Casadei INDUSTRIA
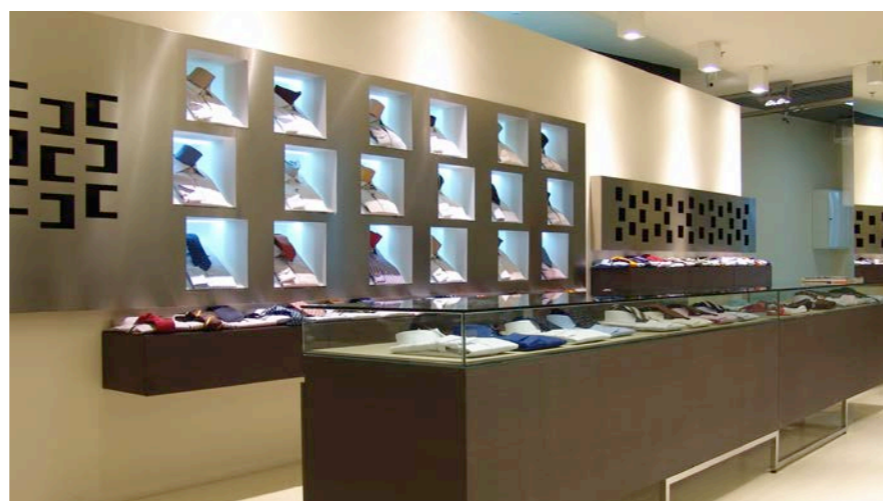—**ProComposite**Tech—

anniversary 25 1994-2019

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

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®
......

ALUMINUM CORRUGATED CORE

METAWELL®
DOLUFLEX®
......

FIBER CEMENT

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

HPL

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

"COLLEGE FOOTBALL HALL OF FAME", ATLANTA, GEORGIA, USA.
MADE BY MILLERCLAPPERTON USING 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 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 aluminum 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 botton 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 aluminum 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®
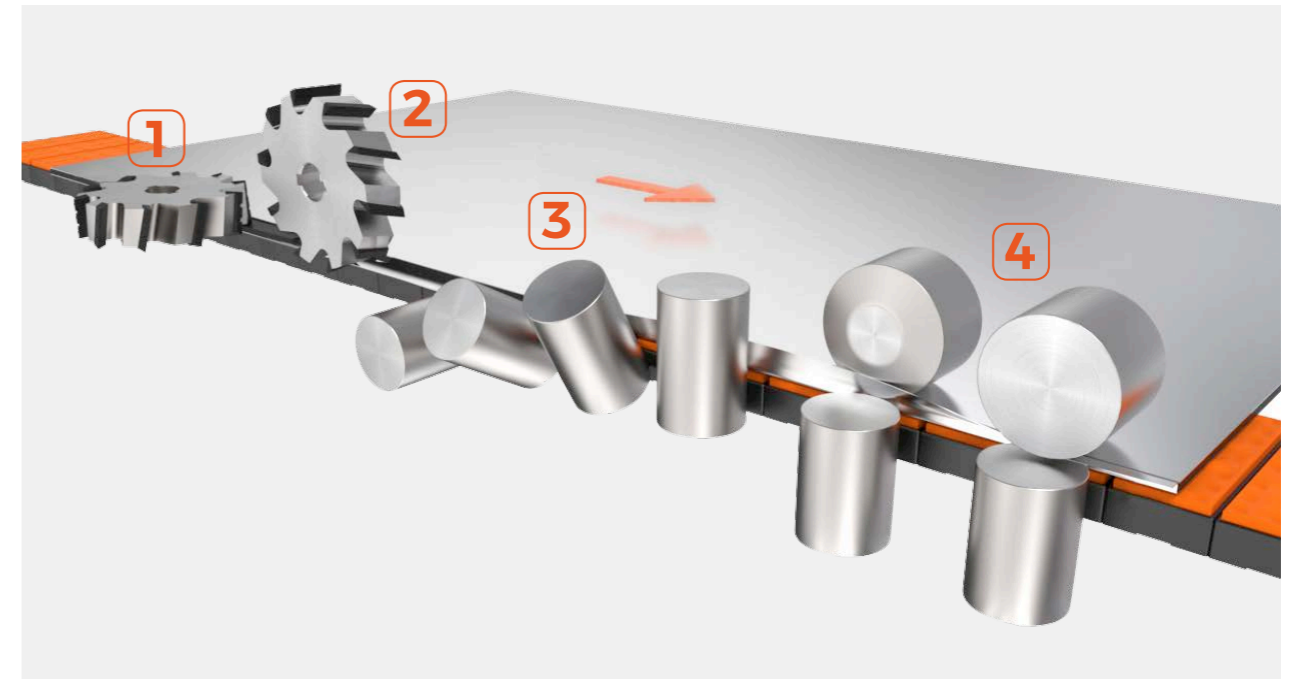DOLUFLEX®
......

