

# FD-V50

High-speed 6-axis production and handling robot for medium loads (up to 50kg) with integrated cable routing, collision protection, minimal installation area and maximum working area

The FD-V50 has the highest efficiency when handling medium loads (up to 50 kg). Like all robots in the FD series, the FD-V50 also has collision protection through improved fault detection / elimination. Comparatively minimal footprint with a maximum working area. In addition, the integrated hose package guarantees optimal protection against getting caught during the robot operation.

On request also with the improved protection class IP67



## Specification

Type	FD-V50
Number of axes	6
Working range	R 2050 mm
Max. payload capacity	50 Kg
Additional payload capacity Axis 3	15 Kg (Note 7)
Protection class base and lower arm	All axes IP67 equivalent
Protection class upper arm	All axes IP67 equivalent
Installation type	F (Not higher than 1000 m above sea level)
Weight	640 Kg
Ambient temperature and humidity	0 ~ 45°C, 20 ~ 85 % RH (No condensation)

## Performance

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

## Product information

Order No. 116000001  
Model No. 0

	Working Range	Max Speed	Wrist load
Axis 1	+/- 165°	3,14 rad/s {180°/s}	
Axis 2	-135° ~ + 80°	3,14 rad/s {180°/s}	
Axis 3	-146° ~ + 260°	3,14 rad/s {180°/s}	
Axis 4	+/- 360°	4,45 rad/s {225°}	30 kg m <sup>2</sup>
Axis 5	+/- 125°	4,45 rad/s {225°}	30 kg m <sup>2</sup>
Axis 6	+/- 450°	6,46 rad/s {370/s}	12 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