



Almega Friendly series **ARC WELDING ROBOT** ***FD-B6***



New and improved in every way

Faster

15% improvement on all axes

Stronger

Payload increased 1.5X

Lighter

Easiest mounting & transporting

Slimmer

Best access to confined welds

Faster

15% improvement on all axes

Stronger

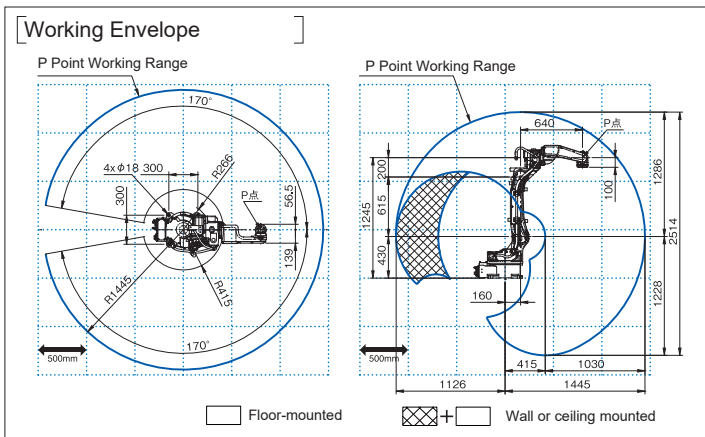
Payload increased 1.5X

Lighter

Easiest mounting & transporting

Slimmer

Best access to confined welds



[Specifications]

		FD-B6	
Item		Specifications	
Name	NB6		
Structure	Vertical articulated type		
Number of axes	6		
Max. payload capacity	6 kg		
Positional repeatability	+/- 0.08 mm		
Drive system	AC Servo motor		
Drive capacity	3132 W		
Position feedback	Absolute encoder		
Working range	Arm	Axis J1 (Rotation)	+/- 170° (±/±50°) <small>Note 1</small>
		Axis J2 (Lower arm)	-155°~+90°
		Axis J3 (Upper arm)	-170°~+245° <small>Note 3</small>
	Wrist	Axis J4 (Swing)	+/- 155° «+/- 170°» <small>Note 2</small>
		Axis J5 (Bending)	-45°~+225°
		Axis J6 (Twist)	+/- 205° «+/- 360°» <small>Note 2, Note 4</small>
Max. velocity	Arm	Axis J1 (Rotation)	4.19 rad/s (240°/s) (3.32 rad/s (190°/s))
		Axis J2 (Lower arm)	4.19 rad/s (240°/s)
		Axis J3 (Upper arm)	4.01 rad/s (230°/s)
	Wrist	Axis J4 (Swing)	7.50 rad/s (430°/s)
		Axis J5 (Bending)	7.50 rad/s (430°/s)
		Axis J6 (Twist)	11.00 rad/s (630°/s)
Wrist load	Allowable Moment	Axis J4 (Swing)	10.5 N*m
		Axis J5 (Bending)	10.5 N*m
		Axis J6 (Twist)	5.9 N*m
	Allowable moment of inertia	Axis J4 (Swing)	0.28 kg*m ²
		Axis J5 (Bending)	0.28 kg*m ²
		Axis J6 (Twist)	0.06 kg*m ²
Arm operation cross-sectional area	3.59 m ² x 340°		
Ambient conditions	0 ~ 45°C, 20 ~ 80 %RH (No condensation)		
Mass (weight)	145 kg		
Upper arm payload capacity	10 kg		
Installation type	Floor, ceiling or wall hanging type		
Paint color	White (Munsell 10GY9/1)		

Note 1:

The values given in () apply when wall-mounted .

Note 2:

The values given in «>> apply when coaxial power cables are not passing through the hollow wrist.

Note 3:

Working range of the J3 axis is restricted to -170 degrees to +180 degrees when floor-based welding is applied.

Note 4:

Working range of the J6 axis may be restricted by the J5 axis position.

