

NACHI



High speed & High precision Robot

MZ07F

MZ07LF

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



MZ07F



MZ07LF

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.*

High precision

*Pose repeatability : Reduced misalignment to approx. 3/4 of conventional robots
Path accuracy : Reduced misalignment to approx. 1/3 of conventional robots*

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

Basic Robot Specification

Item		Specification	
Model		MZ07F-01	MZ07LF-01
Structure		Articulated robot	
Degree of Freedom		6	
Drive System		AC Servo drive	
Maximum motion range	J1	±2.97rad (±170°)	
	J2	-2.36 ~ +1.40 (-135 ~ +80°)	
	J3	-2.37 ~ +4.71rad (-136 ~ +270°)	-2.43 ~ +4.71rad (-139 ~ +270°)
	J4	±3.32rad (±190°)	
	J5	±2.09rad (±120°)	
	J6	±6.28rad (±360°)	
Maximum Velocity 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)	
Maximum Payload	Wrist	7kg	
	J4	16.9N·m	
	J5	16.9N·m	
	J6	9.4N·m	
Maximum static load torque	J4	0.49kg·m ²	
	J5	0.49kg·m ²	
	J6	0.15kg·m ²	
	Position repeatability ³	±0.015mm	
723mm		912mm	
Air tubes	φ6×2		
Application cables	20 wires		
Installation ⁴	Floor / Wall / Inclined / Inverted		
Installation Condition	Ambient Temperature: 0 ~ 45°C ⁵		
	Ambient Humidity: 20 ~ 85%RH (No dew or frost allowed)		
	Vibration: ≤ 0.5G (4.9m/s ²)		
Protection class ⁶	IP 67 equivalent (dust-proof, moisture-resistant)		
Clean rating ⁷	CLASS4		
Robot Mass	41kg	43kg	

1 (rad)=180/π(°), 1 (N·m)=1/9.8(kgf·m)

* Explosion-proof version is not available.

*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 ±30° for wall mount)

*5: Using at an altitude of 1000 m or less.

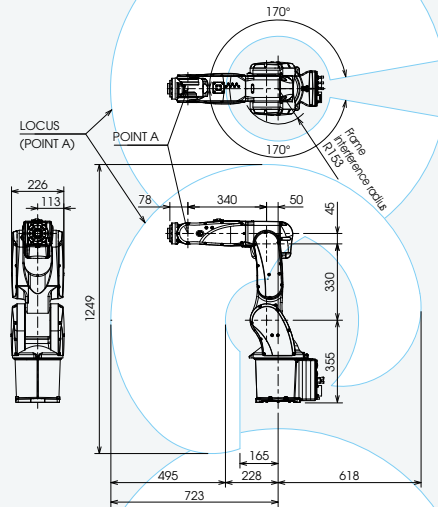
Ambient temperature limited when the allowable altitude exceeds.

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

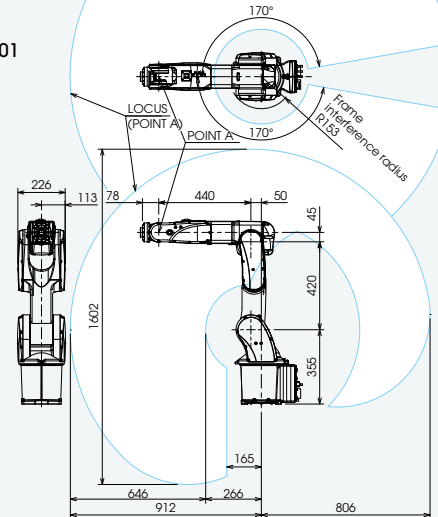
*7: This is based on an in-house assessment that complies with ISO 14644-1. In order to ensure cleanliness, install the robot in a down-flow type cleanroom. The robot is not in a dust-proof package. Before bringing the robot into the clean room, dust and dirt must be removed and wipe it clean.

Dimensions and operating range

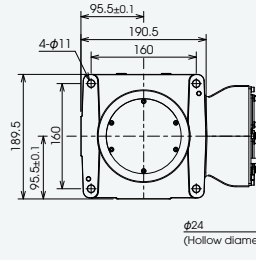
MZ07F-01



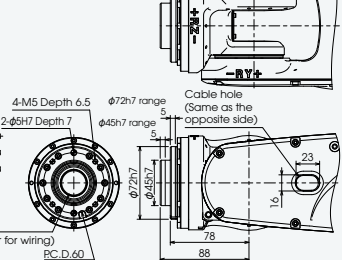
MZ07LF-01



Installation dimensions



Wrist Dimensions



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●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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