



— ProCompositeTech —



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Alu Bender

Automatic Milling / Bending machine

Automatic Milling / Bending machine to process straight edges on composite 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



TYPES OF PANELS

ACM / ACP
PE CORE
MINERAL CORE

- ALUCOBOND®
- LARSON®
- ALPOLIC®
- ARCONIC®
- ALUBOND®
- ALBOND®
- SIBALUX®
- VITRABOND®
- STACBOND®
- MULTIPANEL UK®
-

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®
MULTIPANEL UK®
.....

ARCHITECTURE, TRANSPORT, INTERIOR
DESIGN, VISUAL COMMUNICATION

The “non cassette” panels are processed as rectangles with sharp edges, exposed to atmospheric agents and not pleasant to look at. A wider choice of sectors can be considered by having the edge perfectly 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

The processing of this material can lead to evident blade chattermarks, chippings, edge opacity and sharp corners. The use of a Machining Centre improves the finish but causes productivity loss and high working costs.

Alu Bender allows a quick and perfect edge finishing with reduced working costs, without having to use a Machining Centre. In just one processing cycle it is possible to obtain a perfect surface finishing of the edge and bevel its corners.

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.

Alu Bender carries out automatically with precision the crushing, processing continuously on any length.

FIBER CEMENT

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

VENTILATED FACADES,
INTERIOR DESIGN

When cutting with a circular saw blade, a further bevelling process to the corners of the edge needs to be done to avoid its fragility.

The edge needs an additional manual treatment with a special liquid against humidity.

Alu Bender bevels both corners of the edge and automatically applies the LUKO® liquid or similar, in just a single processing cycle.

ALUMINIUM CORRUGATED CORE

METAWELL®
DOLUFLEX®
.....

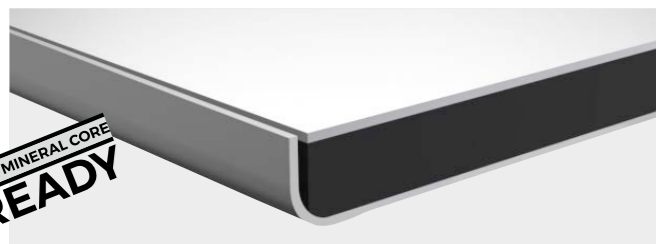
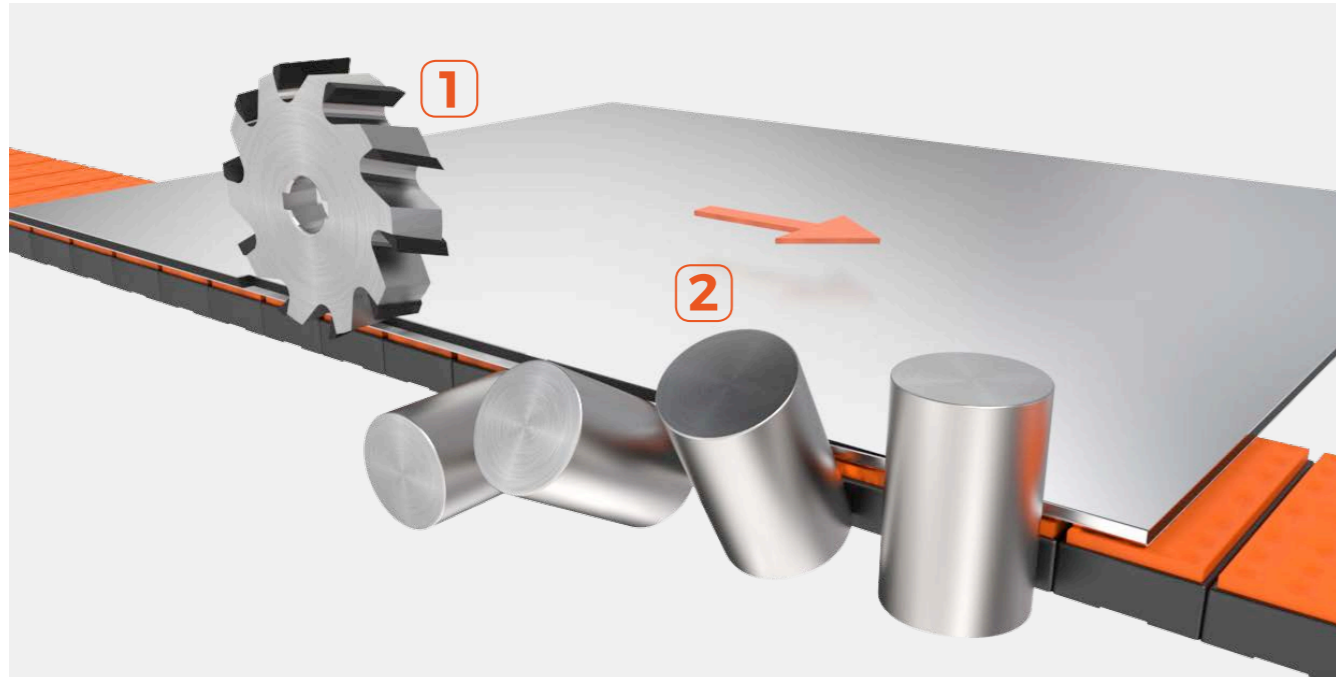
VENTILATED FACADES,
TRANSPORT

