



— ProCompositeTech —



Alu Bender

Automatic multipurpose **edge milling/bending machine** for the edges of architectural panels

Automatic multipurpose Milling / Bending machine to process straight edges on panels for architectural facades, transport industry, Interior Design and Visual Communication



"College Football Hall of Fame", Atlanta, Georgia, Usa.
Made by MillerClapperton using ALU BENDER



COMPATIBLE PANELS

ACM / ACP
PE CORE
MINERAL CORE

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

.....

ALU
HONEYCOMB

- ALUCORE®
- LARCORE®
- PLASCORE®
- STARCELL®
- CELCOMPONENTS®
- HONYLITE®

.....

ALUMINIUM
CORRUGATED CORE

- METAWELL®
- DOLUFLEX®

.....

FIBER CEMENT

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

.....

HPL

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

.....

I AM "THE" ALU BENDER

Alu Bender is:

“**multifunctional** adj. [comp. by multi- and functional].
-1 adj. having or fulfilling several functions, versatile, as for objects, machines, industrial plant...”

ACM / ACP PE CORE MINERAL CORE

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

ARCHITECTURE, TRANSPORT, INTERIOR DESIGN, VISUAL COMMUNICATION

The “non cassette” panels when processed leave sharp edges, exposed to atmospheric agents and are not esthetically pleasing. A wider spectrum of applications can be considered when the edges are covered and protected.

Alu Bender mills the panel and bends the exposed skin, covering the core and protecting it from atmospheric agents. The bending radius on the edge is perfect for all types of aluminium composite panels.

HPL

TRESPA®
MAX EXTERIOR®
POLYREY®
RESOPAL®
FUNDERMAX®

VENTILATED FACADES, INTERIOR DESIGN

Processing of this material can create chatter-marks, chipping, edge opacity and sharp corners. Tying up your Machining Centre or CNC to clean up the edges is inefficient and will inevitably create production bottlenecks.

The Alu Bender is a quick and easy solution to create a perfect edge finish and will increase production. In one simple processing cycle, it is possible to obtain a clean finish and bevel both top and bottom of the edge.

ALU HONEYCOMB

ALUCORE®
LARCORE®
PLASCORE®
STARCELL®
CELCOMPONENTS®
HONYLITE®
.....

VENTILATED FACADES, TRANSPORT

The alu honeycomb core is not corrosion resistant. The exposure to atmospheric agents can cause its deterioration.

The Alu Bender by milling and bending one of the two skins improves the protection of the core from atmospheric agents and covers it up.

The bending radius on the edge is perfect for all types of aluminium composite panels.

TRANSPORT

The alu honeycomb panels are coupled with aluminium profiles to make partition walls. The crushing along the edges allows to insert panels into “H” profiles.

The Alu Bender automatically crushes the panel edge with amazing consistency and accuracy and can automatically feed panels without any length restrictions.

FIBER CEMENT

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

VENTILATED FACADES, INTERIOR DESIGN

When cutting with a circular saw blade; a beveling process to the corners of the edge is required to avoid its fragile state. In addition many manufacturers require that a special sealant be applied to the exposed edges to protect the panels from moisture. Currently this is done manually and is very time consuming.

The Alu Bender will bevel both top/bottom of the edge and automatically applies the LUKO® sealant (or similar), in just one single processing cycle!

ALUMINIUM CORRUGATED CORE

METAWELL®
DOLUFLEX®
.....

