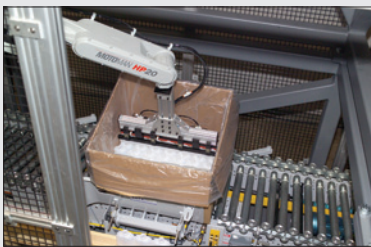




FAMILIAR PROGRAMMING INTERFACE



PACKAGING



FS100 CONTROLLER

TOP REASONS TO BUY

- Exceptionally fast robot with wide range of motion provides flexibility
- Small interference radius reduces floorspace requirements
- High repeatability provides precision needed for a wide variety of applications
- Controlled by the small and powerful FS100 controller



HP20F

CUTTING • DISPENSING • HANDLING • MACHINE TENDING • MATERIAL REMOVAL • PACKAGING

Payload: 20 kg

The HP20F is a high-speed 6-axis robot designed for assembly, material handling and machine tending applications. The FS100 is a powerful controller with unmatched open software architecture.

Versatile, High-Speed Robots

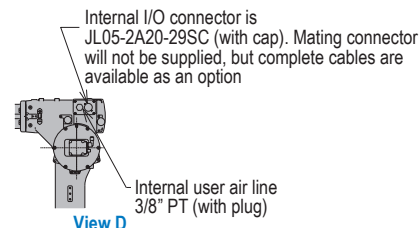
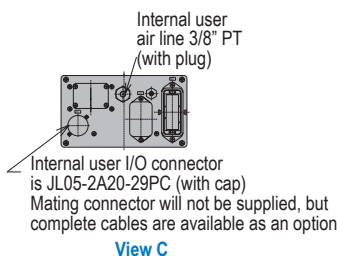
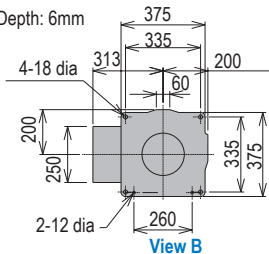
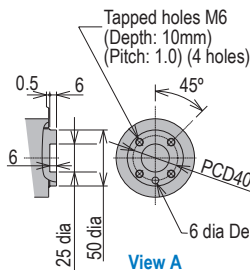
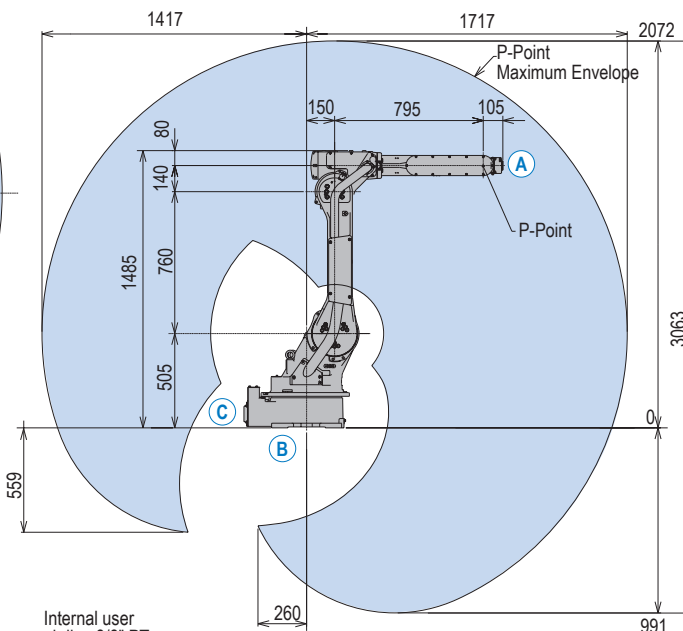
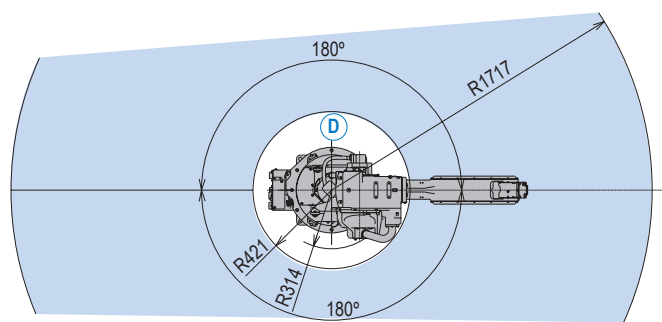
- Fast, versatile six-axis HP20F robot offers superior, high-speed performance in handling, machine tending, packaging, cutting and dispensing applications.
- 20 kg payload; 1,717 mm horizontal reach; 3,063 mm vertical reach; ± 0.06 mm repeatability.
- Powerful design with high moment of inertia ratings.
- Slim base, waist and arm allow robot to be placed close to workpiece holding fixtures to improve part accessibility.
- Fast axial speeds and acceleration reduce cycle times and increase production output.
- Compact design and advanced collision avoidance features with multiple robot control allow up to two robots (16 axes) to be used together to maximize productivity while minimizing overall floorspace requirements.
- Floor-, wall- or ceiling-mounted versions available.

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.

HP20F ROBOT

HP20F robot shown.
All dimensions are metric (mm) and for reference only. Please request detail drawings for all design/engineering requirements.



HP20F SPECIFICATIONS

Structure	Vertical jointed-arm type	
Controlled Axes	6	
Payload	20 kg (44.1 lbs)	
Vertical Reach	3,063 mm (120.6")	
Horizontal Reach	1,717 mm (67.6")	
Repeatability	±0.06 mm (±0.002")	
Maximum Motion Range	S-Axis (Turning)	±180°
	L-Axis (Lower Arm)	+155°/-100°
	U-Axis (Upper Arm)	+255°/-165°
	R-Axis (Upper Arm Twist)	±200°
	B-Axis (Pitch/Yaw)	+230°/-50°
Maximum Speed	T-Axis (Twist)	±360°
	S-Axis	197°/s
	L-Axis	175°/s
	U-Axis	187°/s
	R-Axis	400°/s
Approximate Mass	B-Axis	400°/s
	T-Axis	600°/s
	268 kg (590.9 lbs)	
Brakes	All axes	
Power Consumption	2.0 kVA	
Allowable Moment	R-Axis	39.2 N • m
	B-Axis	39.2 N • m
	T-Axis	19.6 N • m
Allowable Moment of Inertia	R-Axis	1.05 kg • m ²
	B-Axis	1.05 kg • m ²
	T-Axis	0.75 kg • m ²

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, maximum 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

Note: Use DX100 controller for welding applications.
* See FS100 Controller data sheet (DS-509) for complete specifications

www.motoman.com

YASKAWA
MOTOMAN ROBOTICS

MOTOMAN ROBOTICS
100 AUTOMATION WAY, MIAMISBURG, OHIO 45342
TEL: 937.847.6200 ■ FAX: 937.847.6277

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