

# ALCOR SERIES

ALCOR - V



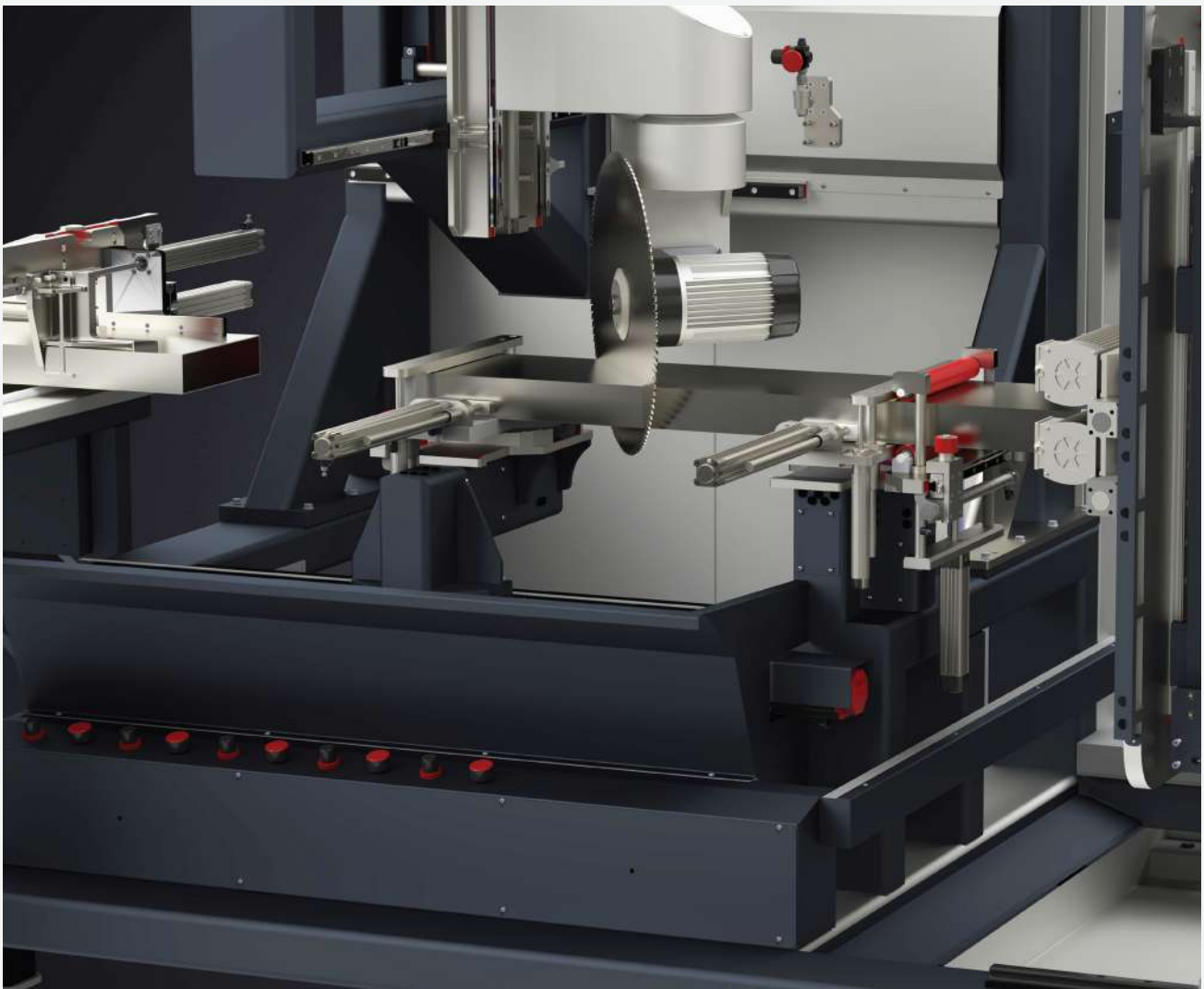
# ALCOR SERIES



# ALCOR SERIES

Alcor series machines are CNC-controlled cutting and machining centers designed for multi-axis processing of aluminum and PVC profiles, including cutting, milling, drilling, marking, and opening slots. ALCOR- I machines are dedicated to cutting profiles. ALCOR- II R and II C machines offer both cutting and machining capabilities for profiles. ALCOR IV and ALCOR V are capable of performing a wider range of operations on larger and more specialized industrial profiles. ALCOR I, ALCOR II R, and ALCOR II C machines utilize a servo-driven saw unit to perform automatic cutting operations at any angle between 30° and 150°.

The ALCOR IV machine features a saw cutting angle range of 0° to 180°. As the pinnacle of the ALCOR series, the ALCOR V machine boasts a full 360° saw cutting capability, complemented by a 5th axis rotary motion of 0° to 180° for versatile processing of large and industrial profiles. It provides a high-efficiency, high-speed process, automated profile loading system, pneumatic gripper robot for precise positioning and a profile unloading unit. Equipped with high-precision linear bearings and robust servo motor systems, Alcor series are engineered to deliver high-speed axis dynamics, optimizing productivity and throughput.



# ALCOR I

The 5 servo axis CNC profile cutting center ALCOR - I is designed to cut profiles made of aluminum, PVC and all kinds of light alloy profiles. The cutting unit with a 550 mm diameter saw blade for cutting at every angle between 30°

and 150° offers a wide cutting range to users. Thanks to the feeding capacity of 10 profiles, the conveyor structure enables batch processing, letting the machine to be used in the most efficient manner.



# ALCOR II R-E

ALCOR- II R E, an 8-servo-axis CNC profile processing and cutting center, was developed to perform cutting, milling, water drainage channel opening, drilling, and marking operations of PVC

profiles together. Thanks to its units that can operate independently of each other and its 7 standard processing axes, ALCOR- II R E is designed to achieve the highest efficiency in the least amount of time.

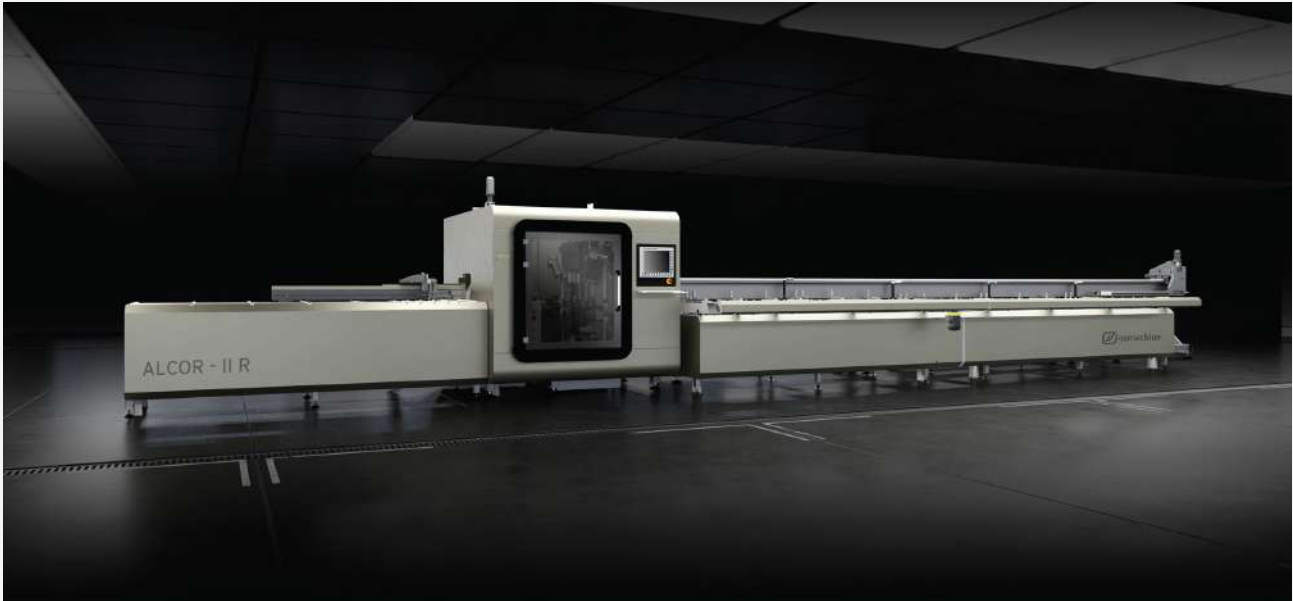




# ALCOR II R

ALCOR - II R, an 8-servo-axis CNC profile processing and cutting center, has been developed to perform cutting, milling, water drainage channel opening, drilling, and marking

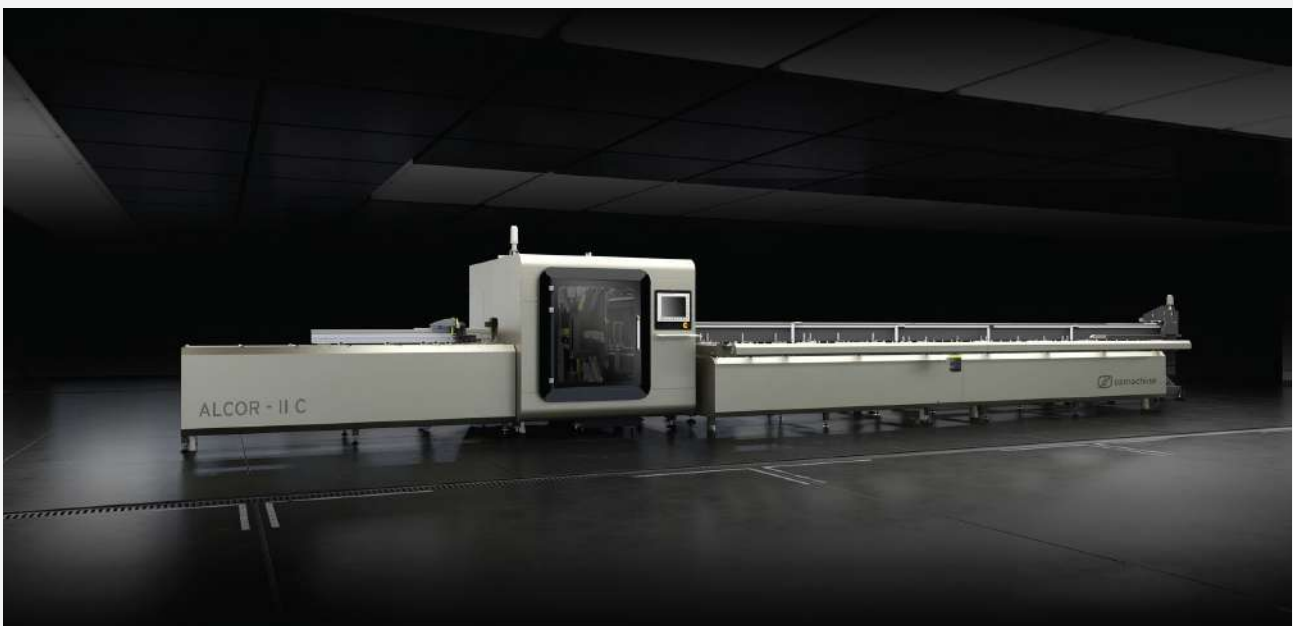
operations of PVC profiles together. Thanks to its units that can operate independently of each other, 13 standard and 1 optional processing axis, ALCOR - II R is designed to achieve the highest efficiency in the least amount of time.



