FANUC Robot M-20iA/20T



Features

FANUC Robotics' M-20iA/20T overhead railmounted robot is part of the Toploader family of six-axis, modular construction, electric servo-driven articulated gantry robots designed for material handling and machine tending. The M-20*i*A/20T robot also has the ability to perform value-added post-processing operations. The robot is engineered for precision, high-speed operation, user-friendly setup and maximum reliability, supported by our extensive service and parts network. The M-20iA/20T robot is ideal for light to medium material handling challenges.

FANUC M-20iA/20T

- Material handling
- Post-process operations
- Palletizing/Depalletizing
- Machine tool tending • Die spray dispensing
- Injection mold machine extraction
- FEATURES AND BENEFITS:
- 6 axes of motion
- 20 kg payload
- +/- 0.15 mm rail repeatability +/- 0.10 mm robot repeatability
- Modular rails can be attached to free-standing support legs with vari able height attachment or to the fixed
- plate of an injection mold or die machine Reduces floor space and ceiling height requirements (compared to
- linear/area gantry robots) Built-in Solution Arm, 50mm hollow wrist and upper arm, same as M-20*i*A
- Uses standard FANUC controller and software
- Improves machine productivity by as much as 30 percent
- Minimizes installation time and startup expense through easy
- installation alignment Maximizes uptime through superior fault tolerance, quick error recovery and proven FANUC reliability
- Services multiple vertical and/or horizontal machines
- 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

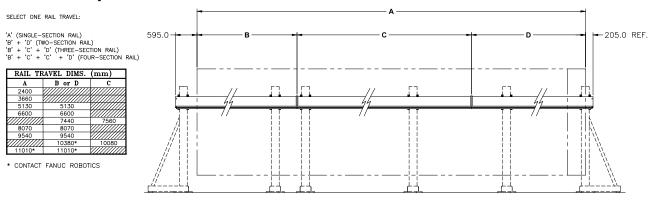


M-20iA/20T on track system

FANUC Robot M-20*i*A/20T

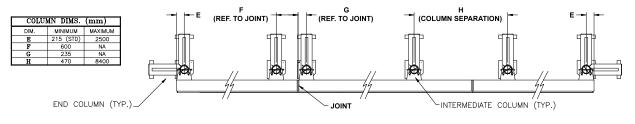
PAYLOAD: 20KG

Rail Travel Options



TO SUPPORT CABLE TRACK INSTALLATION ON 2- AND 3-SECTION RAILS SECTION B MUST BE EQUAL TO OR LONGER THAN SECTION D

Column Positioning



TWO (2) END COLUMNS STANDARD ON ALL RAIL TRAVELS (SHOWN AT STANDARD "END-OF-RAIL" LOCATIONS)

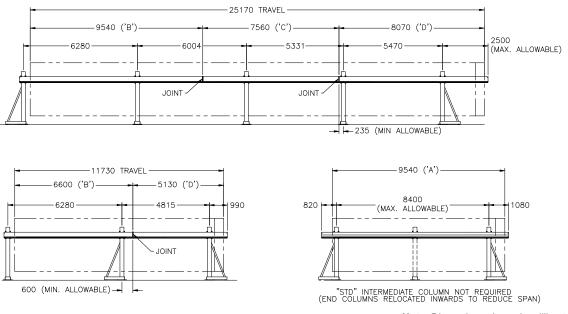
ONE (1) INTERMEDIATE COLUMN STANDARD WHEN RAIL TRAVEL EXCEEDS 8000MM

TWO (2) INTERMEDIATE COLUMNS STANDARD WHEN RAIL TRAVEL EXCEEDS 16000MM (TWO-PIECE RAILS ONLY)

ALL COLUMN LOCATIONS CAN BE SPECIFIED BY CUSTOMER

FANUC ROBOTICS RECOMMENDS TWO COLUMNS PER INDIVIDUAL RAIL SECTION TO ENSURE ADEQUATE SUPPORT AND TO ALLOW THE RAIL TO BE EASILY RE-ASSEMBLED IN THE FIELD.

Sample Rail and Column Configurations



Note: Dimensions shown in millimeters

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TOPLOADER

M-20iA/20T SERIES SPECIFICATIONS:



M-20*i*A/20T Specifications

Items		M-20 <i>i</i> A/20T
Axes		6
Payload (kg) ⁽¹⁾		20
Payload (kg) on J3 casting		12
Reach (mm)		1661
Repeatability ⁽²⁾ (mm)		±0.08
Interference radius (mm)		234
Motion range	J1	2.2 m - 29 m
(degrees)	J2	300
	J3	586
	J4	400
	J5	360
	J6	900
Motion speed	J1	3300 mm/sec
(degrees/s)	J2	175
	J3	180
	J4	360
	J5	360
	J6	550
Wrist	J4	44 (4.5)
moments	J5	44 (4.5)
N-m (kgf-m)	J6	22 (2.2)
Wrist load inertia	J4	1.04
	J5	1.04
(kg-m²)	J6	.28
Mechanical brakes		All axes
Mechanical weight (kg)		185 (Robot arm only)
Installation environment Temperature (°C)		Ambient Temperature 0 to 45
Humidity		Normally: 75% or less Short term (within a month): 95% or less. No condensation
Vibration (m/s ²)		4.9 or less (0.5 G or less)
IP rating(s) ⁽⁵⁾		Rail - IP50 Body - IP54
Purpose		Overhead Rail Mount

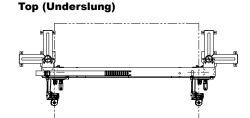
Notes:

- (1) Payload on J3 casting is in addition to wrist payload capacity
- (2) Repeatability per JIS8432
- (3) Combined J2 & J3
- (4) J1 and J2 motion range de-rated when M-20iA & M-20iA/10L are angle or wall mounted
- (5) Organic solvents, acids, alkalis and chlorine/gasoline coolants or any chemicals which may harm NBR (nitrile rubber) must not be used

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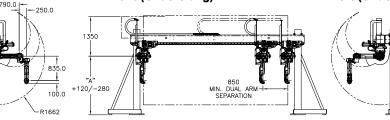
Right (Underslung)



Front (Underslung)

Top (Sideslung)







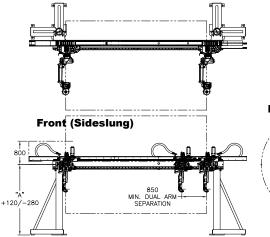
Right (Sideslung) 790.0

250.0

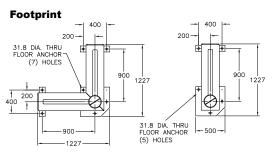
/835.C

100.0

R1662



Left (Sideslung)

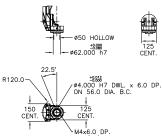


FANUC AMERICA CORPORATION

ROCHESTER HILLS MI 48309-3252

3900 WEST HAMLIN ROAD

ISO Flange Wrist



M4x6.0 DP. TYP.(15) AS SHOWN ON 56.0 DIA. B.C.

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