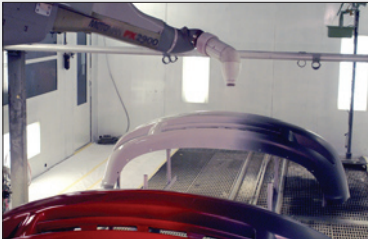


MOTOMAN
a YASKAWA company



PAINTING OF AUTOMOTIVE BUMPERS



TEACH PENDANT



MOTOSIM EG OFF-LINE PROGRAMMING



Motoman's EPX2900 robot provides high quality paint finishes on automotive assemblies and components

COATING • DISPENSING

EPX2900

Hollow wrist

FEATURES & OPTIONS

- 2,900 mm (114.2") reach
- ± 0.5 mm (± 0.02 ") repeatability
- Floor mount
- Hollow wrist design
- FM rating: Class 1, Div. 1 (explosion-proof)
- MotoSim® EG Simulation software (optional)
- MotoMax® III warranty (standard)

Versatile Paint Robot

The EPX2900 robot provides versatility and superior performance for standard industrial, automotive and aerospace coating and dispensing applications. It is ideal for painting automotive bodies and plastic component parts, agricultural equipment and other machinery and large parts. The high-speed EPX2900 creates a smooth, consistent finish with outstanding efficiency. It is Factory Mutual (FM) approved for Class 1, Div. 1 use in hazardous environments.

The EPX2900 robot has a 70 mm (2.76") diameter hollow wrist that facilitates mounting of spray equipment. Interference between the hose and parts/fixtures is avoided, ensuring optimum cycle time and robot reach/access. Optional devices such as 24-color change valve (CCV), flushable gear pump (FGP), flushing unit valve and master valve can be mounted on the upper arm resulting in reduced cycle time and less wasted paint.

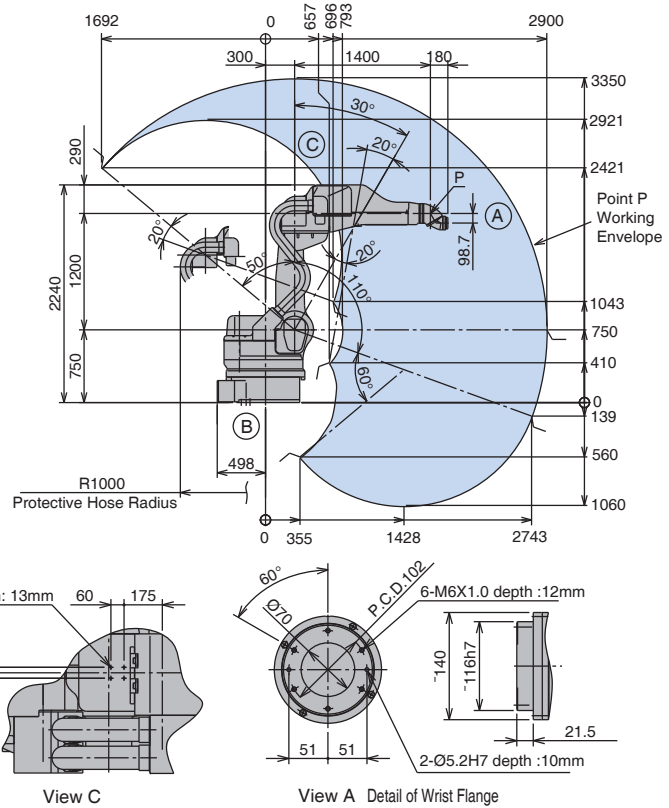
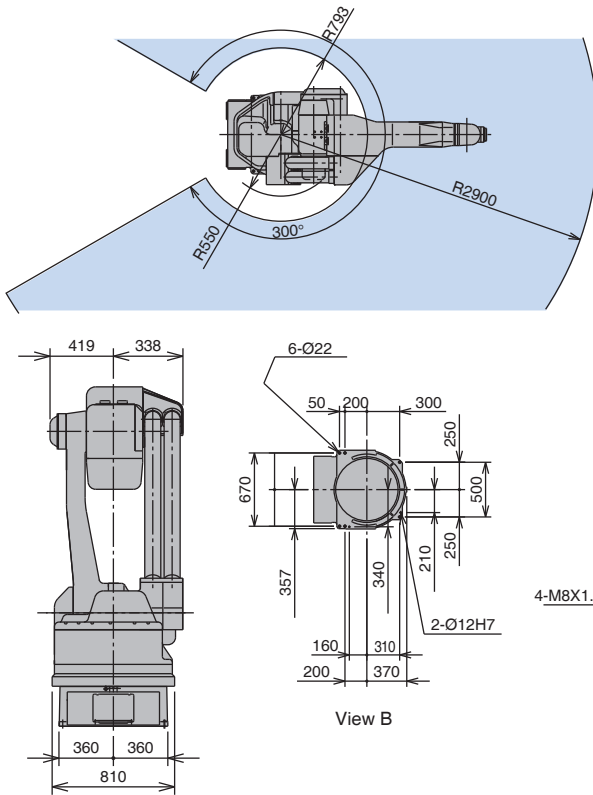
The EPX2900 robot has a 20 kg (44.1-lb) payload capacity, 2,900 mm (114.2") reach, and ± 0.5 mm (± 0.02 ") repeatability. The EPX2900 is available in a floor-mounted configuration.

