



— ProCompositeTech —



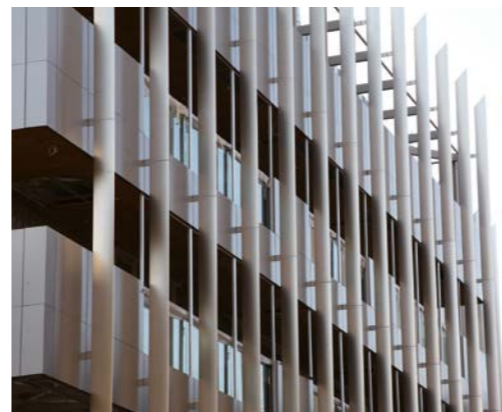
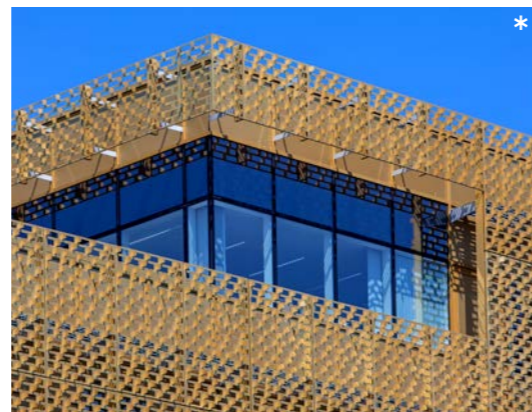
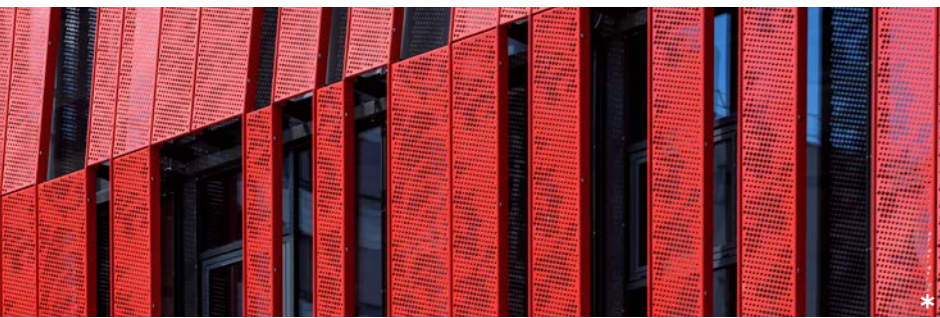
# Alu Ranger VGroove

High Throughput CNC Panel Router  
with Vertical Table for Architectural Panels

|4221 |6321 |10121

# High Throughput CNC Panel Router with Vertical Table for Architectural Panels

CNC panel router made for: ACM/ACP, ACM Mineral core, panels with alu honeycomb and corrugated core, Fibrecement, HPL...



## COMPATIBLE PANELS

### ACM / ACP PE CORE MINERAL CORE

- ALUCOBOND®
- LARSON®
- ALPOLIC®
- ARCONIC®
- ALUBOND®
- ALBOND®
- SIBALUX®
- VITRABOND®
- STACBOND®
- ALUPANEL®
- .....

### SOLID ALU

- VITRADUAL®
- LUXE COAT®
- ALUCOLUX®
- FUTURAL®
- .....

### ALU HONEYCOMB CORE

- ALUCORE®
- LARCORE®
- PLASCORE®
- STARCELL®
- CEL COMPONENTS®
- HONYLITE®
- .....

### ALU CORRUGATED CORE

- METAWELL®
- DOLUFLEX®
- .....

### FIBERCEMENT

- CEMBRIT®
- EQUITONE by ETERNIT®
- COPANEL®
- SWISS PEARL®
- .....