# ALCOR II C

The servo 8-axis CNC profile profile machining and cutting center ALCOR - II C has been developed to carry out all-in-one cutting, milling, drain channel opening, punching and marking operations on profiles, and to perform special

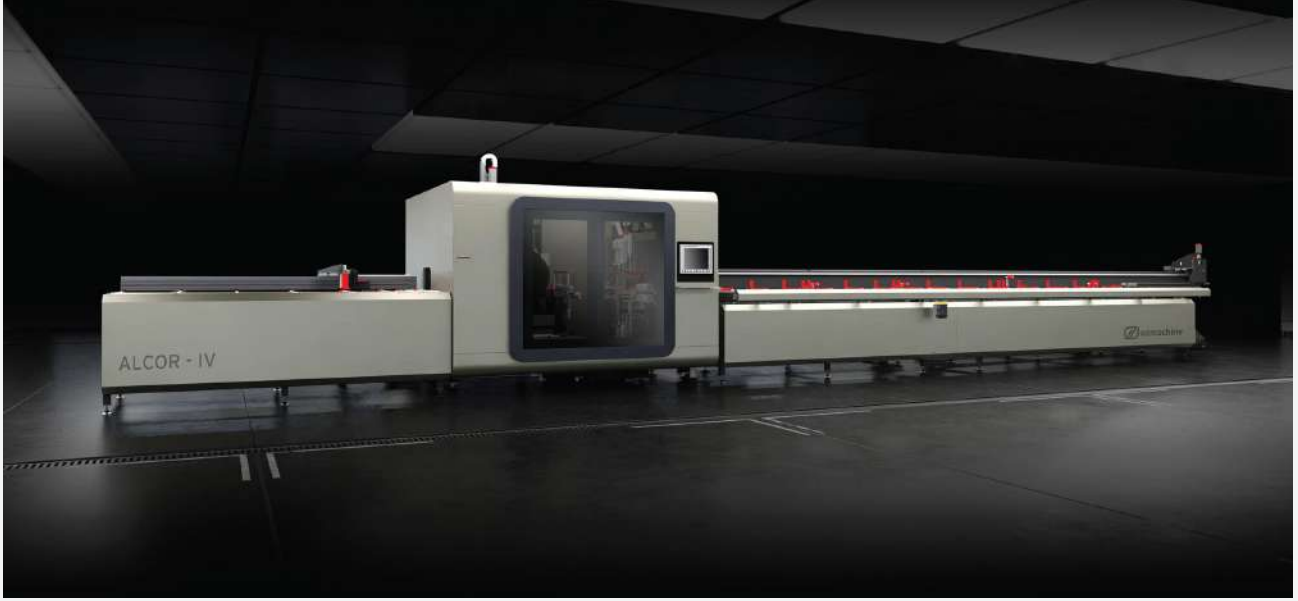
nonstandard operations (punching, channel opening etc.) on different profiles. Thanks to its individually operating units, ALCOR - II C has been designed to offer maximum efficiency in less time.



# ALCOR IV

ALCOR - IV, an 11-servo-axis CNC machining and cutting center, was developed to perform cutting, surface treatments and notching operations of wide aluminum and PVC profiles together.

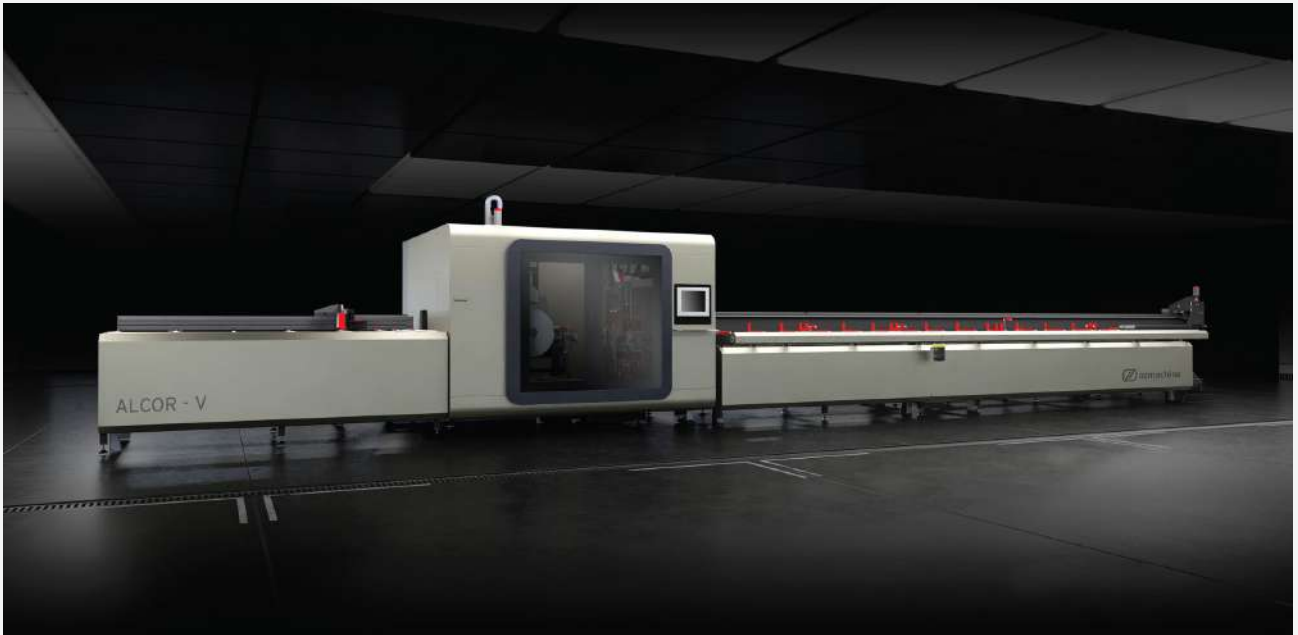
Thanks to its units that can operate independently of each other, ALCOR - IV is designed to achieve the highest efficiency in the least amount of time.



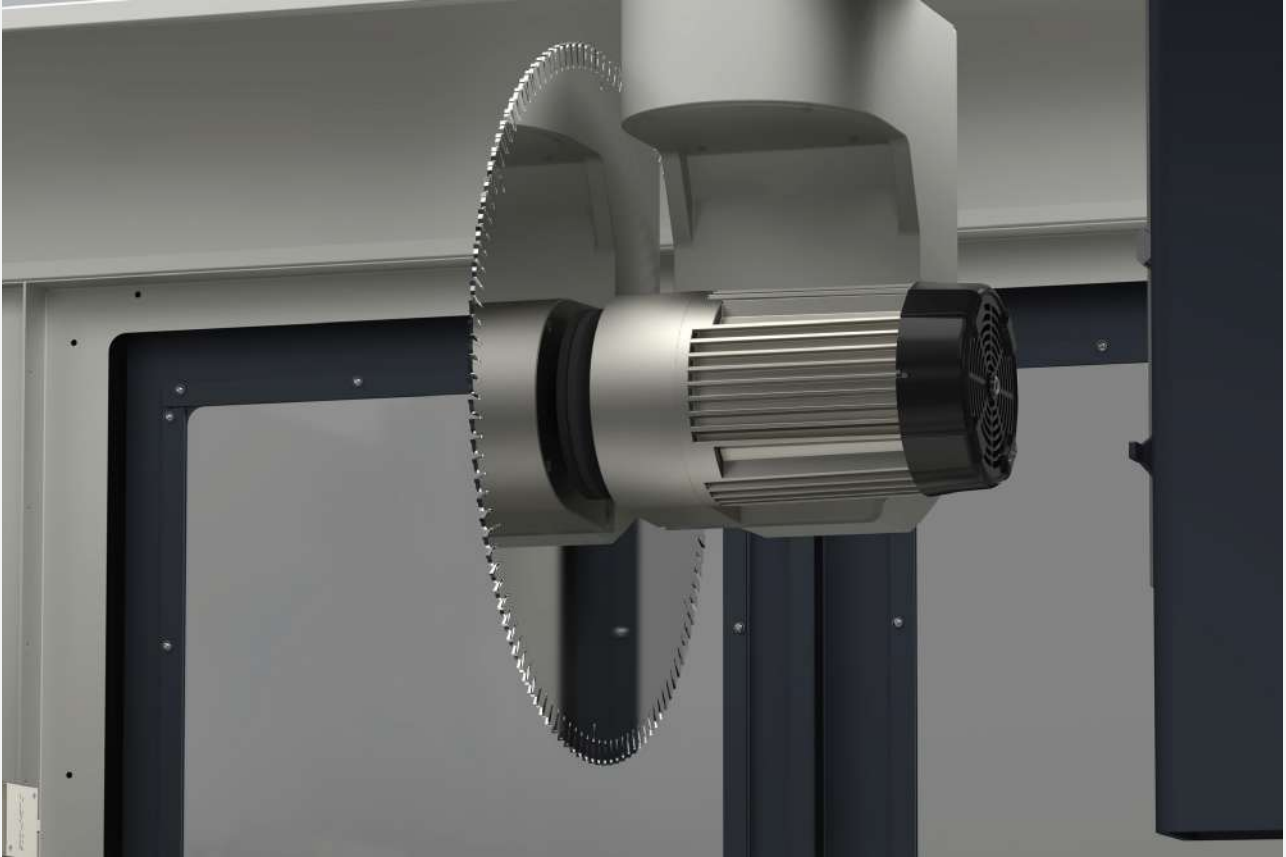
# ALCOR V

ALCOR - V, a 12-servo-axis CNC profile processing and cutting center, was developed to perform cutting, surface treatment and notching operations of wide aluminum and PVC profiles together.

Thanks to its units that can operate independently of each other, ALCOR - V is designed to achieve the highest efficiency in the least amount of time.



# SAW MOTORS



All ALCOR series are equipped with 3 kW – 4 hp powered motors. In this way, fast and precise cuts are achieved on the profiles. Durable and

long-lasting motors have a direct effect on the performance of the machine.

# SAW ANGLES

## ALCOR I / ALCOR II R-E / ALCOR II R / ALCOR II C

The cutting unit, which has a 550 mm diameter saw that can cut at any angle between 30° and 150°, offers users a wide cutting range.





# SAW ANGLES

## ALCOR IV

The 550 mm diameter saw, which can cut at any angle between 0° and 180°, allows the cutting and notching operations of profiles up to 300 mm

wide to be performed simultaneously, thanks to its 4-axis movement capability



## ALCOR V

The 550 mm saw, which can cut at any angle between 0° / 180° on the A axis and 0° / 360° on the C axis, allows cutting and notching

operations of profiles up to 300 mm wide to be performed simultaneously thanks to its 5-axis movement capability.