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

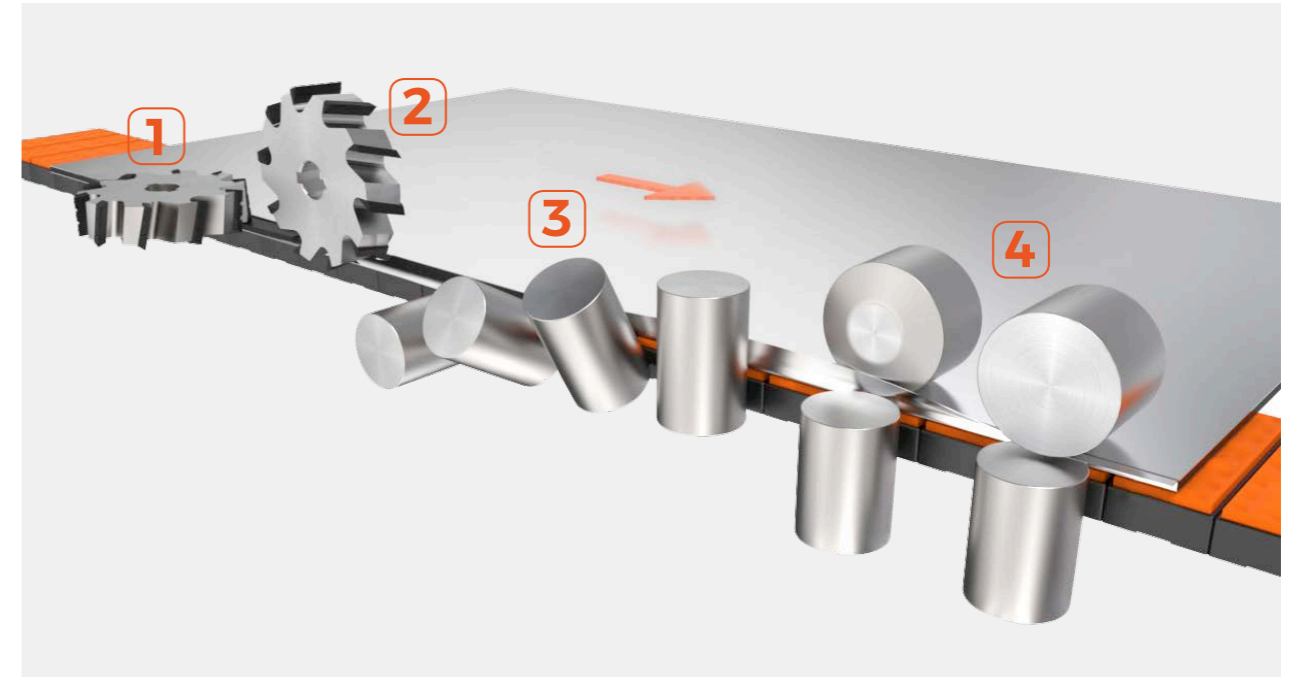
The Alu Bender by milling and bending one of the two skins improves the protection of the core from atmospheric agents and covers it up.