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Almega Friendly series

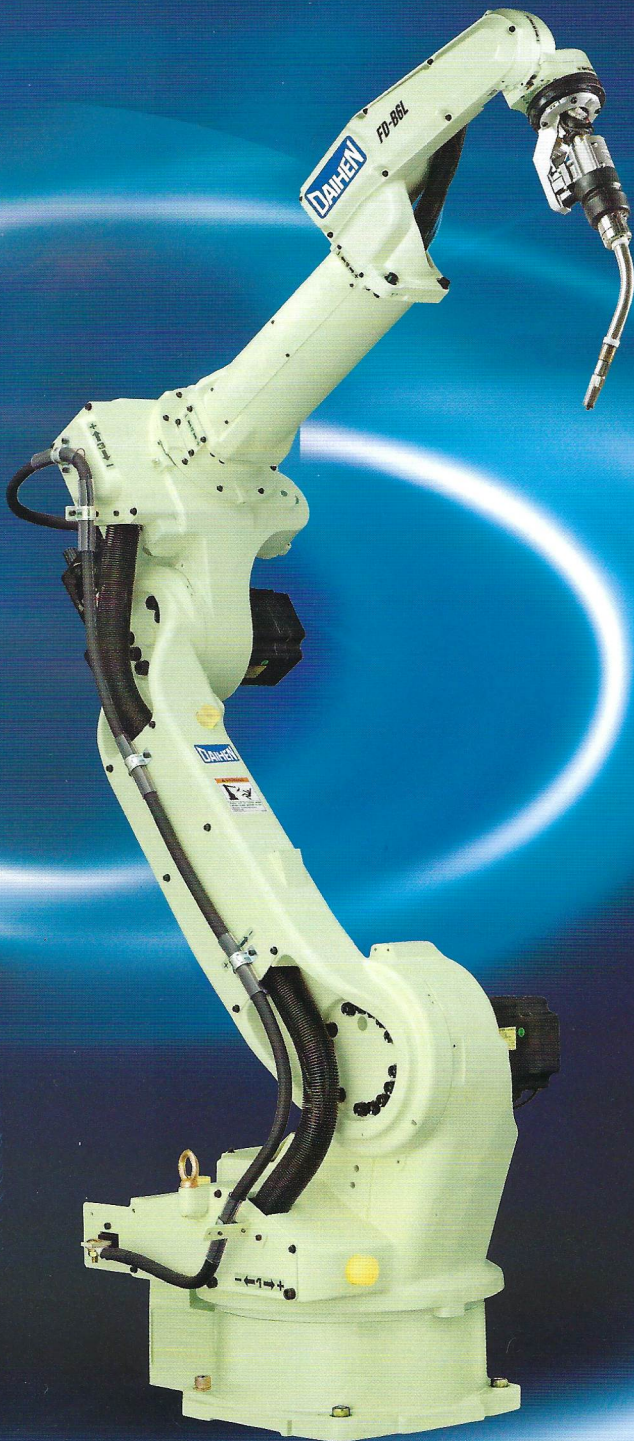
Arc Welding Robot *FD-B6L*

**Faster, Slimmer
& more User-Friendly**

A fully redesigned robot with
built-in cables — completely
new and improved!



Best for large structures by its long arm
All cables required for synchro-feed
welding are already built into the robot.



A fully redesigned robot with built-in cables— completely new and improved!

Faster cycle time

Due to the industry's fastest speeds, cycle times are reduced.

Slim design

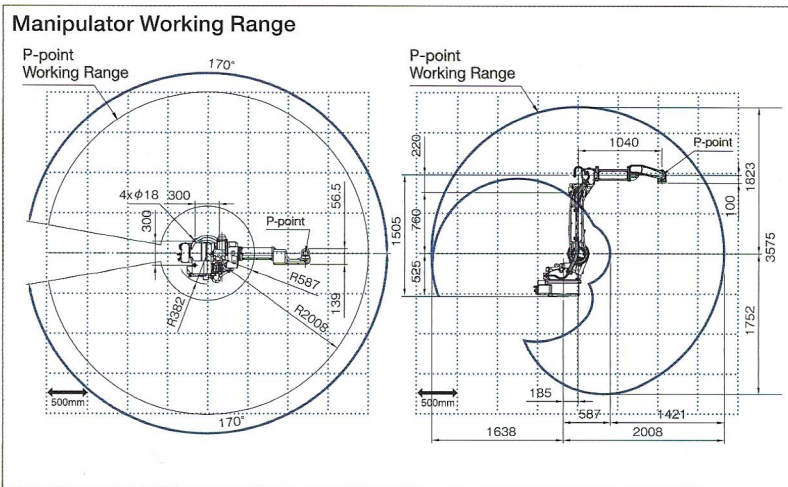
Built-in wrist motors avoid interference with jigs and workpieces.

User-friendly operation

Designed to avoid interference behind the arm (All cables required for synchro-feed welding are already built into the robot)

Stronger structure

Maximum payload is 6kg. Can be equipped with various torches and sensors. It is good for handling application.