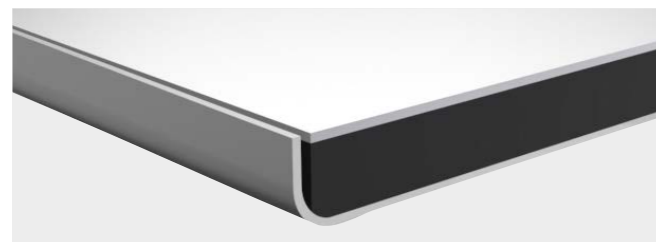
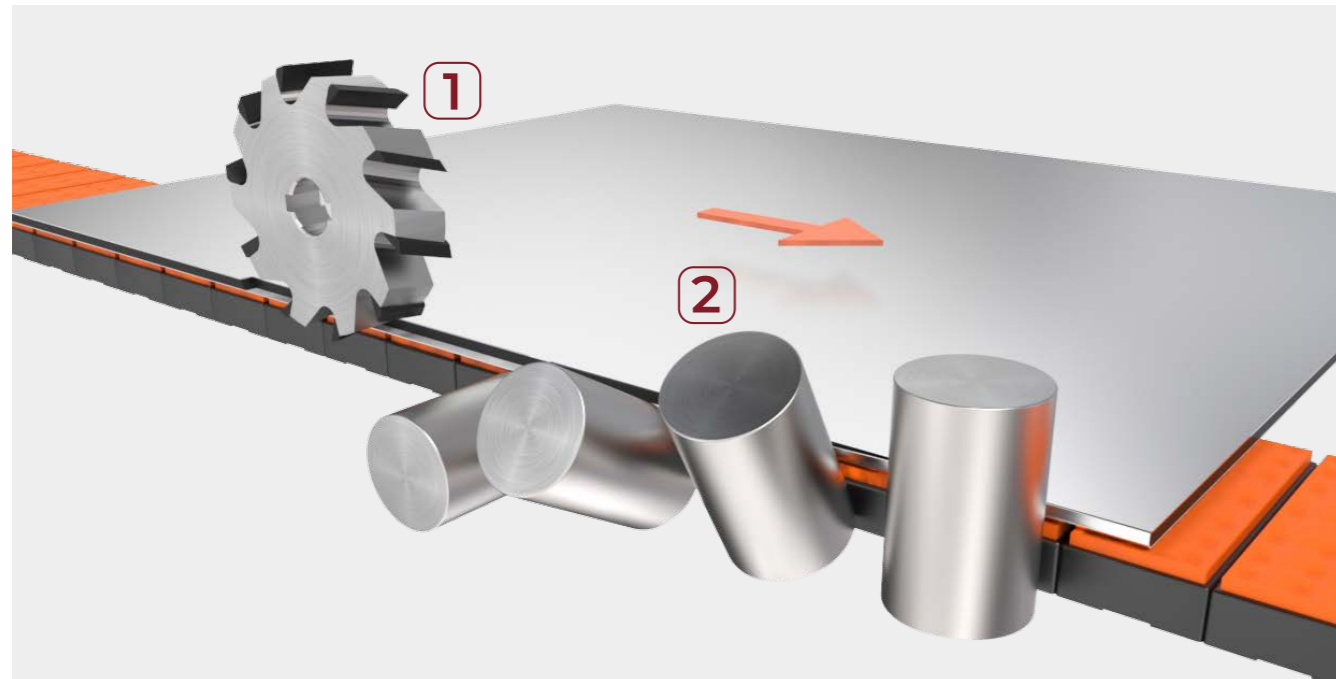
VENTILATED FACADES, TRANSPORT

The aluminium corrugated core may not be treated as corrosion resistant. The exposure to atmospheric agents can cause its deterioration.

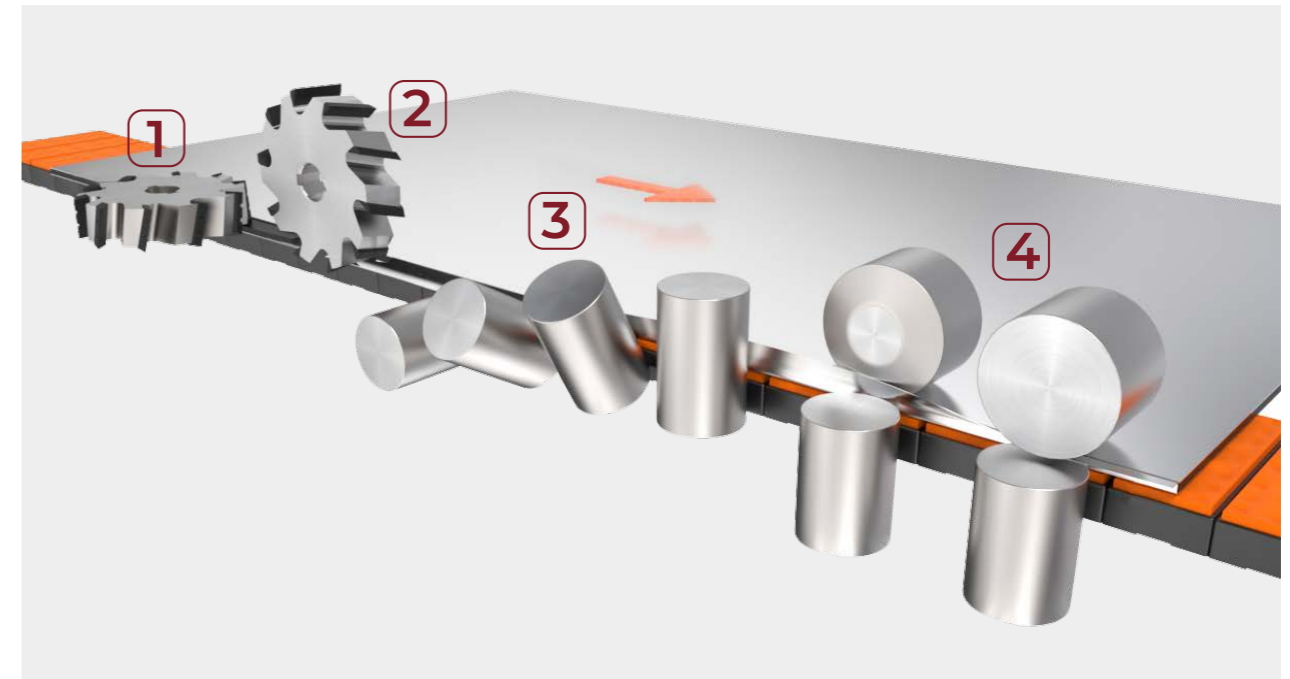
The Alu Bender by milling and bending one of the two skins improves the protection of the core from atmospheric agents and covers it up.