### HPL

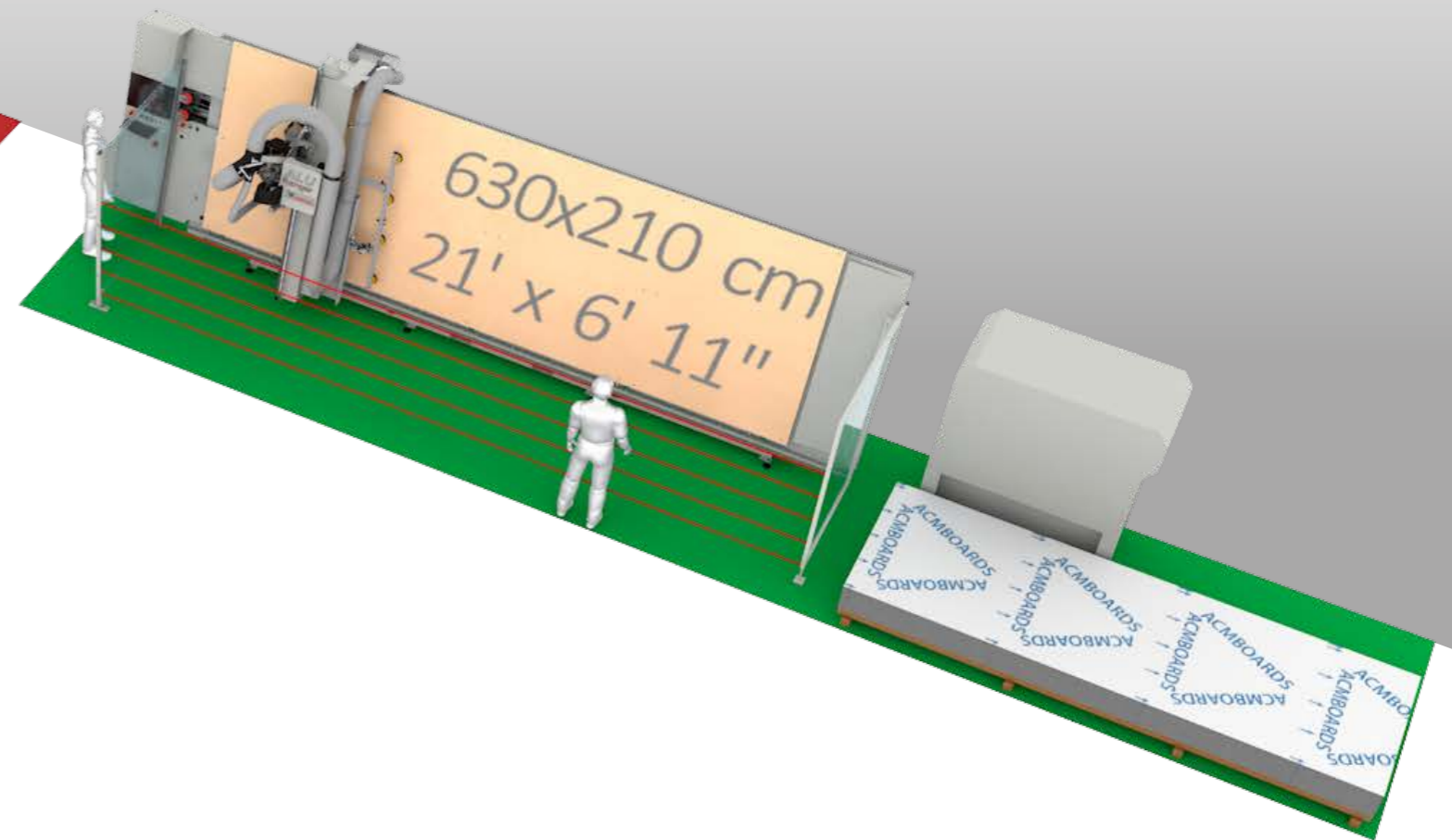
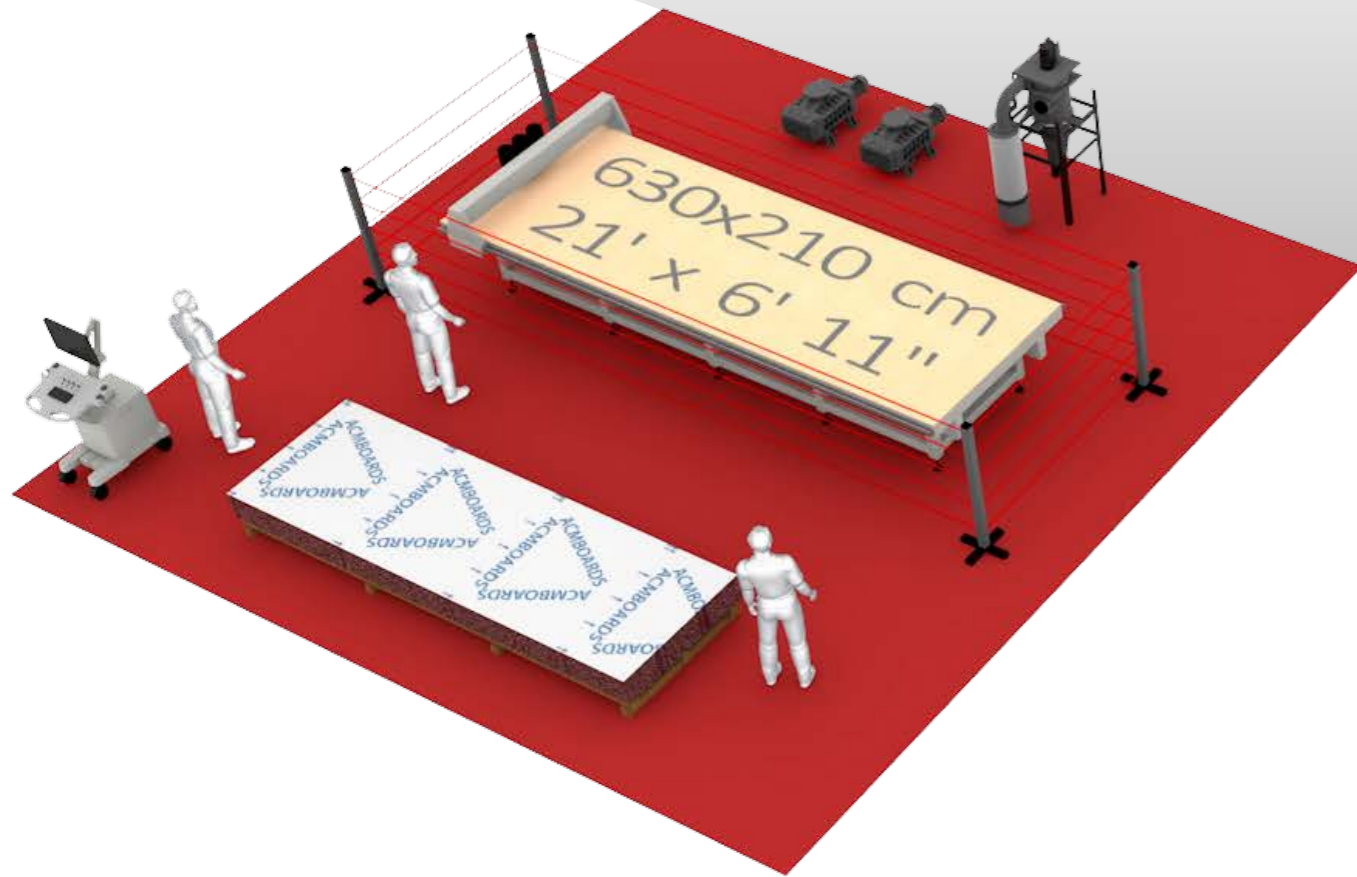
- TRESPA®
- MAX EXTERIOR®
- POLYREY®
- RESOPAL®
- FUNDERMAX®
- .....

I AM ALU RANGER

\* Ph. Fatih Kucukcolak

# 60% less...

- ...floor space required than a horizontal router system
- Designed to occupy less space
- Ergonomic access to the Vertical Table
- Safer work environment for the operator
- Eliminate table prep, debris not held falls to the floor



CNC PANEL ROUTER  
WITH **HORIZONTAL** TABLE



LAYOUT **121** sq mt - (1302 sq ft)

WORKING TABLE **14** sq mt - (151 sq ft)

LAYOUT **49** sq mt - (527 sq ft)

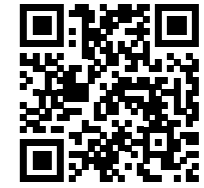
WORKING TABLE **14** sq mt - (151 sq ft)

