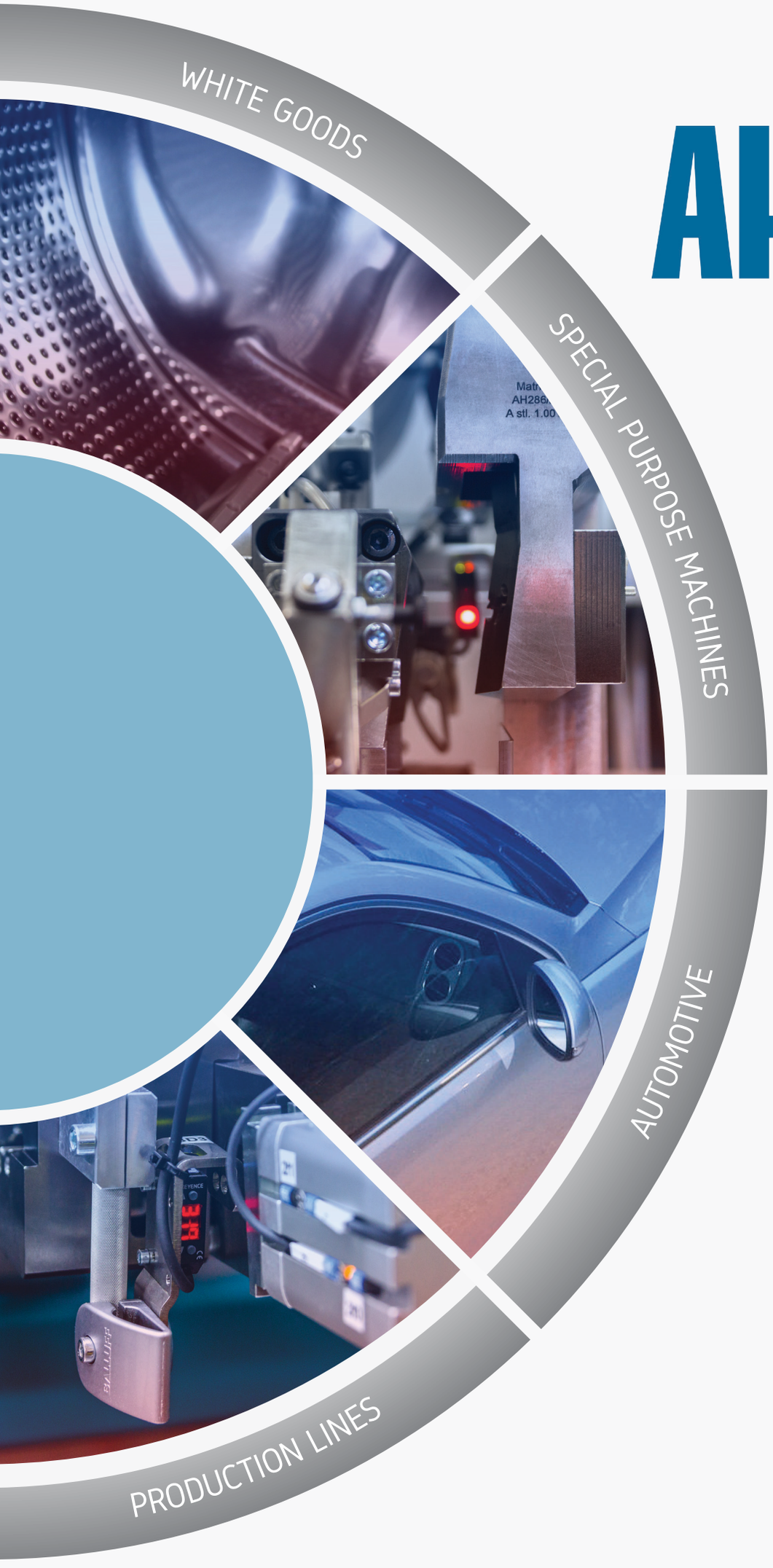



# AHAtech

# PRODUCT CATALOG

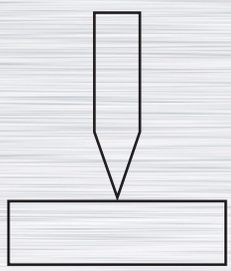
SEPTEMBER 2016

“The real technical advantage is hidden in details”

