

Robots Optimized for Handling(Multi-Purpose) MOTOMAN-MH24

24kg Payload, 6-axis Vertically Articulated

Robot Controller DX200

Announcing the launch of a new robot with a hollow arm that is compatible with the new DX200 controller!

Expanded applications with enhanced functions of the robot arm

- A new robot with a 24-kg payload has been added to the product lineup.
- With the hollow structure (50 mm dia.) of the upper arm, cables can be routed inside the arm.
- The upper arm can bear a 12-kg load.
- A tube for fieldbus cable is available (option).

New functions & design

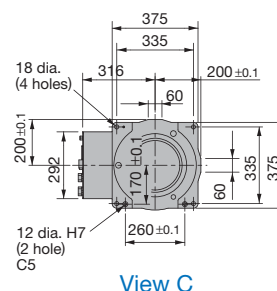
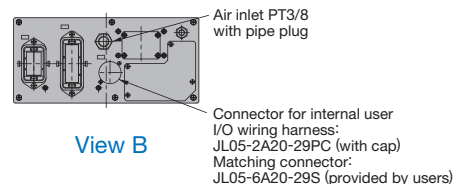
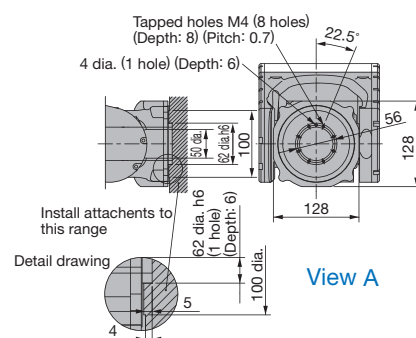
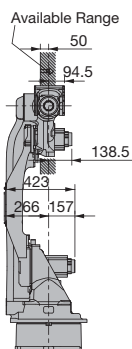
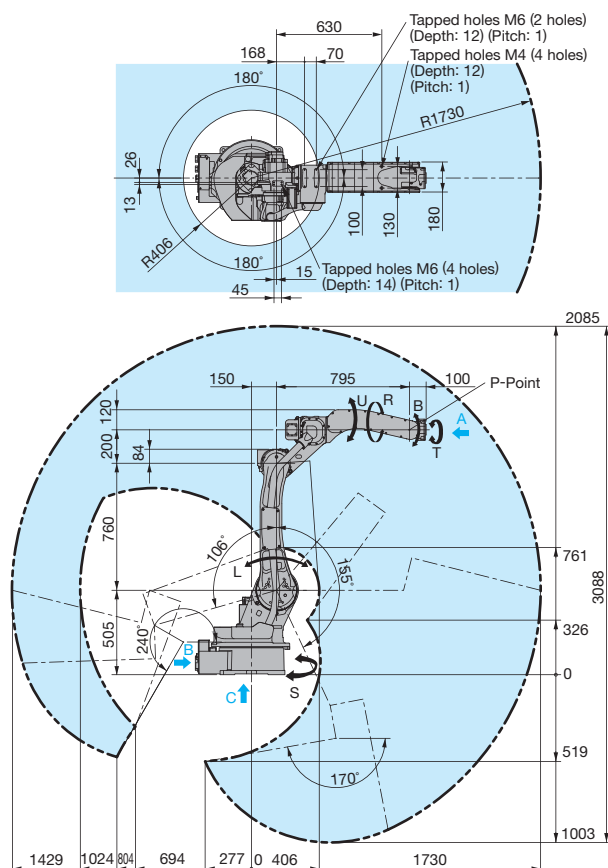
- Preventive maintenance function for speed reducer, preventive maintenance function for hardware, JOB line comment-out function, JOB line edit-protect function, JOB folder function, etc.
- Space-saving controller design

Enhanced safety function (optional)

- Monitors robot and tool positions to limit movements
- Monitors positions with the functional safety module



