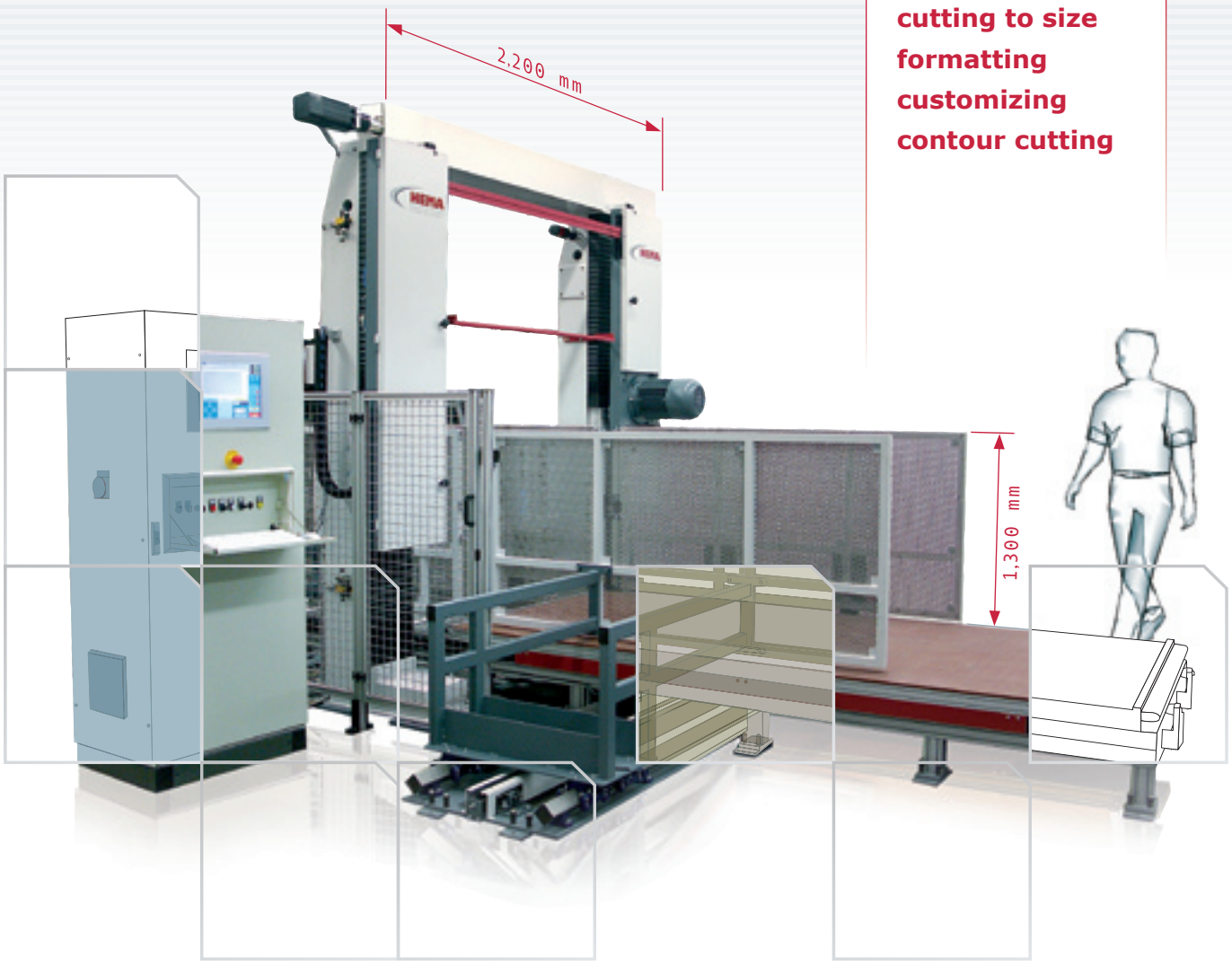
HEMA
BANDSAW TECHNOLOGY
CUTTING SYSTEMS

Sawing to Size

VERTICAL BANDSAWS
HORIZONTAL BANDSAWS
CONTOUR CUTTERS
CIRCULAR SAW TECHNOLOGY
PRODUCTION LINES

sawing
cutting
cutting to size
formatting
customizing
contour cutting



We ... build your machines

... FIND SOLUTIONS

... DEVELOP INNOVATION

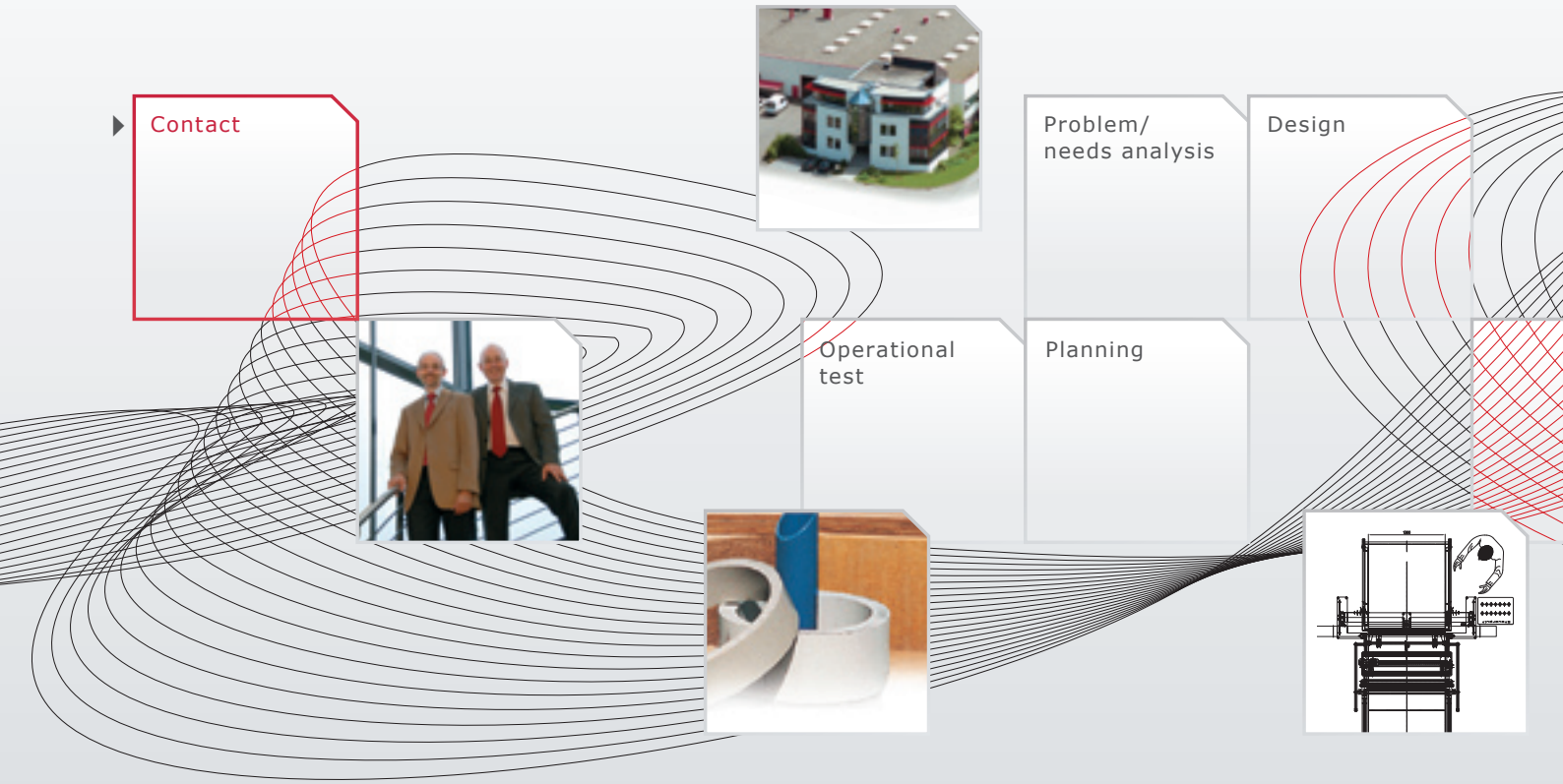
... DESIGN FUNCTION

... BUILD PRECISION

... CREATE TECHNOLOGY

... POSSESS KNOW-HOW

... PROVIDE EFFICIENCY



Traditionally Innovative

With HEMA, a Swabian family business, you have a competent and experienced partner by your side.

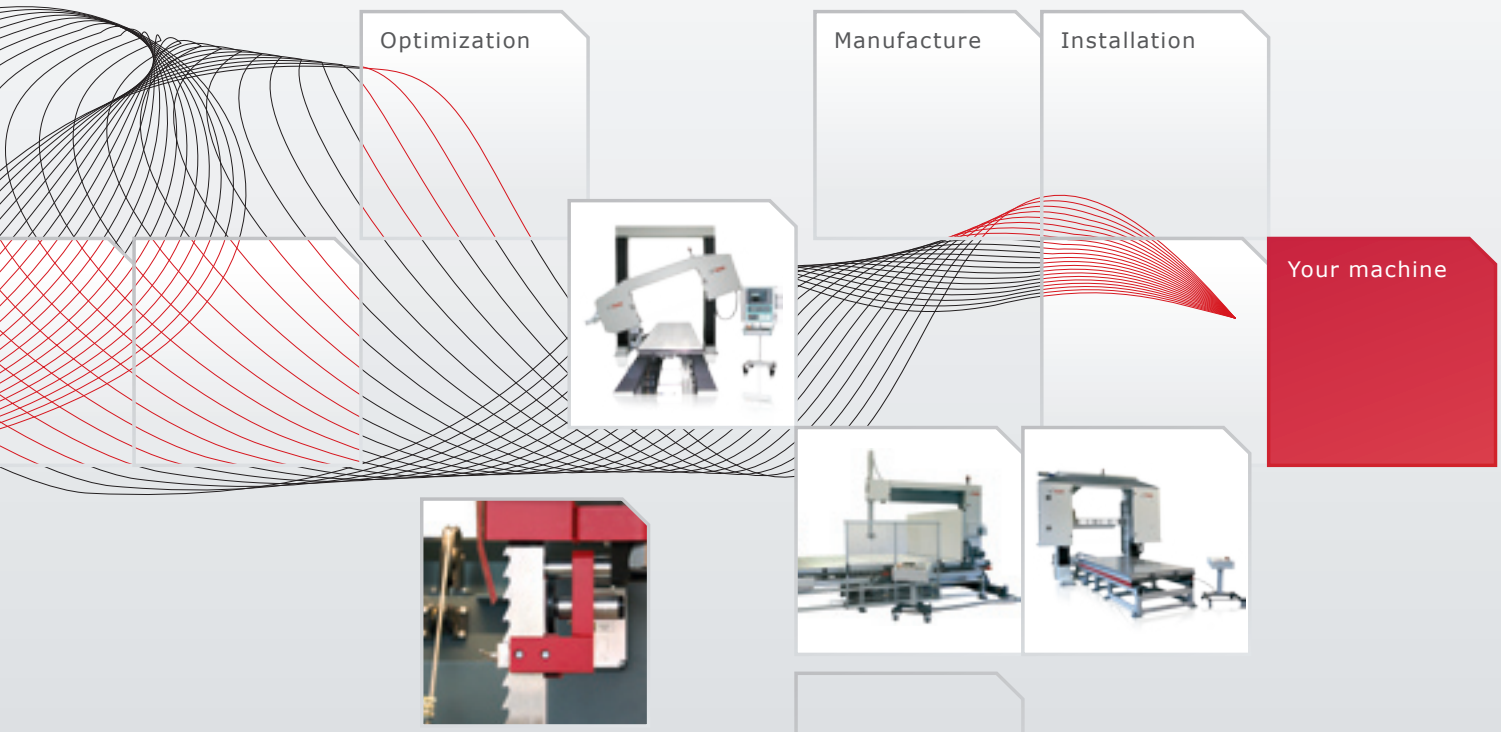
Throughout the 85 years that our company has been in existence we have learned to carry out extensive projects competently, single-mindedly and with an understanding of the essentials.

In close coperation with our customers our specialist teams develop customized solutions for flexible production.

We listen carefully and contribute our considerable knowledge from a wide variety of sectors to produce a convincing, economic overall concept.

We have made it our task to develop and then build individual solutions for innovative products together with our customers.

"As Swabians we know all about invention."



To suit your requirements:

- variable table dimensions
- automatic panel cleaning systems
- modern user-friendly controls
- vacuum tables
- low tool costs

An effective panel cleaning system sucks the accumulating dust from the surface of the block prior to each cut

Horizontal Bandsaws for Panel Cutting

Cutting blocks into accurately dimensioned panels, in particular high density ones, demands a very special machine solution. The sawing aggregate must be designed to absorb enormous belt tension with absolutely no distortion.