The bending radius on the edge is perfect for all types of aluminium corrugated core panels.

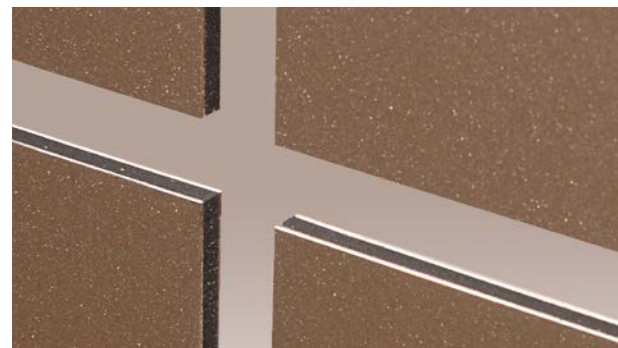
ACM / ACP PE CORE
MINERAL CORE



- ① Aluminium skin and core milling
- ② Bending from 0° to 90°



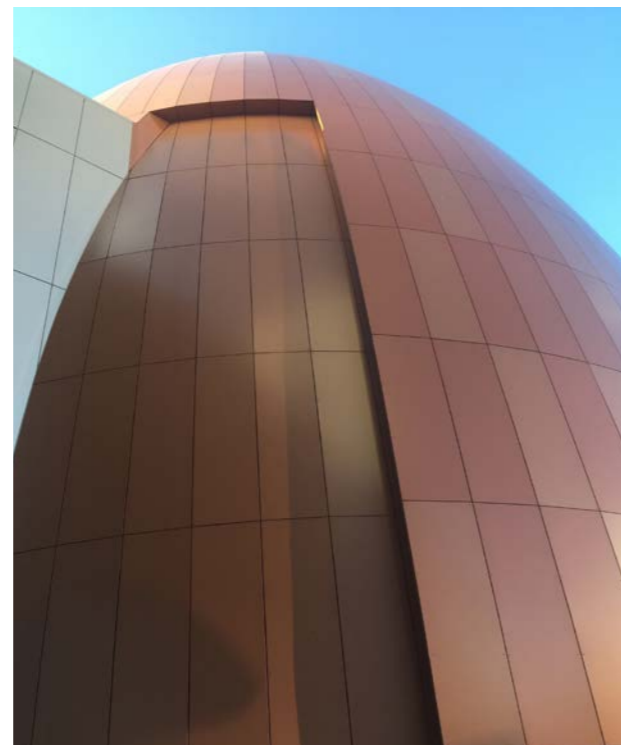
- ① Aluminium skin milling
- ② CORE milling
- ③ Bending from 0° to 90°
- ④ Double outside bending from 90° to 180° "Opt"



