PROFILE MACHINING & CUTTING

ALCOR SERIES

CNC cutting and machining centers for aluminum and PVC / vinyl profiles, from automatic cutting to 5-axis saw units.



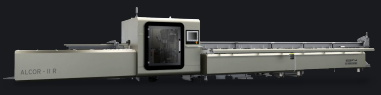
OZ MACHINE USA

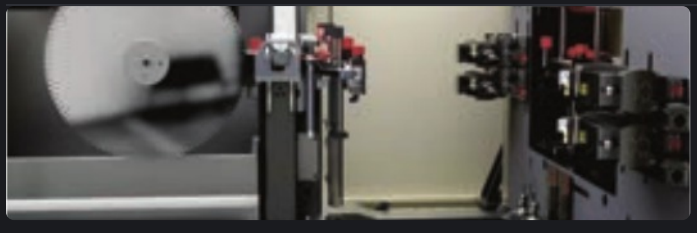
22" SAW · 3 TO 12 SERVO AXES
FIVE MODELS · USA, CANADA AND MEXICO

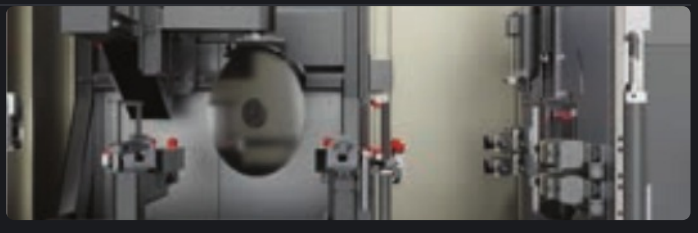
CUTTING CENTERS

ALCOR series

ALCOR machines are CNC-controlled cutting and machining centers for multi-axis work on aluminum and PVC / vinyl profiles (cutting, milling, drilling and opening slots, with optional tapping), for architectural fabricators and industrial manufacturers. Automated profile loading, a pneumatic gripper robot for precise positioning and a profile unloading unit keep the line running at high speed.

MODEL		CUTTING ANGLE	SPINDLES
	**ALCOR I** Cutting, 3 servo axes	30–150°	–
	**ALCOR II C** Cutting + machining, aluminum	30–150°	7
	**ALCOR II R** Cutting + machining, PVC / vinyl	30–150°	13
	**ALCOR IV** Cutting + machining, 4-axis saw	0–180°	8
	**ALCOR V** Cutting + machining, 5-axis saw	0–180°	8





INDUSTRIES WE SERVE

ARCHITECTURAL

- Aluminum windows & doors
- Storefront & commercial glazing
- Curtain wall & facade
- Pergolas & outdoor structures
- Architectural metal & sunshades
- Vinyl windows & doors (ALCOR II R)

INDUSTRIAL

- Aluminum extrusion & industrial applications
- LED lighting & displays
- Solar modules
- Refrigeration, HVAC & cooling
- Defense & aerospace
- Contract fabrication & machining
- Transportation & truck components
- Marine industry

ALCOR I, II C, IV and V for aluminum applications; ALCOR II R for PVC / vinyl windows and doors.

ALCOR I

CNC Profile Cutting Center (3 Axis)



22"	30–150°	10 profiles	24' 7"
Saw blade	Cutting angles	Loading magazine	Max. profile length

Automatic, servo-driven cutting for aluminum, PVC / vinyl and light alloy profiles. A 10-profile loading magazine feeds the line for batch production, while the 22" saw cuts at any angle between 30° and 150° inside a fully guarded cabin.

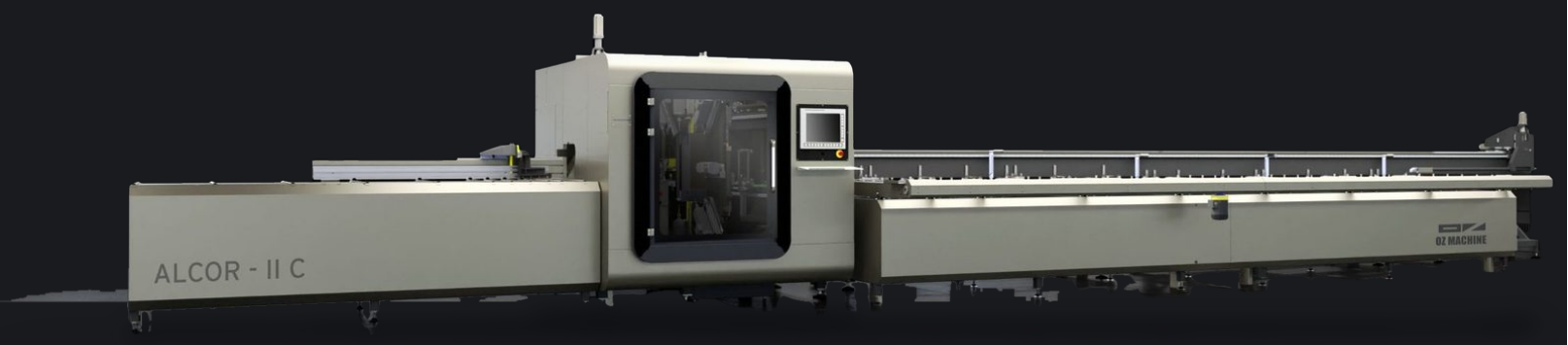
KEY FEATURES

- Servo-controlled cutting and rotation axes
- Guard cabin with automatic lubrication
- Barcode printer for part labeling
- Automatic loading magazine for batch cutting
- Automatic chip discharge conveyor
- 15" industrial touchscreen PC, OZ MACHINE Softcut

MAX. POWER	VOLTAGE	SAW MOTOR	FOOTPRINT
6.75 kW / 17.7 A	220V 3P, 60 Hz	4 HP	42' 6" x 9' 9"

ALCOR II C

CNC Profile Machining and Cutting Center (8 Servo Axis, 7 Machining Axis)



8 servo axes
Fully servo-driven

7 spindles
Machining units

30–150 °
Cutting angles

295.3 "
Max. loading length

Cutting, milling and drilling of aluminum profiles in one line, with optional tapping. Seven independent spindles machine the profile while the 22" saw cuts the next part, so channel openings and other special operations run without extra stations.