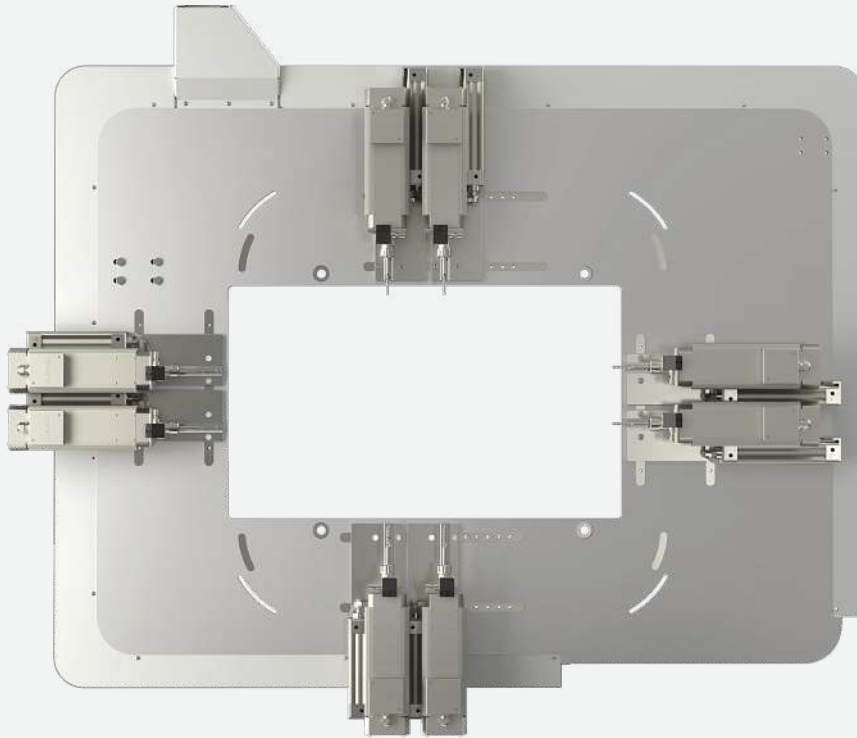


# SPINDLE MOTORS

## ALCOR IV / ALCOR V

8 fan-cooled 3 kW – 4 hp spindle motors positioned in different places provide unlimited processing capability on 4 surfaces of the profile.

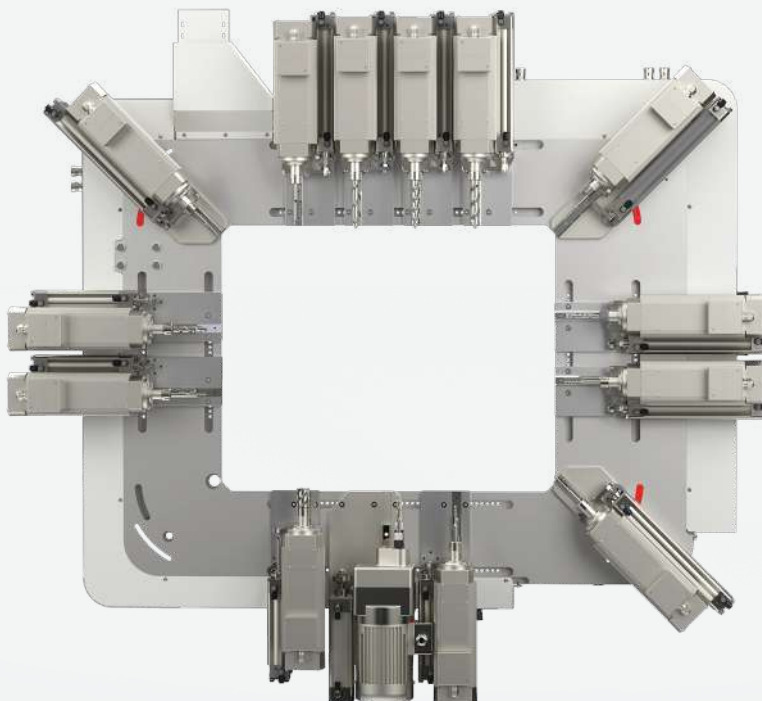
Powerful motors can process the profiles flawlessly.



## ALCOR II R

13 standard and 1 optional fan cooled 3 kW - 4 hp spindle motors positioned in different places

offer unlimited and flawless processing possibilities on 4 surfaces of PVC profiles.

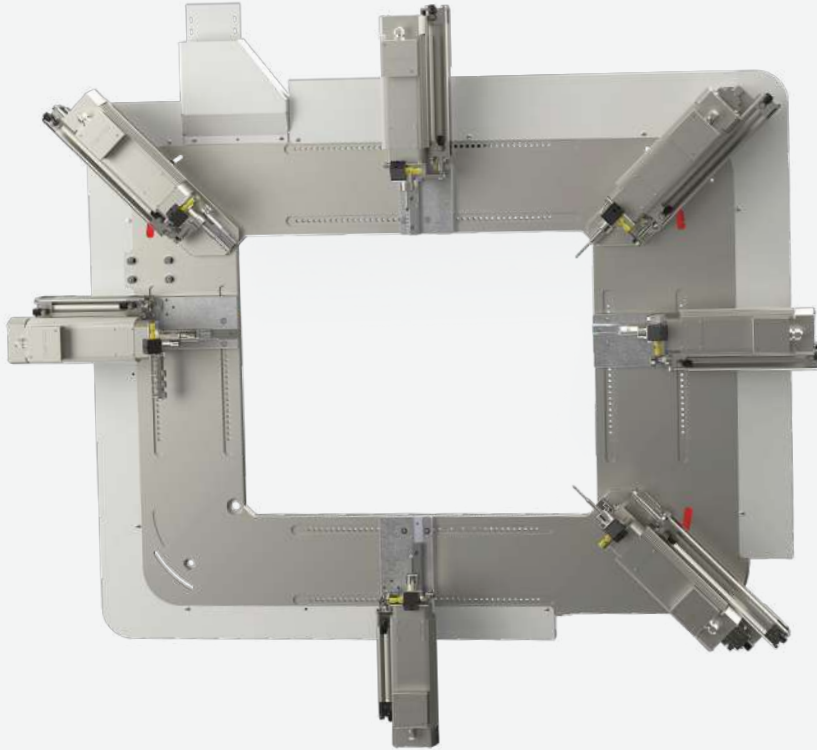


# SPINDLE MOTORS

## ALCOR II C

7 fan-cooled 3 kW – 4 hp spindle motors positioned in different places provide unlimited

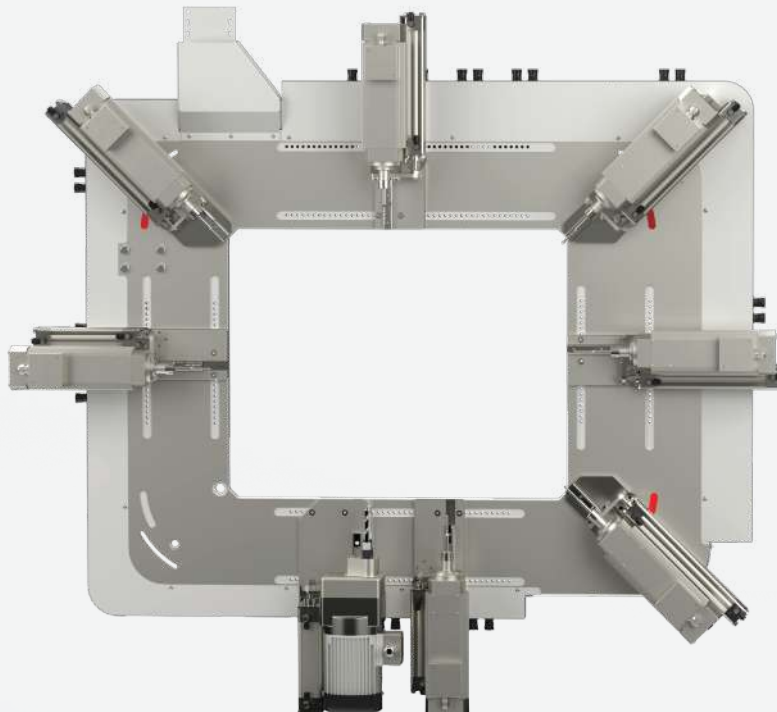
and flawless processing on 4 surfaces of aluminum profiles.



## ALCOR II R -E

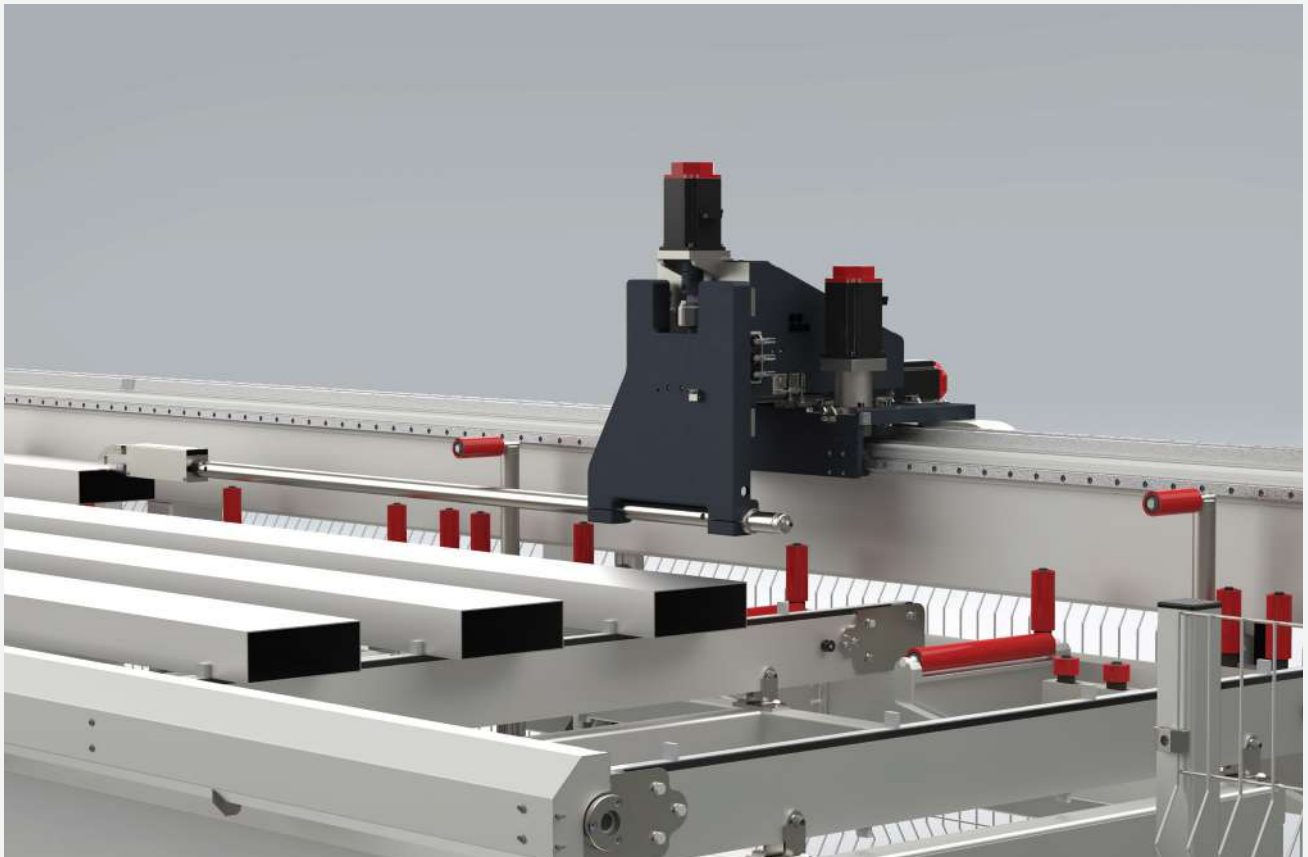
7 standard fan-cooled 3 kW - 4 hp spindle motors positioned in different places offer unlimited and

flawless processing possibilities on 4 surfaces of PVC profiles.



