



***Almega Friendly series***  
**Arc Welding Robot**  
***FD-B6***

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

A fully re-designed robot with built-in cables  
completely new and improved!



**All cables required for  
synchro-feed welding  
are already built into the robot.**





# A fully re-designed 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.

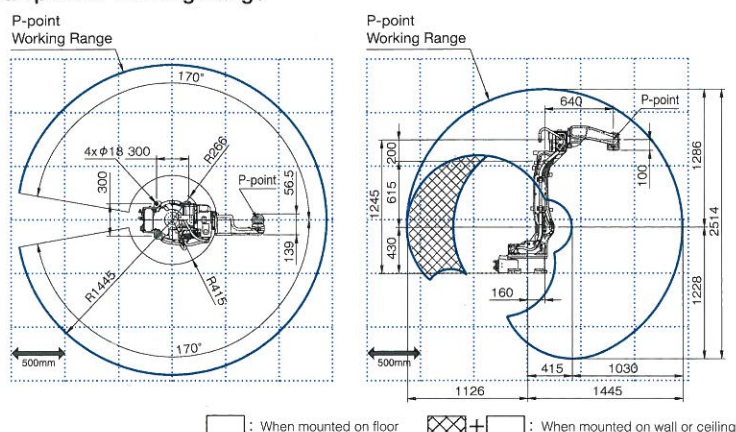
## User-friendly operation

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

## Stronger structure

Payload increased 1.5X for various range of welding tasks. It also is good for handling application.

### Manipulator Working Range



### Manipulator Specifications

FD-B6	
Structure	Vertical articulated type
Number of Axes	6
Max. Payload Capacity	6 kg
Positional Repeatability	±0.08mm (Note 1)
Drive System	AC servomotor
Drive Capacity	3132 W
Position Feedback	Absolute encoder
Working Range	J1 (Rotation) ±170° (±50°) (Note 2)
	J2 (Lower Arm) -155° to +90° (Note 3)
	J3 (Upper Arm) -170° to +245° (Note 4)
	J4 (Swing) ±155° (±170°) (Note 5)
	J5 (Bending) -45° to +225° (Note 6)
	J6 (Twist) ±205° (±360°) (Notes 5 and 6)
Maximum Speed	J1 (Rotation) 4.19rad/s [240°/s] (3.32rad/s [190°/s]) (Note 2)
	J2 (Lower Arm) 4.19rad/s [240°/s]
	J3 (Upper Arm) 4.01rad/s [230°/s]
	J4 (Swing) 7.50rad/s [430°/s]
	J5 (Bending) 7.50rad/s [430°/s]
	J6 (Twist) 11.00rad/s [630°/s]
Wrist Allowable Load	J4 (Swing) 10.5N·m
	J5 (Bending) 10.5N·m
	J6 (Twist) 5.9N·m
	J4 (Swing) 0.28kg·m <sup>2</sup>
	J5 (Bending) 0.28kg·m <sup>2</sup>
	J6 (Twist) 0.06kg·m <sup>2</sup>
Arm Cross-sectional Area	3.59m <sup>2</sup> × 340°
Ambient Conditions	Temp: 0 to 45°C, Hmd: 20 to 80%RH (No Condensation)
Mass (weight)	145kg
Upper Arm Payload Capacity	10kg (Note 7)
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. When this unit is mounted on the floor, the working range of the J3 axis is restricted to between -170° and +180°.
5. 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.
6. The working range of the J6 axis may be restricted by the specific posture of the J5 axis.
7. 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.

## DAIHEN Corporation

4-1, Koyochonishi, Higashinada-ku, Kobe, Hyogo 658-0033, Japan

Phone: (Country Code 81) 78-275-2006

Fax: (Country Code 81) 78-845-8159

Distributed by:

Note This product and the technologies (including software) used in the product are subject to Catch-All Controls. When exporting any of them, verify the users, applications, etc. according to the applicable laws and regulations and take appropriate procedures such as applications for export permission to the Minister of Economy, Trade and Industry if required.

●The information contained in this catalog is current as of September 2016 and is subject to revision without notice.  
●This catalog was printed with environmentally-friendly vegetable oil ink.