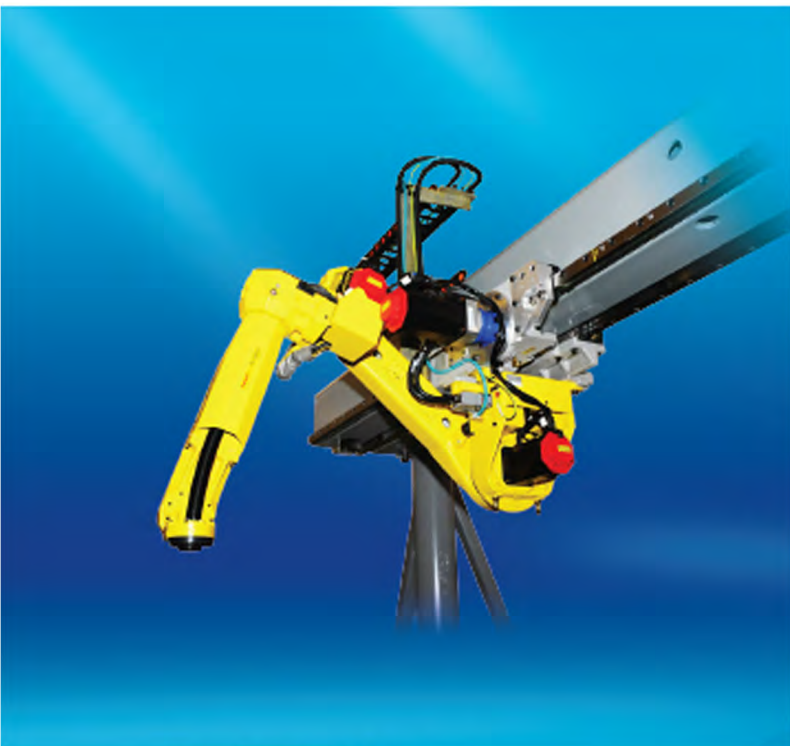


FANUC Robot M-20iA/20T



FANUC M-20iA/20T

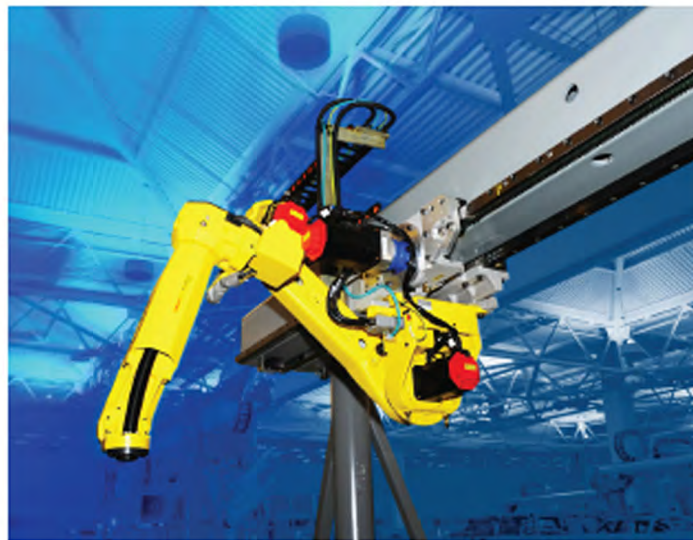
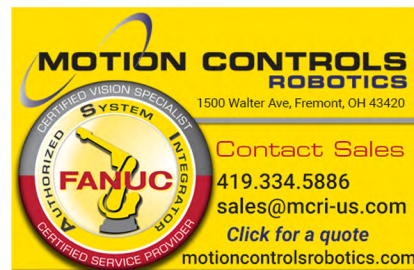
- Material handling
- Machine tool tending
- Die spray dispensing
- Post-process operations
- Palletizing/Depalletizing
- Injection mold machine extraction

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 variable 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-20iA
- 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

Features

FANUC Robotics' M-20iA/20T overhead rail-mounted 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-20iA/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.