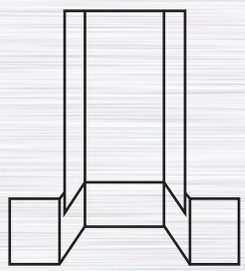
# CUSTOMER-SPECIFIC SOLUTIONS

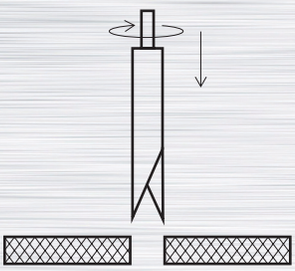
AHAtech design team has more than 25 years of experience in offline notching machine design. Our team is ready to offer consulting in the pre-ordering phase as well as offer valuable advices in order to enhance the technical procedures and processes. There are various developed solutions to be chosen from for several types of materials and shapes. Of course we are here to also serve our customers specific needs and requirements to find the most suitable and efficient customer solution.

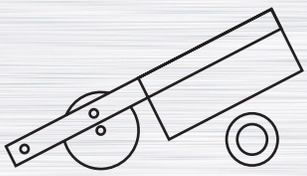
WHAT CAN WE DO ?


DIE CUT

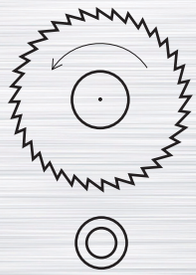

SHEAR CUT

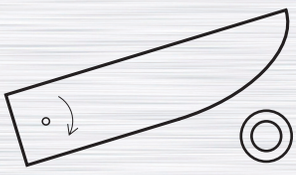

CONTOUR CUT

