

MPX1950

COMPACT ROBOT OPTIMIZED FOR PAINTING

KEY BENEFITS

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

Hollow inline wrist with 7 kg payload capacity

Easy-to-use touch screen teach pendant

MotoSim® EG-VRC 2018SP2 (or later) simulation software (optional)

SPECIFICATIONS

7 kg wrist payload

3 kg upper arm payload

1,450 mm horizontal reach

2,730 mm vertical reach

±0.15 mm repeatability

APPLICATION

Coating

Dispensing

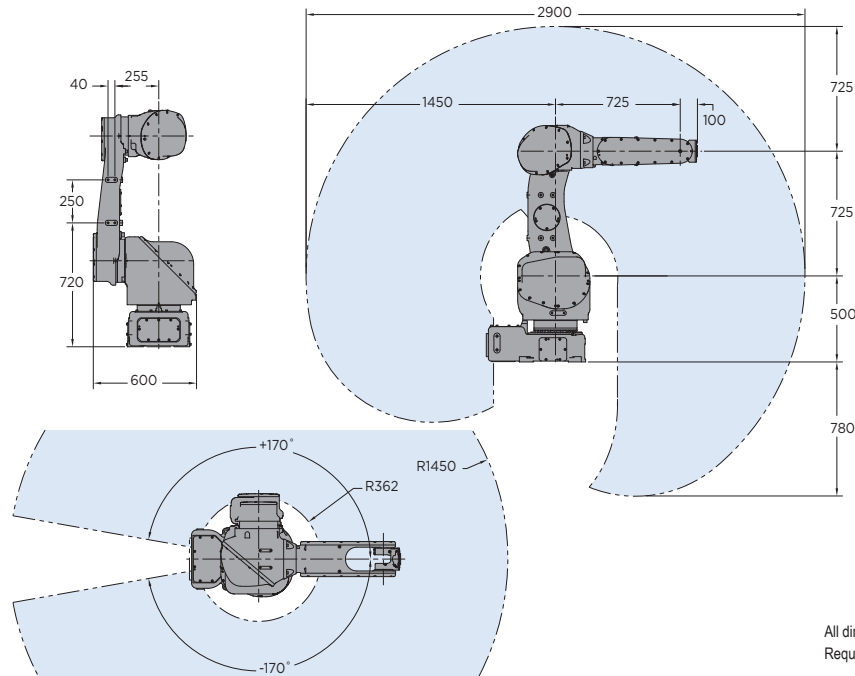


- High-speed, compact six-axis MPX1950 robot is ideal for painting of small to medium components.
- Offers superior performance and creates smooth, consistent finish with outstanding efficiency for painting and dispensing applications.
- Wrist payload of 7 kg; well-suited for mounting a variety of spray guns and small bells.
- Small footprint, slim arm design allows for minimum installation space.
- Reduced interference envelope enables painting of workpieces closer to the robot.
- Optional location (back or bottom) for manipulator cable connection reduces interference with walls.
- Factory Mutual approved for use in Class I, Div. 1 hazardous environments.
- Versatile design can be floor, wall or ceiling mounted for layout flexibility.

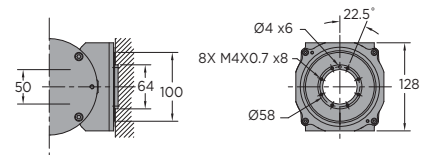
DX200-FM CONTROLLER

- Includes application-specific software for paint applications.
- Supports paint hardware configurations including: trigger delays, air calibrations and valve timing programs.
- Accommodates paint control instructions such as spray start/stop and painting condition files.
- Supports standard networks (such as EtherNet, EtherNet IP, CC-Link, and DeviceNet), 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 smaller spray booths with adjacent manual operations, these safety functions can be utilized to save costs and reduce floorspace requirements.

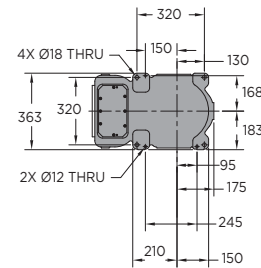
MPX1950 ROBOT



VIEW A



VIEW B



All dimensions are metric (mm) and for reference only.
Request detailed drawings for all design/engineering requirements.

SPECIFICATIONS

MPX1950 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)	±170° (wall mounted: ±90°)	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°/-100°	Grounding	Grounding resistance: ≤100 ohms Separate ground required
	U-Axis (Upper Arm)	+235°/-62°	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)	±200°	Position Feedback	By absolute encoder
	B-Axis (Bend/Pitch/Yaw)	±150°	Drive Units	Servo packs for AC servo motors
	T-Axis (Wrist Twist)	±400°	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	19.6 N · m	Safety	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Meets ANSI/RIA R15.06-1999 and Canadian safety standards
	B-Axis	19.6 N · m	Pendant Dim. (mm)	169 (w) x 314.5 (h) x 50 (d)
	T-Axis	9.8 N · m	Pendant Mass	0.99 kg
Allowable Moment of Inertia	R-Axis	0.6 kg · m ²	Pendant Playback Buttons	Teach, Play, Remote, Servo On, Start, Hold, Emergency Stop, Edit Lock (Play Mode enabled on controller)
	B-Axis	0.6 kg · m ²		
	T-Axis	0.16 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

Technical specifications subject to change without notice. | Motoman is a registered trademark.
All other marks are the trademarks and registered trademarks of Yaskawa America, Inc.
DS-884 ©2021 Yaskawa America, Inc. JANUARY 2021