

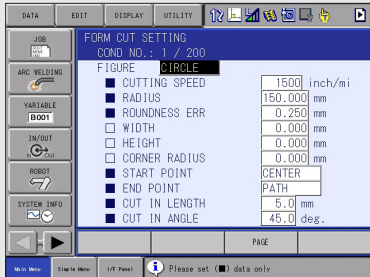


HP20D-A80

— HIGH ACCURACY —

MATERIAL CUTTING • DISPENSING

Payload: 20 kg



FORMCUT FILE



DISPENSING



LASER CUTTING

The six-axis HP20D-A80 robot features high-precision drives on major axes and is designed for high-accuracy cutting and dispensing applications.

Versatile, High-Accuracy Robot

- The accuracy of the HP20D-A80 is similar to the larger MC2000 (Master Cut) robot. Path accuracy can be within 0.1 mm depending on the application.
- 20 kg payload; 1,717 mm horizontal reach; 3,063 mm vertical reach; ±0.06 mm repeatability.
- 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 eight robots (72 axes) to be used together to maximize productivity while minimizing floorspace requirements.
- Can be floor-, wall- or ceiling-mounted. Brakes on all axes.

Software Functions

- Formcut automatically generates the ideal path to cut out shapes based on user-specified geometry. Circle, rectangle, ellipse, pentagon and hexagon shapes are supported with easy definition of shape size and rotation from a single programmed point. The cut motion start

and overlap, along with robot speed, timing options and corner radii, are defined in the cut file.

- Proportional analog generates a control signal corresponding to the speed of the robot. When used with dispensing equipment flow controls, a uniform bead is produced on contoured parts. The signal is available as an analog voltage or across a fieldbus network.

DX100 Controller

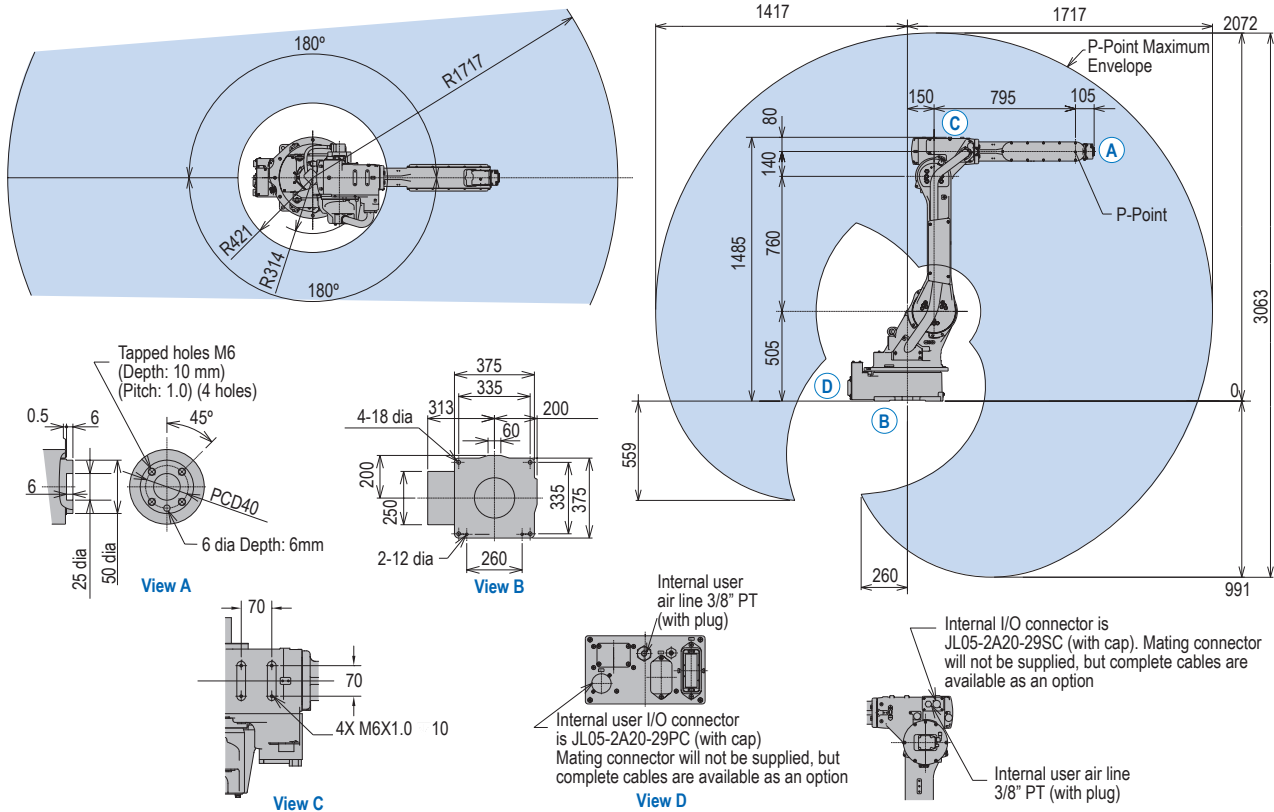
- Patented multiple robot control supports up to 8 robots/72 axes.
- Windows® CE programming pendant with color touch screen and USB interface.
- Faster processing speeds for smoother interpolation. Quicker I/O response. Accelerated Ethernet communication.
- Extensive I/O suite includes integral PLC and touch screen HMI, 2,048 I/O and graphical ladder editor.
- Supports all major fieldbus networks, including EtherNet/IP, DeviceNet, Profibus-DP and many others.
- Compliant to ANSI/RIA R15.06-1999 and other relevant ISO and CSA safety standards. Optional Category 3 functional safety unit.