M-20iA/20T on track system

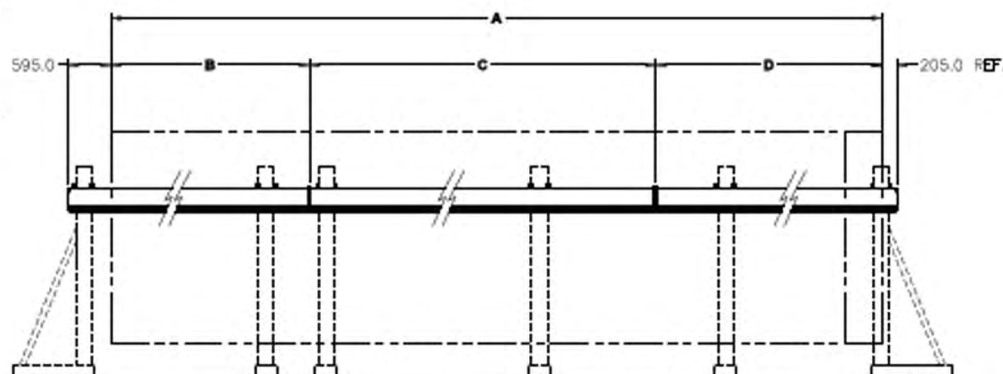
Rail Travel Options

SELECT ONE RAIL TRAVEL

A' (SINGLE-SECTION RAIL)
B' + C' (TWO-SECTION RAIL)
B' + C' + D' (THREE-SECTION RAIL)
B' + C' + D' + E' (FOUR-SECTION RAIL)

RAIL TRAVEL DIMS. (mm)		
A	B or D	C
2400		
3600		
5130	5130	
6600	6600	
	7440	7500
8070	8070	
9540	9540	
	10380	10380
11010	11010	

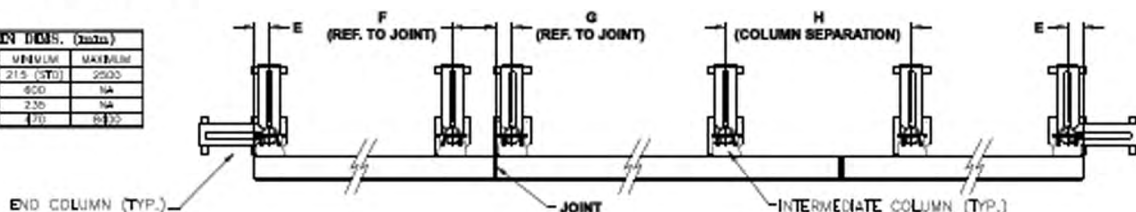
CONTACT FANUC ROBOTICS



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

Column Positioning

COLUMN DIMS. (mm)		
DIM.	MINIMUM	MAXIMUM
E	215 (STD)	2500
F	800	N/A
G	235	N/A
H	470	10325



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

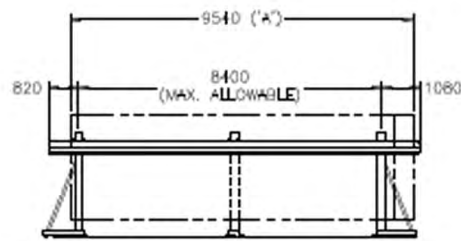
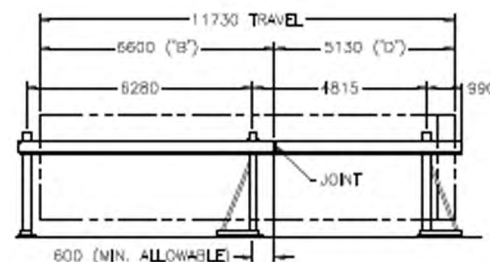
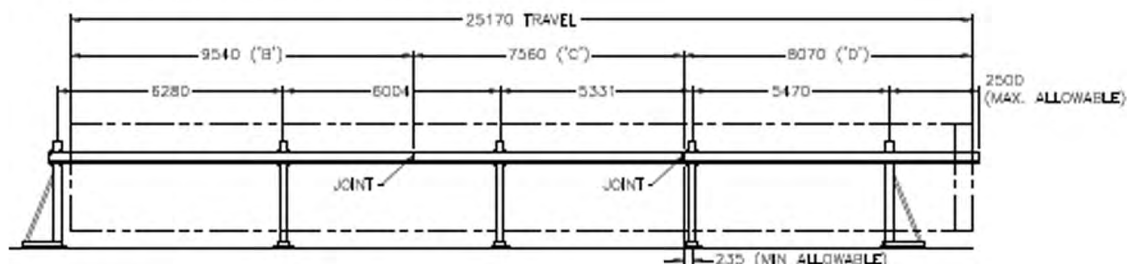
ONE (1) INTERMEDIATE COLUMN STANDARD WHEN RAIL TRAVEL EXCEEDS 8000MM

