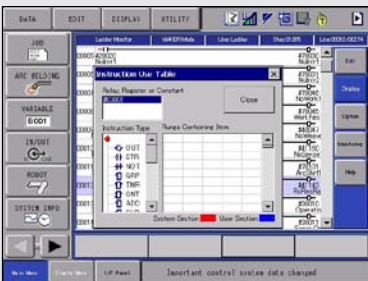




CASE PACKING



BAG PALLETIZING



PENDANT LADDER EDITOR

## TOP REASONS TO BUY

- Fast, flexible 4-axis design provides best-in-class performance
- Wide, 360-degree work envelope; minimum interference radius
- Heaviest payload in its class with highest axis speeds, wrist ratings
- Fieldbus cable can be internally routed to facilitate DeviceNet gripper control
- Easy-to-use integrated vision (optional) allows handling a variety of randomly oriented product



# MPK50

MATERIAL HANDLING • PACKAGING • PALLETIZING

**Payload: 50 kg**

## Fast, Flexible and Powerful

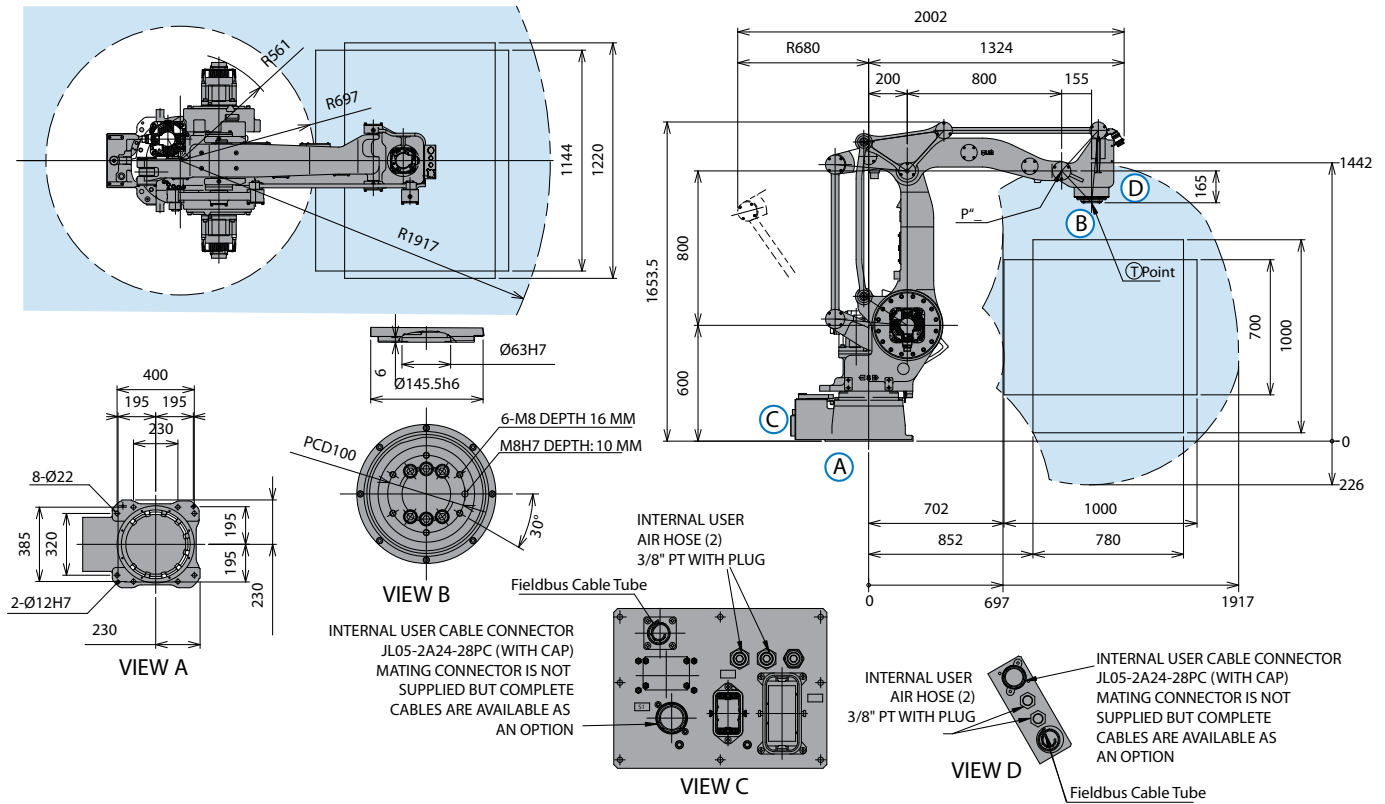
- High speed 4-axis robot provides superior performance and reliability for packaging, palletizing and other material handling applications.
- Large work envelope with full 360-degree rotation.
- Best-in-class motion, axis speed, acceleration and wrist ratings.
- 50 kg (110.3 lb) payload; 1,668 mm (65.7") vertical reach; 1,917 mm (75.5") horizontal reach;  $\pm 0.5$  mm ( $\pm 0.02$ ") repeatability.
- Streamlined robot is only 1,014.5 mm (39.9") wide and has minimum interference radius
- Slim design allows robot to reach into confined spaces, improving system productivity.
- Hollow-arm provides internal path ready for fieldbus cable.
- IP54 arm with IP67 wrist. IP65-rated body optional.

