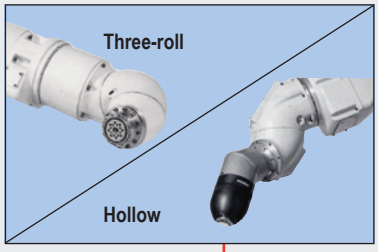
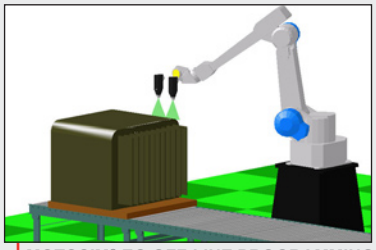
MOTOMAN
a YASKAWA company

PAINTING OF INDUSTRIAL COMPONENTS



WRIST OPTIONS



MOTOSIM® EG OFF-LINE PROGRAMMING

FEATURES & OPTIONS

- 2,829 mm reach with 3-roll wrist
- 2,834 mm reach with hollow wrist
- ±0.5 mm (±0.02") repeatability
- Floor mount
- 3-roll or hollow style wrist available
- FM rating: Class 1, Div. 1 (explosion-proof)
- MotoSim® EG simulation software (optional)
- MotoMax® III warranty (standard)

Motoman's PX2850 robot provides superior performance on large products

• COATING • DISPENSING •

PX2850

Three-roll or hollow wrist

Versatile Paint Robot

The high-speed PX2850 robot is available with either a three-roll or hollow style wrist, providing versatility and superior performance in standard industrial and automotive painting applications.

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

The PX2850 robot is Factory Mutual (FM) approved for Class 1, Div. 1 use in hazardous environments. Both the three-roll and hollow wrist configurations feature a 10 kg (22.1 lb) payload capacity and a ±0.5 mm (±0.02") repeatability. The three-roll wrist has a 2,829 mm (111.4") reach while the hollow wrist has a 2,834 mm (111.6") reach. The PX2850 is available in a floor mounted configuration.

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 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.

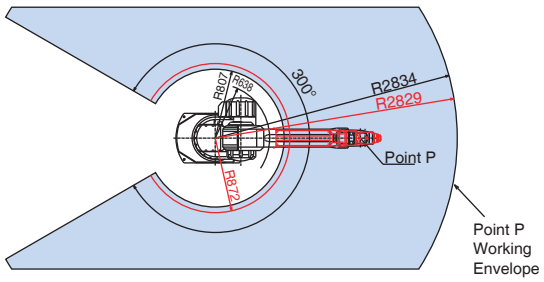
Two types of programming pendants are available – the standard model for use in non-explosive painting applications and as an option, an intrinsically-safe version for use in hazardous conditions.

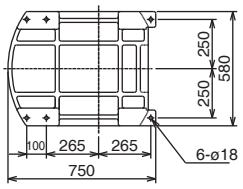
The XRC 2001-FM coordinates operation of robot and painting devices, including the gun. It supports gun control instructions such as spray start/stop and painting conditions. All painting position parameters can be filed and saved.

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.

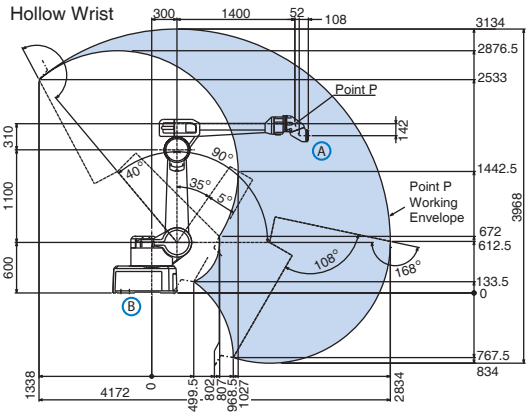
PX2850 Robot

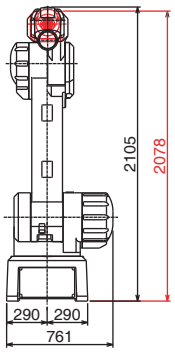
All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.

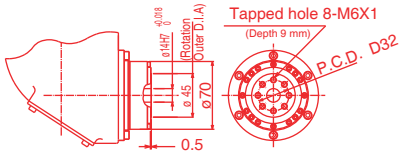




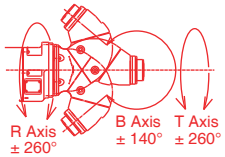
View B



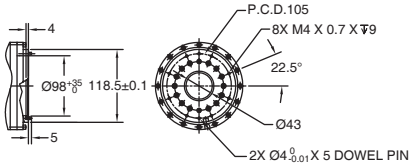




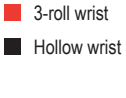
View A: Wrist Detailed
3-Roll Wrist

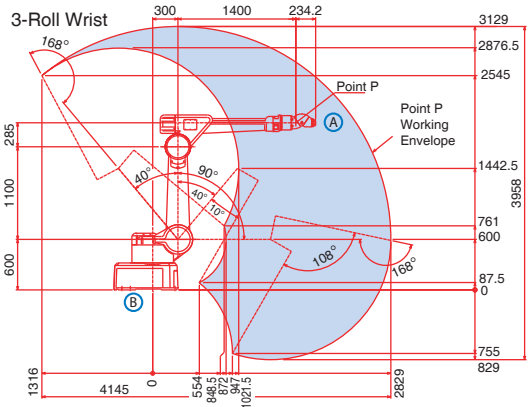


Wrist Motion Diagram
3-Roll Wrist



View A: Wrist Detailed
Hollow Wrist





PX2850 SPECIFICATIONS

Structure		Vertical jointed-arm type
Controlled Axes		6
Payload		10 kg (22.1 lbs.)
Vertical Reach		3-Roll: 3,958 mm (155.8") Hollow: 3,968 mm (156.2")
Horizontal Reach		3-Roll: 2,829 mm (111.4") Hollow: 2,834 mm (111.6")
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)	±150° +90°/-40° 3-Roll: +10°/-168° Hollow: +5°/-168° 3-Roll: ±260° Hollow: ±360° 3-Roll: ±140° Hollow: ±360° 3-Roll: ±260° Hollow: ±360°
Maximum Speed		2.0m/s
Approximate Mass		570 kg (1,256.9 lbs)
Brakes		All axes
Power Consumption		5 kVA
Allowable Moment	R-Axis B-Axis T-Axis	3-Roll: 34.1 N • m Hollow: 30.4 N • m 3-Roll: 34.1 N • m Hollow: 19.6 N • m 9.8 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis 0.10 kg • m²	3-Roll: 1.21 kg • m² Hollow: 0.97 kg • m² 3-Roll: 1.21 kg • m² Hollow: 0.40 kg • m²
Mounting		Floor

Specifications are for both 3-roll wrist and hollow 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" x 51.2" x 23.6") (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° 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 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 Factory Mutual approved, Class 1, Div. 1
Scavenging Control	Equipped with scavenging control unit for internal pressure explosion-proof manipulators

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

MOTOMAN
a YASKAWA company