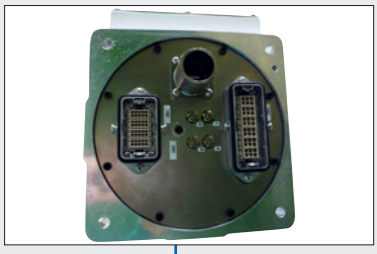
SOLUTIONS IN MOTION®

YASKAWA
MOTOMAN ROBOTICS



BOTTOM-MOUNTED CABLE CONNECTIONS

FS100 CONTROLLER

UPPER ARM CONNECTORS

TOP REASONS TO BUY

- Full 6-axis capability provides high flexibility
- Compact body features internally routed electrical and pneumatic lines
- Floor, wall or ceiling mounting
- Supports MotoPlus™ and MotomanSync™
- Open architecture programming environment

MH3BM

SPECIMEN PROCESSING • BIOMEDICAL • CLEAN ROOM ASSEMBLY

Payload: 3 kg

The MH3BM is a robot designed for compact, lighter payload applications such as clean room assembly, drug development, clinical testing and pharmaceutical dispensing. The FS100 is a powerful controller with unmatched open software architecture.

Ideal for Clean Room and Biomedical Applications

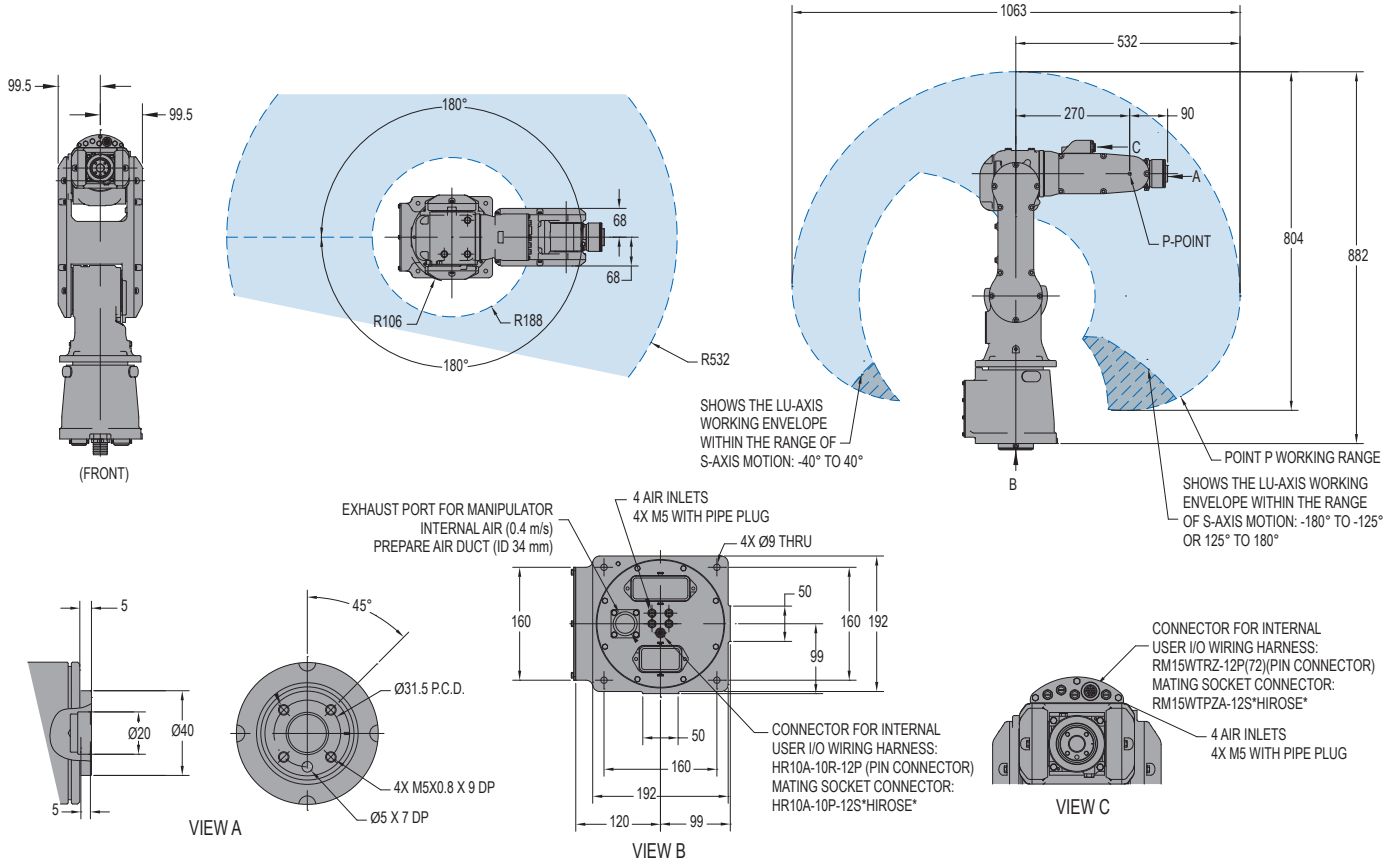
- Special coating, surface treatment and stainless steel fasteners allow cleaning with hydrogen peroxide.
- IP65 body and IP67 wrist provide ingress protection.
- ISO class 5, Federal Class 100 (209E) clean room rated.
- Cable and pneumatic connections on the bottom of the mounting surface provide additional protection.
- Compact, high-speed robot requires minimal installation space; base width of only 200 mm allows it to be mounted in confined spaces.
- 3 kg payload; 804 mm vertical reach; 532 mm horizontal reach.
- Compact design and built-in collision avoidance features with multiple robot control allow two robots to be used together to optimize productivity.
- Internally routed cables and hoses maximize system reliability.

