

MHP45L

HANDLING ROBOT FOR USE IN HAZARDOUS ENVIRONMENTS

KEY BENEFITS

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

Handles parts for a variety of tasks performed in hazardous environments

High wrist payload capacity for large, heavy parts

Easy-to-use touch screen teach pendant

MotoSim® EG-VRC 2020 (or later) simulation software (optional)

SPECIFICATIONS

45 kg wrist payload

2,850 mm horizontal reach

5,373 mm vertical reach

±0.07 mm repeatability

APPLICATION

Material Handling

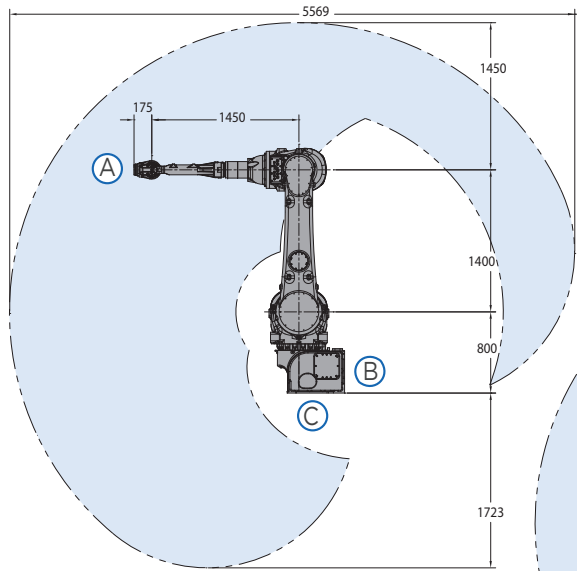


- High-speed, six-axis MHP45L handling robot streamlines automated paint line layouts by eliminating the need for dedicated part transfer equipment.
- Highly flexible range of motion enables transfer of large workpieces, such as automotive bodies and components, while avoiding interference with paint robots and other peripheral equipment.
- High payload capacity, and high moment and inertia ratings provide superior performance for large and heavy handling applications.
- Factory Mutual approved for Class 1, Div. 1 use in hazardous environments.
- Multiple manipulator cable connection options (left, right, back) enable flexible installation.
- Cables and air lines are routed through robot base to upper arm to increase cable life, enhance safety and reduce teaching time.
- This model is available in left or right arm configurations.

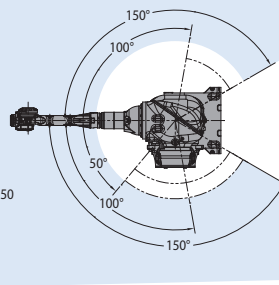
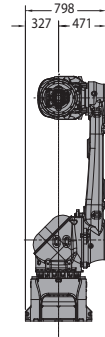
DX200-FM CONTROLLER

- 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.

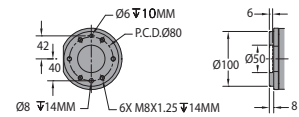
MHP45L ROBOT



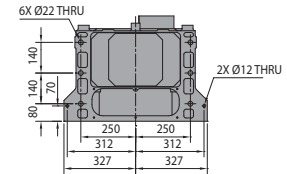
MHP45L (left arm configuration) shown.
All dimensions are metric (mm) and for reference only.
Request detailed drawings for all design/engineering requirements.



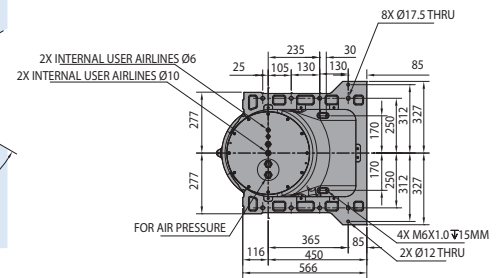
VIEW A



VIEW B



VIEW C



SPECIFICATIONS

MHP45L SPECIFICATIONS		
Structure	Vertical jointed-arm type	
Controlled Axes	6	
Payload	45 kg	
Vertical Reach	5,373 mm	
Horizontal Reach	2,850 mm	
Repeatability	±0.07 mm	
Maximum Motion Range	S-Axis (Turning/Sweep)	±150°
	L-Axis (Lower Arm)	+140°/-65°
	U-Axis (Upper Arm)	+180°/-65°
	(relative angle of lower arm)	
	R-Axis (Wrist Roll)	±360°
	B-Axis (Bend/Pitch/Yaw)	±125°
	T-Axis (Wrist Twist)	±360°
Maximum Speed	1.6 m/s	
Approximate Mass	650 kg	
Brakes	All axes	
Power Consumption	3 kVA	
Allowable Moment	R-Axis	252.8 N · m
	B-Axis	252.8 N · m
	T-Axis	117.6 N · m
Allowable Moment of Inertia	R-Axis	13.9 kg · m ²
	B-Axis	13.9 kg · m ²
	T-Axis	3.2 kg · m ²
Mounting	Floor, Wall, Ceiling, Shelf	

OPTIONS

- Wide variety of fieldbus cards
- Intrinsically safe cable connection for hazardous area tooling needs

DX200-FM CONTROLLER SPECIFICATIONS (WITH STANDARD PENDANT)	
Structure	Free-standing, enclosed type
Dimensions (mm)	600 (w) x 1349 (h) x 520 (d) with transformer
Approximate Mass	250 kg with transformer
Cooling System	Indirect cooling
Ambient Temperature	During operation: 0° C to 40° C During transit and storage: -10° C to +45° C
Relative Humidity	90% max. non-condensing
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
Grounding	Grounding resistance: ≤100 ohms Separate ground required
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
Position Feedback	By absolute encoder
Drive Units	Servo packs for AC servo motors
Accel/Decel	Software servo control
Program Capacity	JOB: 200,000 steps; 10,000 instructions Concurrent I/O ladder: 20,000 steps
Fieldbus Options	CC Link, DeviceNet, Ethernet, EtherNet/IP, EtherCAT, PROFINET
Ethernet	10 Base T/100 Base TX
E-Stop	Controlled stop
Safety	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Meets ANSI/RIA R15.06-1999 and Canadian safety standards
Pendant Dim. (mm)	169 (w) x 314.5 (h) x 50 (d)
Pendant Mass	0.99 kg
Pendant Playback Buttons	Teach, Play, Remote, Servo On, Start, Hold, Emergency Stop, Edit Lock (Play Mode enabled on controller)

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YASKAWA

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