

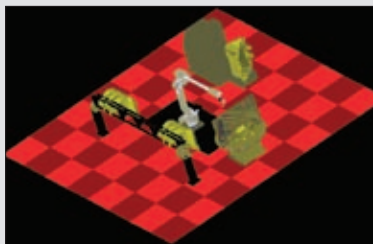
MOTOMAN
a YASKAWA company



ARC WELDING



LARGE PART PROCESSING



MOTOSIM (optional)

FEATURES & OPTIONS

- Industry-leading 3,106 mm (122.3") reach eliminates need for external axis tracks and simplifies robot programming
- Specifically designed for processing large parts
- ± 0.15 mm (± 0.006 ") repeatability
- Outstanding reliability - 62,000 hours MTBF
- MotoMax® III warranty (standard)
- MotoSim® simulation software (optional)



Motoman's extended-reach HP50-20 provides a powerful solution to meet your automation needs

ARC WELDING • COATING • DISPENSING • MATERIAL CUTTING

HP50-20

Payload: 20 kg

Extended Reach for Large Parts

The Motoman HP50-20 is a dynamic, high-speed robot featuring an extended reach. It offers superior performance in arc welding, coating, dispensing, and material cutting applications.

Ideal for processing large parts, the HP50-20 has a reach of 3,106 mm (122.3"). In many cell layouts, the HP50-20's unmatched reach eliminates the need for external axis tracks – reducing system cost and simplifying programming.

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.

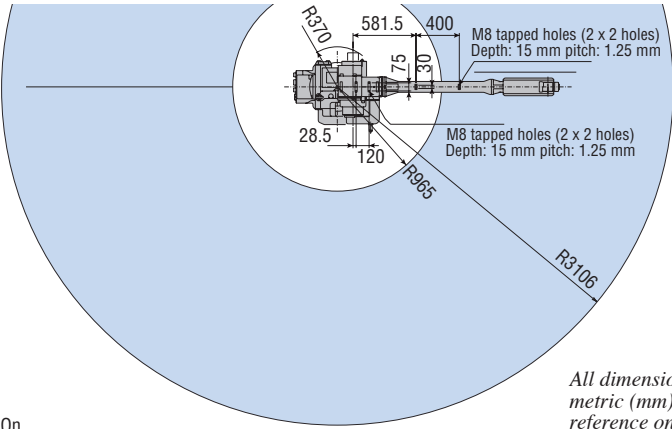
The NX100 offers up to 100 user passwords available in several levels including: user, editor, maintenance, and supervisor. The password restricts and logs the changes made to production programs.

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

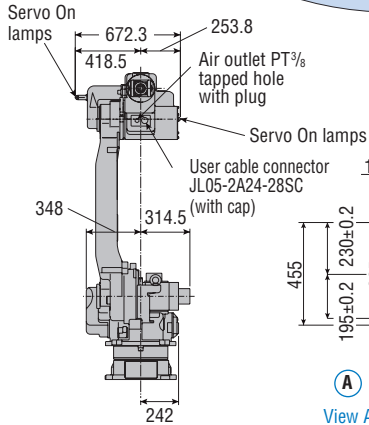
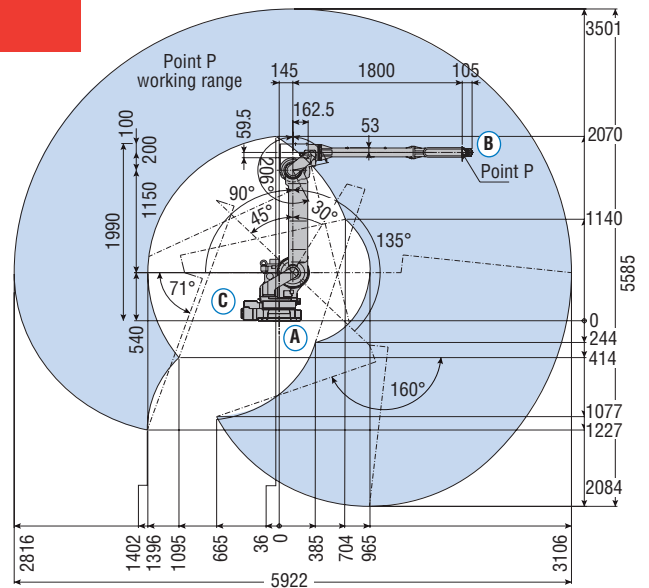
Dual-channel safety features include enhanced E-Stop functionality, integrated speed monitoring, manual brake release switch, and compliance with both ANSI/RIA R15.06-1999 and Canadian safety standards.

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

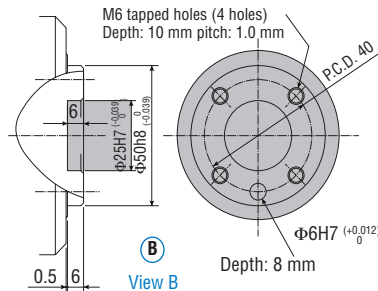
HP50-20 Robot



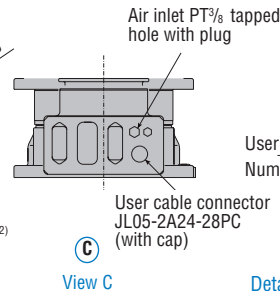
All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



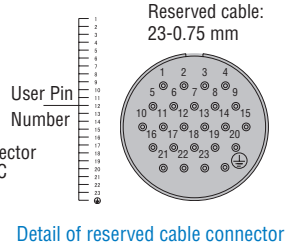
View A



View B



View C



HP50-20 SPECIFICATIONS

Structure	Vertical jointed-arm type	
Controlled Axes	6	
Payload	20 kg (44.1 lbs.)	
Vertical Reach	5,585 mm (219.9")	
Horizontal Reach	3,106 mm (122.3")	
Repeatability	±0.15 mm (0.006")	
Maximum Motion Range	S-Axis (Turning/Sweep)	±180°
	L-Axis (Lower Arm)	+135°/-90°
	U-Axis (Upper Arm)	+251°/-160°
	R-Axis (Wrist Roll)	±190°
	B-Axis (Bend/Pitch/Yaw)	±230°/-50°
Maximum Speed	S-Axis	170°/s
	L-Axis	170°/s
	U-Axis	170°/s
	R-Axis	335°/s
	T-Axis	510°/s
Approximate Mass	495 kg (1,091.5 lbs.)	
Brakes	All axes	
Power Consumption	5.0 kVA	
Allowable Moment	R-Axis	31.4 N • m
	B-Axis	31.4 N • m
	T-Axis	15.7 N • m
Allowable Moment of Inertia	R-Axis	0.7 kg • m ²
	B-Axis	0.7 kg • m ²
	T-Axis	0.2 kg • m ²

NX100 CONTROLLER SPECIFICATIONS

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

MOTOMAN
a YASKAWA company

MOTOMAN CORPORATE HEADQUARTERS
805 LIBERTY LANE, WEST CARROLLTON, OHIO 45449
TEL: 937.847.6200 • FAX: 937.847.6277
WEB SITE: www.motoman.com