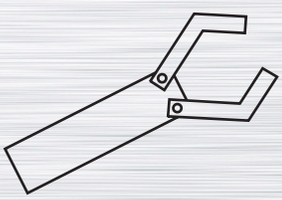

DRILLING

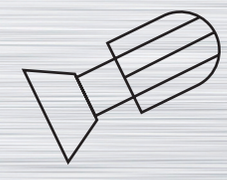

ECCENTRIC CUT

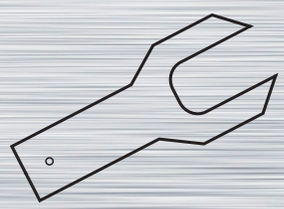

CLIPPING

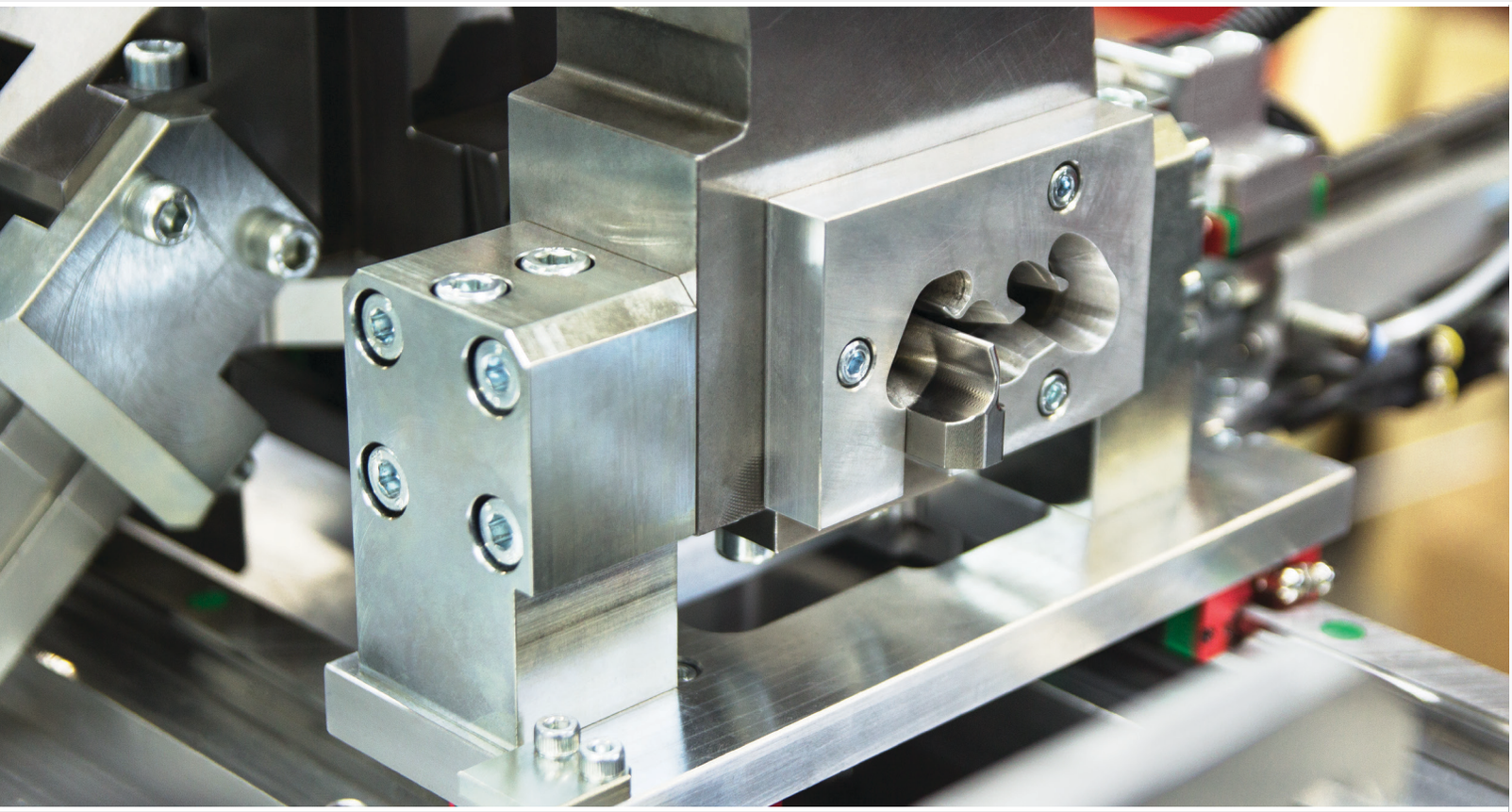

SAWING


FLY KNIFE CUT


MANIPULATION


CAMERAS

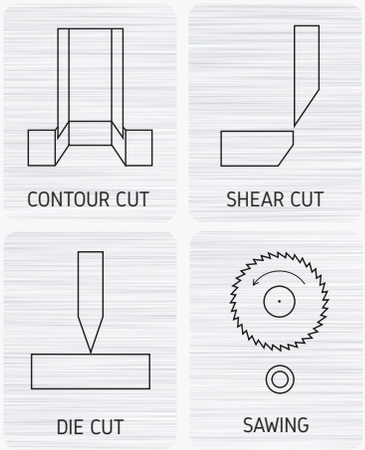

ASSEMBLY



# OFF-LINE MACHINES

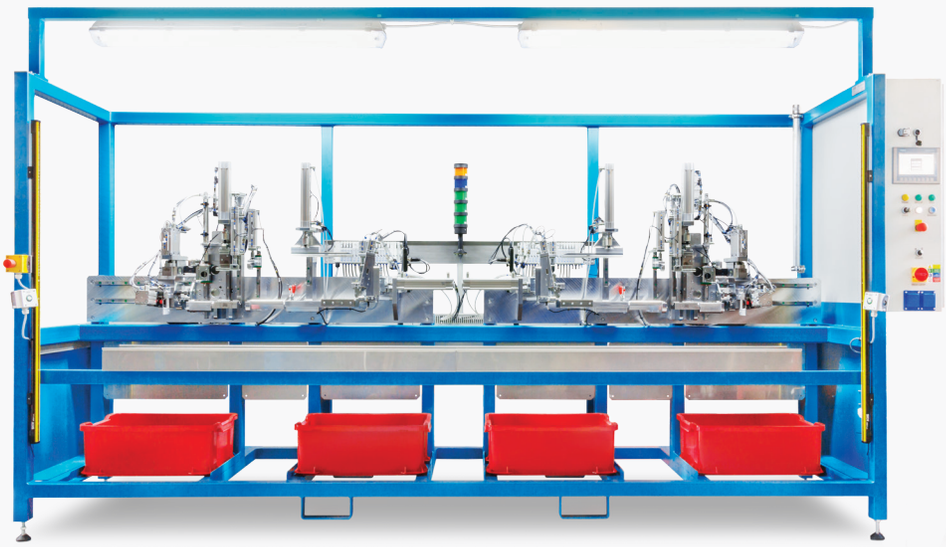
AHAtech core product portfolio starts with special purpose offline notching machines. Offline notching machines are built for preparation and complex finish of car seals, where afterwards they go to next technology step – molding.
By using the state of the art technology trends with servo drives and high-grade steel tools we achieve the best precision when it comes to tolerances coupled with a high repetition rate.

