



NACHI



Compact 10kg payload long reach robot

MZ10LF

Achieves payload improvement, longer reach, and higher speed and precision while previous features, lightweight, compact body, and hollow wrist are maintained.

Lightweight body

Achieves 10kg payload and 1202mm reach with only 55 kg body weight

Compact design

*Minimizes installation space with compact design and small foot print
Frame interference radius : R160, Foot print : 200mm×204mm

High speed/High precision

*Top-level Maximum speed
Achieves precise positioning with high standard position repeatability ($\pm 0.025\text{mm}$)*

Hollow wrist structure

Smart cable and hose routing through the hollow wrist



Basic Robot Specification

Item	Specification	
Model	MZ10LF-01	
Structure	Articulated robot	
Degree of Freedom	6	
Drive System	AC Servo drive	
Maximum motion range	J1	±2.97rad (±170°)
	J2	-2.36 ~ +1.40rad (-135 ~ +80°)
	J3	-2.37 ~ +4.71rad (-136 ~ +270°)
	J4	±3.32rad (±190°)
	J5	±2.09rad (±120°)
	J6	±6.28rad (±360°)
Maximum Velocity ¹	J1	5.24rad/s (300°/s)
	J2	3.49rad/s (200°/s)
	J3	5.76rad/s (330°/s)
	J4	8.20rad/s (470°/s)
	J5	8.20rad/s (470°/s)
	J6	12.92rad/s (740°/s)
Maximum Payload	Wrist 10kg	
Maximum static load torque	J4	20.0N·m
	J5	20.0N·m
	J6	10.4N·m
Maximum moment of inertia ²	J4	0.60kg·m ²
	J5	0.60kg·m ²
	J6	0.20kg·m ²
Position repeatability ³	±0.025mm	
Maximum Reach	1202mm	
Air tubes	φ6×2	
Application cables	20 wires	
Installation	Floor / Inverted	
Installation Condition	Ambient Temperature: 0 ~ 45°C ⁴ Ambient Humidity: 20 ~ 85%RH (No dew or frost allowed) Vibration: ≤ 0.5G (4.9m/s ²)	
Protection class ⁵	IP 67 equivalent (dust-proof, moisture-resistant)	
Clean rating ⁶	CLASS4	
Robot Mass	55kg	

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 condition.

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

*3: JIS B 8432 conformance

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

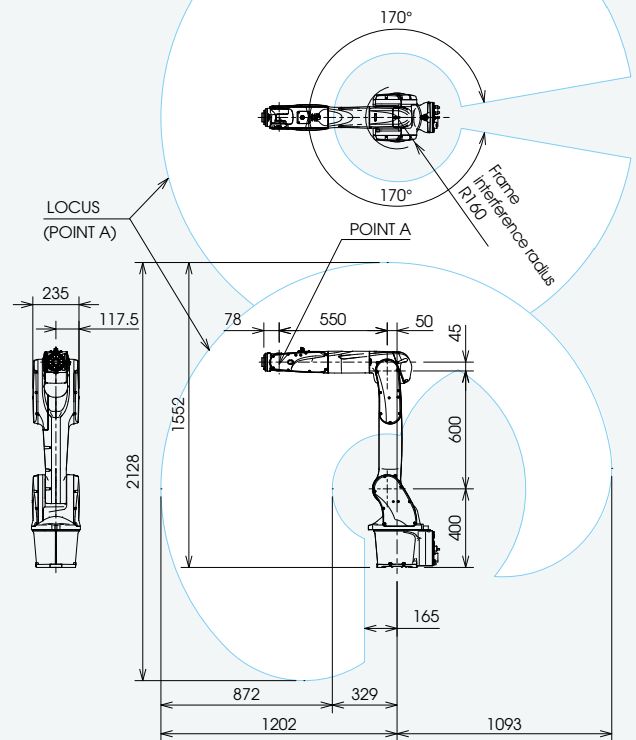
Ambient temperature limited when the allowable altitude exceeds.

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

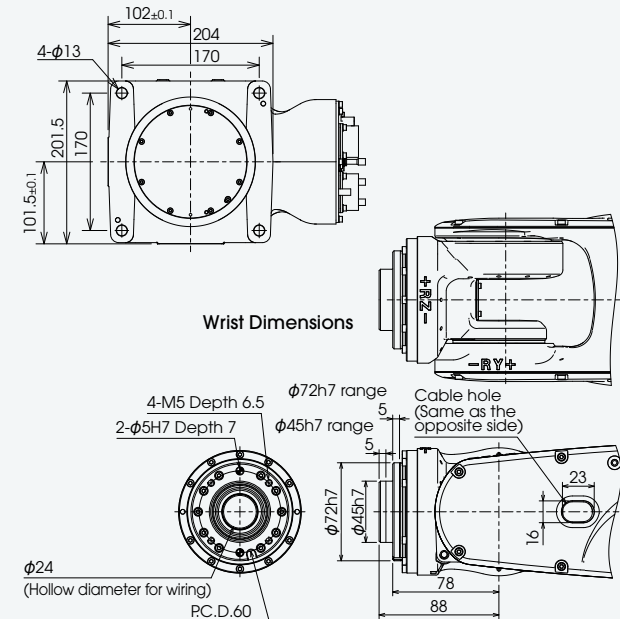
*6: This is based on an in-house assessment that complies with ISO 14644-1. In order to ensure cleanliness, install the robot in a down-flow type cleanroom. The robot is not in a dust-proof package. Before bringing the robot into the clean room, dust and dirt must be removed and wipe it clean.

Dimensions and operating range

MZ10LF-01



Installation dimensions



Wrist Dimensions

NACHI

NACHI-FUJIKOSHI CORP.

www.nachi.com

Head Office Shiodome Sumitomo Bldg, 17F, 1-9-2 Higashi-Shinbashi, Minato-ku, Tokyo 105-0021
Robot Division 1-1-1 Fujikoshi-Honmachi, Toyama 930-8511, JAPAN

Tel: +81-(0)3-5568-5111
Tel: +81-(0)76-456-2223

Fax: +81-(0)3-5568-5206
Fax: +81-(0)76-493-5252

NACHI ROBOTIC SYSTEMS INC.
NACHI MEXICANA, S.A. DE C.V.
NACHI EUROPE GmbH
NACHI TECHNOLOGY (THAILAND) CO., LTD.
PT.NACHI INDONESIA
NACHI-FUJIKOSHI (CHINA) CO., LTD.

Michigan, U.S.A.
MEXICO
GERMANY
THAILAND
INDONESIA
CHINA

Tel: +1-248-305-6545
Tel: +52-442-153-2424
Tel: +49-(0)2151-65046-0
Tel: +66(38)961679
Tel: +62-021-527-2841
Tel: +86-(0)21-6915-2200

Fax: +1-248-305-6542
Fax: +52-442-153-2435
Fax: +49-(0)2151-65046-90
Fax: +66(38)961683
Fax: +62-021-527-3029
Fax: +86-(0)21-6915-5427

<http://www.nachirobotics.com>
<http://www.nachi.com.mx/>
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<https://www.nachi.com.cn/>

●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.

CATALOG NO.

R7710E

2022.02.V-MD-ABE