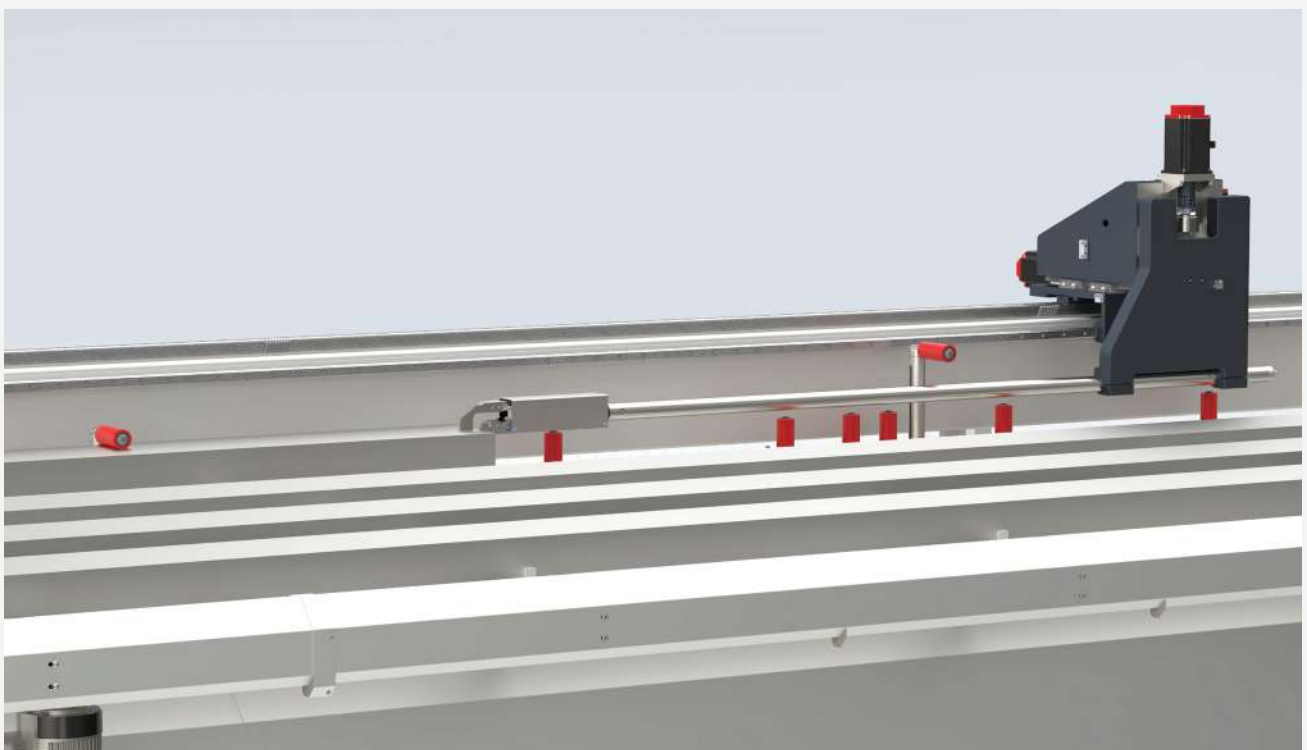
# GRIPPER

ALCOR I / ALCOR II R-E / ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V



It has 3 servo motors and thanks to the rack and pinion gear and linear shaft on which it moves, it

can position the profiles at the desired point very precisely and offers a much longer working life.



# CONVEYOR

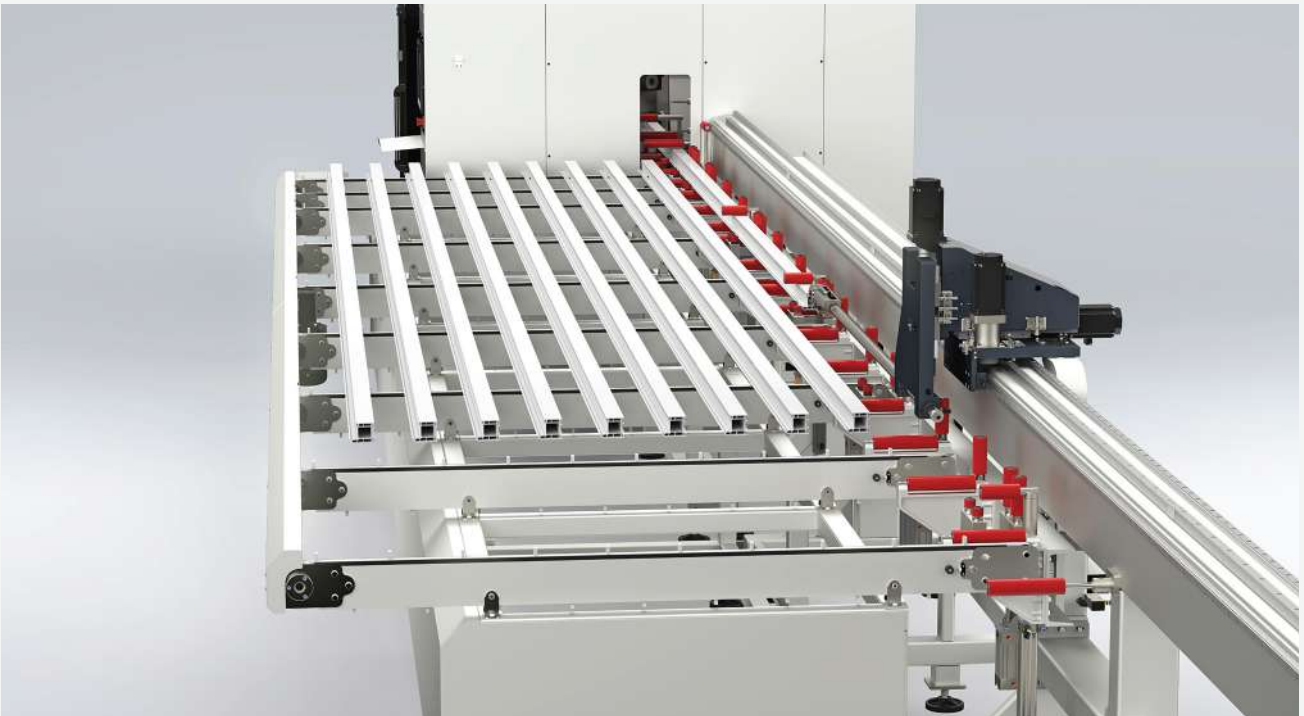
ALCOR IV / ALCOR V



It has the capacity to load 4 profiles with a width of 300 mm at a time. The chrome-plated parts

used in the mechanical structure of the conveyor make it much more durable and long-lasting.

ALCOR I / ALCOR II R-E / ALCOR II R / ALCOR II C



It has the capacity to load up to 10 profiles at a time. The chrome-plated parts used in the

mechanical structure of the conveyor make it much more durable and long-lasting.



# CLAMPS

ALCOR II R-E / ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V



There are a total of 4 pneumatic vices in the processing and cutting section. They hold the profiles strongly, preventing any slippage that

may occur during processing and cutting, allowing you to obtain perfect results.

# SAWDUST CONVEYOR

ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V



It automatically discharges the parts formed after cutting, located at the bottom of the cutting unit, outside the machine.

The metal conveyor belt provides a perfect working cycle with its durable structure.

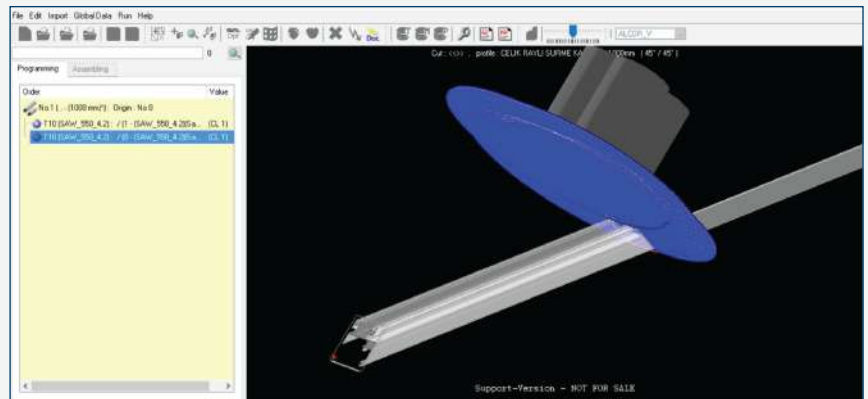
# AUTOMATION INTERFACE

ALCOR II R-E / ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V

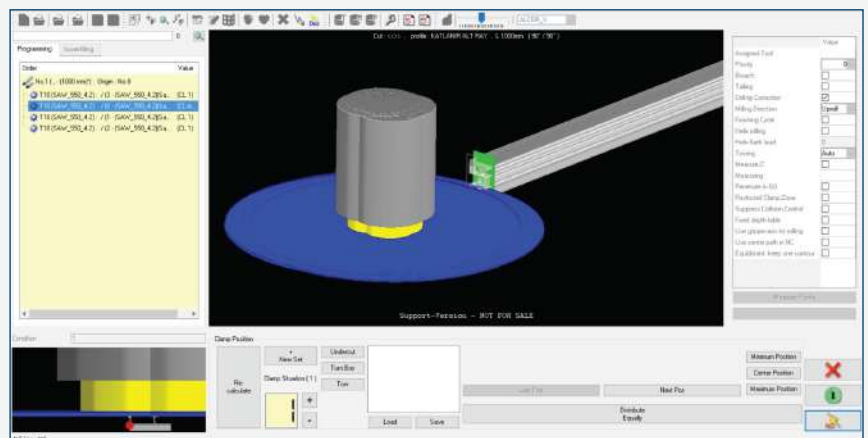
15" Industrial PC - Touch Screen. With its simple and easy-to-understand interface, it saves users time and increases productivity.



View of vertical 45° cut in CAMPROX simulation.

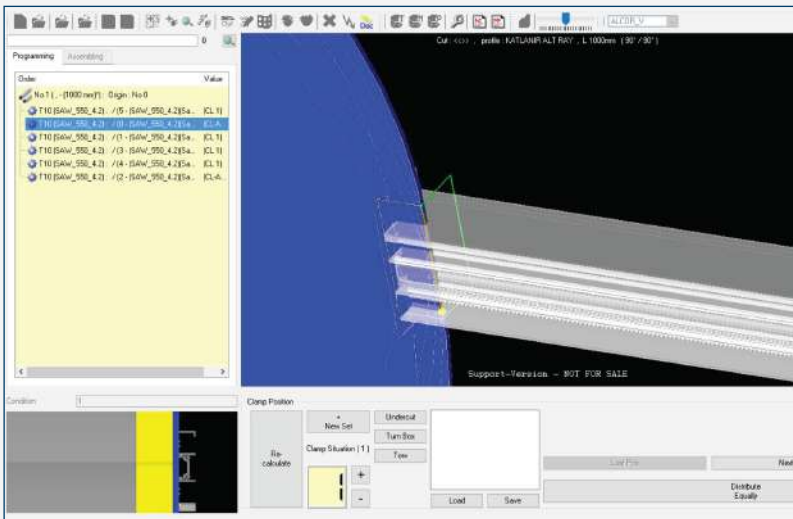


Simulated view of the notching operation that can be performed in the vertical plane.

