

# **MZS**<sub>SERIES</sub> **5kg Payload** **Collaborative Robot**

Model:CMZ05-01

**Add collaborative robot functions  
to the high speed, high accuracy,  
and reliability of the MZ series**

## **Collaborative Rated**

- Compliant with various certifications to ensure safety as a collaborative robot (ISO13849-1, ISO10218-1, ISO/TS15066)
- Shape design and software functions that minimize the risk of getting caught

## **High speed & High precision**

- Achieves top-class high-speed and high-accuracy with the same mechanism as the MZF series.  
(2500 mm/s when not collaborating)

## **Supports various industries**

(protection grade: equivalent to IP67)

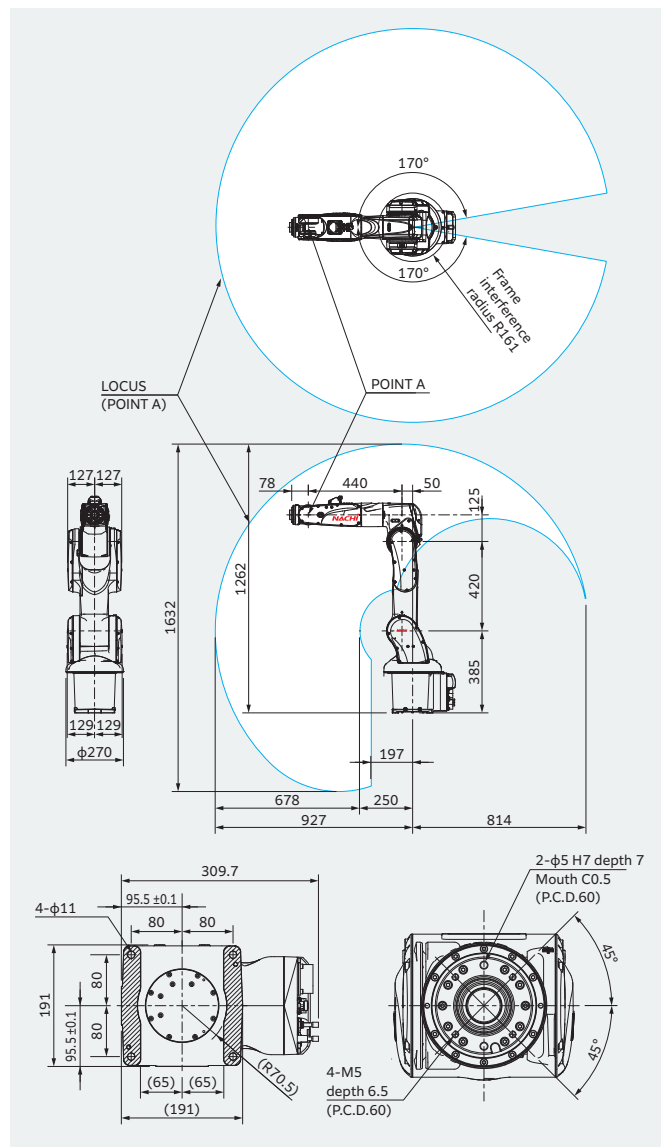
- The risk of contact with the workpiece is reduced by the hollow wrist and the wiring and piping inside the arm
- Abundant applications for various industries



## Basic Specification of Robot

Item	Specification		
Model	<b>CMZ05-01</b>		
Structure	Articulated robot		
Axis	6		
Drive System	AC servo motor		
Maximum motion range	J1	±2.97rad (±170°)	
	J2	Initialization	-2.00 ~ +0.69rad (-115 ~ +40°)
		MAX *1	-2.36 ~ 1.40rad (-135 ~ +80°)
	J3	-2.48 ~ 2.69rad (-142 ~ +154°)	
	J4	±3.32rad (±190°)	
	J5	Initialization	±1.57rad (±90°)
MAX *1		±2.09rad (±120°)	
Maximum Velocity	J1	4.71rad/s (270°/s)	
	J2	4.28rad/s (245°/s)	
	J3	5.42rad/s (310°/s)	
	J4	9.60rad/s (550°/s)	
	J5	9.60rad/s (550°/s)	
	J6	16.58rad/s (950°/s)	
TCP speed	Non-collaborative	2500mm/s	
	Collaborative	1000mm/s *2	
Maximum Payload	Wrist	5kg	
Maximum static load torque	J4	16.9N·m	
	J5	16.9N·m	
	J6	9.4N·m	
Maximum moment of inertia	J4	0.49kg·m <sup>2</sup>	
	J5	0.49kg·m <sup>2</sup>	
	J6	0.15kg·m <sup>2</sup>	
Position repeatability *3	±0.020mm		
Maximum Reach	927 mm		
Air tubes	φ6×2 (3 solenoid valves installed as standard) Available pressure range: 0.1 ~ 0.5MPa		
Application cables	20 core or 12 core (Depends on option selection)		
LAN	None, 8 core 1 line, 8 core 2 line (Depends on option selection)		
Installation	Floor/Inverted		
Mounting Condition	Ambient Temperature: 0 ~ 40°C Ambient Humidity: 20 ~ 85%RH (No dew or frost allowed) Vibration: Not more than 0.5G (4.9m/s <sup>2</sup> )		
Protection class	IP 67 equivalent (dust-proof, liquid-resistant)		
Clean rating	Equivalent ISO CLASS 4 *4		
Noise Level	75dB		
Robot weight	53kg		

## Dimensions and operating range



1[rad]=180/π[°], 1[N·m]=1/9.8[kgf·m]

\*1 The scope of operation must be determined by risk assessment.

\*2 Operating speed must be determined by risk assessment.

\*3 Compliant with JIS B 8432.

\*4 Compliant with ISO14644-1



I/O 20 core, LAN 8 core 1 Line



Collaborative mode indicator lamp



Stopper cover that reduces the risk of getting caught



Offset shape that reduces the risk of getting caught

# NACHI

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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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