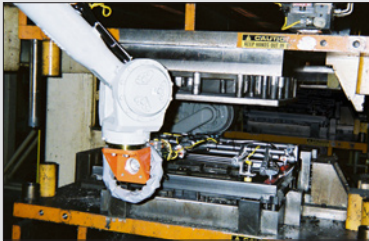


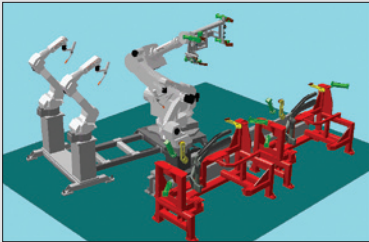
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PRESS TENDING



MATERIAL REMOVAL



MOTOSIM EG (optional)

## FEATURES & OPTIONS

- Multiple robot control (up to four robots) simplifies programming
- Floor-, wall-, ceiling-mounting options
- Widest working envelope in its class: 2,046 mm (80.5") reach
- Highest repeatability in its class:  $\pm 0.07$  mm ( $\pm 0.003$ " )
- MotoSim® EG simulation software (optional)
- IP67 rated wrist (standard)
- IP65 rated body (optional on floor-mounted robot)



*Motoman's HP50 robot provides a flexible solution to meet your automation needs*

MACHINE TENDING • DISPENSING  
MATERIAL HANDLING • MATERIAL REMOVAL

# HP50

**Payload: 50 kg**

### Fast, Flexible and Reliable

The Motoman HP50 is a sleek, high-speed robot that requires minimal installation space. It offers superior performance in machine tending, dispensing, handling and material removal applications.

Featuring a streamlined body, the HP50 can be placed close to machines for loading and unloading of parts.

The advanced Sigma motors provide smooth, swift motion on demand.

The versatile HP50 features a 50 kg (110.3 lb) payload, 3,547 mm (139.6") vertical reach, 2,046 mm (80.5") horizontal reach, and industry-leading repeatability of  $\pm 0.07$  mm ( $\pm 0.003$ " ).

Motoman's highly accurate MotoSim EG off-line programming and simulation package is available to assist in the design, verification and programming of workcells.

### Advanced NX100 Controller

The NX100 high-performance controller features a Windows® CE programming pendant, fast processing,

easy-to-use INFORM III programming language, and robust PC architecture.

The NX100 offers unmatched multiple robot control capability (up to four robots) to minimize cost of integration and eliminate risk of robot collisions.

The NX100 includes four security levels of password protection (user, editor, maintenance and supervisor) for up to 100 individual users. Password use restricts access to the production programs and the controller logs any changes.

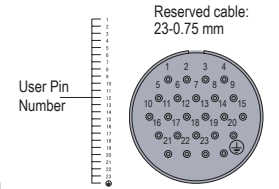
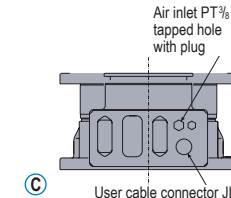
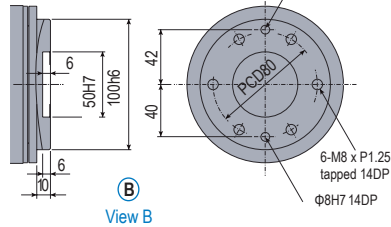
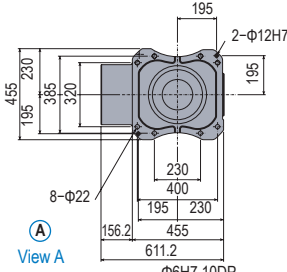
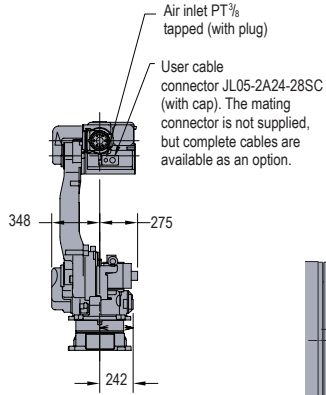
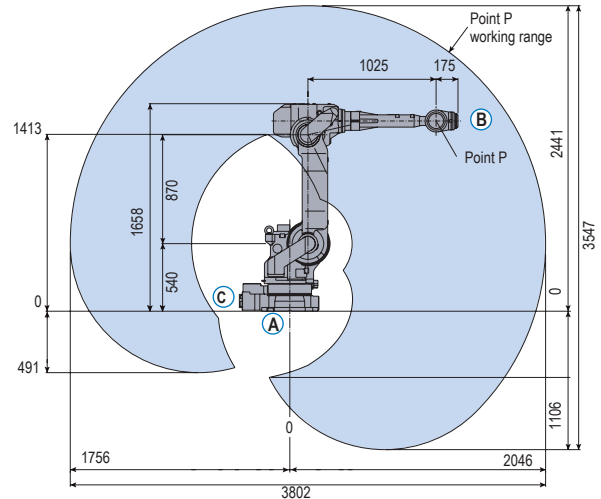
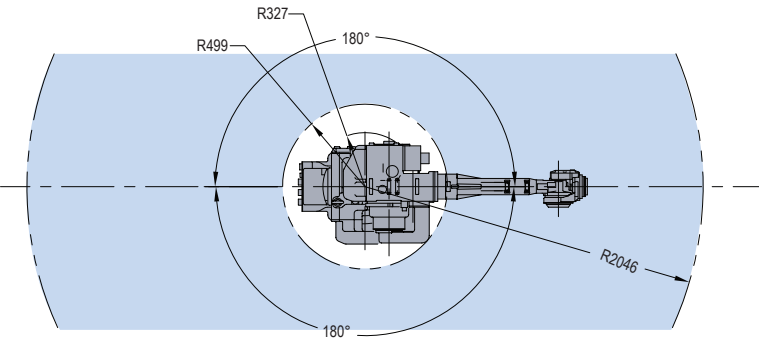
The programming pendant features a color touch-screen display that can be configured as a custom HMI with buttons and status indicators.