VENTILATED FACADES, TRANSPORT

The aluminum 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 aluminum corrugated core panels.**
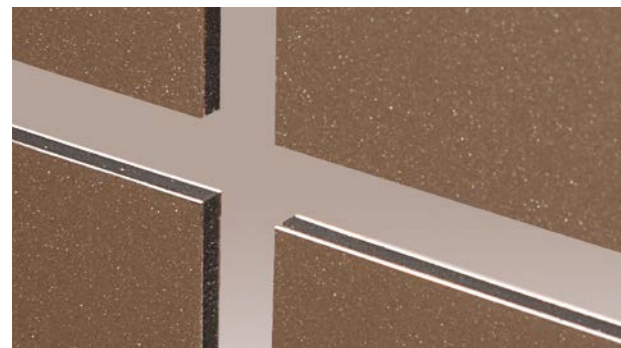
I AM INDUSTRIAL PRODUCTIVITY

ACM / ACP PE CORE / MINERAL CORE

1
2

Aluminum skin and core milling
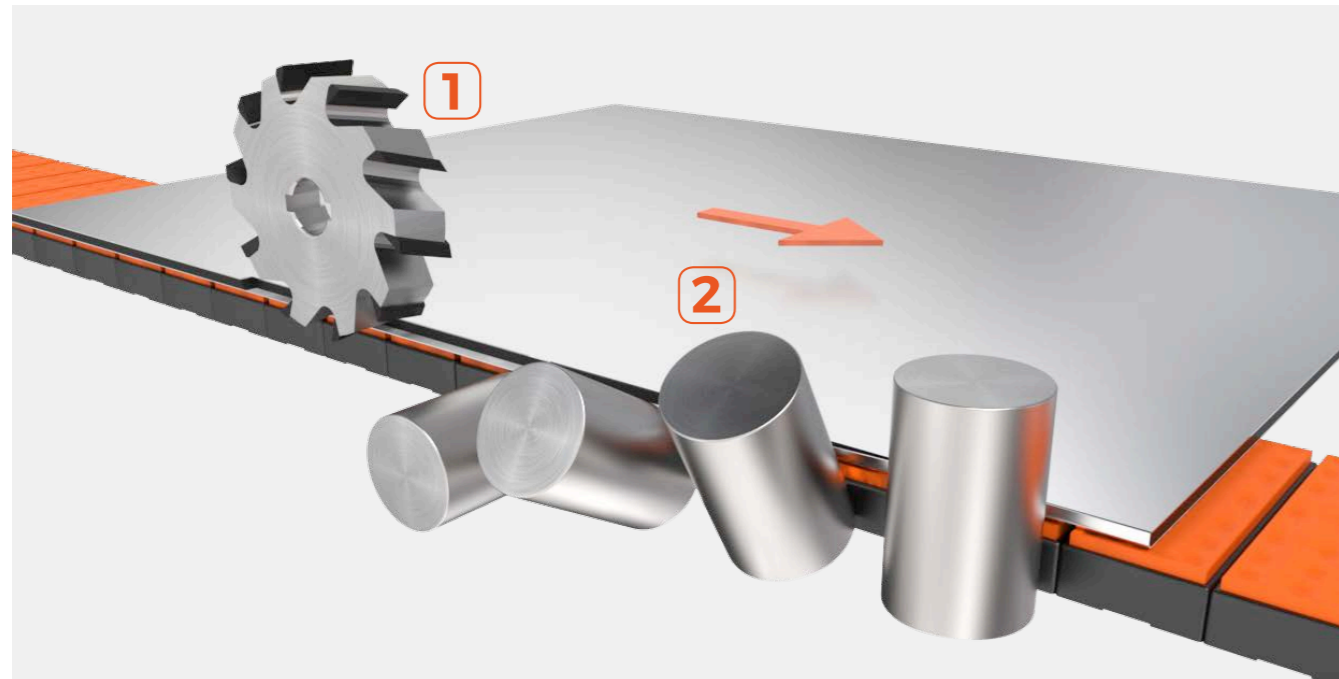
1 Aluminum skin and core milling
2 Bending from 0˚ to 90˚