CNC PANEL ROUTER  
WITH **VERTICAL** TABLE

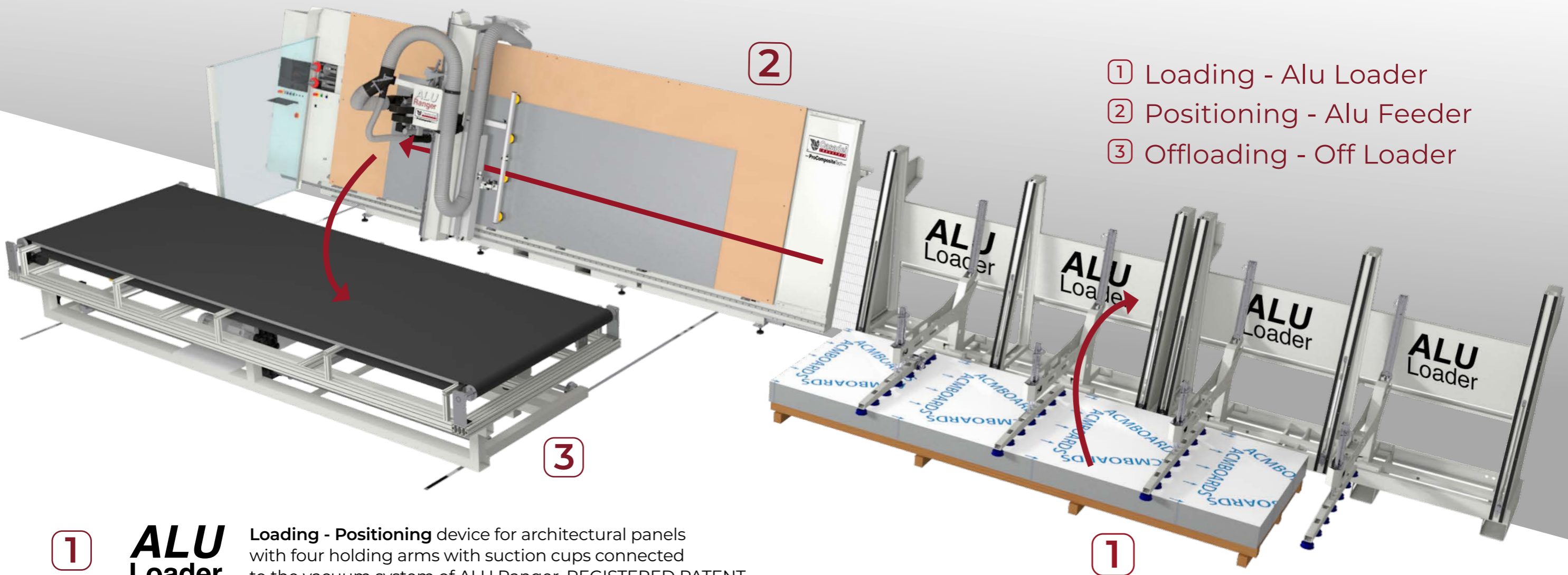
**VGroove**  
**6321**

## Integrated automation

- Automatic loading and positioning without operators
- Increased productivity
- Zero risk of panels falling with patented holding device
- Ergonomically designed for easy panel off-loading



I LOAD AND OFFLOAD PANELS ALL ALONE



- ① Loading - Alu Loader
- ② Positioning - Alu Feeder
- ③ Offloading - Off Loader

- ① **ALU Loader** Loading - Positioning device for architectural panels with four holding arms with suction cups connected to the vacuum system of ALU Ranger. REGISTERED PATENT
- ② **ALU Ranger** CNC Panel Router with Vertical Table for architectural facades panels fabrication
- ③ **OFF Loader** Automatic Off Loader for processed panels by a tiltable vacuum holding table PATENT PENDING

## Panel Vacuum Holding

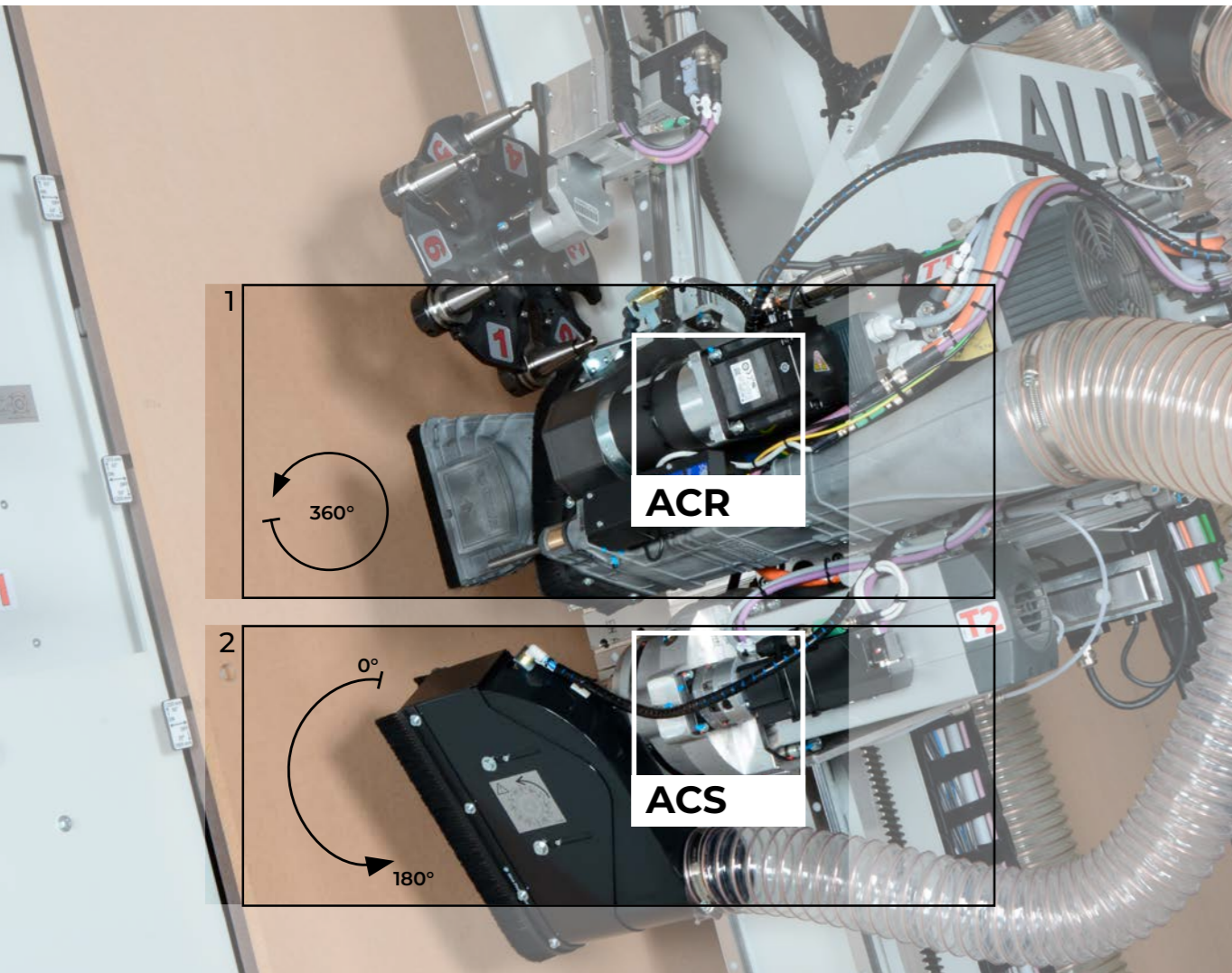
- Vacuum zones designed for standard ACM panels
- Easy Release for processed panels (patent pending)
- No risk of panels falling during off-loading
- Vacuum pumps integrated inside the machine frame: less space required and reduced noise
- Possibility of resuming work on panels that have not been unloaded without losing the references



- Vacuum panel holding with MDF sacrificial board.
- Automatic vacuum zone selection by control panel (6, 8, 12 zones).
- Manual vacuum zone selection (24, 32, 48 zones) as per ACM panel height (1.000; 1.250; 1.575; 2.050 mm - 39"; 50"; 62"; 80").