KEY FEATURES

- Milling and drilling on 4 + 3 surfaces, tapping (optional)
- 10-profile automatic loading magazine
- FANUC control, 15" industrial touchscreen PC
- Upper spindles 0° / 45°, frontal spindles 45° / 135°
- Gripper robot with servo positioning
- Guard cabin and automatic chip conveyor

MAX. POWER	VOLTAGE	AIR	WEIGHT
32 kW / 84 A	220V 3P, 60 Hz	8.8 CFM · 100 psi	8,580 lb

CNC CUTTING CENTERS

ALCOR II R

CNC PVC / Vinyl Profile Machining and Cutting Center (8 Servo Axis, 14 Machining Axis)



14 axes
Machining axes

13 spindles
Fan-cooled spindles

30–150°
Cutting angles

10 profiles
Loading magazine

Built for vinyl window lines: 13 spindles plus a handle hole drilling motor machine every opening, weep hole and hardware slot, and the 22" saw cuts the finished part. One operator, one line, from raw bar to ready-to-weld piece.

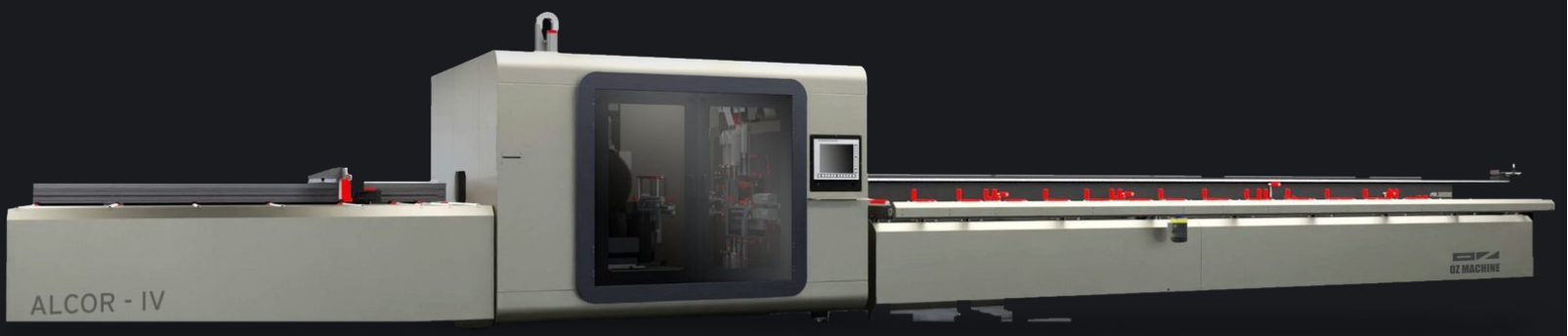
KEY FEATURES

- Milling and drilling on 4 + 3 surfaces, tapping (optional)
- Weep hole milling on the line
- FANUC control, 15" industrial touchscreen PC
- Handle hole drilling motor
- 10-profile automatic loading magazine
- Guard cabin and automatic chip conveyor

MAX. POWER	VOLTAGE	AIR	WEIGHT
50.45 kW	220V 3P, 60 Hz	8.8 CFM · 100 psi	8,580 lb

ALCOR IV

CNC Profile Machining and 4 Axis Cutting Center



0–180°	8 spindles	12.6"	315"
Cutting angles	Machining units	Max. profile width	Max. loading length

For wide aluminum and PVC / vinyl profiles. Eight fan-cooled spindles work at different angles on four surfaces, and the 22" saw moves on 4 axes to cut at any angle between 0° and 180° and to end-mill profiles up to 12.6" wide.

