



OTC DAIHEN EUROPE

**Roboter – Technische Daten**  
**Manipulator Specifications**

**FD-V166**

|                                      |                  |                      |                         |
|--------------------------------------|------------------|----------------------|-------------------------|
| Model                                |                  | <b>FD-V166</b>       |                         |
| Kinematic                            |                  | Vertical artic. type |                         |
| No. of Axes                          |                  | 6                    |                         |
| P-Point (Working Range)              |                  | R 2,654 mm           |                         |
| Maximum Payload Capacity             |                  | 166 kg               |                         |
| Positional Repeatability(*1)         |                  | ± 0.1 mm             |                         |
| Driving Method                       |                  | AC Servo Motor       |                         |
| Working Range                        | Arm              | J1 (Rotation)        | ± 180°                  |
|                                      |                  | J2 (Vertical)        | -80° ≈ +60°             |
|                                      |                  | J7                   |                         |
|                                      | Wrist            | J3 (Rotation)        | -146,5° ≈ +150°         |
|                                      |                  | J4 (Rotation)        | ± 360°                  |
|                                      |                  | J5 (Bending)         | ± 135°                  |
| Maximum Speed                        | Arm              | J6 (Rotation)        | ± 360°                  |
|                                      |                  | J1 (Rotation)        | 125°/s                  |
|                                      |                  | J2 (Vertical)        | 115°/s                  |
|                                      | Wrist            | J7                   |                         |
|                                      |                  | J3 (Rotation)        | 121°/s                  |
|                                      |                  | J4 (Rotation)        | 180°/s                  |
| Maximum Payload                      | Allowable Moment | J5 (Bending)         | 173°/s                  |
|                                      |                  | J6 (Rotation)        | 260°/s                  |
|                                      |                  | J1 (Rotation)        | 951 Nm                  |
|                                      |                  | J2 (Vertical)        | 951 Nm                  |
|                                      |                  | J3 (Rotation)        | 490 Nm                  |
|                                      |                  | J4 (Rotation)        | 88.90 kg/m <sup>2</sup> |
| Ambient Temp./Humidity               |                  | 0 ≈ 45°, 20 ≈ 85%    |                         |
| Mass (weight)                        |                  | 960 kg               |                         |
| Upper arm max. Carrying capacity(*2) |                  | 90 kg                |                         |
| Origin Return                        |                  | Note 3               |                         |
| Installation Position                |                  | F                    |                         |



- Note 1: Measured value obtained after sufficient repetition of automatic operation for stabilizing conditions.
- Note 2: When the output flange of the wrist axis is loaded with maximum payload capacity.
- Note 3: Positional data protected by battery-backed storage inside the manipulator.  
F = Floor W = Wall C = Ceiling

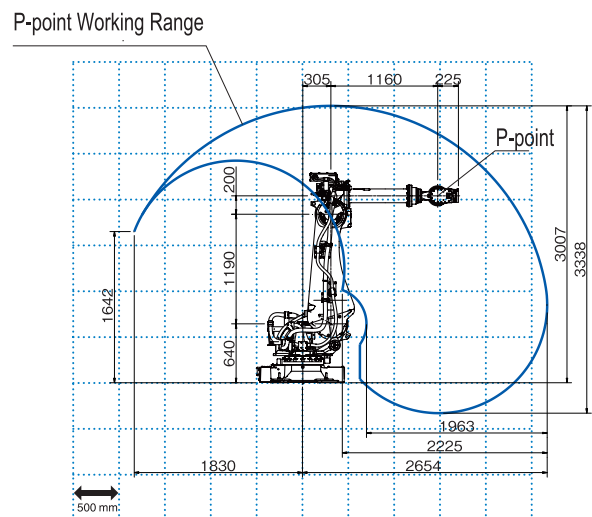
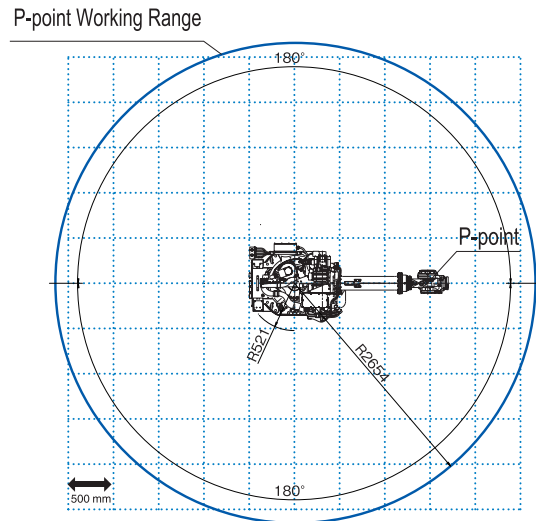


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|                                      | Wrist                   |                         |
| J4 (Rotation)                        | ± 360°                  |                         |
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| J6 (Rotation)                        | 260°/s                  |                         |
| Maximum Payload                      | Allowable Moment        |                         |
|                                      | J1 (Rotation)           | 951 Nm                  |
|                                      | J2 (Vertical)           | 951 Nm                  |
|                                      | J3 (Rotation)           | 490 Nm                  |
|                                      | J4 (Rotation)           | 88.90 kg/m <sup>2</sup> |
|                                      | J5 (Bending)            | 88.90 kg/m <sup>2</sup> |
| J6 (Rotation)                        | 45.00 kg/m <sup>2</sup> |                         |
| Ambient Temp./Humidity               | 0 ≈ 45°, 20 ≈ 85%       |                         |
| Mass (weight)                        | 960 kg                  |                         |
| Upper arm max. Carrying capacity(*2) | 90 kg                   |                         |
| Origin Return                        | Note 3                  |                         |
| Installation Position                | F                       |                         |



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