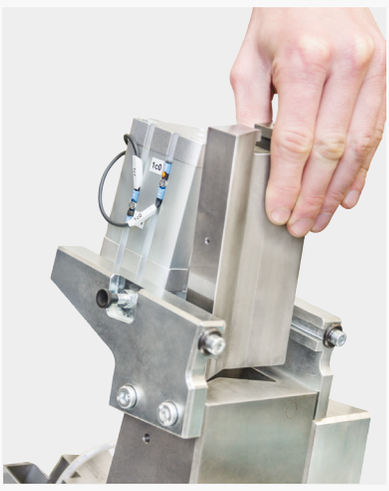
CONTOUR CUTTING MACHINES
SPECIAL PURPOSE CONTOUR CUT STEP MACHINES
DRILLING MACHINES
DIE CUT MACHINES
CLIPPING MACHINES
SAW MACHINES
PROTOTYPE CUTTING & PUNCHING TOOLS




# CONTOUR CUTTING MACHINES

AHAtech notching machines are designed for mass automotive production between 30 000 and 250 000 of car seal units per year. Robust frame design formed by welded construction means lower service costs and better notching precision. Optical and capacitive sensors are used to reach maximum performance when it comes to achieving results and minimize downtime due to wrong operator decisions. AHAtech offline notching machines process various car seal types used in the automotive industry including (but not limited to): door seals, glass run seals, hood seals and various weatherstrips.



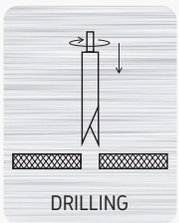


fast tools - free change of the knife for fast and reliable service procedures

# SPECIAL PURPOSE CONTOUR CUT STEP MACHINES

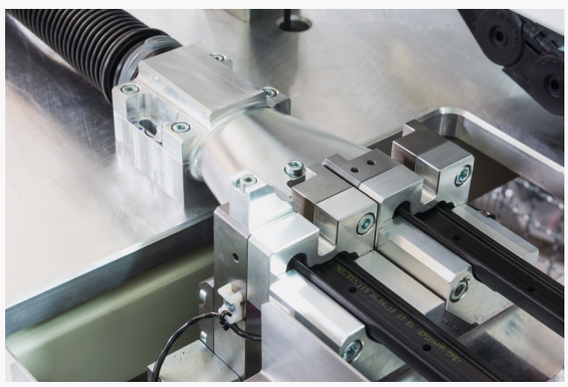
For even more complicated car seals as for example roof profiles. AHAtech transfer machines are built to meet high demands for mass productivity of complicated contour cuts on door seals. In the process of cutting, movable support is transported to the individual cutting stations, where different contour cuts are performed. After all particular steps are completed, processed automotive seal is removed. For faster profile change, AHAtech developed a quick change palette system.
All cutting stations are equipped with servo drives to achieve necessary precision and possibility of changing contour cut dimensions from main control panel.

