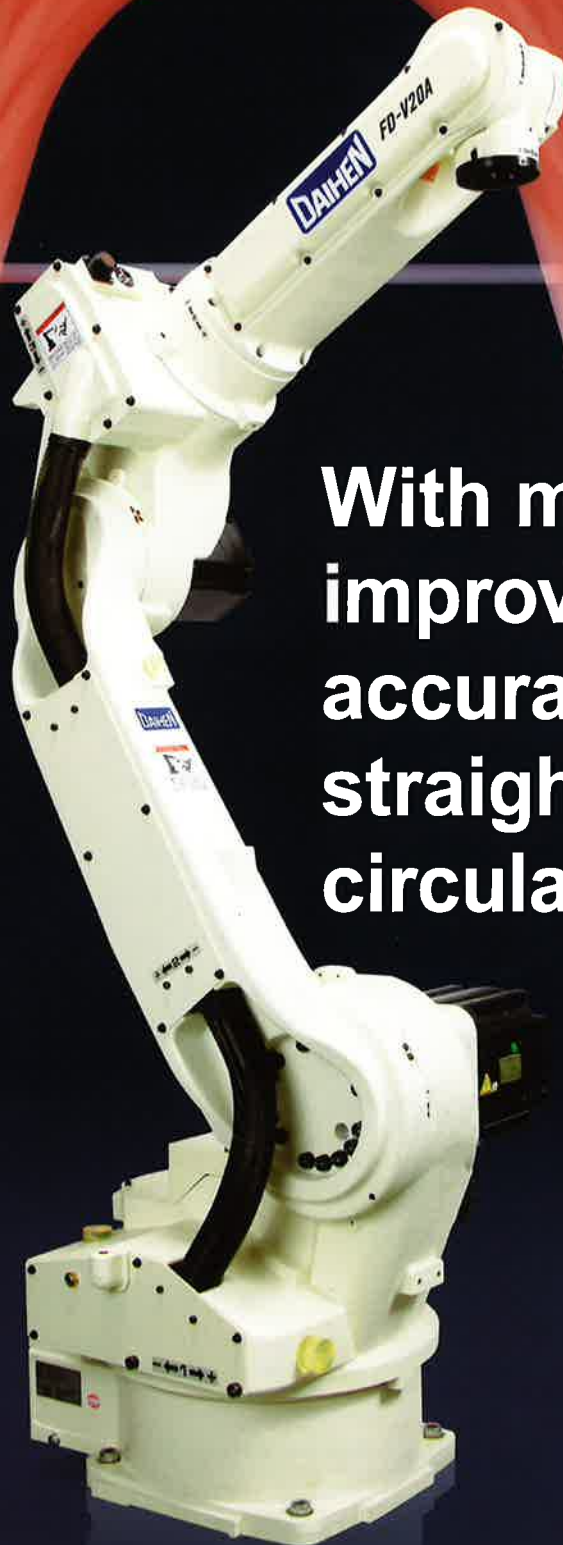




Welding & Handling Robot

Friendly series

FD-V20A



**With markedly
improved tracking
accuracy for
straight lines and
circular arcs**

With markedly improved tracking accuracy for straight lines and circular arcs

FD-V20A

Ideal for tasks requiring exceptional accuracy, such as highly precise TIG and plasma arc welding, and laser welding and cutting.

Standard

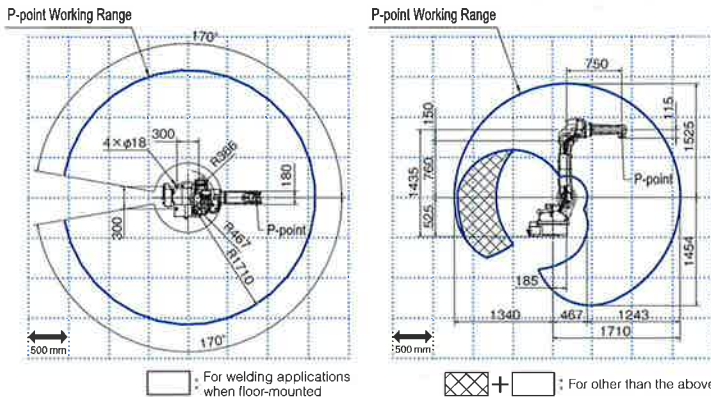
FD-V20A



Manipulator Specifications

		FD-V20A
Structure		Vertical articulated type
Number of Axes		6
Wrist Capacity		20 kg
Positional Repeatability		±0.07 mm (Note 1)
Driving Method		AC servomotor
Driving Capacity		7900 W
Positional Feedback		Absolute encoder
Working Range	Arm J1 (Rotation)	±170°
	J2 (Front/back)	-155° to +100°
	J3 (Up/down)	-170° to +260° (Note 4)
	J4 (Swing)	±180°
	Wrist J5 (Bending)	-50° to +230°
	J6 (Twist)	±360°
Maximum Speed	Arm J1 (Rotation)	3.40 rad/s 195°/s
	J2 (Front/back)	3.32 rad/s 190°/s
	J3 (Up/down)	3.14 rad/s 180°/s
	J4 (Swing)	6.98 rad/s 400°/s
	Wrist J5 (Bending)	6.98 rad/s 400°/s
	J6 (Twist)	10.5 rad/s 600°/s
Wrist Allowable Load	Allowable Moment J4 (Swing)	43.7 N·m
	J5 (Bending)	43.7 N·m
	J6 (Twist)	19.6 N·m
	Allowable Moment of Inertia J4 (Swing)	1.09 kg·m ²
	J5 (Bending)	1.09 kg·m ²
	J6 (Twist)	0.24 kg·m ²
Arm Cross-sectional Area		5,27 m ² × 340°
Environmental Conditions		Temp: 0 to 45°C, Hmd: 20 to 80%RH (No Condensation)
Mass (weight)		311 kg
Capacity of Upper Arm		20 kg (Note 5)
Installation Method		Floor-/Ceiling-mounted
Paint Color		White (Munsell notation 10GY 9/1)

Manipulator Working Range



Notes

1. Positional repeatability of the tool center point (TCP) value complies with the JIS-B-8432 Standard.
2. The value in the parentheses indicates the wall-mounting condition.
3. Working range of J2 axis may be restricted when wall-mounting.
4. The operation range of the J3 axis is restricted to -170 degrees to +205 degrees when floor-based welding is applied.
5. The capacity of the upper arm varies with the wrist capacity.



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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 August 2012 and is subject to revision without notice.