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

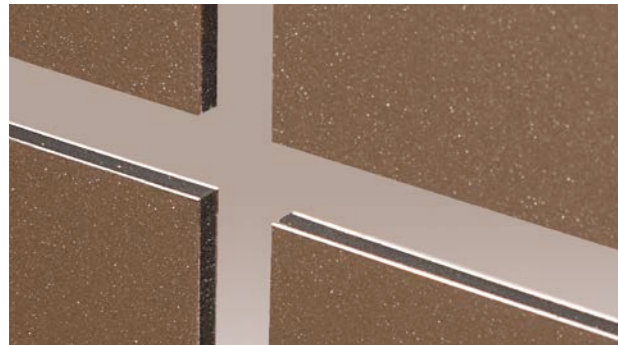
ACM / ACP PE CORE
MINERAL CORE



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



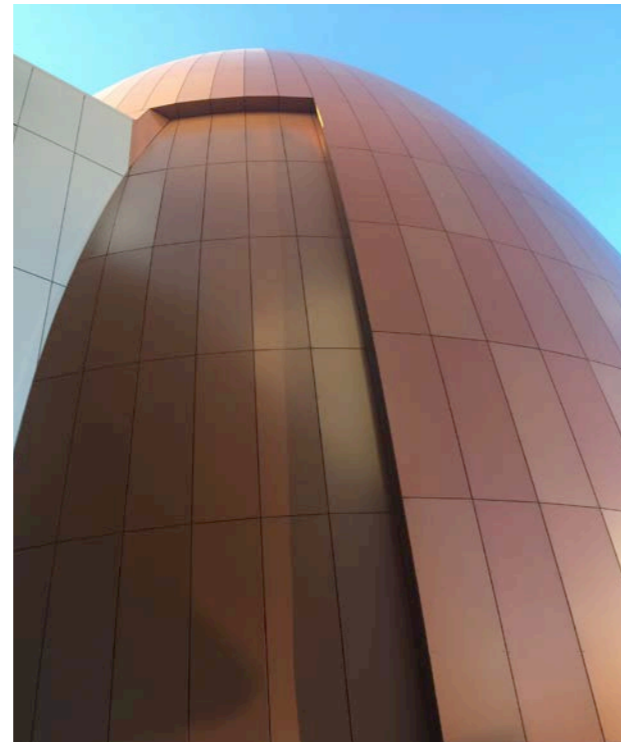
- 1 Aluminium skin milling "Opt"
- 2 CORE milling
- 3 Bending from 0° to 90°
- 4 Double outside bending from 90° to 180° "Opt"



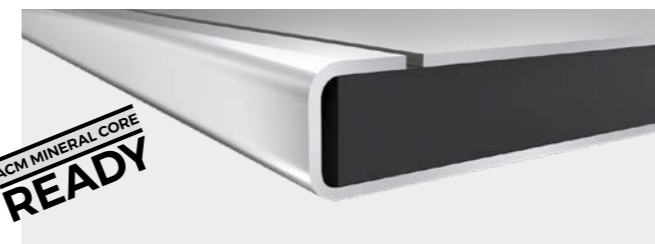
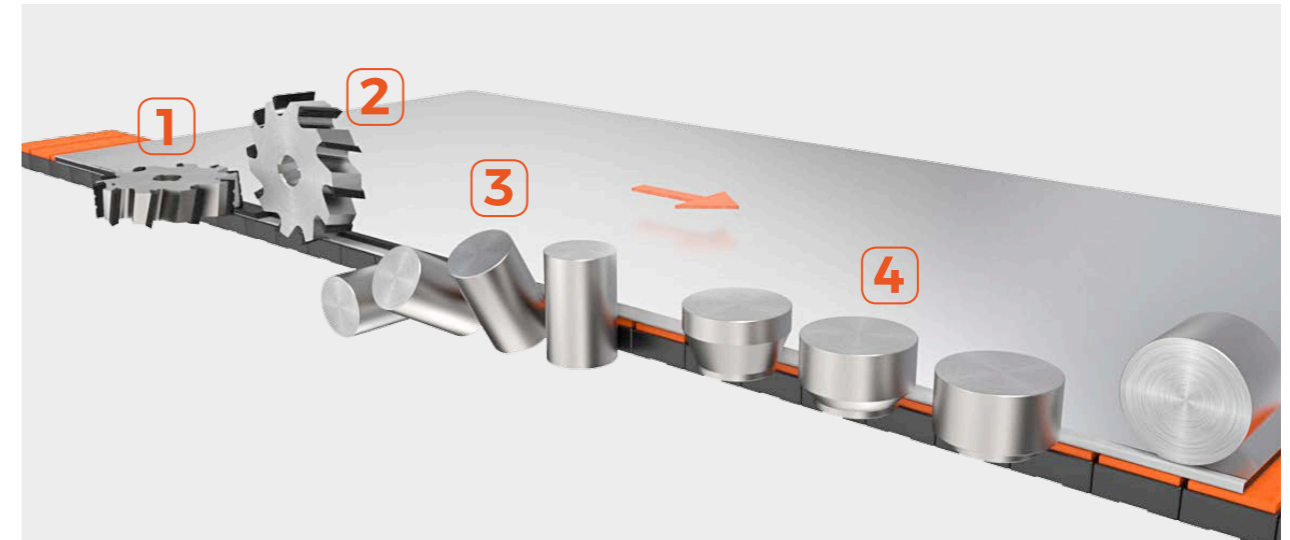
BEFORE