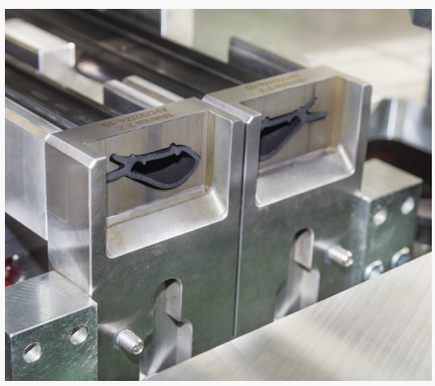
Most of the automotive seals processed in step transfer machines are equipped with metal reinforcement. For cutting of steel inserts AHAtech uses hydraulic power unit and powerful tools for fluent metal cutting without any shear impact.
For end cuts the use of saw units to achieve even better finishing quality for next technical steps is possible. Transfer type notching machines are designed to meet high standards of mass production up to 400 000 pieces per year.

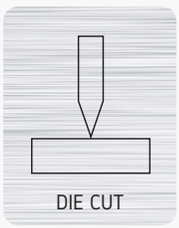



# DRILLING MACHINES

· for offline drilling with combination of end cutting or contour cutting
· possibility of quick ejection of processed parts and exhaustion of drilling residues
· using of drill spindles with very high speeds of 100 000 rpm
· electric or pneumatic drill spindles to be chosen from
· ventilation or holes for drainage in case the automotive seals require holes for clips