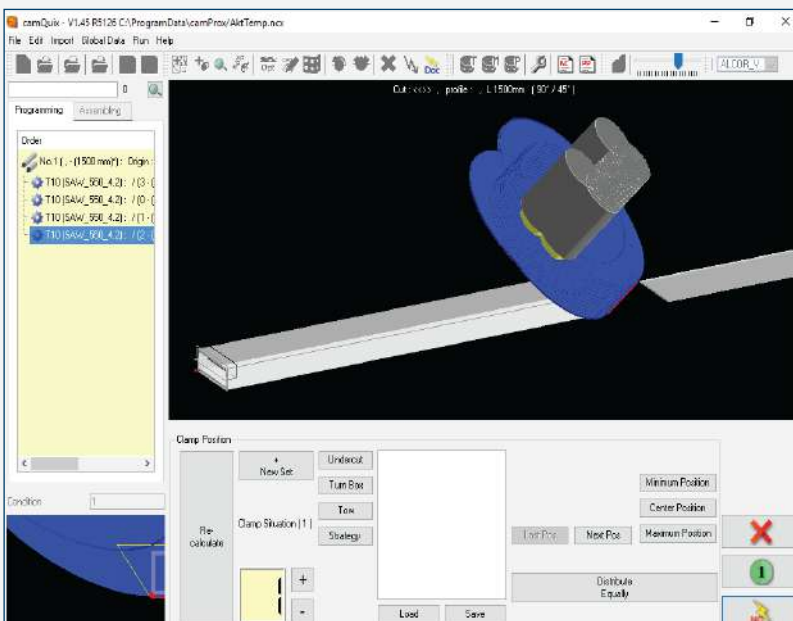


# AUTOMATION INTERFACE

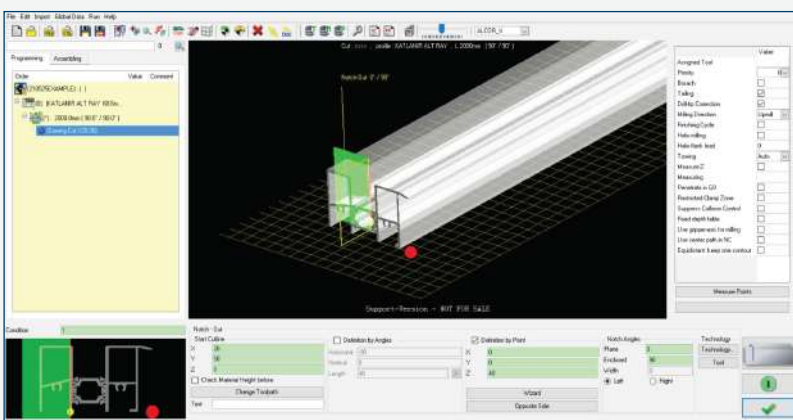
ALCOR II R-E / ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V



CAMPROX simulation view of the notching operation on the horizontal plane.



It is a simulation of the compound angle operation, which is the prominent feature of the ALCOR V machine, the flagship of the ALCOR series.

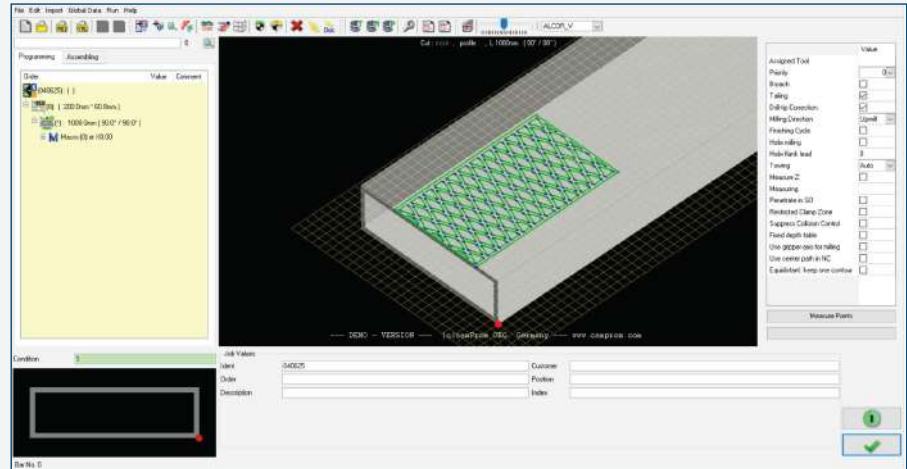


Ability to check profiles in detail before processing in the CAMPROX simulation environment.

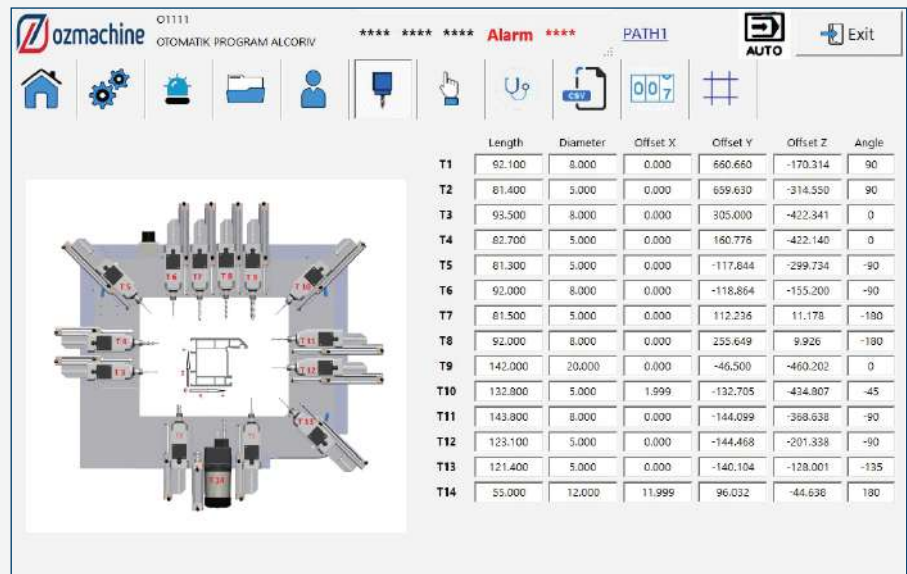
# AUTOMATION INTERFACE

ALCOR II R-E / ALCOR II R / ALCOR II C / ALCOR IV / ALCOR V

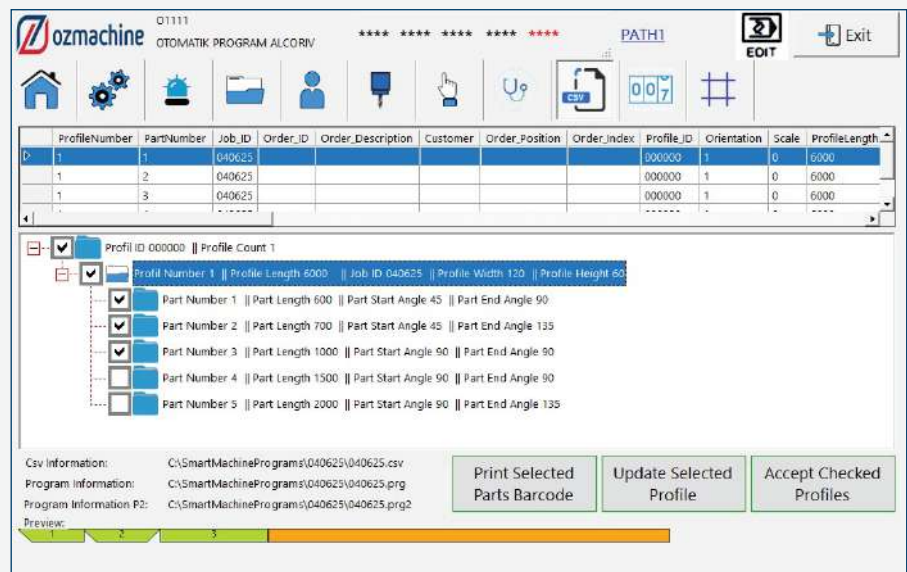
Ability to import complex shapes designed in CAD environment.



Tool management page that allows for different tool numbers and lineups.



Predefined cuts on the profile can be selected as desired.