KEY FEATURES

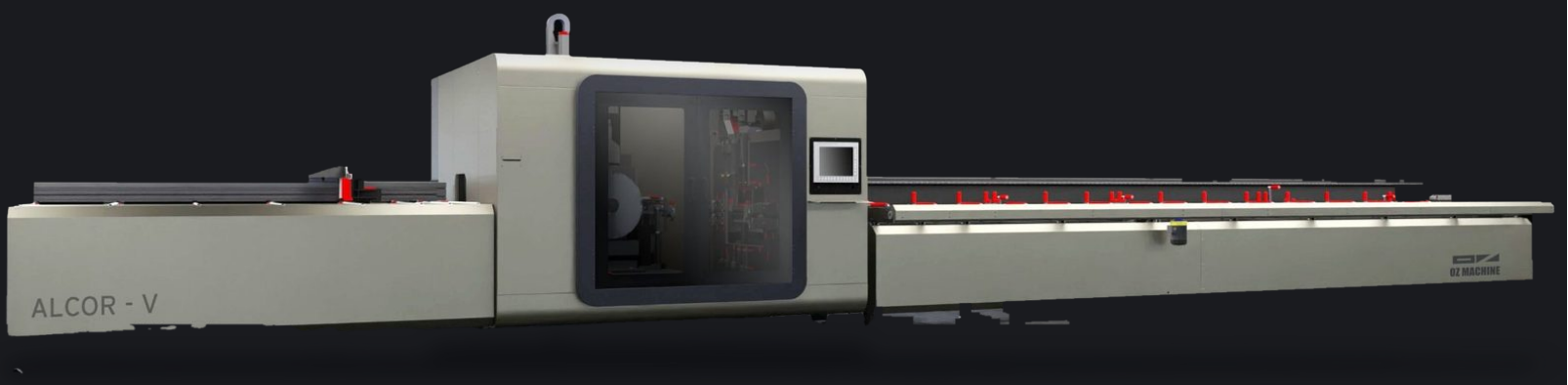
- Milling and drilling on 4 surfaces, tapping (optional)
- 4-profile loading conveyor (up to 10 optional)
- FANUC control, 15" industrial touchscreen PC
- 4-axis saw unit: cutting and end milling
- Up to 5 additional spindles (optional)
- Accepts optimized cutting and machining lists

MAX. POWER	VOLTAGE	AIR	WEIGHT
43 kW / 113 A	220V 3P, 60 Hz	15 CFM · 100 psi	12,125 lb

CNC CUTTING CENTERS

ALCOR V

CNC Profile Machining and 5 Axis Cutting Center



0–180°
Vertical saw rotation

0–180°
Horizontal saw rotation

12 servo axes
Servo axes

8 spindles
Machining units

The top of the ALCOR series. The 22" saw tilts 0–180° both vertically and horizontally, so compound and special cuts on wide profiles are done in one setup, while eight spindles machine four surfaces of the profile.

KEY FEATURES

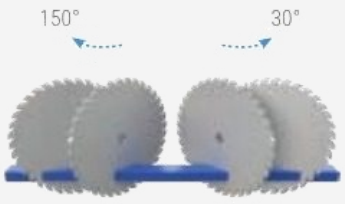
- Milling and drilling on 4 surfaces, tapping (optional)
- 4-profile loading conveyor (up to 10 optional)
- FANUC control, 15" industrial touchscreen PC
- 5-axis saw unit for compound cuts
- Up to 5 additional spindles (optional)
- Accepts optimized cutting and machining lists

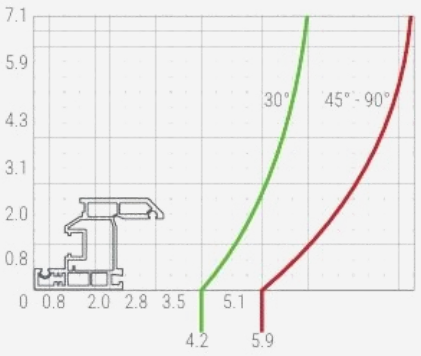
MAX. POWER	VOLTAGE	AIR	WEIGHT
43.5 kW / 114 A	220V 3P, 60 Hz	15 CFM · 100 psi	12,125 lb

Cutting diagrams

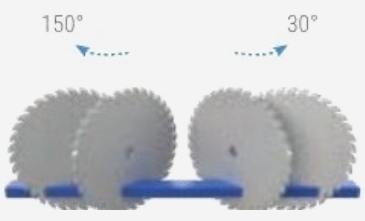
22" saw. Dimensions in inches.

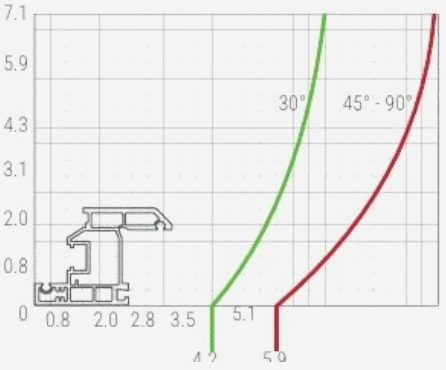
ALCOR I



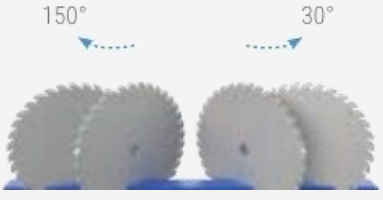


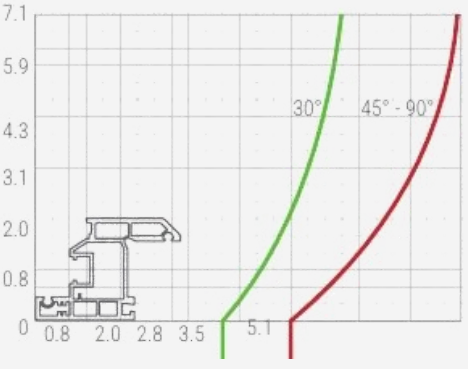
ALCOR II C





ALCOR II R

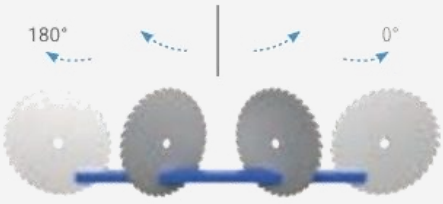


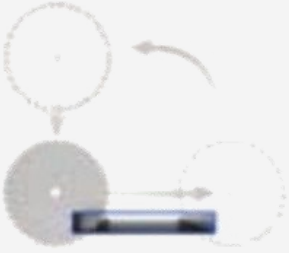


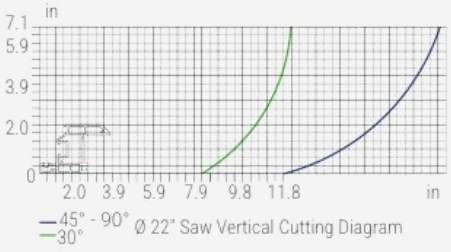
Cutting diagrams

22" saw. Dimensions in inches.

