



iNTEL MAKiNA
INDUSTRY AND TRADING CORP.

CM 504

Automatic Upcut Cutting Machine with Saw

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Description

CM 504 is designed for straight or angled cutting operations of large-sized profiles made from PVC and aluminum materials thanks to its 450 mm saw blade.

Highlights

- ✓ Ø 450 mm saw blade
- ✓ 2 x pneumatic vertical vise
- ✓ Air gun
- ✓ Adjustable saw exit speed
- ✓ Manually opening protective cover
- ✓ Movable square for higher cutting capacity
- ✓ Spring-loaded cutting at right and left directions at 60°, 45°, 30°, 22.5°, 15°, 0° angles
- ✓ -60° left and +45° right full intermediate cutting capability
- ✓ Dual hand control application
- ✓ Hydro-pneumatic controlled saw movement

✓ Spray saw cooling system

✓ Right support conveyor

Optional Features

+ Spare Ø 450 mm saw blade

+ Laser marking kit showing cutting line

+ Left conveyor



CONTROL PANEL

According to the control panel and mechanical adjustment elements shown in the image, the steps to be followed for safe and correct operation of this cutting machine are as follows:

1. Mechanical Adjustments and Preparation

- **Angle and Table Adjustment:** Before starting the cutting operation, the necessary mechanical positioning is performed using the Degree adjustment spring and Table locking spring located at the top according to the angle of the material to be cut, and the table is locked.

2. Safety Check

- **Emergency Stop Check:** Make sure the red Emergency Stop button located in the center of the control panel is not pressed (locked). If it is pressed, release it by turning in the direction of the arrow.

3. Motor Activation

- **Starting the Motor:** Press the green Motor start/stop button in the dual button group located in the upper left to start the main motor and thus the cutting saw/blade.

4. Material Fixation

- **Vise Locking:** After placing the material to be cut in the hopper, turn the rotating Vise button located on the right side of the panel to securely clamp and fix the material.

5. Starting the Cutting Operation (Dual Hand Safety)

- **Cutting Start:** This machine has a dual hand safety system for work safety purposes.
- To start the operation, you must press the Cutting Start button located at the far left of the panel and the Cutting Start button at the far right simultaneously. This way, both of your hands remain on the panel and are kept safe, away from the cutting area.

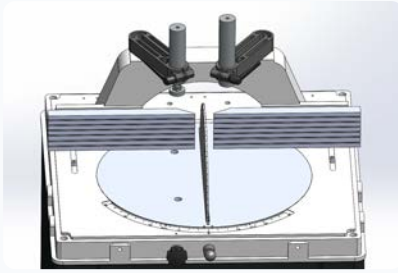


TABLE SECTION

Circular Saw Blade: A circular saw blade positioned vertically at the center of the machine. Part of the blade emerges upward from a slot under the table and is ready for cutting.

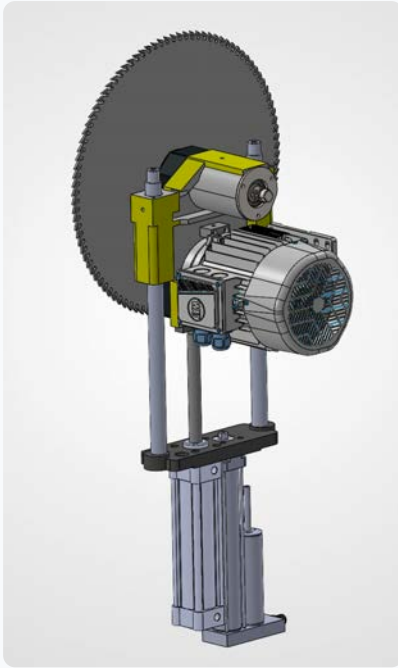
Rotating Cutting Table: A circular table is present. This table can be rotated to change the cutting angle.

Precision Angle Scale: At the edge of the rotating table, there is a very clear and precise angle scale showing angles between 0° and 60° and between 0° and 45° . This scale allows the operator to cut the workpiece at the exact desired angle. The ball pin at the front is part of a mechanism that provides quick and secure locking at specific angles (for example, 0° , 15° , 22.5° , 30° , 45°).

Two-Part Support System: On both sides of the saw blade, there are two separate support pieces made from aluminum profile material with a grooved surface. These pieces provide a surface to keep the workpiece perpendicular to the blade during cutting.

Vertical Vise Mechanisms: Behind the support pieces, there are two vertical vise mechanisms consisting of arms and pneumatic cylinders. These vises securely press the workpiece downward against the aluminum support pieces and rotating table, preventing it from moving during cutting.

