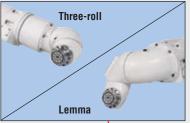
## MOTO/A/V a YASKAWA company



PAINTING OF INTERIOR SURFACE



WRIST OPTIONS



MOTOSIM® OFF-LINE PROGRAMMING

## **FEATURES & OPTIONS**

- **2.035** mm reach
- $\pm$  0.5 mm ( $\pm$ 0.02") repeatability
- Floor-, wall-, ceiling- mount options
- Three-roll or Lemma style wrist available
- FM rating: Class 1, Div. 1 (explosion-proof)
- Advanced applicationspecific paint software
- MotoSim® simulation software (optional)
- MotoMax<sup>®</sup> III warranty (standard)



## **Versatile Coating Robot**

The high-speed PX2050 robot is available with either a three-roll or Lemma-style wrist, providing versatility and superior performance in standard industrial and automotive coating applications.

The three-roll wrist design is ideal for painting contoured parts such as car bodies and interior/exterior surfaces. The Lemma wrist is well-suited for painting horizontal and vertical planes.

The PX2050 robot is Factory Mutual (FM) approved for Class 1, Div. 1 use in hazardous environments. It features a 10 kg (22.1-lb) payload capacity, a 2,035 mm (80.1") reach, and a ±0.5 mm (±0.02") repeatability. The compact design of the highly flexible, six-axis PX2050 robot makes it easy to mount on the floor, wall or ceiling.

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.

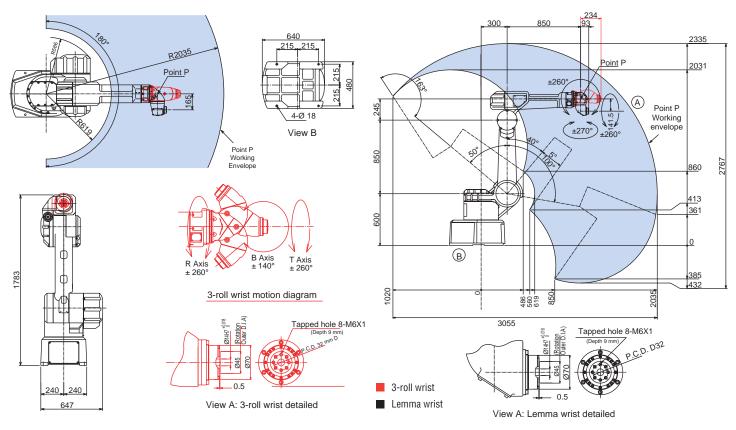
## Advanced XRC 2001-FM Controller

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.



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

PX208	50 SPECIFICATION	S
Structure		Vertical jointed-arm type
Controlled Axes		6
Payload		10 kg (22.1 lbs.)
Vertical Reach		2,767 mm (108.9")
Horizontal Reach		2,035 mm (80.1")
Repeatability		±0.5 mm (0.02")
Maximum Motion Range	S-Axis (Turning/sweep) L-Axis (Lower Arm) U-Axis (Upper Arm) (relative angle of lower arm) R-Axis (Wrist Roll) B-Axis (Bend/Pitch/Yaw) T-Axis (Wrist Twist)	±90° +100°/-50° 5° - 163° ±260° 3-Roll: ±140° Lemma: ±270° ±260°
Maximum Speed		2.0m/s
Approximate Mass		370 kg (816 lbs.)
Brakes		All axes
Power Consumption		5 kVA
Allowable Moment	R-Axis B-Axis T-Axis	3-Roll: 34.1 N • m Lemma: 30.4 N • m 3-Roll: 34.1 N • m Lemma: 19.6 N • m 9.8 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis	3-Roll: 1.21 kg • m² Lemma: 0.97 kg • m² 3-Roll: 1.21 kg • m² Lemma: 0.40 kg • m² 0.10 kg • m²
Mounting		Floor, wall, ceiling

<sup>\*</sup>Specifications are for both 3-roll wrist and Lemma wrist unless otherwise noted

XRC 2001-FM CONTROLLER SPECIFICATIONS		
Structure	Free-standing, enclosed type	
Dimensions (mm)	800 (w) x 1,300 (h) x 600 (d) $(31.5^\circ$ x $51.2^\circ$ x $23.6^\circ$ ) (Scavenging unit (175 mm width) and protuding portion not included)	
Approximate Mass	100 kg (220.5 lbs)	
Cooling System	Indirect cooling	
Ambient Temperature	During operation: $0^{\circ}$ C (32° F) to 45° C (113° F) During transmit and storage: $-10^{\circ}$ C (14° F) to $+60^{\circ}$ C (140° F) $0^{\circ}$ C (32° F) to 40° C (113° F) for programing 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 intrinsically-safe 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 standard Factual Mutual approved, Class 1, Div. 1	
Scavenging Control	Equipped with scavenging control unit for internal pressure explosion-proof manipulators	