As our horizontal bandsaws were originally produced for wood processing, they are exceptionally sturdy and are equipped with very precise guide and drive elements. It is therefore possible to produce excellent cutting surfaces with very low tolerance.

A special guide system as well as optimized dust collection guarantee a high level of production reliability, particularly in the case of abrasive and hard fibre materials.

The technically high quality of the equipment as well as the sturdy mode of construction of our customized HTR 800 series guarantee a high cutting capacity. This machine works within a narrow tolerance range and produces an optimum cutting quality

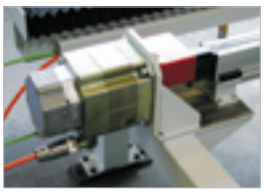
Examples of Materials

- Polyurethane foam
- Rock wool
- Glass/mineral wool
- High-temperature-resistant fibre materials
- AIREX
- ROHACELL
- Composite honeycomb
- Polystyrene cement
- Glass foam
- Graphite
- Sandstone
- Aluminium honeycomb

With these sawing machines it is also possible to cut high blocks without having to remove the panels that have already been cut. The bandsaw blade runs round four 800 mm diameter wheels, which means that complete blocks of up to 1,500 mm in height can be cut.

Ergonomic control panel

Spray cooling



High quality servo motors

Adjustable stop system for multiple panel cutting

Variable cutting width

Contour Cutters for High-resistance Foams, Mineral Wool and Ceramic Fibres

A high speed rotating cutting wire has revolutionised the customized production of moulded parts and technical articles.

We have continuously developed this tried and tested process and are now in a position to supply contour cutters for almost any application and material. Half pipes made of PU foam, insulation roof fillers made of rockwool, insulating wedges or intricately shaped parts for the packing industry can be cut precisely and very efficiently.

HEMA designs its profile cutters to suit the exact requirements of its customers.

The machine can be equipped with a third CNC axis for ridge and valley panels used in the manufacture of sloping roofs.

3-axis CNC machine for ridge and valley panels. Integrated conveyor belt

To suit your requirements:

- a variety of cutting widths and table sizes available
- loading facilities from the front and rear of the machine
- large-sized touch screen
- vacuum table
- stop system for panel processing

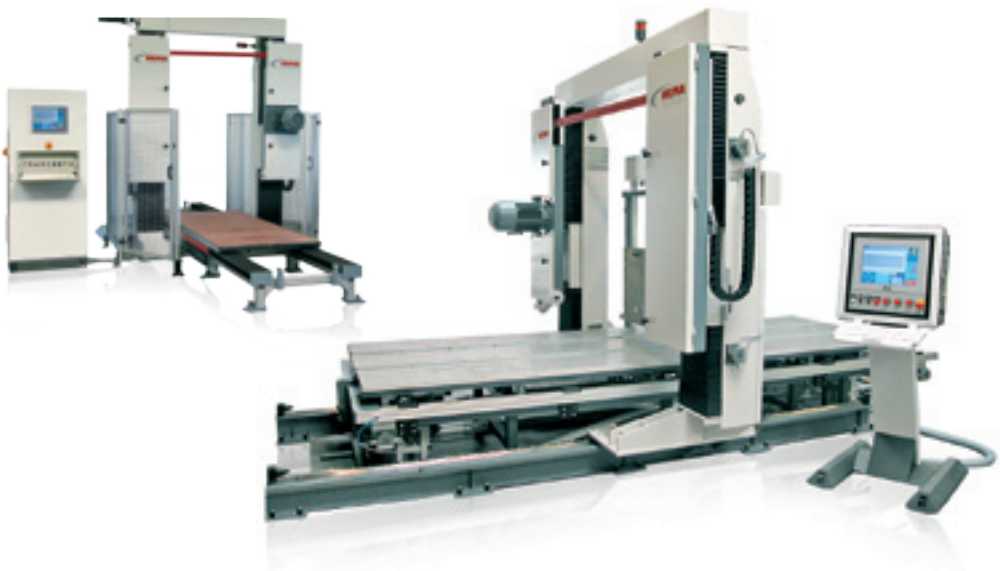
Examples of Products

- Insulation roof fillers
- Roof wedges
- Half pipes
- Panels
- Trimmed pieces
- Moulded parts
- Sloping roofs
- Ridge and valley panels

Our professional machine control panel is Windows-based, well-equipped and easy to operate. Production data can be transferred directly at the machine.

Our FoamCAD-XP software is provided for off-line programming. With this new development even complex workpieces can be programmed faster than ever before. DXF data transmission is of course possible.

A large-sized touch screen provides optimum ease of use



A well thought out height adjustment system enables the cutting height to be aligned with the workpiece

The vertical contour cutters are also equipped with our top FoamCAD-XP software

Vertical Contour Cutter

HEMA vertical contour cutters are capable of producing parts of any shape from panels. Several panels can be laid on top of each other up to a maximum height of 500 mm. What alternative process can achieve this?

The high speed circulating wire can cut small radii just as accurately as acute angles, along the entire thickness of the material.

With optional additional blades it is possible to provide a complete cutting installation so that manless night shifts can also be operated.

Machine in operation

Examples of Materials

- PU foam
- PE foam
- Laminated mineral wool
- Fibre materials
- Balsa wood
- Polystyrene
- Rock wool

Bandsaws for Sandwich Elements and Panels

Sandwich elements are not easy to saw due their structure and varying materials. Circular saws have a high noise emission and often destroy the fragile layers of the element.

A bandsaw, on the other hand, can produce a clean cut with virtually no burrs. The bonding of the top layer also remains intact.

Should mitre cuts, corner joints or other diagonal cuts be required, we can provide customised solutions.

A pneumatic or manually rotatable guide system permits both longitudinal and cross cutting on the same machine.