Support Structures: At the rear, there are larger vertical metal support pieces that carry the vise arms and provide a solid structure.



SAW SECTION

Circular Saw Blade: A large, toothed circular blade, is the main cutting element and is positioned in a vertical plane behind the motor.

Electric Motor: Provides power to the saw blade through a shaft.

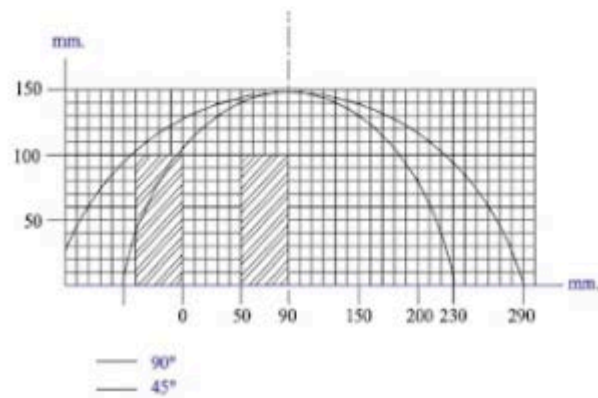
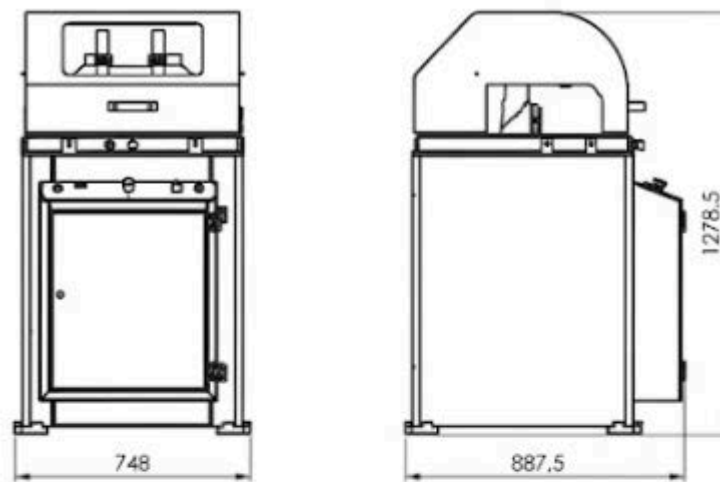
Pneumatic Cylinder: This is the primary linear actuator that moves the entire cutting head up and down. The aluminum-bodied cylinder uses pressurized air to lower the head for cutting and then retracts it. Provides automatic, repeatable cutting.

Linear Guide Rails and Blocks: The motor and cylinder slide on two vertical, polished metal guide rails. Two black upper blocks and two black lower connecting plates ensure that the entire assembly moves smoothly and without deviation on these rails.

Adjustable Depth Stop Shaft: This long shaft limits the downward movement (cutting depth) of the cutting head. The threaded part or collar at the lower end can be moved vertically to precisely adjust how far the head can descend. This is crucial for consistent cutting quality.

Connecting Plates: The upper and lower black vertical plates connect the motor, cylinder, and guide blocks to each other, creating a solid frame.

Technical Drawing 1



Technical Drawing 2

TEKNİK VERİLER							
TEKNİK ÖZELLİKLER							
				BAR	Hava Tük.		
CM 504	2,2 kW 400V~3N PE 50 Hz	D=450mm d=32 mm	3000 D/ dak. RPM	6-8 Bar	34 Lt/dak.	80x90x130 cm	210 kg

Technical Specifications

CUTTING UNIT

Motor Power	2.2 KW
Voltage	400V
Supply Type	3Ph
Frequency	50/60 Hz
Saw Blade	450
Air Consumption	30lt
Air Pressure	68 Bar
Saw Rotation Speed	3000 rpm
Spring-Loaded Cutting Angles	60°, 45°, 30°, 22.5°, 15°, 0°
Liquid Cooling	✓
Hydrocheck	✓
Vertical Vise	✓
Input Conveyor	4 Mt

MACHINE DIMENSIONS

Machine Height	1300 mm
Machine Length	900 mm
Machine Width	800 mm
Machine Weight	210 Kg

PACKAGING DIMENSIONS - MACHINE

Machine Height	1400 mm
Machine Length	1000 mm
Machine Width	930 mm

PACKAGING DIMENSIONS CONVEYOR

Conveyor Height	300 mm
Conveyor Length	600 mm
Conveyor Width	2800 mm

SAFETY

Dual Hand Operation	✓
Protective Covers	✓
Current Protection (Leakage Current)	✓
Motor Protection (High Current)	✓
Phase Protection (When Motor Direction Changes)	✓
Emergency Stop	✓



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