

NACHI



Powerful and Compact

Multipurpose Robot

**MZ12/
15H**

NEW

DURABLE

- Fully enclosed robot body and wrist
- Supports various applications with IP67 equivalent, rust-resistant design
- Achieves high speed and precise motion control through weight reduction
- Improved rigidity enhances productivity

INNOVATIVE

- Integrated valves in the arm and smart cable and hose routing through the hollow wrist
- Minimizes interference and wear

FLEXIBLE

- Flexible system designs enabled by a wide working envelope
- Large wrist torque supports heavy tooling and workpieces
- Integrated wiring at the wrist for 7th axis & Ethernet
- Neat cable and hose routing

Basic Specification of Robot

Item	Specification		
Model	MZ12H-21	MZ15H-21	
Structure	Articulated robot		
Axes	6		
Drive System	AC servo motor		
Maximum motion range	J1	±2.97rad (±170°)	
	J2	+1.57~-2.79rad (+90~-160°)	
	J3	+3.67~-2.57rad (+210~-147°)	
	J4	±3.32rad (±190°)	
	J5	±2.44rad (±140°)	±2.36rad (±135°)
	J6	±6.28rad (±360°)	
	Maximum Velocity 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)	4.88rad/s (280°/s)
J6		12.92rad/s (740°/s)	10.82rad/s (620°/s)
Maximum Payload		Wrist	12kg
	J4	26.5N·m	35.0N·m
	J5	26.5N·m	35.0N·m
Maximum static load torque	J4	12.0N·m	15.0N·m
	J5	0.9kg·m ²	1.6kg·m ²
	J6	0.9kg·m ²	1.6kg·m ²
Maximum moment of inertia ²⁾	J4	0.9kg·m ²	1.6kg·m ²
	J5	0.9kg·m ²	1.6kg·m ²
	J6	0.3kg·m ²	0.8kg·m ²
Position repeatability ³⁾	±0.04mm		
Maximum Reach	1454mm		
Air tubes	φ6×2, φ8×1		
Application cables	24 wires (Including wires for optional valves)		
Installation	Floor / Inverted / Angle	Floor / Inverted	
Mounting Condition	Ambient Temperature:0~45°C ⁴		
	Ambient Humidity:20~85%RH (No dew or frost allowed) Vibration: Not more than 0.5G(4.9m/s ²)		
Protection class ⁵⁾	IP 67 equivalent(dust-proof, liquid-resistant)		
Robot weight	165kg		

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

* Specifications are subject to change without prior notice for technical changes

* Explosion-proof version is not available.

*1. The maximum velocity in the chart is the maximum value.

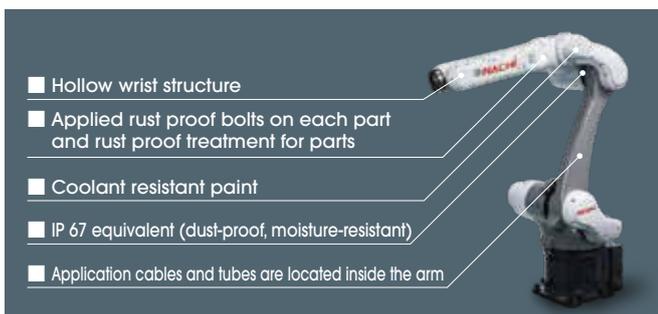
It will change depending on the operation program and the wrist load condition.

*2. Depends on wrist load condition

*3. JIS B 8432 conformance

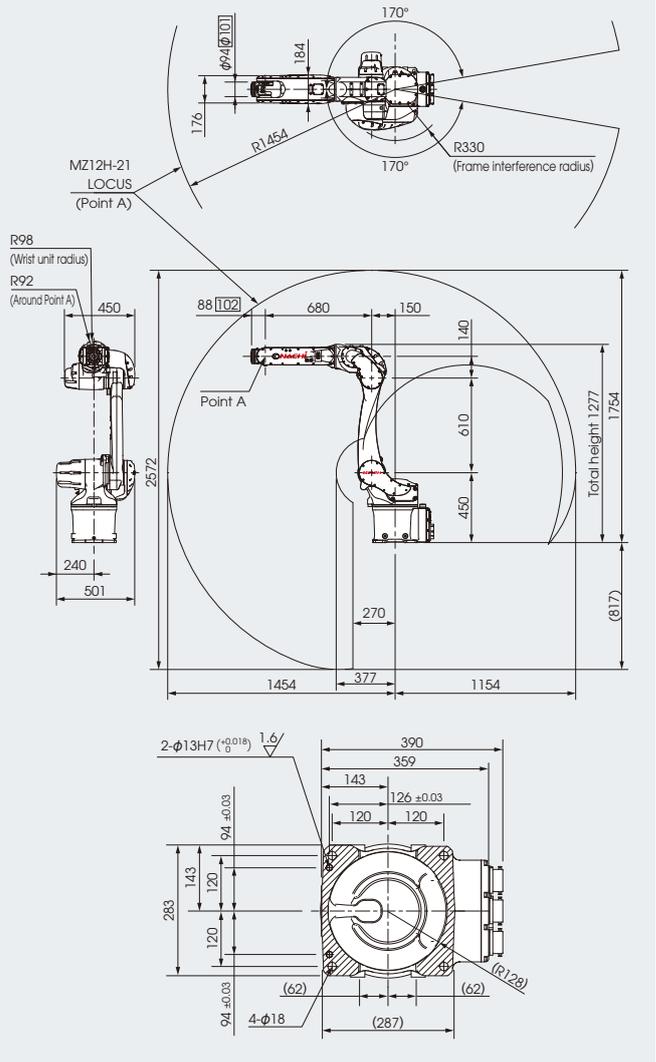
*4. Up to a maximum of 1000m from sea level. Ambient temperature is reduced when allowable altitude is exceeded.

*5. Fluids that cause the deterioration of sealants, such as gasoline-based cutting fluids, chlorine, alkalines, acids and organic solvents cannot be used. The main robot cables are IP65.

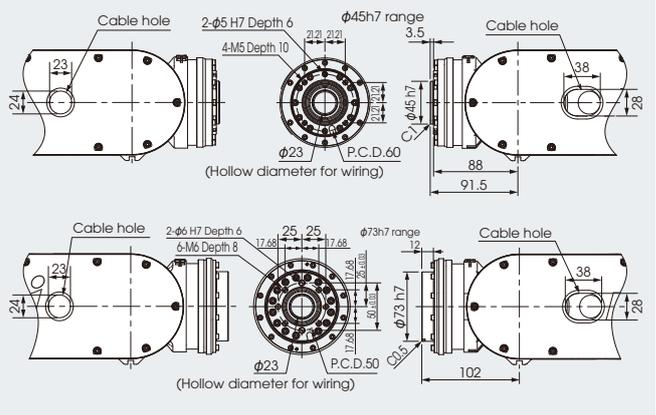


Dimensions and Operating Range

*Data shown in for MZ15H-21



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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