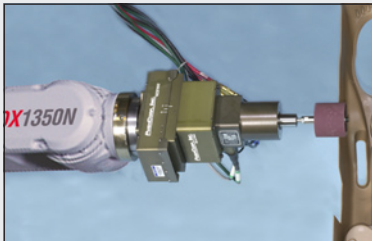


**MOTOMAN**  
a YASKAWA company



EDGE FINISHING WITH  
ABRASIVE DRUM



SANDING OF AUTO PARTS



SURFACE PREPARATION

## FEATURES & OPTIONS

- Full 6-axis capability provides high flexibility
- 35-kg payload and highest wrist torque in its class
- High torsion and rigid structure deliver industry-leading part finishing capability
- G-Code Converter software (option) provides programming by common CAM (computer aided manufacturing) packages
- IP67-rated wrist eliminates the need for a protective jacket
- IP65-rated body (optional)
- Floor, wall, or ceiling mounted
- High moment and inertia ratings make this robot suitable for material handling
- MotoSim® EG simulation software (optional)



*Motoman's DX1350N robot provides a high-speed, robust solution for your material removal and finishing needs*

MATERIAL REMOVAL • SURFACE PREPARATION • FINISHING

# DX1350N

**Payload: 35 kg**

### **Fast, Rugged, and Powerful**

Motoman's DX1350N robot is specifically designed to optimize performance in part finishing applications like grinding and sanding. These applications require high-quality processing under difficult conditions. The robot body is resistant to airborne particles and water. The wrist is rated IP67 and can tolerate temporary immersion.

This compact, lightweight robot can be easily wall- or ceiling-mounted, and offers the flexibility and productivity needed for part processing. It features a wide work envelope, in addition to the fastest motion speed and highest wrist torque rating in its class.

The DX1350N features a 1,355-mm (53.3-inch) reach and can reach behind itself for easy tooling changeover. The robot's inherent stiffness and payload allows it to carry the process tool to the part or to manipulate the part for processing by a stationary tool.

The power and rigidity of the hard-working DX1350N robot's design, together with Motoman's patented method of multiple robot control, offer improved cycle time and increased productivity for material removal applications.

### **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.

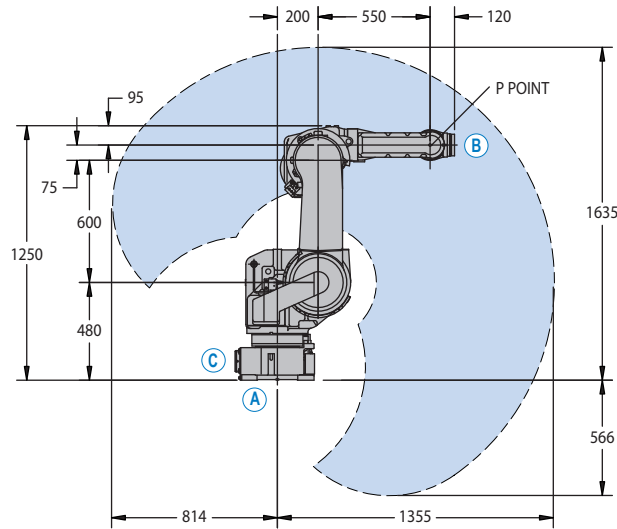
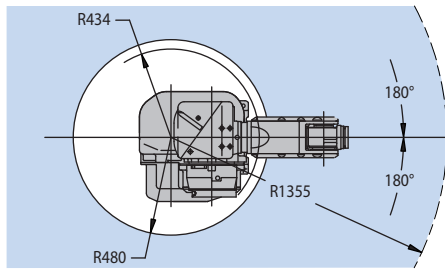
The programming pendant features a color touch-screen display that can be configured as a custom HMI with buttons and status indicators.

Dual-channel safety features include enhanced E-Stop functionality, integrated speed monitoring, manual brake release switches, and compliance with both the 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.

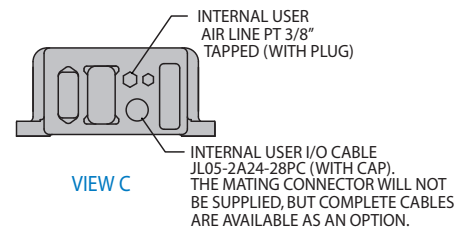
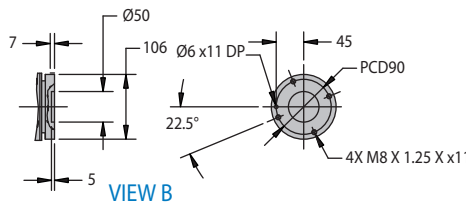
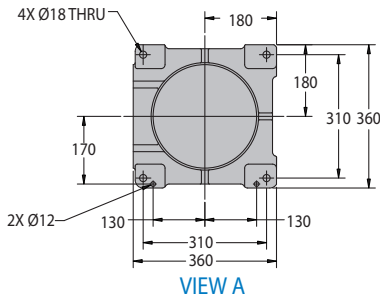
# DX1350N Robot

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



INTERNAL USER AIR LINE  
PT 3/8" TAPPED (WITH PLUG)

INTERNAL USER I/O CABLE  
JL05-2A24-285C (WITH CAP).  
THE MATING CONNECTOR WILL NOT  
BE SUPPLIED, BUT COMPLETE CABLES  
ARE AVAILABLE AS AN OPTION.



## DX1350N SPECIFICATIONS

<b>Structure</b>	Vertical articulated robot	
<b>Controlled Axes</b>	6	
<b>Payload</b>	35 kg (77.2 lbs.)	
<b>Vertical Reach</b>	2,201 mm (86.7")	
<b>Horizontal Reach</b>	1,355 mm (53.3")	
<b>Repeatability</b>	±0.06 mm (0.002")	
<b>Maximum Motion Range</b>	S-Axis (Turning/Sweep)	±180°
	S-Axis (Wall Mount)	±30°
	L-Axis (Lower Arm)	+145°/-50°
	U-Axis (Upper Arm)	+220°/-140°
	R-Axis (Wrist Roll)	±200°
	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	270°/s
	B-Axis	270°/s
	T-Axis	460°/s
<b>Approximate Mass</b>	275 kg (606.4 lbs.)	
<b>Brakes</b>	All axes	
<b>Power Consumption</b>	5 kVA	
<b>Allowable Moment</b>	R-Axis	82 N · m
	B-Axis	82 N · m
	T-Axis	41 N · m
<b>Allowable Moment of Inertia</b>	R-Axis	2.0 kg · m <sup>2</sup>
	B-Axis	2.0 kg · m <sup>2</sup>
	T-Axis	0.5 kg · m <sup>2</sup>
<b>Internal User I/O Cable</b>	23 conductors + ground	
<b>Internal User Air Line</b>	PT 3/8" connector	

## 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>	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

MOTOMAN CORPORATE HEADQUARTERS  
805 LIBERTY LANE, WEST CARROLLTON, OHIO 45449  
TEL: 937.847.6200 • FAX: 937.847.6277  
WEB SITE: [www.motoman.com](http://www.motoman.com)

**MOTOMAN**  
a YASKAWA company

MOTOMAN IS A REGISTERED TRADEMARK  
WINDOWS IS A REGISTERED TRADEMARK OF MICROSOFT  
ALL OTHER MARKS ARE THE TRADEMARKS AND  
REGISTERED TRADEMARKS OF MOTOMAN INC.