TOP REASONS TO BUY

- High-accuracy motion for cutting holes or contours
- Formcut software automates path generation for multiple cut-out shapes
- Path accuracies measured in tenths of a millimeter depending on application

HP20D-A80 ROBOT

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



NOTE: Dimensions are the same as HP20D, but with high-precision drives on major axes.

HP20D-A80 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°/-110°
	U-Axis (Upper Arm)	+255°/-165°
	R-Axis (Upper Arm Twist)	±200°
	B-Axis (Pitch/Yaw)	+230°/-50°
	T-Axis (Twist)	±360°
Maximum Speed	S-Axis	197°/s
	L-Axis	175°/s
	U-Axis	187°/s
	R-Axis	400°/s
	B-Axis	400°/s
	T-Axis	600°/s
Approximate Mass	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

DX100 CONTROLLER SPECIFICATIONS**

Dimensions (mm)	800 (w) x 1,000 (h) x 650 (d) (31.5" x 39.4" x 25.6")
Approximate Mass	250 kg max. (551.3 lbs)
Cooling System	Indirect cooling
Ambient Temperature	During operation: 0° to 45° C (32° to 113° F) During transit and storage: -10° to 60° C (14° to 140° F)
Relative Humidity	90% max. non-condensing
Primary Power Requirements	3-phase, 240/480/575 VAC at 50/60 Hz
Digital I/O	NPN-Standard PNP-Optional
	Standard I/O: 40 inputs/40 outputs consisting of 16 system inputs/ 16 system outputs, 24 user inputs/24 user outputs 32 Transistor Outputs; 8 Relay Outputs Max. I/O (optional): 2,048 inputs and 2,048 outputs
Position Feedback	By absolute encoder
Program Memory	JOB: 200,000 steps, 10,000 instructions C/O Ladder Standard: 15,000 steps Expanded: 20,000 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
Maintenance Functions	Displays troubleshooting for alarms, predicts reducer wear
Number of Robots/Axes	Up to 8 robots, 72 axes
Multi Tasking	Up to 16 concurrent jobs, 4 system jobs
Fieldbus	DeviceNet Master/Slave, AB RIO, Profibus, Interbus-S, M-Net, CC Link, EtherNet IP/Slave
Ethernet	10 Base T/100 Base TX
Safety	Dual-channel Emergency Stop Pushbuttons, 3-position Enable Switch, Manual Brake Release Meets ANSI/RIA R15.06-1999, ANSI/RIA/ISO 10218-1-2007 and CSA Z434-03

**See DX100 Controller data sheet (DS-399) for complete specifications