Dual-channel safety features include enhanced E-Stop functionality, integrated speed monitoring, manual brake release switch, and compliance with both ANSI/RIA R15.06-1999 and Canadian safety standards.

The NX100 offers unmatched connectivity through standard Ethernet and other network options: DeviceNet, ControlNet, Profibus-DP and EtherNet/IP.

# HP50 Robot

All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



## HP50 SPECIFICATIONS

<b>Structure</b>	Vertical jointed-arm type	
<b>Controlled Axes</b>	6	
<b>Payload</b>	50 kg (110.3 lbs.)	
<b>Vertical Reach</b>	3,547 mm (139.6")	
<b>Horizontal Reach</b>	2,046 mm (80.6")	
<b>Repeatability</b>	±0.07 mm (0.003")	
<b>Maximum Motion Range</b>	S-Axis (Turning/Sweep)	±180°
	S-Axis (Wall Mount)	±30°
	L-Axis (Lower Arm)	+135°/-90°
	U-Axis (Upper Arm)	+280°/-160°
	R-Axis (Wrist Roll)	±360°
	B-Axis (Bend/Pitch/Yaw)	±125°
	T-Axis (Wrist Twist)	±360°
<b>Maximum Speed</b>	S-Axis	170°/s
	L-Axis	170°/s
	U-Axis	170°/s
	R-Axis	250°/s
	B-Axis	250°/s
	T-Axis	350°/s
<b>Approximate Mass</b>	550 kg (1,212.8 lbs.)	
<b>Brakes</b>	All axes	
<b>Power Consumption</b>	5.0 kVA	
<b>Allowable Moment</b>	R-Axis	196 N • m
	B-Axis	196 N • m
	T-Axis	127 N • m
<b>Allowable Moment of Inertia</b>	R-Axis	13 kg • m <sup>2</sup>
	B-Axis	13 kg • m <sup>2</sup>
	T-Axis	5.5 kg • m <sup>2</sup>

## NX100 CONTROLLER SPECIFICATIONS\*

<b>Structure</b>	Free-standing, enclosed type
<b>Dimensions (mm)</b>	650 (w) x 1,200 (h) x 650 (d) (25.6" x 47.2" x 25.6")
<b>Approximate Mass</b>	150-250 kg (330.8-551.3 lbs.)
<b>Cooling System</b>	Indirect cooling
<b>Ambient Temperature</b>	During operation: 0° C (32° F) to 45° C (113° F) During transmit and storage: -10° C (14° F) to +60° C (140° F)
<b>Relative Humidity</b>	90% max. non-condensing
<b>Primary Power Requirements</b>	3-phase, 240/480/575 VAC at 50/60 Hz
<b>Grounding</b>	Grounding resistance: ≤100 ohms Separate ground required
<b>Digital I/O</b> NPN-Standard PNP-Optional	Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/16 system outputs, 24 user inputs/24 user outputs Enabled to 1,024 inputs/1,024 outputs
<b>Position Feedback</b>	By absolute encoder
<b>Drive Units</b>	Servo packs for AC servo motors
<b>Accel/Decel</b>	Software servo control
<b>Program Memory</b>	60,000 steps 10,000 ladder instructions
<b>Pendant Dim. (mm)</b>	199 (w) x 338 (h) x 60 (d) (7.8" x 13.3" x 2.4")
<b>Pendant Playback Buttons</b>	Teach, Play, Remote, Servo On, Start, Hold, Emergency Stop, Edit Lock (Play Mode Enabled on Controller)
<b>Concurrent I/O Ladder</b>	10,000 Instructions
<b>Multi Tasking</b>	Up to 8 concurrent jobs
<b>Fieldbus</b>	DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet IP/Slave
<b>Ethernet</b>	10 Base T/100 Base TX
<b>E-Stop</b>	Controlled stop
<b>Safety</b>	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999 and Canadian safety standards

\*See NX100 Controller data sheet (DS-232) for complete specifications

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