



iNTEL MAKiNA
INDUSTRY AND TRADING CORP.

SC 500

Automatic Aluminum Cutting and Drilling Machine

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Description

The SC 500 D is designed for straight cutting operations at 90° on large-sized profiles made from PVC and aluminum thanks to its Ø500 mm saw blade. It is ideal for series and precision slicing and perpendicular drilling operations.

It is suitable for high-volume slicing of aluminum profiles for window manufacturing and industrial applications

Highlights

- ✓ Time saving through servo-controlled workpiece feed speed.
- ✓ Suitable for high-volume window and industrial profile slicing operations
- ✓ Servo-controlled profile advance speed
- ✓ Horizontal and vertical clamping system that automatically secures the workpiece during cutting
- ✓ Saw cooling system
- ✓ Large memory capacity providing the ability to save cutting programs
- ✓ 10" LCD color touchscreen
- ✓ Feed distance per cycle (5 – 1000 mm)

- ✓ 3 meter feeding roller conveyor
- ✓ Hydro Pneumatic Saw Advance (Adjustable)

Optional Features

- + Ø 500 mm spare saw blade
- + Extension kit for 5 meter feeding roller conveyor
- + Chip vacuum extractor

Machine Components



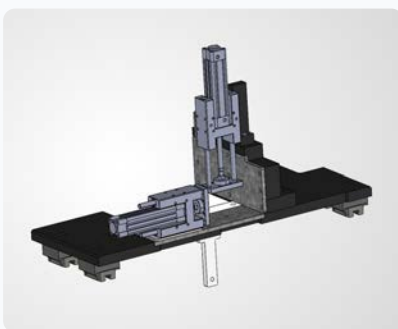
FRAME

Enclosed Cabinet / Box Frame: Steel frame housing that contains the mechanism and provides sound and chip isolation.

Integrated Touchscreen Panel (HMI): Cutting parameters and recipes are managed ergonomically through the screen and buttons on the front face.

Upper Guard & Dust Hood: Closes the cutting area from above, increasing work safety and preparing the ground for the chip extraction system.

Rigid Mounting Surfaces: The upper profile structure ensures vibration-free and precise fastening of supports, pressure cylinders and feed tables.



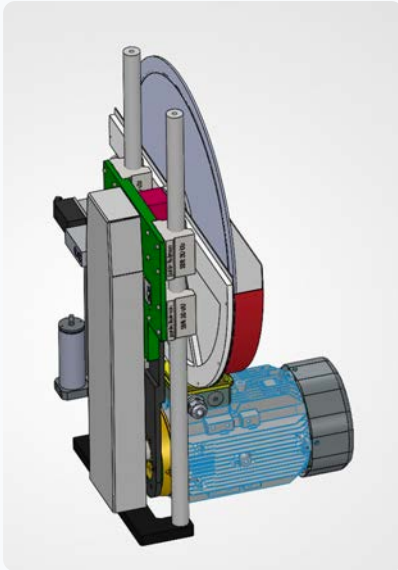
CLAMPING

Bidirectional Compression: Compresses the profile vertically (from top) and horizontally (from front) simultaneously, providing complete locking during cutting.

Guided Piston Structure: Parallel guide cylinders prevent buckling and apply balanced and rigid pressure.

Blade Passage Channel: The gap structure in the center of the housing allows the Ø 500 mm saw blade rising from below to pass unobstructed and safely.

Chip-Free and Precise Cutting: Eliminates vibration and slippage during cutting, providing smooth surface quality and full dimensional accuracy.



SAW

Upcut Cutting: The blade and motor remain at the bottom when idle; upon cutting command, they rise vertically on the Z-axis to perform the cut.

Ø 500 mm Blade & Powerful Motor: With its large 500 mm diameter blade and high-torque motor, it processes thick-walled aluminum and wide PVC profiles in a single pass.

SBR Linear Bearing: Parallel vertical spindles and SBR 30 UU bearing blocks ensure vibration-free and smooth head elevation.

Hydro-Pneumatic Speed Adjustment: The hydraulic braking in the lift cylinder allows stepless adjustment of blade exit speed, achieving smooth cutting and extended blade life.



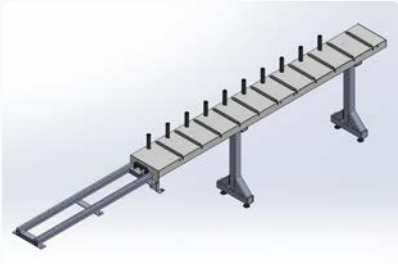
TOOL HOLDER

Multi-Axis Routing: A CNC routing unit that automatically processes locks, handles, hinge pockets and water drainage channels on profiles.

High-Speed Spindle: With its special routing motor and precise tip design, it performs smooth drilling/routing on aluminum and PVC profiles.

Servo / Axis Control: Threaded spindle mechanism and flexible cable routing provide precise positioning on vertical and horizontal axes.

Integrated Production Flexibility: Transforms the cutting machine into a profile processing center, saving additional labor and time.



