MOUNTAIN
PANEL PRODUCTS

5 AXIS COMPOSITE PANEL CNC

SIP SOLUTIONS DESIGNED BY SIP EXPERTS

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ABOVE: MPP-109 5 Axis Composite Panel CNC Machine

NOTE: Image for illustrative purposes only

MPP–109 5 AXIS CNC

The MPP-109 Composite Panel 5 Axis CNC Machine has been specifically designed & tailored to service the SIP industry.

The MPP-109 has been designed for processing of large, thick panels such as floors, walls & roofs with high tolerance accuracy, by using a 5 axis operational system.

The machine combines Circular Saw, Chainsaw, Router & Drill bits to give you the capability & technology to cut your SIP to the CAD CAM you design.

Extremely flexible operation & cutting parameters allow you to increase production & quality at an enviable speed, whilst cutting costs on labour & reducing overall waste in your production line.

Elements up to 9′ x 24′ (2.74m x 7.32m) can be processed up to a thickness of 12″ (311mm) with our standard model, but can be built to suit your cutting requirements.

Designed for single operator use, the MPP-109 has the smallest footprint of any machine in it's class - leaving you more valuable space in your factory.

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Standard Features

- ·Heavy Duty Steel Frame
  - Sub frame, running gantry & bed
- Cutting Bed which accommodates a panel size of 9′ x 24′ (2.74m x 7.32m)
- On/Off Safety Switches located in a minimum of 3 locations:
  - 1 on Control Panel
  - 2 on Machine (1 on either side)
- 25kw Spindle Motor from OLI
- Attachments:
  - Circular Saw - 29.5" (750mm) blade
  - Chainsaw - 21" (535mm) bar (cutting capacity)
  - Routers x 3 (as standard)
- Dust management & collection:
  - Dust Collection Unit located separately from machine
    - Jib arm from DCU to machine
    - Optional location points
  - Dust Guards for protection & dust management where practicable
- Operators Control Panel
  - Configured in English (other languages available upon request)
  - Located adjacent to/near machine
- CAD CAM System
  - Configured in English
  - Interface program compatible with HSB CAD, CADworks or other compatible BTL file formats
  - Free upgrades & software updates
- Sacrificial Cutting Bed
  - Initial boards included (testing boards to be replaced prior to delivery)
- Remote Access Interface Capability
  - Improved Technical Assistance
  - Less down time
  - Real time troubleshooting
  - Can be disabled/enabled
- All MPP machines come with full online technical support, serviced through our Summit Platform.

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Specifications & Performance

Processing Options & Capacity

- Rotary Axis (C-Axis): Provides 520 degrees of total rotation around the vertical Z-axis.
- Tilt Axis (A/B-Axis): Provides 65 degrees of tilt in either direction (±65 degrees) to allow undercutting and angled machining.
- All possible shapes, cuts & angles required for fabrication of SIPs, including slots, holes & archs
- Milling Unit:
  - Up to 6 tools
  - Service Milling: straight, rounded, bent
  - Drilling: vertical, pocket, countersink, ring dowel
- Cutting bed levelling router included for periodic layer reduction
- Circular Saw:
  - Longitudinal, mitre or compound angle
  - Tolerance Verification
  - Safety Stop mid operation
  - Tool Wear verification
- Chainsaw:
  - Heavy duty 80cm Guide Bar - 0.404" pitch /0.80" groove to accommodate industrial heavy duty chain
  - Longitudinal, bevelled, diagonal & compound cuts with clean/square corners

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Specifications & Performance

Specification	Imperial	Metric
Z-axis travel	19.7"	500mm
Spindle head rotation	±520°	±520°
Spindle head inclination angle	±65°	±65°
X maximum speed	147.6' per min	45m per min
Y maximum speed	147.6' per min	45m per min
Z top speed	49.2' per min	15m per min
Spindle power	33.5hp	25kw
Maximum spindle speed	24000rpm max	24000rpm max
Positioning accuracy	0.002"	±0.05mm
System resolution	0.0004"	±0.001mm
Number of automatic tool changes	Up to 6 (support customization)	Up to 6 (support customization)
Automatic tool setting function	Yes	Yes
Tools	29.5" Saw Drill to 14" depth Milling Auger to 14" depth Chainsaw with 21″ cut depth max	750mm Saw Drill to 350mm depth Milling Auger to 350mm depth Chainsaw with 535mm cut depth max