Examples of Products

- Cladding elements
- High speed doors
- Cold storage containers
- Container building
- Roofing elements

Special guide for longitudinal and cross cutting

Practical stop system

Mitre cuts on wide panels are also no problem

Compactly-designed automatic panel cutting machine with pallet feed, leveller and stacking unit

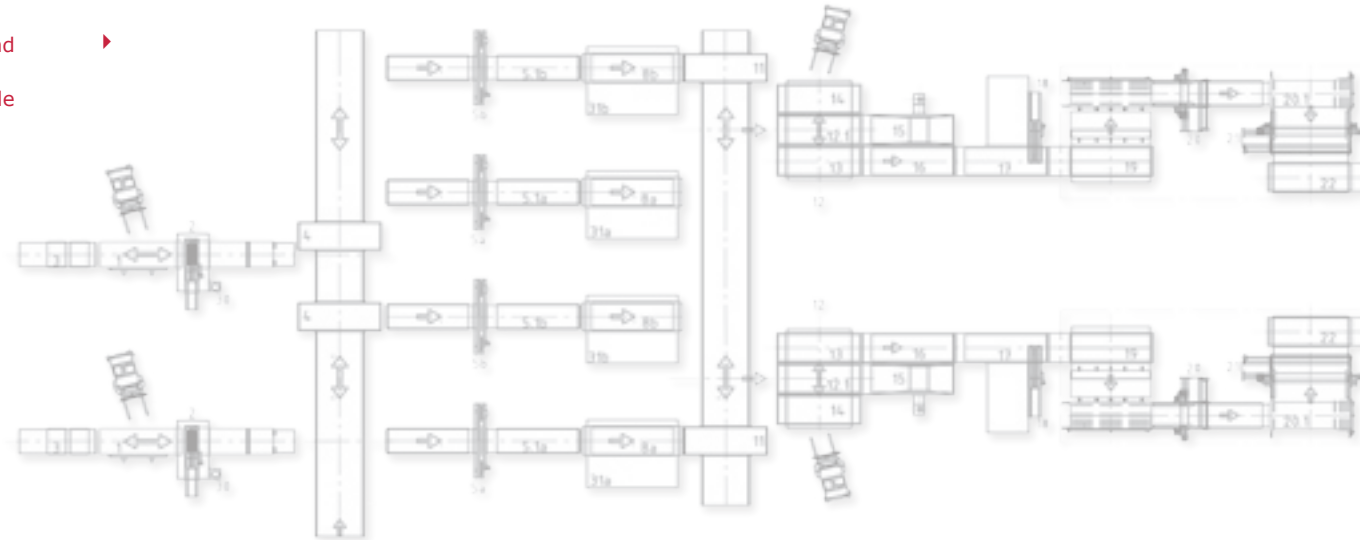
Integrated Solutions – From One Source

HEMA not only provides solutions to sawing and cutting problems but also for the "before" and "after" stages. We design production lines and manufacturing equipment, tailor-made to the requirements of our customers. We offer integrated concepts covering all stages, from loading the workpiece to palletizing and packing.

All the equipment is from one single source with an integrated design using standardized, tried and tested technology and integrated safety standards.

We also pay careful attention to the periphery of the equipment. For instance, we design high capacity sucking units to suit both the machine and the local conditions. You have one contact person only who has detailed knowledge of your project and is responsible for all aspects, right up to commencement of production. This saves frayed nerves and cash!

Conscientious and careful planning guarantee reliable production later



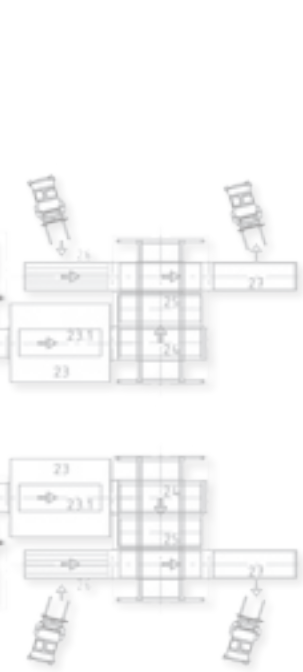
Automatic strip cutting machine for high bulk density products

Panel cutting with 14 circular saws

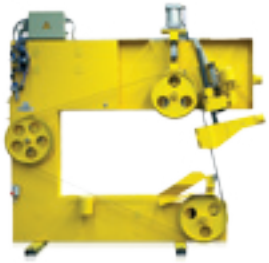
Our conveyor systems consist of high quality, durable machine parts

Production line with optimized use of space

Panel trimming and cutting to size in one production line using 6 sawing units



Large width pieces are cut using tilted horizontal bandsaws



"Flying saw" as assembly unit for integrating in a sandwich panel production line

"Flying Saws"

For continuous processes such as the polyurethane foaming process, the production of mineral wool or the manufacture of sandwich panels, "flying saws" are indispensible. The speed of the sawing unit is increased to that of the production line and cutting commences as soon as a synchronised speed has been reached. Subsequently the machine rapidly returns to the starting position for the next cut. The production line often reaches speeds of over 25 m/min.

An automatic twisting system for the saw band make the sawing up and sawing down processes possible. Particularly advantageous for high speed production lines

"Flying circular saw" with omega bands for the production of wide sandwich panels. This machine is equipped with an additional blade cleaning system

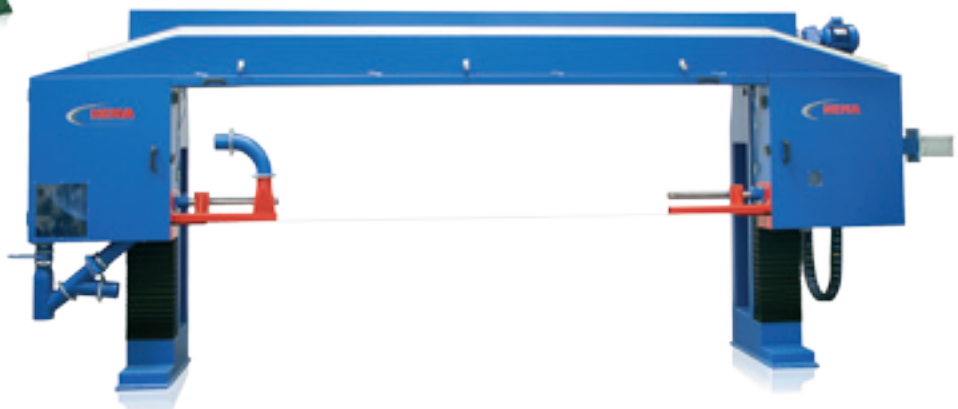
Cutting Systems for Integration in Production Lines

Production processes frequently require sawing units within the production line. We supply sawing units for existing as well as new machines which are adapted to the product and the space available.

Accurately defined interfaces allow for unproblematic integration. Whether you need to trim, centre, level or cut into sections – make use of our know-how!