ACM MINERAL CORE
READY

BEFORE

AFTER

"COLLEGE FOOTBALL HALL OF FAME", ATLANTA, GEORGIA, USA.
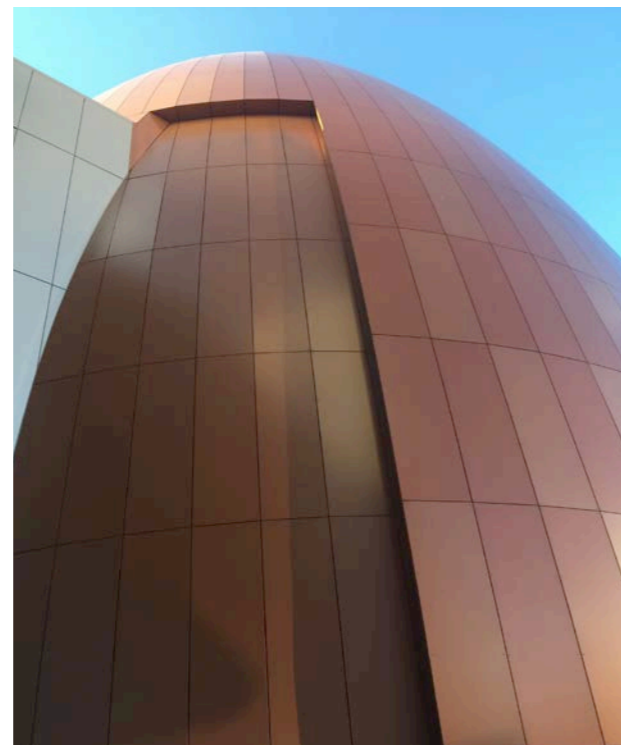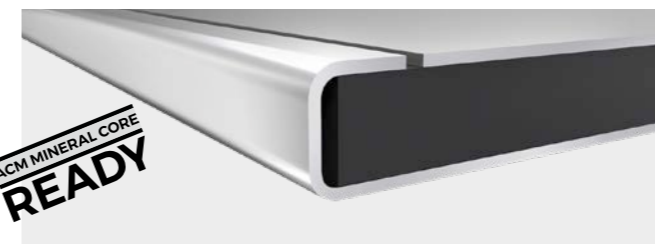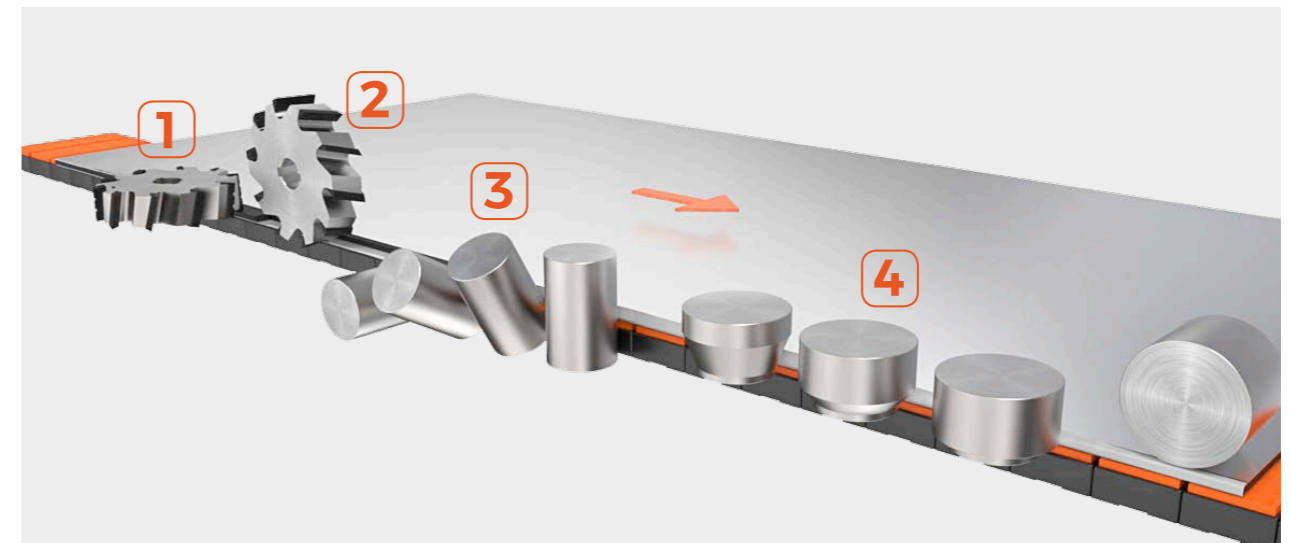FABRICATED BY MILLERCLAPPERTON USING THE ALU BENDER

