

## FD-A20

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

With repetition accuracy of up to  $\pm 0.07$  mm, the new high accuracy robot can succeed in even the most demanding of tasks. The deviation from circular diameters of  $\leq 10$  mm is max. 0.09 mm - half as much as with commercial robots.

- Position Accuracy: Highest precision regardless of robot position.
- Precision machining: The best choice for laser welding and cutting, TIG, and other tasks requiring high accuracy.

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### Product information

Order No.	116000004
Model No.	0

#### Specification

Type	FD-A20
Number of axes	6
Working range	R 1664 mm
Max. payload capacity	20 Kg
Additional payload capacity Axis 3	20 Kg (Note 7)
Installation type	F, C
Weight	355 Kg
Ambient temperature and humidity	0 ~ 45°C, 20 ~ 80 % RH (No condensation)

#### Performance

Position repeatability (ISO 9283) +/- 0,07 mm (Note 1)

	Working Range	Max Speed	Wrist load
Axis 1	+/- 170°	3,40 rad/s {195°/s}	
Axis 2	-70° ~ + 60°	3,32 rad/s {190°/s}	
Axis 3	-140° ~ + 240° (Note 2)	3,14 rad/s {180°/s}	
Axis 4	+/- 180°	6,98 rad/s {400°/s}	1,09 kg m <sup>2</sup>
Axis 5	-50° ~ +230°	6,98 rad/s {400°/s}	1,09 kg m <sup>2</sup>
Axis 6	+/- 360°	10,5 rad/s {600°/s}	0,24 kg m <sup>2</sup>

Note 1: The value of the positional repeatability is at the tool center point (TCP) compliant to ISO 9283.

Note 2: The value in the parentheses indicates the wall-hung condition. J2 axis may occur the limitation of the working range.

Note 3: There are occasions where restrictions can be made to the operation range of the J2 axis when the wall-hung condition.

Note 4: The operation range of the J3 axis is restricted to -170 degrees to + 180 degrees when floor based welding is applied (In overhead mounting it's a combination of J2 + J3 axis).

Note 5: This is the specification for the case that the coaxial power cable are let into the centrum of J4 and J6 axis. The value given in parentheses presents for other specifications.

Note 6: There are occasions where restrictions can be made to the operation range of the J6 axis, depending on the J5 axis's posture.

Note 7: Max. Load to the upper shoulder, when loading the max. payload capacity at the end effector.

F= Floor W=Wall C=Ceiling