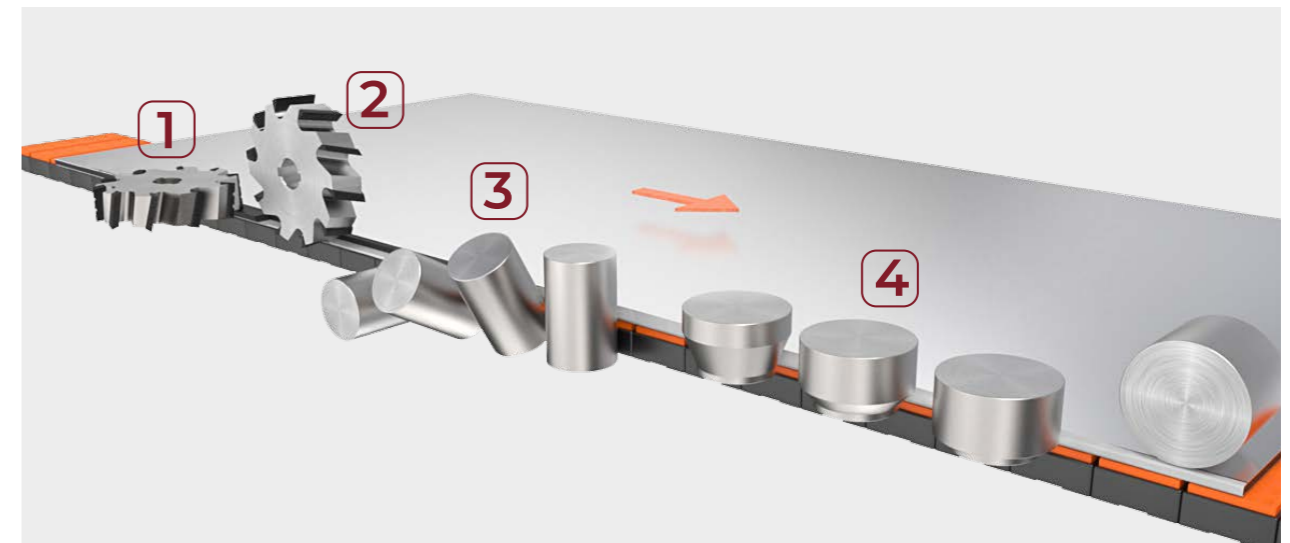
BEFORE



AFTER



"College Football Hall of Fame", Atlanta, Georgia, Usa.
Fabricated by MillerClapperton using the ALU BENDER



- ① Aluminium skin milling
- ② CORE milling
- ③ Bending from 0° to 90°
- ④ Double inside bending from 90° to 180° "Opt"

I PROCESS THE EDGE...


ARCHITECTURE

ALU HONEYCOMB



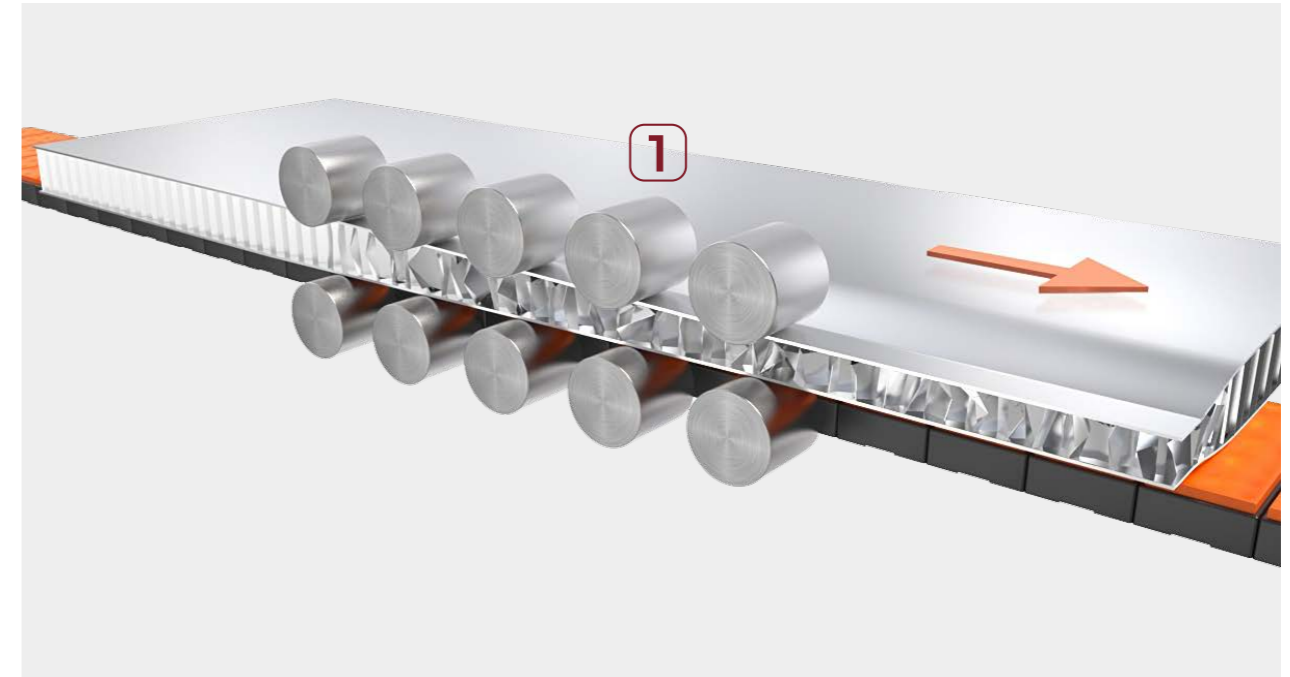
ALU HONEYCOMB PANELS AHP

Panel thickness min 6 mm - 15/64 - max 25 mm - 63/64
Skins thickness min 0,7 mm - 0,030" max 1 mm - 3/64

- 1 Aluminium skin milling
- 2 CORE milling and V milling for bending
- 3 Bending from 0° to 90°
-  Tool lubrication OPT.