AFTER



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



- 1 Aluminium skin milling "Opt"
- 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
 min 6 - 15/64 - max 25 - 63/64 - Skins min 0,7 - 0,030"
 max 1 mm - 3/64

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



BEFORE



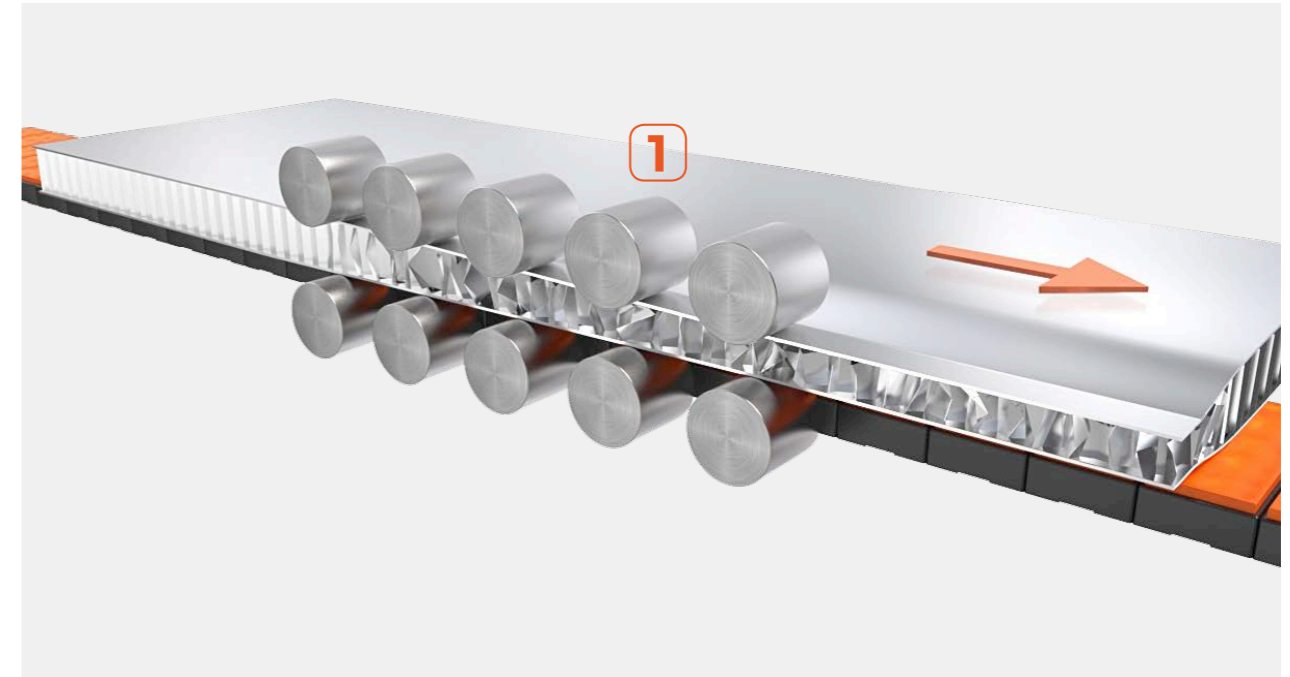
AFTER



"Eperia" made with ALU BENDER

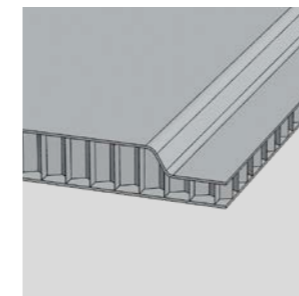
TRANSPORT

ALU HONEYCOMB

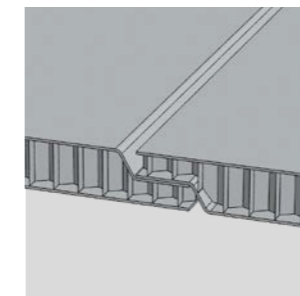


ALU HONEYCOMB PANELS AHP
 min 6 - 15/64 - max 60 - 2" 23/64 - Skins min 0,7 - 0,030"
 max 1 mm - 3/64

