

**NACHI**



*Powerful and compact  
High speed and precise*

*Compact and multipurpose robot*

**NEW**

# MZ12

*Protection level: IP67 rated*

*Paint is coolant resistant*

*Leads its class in speed in precision*

*Footprint is 17% smaller than conventional robots*

*Through-arm cabling and air piping included*

## Basic Specification of Robot

Item	Specification	
Model	MZ12-01	
Structure	Articulated	
Controllable Axes	6	
Drive System	AC Servodrive	
Max. Working Envelope	J1	$\pm 2.97\text{rad}(\pm 170^\circ)$
	J2	$+1.57 \sim -2.79\text{rad}(+90 \sim -160^\circ)$
	J3	$+3.67 \sim -2.57\text{rad}(+210 \sim -147^\circ)$
	J4	$\pm 3.32\text{rad}(\pm 190^\circ)$
	J5	$\pm 2.44\text{rad}(\pm 140^\circ)$
	J6	$\pm 6.28\text{rad}(\pm 360^\circ)$
Max. Speed*1	J1	4.54rad/s( 260°/s)
	J2	4.01rad/s( 230°/s)
	J3	4.54rad/s( 260°/s)
	J4	8.20rad/s( 470°/s)
	J5	8.20rad/s( 470°/s)
	J6	12.22rad/s( 700°/s)
Payload	Wrist	12kg
Allowable Static Loading Torque	J4	25N·m
	J5	25N·m
	J6	9.8N·m
Max. Allowable Moment of Inertia*2	J4	0.7kg·m <sup>2</sup>
	J5	0.7kg·m <sup>2</sup>
	J6	0.2kg·m <sup>2</sup>
Position Repeatability*3	$\pm 0.04\text{mm}$	
Max. Reach	1454mm	
Air Piping	$\phi 6 \times 2, \phi 8 \times 1$	
Application Wirings	24wires (including wires for the optional solenoid valves)	
Installation	Floor / Inverted mount / Tilted	
Ambient Conditions	Ambient temperature: 0~45°C*4	
	Ambient humidity: 20~85%RH (without condensation)	
	Vibration: Not more than 0.5G(4.9m/s <sup>2</sup> )	
Environmental Conditions*5	IP67 equivalent(Protection Rating)	
Weight	150kg	

\*Explosion-proof version is not available.

\*1: The maximum speed in the chart is a maximum value. The maximum value may change depending on work programs and load conditions of the wrist.

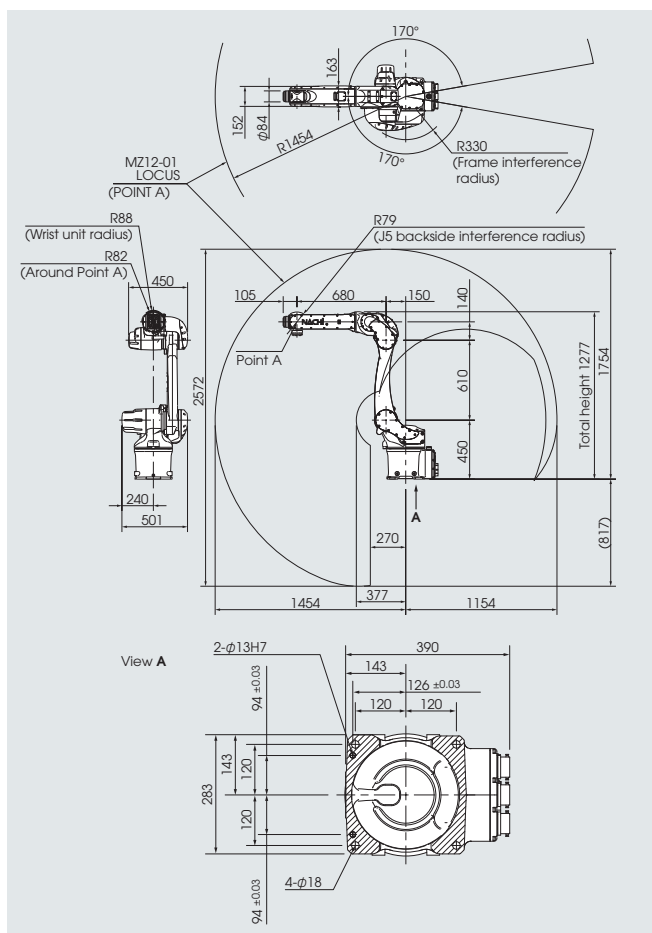
\*2: The Allowable Moment of Inertia of a wrist changes with load conditions of a wrist.

\*3: JIS B 8432 compliant.

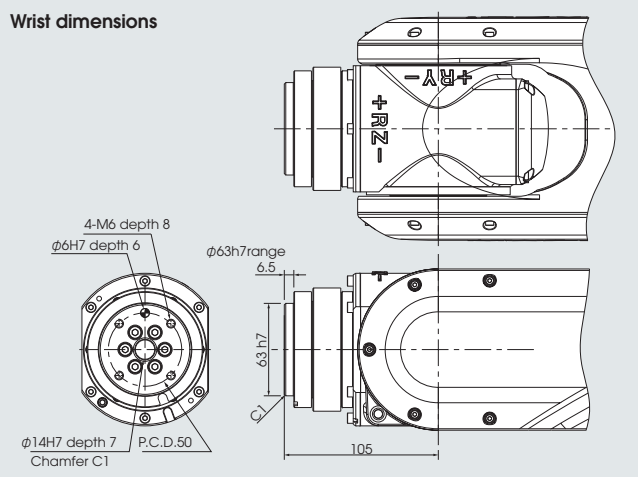
\*4: Using at 1000 m or lower sea level. Ambient temperature has limitations when allowable altitude is exceeded.

\*5: Fluids that cause the deterioration of sealants, such as gasoline-based cutting fluids, chlorine, alkali, acids, and organic solvents, cannot be used. The wire-harness portion is IP65 equivalent, and the robot controller is IP20 equivalent.

## Robot Dimensions and Working Envelope



### Wrist dimensions



# NACHI

## NACHI-FUJIKOSHI CORP.

[www.nachi.com](http://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)3-5568-5247  
 Tel: +81-(0)76-456-2223

Fax: +81-(0)3-5568-5237  
 Fax: +81-(0)76-493-5251

**NACHI ROBOTIC SYSTEMS INC.**  
**NACHI AMERICA INC. HEADQUARTERS**  
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 CHINA

Tel: +1-248-305-6545  
 Tel: +1-317-530-1001  
 Tel: +1-905-660-0088  
 Tel: +52-442-153-2424  
 Tel: +55-11-4793-8800  
 Tel: +49-(0)2151-65046-0  
 Tel: +66-2-714-0008  
 Tel: +65-65587393  
 Tel: +62-21-527-2841  
 Tel: +91-(0)12-4450-2900  
 Tel: +61-(0)2-9898-1511  
 Tel: +86-(0)21-6915-2200

Fax: +1-248-305-6542  
 Fax: +1-317-530-1011  
 Fax: +1-905-660-1146  
 Fax: +52-442-153-2435  
 Fax: +55-11-4793-8870  
 Fax: +49-(0)2151-65046-90  
 Fax: +66-2-714-0740  
 Fax: +65-65587371  
 Fax: +62-21-527-3029  
 Fax: +91-(0)12-4450-2910  
 Fax: +61-(0)2-9898-1678  
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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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