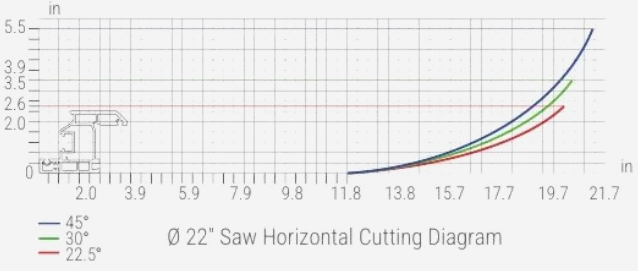
ALCOR IV

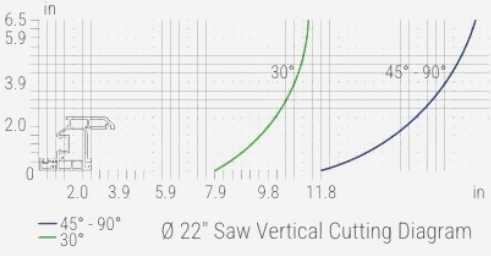


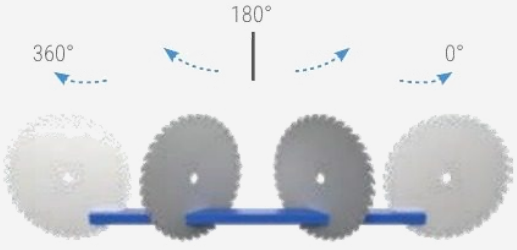


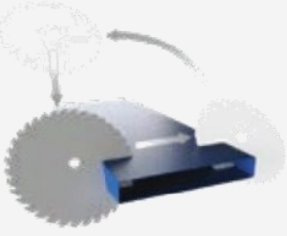


ALCOR V



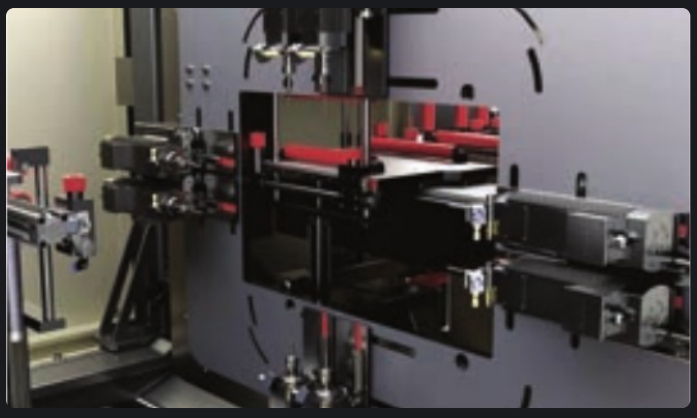




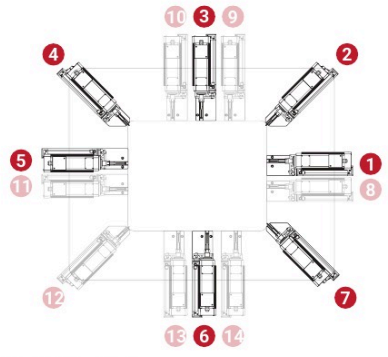


Configurable spindle motors

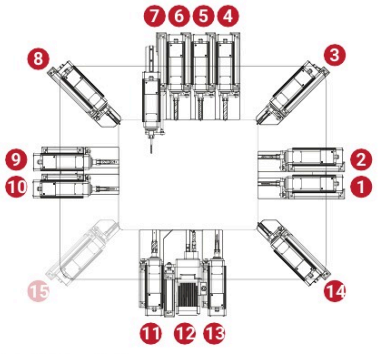
Spindle units surround the profile so every surface can be milled, drilled and, optionally, tapped in one pass. Positions for ALCOR II C, II R, IV and V:



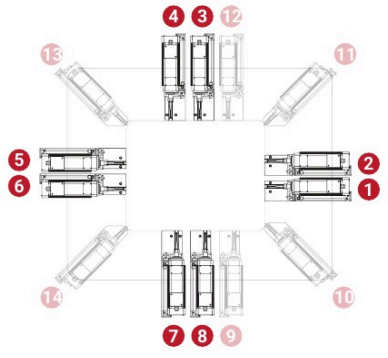




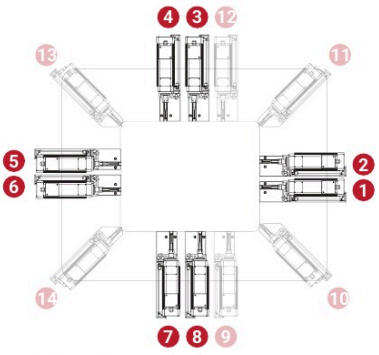
ALCOR - II C



ALCOR - II R



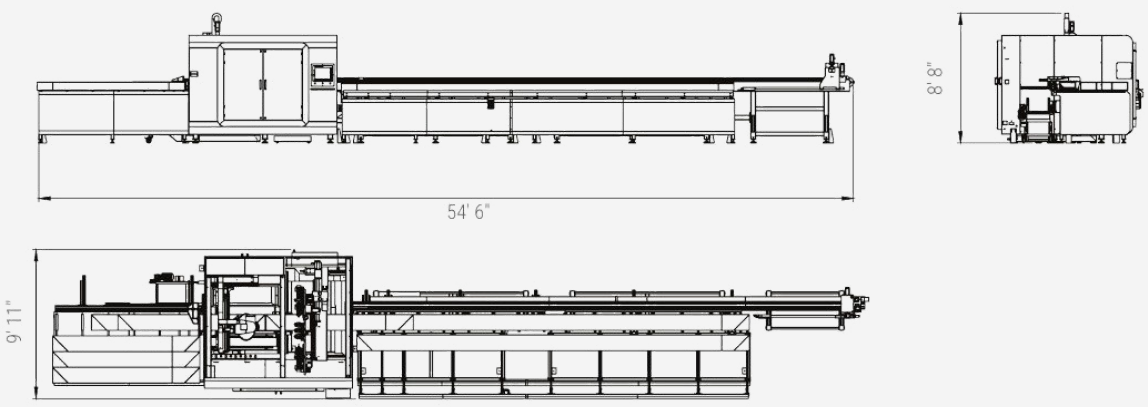
ALCOR - IV



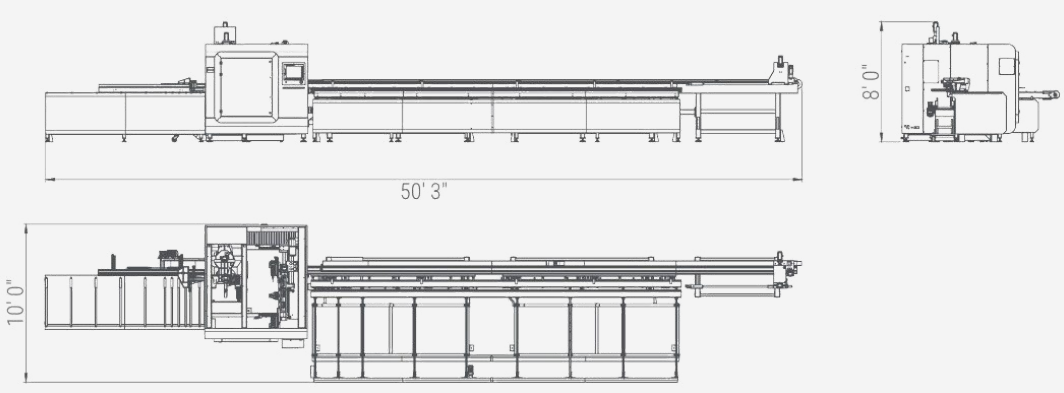
ALCOR - V

Layout plans

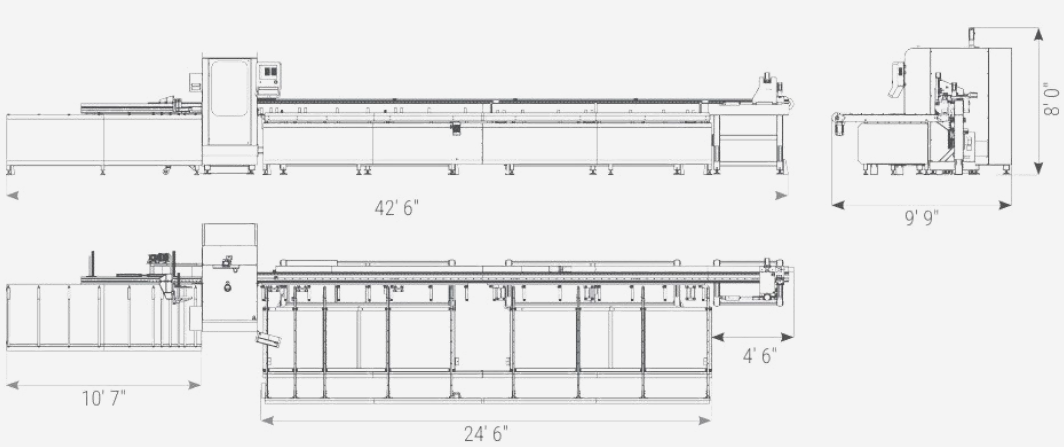
ALCOR IV / V



ALCOR II C / II R



ALCOR I



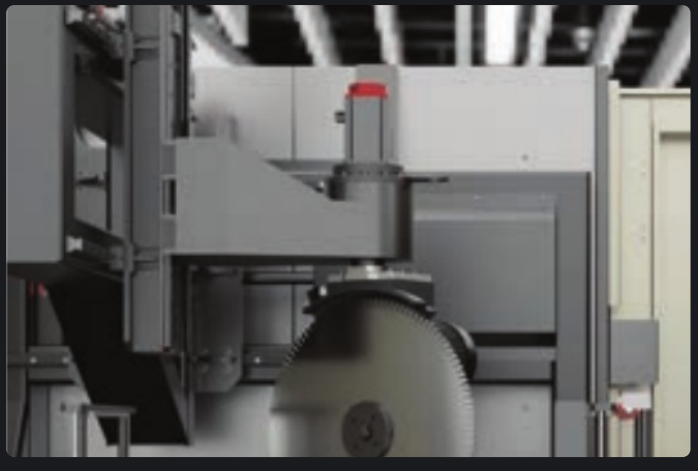
Dimensions in feet and inches.