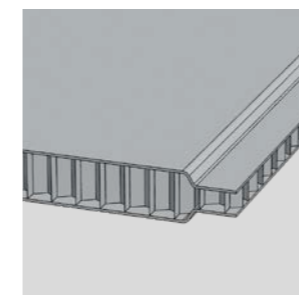
- 1 Continuous crushing "Opt"



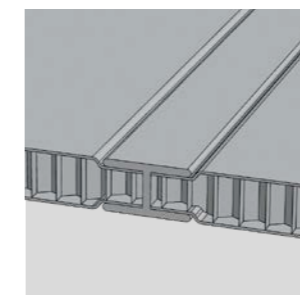
Asymmetric crushing



Coupled assembly



Symmetric crushing

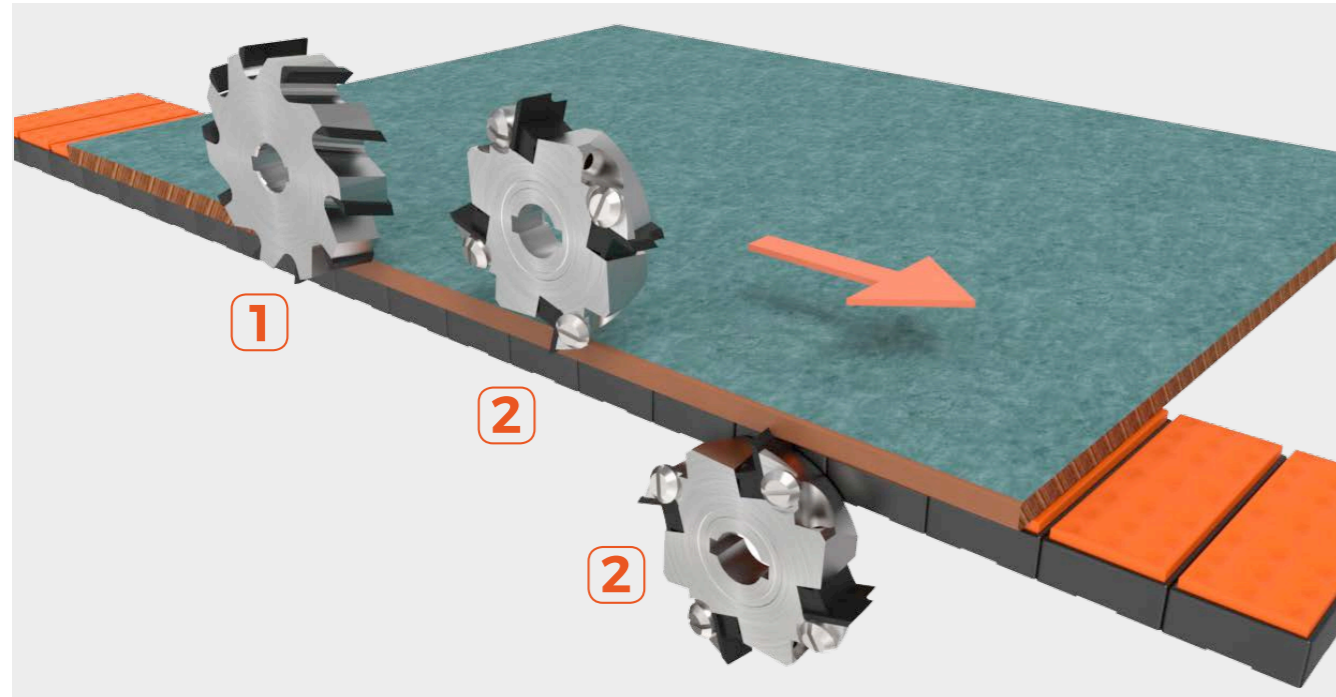


"H" profile assembly

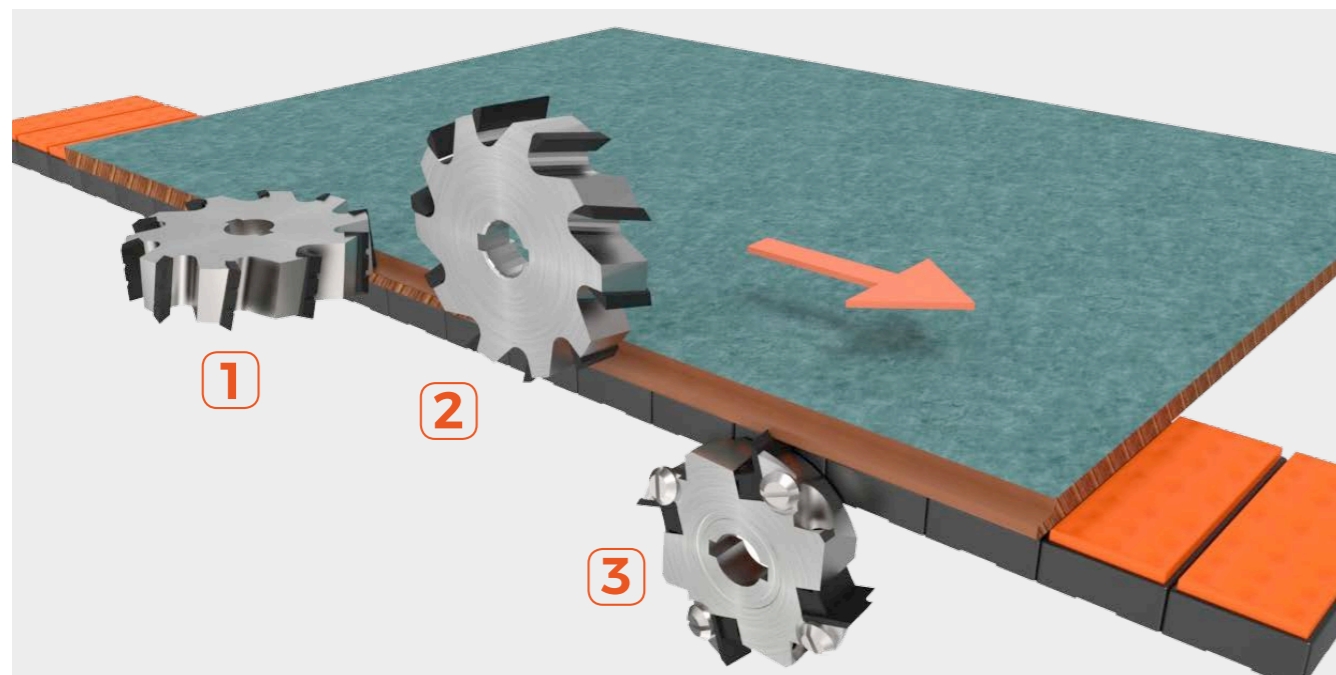


I IMPROVE THE EDGE...