FS100 Controller

- Small, compact controller.
- 470 mm wide, 200 mm high, 420 mm deep.
- Designed for packaging and small parts handling robots with payloads of 20 kg and under.
- Compatible with integrated MotoSight™ 2D vision (optional).
- Improved communication speeds and functionality.
- High-speed I/O response and high-resolution timers.
- Open architecture enables software customization in widely accepted environments such as C, C++, C# and .NET.
- Uses same programming pendant hardware as DX100 controller, providing a consistent programming interface with current products.

MH3BM ROBOT

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



MH3BM SPECIFICATIONS

Structure		Vertical jointed-arm type
Controlled Axes		6
Payload		3 kg (6.6 lbs.)
Vertical Reach		804 mm (31.7")
Horizontal Reach		532 mm (20.9")
Repeatability		±0.03 mm (±0.001)
Maximum Motion Range	S-Axis (Turning/Sweep) S-Axis (Wall Mount) L-Axis (Lower Arm) U-Axis (Upper Arm) R-Axis (Wrist Roll) B-Axis (Bend/Pitch/Yaw) T-Axis (Wrist Twist)	±180° ±25° +90°/-85° +260°/-105° ±170° ±120° ±360°
Maximum Speed	S-Axis L-Axis U-Axis R-Axis B-Axis T-Axis	310°/s 150°/s 190°/s 300°/s 300°/s 420°/s
Approximate Mass		27 kg (59.5 lbs.)
Brakes		All axes
Power Rating		0.5 kVA
Allowable Moment	R-Axis B-Axis T-Axis	5.39 N • m 5.39 N • m 2.94 N • m
Allowable Moment of Inertia	R-Axis B-Axis T-Axis	0.1 kg • m^2 0.1 kg • m^2 0.03 kg • m^2
Internal User I/O cable		10 conductors
Internal User Air Line		5 mm (4 places)

FS100 CONTROLLER SPECIFICATIONS*

Dimensions (mm)	470 (w) x 200 (h) x 420 (d) (18.5" x 7.9" x 16.5")
Approximate Mass	20 kg (44.1 lbs)
Cooling System	Direct cooling
Ambient Temperature	During operation: 0° to 40° C (32° to 104° F) During transit and storage: -10° to 60° C (14° to 140° F)
Relative Humidity	90% max. non-condensing
Primary Power Requirements	Single-phase or 3-phase power, 200/230 VAC at 50/60 Hz (MPP3, MPK2, MH6F, HP20F require 3-phase)
External Transformer (optional)	For 480/575 VAC installations
Digital I/O NPN-Standard PNP-Optional	Standard I/O: 16 inputs/16 outputs Max. I/O (optional): 168 inputs and 168 outputs
Position Feedback	Absolute encoder
Program Memory	JOB: 10,000 steps, 1,000 instructions CIO Ladder: 1,500 steps
Pendant Dim. (mm)	169 (w) x 314.5 (h) x 50 (d) (6.7" x 12.4" x 2")
Pendant Weight	.998 kg (2.2 lbs)
Interface	One Compact Flash slot; One USB port (1.1)
Pendant Playback Buttons	Teach/Play/Remote Keyswitch selector Servo On, Start, Hold, and Emergency Stop Buttons
Programming Language	INFORM III, menu-driven programming, MotoPlus SDK (C language) – optional
Maintenance Functions	Displays troubleshooting for alarms
Number of Robots/Axes	Up to 2 robots, 16 axes (requires 2 controllers)
Multi Tasking	Up to 6 concurrent jobs, 1 system job
Fieldbus	All common networks supported
Ethernet	10 Base T/100 Base TX
Safety	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release

* See FS100 Controller data sheet (DS-509) for complete specifications

www.motoman.com

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