Examples of Materials

- Mineral wool
- Wood fibre products
- Folded filters
- PU-foam
- Catalytic converters
- Chip board
- Cardboard
- Rolled goods



Cutting width of 3500 mm – could be a world record

When processing blocks and panels, special sizes in small quantities are often required.

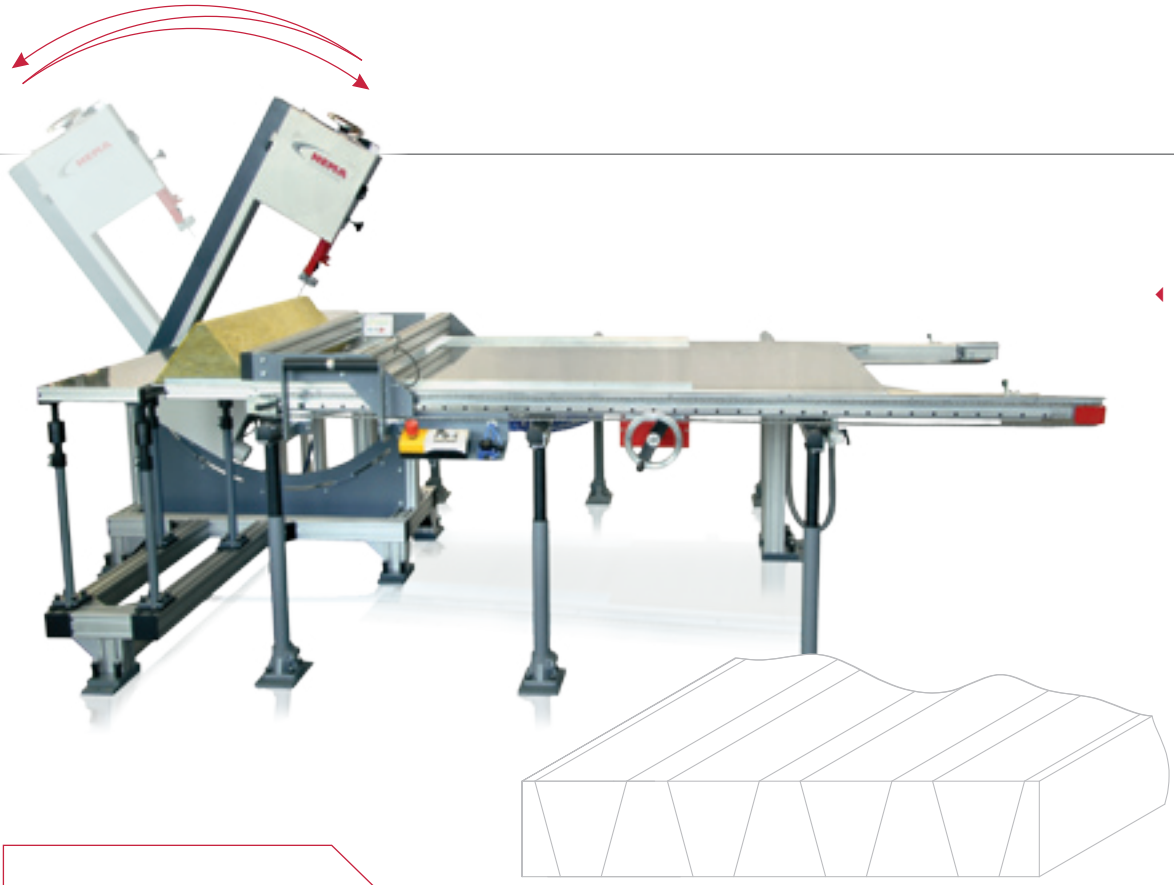
This horizontal bandsaw is equipped with a simple, easy to operate control system which makes a "quick cut" possible. This in turn reduces delivery times and saves expensive storage space

Serial Production of Mineral Wool and PU-foam

The customized production of mineral wool or high-resistance foam is very challenging for the processor because of the variety of shapes and number of pieces. "Ordered today – delivered yesterday"- with flexible machinery it could "almost" be possible to fulfil these demands.

For requirements such as these HEMA provides a complete programme of standard and specialist machines for any kind of cut – even the most unusual or complicated.

For general cutting purposes we provide bandsaw machines in all cutting heights and widths as well as with sliding tables in a variety of sizes.

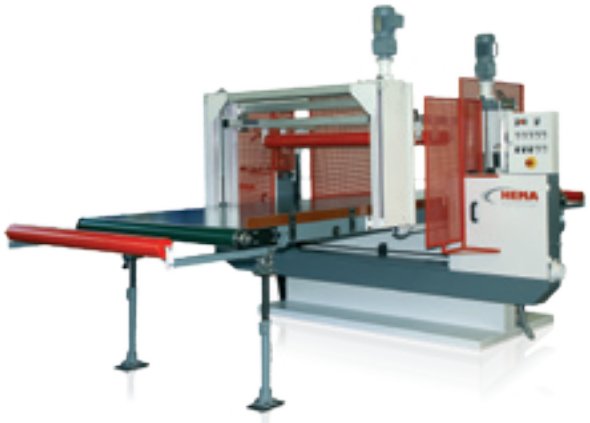


Cutting roof insulation fillers and roof wedges is quite tricky …

… the workpiece must be continuously rotated during the cutting process. Not very effective and quite dangerous! But not with this pendulum saw! It travels forwards and backwards and ensures a high cutting capacity, safe operation and a minimal amount of dust

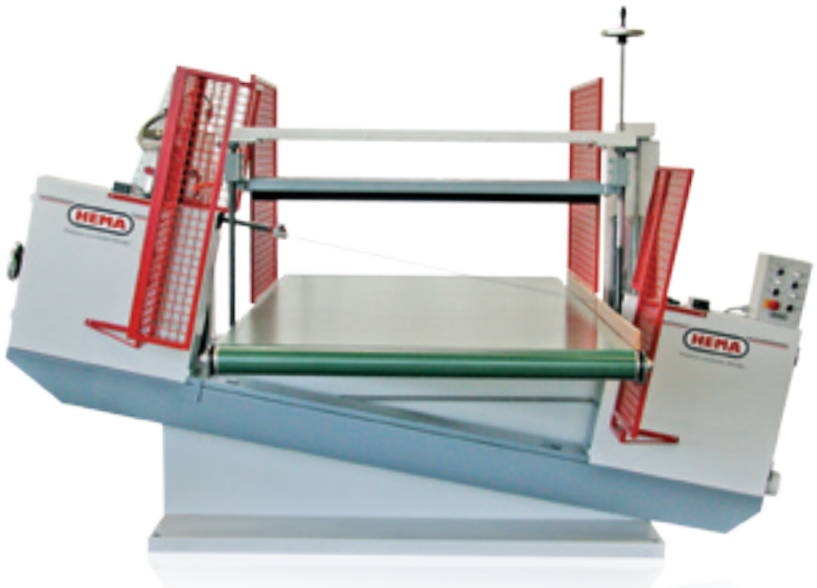
Examples of Products

- Roof insulation fillers
- Roof wedges
- Half pipes
- Panels
- Trimmed pieces
- Shaped parts
- Sloping roofs
- Ridge panels