HPL

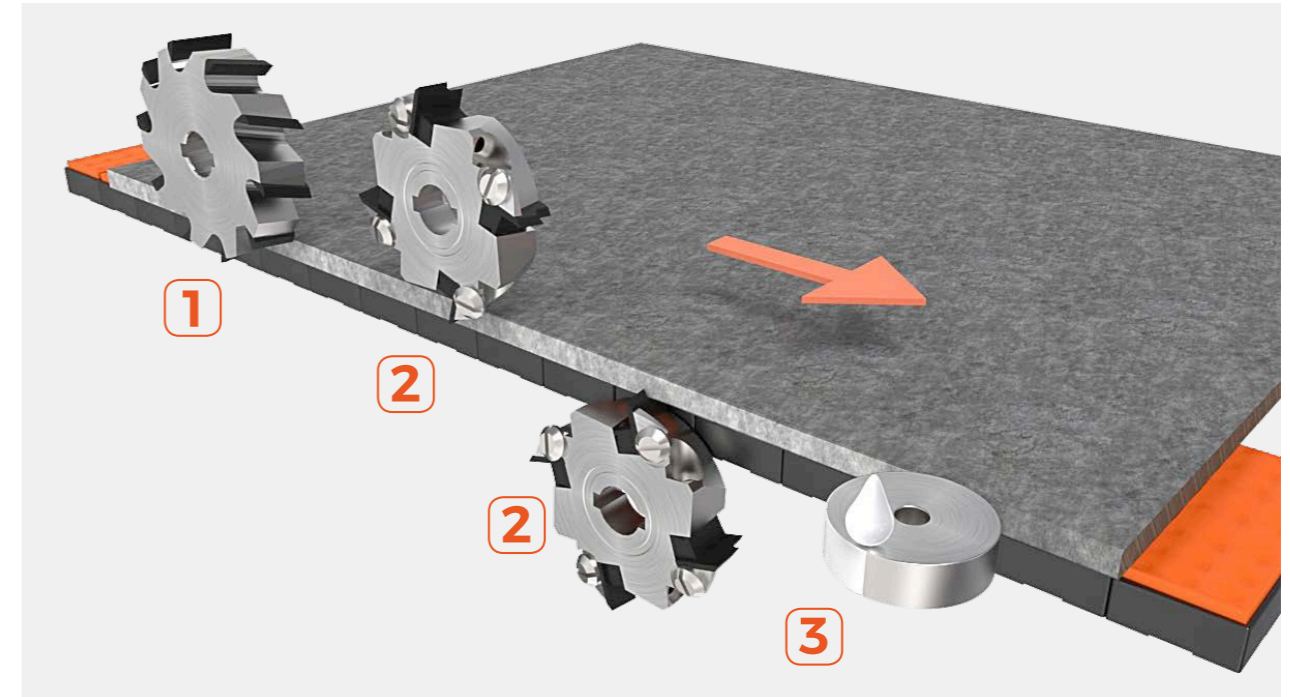


- 1 Milling/Cleaning of the edge
- 2 Top - Bottom beveling "Opt"



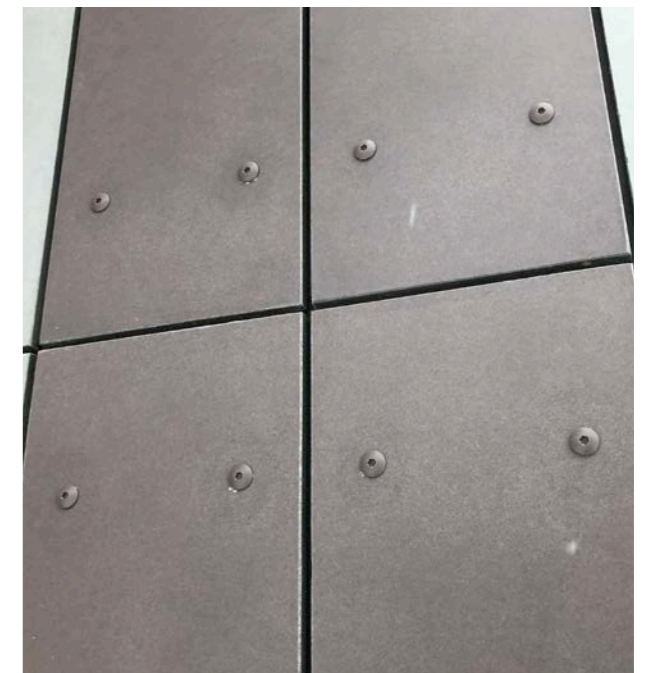
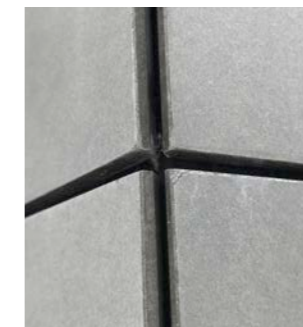
- 1 Milling for overlapping "Opt"
- 2 Milling/Cleaning of the edge
- 3 Bottom beveling "Opt"

