FEATURES

FANUC Robot ARC Mate 100iC / 120iC is the cables integrated arc welding robot.

- ARC Mate 100iC Standard type, short arm type (12S), long arm type (7L) and ARC Mate 120iC Standard type, long arm type (12L) are available for various application adaptations.
- High rigidity arm and advanced servo technology enable to increase acceleration performance. This decreases cycle time and realizes high productivity.
- The unique drive mechanism in wrist axis realizes the slim arm in torch cable integrated robot.
- Smooth hand cable routing and easy maintenance by cantilevered fore arm provides excellent cable management with stable wire feeding.
- Thanks to stable hand cable management, off-line teaching function by ROBOGUIDE (Option) reduces teaching cost.
- Various intelligent functions with iRVision (integrated vision) and Coordinated motion with Positioner are available.

Application Examples

Automobile part arc welding with Servo Torch

Architectural part arc welding with iRVision
Operating space

**ARC Mate 100iC**
- ARC Mate 100iC/7L
- ARC Mate 100iC/7C
- ARC Mate 100iC/12S

**ARC Mate 120iC**
- ARC Mate 120iC/7L
- ARC Mate 120iC/12S

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### Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>ARC Mate 100iC/12S</th>
<th>ARC Mate 100iC/12C</th>
<th>ARC Mate 100iC/7L</th>
<th>ARC Mate 100iC/12C</th>
<th>ARC Mate 120iC/12L</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type</strong></td>
<td><strong>Type</strong></td>
<td><strong>Type</strong></td>
<td><strong>Type</strong></td>
<td><strong>Type</strong></td>
<td><strong>Type</strong></td>
</tr>
<tr>
<td><strong>Reach</strong></td>
<td>1098mm</td>
<td>1420mm</td>
<td>1632mm</td>
<td>1811mm</td>
<td>2009mm</td>
</tr>
<tr>
<td><strong>Installation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J1 axis rotation</td>
<td>340°/360° (option)</td>
<td>340°/360° (option)</td>
<td>340°/370° (option)</td>
<td>340°/370° (option)</td>
<td></td>
</tr>
<tr>
<td>J2 axis rotation</td>
<td>250°/280° (rad/s)</td>
<td>250°/255° (rad/s)</td>
<td>260°/175° (rad/s)</td>
<td>4.54 rad (3.05 rad/s)</td>
<td></td>
</tr>
<tr>
<td>J3 axis rotation</td>
<td>340°/315° (rad/s)</td>
<td>340°/230° (rad/s)</td>
<td>445°/230° (rad/s)</td>
<td>4.54 rad (3.05 rad/s)</td>
<td></td>
</tr>
<tr>
<td>J4 axis rotation</td>
<td>380°/430° (rad/s)</td>
<td>360°/360° (rad/s)</td>
<td>40°0°/360° (rad/s)</td>
<td>4.54 rad (3.05 rad/s)</td>
<td></td>
</tr>
<tr>
<td>J5 axis rotation</td>
<td>6.63 rad (7.50 rad/s)</td>
<td>6.63 rad (7.50 rad/s)</td>
<td>6.63 rad (7.50 rad/s)</td>
<td>4.54 rad (3.05 rad/s)</td>
<td></td>
</tr>
<tr>
<td>J6 axis rotation</td>
<td>720°/630° (rad/s)</td>
<td>900°/650° (rad/s)</td>
<td>900°/630° (rad/s)</td>
<td>4.54 rad (3.05 rad/s)</td>
<td></td>
</tr>
<tr>
<td><strong>Motion range (Maximum speed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Note 1, 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Maximum load capacity at wrist</strong></td>
<td>12 kg</td>
<td>7 kg</td>
<td>20 kg</td>
<td>12 kg</td>
<td></td>
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<tr>
<td>J4 axis</td>
<td>22.2 Nm</td>
<td>15.7 Nm</td>
<td>22.0 Nm</td>
<td>22.0 Nm</td>
<td></td>
</tr>
<tr>
<td>J5 axis</td>
<td>22.0 Nm</td>
<td>10.1 Nm</td>
<td>22.0 Nm</td>
<td>22.0 Nm</td>
<td></td>
</tr>
<tr>
<td>J6 axis</td>
<td>9.8 Nm</td>
<td>5.9 Nm</td>
<td>22.0 Nm</td>
<td>9.8 Nm</td>
<td></td>
</tr>
<tr>
<td><strong>Allowable load moment at wrist</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>J4 axis</td>
<td>0.65 kg/m²</td>
<td>0.53 kg/m²</td>
<td>0.53 kg/m²</td>
<td>0.53 kg/m²</td>
<td></td>
</tr>
<tr>
<td>J5 axis</td>
<td>0.65 kg/m²</td>
<td>0.35 kg/m²</td>
<td>0.53 kg/m²</td>
<td>0.53 kg/m²</td>
<td></td>
</tr>
<tr>
<td>J6 axis</td>
<td>0.17 kg/m²</td>
<td>0.061 kg/m²</td>
<td>0.26 kg/m²</td>
<td>0.17 kg/m²</td>
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</tr>
<tr>
<td><strong>Repeatability (Note 3)</strong></td>
<td>± 0.03 mm</td>
<td></td>
<td></td>
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<tr>
<td><strong>Mass Note 4</strong></td>
<td>130 kg</td>
<td>135 kg</td>
<td>250 kg</td>
<td></td>
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<tr>
<td><strong>Installation environment</strong></td>
<td>Ambient temperature: 0 to 45°C</td>
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<tr>
<td>Ambient humidity: Normal 75%RH or less (no dew not frost allowed)</td>
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<tr>
<td>Vibration acceleration: 4.5m/s² (0.5G) or less</td>
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</tbody>
</table>

**Note 1** In case of angle mounting, J1 and J2 axis motion range is restricted.
**Note 2** In case of short distance motion, the axis speed may not reach the maximum value stated.
**Note 3** Compliant with ISO 9283.
**Note 4** Without controller.

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