

M-710iC/20L™

Material Handling Applications

Basic Description

The M-710iC/20L is a six-axis, modular construction, electric servo-driven robot designed for precise, high-speed material handling applications. Based on its simple and reliable serial link construction, the M-710iC/20L offers an industry leading reach and stroke making this the largest material handling robot of its kind. The compact yet flexible design simplifies installation, maximizes reach and makes this robot ideally suited for applications requiring large work envelopes.

The robot controller and easy-to-use HandlingTool® software provide reliable performance with high productivity.

Benefits

- Features highest motion speeds in class for maximum performance and productivity.
- Best-in-class reach versus stroke ratio.
- The M-710iC/20L offers an extremely large work envelope useful for large parts.
- Simplified design reduces wrist interference ideal for reaching into complex tooling.
- Extremely fast wrist axes reduces airmove times, thus improving throughput.

Features

- J3 flip-over capability provides large working envelope that is ideal for inverted applications.
- Slim wrist size enables the robot to enter into smaller openings in the work space.
- RV reducer drivetrain with integral bearings provides rigidity and performance in a compact package.
- Process equipment mounted directly to robot's upper arm shortens process cable length, which improves dressout reliability.



- HandlingTool teach pendant with application-specific hard keys offers intuitive control over the process.
- Interfaces with most types of servo driven or indexing positioners.
- 3,110 mm reach and 2,194 mm stroke.
- Serial link construction eliminates the "link arm" and provides greater flexibility and fewer moving parts.
- 20 kg load on the faceplate; 24 kg load on upper J3 arm.
- Mounting flexibility supports upright, inverted, wall or angle mount with no changes to the mechanical unit.
- Built-in support for machine vision applications for error proofing and robot guidance, without the need for a PC.
- FANUC's iRVision™ (Integrated Robot Vision) system delivers high performance 2-D and 3-D machine vision capabilities with FANUC reliability. Additional option for Error Proofing can provide integrated vision based capabilities to check for product completeness before product is packaged or further operations are performed.

Options

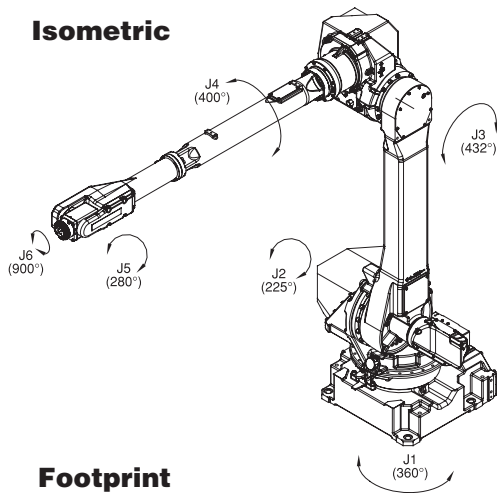
- Standard baseplate for quick robot installation.
- Auxiliary axes packages for integration of peripheral servo-controlled devices.
- Adjustable hard stops for J1, J2 and J3.
- Various robot connection cable lengths for flexible cabinet placement and optional track rated cables.
- Two-part epoxy paint available for harsh environments.
- Monochrome pendant available.
- FoundryPRO® protection package.
- ± 185 rotation for J1.
- Process specific software packages for various applications.
- Web-based software tools for remote connectivity, diagnostics and production monitoring.
- Machine vision for robot guidance.
- Intelligent robot solutions.

Note: FoundryPRO is a registered trademark of FANUC LTD.

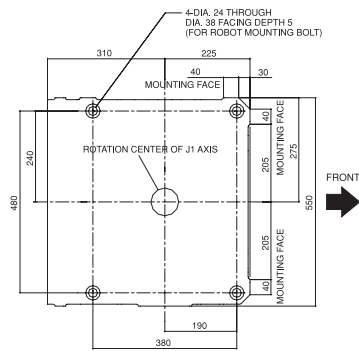
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M-710iC/20L Dimensions

