

# M-710iC/T™ Series

## Basic Description

FANUC Robotics' M-710iC/T series of overhead rail-mounted robots is the latest generation, medium payload member of the Toploader family of six-axis, modular construction, electric servo-driven articulated gantry robots designed for material handling and machine tending. The M-710iC/T robots also have the ability to perform value-added post-processing operations.

The robots are engineered for precision, high-speed operation, user-friendly setup and maximum reliability, supported by our extensive service and parts network. The M-710iC/50T and M-710iC/70T robots are ideal for medium to heavy material handling applications.

## M-710iC/T Series, the Solution for:

- Material handling
- Machine tool tending and post-process operations
- Injection mold machine unload and post-process operations
- Die casting extraction
- Die spray
- Dispensing
- Palletizing/Depalletizing

## Benefits

- Combines the advantages of a linear gantry (large, scaleable work envelope with limited floorspace requirements) and a FANUC six-axis articulated robot (dexterity, high reliability and maintainability).
- Services multiple vertical and/or horizontal machines.
- Adapts easily to existing plant layouts.
- Improves machine productivity by as much as 30 percent.



- Reduces capital and maintenance costs by allowing simple devices to replace complex material handling peripherals.
- Minimizes installation time and startup expense through easy installation alignment.
- Balances asynchronous processes by maintaining in-process part buffers.
- Performs value-added processing operations such as gauging, deburring, deflashing and labeling, in addition to basic material handling tasks.
- Two configurations available to maximize either vertical stroke (sideslung) or symmetrical work envelope (underslung).
- Software settable rail speed of 2.5 m/s or 3 m/s.
- Rail travels from 7.2 m to 46.2 m and longer.
- Family of standard support columns provide multiple robot height options. Supports on-site elevation adjustment.
- +/- 0.15 mm robot repeatability.
- Fail-safe brakes on all six axes.
- Brushless AC servo motors minimize motor maintenance.
- Robust rack and pinion rail drive.

## Mechanical Features

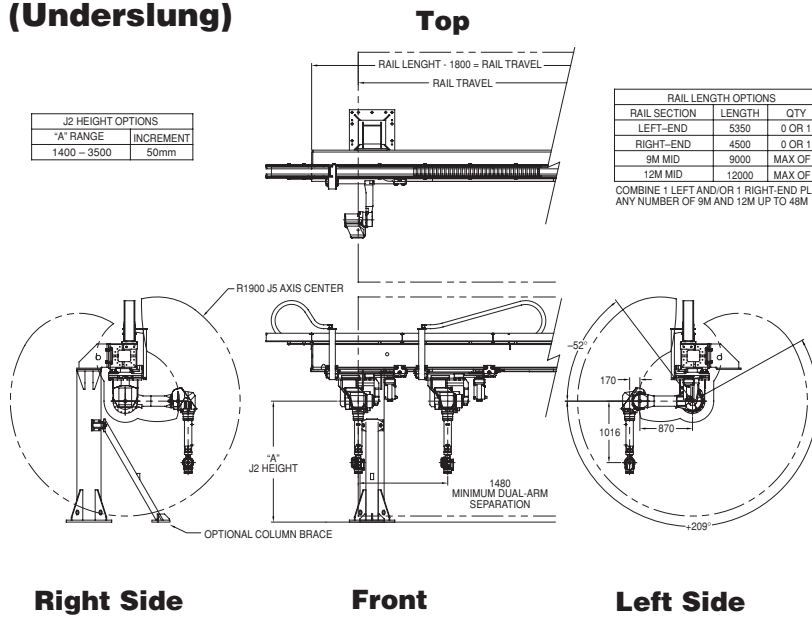
- Modular rails can be attached to free-standing support legs with variable height attachment or to the fixed platen of an injection mold or die machine.
- Based on proven reliable, standard FANUC Robotics' products (M-710iC/50 and M-710iC/70).
- 50 kg (M-710iC/50T) and 70 kg (M-710iC/70T) payload.