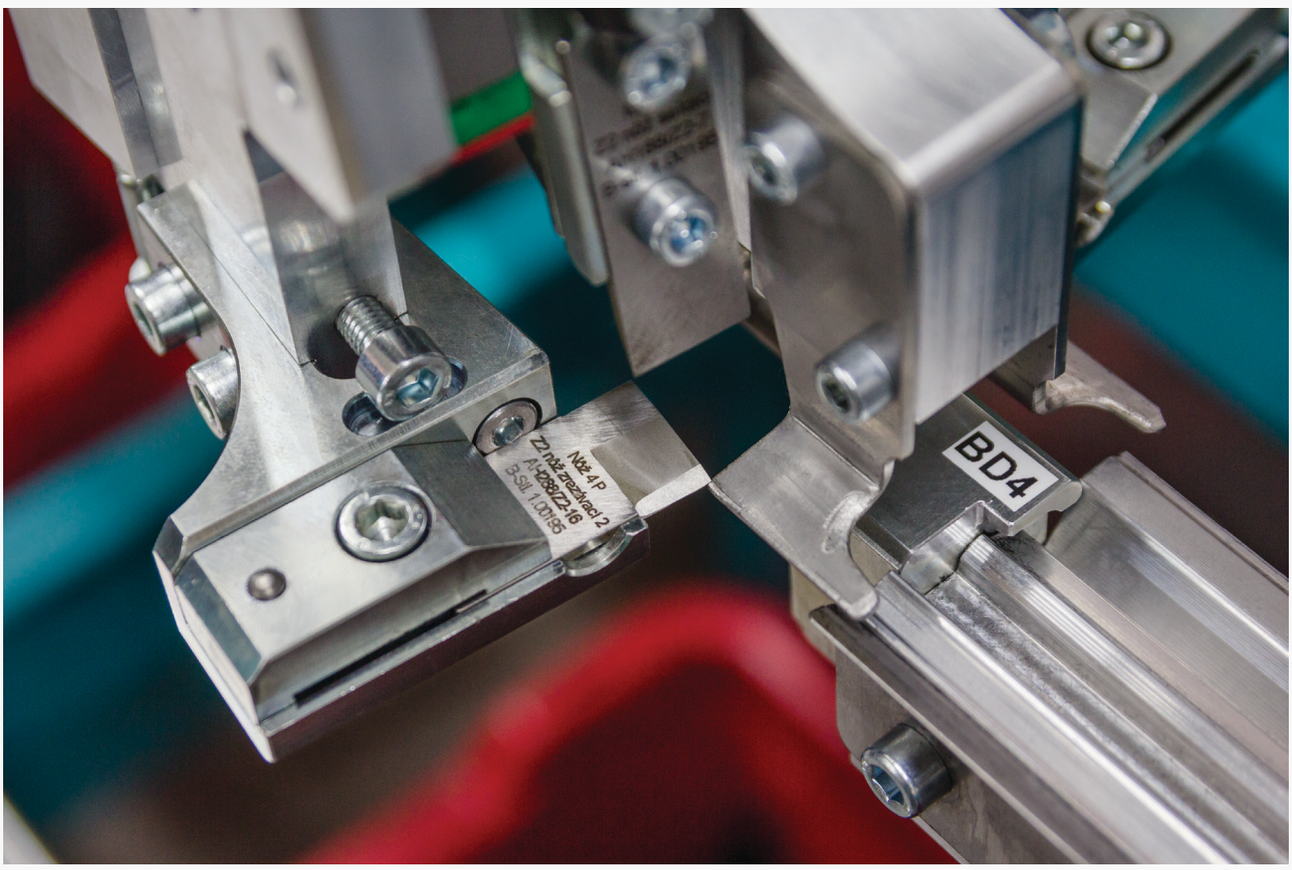


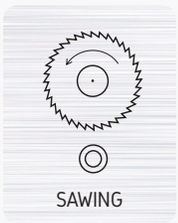

# DIE CUT MACHINES

· equipped with one or more tools according to the customer specification
· performs several cutting steps at the same time
· position of the product monitored with sensors
· possibility of automatic cutting and automatic ejection of processed parts
· simple and cost effective way of cutting material


# CLIPPING MACHINES

· clipping machines are designed to assemble plastic clips into the holes of automotive seals
· very high efficiency of clip loading
· various clip shapes and hole patterns