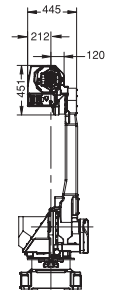
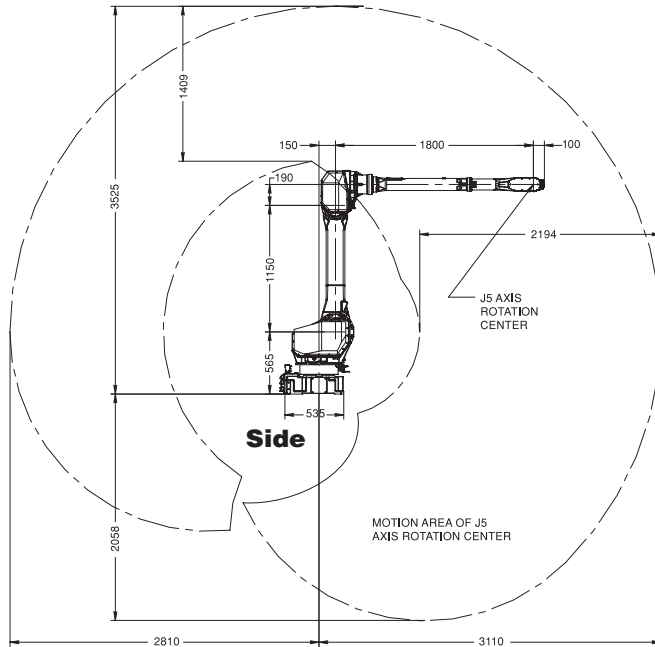
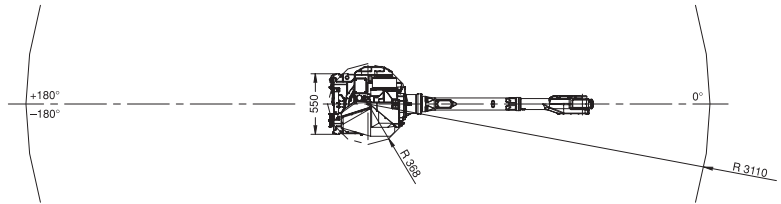
Isometric



Footprint



Top



Front

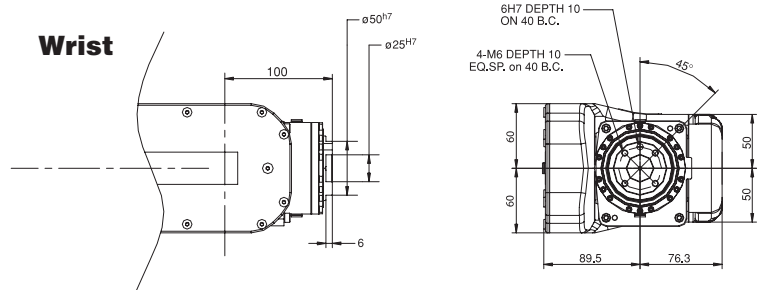
M-710iC/20L Specifications

Items		
Axes		6
Payload-wrist (kg)		20
Payload (kg) on J3 casting		24
Reach (mm)		3110
Repeatability (mm)		±0.15
J2 interference radius (mm)		368
Motion range (degrees)	J1	320/360/370
	J2	225
	J3	432
	J4	400
	J5	280
	J6	900
Motion speed (degrees/s)	J1	175
	J2	175
	J3	180
	J4	350
	J5	360
	J6	600
Wrist moment N·m (kgf·m)	J4	39 (4)
	J5	39 (4)
	J6	19 (2)
Wrist inertia kg·m²	J4	.88
	J5	.89
	J6	.24
Brakes		All axes
Mechanical weight (kg)⁽¹⁾		540
Mounting method⁽²⁾		Floor, ceiling, angle and wall
Installation environment:		
Ambient temperature °C		0 to 45
Humidity		Normally: 75% or less Short term (within a month): 95% or less. No condensation
Vibration m/s² (G)		4.9m/s ² or less (0.5G or less)
IP Rating(s)		Body IP54 Std. (IP67 optional) Wrist and Joint 3arm IP67

Notes:

- (1) Without controller.
- (2) J1 and J2 axis motion range will be limited for ceiling, angle and wall. See manual under installation condition.

Wrist



Note: Dimensions are shown in millimeters.
Detailed CAD data are available upon request.

Intelligent Robot Solutions



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