Horizontal bandsaw with holding down rollers

Easy to read scale for the roof pitch



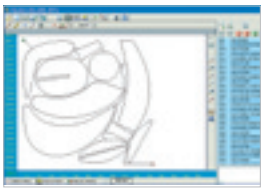
For the manufacture of sloping roofs HEMA has come up with a real highlight! Equipped with slope adjustment and conveyor belt this horizontal band saw produces "non-stop" diagonal cuts in hard rock wool!

To suit your requirements:

- variety of cutting widths and table sizes available
- revolving tables
- conveyor tables
- digitizing board

Modern control system

Standard centre guide



DXF-design data can be transferred directly to the machine

CNC Contour Cutters for Flexible Foams

When cutting any shape from PU, PE or other flexible foams, dust is absolutely taboo.

This is why our newly developed MSM 2200 H profile cutting machine produces an absolutely dust-free cut . A precisely guided, oscillating blade traces every contour exactly and cuts the smallest of radii just as accurately as sharp-edged corners or acute angles.

The entire machine is sturdily and precisely built using high quality durable machine parts.

All guide and drive elements, both for the vertical travel as well as the table drive, are protected by bellows.

A motor-powered adjustable centre guide and a workpiece clamp are standard equipment.

The modern Windows-based control system with clear operating instructions is very easy to learn and has a substantial storage capacity for 40,000 programmes.

Numerous practical auxiliary accessories, a variety of cutting widths and table sizes as well as practice-orientated software modules are available.

Cutting Machines for Flexible Foams

Our vertical cutting machines can be used for a variety of purposes including the production of single blocks, panels or cut-to-size pieces.

Primarily heavy foams can be processed on this robust, stable machine. The high blade tension makes it possible to even cut very high pieces accurately.

The blade wheels have a special vulcanised coating with an almost unlimited service life.

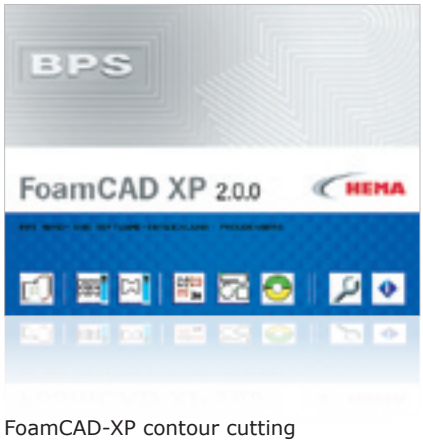
Dynamic fine balancing and plane-parallel alignment of the blade wheels guarantee top quality cutting results and vibration-free travel.

Lever ratchet for series cutting (optional)

The machine's "cockpit"

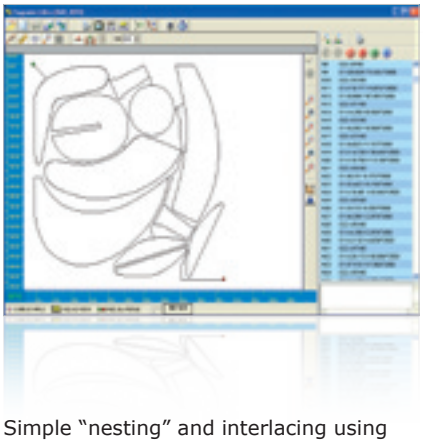
A flexible vertical cutting machine is required in the production of flexible foam samples or in the packing industry.

Our newly developed VZS 304 fulfils these requirements exactly and is even reasonably priced



FoamCAD-XP contour cutting programme

Clear layout of monitoring system



Simple "nesting" and interlacing using "drag and drop"

CNC Machine Control System for HEMA Contour Cutters

Programming is great fun with the new Windows-based CNC machine control system!

A modern touch screen makes it possible to enter data directly on the screen.

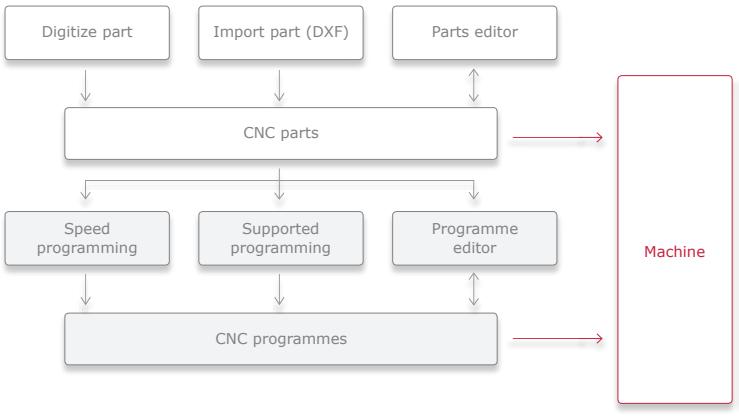
You can write programmes directly at the machine or import finished data with the aid of the simple import function.

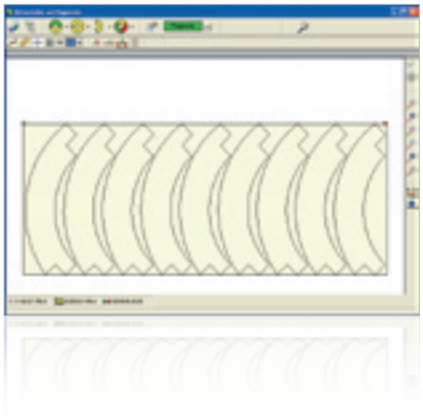
Subsequent programme changes can be carried out quickly and easily directly at the machine.