- Dry vacuum pumps (Made in Germany)
- 4221 VGroove 1x250m<sup>3</sup>/h pump Std
- 6321 VGroove 2x250m<sup>3</sup>/h pump Std
- 10121 VGroove 4x250m<sup>3</sup>/h pump Std



### R8A - TC6L

ELECTROSPINDLE  
FOR FLUTE TOOLS  
AND AGGREGATES

- High-efficiency electrospindle
- High-resistance ceramic bearings
- Power 8 kW - up to 24000 RPM - Electroventilated
- Rotary tool changer ( flute tools) 6 positions ISO 30 Cones - Collet ER32
- Numerical controlled integrated swarf collection hood (patent pending)

#### ACR OPTION

- Fourth positioning Axis 0-360° to cut in any direction with aggregates

### VGROOVE V175 / S200 / S250

INDEPENDENT AND SEPARATED ANGULAR ELECTROSPINDLE FOR GROOVING / CUTTING AT HIGH SPEED

- Power 5 kW - up to 8000 RPM
- Carbide Vgrooving cutterhead ø175mm (Std)
- Integrated dust collection hood
- Sizing cuts on HPL with ø 200 mm - 8" or ø 250 mm - 10" saw blade
- Fourth positioning Axis from 0 to 180° for Vgrooving disc or sawblade

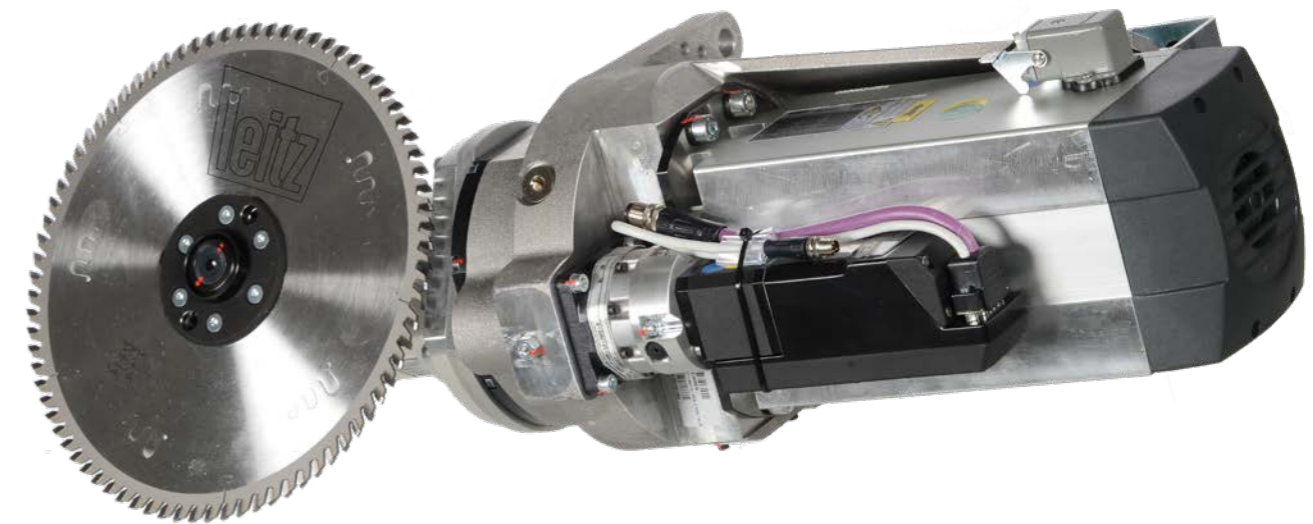
I AM DOUBLE-HEADED

### The unit

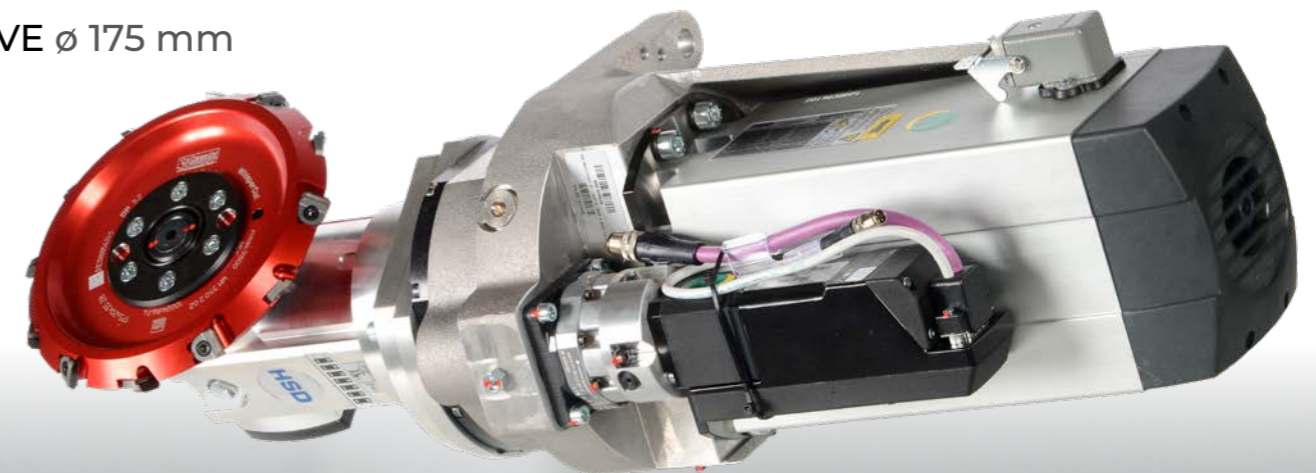
## VGroove V175 / S200 / S250

- Direct power to the tool (no aggregate)
- High speed processing
- Ready to go (no tool change)
- Longer tool lifespan compared to flute tools
- Dedicated dust collection hood

SAW BLADE ø 200 mm - ø 250 mm



VGROOVE ø 175 mm

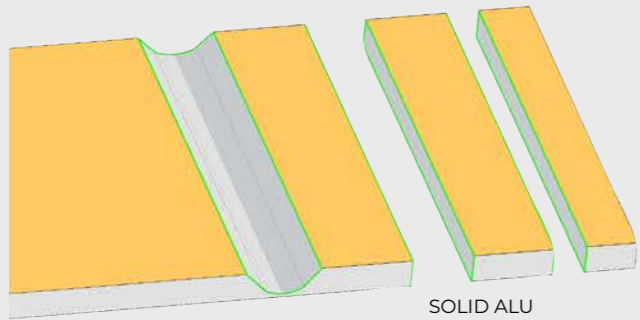
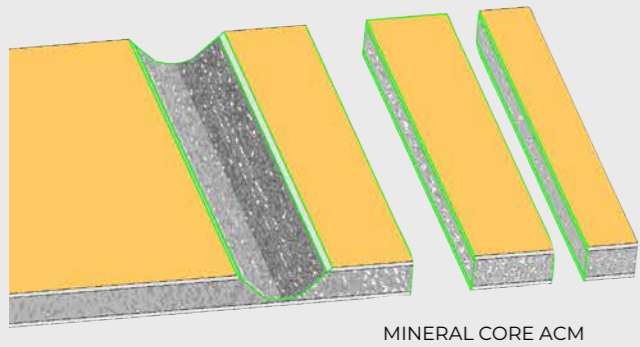
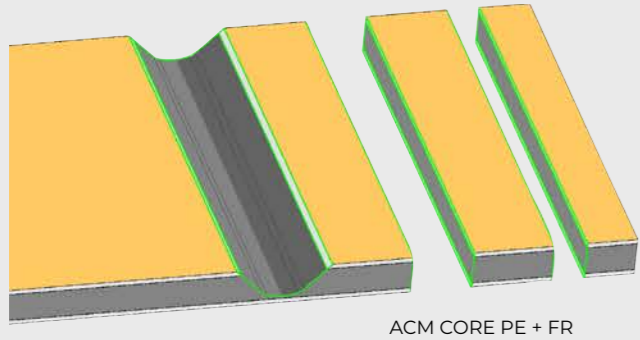


