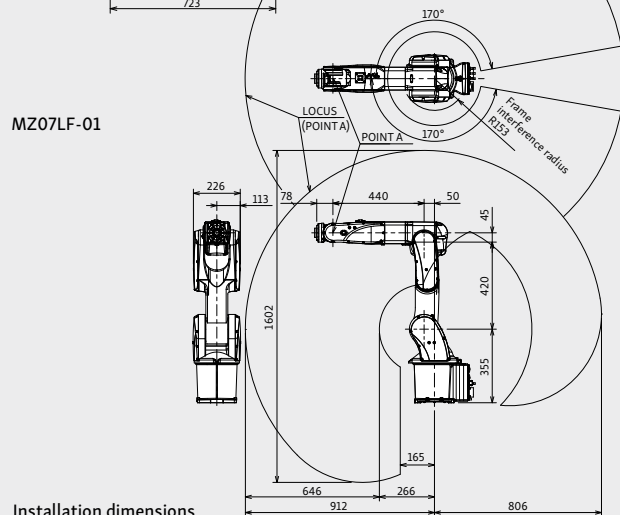
of conventional robots. **Path accuracy:** Reduced misalignment to approx. 1/3 of conventional robots.

ROBOT DIMENSIONS AND WORKING ENVELOPE

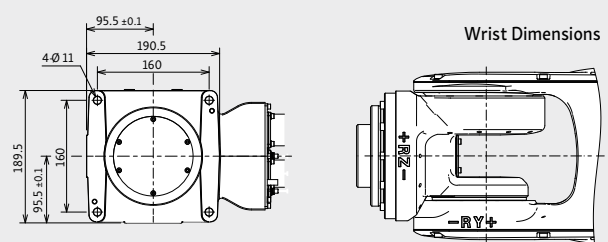
MZ07F-01



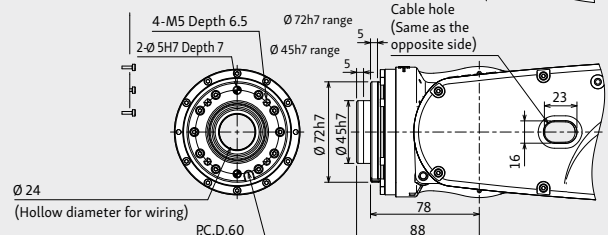
MZ07LF-01



Installation dimensions



Wrist Dimensions



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