## DX100 Controller

- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.

# MPK50 ROBOT

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



## MPK50 SPECIFICATIONS

<b>Structure</b>	Vertical articulated type	
<b>Controlled Axes</b>	4	
<b>Payload</b>	50 kg (110.3 lbs)	
<b>Vertical Reach</b>	1,668 mm (65.7")	
<b>Horizontal Reach</b>	1,917 mm (75.5")	
<b>Repeatability</b>	±0.5 mm (0.02")	
<b>Maximum Motion Range</b>	S-Axis (Turning/Sweep) L-Axis (Lower Arm) U-Axis (Upper Arm) T-Axis (Wrist Twist)	±180° +80°/-35° +15°/-105° ±350°
<b>Maximum Speed</b>	S-Axis L-Axis U-Axis T-Axis*	185°/s 215°/s 215°/s 374°/s
<b>Approximate Mass</b>	670 kg (1,477.4 lbs)	
<b>Brakes</b>	All axes	
<b>Power Consumption</b>	4 kVA	
<b>T-Axis Allowable Inertia</b>	5.5 kg · m <sup>2</sup>	
<b>Internal User Electrical Cable</b>	23 conductors + ground	
<b>Internal User Air Hose</b>	2 - 3/8" PT connectors	

\* T-axis maximum speed at 40 kg payload

## DX100 CONTROLLER SPECIFICATIONS\*\*

<b>Dimensions (mm)</b>	800 (w) x 1,000 (h) x 650 (d) (31.5" x 39.4" x 25.6")
<b>Approximate Mass</b>	250 kg max. (551.3 lbs)
<b>Cooling System</b>	Indirect cooling
<b>Ambient Temperature</b>	During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 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>Digital I/O</b>	Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs
<b>Position Feedback</b>	By absolute encoder
<b>Program Memory</b>	JOB: 200,000 steps, 10,000 instructions CIO Ladder Standard: 15,000 steps Expanded: 20,000 steps
<b>Pendant Dim. (mm)</b>	169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2")
<b>Pendant Weight</b>	.998 kg (2.2 lbs)
<b>Interface</b>	One Compact Flash slot; One USB port (1.1)
<b>Pendant Playback Buttons</b>	Teach/Play/Remote Keypress selector Servo On, Start, Hold, and Emergency Stop Buttons
<b>Programming Language</b>	INFORM III, menu-driven programming
<b>Maintenance Functions</b>	Displays troubleshooting for alarms, predicts reducer wear
<b>Number of Robots/Axes</b>	Up to 8 robots, 72 axes
<b>Multi Tasking</b>	Up to 16 concurrent jobs, 4 system 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>Safety</b>	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03

\*\*See DX100 Controller data sheet (DS-399) for complete specifications

www.motoman.com

**YASKAWA**

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