

MotoRail 7

with DX100 Controller

MotoRail 7-20 ■ MotoRail 7-50 ■ MotoRail 7-80 ■ MotoRail 7-200



Available in 20-, 50-, 80- and 200-kg payload versions, MotoRail 7 solutions are ideal for robotic applications requiring extended reach and high throughput, including machine tending, material handling, welding, deburring, trimming, deflashing and dispensing. The MotoRail 7 series features a 7-axis design (single-axis rail and 6-axis robot) with high linear traverse speeds and exceptional repeatability of both the track and robot. Depending on project needs, the robot(s) can be wall- or ceiling-mounted. Independent or truly coordinated operation is possible. MotoRail 7 is also available in multiple robot configurations that provide increased throughput.

HIGHLIGHTS

Modular Design

- Available with a wide range of six-axis Motoman® robots, including:
 - MH80 material handling robot
 - High-performance HP20D, MH50 and ES200TD robots
 - Extended-reach HP20D-6, MH50-20 and MH50-35 robots
- Available with standard servo rail linear travel lengths from 4-32 meters (13.12-105 ft).
- MotoRail 7 includes 6-axis robot, transport beam, two legs, carriage, cables (manipulator and external axis) and carriage control kit.
- DX100 controller controls the robot(s) and servo rail (transport beam).
- Ceiling-mount (overhead-mount) is standard; wall-mount orientation is available upon request for robot payloads of 6-80 kg.
- Custom applications requiring multi-beam sections and carriage assemblies are readily configured utilizing standard, modular components. If necessary, one robot can be locked out while the other(s) continue(s) to operate.
- Left- and right-hand carriage assemblies are available for maximum flexibility on multi-carriage applications.

- Support legs may be located on either side or both sides of a beam system. They provide free-standing support that is satisfactory on most factory floors without additional foundation work.

Unmatched Flexibility

- Easily deployed; can often use existing machine layouts.
- Can be used for identical or progressive operations at multiple machining cells.
- Rail mounting reduces floorspace requirements and allows better access to parts through machine doors (top or side).
- Provides open access in front of the machine for tool changeover, part setup and running prototype parts, while also reducing trip hazards.
- Provides optimum flexibility with maximum reach on both sides of transport beam and beyond the beam ends (ceiling-mount configuration).

Benefits

MotoRail 7 solutions provide:

- Direct labor savings, improved quality, reduced scrap, increased productivity and throughput, and improved cycle time.
- Improved safety through reduced repetitive motion injuries to human operators, as well as reduced worker compensation claims.
- Expanded reach and improved flexibility provide the ability to get the most productivity from the robot. (Examples: welding extremely large workpieces and performing secondary operations such as post-machining deburring.)

ARM YOURSELF

...with a versatile, high-throughput MotoRail 7 solution from Motoman Robotics that is easily deployed with many existing layouts.

**IMPROVE FLEXIBILITY
WITH 7 AXES!
ONLY FROM MOTOMAN ROBOTICS**



MACHINE TENDING



WELDING

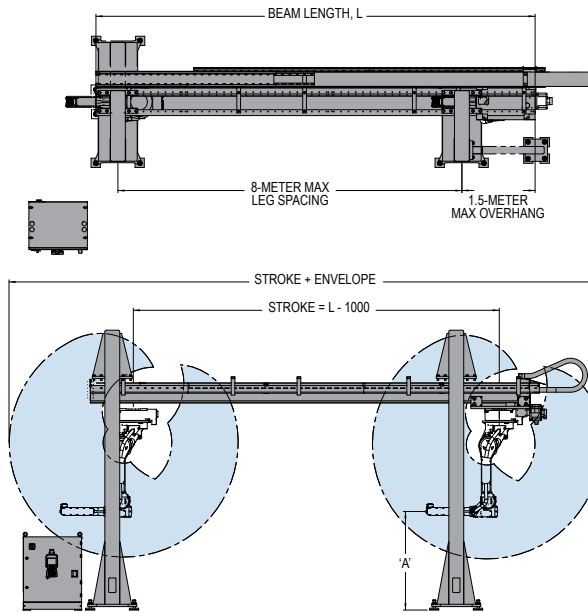
TOP 3 REASONS TO BUY!