TRANSPORT

ALU HONEYCOMB



ALU HONEYCOMB PANELS AHP

Panel thickness min 6 mm - 15/64 - max 60 mm - 2" 23/64
Skins thickness min 0,7 mm - 0,030" - max 1 mm - 3/64

- 1 Continuous crushing "Opt"



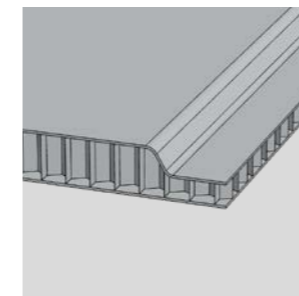
BEFORE



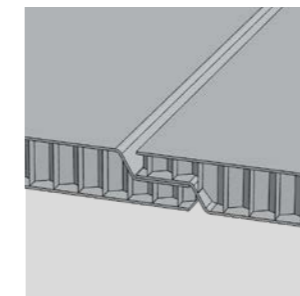
AFTER



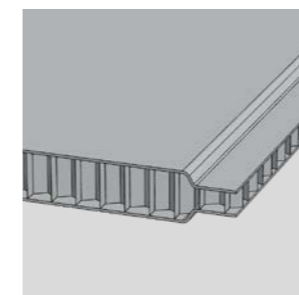
"Eperia" made with ALU BENDER



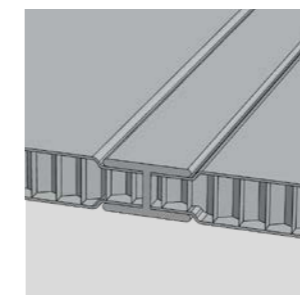
Asymmetric crushing



Coupled assembly



Symmetric crushing

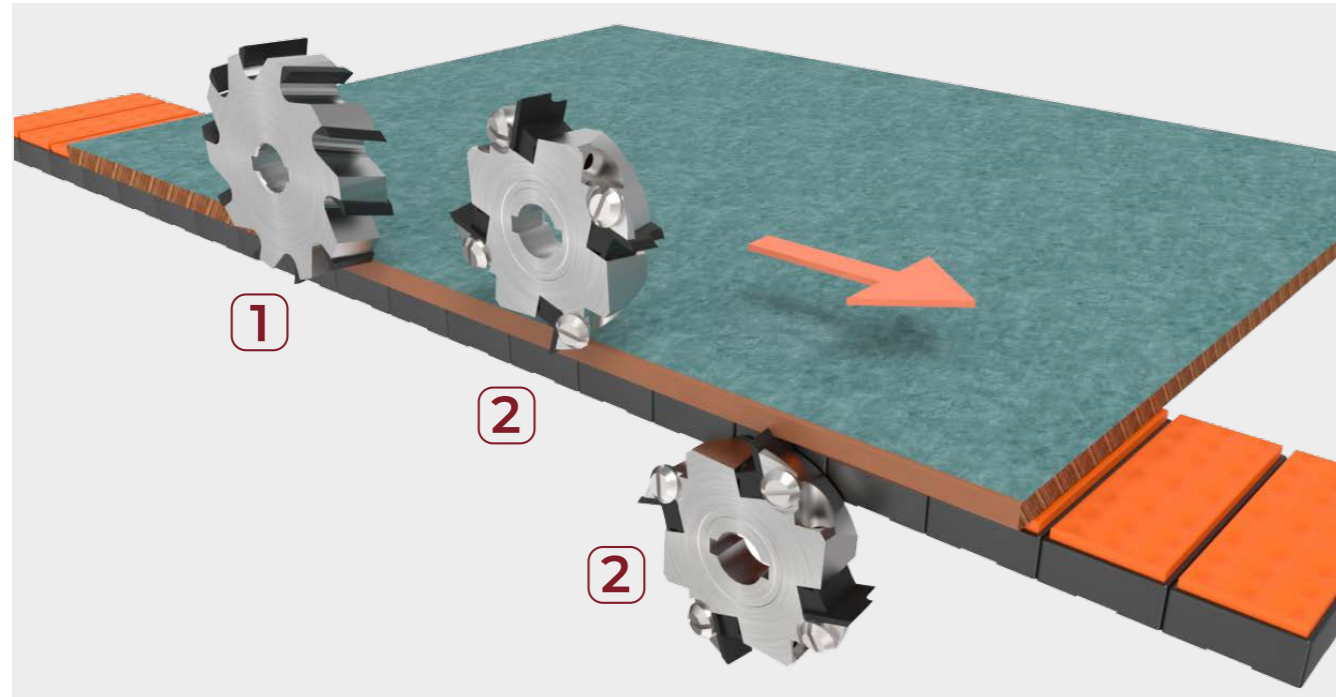


"H" profile assembly



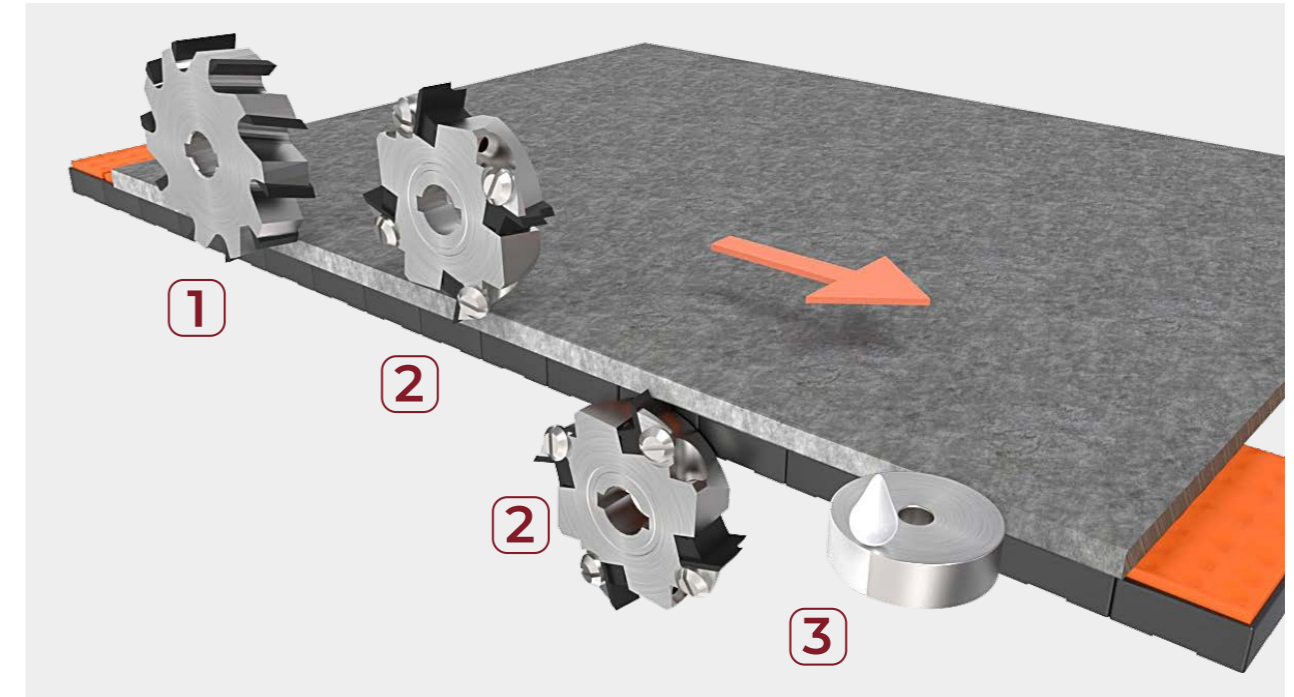
I IMPROVE THE EDGE...