FIBER CEMENT



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

Fiber Cement facade



I PROTECT THE EDGE...

Alu Bender

Automatic chain feeding
Milling/Bending machine

BENDING UNIT



CRUSHING UNIT
"OPT"

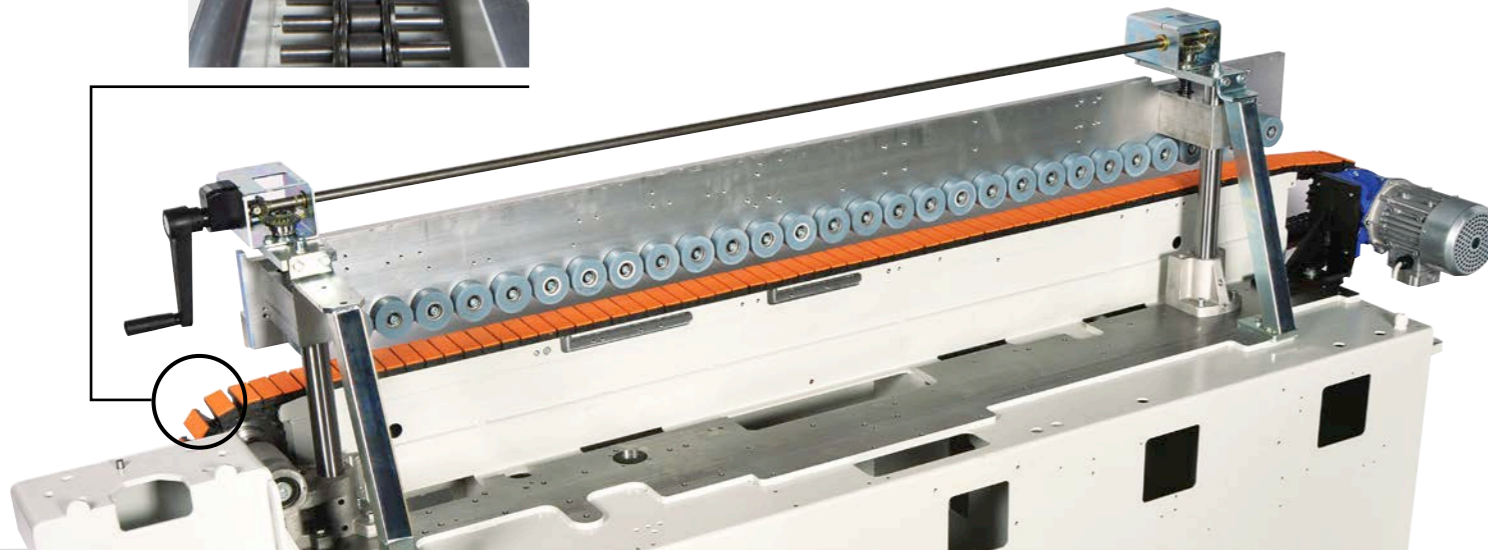
Interchangeable,
instead of the Bending
Unit