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



"STD" INTERMEDIATE COLUMN NOT REQUIRED (END COLUMNS RELOCATED INWARDS TO REDUCE SPAN)

Note: Dimensions shown in millimeters

M-20iA/20T SERIES SPECIFICATIONS:



M-20iA/20T Specifications

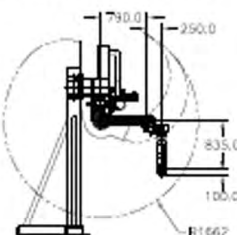
Items	M-20iA/20T
Axes	6
Payload (kg) ⁽¹⁾	20
Payload (kg) on J3 casting	12
Reach (mm)	1661
Repeatability ⁽²⁾ (mm)	±0.08
Interference radius (mm)	234
Motion range (degrees)	J1 2.2 m - 29 m
	J2 300
	J3 566
	J4 400
	J5 360
	J6 900
Motion speed (degrees/s)	J1 3300 mm/sec
	J2 175
	J3 180
	J4 360
	J5 360
	J6 550
Wrist moments N-m (kgf-m)	J4 44 (4.5)
	J5 44 (4.5)
	J6 22 (2.2)
Wrist load inertia (kg-m ²)	J4 1.04
	J5 1.04
	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
Vibration (m/s ²)	No condensation
	4.9 or less (0.5 G or less)
IP rating(s) ⁽³⁾	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

SUPPORTED TOOL (GROSS)	
▽	2200
▽	2200
▽	1600
▽	1600
▽	1600
▽	1600
▽	1600

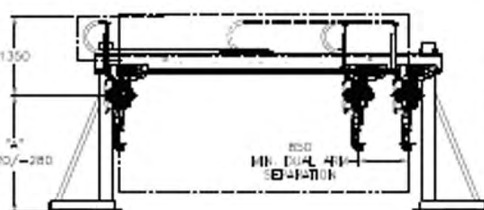
Right (Underslung)



Top (Underslung)



Front (Underslung)

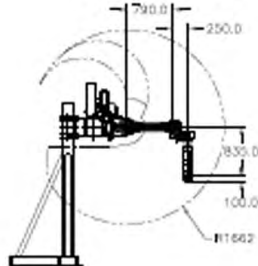


Left (Underslung)

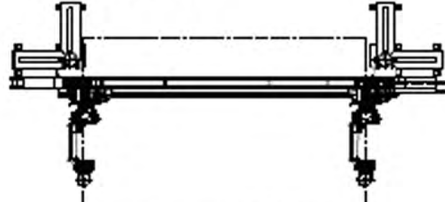


SUPPORTED TOOL (NET)	
▽	2200
▽	2200
▽	1600
▽	1600
▽	1600
▽	1600
▽	1600

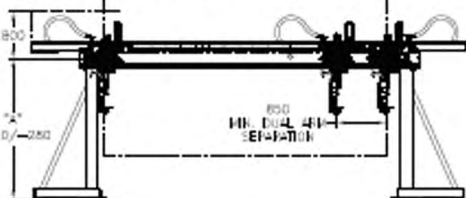
Right (Sideslung)



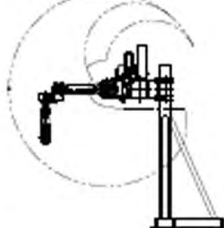
Top (Sideslung)



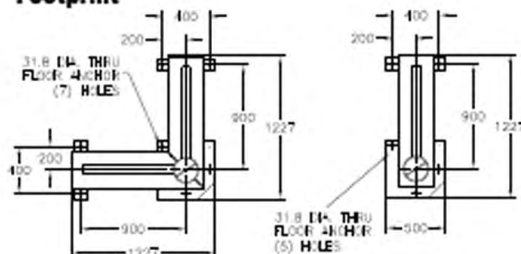
Front (Sideslung)



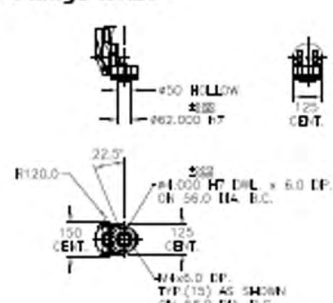
Left (Sideslung)



Footprint



ISO Flange Wrist



FANUC

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