- Highly flexible rail-mounted configuration allows robot to service multiple workstations, maximizing productivity and use of capital equipment.
- Seven-axis design reduces cycle times by 20 percent compared to competitors' top-mounted six-axis robots (5 rotary axes plus one linear axis).
- Installation and setup is fast and easy; modular 7-axis design minimizes alignment requirements to machine tools, conveyors and other peripheral equipment.

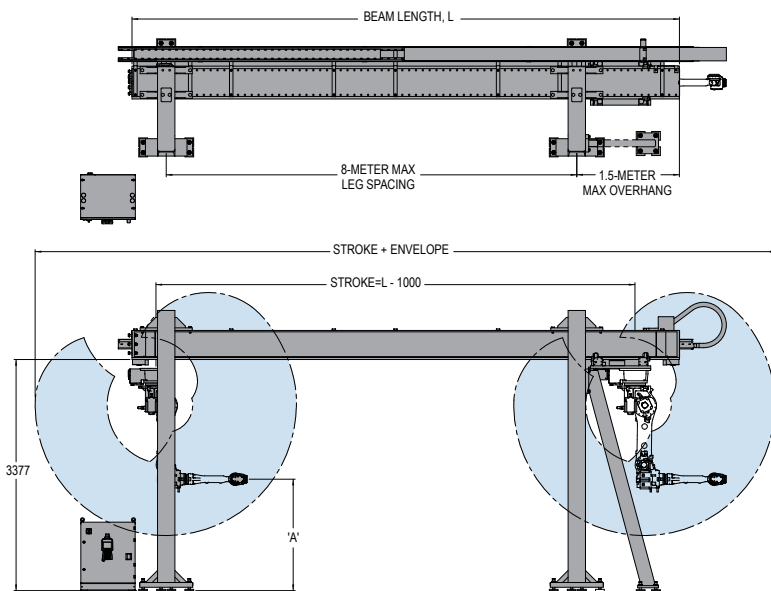
MOTORAIL 7

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements. * Dimensions change based on optional leg lengths.

DRAWINGS



MOTORAIL 7-20			
Robot		HP20D	HP20D-6
Dimension A (mm)	Option 1*	1,540	1,540
	Standard	1,350	1,350
	Option 2*	1,140	1,140
Envelope Dia. (mm)		3,434	3,830



MOTORAIL 7-50/7-80 (MH50 SHOWN)					
Robot		MH50	MH50-20	MH50-35	MH80
Dimension A (mm)	Option 1*	1,880	1,610	1,600	1,880
	Standard	1,630	1,360	1,350	1,630
	Option 2*	1,380	1,110	1,100	1,380
Envelope Dia. (mm)		4,120	6,212	5,076	4,120

MOTORAIL 7 SPECIFICATIONS

	Unit	7-20	7-50	7-80	7-200
Robots		HP20D, HP20D-6	MH50, MH50-20, MH50-35	MH80	ES200TD
Base Mounting Height	mm (in)	2,500 (98.4)	3,000 (118.1)	3,000 (118.1)	3,500 (137.8)
		2,750 (108.3)	3,250 (128.0)	3,250 (128.0)	
		3,000 (118.1)	3,500 (137.8)	3,500 (137.8)	
Maximum Carriage Velocity	m/sec	2.5	2.5	2.5	1.6
Rated Acceleration Time	sec	1.0	0.5	0.5	0.5
EOA Repeatability	±mm (in)	0.1 (.004)	0.1 (.004)	0.1 (.004)	0.15 (.006)
E-Stop Response Time (typical)	sec	0.4	0.4	0.4	n/a
E-Stop Response Distance (typical)	mm (in)	550 (21.7)	500 (19.7)	500 (19.7)	n/a
Duty Cycle	%	60	60	60	60

Note: Contact Motoman Robotics for lengths exceeding 32 m or for multiple rail/robot configurations. MotoRail products also available with MH6, MH6-10 and MA1900 robots.

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