Advanced NX100-FM Controller

The NX100-FM controller is Factory Mutual (FM) approved for Class 1, Div. 1 use in hazardous environments. It includes application-specific software for coating applications.

The NX100-FM coordinates operation of robot and painting devices, including the spray gun. It supports gun control instructions such as spray start/stop and painting conditions. All painting position parameters can be filed and saved.

The NX100-FM supports standard networks (such as DeviceNet, ControlNet, Profibus-DP, and Interbus-S), enabling connection to paint equipment controllers and production line controllers.



EPX2900 SPECIFICATIONS

Structure		Vertical jointed-arm type
Controlled Axes		6
Payload		20 kg (44.1 lb)
Vertical Reach		4,410 mm (173.6")
Horizontal Reach		2,900 mm (114.2")
Repeatability		±0.5 mm (0.02")
Maximum Motion Range	S-Axis (Turning/Sweep)	±150°
	L-Axis (Lower Arm)	+110°/-50°
	U-Axis (Upper Arm)	+90°/-70°
	R-Axis (Wrist Roll)	±360° (R & T: ±360° or less)
	B-Axis (Bend/Pitch/Yaw)	±360°
Maximum Speed	T-Axis (Wrist Twist)	±360° (R & T: ±360° or less)
	S-Axis	2.7 rad/s, 155°/s
	L-Axis	2.2 rad/s, 125°/s
Approximate Mass	U-Axis	2.7 rad/s, 155°/s
	R-Axis	7.9 rad/s, 450°/s
	B-Axis	9.6 rad/s, 550°/s
	T-Axis	11.3 rad/s, 650°/s
Brakes		All axes
Power Consumption		5 kVA
Allowable Moment	R-Axis	72 N · m
	B-Axis	51.5 N · m
	T-Axis	19.6 N · m
Allowable Moment of Inertia	R-Axis	10.5 kg · m ²
	B-Axis	6.5 kg · m ²
	T-Axis	0.8 kg · m ²
Mounting		Floor

NX100-FM CONTROLLER SPECIFICATIONS

Structure	Free-standing, enclosed type
Dimensions (mm)	800 (w) x 1,200 (h) x 600 (d) (31.5" x 47.2" x 23.6")
Approximate Mass	200 kg (441 lb)
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 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
Position Feedback	By absolute encoder
Drive Units	Servo packs for AC servo motors
Accel/Decel	Software servo control
Program Memory	60,000 steps 10,000 ladder 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 Ladder	10,000 Instructions
Multi Tasking	Up to 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	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999 and Canadian safety standards
Scavenging Control	Equipped with scavenging control unit for internal pressure explosion-proof manipulator