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Feature Specifications

Feature	Imperial	Metric
Circular Saw:		
Saw blade diameter	29.52"	750mm
Saw blade max cutting depth	10.3"	260mm
Saw blade kerf	0.18"	5mm
Circular Saw total cutting depth - 90 degrees	10.3"	260mm
Circular Saw total cutting depth - 60 degrees	7.42"	189mm
Router/Drill:		
Router/Drill depth - 90 degrees	10.25"	260mm
Chainsaw:		
Bar cutting depth max	21"	535mm
Saw chain pitch	0.404"	10mm
Chainsaw total cutting depth - 90 degrees	21"	535mm
Chainsaw total cutting depth - 60 degrees	12"	305mm

ABOVE: MPP-109 5 Axis Composite Panel CNC tooling options from Onsrud Tooling NOTE: Image for illustrative purposes only

Optional Modifications

- Increased Cutting Bed size to allow for fabrication of panels up to 12' x 52' (3.6m x 16m)
- Additional Router attachments
- Additional Drill attachments
- Industrial Protective Fencing, Guards & Safety Rails
- Dual Spindle Technology
  - 5 Axis High Torque Saw motor
  - 5 Axis Electric Spindle
- Heavy Duty transport conveyor rollers
  - Gravity roller conveyor with 2-1/2" (63mm) diameter rollers
  - Motorised AC Drive Motor In-feed/Out-feed rollers for panel loading
- Vacuum system with multiple retractable hold downs for panel fixation during cutting
- Board Fixation
  - Pneumatic alignment pins for varied panel positioning
  - Angled auto rollers for panel adjustment to X/Y axis
  - Raise & lower in variable locations to avoid cutting zones

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Machine Dimensions

Machine Only	Imperial	Metric
Length	41'	12.5m
Width	12.5'	3.8m
Height	12'	3.6m
Weight	25200lbs	12.6t

Maxing Shipping Information - Unit 1 / Unit 2	Imperial	Metric
Length	11' / 12.5'	3.3m / 3.8m
Width	43' / 14'	13.2m / 4.2m
Height	8' / 5'	2.3m / 1.5m
Weight	17400 / 9600lbs	8.7t / 4.8t

Installation Requirements

Compressed air
- Factory system (supplied by others)
- Power: 90psi
- Volume: 8cfm

Power Consumption
- 480V, 3 Phase, 60Hz

Foundation Support (pressure through each leg)
- Per leg: 3300lbs (1500kg)
- N# of legs: 8

Safety

The MPP-109 5 Axis Composite Panel CNC machine is constructed with multiple safety features & protections.

We can incorporate, where possible, additional safety measures & add these to the machine during the design phase, with associated cost variations.

Additional safety features include:

- Control Centre is safely located outside the machine gantry zone of operation
- Laser safety lines (infrared induction) as per Safety Plan
- Compression matt for Control Panel
- Machine Guards
- Brushes to Operational zones
- Industrial Protective Fence available by request, according to local requirements

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Our Commitment to You

At Mountain Panel Products, we're commited to providing world class machinery & exceptional service to our clients.

When you purchase machinery from us, we supply a highly comprehensive documentation package including the following:

- 2D Dimensioned Drawings
- Electrical Schematics
- Safety Plan
- Machine Schematics & Parts Listing
- Operation Manuals
- Comprehensive FAQ's
- Transport Plan
- Maintenance Schedule
- Operational Videos

We also pride ourselves on our extensive training & superior after sales service.

All machines come with full online technical support, serviced through our Summit Platform.

The smooth & efficient integration of our machinery into your business is our priority.

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Your Expert SIP Manufacturing Partner

- Machinery specifically made & tailored for the SIP industry
- International experience in all major world markets
- Best price in it's class
- Smallest footprint in it's class
- Streamlined production & delivery
- Extensive Warranty & after market service
- Best price to performance metric of any comparable machine
- Full listed Parts Disclosure to enable local sourcing
- Professional training & support
- Free software upgrades
- Remote server access and assistance

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