ACM MINERAL CORE
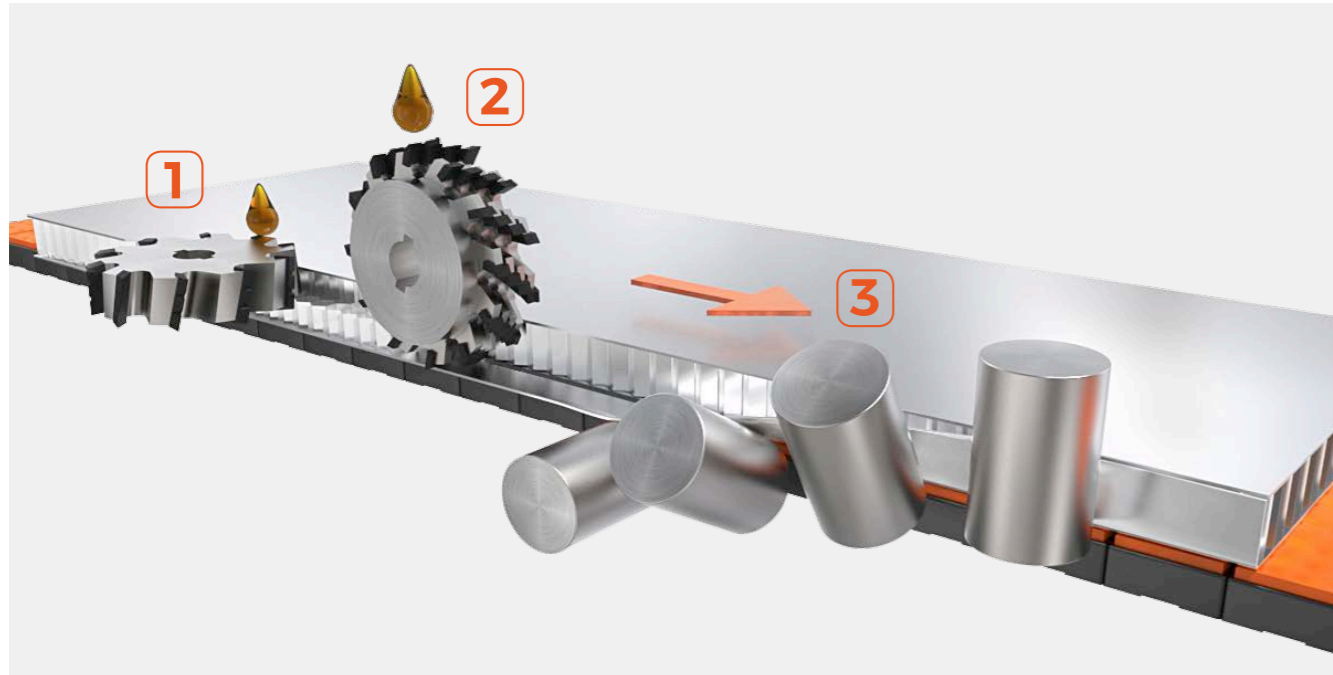READY

1 Aluminum skin milling "Opt"
2 CORE milling
3 Bending from 0˚ to 90˚
4 Double outside bending from 90˚ to 180˚ "Opt"

ACM MINERAL CORE
READY

1 Aluminum 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
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 Aluminum skin milling "Opt"

2 CORE milling and V milling for bending
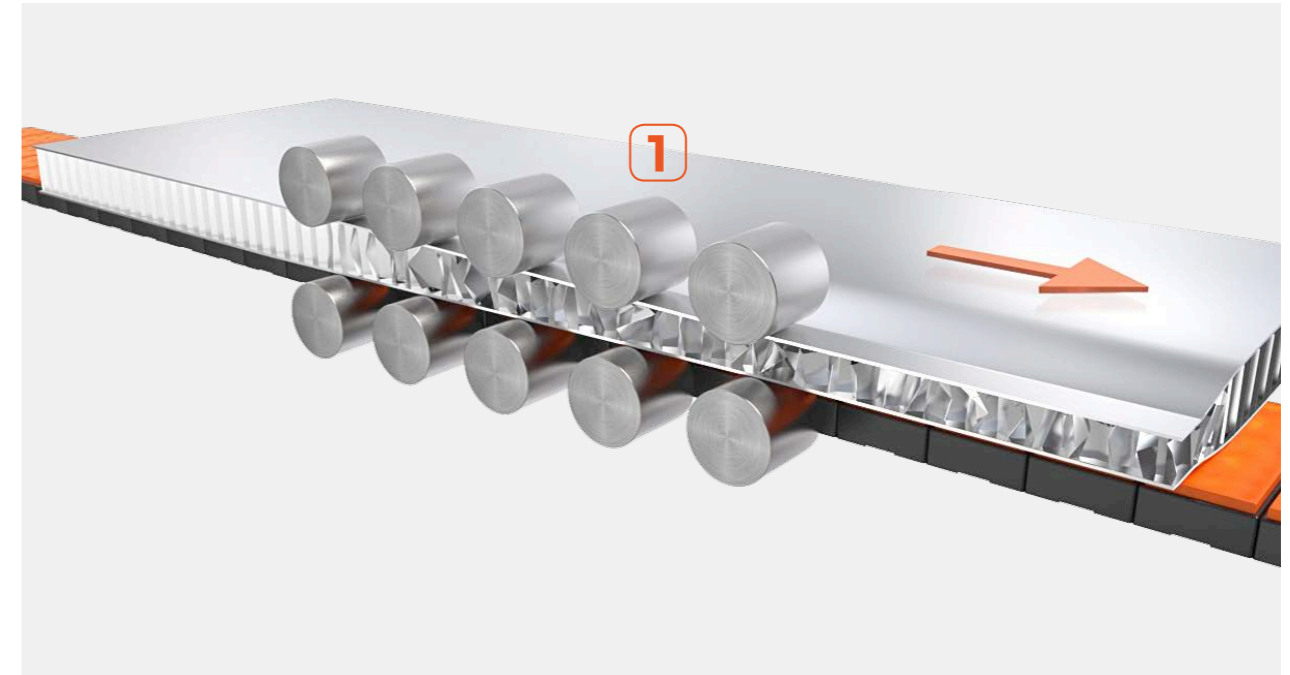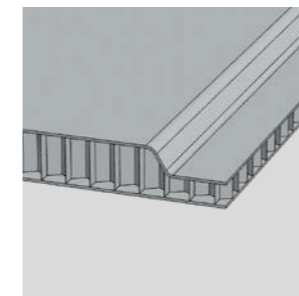
3 Bending from 0˚ to 90˚

