

*10Kg Payload Long Reach SCARA Robot*

# **EC10**

■ **Increased Payload Capacity**

*Rated 5kg, Maximum 10kg, conditional 12kg*

■ **Long reach**

*Long reach of 800/1,000mm*

■ **Selectable vertical axis length**

*Selectable from 200/300mm*

■ **Equipped with LAN cable  
as standard equipment**



## Basic Specification of Robot

Item		Specification			
Model		<b>EC10-8020-01</b>	<b>EC10-8030-01</b>	<b>EC10-A020-01</b>	<b>EC10-A030-01</b>
Structure		Horizontal articulated type			
Axis		4			
Drive System		AC servo motor			
brake		J1, J2, J4: without brake J3: with brake			
Maximum motion range	J1	±2.30rad (±132°)			
	J2	±2.61rad (±150°)			
	J3 (Clean specification)	200mm	300mm	200mm	300mm
	J4	±6.28rad (±360°)			
Maximum Velocity <sup>1)</sup>	J1+J2 (With 12 kg)	9,700mm/s (6,900mm/s)		9,000mm/s (7,000mm/s)	
	J1 (With 12 kg)	5.93rad/s (340°/s) (4.19rad/s (240°/s))		5.24rad/s (300°/s) (3.67rad/s (210°/s))	
	J2 (With 12 kg)	11.00rad/s (630°/s) (8.03rad/s (460°/s))		10.82rad/s (620°/s) (7.50rad/s (430°/s))	
	J3 (With 12 kg)	1100mm/s (770mm/s)			
	J4 (With 12 kg)	47.12rad/s (2700°/s) (32.99rad/s (1890°/s))			
Maximum Payload	Rated	5kg			
	Maximum	10kg (conditional 12kg <sup>2)</sup> )			
Maximum moment of inertia <sup>4)</sup>		0.02kg·m <sup>2</sup>			
#3 axis maximum pressing force		200N <sup>3)</sup>			
Position repeatability	X-Y synthesis	±0.025mm			
	J3 (Z)	±0.01mm			
	J4 (θ)	±0.01°			
Maximum Reach		800mm		1000mm	
Air tubes		Primary: φ6×2, φ4×2 Secondary: φ6×2, φ4×2 (when solenoid valve is not used) φ6×1, φ4×5 (when using solenoid valve)			
Application cables		24PIN (15PIN+9PIN) (when solenoid valve is not used) 20PIN (11PIN+9PIN) (when using solenoid valve)			
LAN cable		RJ45×1			
Installation		Floor			
Mounting Condition		Ambient Temperature: 0 ~ 40°C <sup>5)</sup> Ambient Humidity: 20 ~ 80%RH (No dew or frost allowed) Vibration: Not more than 0.5G (4.9m/s <sup>2</sup> )			
Environmental specifications <sup>6)</sup>		IP 20 equivalent			
Noise level <sup>7)</sup>		Not more than 77.0dB			
Robot weight		41kg		44kg	

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.

\* This robot may vibrate during low speed operation. Therefore, it cannot be used for sealing applications.

<sup>1)</sup> The maximum velocity in the chart is the maximum value. It will change depending on the operation program and the wrist load condition.

<sup>2)</sup> For this load, speed and acceleration are limited.

<sup>3)</sup> This is the downward pressing force that can be generated at the tip of the load when the maximum load is mounted and the #1, #2, and #4 axes are stationary.  
Please use the specified value or less. Also, if pressed for a long time, an overload error will occur.  
Please use it in a state where no error occurs.

<sup>4)</sup> Note that the allowable moment of inertia varies with wrist load conditions.

<sup>5)</sup> Using at 1000 m or lower sea level.

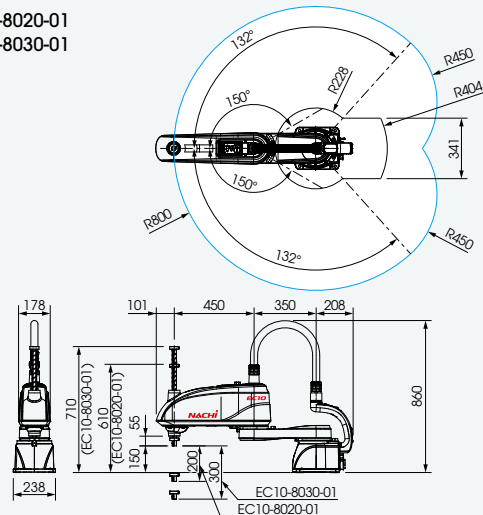
Ambient temperature has limitations when allowable altitude is exceeded.

<sup>6)</sup> 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.

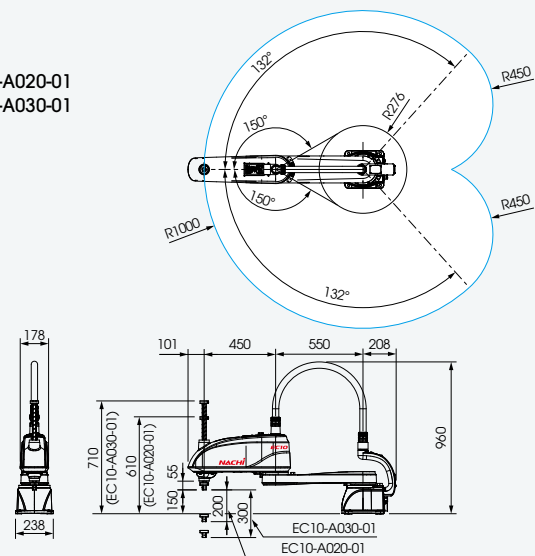
<sup>7)</sup> Robot noise is A-weighted equivalent sound level measured under "JIS Z 8737-1" (ISO 11201) with maximum payload and maximum velocity.

## Dimensions and operating range

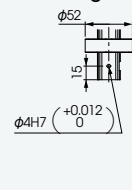
EC10-8020-01  
EC10-8030-01



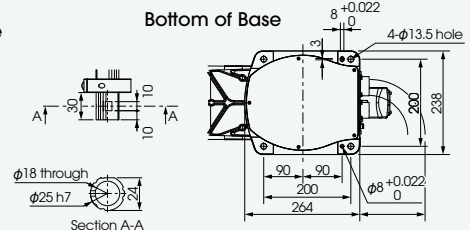
EC10-A020-01  
EC10-A030-01



Details of load mounting face



Bottom of Base



Cable connection space  
Secure 250mm or more.

# 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.

CATALOG NO. **R7806E-2**

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