## Options

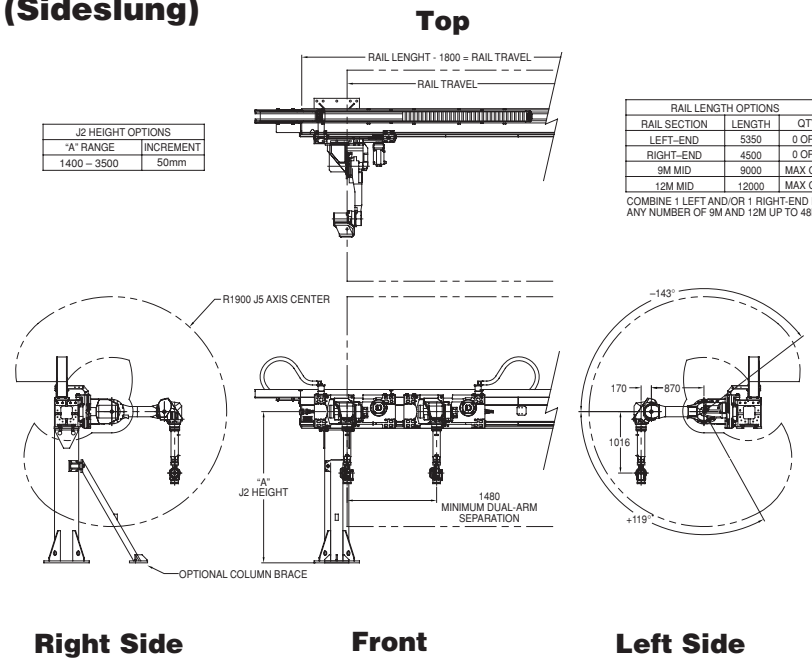
- Severe Dust and Liquid Protection (SDLP) option on the robot arms for harsh industrial environments.
- Severe Dust Protection on the robot rail.
- Multiple arms on a single rail.
- Dual arm software coordinates two robot arms to handle large/heavy parts.

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# M-710iC/T (Underslung)



# (Sideslung)

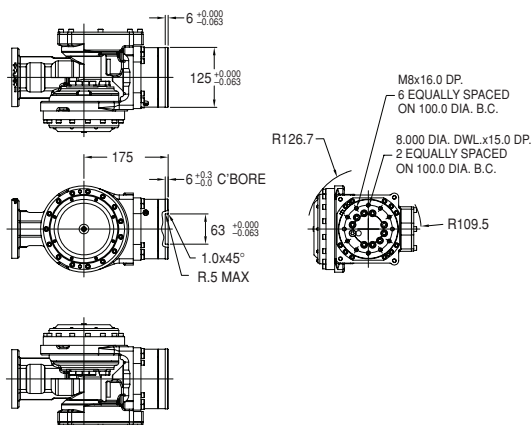


# M-710iC/T Specifications

Items	M-710iC/50T	M-710iC/70T	
<b>Axes</b>	6	6	
<b>Payload - Wrist (kg)</b>	50	70	
<b>Payload - J3 arm (kg)</b>	15	15	
<b>Reach (mm)</b>	1900	1900	
<b>Repeatability (mm)</b>	±0.07	±0.07	
<b>Interference radius (mm)</b>	351	351	
<b>Motion range (degrees)</b>	J1	7.2 to 46.2m	7.2 to 46.2m
	J2	261	261
	J3	491	491
	J4	720	720
	J5	250	250
	J6	720	720
<b>Motion speed (degrees/s)</b>	J1	2.5m/s or 3m/s	2.5m/s or 3m/s
	J2	175	120
	J3	175	120
	J4	250	225
	J5	250	225
	J6	355	225
<b>Wrist moment (kgf·m)</b>	J4	21	30
	J5	21	30
	J6	13	15
<b>Wrist inertia (kgf·cm·s<sup>2</sup>)</b>	J4	286	286
	J5	286	286
	J6	112	112
<b>Mechanical brakes</b>	All axes		
<b>Mechanical weight (kg)</b>	580 (robot arm and carriage)		
<b>Rail weight (kg)</b>	283 * rail travel		
<b>Mounting method</b>	Sideslung or underslung		
<b>Installation environment:</b>			
<b>Ambient temperature °C</b>	0 to 45		
<b>Humidity</b>	Normally: 75% or less Short term (within a month): 95% or less. No condensation		
<b>Vibration (m/s<sup>2</sup>) (G)</b>	4.9 or less (0.5G or less)		
<b>IP Rating(s)</b>	Rail IP50, Body IP54 (IP67 optional) Wrist and joint 3 arm IP67		
<b>Purpose</b>	Overhead rail mount		



# Wrist



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



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