Ergonomic design

A servo-driven motion system and a rotating gripper that adapts to different profile shapes position profiles quickly and accurately in the machining area.



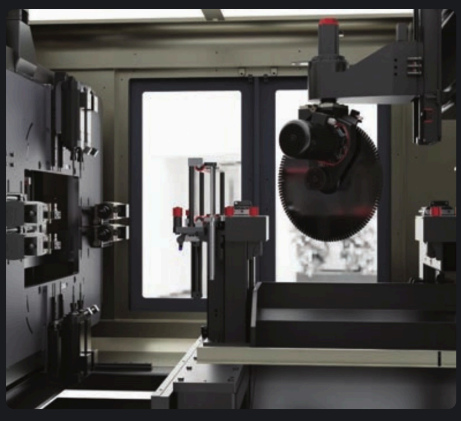
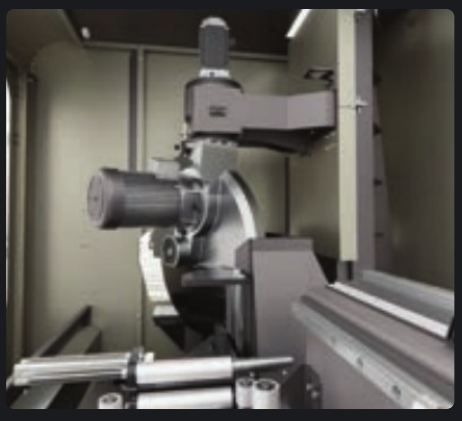




Enclosure and clamps

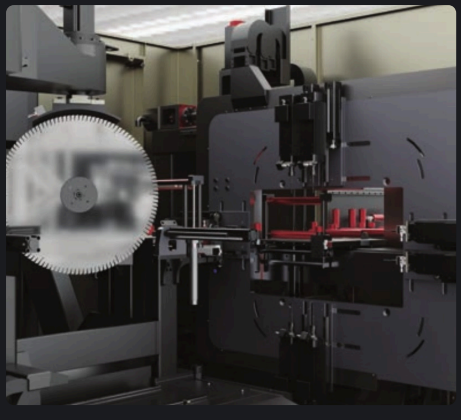
PLEXIGLASS SAFETY ENCLOSURE

The enclosed cabinet has a durable plexiglass window on the front: a safe working environment with a clear view of the process.


HIGH-PRESSURE CLAMPS

Horizontal and vertical high-pressure clamps hold the profile securely during machining and cutting.

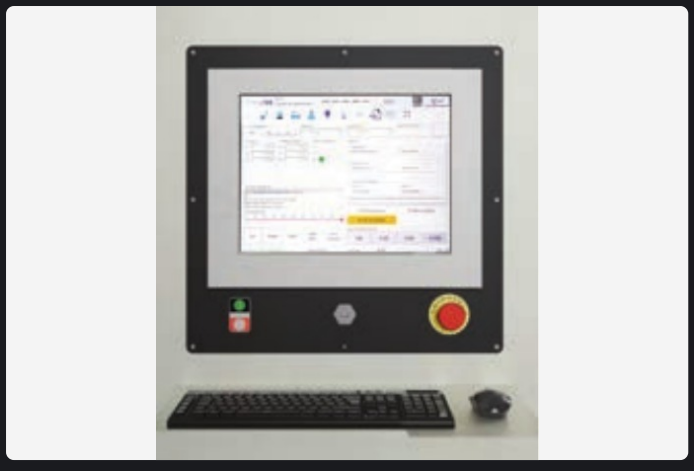




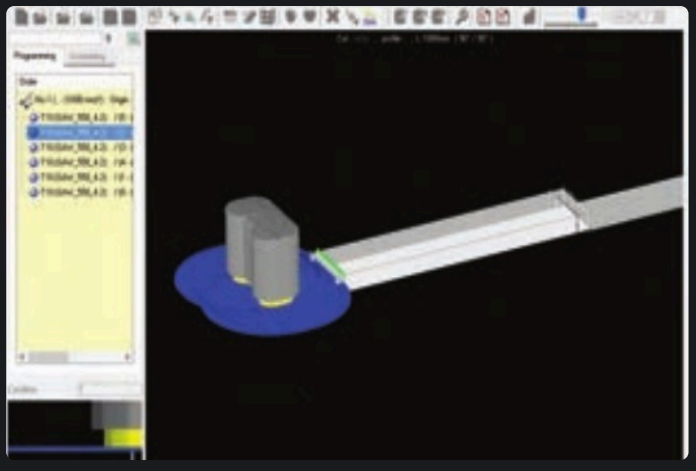
SOFTWARE

Easy-to-use interface

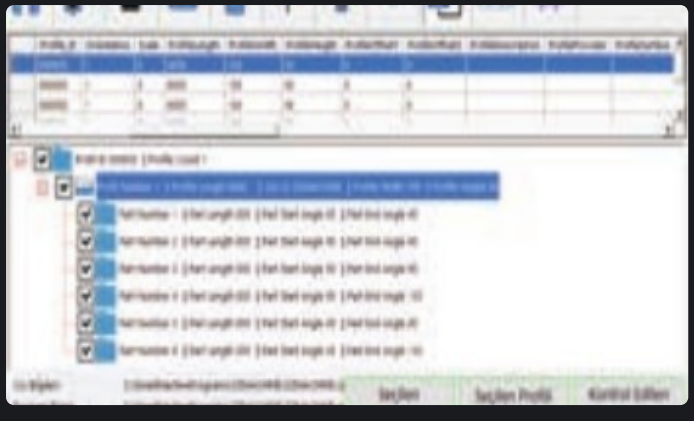
15" industrial touchscreen PC: import optimized cutting and machining lists, check each operation in 3D and manage tools and clamp positions.