💧 Tool lubrication OPT.

BEFORE

AFTER

"Eperia" made with ALU BENDER
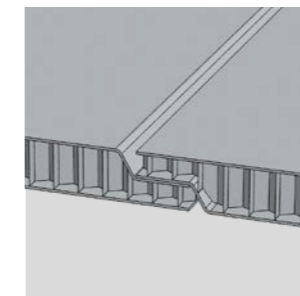
TRANSPORT
ALU HONEYCOMB

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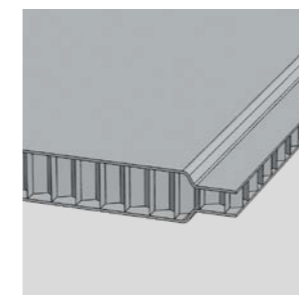Skins thickness min 0,7 mm - 0,030'' - max 1 mm - 3/64

1 Continuous crushing "Opt"
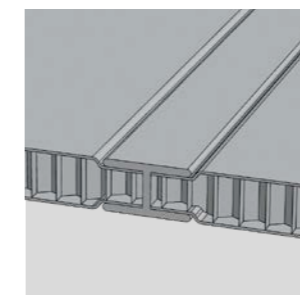

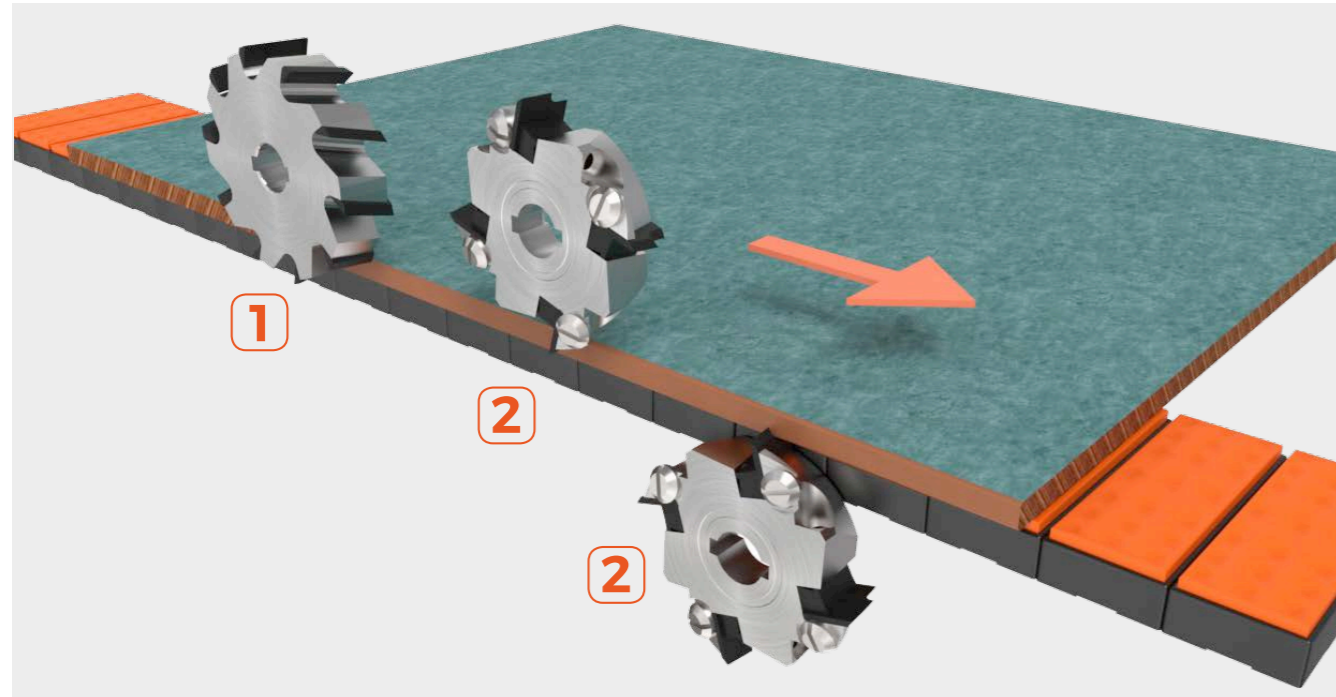Asymmetric crushing

Coupled assembly

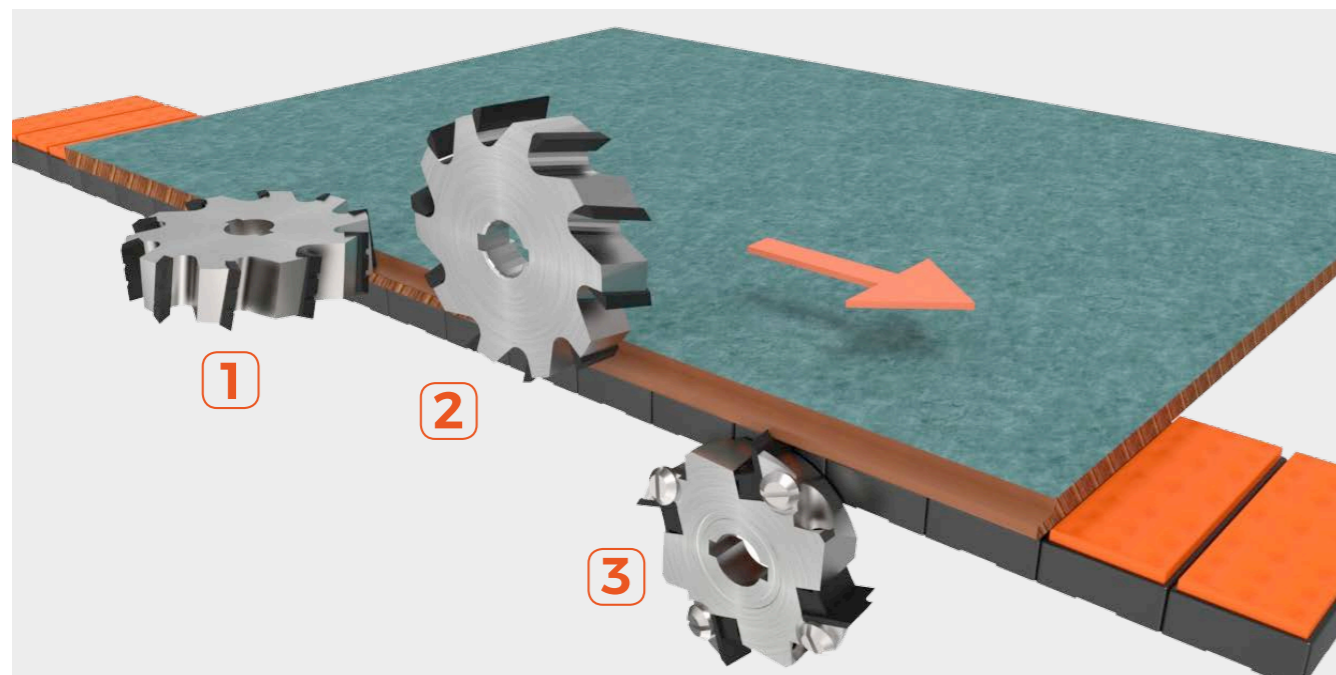Symmetric crushing

