

The Ultimate Arc Welding Robot

# NB04/04L

- **Selectable Arm Type**

Select either the standard or the long arm according to your job and the size of your workpiece

- **Small Footprint**

Removed protrusions from previous model to shrink footprint by 90 mm.

- **Reduce Collision Damage**

Improved sensitivity of servo shock sensor detects interference is 40% better (compared to previous models) and the force of interference is controlled to reduce damage from collisions.

- **Enclosed Cables**

Cables are enclosed to prevent snagging during robot operations.

- **Superior Maintainability**

Uses cantilever construction and the upper arm is fully accessible. Maintainability is great and power cables can be changed with ease.



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## NB04/04L

### ◆ Robot specifications

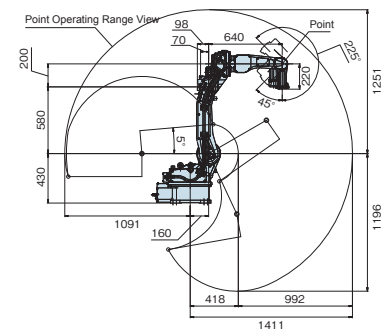
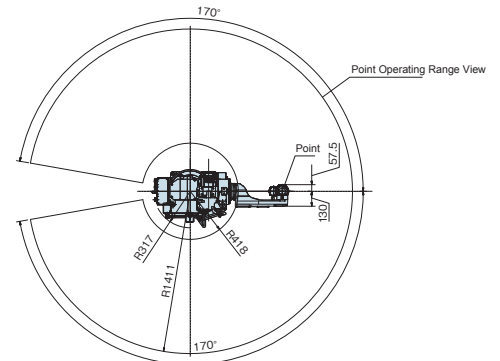
Item		Specifications	
Robot model		NB04	NB04L
Construction		Articulated construction	
Number of axes		6	
Drive system		AC servo system	
Max. operating area	Arm	J1 Swivel	$\pm 2.97\text{rad} (\pm 0.87\text{rad})^{*1}$
		J2 Forward/backward	$-2.71 \sim 1.57\text{rad}$ $-2.71 \sim 1.75\text{rad}$
		J3 Upward/downward	$-2.97 \sim 3.14\text{rad}$ $-2.97 \sim 3.32\text{rad}$
	Wrist	J4 Rotation2	$\pm 2.71\text{rad}$
		J5 Bending	$-0.79 \sim 3.93\text{rad}$
		J6 Rotation1	$\pm 3.58\text{rad}$
Max. speed	Arm	J1 Swivel	3.66rad/s    3.40rad/s(3.05rad/s) <sup>*1</sup>
		J2 Forward/backward	3.66rad/s    3.49rad/s
		J3 Upward/downward	3.66rad/s    3.49rad/s
	Wrist	J4 Rotation2	7.33rad/s
		J5 Bending	7.33rad/s
		J6 Rotation1	10.5rad/s
Max. Payload	Wrist	4kg	
	Forearm	10kg <sup>*2</sup>	20kg <sup>*2</sup>
Allowable static load torque of wrist	J4 Rotation2	10.1N·m	
	J5 Bending	10.1N·m	
	J6 Rotation1	2.94N·m	
Max. allowable moment of inertia of wrist <sup>*4</sup>	J4 Rotation2	0.38kg·m <sup>2</sup>	
	J5 Bending	0.38kg·m <sup>2</sup>	
	J6 Rotation1	0.03kg·m <sup>2</sup>	
Position repeat accuracy		$\pm 0.08\text{mm}^{*3}$	
Installation parameters	Ambient temperature	0~45°C	
	Ambient humidity	20~80%RH (Non condensing)	
	Vibration value	0.5 G Below Not more than 0.5G	
Robot type		Floor mounted, Ceiling mounted, Wall installation	
Robot mass		170kg	280kg

1[rad] = 180/π [°], 1[N·m] = 1/9.8[kgf·m]

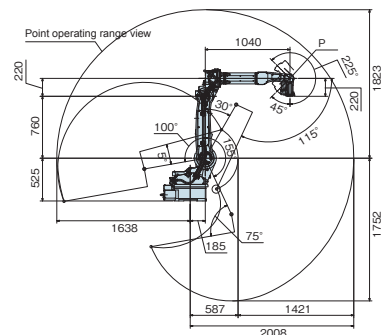
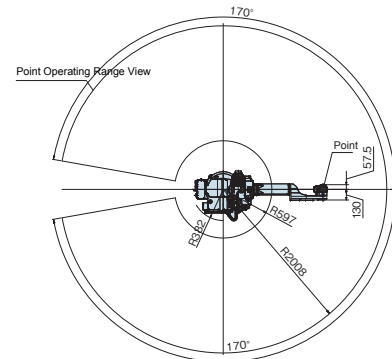
- \*1 Values in (parentheses) are for wall installations.
- \*2 Maximum allowed loading capacity when end effector is used.
- \*3 Value measured is for maximum load on upper arm for adequate repetitions of automatic operations in stable robot operating conditions.
- \*4 Note that wrist moment of inertia varies depending on wrist and conditions.

### ◆ Exterior dimensions and operating envelope

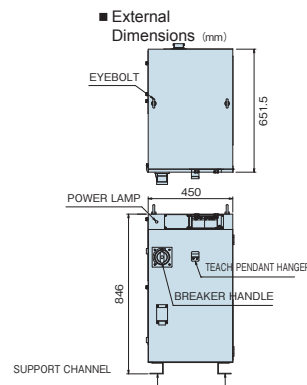
#### NB04



#### NB04L



#### AX21 controller



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