■ Dimensions Units : mm ■ : P-point Maximum Envelope



MOTOMAN-MH24

■ Manipulator Specifications

Items		Specifications
Model		MOTOMAN-MH24
Type		YR-MH00024-A00
Motion control		Vertically Articulated
Controlled Axis		6
Payload		24 kg
Repeatability*1		±0.06 mm
Range of Motion	S-axis (turning)	−180°—+180°
	L-axis (lower arm)	−106°—+155°
	U-axis (upper arm)	−170°—+240°
	R-axis (wrist roll)	−200°—+200°
	B-axis (wrist pitch/yaw)	−150°—+150°
	T-axis (wrist twist)	−455°—+455°
Maximum Speed	S-axis (turning)	3.44rad/s, 197°/s
	L-axis (lower arm)	3.32rad/s, 190°/s
	U-axis (upper arm)	3.67rad/s, 210°/s
	R-axis (wrist roll)	7.16rad/s, 410°/s
	B-axis (wrist pitch/yaw)	7.16rad/s, 410°/s
	T-axis (wrist twist)	10.82rad/s, 620°/s
Allowable Moment	R-axis (wrist roll)	50.0 N·m
	B-axis (wrist pitch/yaw)	50.0 N·m
	T-axis (wrist twist)	30.4 N·m
Allowable Inertia (GD ² /4)	R-axis (wrist roll)	2.1 kgm ²
	B-axis (wrist pitch/yaw)	2.1 kgm ²
	T-axis (wrist twist)	1.1 kgm ²
Approx. Mass		268 kg
Ambient Conditions	Temperature	0—+45°C
	Humidity	20 to 80%RH (non-condensing)
	Vibration	4.9 m/s ² or less
	Others	<ul style="list-style-type: none"> • Free from corrosive gasses or liquids, or explosive gasses • Free from exposure to water, oil, or dust • Free from excessive electrical noise (plasma)
Power Requirements*2		2.0kVA

*1 : Conforms to ISO 9283.

*2 : Varies in accordance with applications and motion patterns.

Note : SI units are used for specifications.

■ DX200 Controller Specifications

Items		Specifications
Configuration	Dust proof	
Dimensions	600 (W)×520 (D)×730 (H) mm (Possible to control three external axes)	
Mass	100 kg max.	
Cooling System	Indirect cooling	
Ambient Temperature	During operation : 0°C to +45°C During storage : −10°C to +60°C	
Relative Humidity	90% max. (non-condensing)	
Power Supply	Three-phase 200/220 VAC (+10%, −15%), 50/60 Hz (±2%)	
Grounding	Grounding resistance : 100Ω or less	
Digital I/Os	Specialized signals : 23 inputs and 5 outputs	
	General signals : 40 inputs and 40 outputs Max. I/O (optional) : 4096 inputs and 4096 outputs	
Positioning System	By serial encoder	
Programming Capacity	JOB : 200,000 steps, 10,000 instructions CIO ladder : 20,000 steps	
Expansion Slots	PCI : 2 slots	
LAN (Connection to Host)	1 (10BASE-T/100BASE-TX)	
Interface	RS-232C : 1ch	
Control Method	Software servo control	
Drive Units	SERVOPACK for AC servomotors (can control up to 9 axes)	
Painting Color	Front panel :	
	Light gray (Munsell notation N7.7 or equivalent)	
	Body except front panel : Dark gray (Munsell notation N3 or equivalent)	

■ Programming Pendant Specifications

Items		Specifications
Dimensions	169 (W)×314.5 (H)×50 (D) mm	
Mass	0.998 kg	
Material	Reinforced plastics	
Operation Device	Select keys, axis keys, numerical/application keys, mode selector switch with keys (mode : teach, play, and remote), emergency stop button, enable switch, compact flash card interface device (compact flash is optional.)	
Display	5.7-inch color LCD, touch panel 640×480 pixels (Alphanumeric characters, Chinese characters, Japanese letters, Others)	
IEC Protection Class	IP65	
Cable Length	Standard : 8 m,	
	Max. : 36 m (with optional extension cable)	

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YASKAWA ELECTRIC CORPORATION

In the event that the end user of this product is to be the military and said product is to be employed in any weapons systems or the manufacture thereof, the export will fall under the relevant regulations as stipulated in the Foreign Exchange and Foreign Trade Regulations. Therefore, be sure to follow all procedures and submit all relevant documentation according to any and all rules, regulations and laws that may apply.

Specifications are subject to change without notice for ongoing product modifications and improvements.

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LITERATURE NO. CHEP C940321 40A

Published in Japan April 2014 14-4
13-12-36