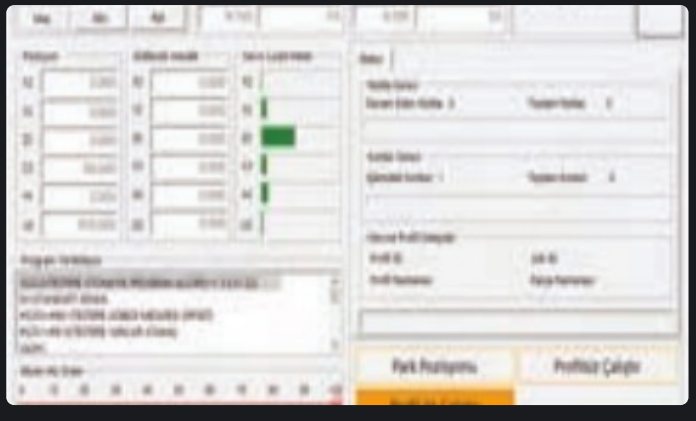
CONTROL PANEL



3D SIMULATION



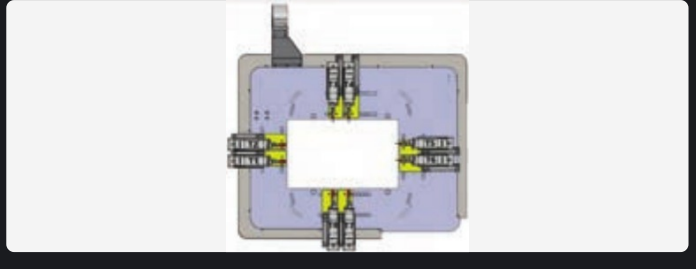
CUTTING LISTS



MACHINING PROGRAM



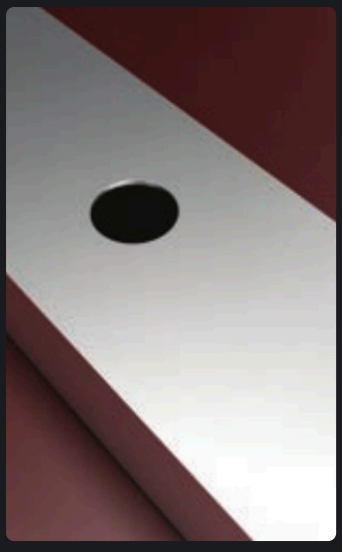
TOOL TABLE



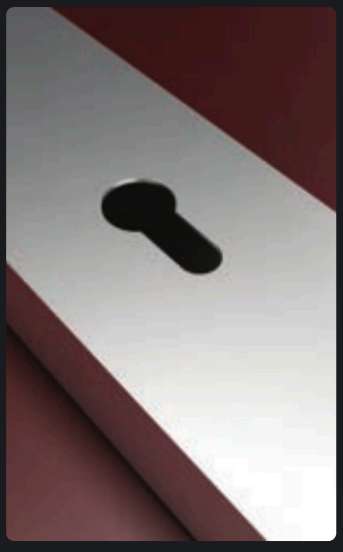
CLAMP POSITIONS

Milling and cutting

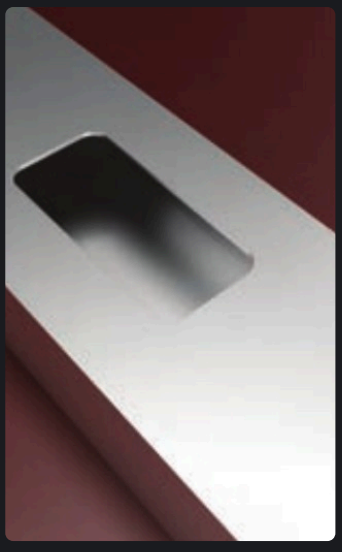
MILLING CAPABILITY



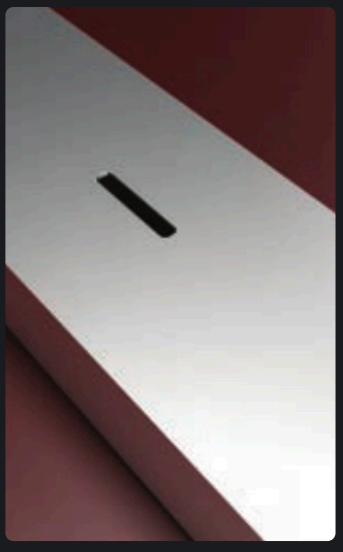
CIRCULAR CUTOUT



LATCH HOLE

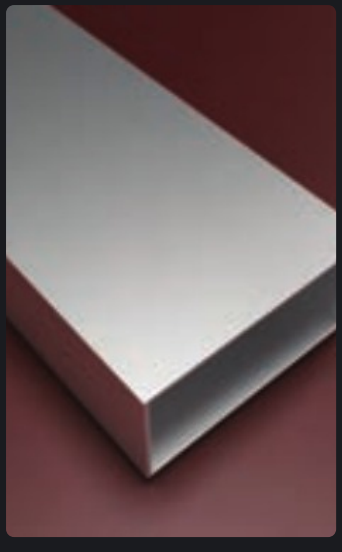


RECTANGULAR CUTOUT

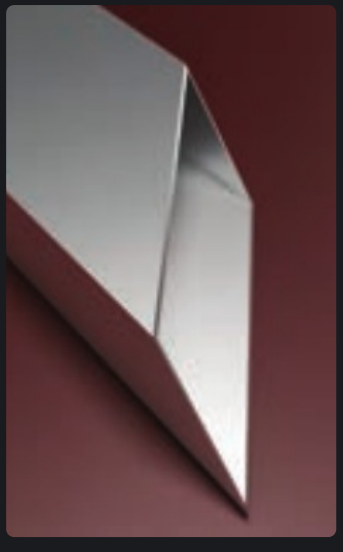


OPENING SLOT

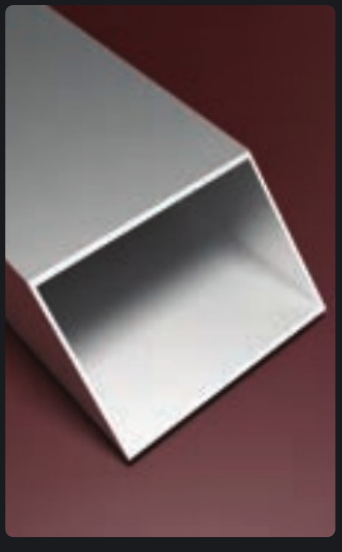
CUTTING CAPABILITY



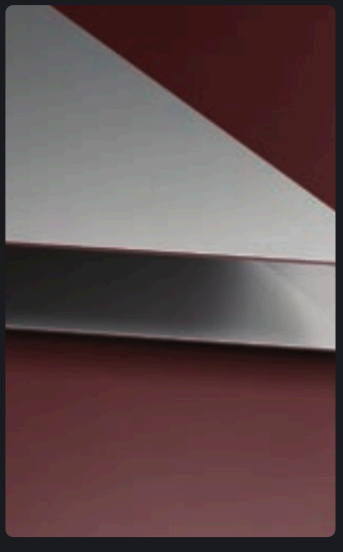
VERTICAL 90° CUTTING



COMPOUND ANGLE CUTTING



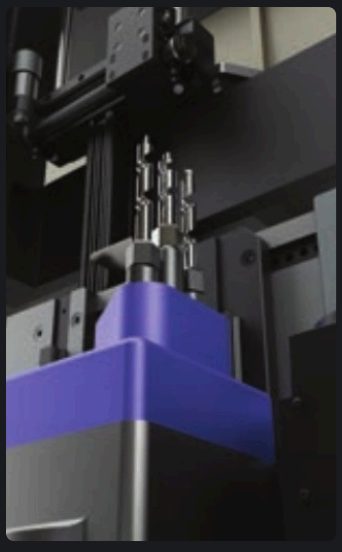
VERTICAL 45° CUTTING



HORIZONTAL 45° CUTTING

Milling and cutting

MILLING CAPABILITY



MACHINING UNIT



HANDLE MOUNTING HOLES



LATCH HOLE



WEEP HOLE

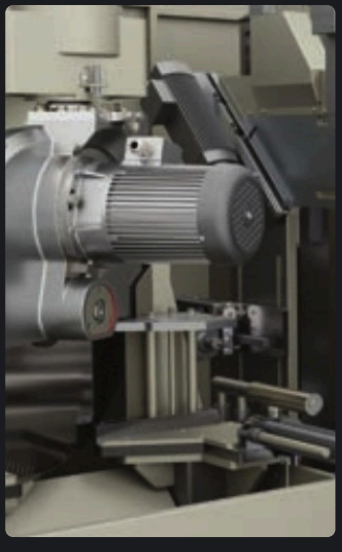
CUTTING CAPABILITY



SAW UNIT



VERTICAL 90° CUTTING



SAW UNIT



