



PAT MOONEY, INC.

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www.patmooneysaws.com



PMI-CNC18 MDS (Machine+Drill+Tap+Saw) **PMI PRECISION UPCUT SAW FOR ALUMINUM PROFILES**

The PMI Precision Cutoff Saws are designed to saw aluminum profiles quickly and accurately with a burr free mirror finish. The PMI-CNC18 MDS is a fully automatic sawing and machining center. It is equipped with a saw head and precision high speed spindle for milling, drilling, and tapping so it can produce a cut-to-length part with machined/drilled/tapped holes.

Machine Features:

10 HP Saw Motor:

The strong drive system via 10 HP saw motor allows for maximum cutting force and chip removal. This additional power extends the life of the saw blade between regrinds.

HMI Touch Screen:

The touch screen is easy to use and operator friendly, is 15” large and easy to read. The cut length(s), drill/tap distance and number of pieces to cut are entered in the touch screen control when setting up a new program.

CNC Control:

The CNC control allows for easy operation and job setup. The machine can be programmed at the control or using AlphaCam software on a PC. The operator/programmer will enter the required number of parts, cut length, and set the holes to be milled, drilled, and/or tapped. The machine will then cut and machine to the programmed dimensions.

Material Indexing System:

The material indexing is completed by a shuttle vise that will position the cut lengths to the programmed dimension. The shuttle vise’s movement is ballscrew controlled and servo driven so it provides precise, accurate cut lengths. The shuttle vise is equipped with vertical and horizontal clamping to ensure the part is securely clamped. It is capable of indexing a part 49.2 inches.

Upcut Design and Saw Blade Chamber:

The saw head on the PMI-CNC18 MDS is an Upcut design so the saw blade is housed under the work table and travels up through the work piece. This has several advantages such as safety (less blade exposed during cut), chip removal and longer blade life.



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Material Clamping:

The pneumatic clamping system has adjustable clamping pressure to prevent distortion of thin wall profiles. The saw head is equipped with vertical and horizontal clamps. The top clamp holds the work piece on both sides of the saw blade across the entire cutting area. This helps in delivering a burr free cut. The shuttle vise also is equipped with horizontal and vertical clamps. The machining spindle has its own clamp to secure the part during the machining operation.

High Speed Machining Spindle:

The High Speed Machining Spindle has a maximum RPM of 12,000 RPM. It uses an ISO 30 tool holder. The spindle is capable of milling, drilling, and tapping.



Automatic Tool Changer:

The automatic tool changer holds up to 4 tools.



Saw Blade Feed:

The saw blade is hydraulically driven to provide maximum stability. The hydraulic cutting control gives the operator full control of the feed rate so the optimal feed rate can be dialed in based on the material thickness.

Precise Micro-Drip Blade Lubrication System:

The blade is lubricated via a micro-drip system. A small amount of lubricant is introduced to an air line at the point of discharge for control and economical distribution of the saw lubricant. The cutting tool (drill, end mill, tap) is also lubricated with a micro-drip coolant system to ensure quality cutting and long tool life.

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**Safety Features:**

Safety Machine Enclosure: The work table is guarded via a machine enclosure that is monitored by a limit switch. The cover must be closed for the saw to cycle.

Safety Limit Switch: The blade access door is protected via a limit switch that shuts down the machine in case of an open door.

Technical Data:

Saw Blade Size	18" x 1" bore
Saw Spindle Speed	3500RPM
Saw Motor	10 HP
Servomotor (feed system)	850w
Shuttle Indexing Length	49.2 Inches (1.25m)
Indexing Control	Ballscrew with Servo
Program Storage	100
Hydraulic Motor	1 HP
Touch screen	15 Inches
X-Axis	59 Inches (1.5m)
Y-Axis	12.8 Inches (325mm)
Z-Axis	11.81 Inches (300mm)
X-Axis Servo Motor	850w
Y-Axis Servo Motor	400w
Z-Axis Servo Motor	400w
Machining Spindle RPM	12000 RPM
Spindle Motor	5 HP
Rapid Feed Rate X/Y/Z	X-axis: 131 FPM, Y-axis: 49 FPM, Z-axis: 49 FPM
Tool Holder	ISO 30
Dimensions	158" x 78" x 86"
Weight	7,260 LBS

Items included with the saw system:

- Operators Manual
- 1 Blade Included
- Tool Box Included
- Two Tool Holders
- Infeed Roller Table (13ft)



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