With the mouse you can easily turn, mirror and reposition the parts, nest them for optimum utilisation of the material and simulate the whole cutting process on the screen.

A logical and clear arrangement of the buttons and a corresponding layout of the operation interface enable even complicated parts and combinations of parts to be produced quickly.

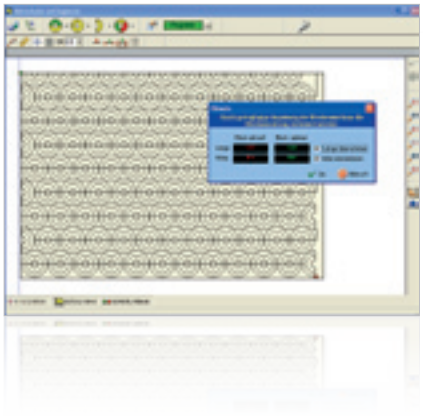
Newly developed service windows will help you to monitor all the machine parameters and provide numerous analysis functions.





Programming insulation piping is very easy

Original configurations are easily adapted



Automatic optimisation of cut

Programming Possibilities

Any number of geometric shapes can be quickly and easily created as a CNC part or programme using the FoamCAD-XP. A variety of input options are available:

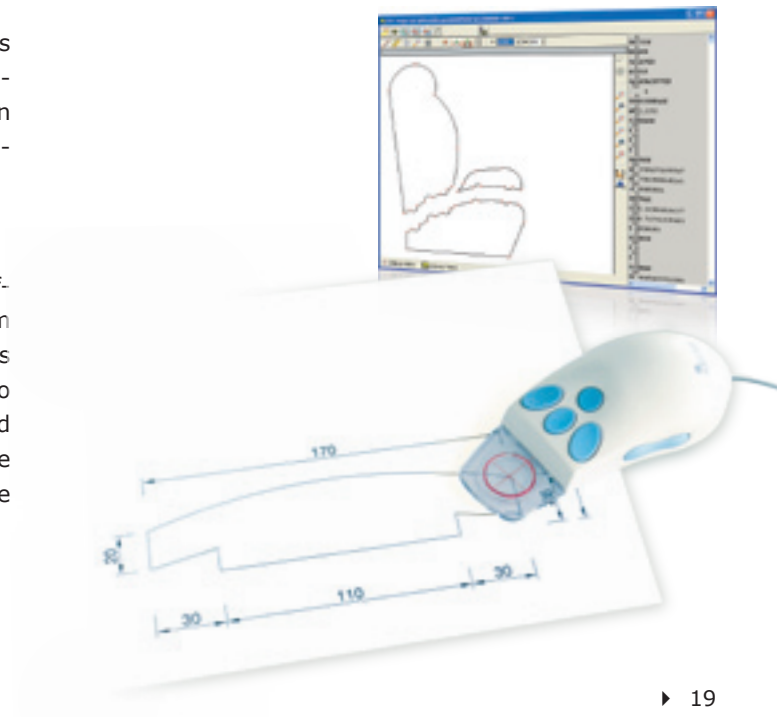
DXF-Data Transfer
Most CAD programmes are able to display drawing files in DXF format. With FoamCAD contour parts are imported in DXF format. In order to produce sharp-edged corners FoamCAD automatically adds idling times when the cutting direction changes.

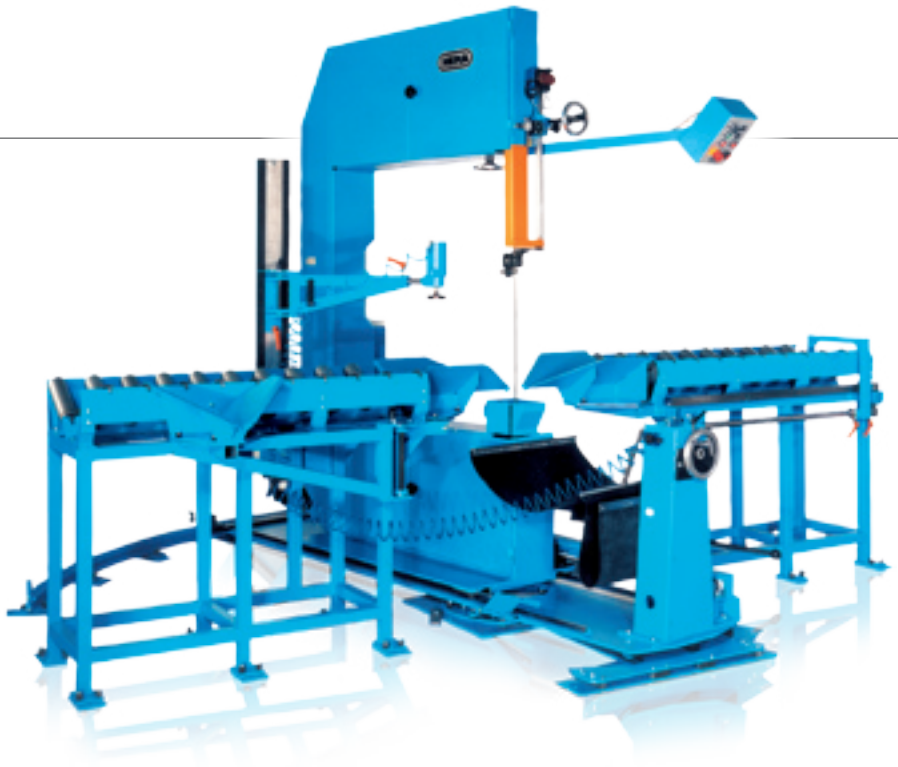
Parts Editor
The parts editor makes it possible to design geometric shapes using simple drawing tools. It is also possible to enter the data in direct CNC code. Irrespective of which input method is chosen, parts can be subsequently reworked in the editor (turned, mirrored, resized …). The CNC part (single part, sample) is then processed directly on the machine.

Electronic Drawing Board
Existing drawings or templates can be scanned using a digitizer. The received data is then directly translated into CNC data.

Duplication
If several of the same or differing parts are to be cut from the material, FoamCAD helps you to transfer from part to programme. With the speed programme you can produce a functioning CNC programme in a few minutes from one single part. The number of horizontal or vertical parts to be cut is variable and can be adjusted to suit the size of the block by means of simple counters on the machine.