HPL

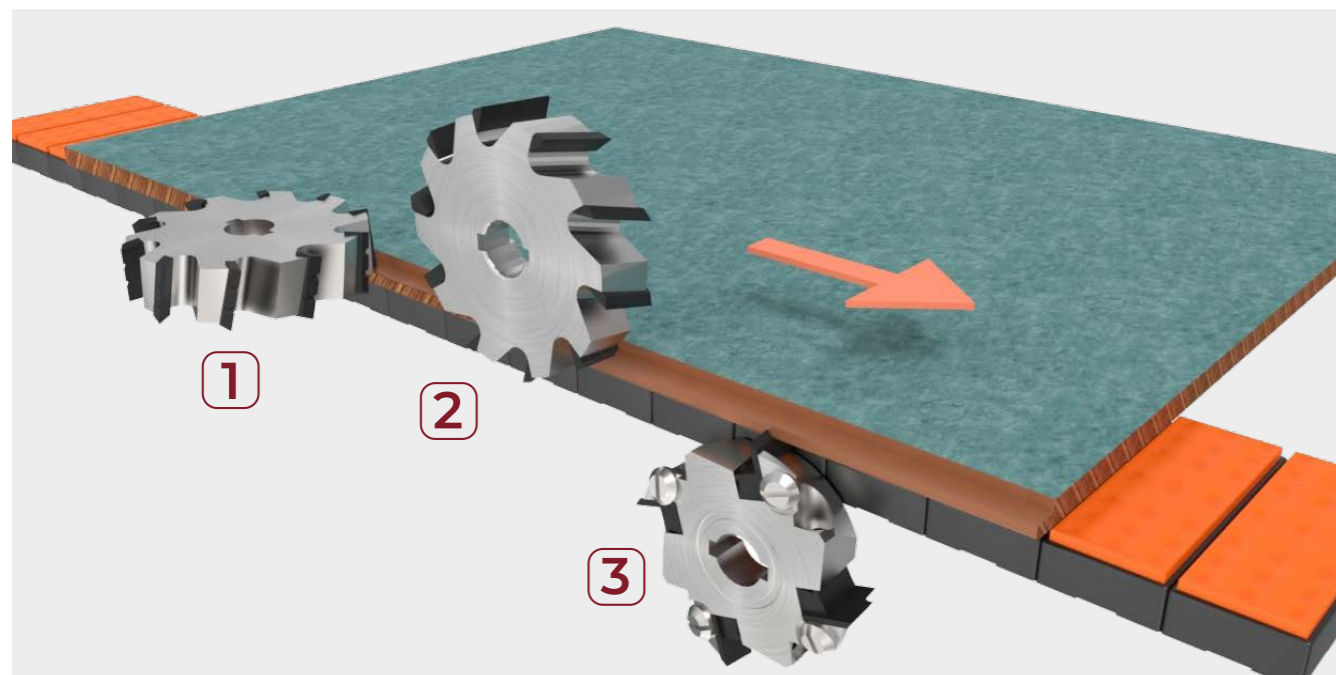


- ① Milling/Cleaning of the edge
- ② Top - Bottom beveling "Opt"

FIBER CEMENT



- ① Milling/Cleaning of the edge
- ② Top - Bottom beveling "Opt"
- ③ Automatic spreading of the LUKO® liquid "Opt"



- ① Milling for overlapping
- ② Milling/Cleaning of the edge
- ③ Bottom beveling "Opt"

Fiber Cement facade



I PROTECT THE EDGE...

Alu Bender

Automatic multipurpose **edge milling/bending machine** for the edges of architectural panels

BENDING UNIT



CRUSHING UNIT
"OPT"

The Crushing and Bending attachments are interchangeable.



	1,8 Kw T1 STD.	0,73 Kw T2 OPT.(4)	DIAMOND T2 STD.	OPT.(11)	STD.	OPT.(12)	OPT.(3)	OPT.(10)	LUKO OPT
ACM PE CORE	✓	-	✓	-	✓	✓	-	✓	-
ACM MINERAL CORE	-	-	-	✓	✓	✓	-	✓	-
ALU HONEYCOMB	✓	✓	✓	-	✓	-	-	-	-
HPL	✓	-	-	✓	-	-	✓	-	-
FIBROCEMENT	-	-	-	✓	-	-	✓	-	✓

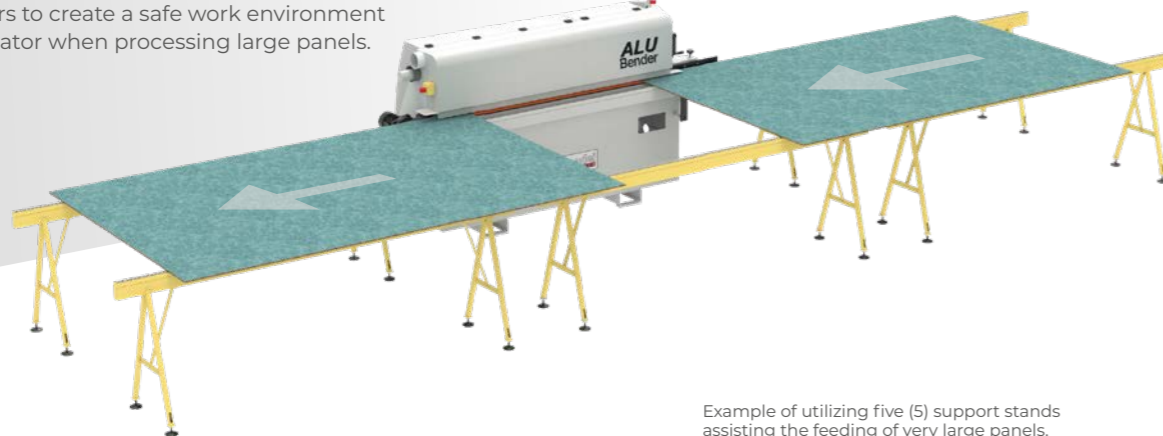
INDUSTRIAL PANEL FEEDING

- Non-slip pad guarantees a firm grip of the panel. Double row of rubber rollers are assembled on a very sturdy beam to manually adjust the pressure placed on the panel.
- High quality, powerful gearbox for an adjustable continuous feed.
- The linearity of the panel feeding is guaranteed by the sliding track which has been manufactured with high precision.
- Long term reliability and accurate precision due to the monobloc frame that is processed singulary on the machining centre.



