

MPX3500

VERSATILE COATING ROBOT

KEY BENEFITS

Large global install base backed by Yaskawa's experience and reliability

High wrist/upper arm payload capacity for mounting paint application equipment

Easy-to-use touch screen teach pendant

MotoSim® EG-VRC 2016SP3 (or later) simulation software (optional)

SPECIFICATIONS

15 kg wrist payload

25 kg upper arm payload

2,700 mm horizontal reach

5,095 mm vertical reach

±0.15 mm repeatability

APPLICATION

Coating

Dispensing

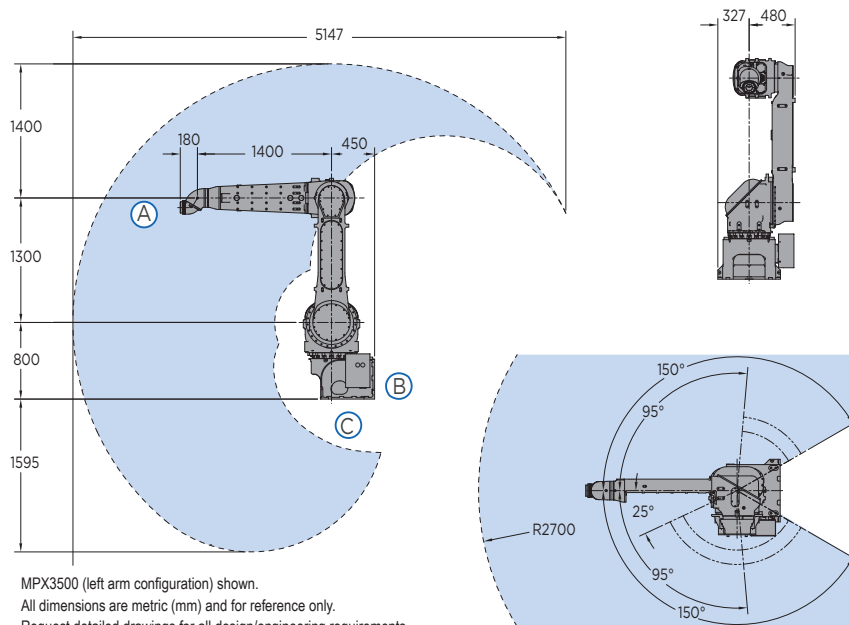


- High-speed, compact six-axis MXP3500 robot is ideal for automotive body and components, as well as other industrial coating applications.
- Offers superior performance and creates smooth, consistent finish with outstanding efficiency for painting and dispensing applications.
- Hollow wrist design with inside wrist diameter of 70 mm; well-suited for mounting spray equipment applicators.
- Ideal for painting contoured parts such as interior/exterior surfaces; interference between the hose and parts/fixtures is avoided which ensures optimum cycle time and robot reach/access.
- Factory Mutual approved for Class 1, Div. 1 use in hazardous environments.
- Versatile design can be floor, wall or ceiling mounted for layout flexibility.
- This model is available in left or right arm configurations.

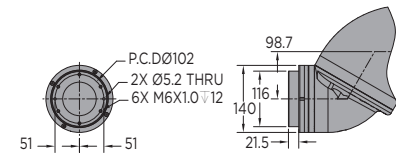
DX200-FM CONTROLLER

- Includes application-specific software for paint applications.
- Coordinates operation of robot and painting devices, including spray gun, color changer and gear pump.
- Supports gun control instructions such as spray start/stop and painting condition files.
- Supports standard networks (such as EtherNet, EtherNet IP, CC-Link, DeviceNet, EtherCAT and PROFINET), enabling connection to paint equipment controllers and production line controllers.
- Intrinsically safe pendant (optional).
- The DX200-FM is available with Category 3 Performance Level d (PLd) Functional Safety Unit (FSU), which supports safety-rated speed control, safety-rated soft axis and space limiting, and safety-rated monitor stop. In addition to enabling safe operation in shorter and narrower spray booths with adjacent manual operations, these safety functions can be utilized to save costs and reduce floorspace requirements.