A single part is quickly digitalized





Examples of Products

- Plastic pipes
- Air ducts
- Cladding elements
- Hollow plaster boards
- Aluminium profiles

Mitre cutting a 1000 mm diameter pipe

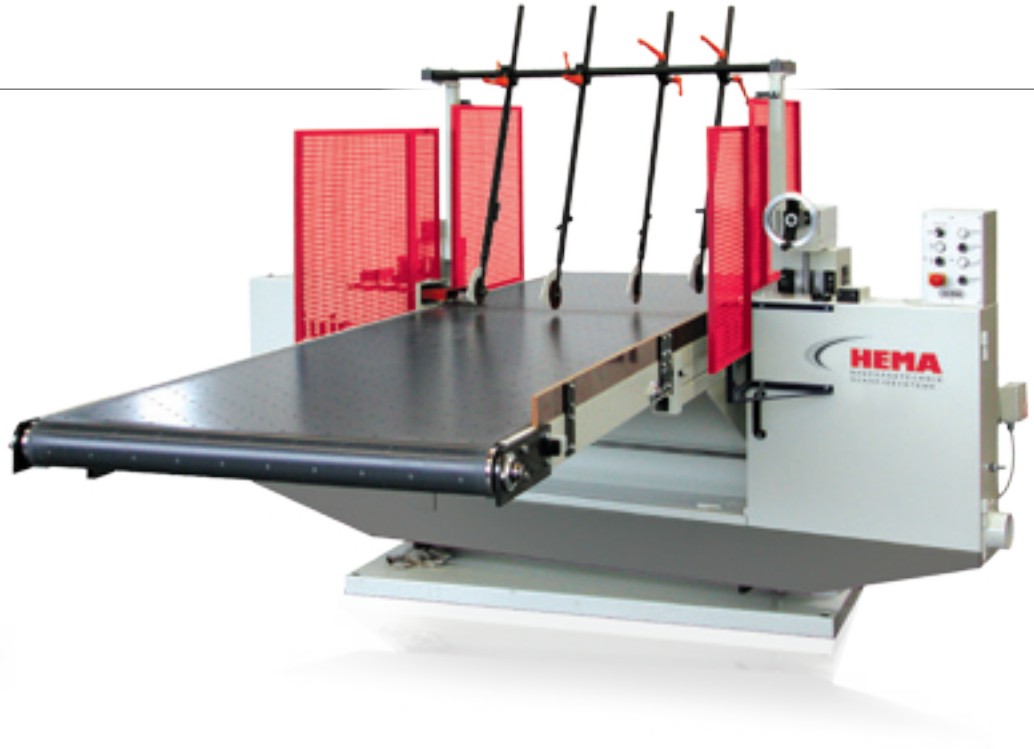
Bandsaws for Plastic Pipes

We supply a wide range of machines for cutting 100–1,800 mm diameter plastic pipes! In special cases diameters of up to 2,500 mm are possible.

The saw travels on vibration-free, stable guide elements, thereby executing the actual feed motion. This whole piece of equipment is pivotal to enable segmental arches, T-pieces and branches to be sawn economically and accurately.

The blade´s fulcrum is always at the centre of the pipe and serves as the point of reference

With this saw thin-walled air ducts or unstable cladding panels can easily be cut into pieces or mitre cut .



Spring-mounted holding down device

Rapid blade change

Horizontal Bandsaws for Deep Drawn Parts

Drawn edges of deep drawn parts can be removed quickly and economoically using our horizontal bandsaw. This can save a great deal of milling time on expensive machining centres. The piece is fed by a conveyor belt which means that the bandsaw can be positioned directly behind the deep drawing machine.

The large diameter of the wheel as well as its extremely robust construction allow even large cutting widths to be cut accurately.

Available cutting widths:
650–2,500 mm

Variations and accessories:

- suction conveyor
- cutting chip suction
- variable cutting speed
- central guide

HTR 600 -
with a cutting width of 2,200 mm

The HTR 400 is a compact horizontal bandsaw which can always be used when samples or a pre-production series have to be produced quickly and simply. However, this machine also proves its worth in continuous operation attached to the production line of a deep drawing machine

Contour cut on landing flaps
for the Airbus A380

Cuts ranging from extreme
diagonal to horizontal

Carpet rolls for car mats

Diagonal cutting of foam
glass blocks

Large wedge-shape glulam planks

Flexible panel cutting
(high-resistance and flexible foam)

Test cuts on car batteries

Cutting rolls of sheeting into lengths

Pre-crushing of hollow plastic containers

Your Product

- Aluminium honeycombs
- Balsawood
- Composite honeycombs
- Fluted filters
- Filter mats
- Graphite
- High resistance foams
- Wood
- Wood fibre boards
- Limestone
- Calcium silicate
- Plastic pipes
- Air bubble sheeting
- Air ducts
- Mineral wool
- Model making boards
- Pallets
- Paper rolls
- Sandwich elements
- Rockwool
- Polystyrene
- Deep drawn parts
- Dry ice
- Flexible foam
- Corrugated cardboard

Your Branch

- Aluminium foundry
- Car industry
- Container production
- Roof insulation
- Insulating material industry
- Cladding construction
- Filter production
- Aircraft industry
- Furnace construction
- Limestone works
- Customized cutting
- Plastic tanks
- Laboratories/ testing laboratories
- Air ducts
- Model making
- Pallet repair
- Upholstered furniture
- Recycling
- Pipe insulation
- Pipeline construction
- Gate manufacture
- Packing industry
- Wind power plants
- Carpentry firms

Hot-wire contour cutting
of large EPS parts

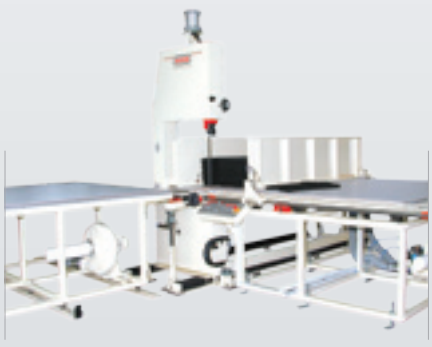
Angle cutting of limestone blocks

Tilted mitre cutting
of large construction elements

Pre-crushing of large plastic tanks

Cutting high density foam panels
for model making

Mitre cutting of aluminium
cladding elements



Batch cutting of rubber sheeting

Row of horizontal saws
for cutting rock wool panels

"Do you by any chance process a material that we haven`t cut yet?"

HEMA
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CUTTING SYSTEMS

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Our knowledge is your gain