Option for large panels

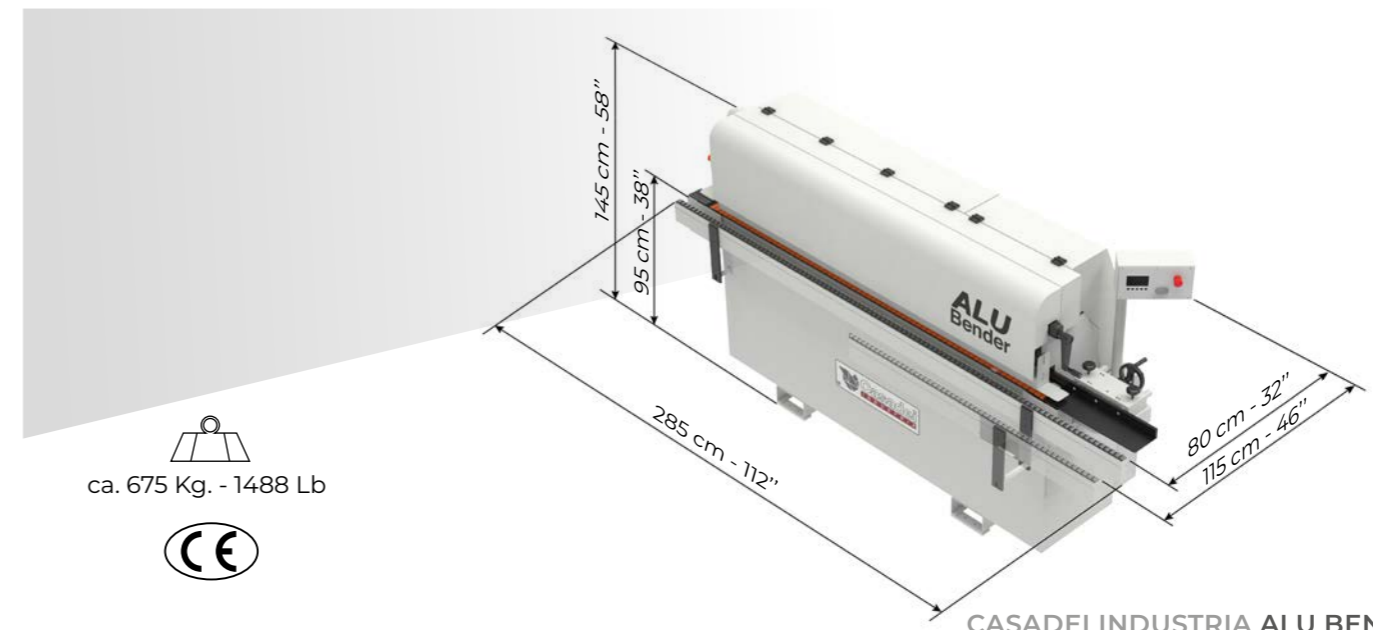
- To guarantee accuracy when processing larger panels, it will be necessary to employ additional supports when feeding the panels into the Alu Bender.
- The supports are equipped with adjustable feet and sliding rollers to create a safe work environment for the operator when processing large panels.



Example of utilizing five (5) support stands assisting the feeding of very large panels.

Panel thickness min-max ACM	min 3 mm - max 6 mm min (1/8) (15/64)
Skin thickness ACM	min 0,3 - max 0,5 mm min (0.012") - max (0.020")
Panel thickness min-max AHP (alu honeycomb) mills and bends	min 6 mm - max 8 mm (max 25 mm with option) (15/64) (5/16) (63/64)
Skin thickness AHP (alu honeycomb) mills and bends	min 0,5 mm - max 1 mm (0.020") (3/64)
Panel thickness min-max AHP (honeycomb) crushing	min 6 mm - max 60 mm (15/64) (2" 23/64)
Panel thickness min-max HPL	min 8 mm - max 12 mm (5/16) (15/32)
Panel thickness min-max Fiber cement	min 8 - max 10 mm (5/16) (25/64)
Min Width min	110 mm (4" 21/64)
Min Length min	120 mm (4" 23/32)
Panel Feeding Speed	adjustable on PLC from 2 to 6 mt/1' (from 7' to 20' for min)
Chain Feeding motor	0,73 Kw
Milling motor T1 Standard (pre-bending rollers)	1,8 Kw - 200 Hz. - 12000 RPM
Motor T2 Standard (post-bending rollers)	0,73 Kw - 200 Hz. - 12000 RPM
Flush and bevel trimming motors - top-bottom (post-bending rollers)	cad 0,22 Kw - 200 Hz. - 12000 RPM

We reserve the right to make modifications. The illustrated machines may show some units which are not included in the standard version. For photographic reasons some units are without protections. The use of the machine must be made with all protections installed.





— **ProComposite**Tech —

www.composite.casadei-industria.com

Casadei Industria ALU S.r.l.
via Tane di Baragone, 11
47899 Galazzano Serravalle
Repubblica di San Marino
Tel. +378 0549 900720