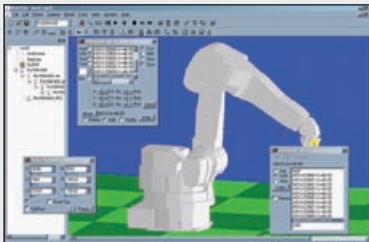




AUTOMOTIVE PANELS



HOLLOW WRIST

MOTOSIM® OFF-LINE
PROGRAMMING

FEATURES & OPTIONS

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



Motoman's PX2900 robot provides high quality finishes on automotive products

• COATING • DISPENSING •

PX2900

Hollow wrist design

Versatile Paint Robot

The PX2900 robot is designed specifically for coating of car bodies, machinery, and large parts. The high-speed PX2900 robot creates a smooth, consistent finish with outstanding efficiency.

The PX2900 features a hollow wrist design. It is ideal for painting of ultra fine finishes due to internal routing of all paint tubes and cables which reduces the dust falling from these cables onto the painted product.

The PX2900 robot is Factory Mutual (FM) approved for Class 1, Div. 1 use in hazardous environments. It features a 20 kg (44.1-lb) payload capacity, a 2,900 mm (114.2") reach, and a ± 0.5 mm (± 0.02 ") repeatability.

Optional devices such as 24-color CCU, FGP, washing unit valve and master valve can be mounted on the upper arm resulting in reduced tact time and wasted paint.

Advanced XRC 2001-FM Controller

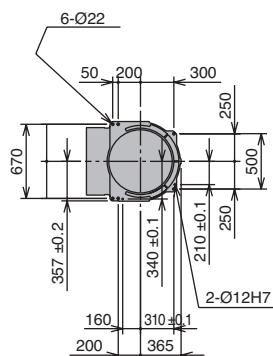
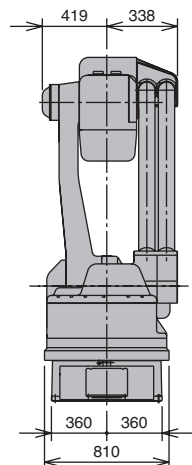
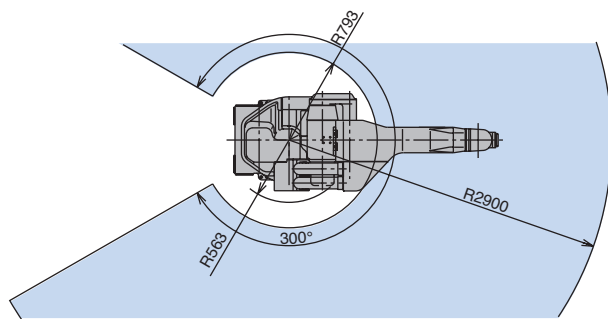
The advanced XRC 2001-FM controller features fast processing, easy-to-use INFORM II programming, and includes application-specific software for coating.

Two types of programming pendants are available — the standard model for use in non-explosive painting applications and as an option, an intrinsically-safe version for use in hazardous conditions.

The XRC 2001-FM coordinates operation of robot and painting devices, including the gun. It supports gun control instructions such as spray start/stop and painting conditions. All painting position parameters can be filed and saved.

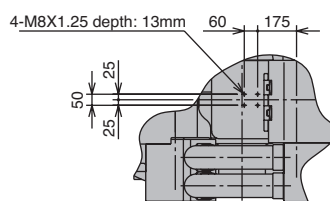
The XRC 2001-FM supports standard networks (such as DeviceNet, ControlNet, Profibus-DP, and Interbus-S), enabling connection to paint machine controllers and line controllers.

PX2900 Robot

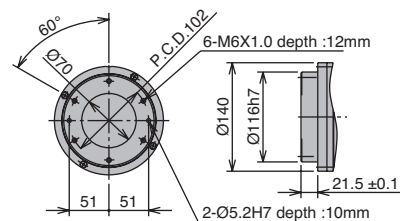


View B

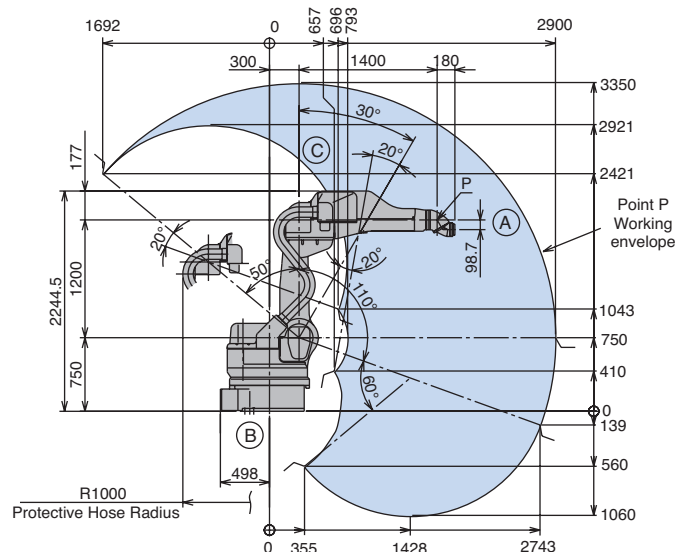
All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



View C



View A Detail of Wrist Flange



PX2900 SPECIFICATIONS

Structure		Vertical jointed-arm type
Controlled Axes		6
Payload		20 kg (44.1 lbs.)
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°/-170°
	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	2.70rad/s, 155°/s
	L-Axis	2.18rad/s, 125°/s
	U-Axis	2.70rad/s, 155°/s
	R-Axis	7.85rad/s, 450°/s
Approximate Mass	B-Axis	9.60rad/s, 550°/s
	T-Axis	11.34rad/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

XRC 2001-FM CONTROLLER SPECIFICATIONS

Structure		Free-standing, enclosed type
Dimensions (mm)		800 (w) x 1,300 (h) x 600 (d) (31.5" x 51.2" x 23.6") (Scavenging unit (175 mm width) and protruding portion not included)
Approximate Mass		100 kg (220.5 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) 0° C (32° F) to 40° C (113° F) for programming pendant
Relative Humidity		90% max. non-condensing (85% or less for pendant)
Primary Power Requirements		3-phase, 200/220 VAC (+10% to -15%) at 50/60 Hz
Grounding		Grounding resistance: ≤100 ohms Separate ground required ≤10 ohms for explosion-proof pendant
Digital I/O		Specialized signals (hardware): 11 inputs/2 outputs General signals (standard max): 40 inputs/40 outputs Expandable to 256 inputs/256 outputs
Position Feedback		By absolute encoder
Drive Units		Servo packs for AC servomotors
Accel/Decel		Software servo control
Program Memory		5,000 steps and 3,000 instructions
Pendant Dim. (mm)		200 (w) x 325 (h) x 77 (d) (7.9" x 12.8" x 3.0")
Pendant Buttons Provided		Teach Play, Remote, Servo On, Start, Hold, Emergency Stop, Edit Lock
Safety		Emergency Stop Pushbuttons, 3-position Deadman, Brake Release Switches Meets ANSI/RIA R15.06-1999 safety standard Factory Mutual approved, Class 1, Div. 1
Scavenging Control		Equipped with scavenging control unit for internal pressure explosion-proof manipulators

MOTOMAN
a YASKAWA company

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