**leitz** V GROOVE  
WHISPERCUT® MADE BY LEITZ

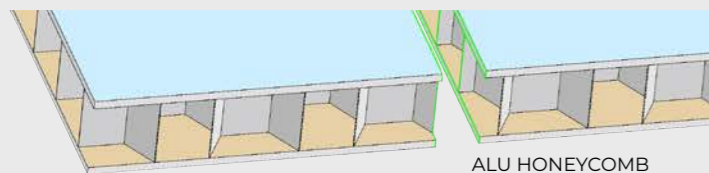
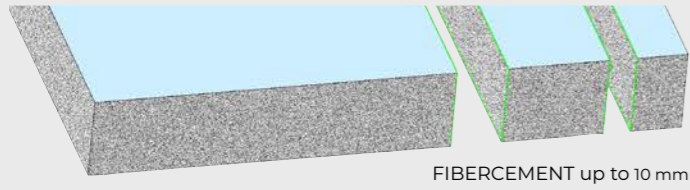
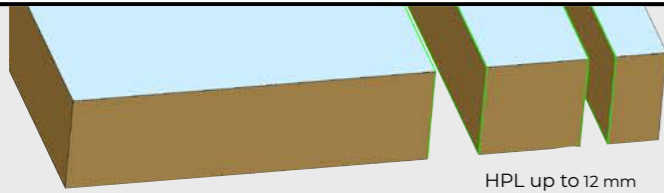
**3A**  
COMPOSITES  
ALUCOBOND A2  
3A® COMPOSITES

# MATERIAL

VGroove with Rotary cutterhead    Flute tool route    Sawblade cut



\* Indicative speeds for an optimal quality/duration ratio



# VGroove

DIAMOND



VGROOVE \_ Ø 175 mm Z 6+6  
DIAMOND (Opt)

\*processing speed:  
up to ca. 50 mt/1' - 1968 IPM (ACM core PE + FR)  
up to ca. 15 mt/1' - 590 IPM ft/1' (Mineral core ACM)  
up to ca. 10 mt/1' - 393 IPM (Solid Alu)

AGGREGATE  
WITH VGROOVE  
WHISPERCUT  
Ø 125 mm Z 5+5 (Opt)

\*processing speed:  
up to ca. 30 mt/1' - 1181 IPM (ACM core PE + FR)  
up to ca. 12 mt/1' - 472 IPM (Mineral core ACM)  
up to ca. 8 mt/1' - 314 IPM (Solid Alu)



# FLUTE TOOL



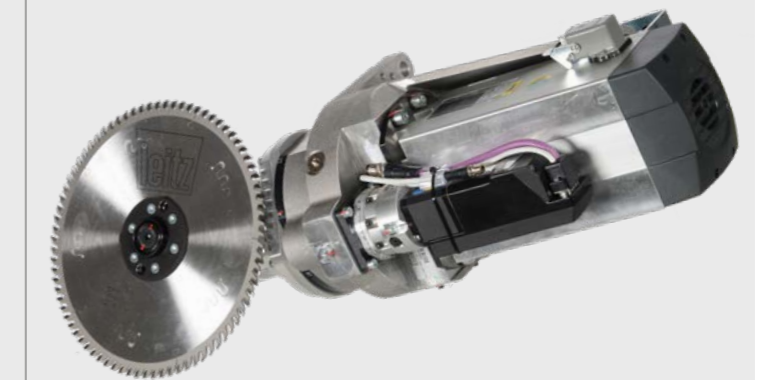
WITH SUPERIOR COATING BY CROWN NORGE

\*processing speed:  
up to ca. 16 mt/1' - 630 IPM (ACM core PE + FR)  
up to ca. 5 mt/1' - 196 IPM (Solid Alu)



\*processing speed:  
up to ca. 10 mt/1' - 393 IPM (ACM core PE + FR)  
up to ca. 6 mt/1' - 236 IPM (Mineral core ACM)  
up to ca. 4 mt/1' - 157 IPM (Solid Alu)

# CIRCULAR SAWBLADE

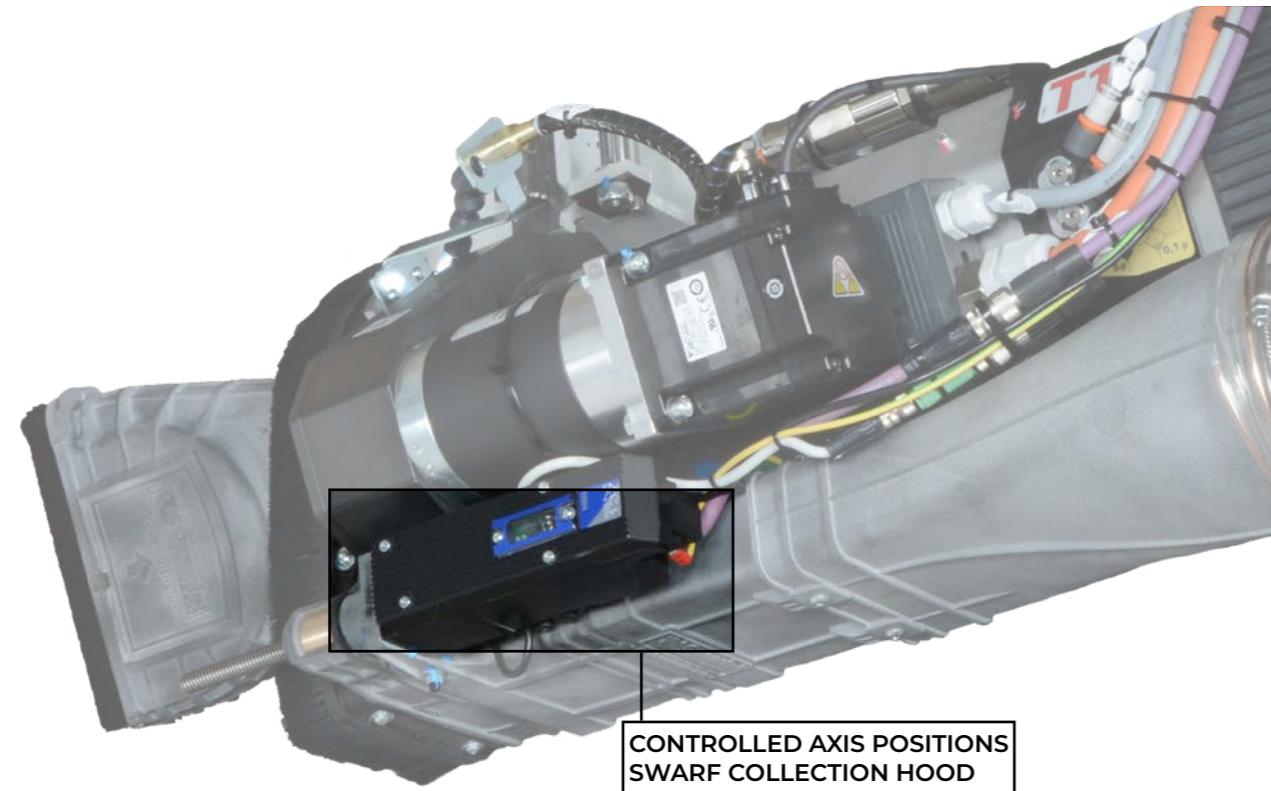


\*processing speed Ø 200 mm:  
up to ca. 50 mt/1' - 1968 IPM (ACM core PE + FR)  
up to ca. 20 mt/1' - 788 IPM (Mineral core ACM)  
up to ca. 10 mt/1' - 393 IPM (Solid Alu)