MEASUREMENT

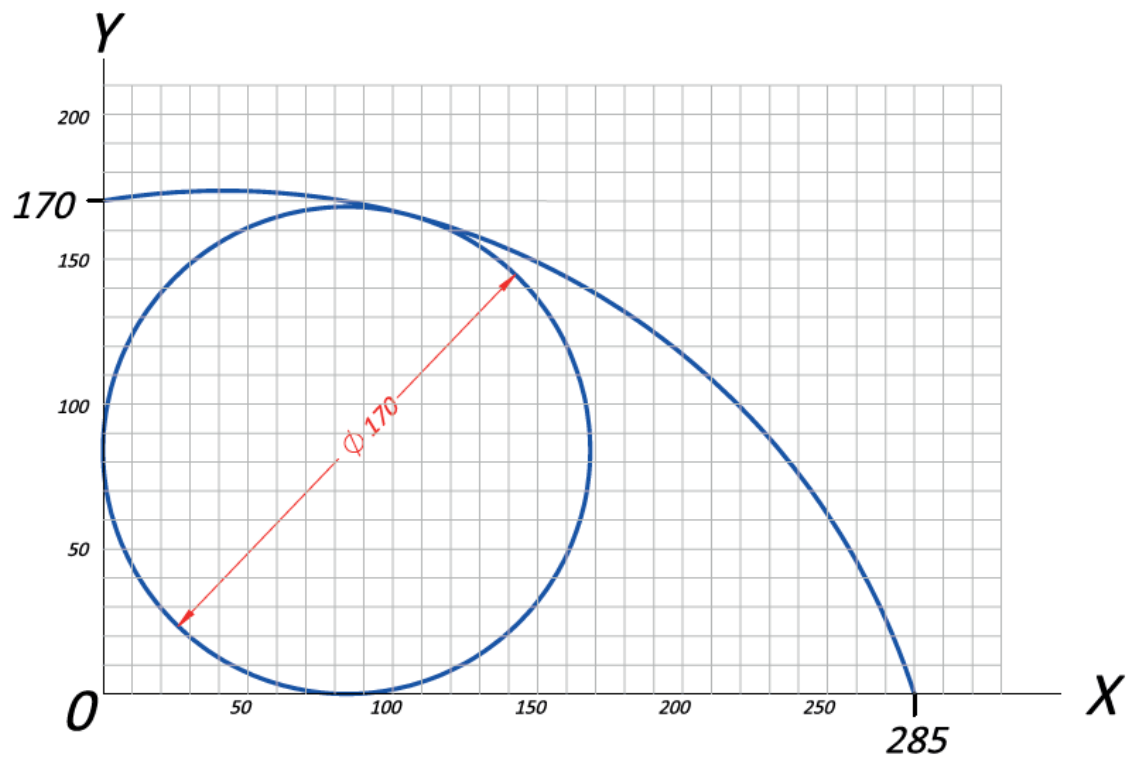
Automatic Length Stop: Precisely advances and positions the profile according to the entered cutting dimension, eliminating the need for manual measurement.

Linear Rail Track: Precisely machined axis rails ensure the carriage head moves without deviation and with high precision.

Roller and Vertical Pin Support Surface: Transverse rollers allow the material to slide without scratching, while vertical pins guarantee the profile remains aligned.

Series Production and Zero Error: Works automatically according to recipes, preventing human error and material waste, accelerating production.

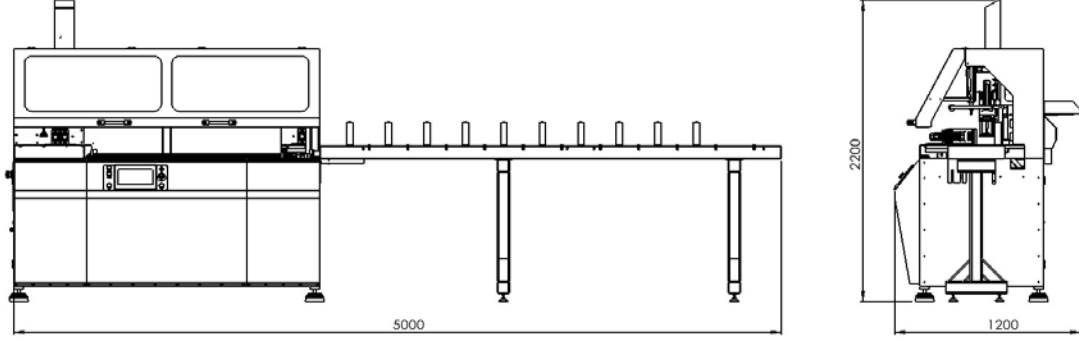
DSFSDFDS



Technical Drawing 2

TEKNİK VERİLER							
TEKNİK ÖZELLİKLER							
				BAR	Air cons.		
SC 500	7 kW 400V 3ph 50-60 Hz	Ø 500 mm	3000 D/dak. RPM	6-8 Bar	20 Lt/dak.	1200x5000x2200 mm	675 kg

Technical Drawing 3



Technical Specifications

Technical Specifications

Motor Power	7 kW
Motor Speed	3000-18000 rpm
Air Pressure	6-8 Bar
Air Consumption	20 Lt/d
Voltage	400 V 3ph 50-60 Hz
Weight	675 Kg
Length	1200 mm
Width	5000 mm
Height	2200 mm



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