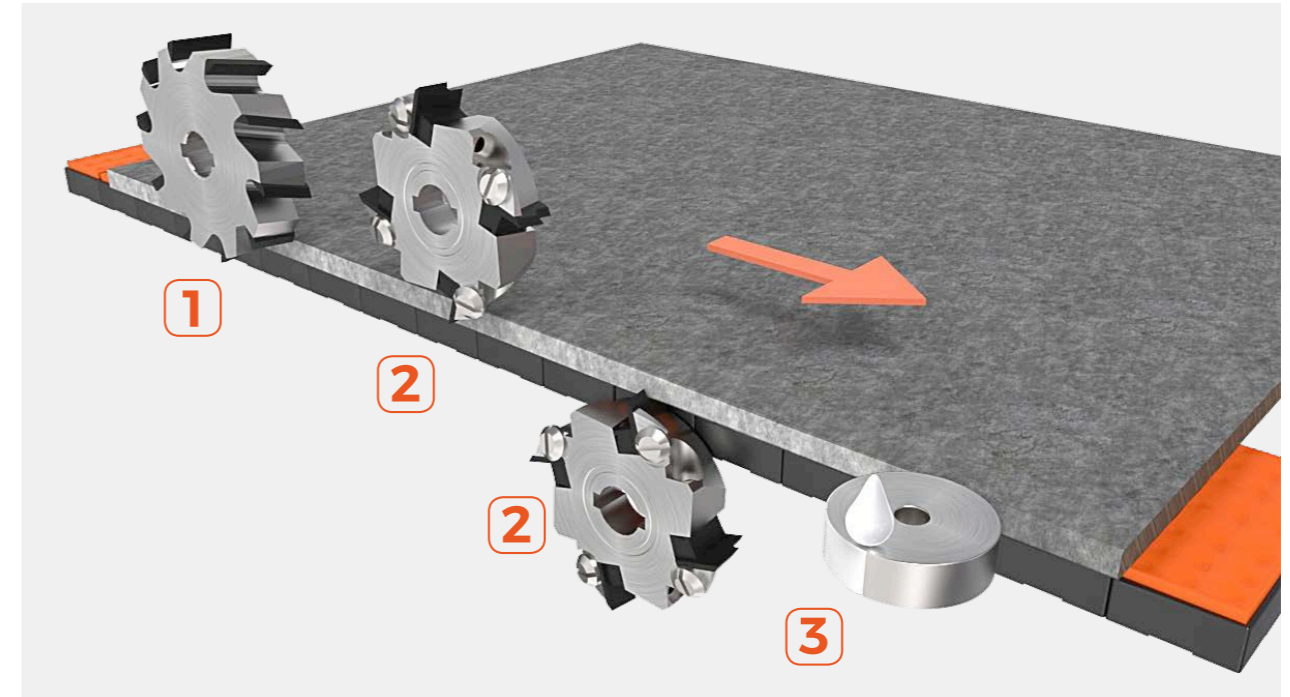"H" profile assembly

I IMPROVE THE EDGE...

HPL

1. **Milling/Cleaning of the edge**
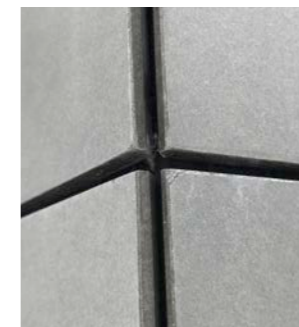2. **Top – Bottom bevelling "Opt"**

1. **Milling for overlapping "Opt"**
2. **Milling/Cleaning of the edge**
3. **Bottom bevelling "Opt"**

FIBER CEMENT

1. **Milling/Cleaning of the edge**
2. **Top – Bottom bevelling "Opt"**
3. **Automatic spreading of the LUKO® liquid "Opt"**

Fiber Cement facade

I PROTECT THE EDGE...

Alu Bender

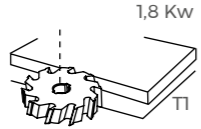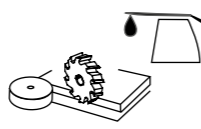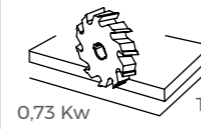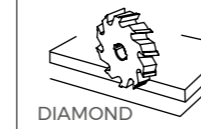**Automatic chain feeding
Milling/Bending machine**
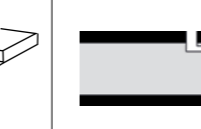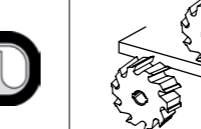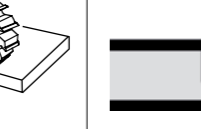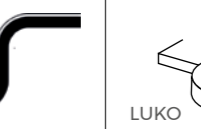
CRUSHING UNIT "OPT"

The Crushing and Bending attachments are interchangeable.