# CUTTING CAPABILITY



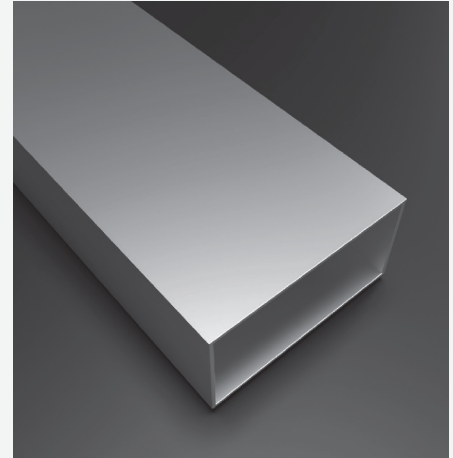
ALCOR V only



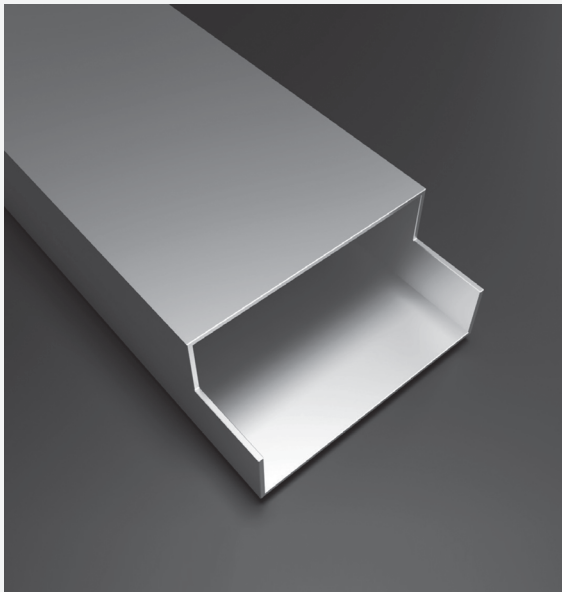
Compound Angle Cutting



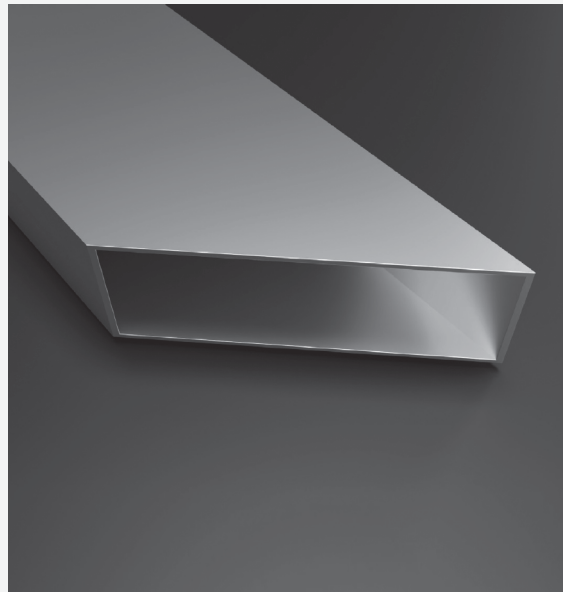
Vertical 45° Cutting



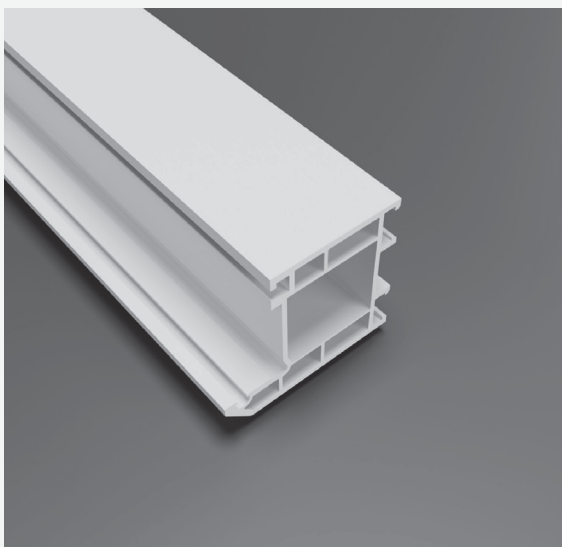
Vertical 90° Cutting



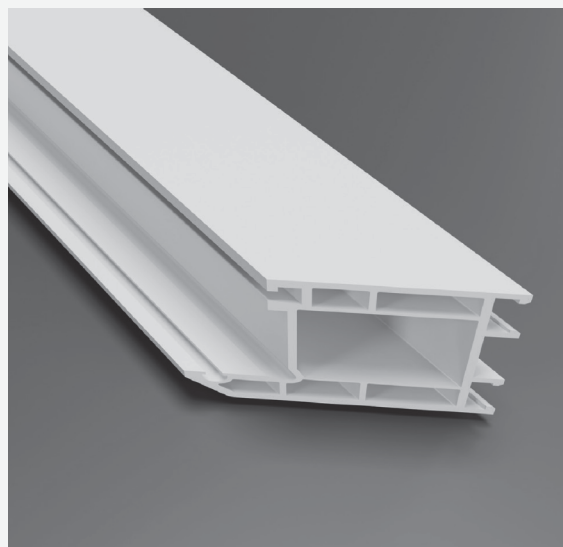
Vertical 90° Cutting



Horizontal 45° Cutting



Vertical 90° Cutting

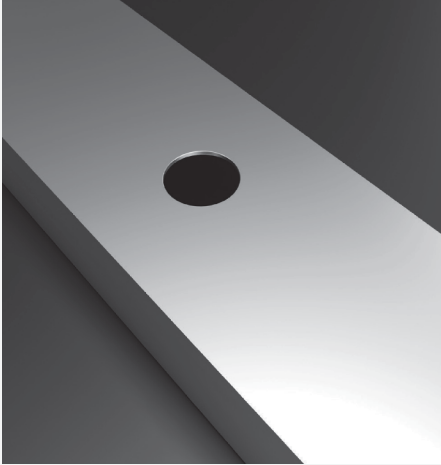


Horizontal 45° Cutting





# MILLING CAPABILITY



Circular Cutout



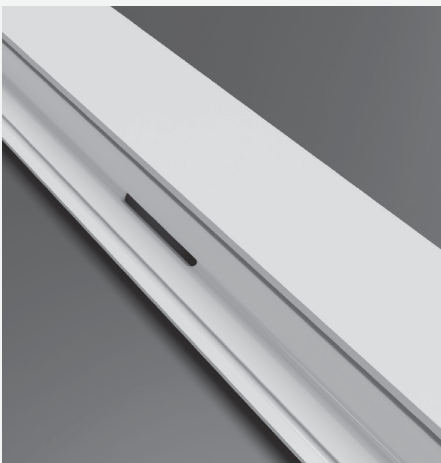
Rectangular Cutout



Latches Hole



Opening Slot



Drain Slot



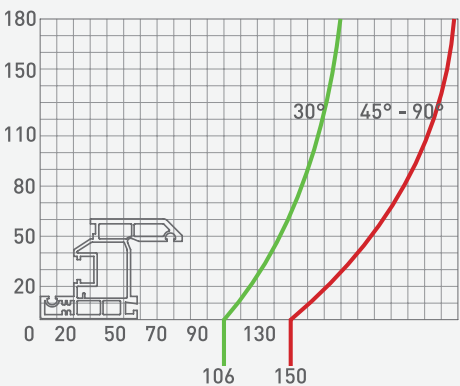
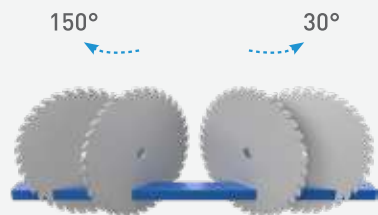
Latches Hole



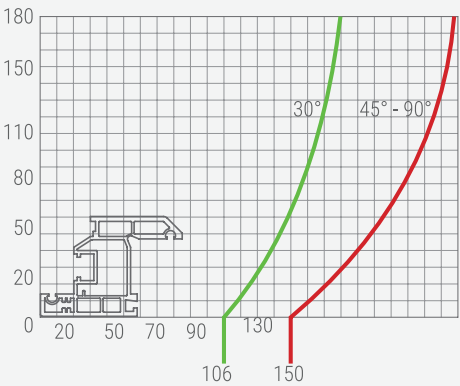
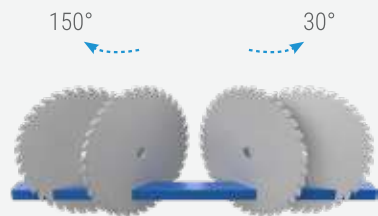
Triple Grip Slot

# CUTTING DIAGRAMS

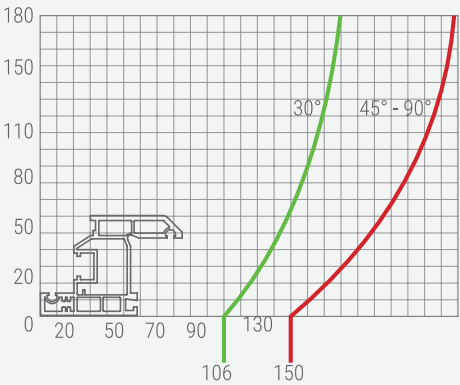
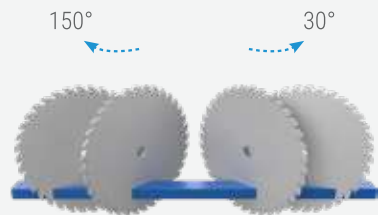
## ALCOR I



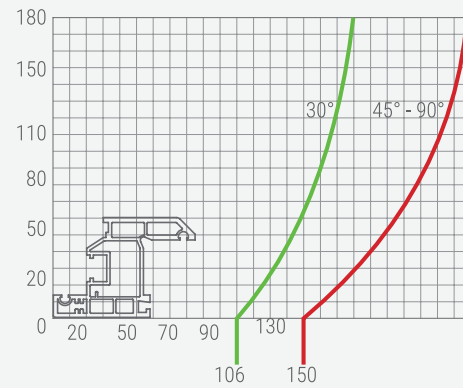
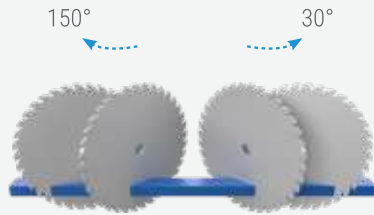
## ALCOR II R - E



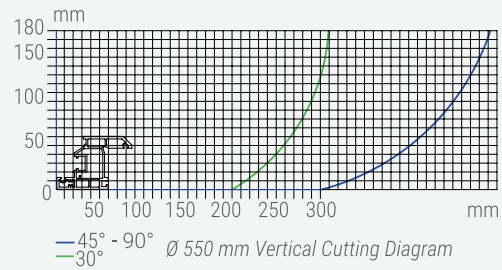
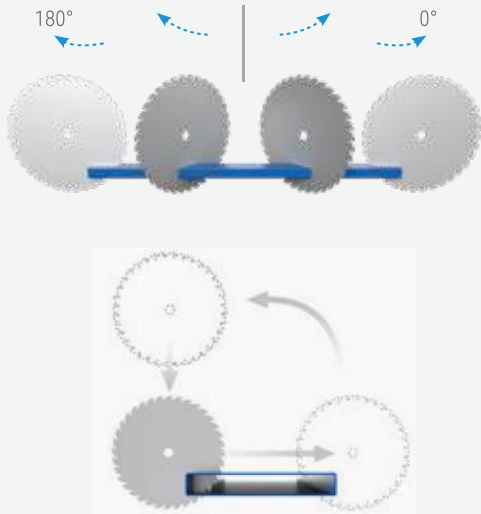
## ALCOR II R



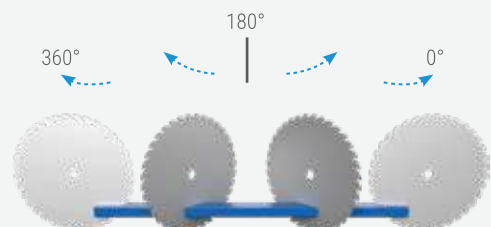
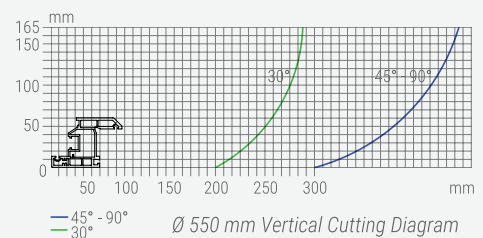
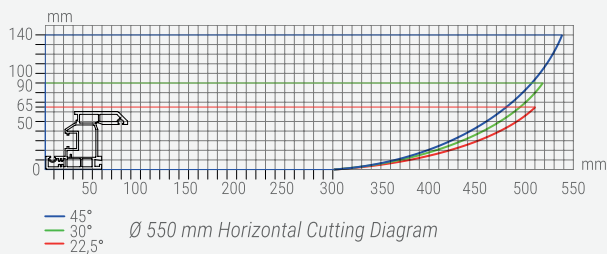
## ALCOR II C