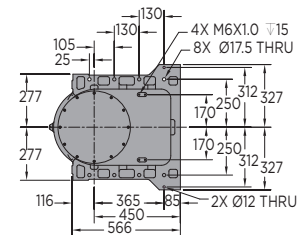
MPX3500 ROBOT



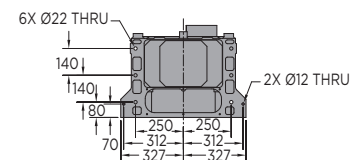
VIEW A



VIEW B



VIEW C



SPECIFICATIONS

MPX3500 SPECIFICATIONS			DX200-FM CONTROLLER SPECIFICATIONS (WITH STANDARD PENDANT)	
Structure			Structure	Free-standing, enclosed type
Controlled Axes			Dimensions (mm)	600 (w) x 1349 (h) x 520 (d) with transformer
Payload			Approximate Mass	250 kg with transformer
Vertical Reach			Cooling System	Indirect cooling
Horizontal Reach			Ambient Temperature	During operation: 0° C to 40° C During transit and storage: -10° C to +45° C
Repeatability			Relative Humidity	90% max. non-condensing
Maximum Motion Range	S-Axis (Turning/Sweep)	±150°	Primary Power Requirements	3-phase, 240/480/575 VAC at 50/60 Hz Optional external transformer allows 240/480/575 VAC at 50/60 Hz
	L-Axis (Lower Arm)	+140°/-65°	Grounding	Grounding resistance: ≤100 ohms Separate ground required
	U-Axis (Upper Arm) (relative angle of lower arm)	+90°/-65°	Digital I/O	Specialized signals: 28 inputs and 7 outputs General signals: 40 inputs and 40 outputs (Specialized allocation: 24 inputs and 4 outputs; General allocation: 16 inputs and 16 outputs) Max. I/O (optional): 4,096 inputs and 4,096 outputs
	R-Axis (Wrist Roll)	±720°	Position Feedback	By absolute encoder
	B-Axis (Bend/Pitch/Yaw)	±720°	Drive Units	Servo packs for AC servo motors
	T-Axis (Wrist Twist)	±720°	Accel/Decel	Software servo control
Maximum Speed			Program Capacity	JOB: 200,000 steps; 10,000 instructions Concurrent I/O ladder: 20,000 steps
Approximate Mass			Fieldbus Options	CC Link, DeviceNet, Ethernet, EtherNet/IP, EtherCAT, PROFINET
Brakes			Ethernet	10 Base T/100 Base TX
Power Consumption			E-Stop	Controlled stop
Allowable Moment	R-Axis	93.2 N · m	Safety	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Meets ANSI/RIA R15.06-1999 and Canadian safety standards
	B-Axis	58.8 N · m	Pendant Dim. (mm)	169 (w) x 314.5 (h) x 50 (d)
	T-Axis	19.6 N · m	Pendant Mass	0.99 kg
Allowable Moment of Inertia	R-Axis	3.75 kg · m ²	Pendant Playback Buttons	Teach, Play, Remote, Servo On, Start, Hold, Emergency Stop, Edit Lock (Play Mode enabled on controller)
	B-Axis	2.225 kg · m ²		
	T-Axis	0.20 kg · m ²		
Mounting				
Floor, Wall, Ceiling				
INTRINSICALLY SAFE PENDANT SPECIFICATIONS (OPTIONAL)				
Dimensions (mm)				
235 (w) x 203 (h) x 78 (d)				
Mass				
1.3 kg				
Material				
Reinforced plastics				
Operation Device				
Select keys, axes keys, numerical/application keys, emergency stop button, enable switch				
Display				
5.7-inch monochrome LCD, backlit white LED, touch panel 320 x 240 pixels (Alphanumeric characters, Chinese characters, Japanese letters, others)				
IEC Protection Class				
IP54				
Cable Length				
Standard: 8 m, Optional 20 m Max: 50 m (with optional extension cable)				

YASKAWA

YASKAWA AMERICA, INC. 100 Automation Way | Miamisburg, OH 45342
937.847.6200 | motoman.com

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