I AM VERSATILE AND FAST

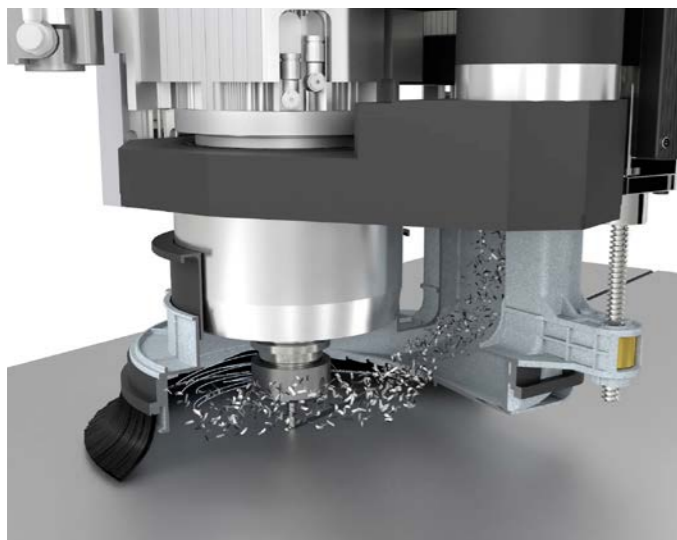
## Double dust collection (PATENT PENDING)

- Swarf collection for flute tool routing
- Numerical Control axis positions swarf collection main hood
- Swarf collection whatever the direction of the aggregate

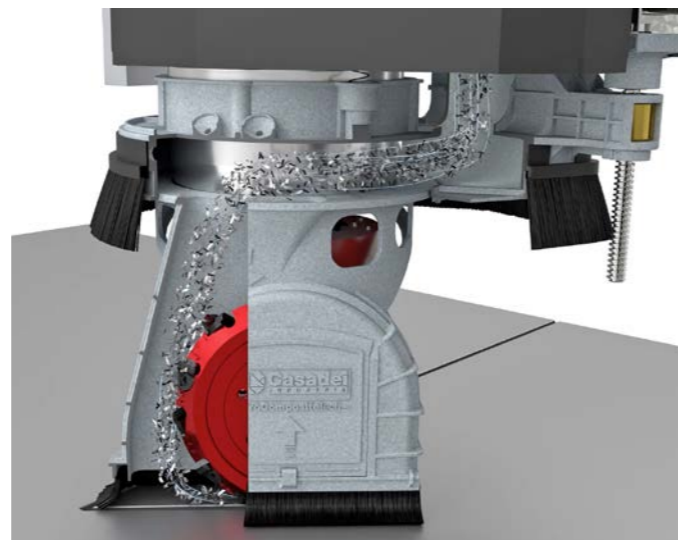


I KEEP CLEAN

Swarf collection hood with multiple positioning during processing (Patent Pending)



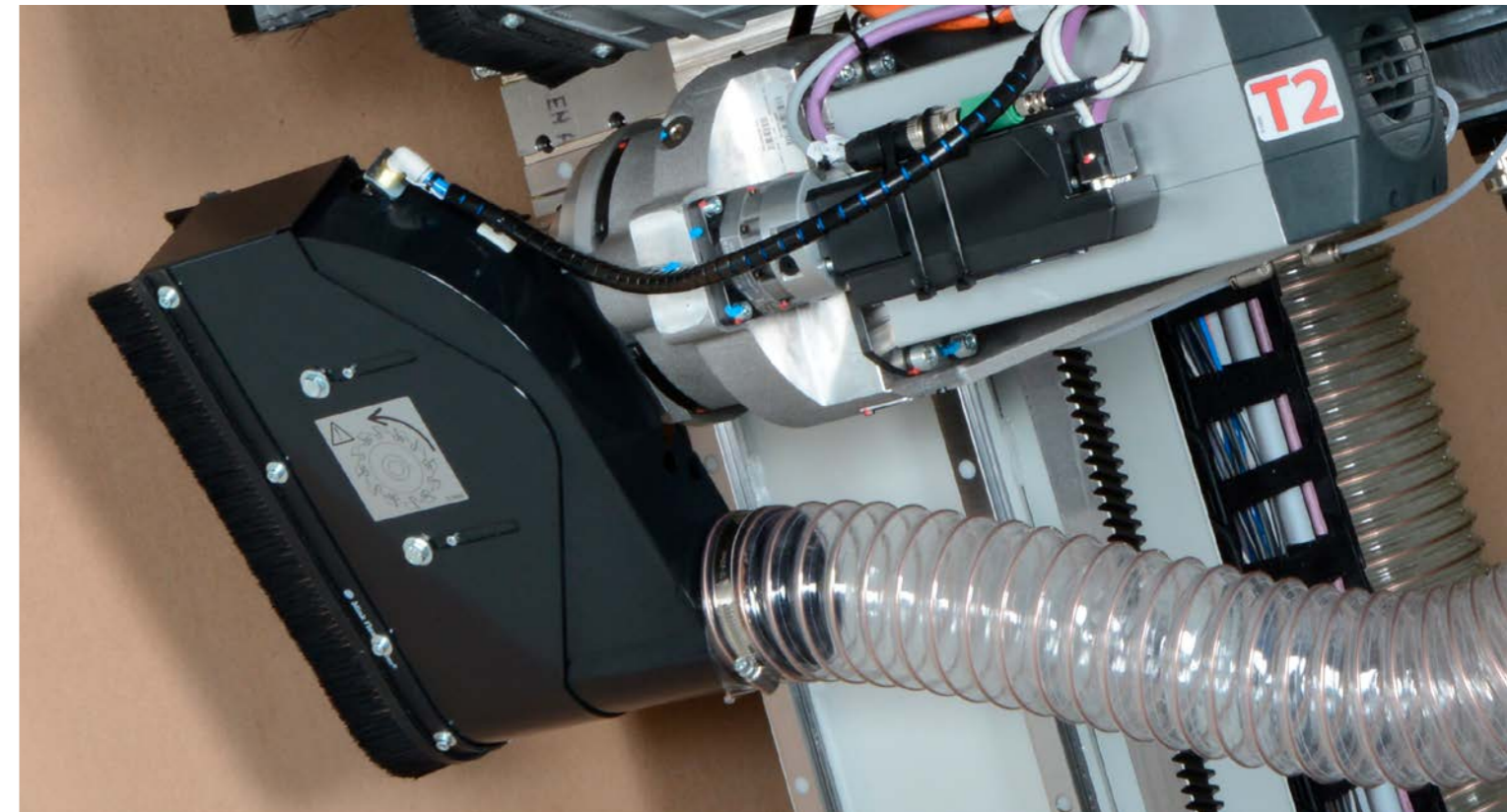
Processing with flute tool



Processing with aggregates

## VGROOVE Unit Dust Collection

- Collection of fine dust while processing fibercement or HPL
- Protection against sudden ejection
- Adjusts to all facade panels