	OPT.13	OPT.(4)	STD.	OPT.(11)	STD.	OPT.(12)	OPT.(3)	OPT.(10)	OPT
ACM PE CORE	✓	-	✓	-	✓	✓	-	✓	-
ACM MINERAL CORE	-	-	-	✓	✓	✓	-	✓	-
ALU HONEYCOMB	✓	✓	✓	-	✓	-	-	-	-
HPL	✓	-	-	✓	-	-	✓	-	-
FIBROCEMENT	-	-	-	✓	-	-	✓	-	✓

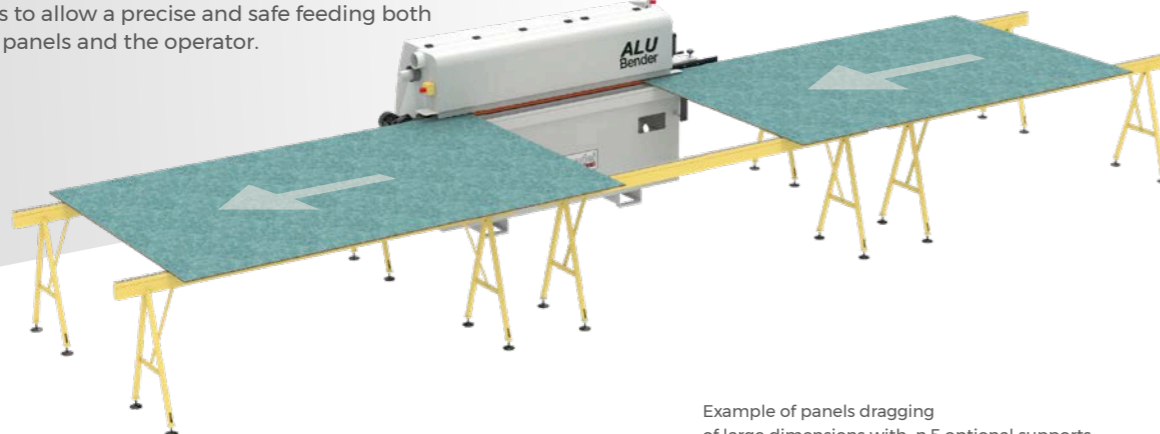
INDUSTRIAL PANEL FEEDING

- Non-slip pad to guarantee a stronghold of panel. Double row of rubber rollers assembled on a very sturdy beam to adjust the push on the panel.
- High quality and powerful gearbox for an adjustable and continuous feeding
- The linearity of the panel feeding is guaranteed by the sliding track which has been manufactured with high precision.
- Long term reliability and great precision thanks to the monobloc frame processed singularly on the machining centre.



Optional for large panels

- For a precise milling and bending workmanship on large panels it is necessary to support the panel in its infeed, outfeed and when it is in front of the machine.
- The supports are equipped with adjustable feet and sliding rollers to allow a precise and safe feeding both for the large panels and the operator.



Example of panels dragging of large dimensions with n.5 optional supports

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)
Min Length	adjustable on PLC from 2 to 6 mt/1' (5/64) (15/64)
Chain feeding motor	0,73 Kw
Milling motor T1 Optional (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.

