

## THE ULTIMATE ARC WELDING ROBOT

# NV06/06L

## Optimal Robot for Arc Welding Application

### Selectable Arm Type

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

### Upper Arm Is Slim

The upper arm has been reduced from 140 mm (previous models) to 134 mm to avoid interference in narrow spaces.

### Reduce Collision Damage

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

### Supports several welding applications

Supports various welding methods such as CO/MAG, MIG, TIG, and others, plus it has enough load capacity to easily handle a sensor.



# NV06/06L

## Nachi's Arc Welding Robot



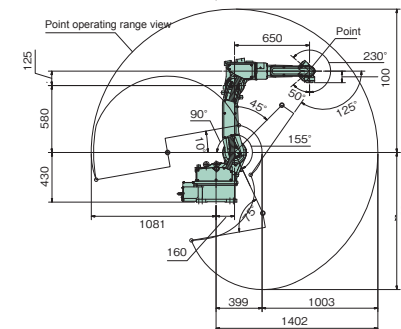
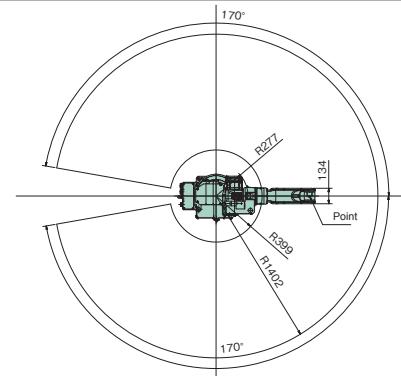
### ◆ Robot specifications

Item		Specifications	
Robot Model		NV06	NV06L
Construction		Articulated construction	
Number of Axes		6	
Drive System		AC Servo System	
Max. operating area	Arm	J1 Swivel	$\pm 2.97\text{rad}$ ( $\pm 0.87\text{rad}$ ) <sup>*1</sup>
		J2 Forward/backward	$-2.71 \sim 1.57\text{rad}$ $-2.71 \sim 1.75\text{rad}$ <sup>*2</sup>
		J3 Upward/downward	$-2.97 \sim 3.32\text{rad}$ $-2.97 \sim 4.54\text{rad}$ <sup>*3</sup>
	Wrist	J4 Rotation2	$\pm 3.14\text{rad}$
		J5 Bending	$-0.87 \sim 4.01\text{rad}$
		J6 Rotation1	$\pm 6.28\text{rad}$
Max. speed	Arm	J1 Swivel	$3.66\text{rad/s}$ ( $2.61\text{rad/s}$ ) <sup>*1</sup> $3.40\text{rad/s}$ ( $3.05\text{rad/s}$ ) <sup>*1</sup>
		J2 Forward/backward	$3.66\text{rad/s}$ $3.49\text{rad/s}$
		J3 Upward/downward	$3.66\text{rad/s}$ $3.49\text{rad/s}$
	Wrist	J4 Rotation2	$7.33\text{rad/s}$
		J5 Bending	$7.33\text{rad/s}$
		J6 Rotation1	$10.82\text{rad/s}$
Max. Payload	Wrist	6kg	
	Forearm	$10\text{kg}$ <sup>*4</sup>	$20\text{kg}$ <sup>*4</sup>
Allowable static load torque of wrist	J4 Rotation2	11.8N·m	
	J5 Bending	9.8N·m	
	J6 Rotation1	5.9N·m	
Max. allowable moment of inertia of wrist <sup>*5</sup>	J4 Rotation2	0.30kg·m <sup>2</sup>	
	J5 Bending	0.25kg·m <sup>2</sup>	
	J6 Rotation1	0.06kg·m <sup>2</sup>	
Position repeat accuracy		$\pm 0.08\text{mm}$ <sup>*5</sup>	
Installation parameters	Ambient temperature	0~45°C	
	Ambient humidity	20~80%RH (Non condensing)	
	Vibration value	0.5G Not more than 0.5G	
Robot type		Floor mounted, Ceiling mounted, Wall installation	
Robot mass		160kg	280kg

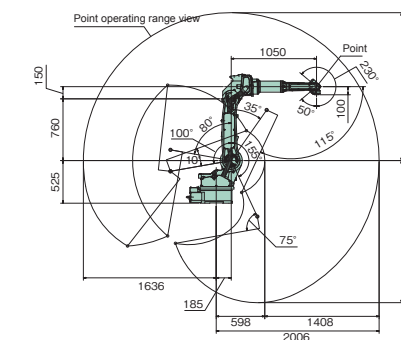
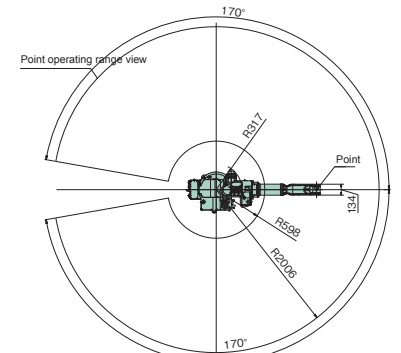
\*1 Values in (parentheses) are for wall installations. \*2 Wall installation may limit range of motion of J2 axis. \*3 For floor installations for welding, range of motion of J3 axis is limited to -2.97 rad to 3.58 rad. \*4 Maximum allowed loading capacity when end effector is used. \*5 Value measured is for maximum load on upper arm for adequate repetitions of automatic operations in stable robot operating conditions. \*6 Note that wrist moment of inertia varies depending on wrist and conditions.

### ◆ Exterior dimensions and operating envelope

#### ■ NV06



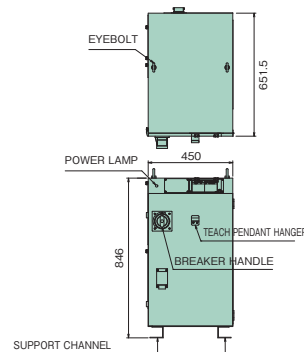
#### ■ NV06L



#### ■ AX21 controller



#### ■ External Dimensions (Unit : mm)



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