V-Grooving on ACM



HPL cut



Fibercement cut



**No risk of dust inhalation!**



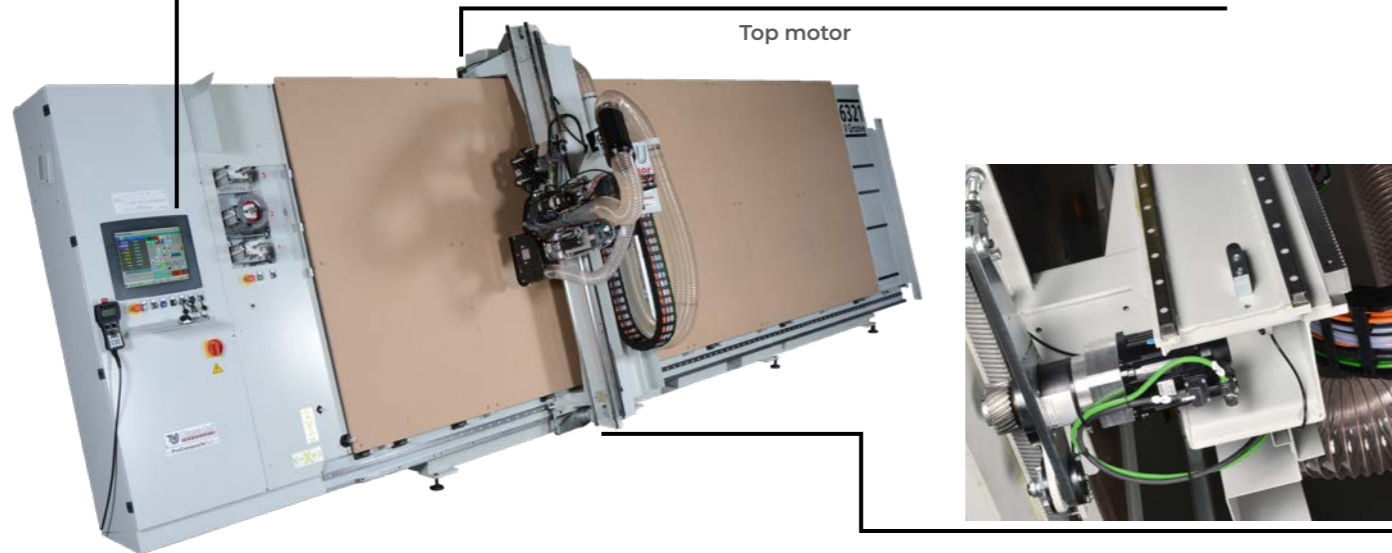


## The Vertical way

- Table flatness is guaranteed by machining the frame vertically
- The robust vertical design absorbs more vibration which results in less chatter marks during processing that will extend tool life
- Operator's safety is increased by side protection barriers and a safety light curtain



Electrical box and control panel integrated into machine frame



Top motor

Lower motor

I WAS MADE THIS WAY...



### Hand-held remote control (Opt)

- 4 lines and 16 characters
- Axis manual control "JOG"
- Speed control "Override"



### Automatic presetter for tool length

- Fully automatic
- Measurement tolerance  $\pm 0.02 \text{ mm} \pm 0.0007 \text{ In}$



### Industrial numerical control

- Up to 7 axis controlled (X,Y,Z interpolating)
- 17" LCD colour monitor
- Ethernet connection, USB, mouse



### Origin pop-up stops

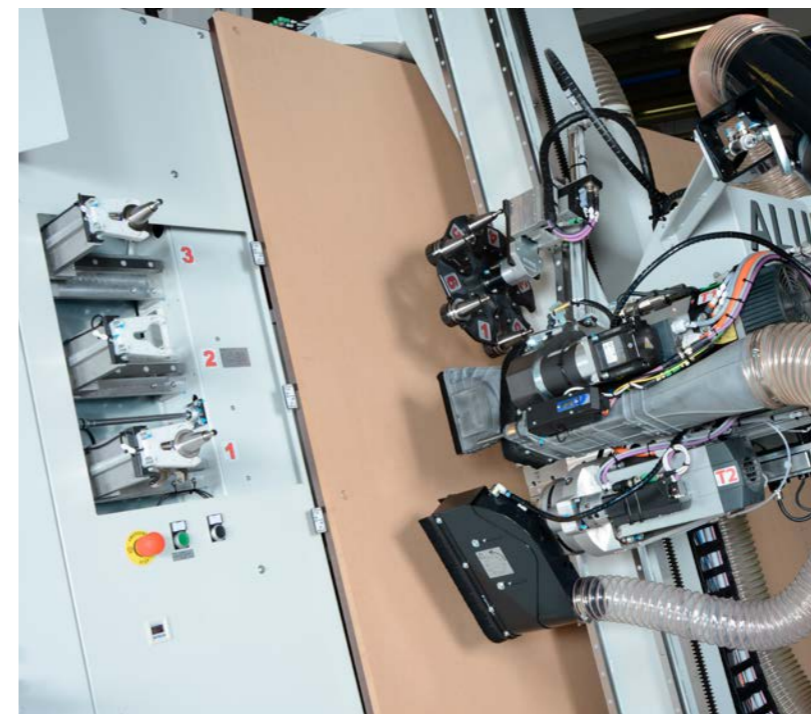
- Bearing for easy panel sliding
- Pneumatic control with safety sensor connected to PLC