	1,8 Kw / T1	/ (0,73 Kw)	STD. / T2	DIAMOND / T2					LUKO
	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 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.
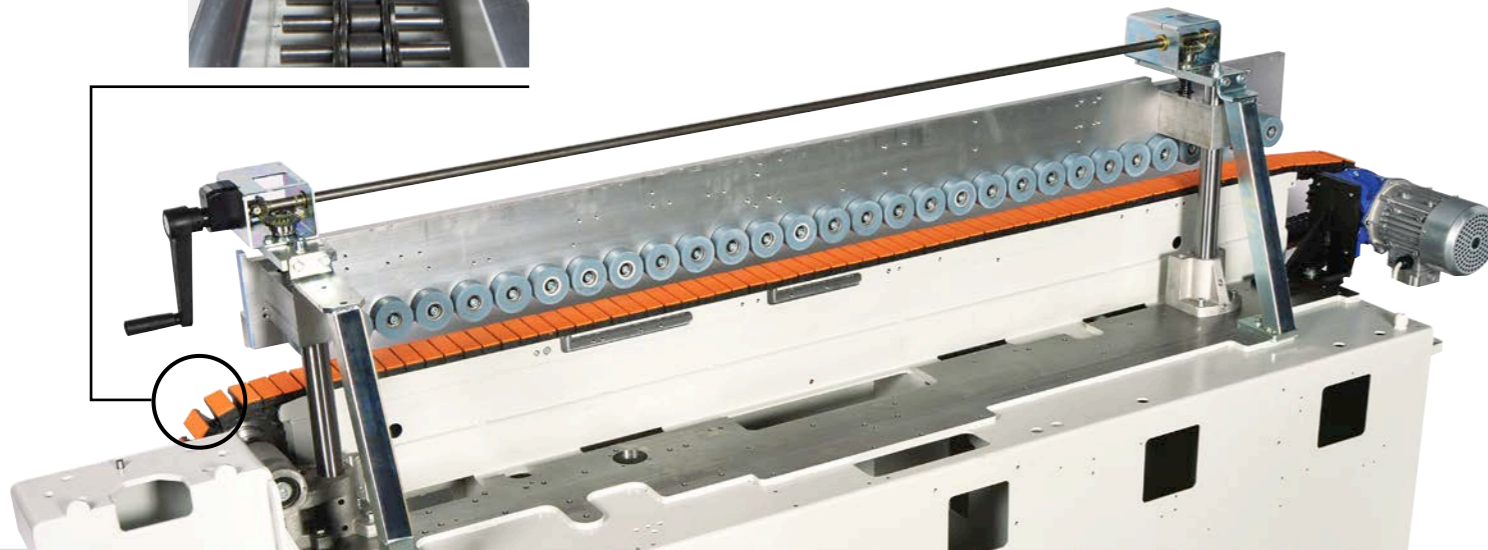
Option for large panels
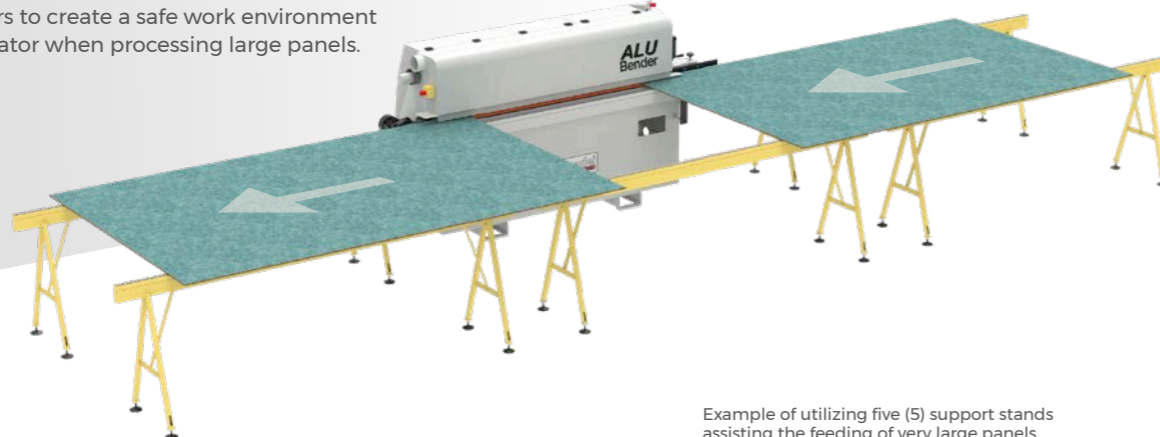- To guarantee accuracy when processing larger panels, it will be necessary to employ additional supports when feeding the panels into the Alu Bender.
- The supports are equipped with adjustable feet and sliding rollers to create a safe work environment for the operator when processing large panels.

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

MY MEASUREMENTS

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 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.

ca. 675 Kg. - 1488 Lb

CE

145 cm - 58"
95 cm - 38"
285 cm - 112"
80 cm - 32"
115 cm - 46"