HORIZONTAL 45° CUTTING

ALCOR SERIES

Compare the line

Five CNC cutting centers, from automatic cutting to 5-axis saw units.







	ALCOR I	ALCOR II C	ALCOR II R	ALCOR IV	ALCOR V
Function	Cutting	Cutting + machining	Cutting + machining	Cutting + machining	Cutting + machining
Servo axes	3	8	8	11	12
Saw blade	22"	22"	22"	22"	22"
Cutting angle (vertical)	30°–150°	30°–150°	30°–150°	0°–180°	0°–180°
Horizontal saw rotation	—	—	—	—	0°–180°
Spindle motors	—	7 × 4 HP	13 × 4 HP	8 × 4 HP	8 × 4 HP
Machining surfaces	—	4+3	4+3	4	4
Max. profile loading length	295.3"	295.3"	295.3"	315.0"	315.0"
Profile magazine	10	10	10	4	4
Max. cutting width × height	5.9" × 7.1"	5.9" × 7.1"	5.9" × 7.1"	12.6" × 7.1"	12.6" × 7.1"
Control system	LS (FANUC opt.)	FANUC	FANUC	FANUC	FANUC
Max. power / current	6.75 kW / 17.7 A	32 kW / 84 A	50.45 kW	43 kW / 113 A	43.5 kW / 114 A
Air consumption	3.0 CFM	8.8 CFM	8.8 CFM	15.0 CFM	15.0 CFM

Voltage 220V 3P, 60 Hz · Air pressure 100 psi.



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