## ALCOR IV

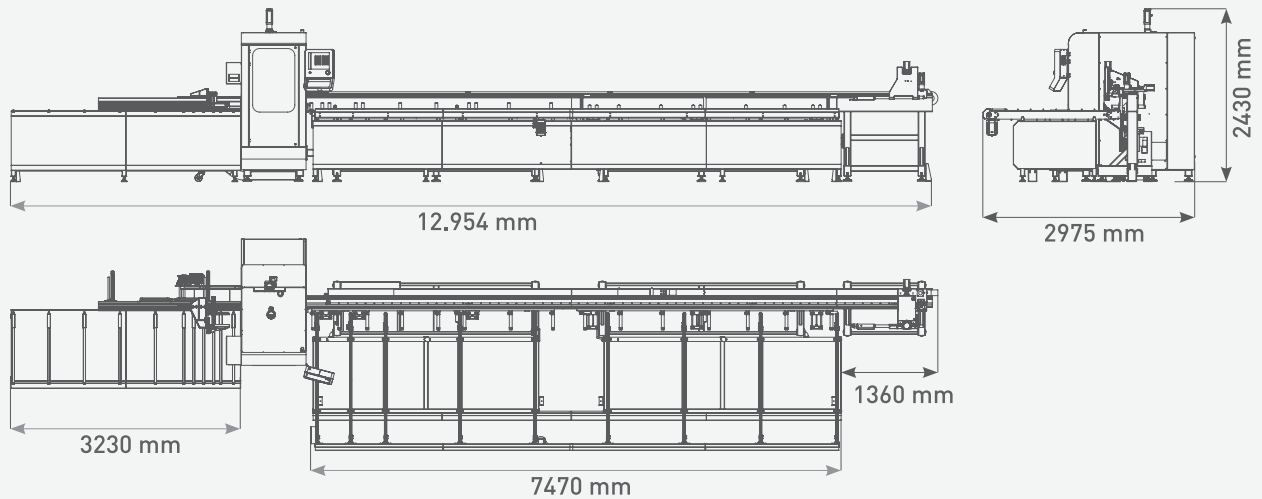


## ALCOR V



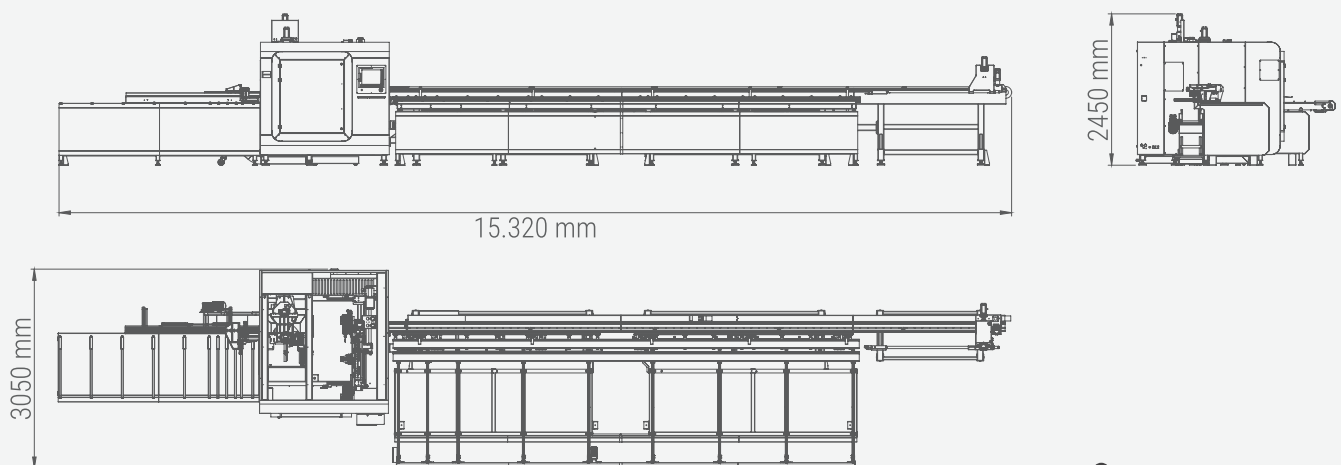
# LAYOUTS

## ALCOR I



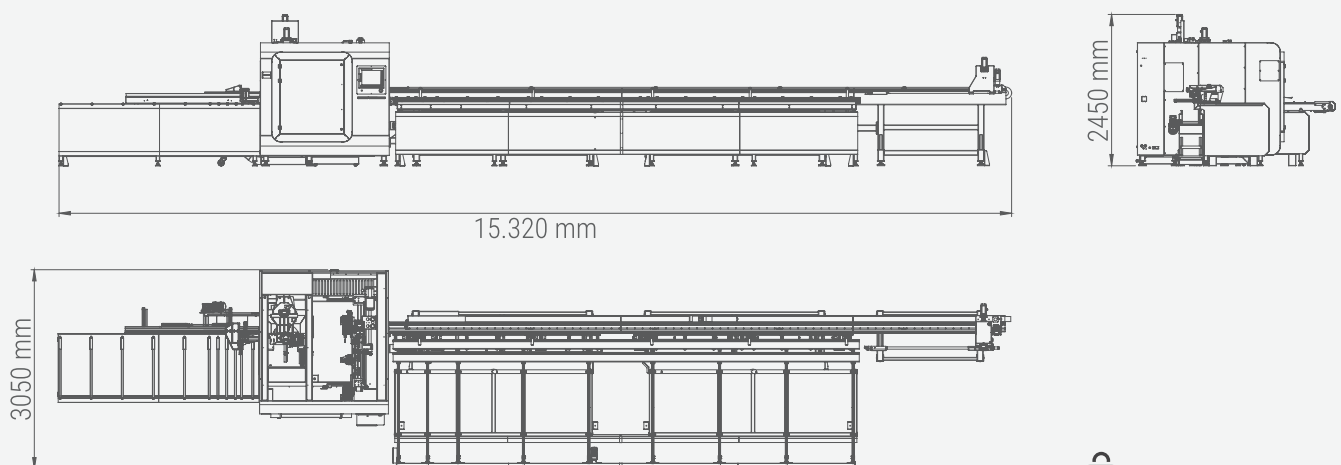
**KG 3.100**

## ALCOR II R - E



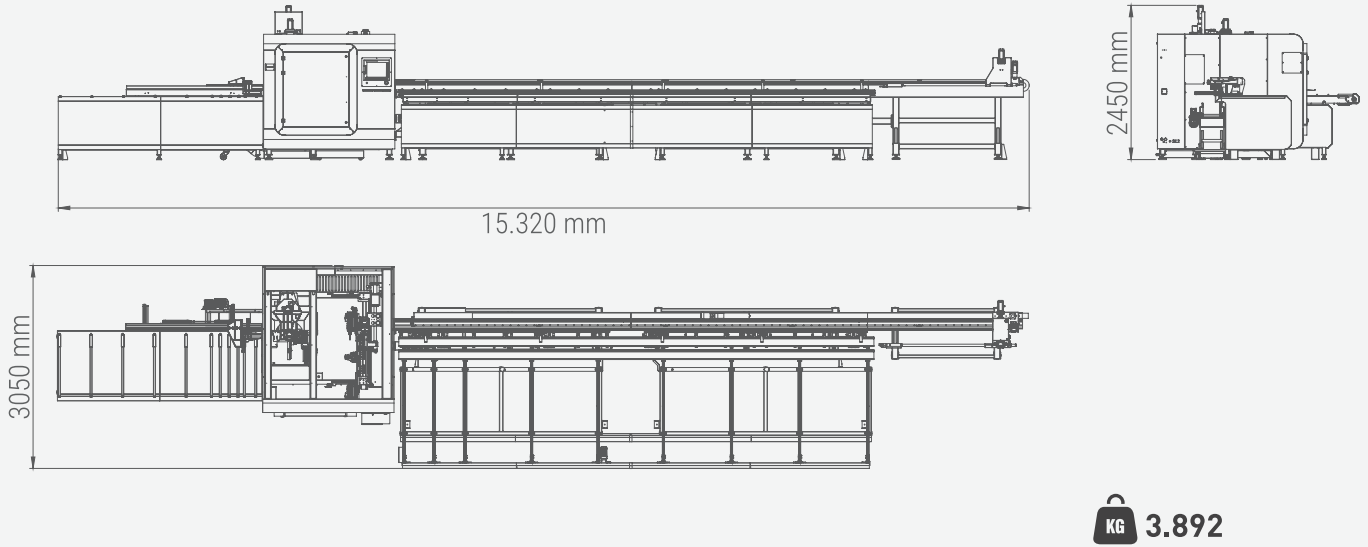
**KG 3.892**

## ALCOR II R

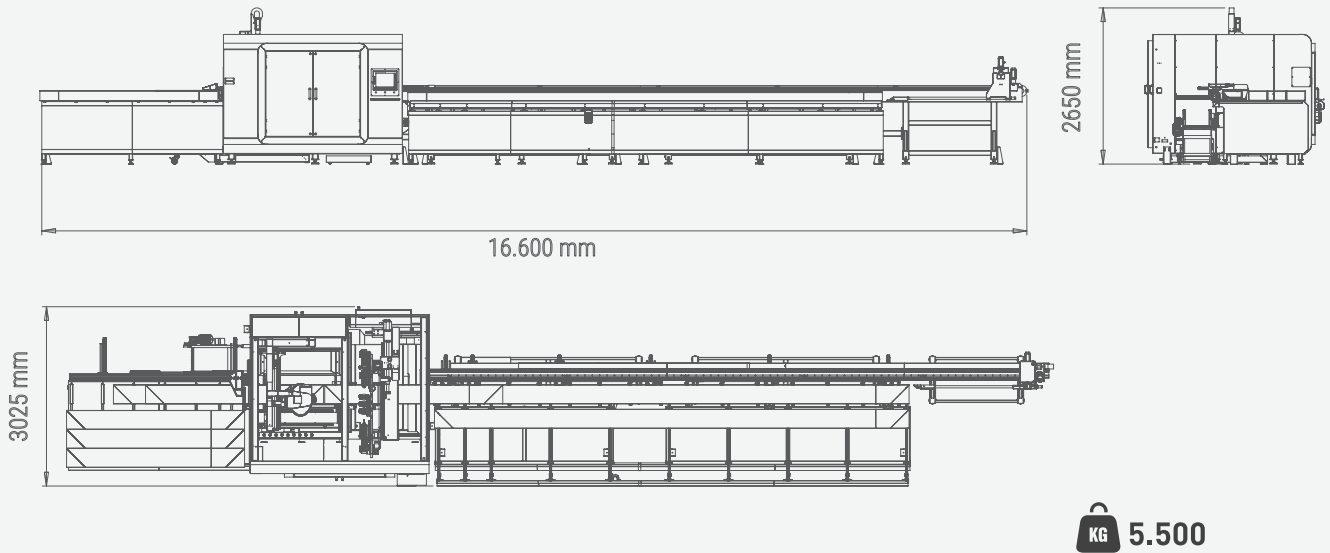


**KG 3.892**

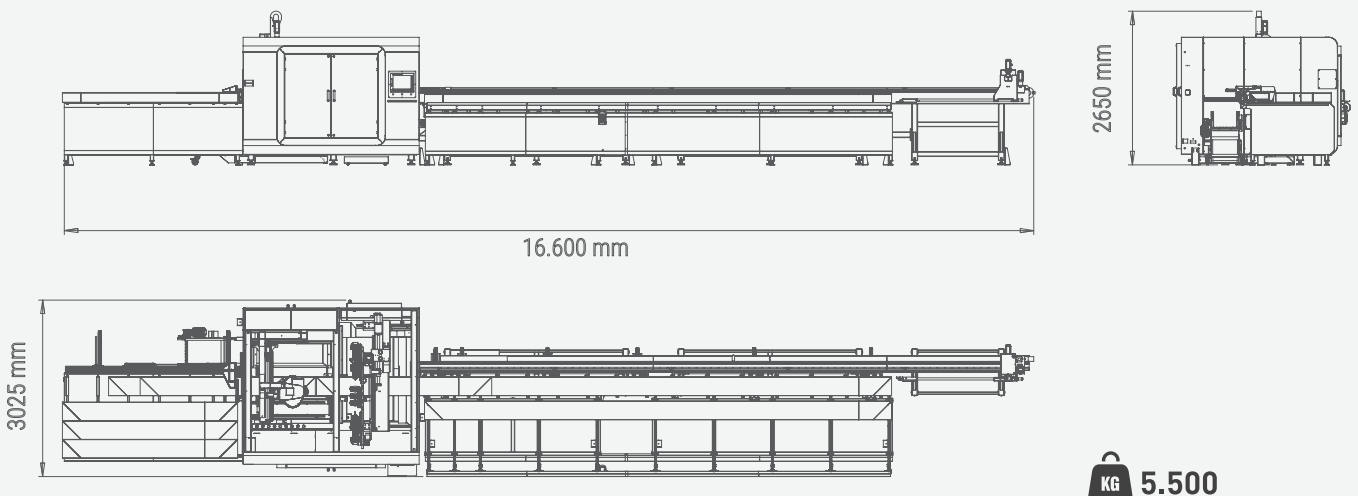
## ALCOR II C



## ALCOR IV

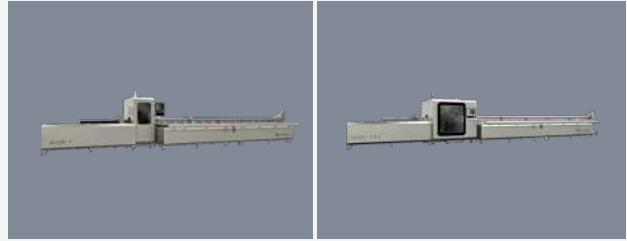


## ALCOR V



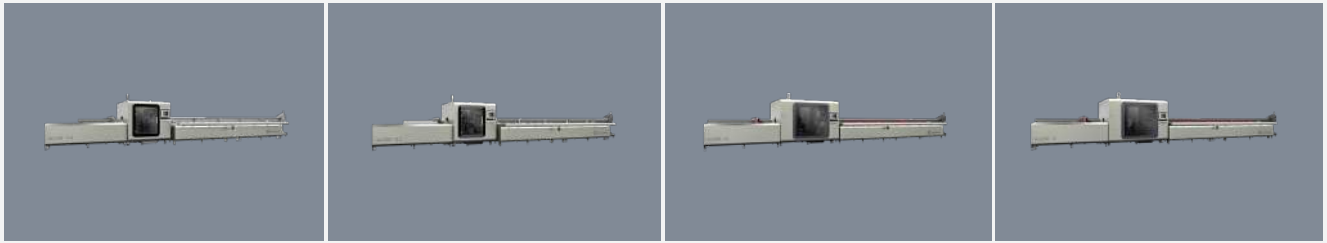


# ALCOR SERIES



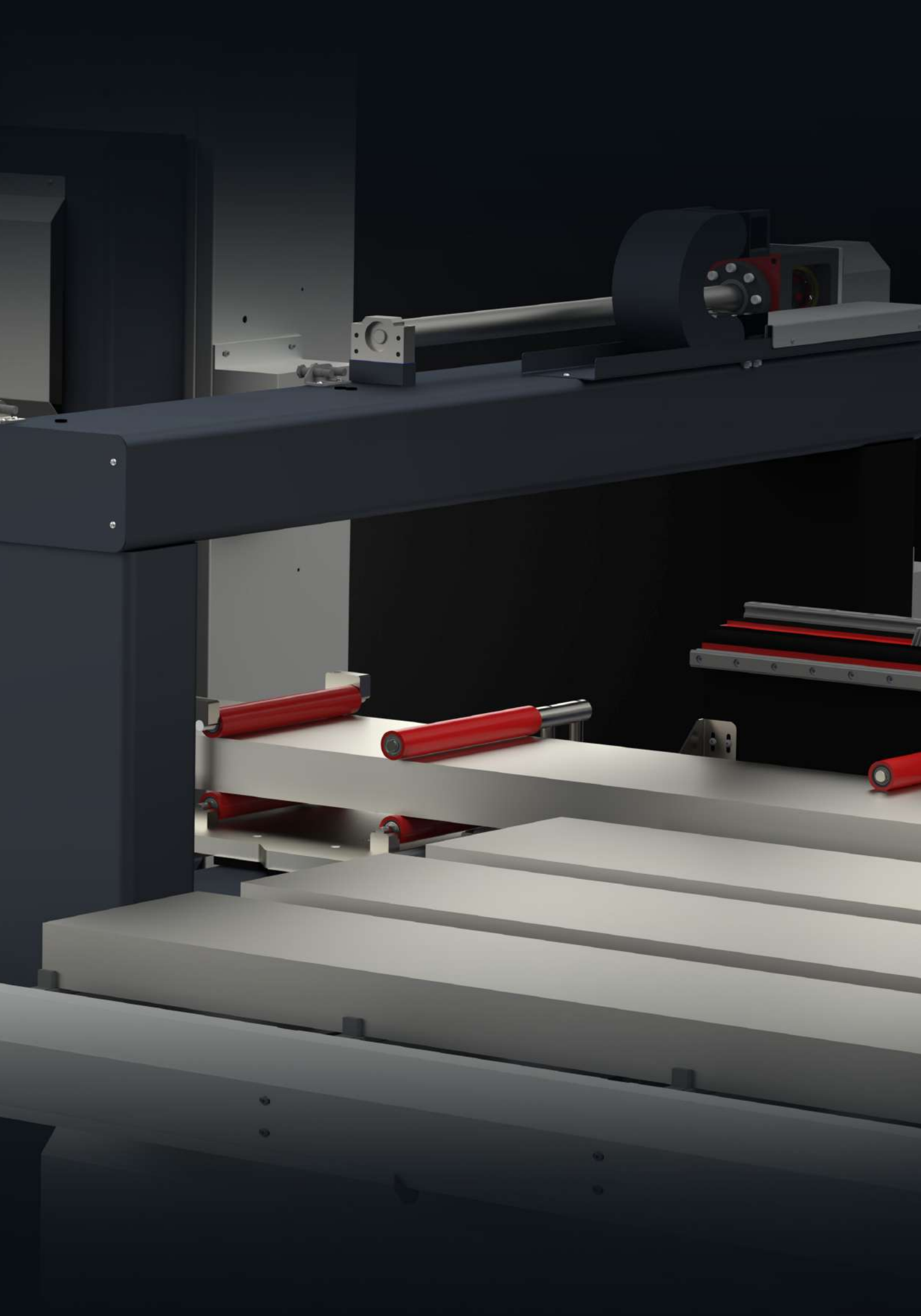
	ALCOR - I	ALCOR - II R-E
Material (Alm / Pvc )	Alm / Pvc	Pvc
Function of the Machine	Cutting	Cutting + Machining
Axis (piece)	5 (5 Axis Servo)	8 (7 Axis Servo)
Radial Cutting	X	X
Saw Diameter (mm)	Ø 550	Ø 550
Saw Motor Power (kw)	3	3
Saw rotation speed (rpm)	3000	3000
Cutting Angle (°) - Vertical Rotation	30° / 150°	30° / 150°
Cutting Angle (°) - Horizontal Rotation	X	X
Max. Profile Loading Length (mm)	7.500	7.500
Min. Profile Loading Length (mm)	700	1200
Min.Profile Unloading Length - 90°/90° (mm)	270	270
Profile Loading Capacity (Piece)	10	10
Fan Cooling Spindle Motor (Piece)	X	7
Fan Cooling Spindle Motor Power (kw)	X	3
Fan Cooling Spindle Motor Rotation Speed (rpm)	X	18.000
Tool Holder	X	ER 20
3ple grip slot drilling	X	✓
Profile Vertical Cutting and Machining Width (45° ve 90°) - Min. / Max. (mm)	30 / 150	30 / 150
Profile Vertical Cutting and Machining Height (45° ve 90°) - Min. / Max. (mm)	30 / 180	30 / 180
Profile Horizontal Cutting Width (45°) - Min./ Max. (mm)	X	X
