



Almega Friendly series II

High-Accuracy Robot ***FD-A20***

The Industry Global leader

High-Accuracy Robot



**Ideal for
laser welding and cutting**

The Industry Global leader, High Accuracy Robot

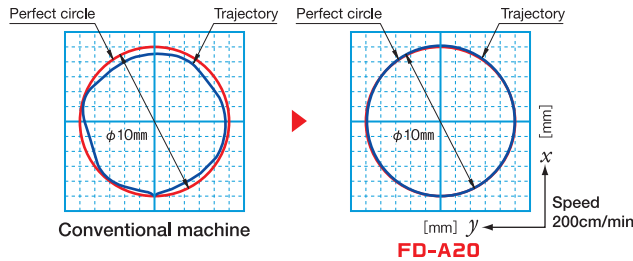
High accuracy across a wider range

Now with higher accuracy independent of robot position, whether retracted or extended.

Ideal for precision machining

The best choice for laser welding and cutting, TIG, and other tasks requiring high accuracy.

Capable of machining circles smaller than 10 mm in diameter with high accuracy.



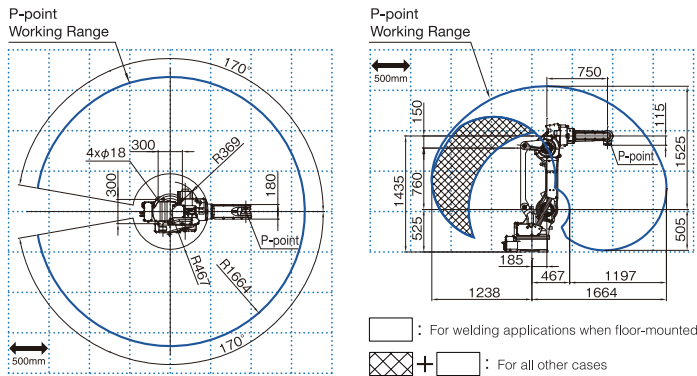
Manipulator Specifications

		FD-A20
Structure		Vertical articulated
Number of Axes		6
Max. Payload Capacity		20 kg
Positional Repeatability		$\pm 0.07\text{mm}$ (Note 1)
Drive System		AC servomotor
Drive Capacity		7900W
Position Feedback		Absolute encoder
Working Range	J1 axis (Rotation)	$\pm 170^\circ$
	J2 axis (Lower arm)	-70° to $+60^\circ$
	J3 axis (Upper arm)	-140° to $+240^\circ$ (Note 2)
	J4 axis (Swing)	$\pm 180^\circ$
	J5 axis (Bending)	-50° to $+230^\circ$
	J6 axis (Twist)	$\pm 360^\circ$
Maximum Speed	J1 axis (Rotation)	3.40 rad/s($195^\circ/\text{s}$)
	J2 axis (Lower arm)	3.32 rad/s($190^\circ/\text{s}$)
	J3 axis (Upper arm)	3.14 rad/s($180^\circ/\text{s}$)
	J4 axis (Swing)	6.98 rad/s($400^\circ/\text{s}$)
	J5 axis (Bending)	6.98 rad/s($400^\circ/\text{s}$)
	J6 axis (Twist)	10.5 rad/s($600^\circ/\text{s}$)
Wrist Allowable Load	Allowable Moment	
	J4 axis (Swing)	43.7Nm
	J5 axis (Bending)	43.7Nm
	J6 axis (Twist)	19.6Nm
	Moment of Inertia	
	J4 axis (Swing)	1.09kgm ²
J5 axis (Bending)	1.09kgm ²	
J6 axis (Twist)	0.24kgm ²	
Arm Cross-sectional Area		3.32m ² $\times 340^\circ$
Ambient Conditions		0 to 45°C
Ambient Operating Humidity		20 to 80%RH (No Condensation)
Mass (weight)		355kg
Upper Arm Payload Capacity		20kg (Note 3)
Installation Type		Floor-/Ceiling-mounted
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. The working range of the J3 axis is restricted to -140 degrees to $+165$ degrees when floor-based welding is applied.
3. The capacity of the upper arm varies with the wrist capacity.

Manipulator Working Range



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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● The information contained in this catalog is current as of November 2019 and is subject to revision without notice.
 ● This catalog was printed with environmentally-friendly vegetable oil ink.