Manipulator Specifications

		FD-B6L
Structure		Vertical articulated type
Number of Axes		6
Max. Payload Capacity		6kg
Positional Repeatability		±0.08mm (Note 1)
Drive System		AC servomotor
Drive Capacity		4832W
Position Feedback		Absolute encoder
Working Range	Arm J1 (Rotation)	±170° (±50°) (Note 2)
	J2 (Lower Arm)	-155°~+100° (Note 3)
	J3 (Upper Arm)	-170°~+190°
	J4 (Swing)	±155°(±170°) (Note 4)
	Wrist J5 (Bending)	-45°~+225° (Note 5)
	J6 (Twist)	±205°(±360°) (Note 4, 5)
Maximum Speed	Arm J1 (Rotation)	3.40rad/s (3.05 {195°/s (175°/s)} (Note 2)
	J2 (Lower Arm)	3.49rad/s(200°/s)
	J3 (Upper Arm)	3.49rad/s(200°/s)
	J4 (Swing)	7.50rad/s(430°/s)
	Wrist J5 (Bending)	7.50rad/s(430°/s)
	J6 (Twist)	11.00rad/s(630°/s)
Wrist Allowable Load	Allowable Moment J4 (Swing)	10.5N·m
	J5 (Bending)	10.5N·m
	J6 (Twist)	5.9N·m
	Allowable Moment of Inertia J4 (Swing)	0.28kg·m ²
	J5 (Bending)	0.28kg·m ²
	J6 (Twist)	0.06kg·m ²
Arm Cross-sectional Area		6.37m ² × 340°
Ambient Conditions		Temp: 0 to 45°C, Hmd: 20 to 80%RH (No Condensation)
Mass (weight)		278kg
Upper Arm Payload Capacity		20kg (Note 6)
Installation Type		Floor, wall, or ceiling
Paint Color		White (Munsell notation 10GY 9/1)

Notes

1. Positional repeatability of the tool center point (TCP) value complies with the JIS-B-8432 Standard.
2. Specifications for wall mounting appear in parentheses.
3. The working range of the J2 axis may be restricted when wall-mounted.
4. This specification applies when a single-wire power cable is fed through the hollow part of J4 and J6. The value in parentheses represents all other specifications.
5. The working range of the J6 axis may be restricted by the specific posture of the J5 axis.
6. The capacity of the upper arm varies with the wrist capacity.

In accordance with DAIHEN's policy to make continuing improvements, design and/or specifications are subject to change without notice and without any obligation on the part of manufacturer.

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Distributed by:



Almega Friendly series
ARC WELDING ROBOT
FD-V8



Faster
Stronger
Slimmer
Efficient

Load capacity of 17.6 lb

New and improved in every way

Faster

15% improvement on all axes

Stronger

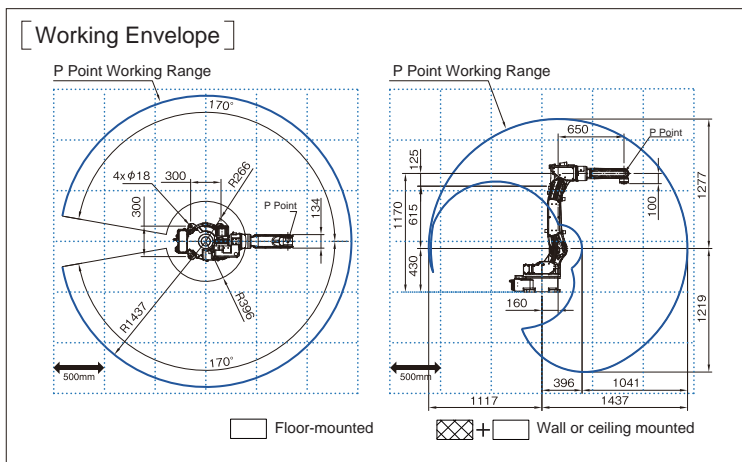
Payload increased 30%

Efficient

Incorporating cables improve operation

Slimmer

Best access to confined welds



Specifications

		FD-V8	
Item	Specifications		
Structure	Vertical articulated type		
Number of axes	6		
Max. payload capacity	8 kg		
Positional repeatability	±0.08mm <small>Note 1</small>		
Drive system	AC Servo motor		
Drive capacity	3016 W		
Position feedback	Absolute encoder		
Working range	Arm	Axis J1 (Rotation)	±170° (±50°) <small>Note 2</small>
		Axis J2 (Lower arm)	-155° ~ +90°
		Axis J3 (Upper arm)	-170° ~ +190°
Wrist	Axis J4 (Swing)	±180°	
	Axis J5 (Bending)	-50° ~ +230°	
	Axis J6 (Twist)	±360°	
Max. velocity	Arm	Axis J1 (Rotation)	4.19 rad/s (240°/s) (3.32rad/s (190°/s)) <small>Note 2</small>
		Axis J2 (Lower arm)	4.19 rad/s (240°/s)
		Axis J3 (Upper arm)	4.01 rad/s (230°/s)
	Wrist	Axis J4 (Swing)	7.50 rad/s (430°/s)
		Axis J5 (Bending)	7.50 rad/s (430°/s)
		Axis J6 (Twist)	11.00 rad/s (630°/s)
Wrist load	Allowable Moment	Axis J4 (Swing)	17.6 N·m
		Axis J5 (Bending)	17.6 N·m
		Axis J6 (Twist)	7.8 N·m
Allowable moment of inertia	Axis J4 (Swing)	0.43kg·m ²	
	Axis J5 (Bending)	0.43kg·m ²	
	Axis J6 (Twist)	0.09kg·m ²	
Arm operation cross-sectional area	3.11m ² x 340°		
Ambient conditions	0~45°C, 20 ~ 80%RH (No condensation)		
Mass (weight)	140kg		
Upper arm payload capacity	10kg <small>Note 4</small>		
Installation type	Floor, ceiling or wall hanging type		
Paint color	White (Munsell value 10gy9/1)		

Note 1:

The positional repeatability is pursuant to JIS B 8432 standards.

Note 2:

The values given in () apply when wall-mounted .

Note 3:

When wall mounted the working range of the J2 axis may be limited.

Note 4:

The upper arm payload capacity varies by max. payload capacity.

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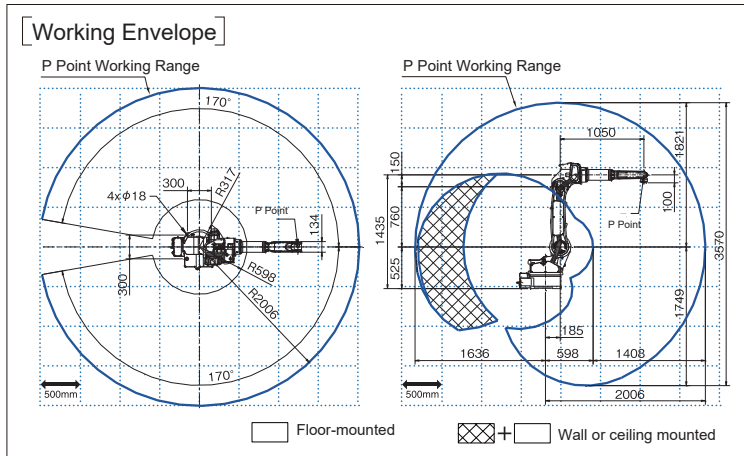
Incorporating cables improve operation

Slimmer

Best access to confined welds

Specifications

		FD-V8L	
Item		Specifications	
Structure		Vertical articulated type	
Number of axes		6	
Max. payload capacity		8 kg	
Positional repeatability		±0.08mm <small>Note 1</small>	
Drive system		AC Servo motor	
Drive capacity		5000 W	
Position feedback		Absolute encoder	
Working range	Arm	Axis J1 (Rotation)	±170° (±50°) <small>Note 2</small>
		Axis J2 (Lower arm)	-155°~ +100°
		Axis J3 (Upper arm)	-170°~ +260°
Wrist	Axis J4 (Swing)	±180°	
	Axis J5 (Bending)	-50°~ +230°	
	Axis J6 (Twist)	±360°	
Max. velocity	Arm	Axis J1 (Rotation)	3.40rad/s(3.05) {195°/s} (175°/s) <small>Note 3</small>
		Axis J2 (Lower arm)	3.49rad/s (200°/s)
		Axis J3 (Upper arm)	3.49rad/s (200°/s)
Wrist	Axis J4 (Swing)	7.50rad/s (430°/s)	
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	Axis J6 (Twist)	10.99rad/s (630°/s)	
Wrist load	Allowable Moment	Axis J4 (Swing)	17.6 N*m
		Axis J5 (Bending)	17.6 N*m
		Axis J6 (Twist)	7.8 N*m
Allowable moment of inertia	Axis J4 (Swing)	0.43kg*m ²	
	Axis J5 (Bending)	0.43kg*m ²	
	Axis J6 (Twist)	0.09kg*m ²	
Arm operation cross-sectional area		7.48m ²	
Ambient conditions		0~45°C, 20 ~ 80%RH (No condensation)	
Mass (weight)		273kg	
Upper arm payload capacity		20kg <small>Note 4</small>	
Installation type		Floor, ceiling or wall hanging type	
Paint color		White (Munsell value 10gy9/1)	



Note 1:

The positional repeatability is pursuant to JIS B 8432 standards.

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When wall mounted the working range of the J2 axis may be limited.

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