### Automatic lubrication for linear guides



### Automatic lubrication for tools (Opt.)



### Tool changer

- 9+1 available tools with automatic change
- Cone presence sensor

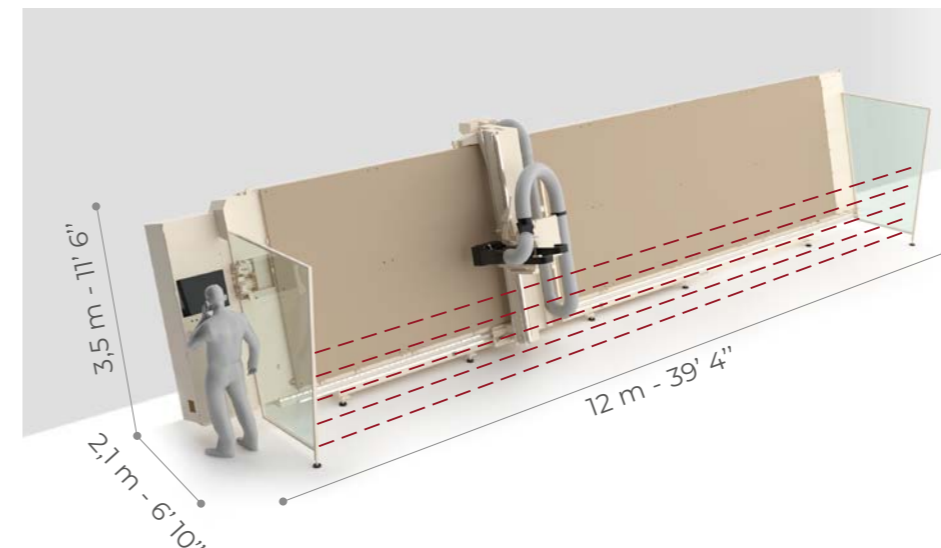
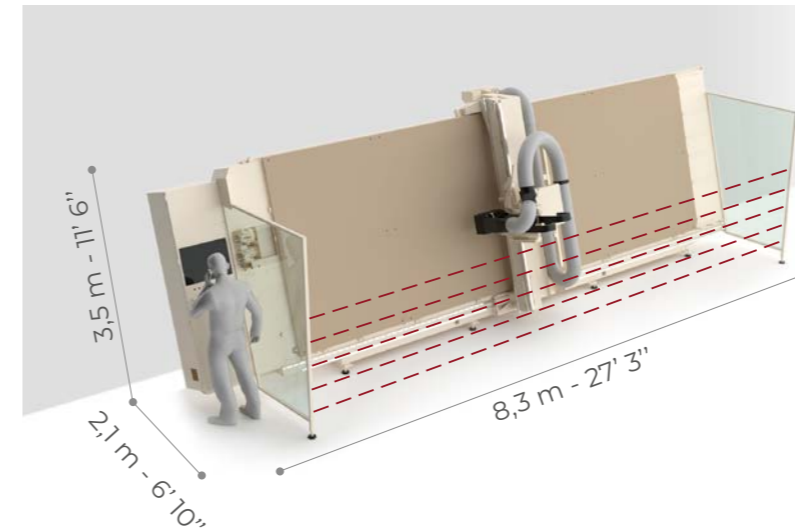
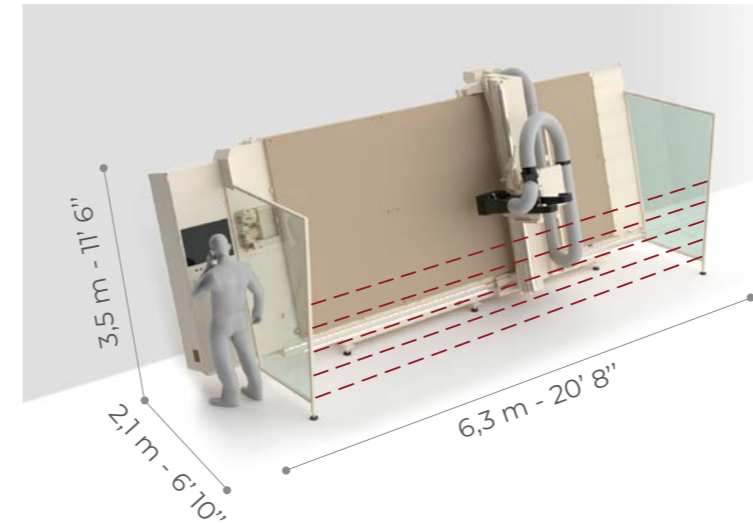


... AND I DO NOT MISS ANYTHING

# TECHNICAL FEATURES

	ALU RANGER VGroove <b>4221</b>	ALU RANGER VGroove <b>6321</b>	ALU RANGER VGroove <b>10121</b>
Working table (mm) Working table (imperial)	X 4200 - Y 2100 - Z 90 X 14' - Y 6' 11" - Z 3' ½	X 6300 - Y 2100 - Z 90 X 20' 8" - Y 6' 11" - Z 3' ½	X 10100 - Y 2100 - Z 90 X 33' 2" - Y 6' 11" - Z 3' ½
Panel holding, vacuum by working table with MDF sacrificial board (selection by PLC)	6 zones AUTO	8 zones AUTO	12 zones AUTO
Panel holding vacuum by zones combinations with manual activation (1000, 1250, 1575, 2050 mm) (39" - 50" - 62" - 80")	24	32	48
Vacuum pump	1 x 250 m <sup>3</sup> /h 1 x 147 Cfm	2 x 250 m <sup>3</sup> /h 2 x 147 Cfm	4 x 250 m <sup>3</sup> /h 4 x 147 Cfm
Axis speed (Rapid)	X 50 - Y 30 - Z 10 mt/min X 164' - Y 98' - Z 32' ft/1'		
Electrospindle R8A	8 Kw - collet ER32 up to 24000 g/min		
Automatic tool changer - head side TC6L	Rotary tool changer - 6 positions - ISO30 cones		
Automatic tool changer - working table side (for aggregates)	3 Std		
Routing head VGroove V175	5 Kw up to 8000 g/min		
Total power	ca. 17 KW	ca. 22 KW	ca. 35 KW
Max weight of panel under process	ca. 250 Kg ca. 550 Lb	ca. 350 Kg ca. 772 Lb	ca. 500 Kg ca. 1102 Lb
Total weight	ca. 2700 Kg ca. 5950 Lb	ca. 3600 Kg ca. 7930 Lb	ca. 5000 Kg ca. 11020 Lb

We reserve the right to make modifications. The machine can include equipment not shown in standard version.  
For photographic reasons some units are without protections. The use of machine must be made with all protections installed.



## ALU RANGER **4221** VGroove

WORKING TABLE  
X 4200 - Y 2100 - Z 90 mm  
X 14' - Y 6' 11" - Z 3' ½  
SURFACE OCCUPIED  
L 6,3 m - P 2,1 m - H 3,5 m  
L 20' 8" - P 6' 10" - H 11' 6"  
WORKING TABLE SURFACE  
8,8 m<sup>2</sup> - 95 sq ft  
SURFACE OCCUPIED  
ca. 13 m<sup>2</sup> - 140 sq ft

## ALU RANGER **6321** VGroove

TABLE SURFACE  
X 6300 - Y 2100 - Z 90 mm  
X 20' 8" - Y 6' 11" - Z 3' ½  
SURFACE OCCUPIED  
L 8,3 m - P 2,1 m - H 3,5 m  
L 27' 3" - P 6' 10" - H 11' 6"  
WORKING TABLE SURFACE  
14 m<sup>2</sup> - 151 sq ft  
SURFACE OCCUPIED  
ca. 17,5 m<sup>2</sup> - 188 sq ft

## ALU RANGER **10121** VGroove

TABLE SURFACE  
X 10100 - Y 2100 - Z 90 mm  
X 33' 2" - Y 6' 11" - Z 3' ½  
SURFACE OCCUPIED  
L 12 m - P 2,1 m - H 3,5 m  
L 39' 4" - P 6' 10" - H 11' 6"  
WORKING TABLE SURFACE  
21 m<sup>2</sup> - 226 sq ft  
SURFACE OCCUPIED  
ca. 25,2 m<sup>2</sup> - 271 sq ft



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