Profile Horizontal Cutting Height (45°) - Min./ Max. (mm)	X	X
Gripper Axis Travel - Lateral Min./ Max. (mm)	20 / 117	20 / 117
Gripper Axis Travel - Vertical Min./ Max. (mm)	20 / 115	20 / 115
Automation System	Ls (Fanuc ops.)	Fanuc
Automation Software	OZ Machine Soft Cut	Compatibility with optimization programs
Compabbility with optimization programs	✓	✓

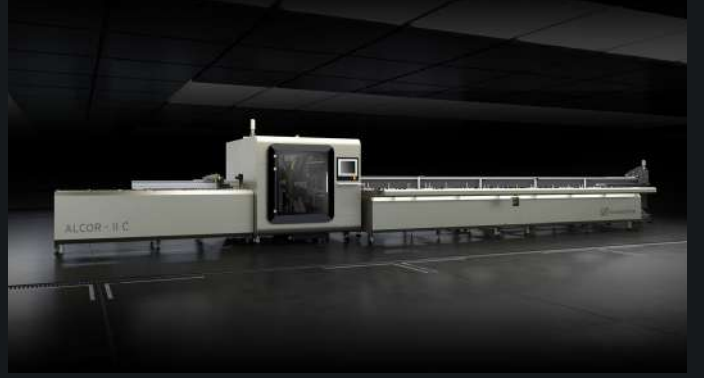
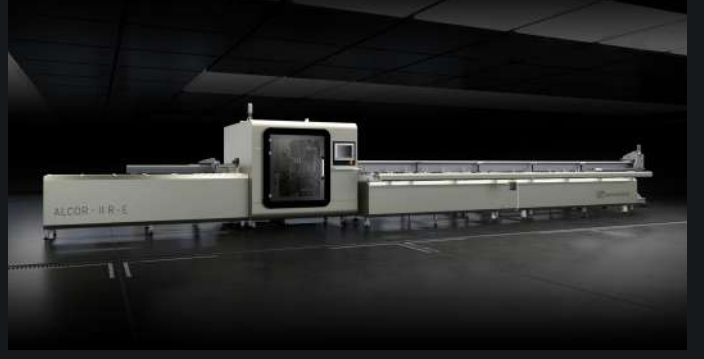
# COMPARISON TABLE



ALCOR - II R	ALCOR - II C	ALCOR - IV	ALCOR - V
Pvc	Alm	Alm / Pvc	Alm / Pvc
Cutting + Machining	Cutting + Machining	Cutting + Machining	Cutting + Machining
8 (8 Axis Servo)	8 (8 Axis Servo)	11 (11 Axis Servo)	12 (12 Axis Servo)
X	X	✓	✓
Ø 550	Ø 550	Ø 550	Ø 550
3	3	3	3
3000	3000	3000	3000
30° / 150°	30° / 150°	0° / 180°	0° / 360°
X	X	X	0° / 180°
7.500	7.500	8.000	8.000
1200	1200	1200	1200
270	270	400	400
10	10	4	4
13	7	8	8
3	3	3	3
18.000	18.000	18.000	18.000
ER 20	ER 20	ER 20	ER 20
✓	X	X	X
30 / 150	30 / 150	30 / 300	30 / 300
30 / 180	30 / 180	30 / 180	30 / 165
X	X	X	30 / 300
X	X	X	30 / 140
20 / 117	20 / 117	20 / 150	20 / 150
20 / 115	20 / 115	20 / 140	20 / 140
Fanuc	Fanuc	Fanuc	Fanuc
Compatibility with optimization programs	Camquix (CAM Software) CadXtract (ops.)	Camquix (CAM Software) CadXtract (ops.)	Camquix (CAM Software) CadXtract (ops.)
✓	✓	✓	✓







ÖZÇELİK MAKİNA SAN. VE TİC. A.Ş.

Anadolu Mh. Kanuni Cd. No:8 34956 Orhanlı, Tuzla, İstanbul / Türkiye

T: +90 216 304 20 10 | F: +90 216 304 19 88

www.ozcelik.com | info@ozcelik.com / info@oz-machine.com