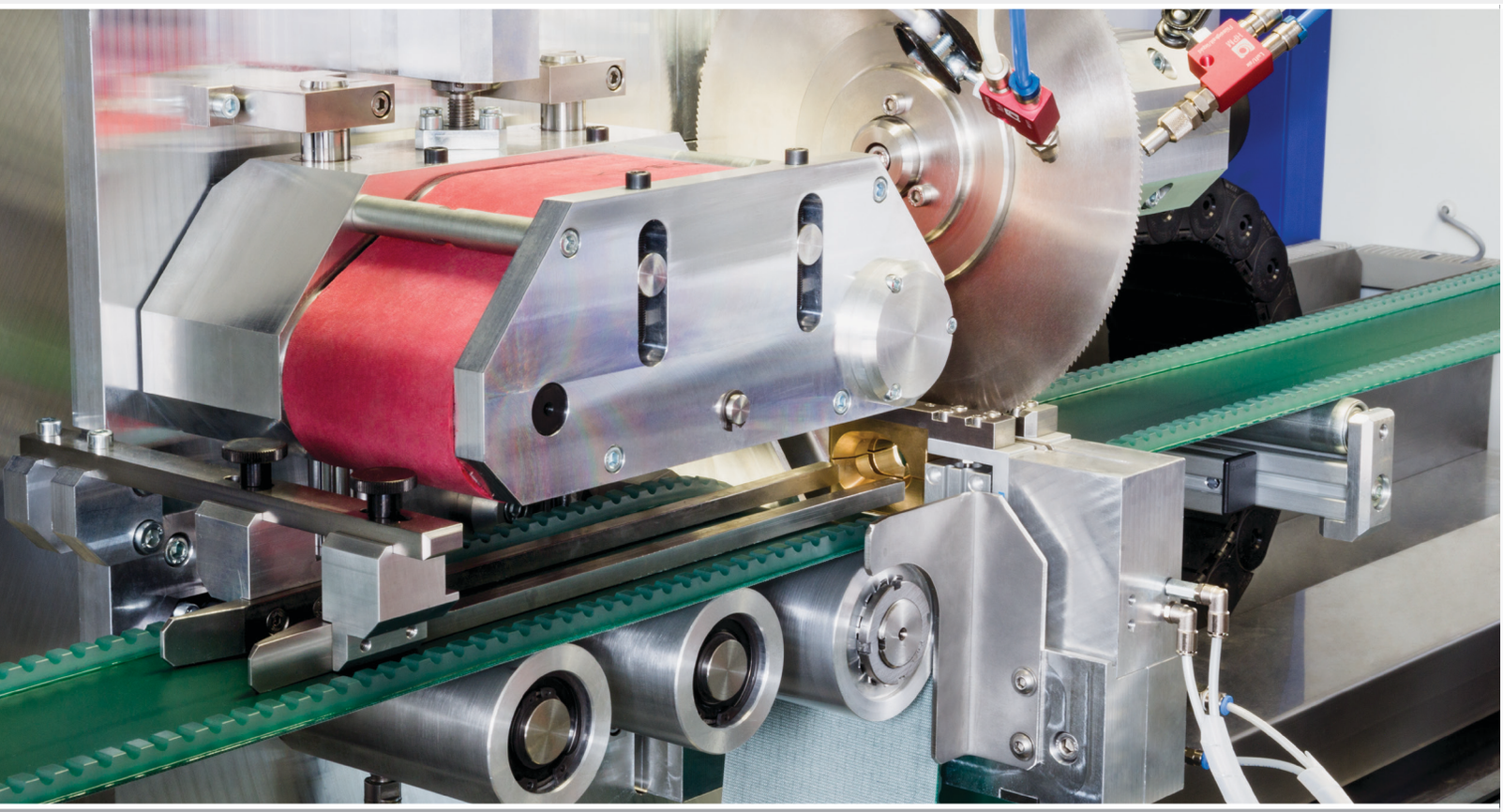



# SAW MACHINES

· for processing of the automotive seals with metal reinforcement
· loading and unloading of the product is controlled by sensors
· special saw units guarantee best finishing quality of the profile ends
· exhaustion unit that guarantees clean and dust-free environment is the integral part of the machine

# PROTOTYPE CUTTING & PUNCHING TOOLS

· for first prototype production of various types of automotive seals
· generally used to fine-tune the final dimensions and shapes for the prototype cars
· prototype tools are used in various industries where annual series production is counted in thousands of pieces
· these tools are necessary to prepare and debug the first parts

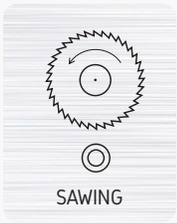


# PROCESSING IN-LINE MACHINES

AHAtech supplies all kinds of on-line processing machines. They are designed to cut, saw, drill, bend, pull or mark almost any material which is produced in extrusion line. Experiences of R&D department are based on processing of TPE or rubber profiles.
All processing in-line machines can be equipped with several additional devices. For example profile cutting at color label marked on a profile or conveyor belt with profile string. Machines are supplied with automatic line speed synchronization

FLYING SAW MACHINE
ECCENTRIC CUT MACHINE
FLYING CUT MACHINE
SAW MACHINE
DRILLING MACHNES

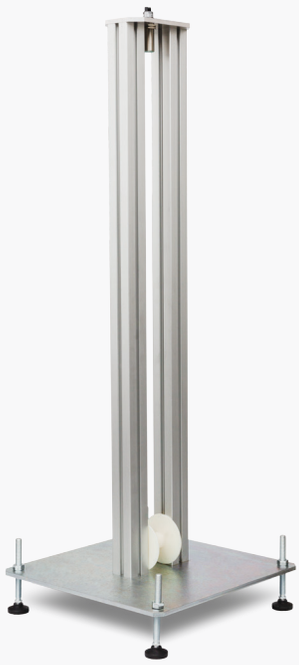
PRE-BENDING CASSETTES
MARKING DEVICES
EXTRUSION TOOLS
CATERPILLAR HAUL-OFF



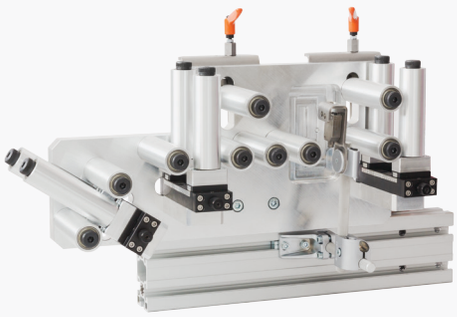

# FLYING SAW MACHINE

Concept of flying saw contains traveling head with saw or cutting unit. Flying saw is best for processing profiles with metal reinforcement. At the same time it ensures exceptional finishing quality of cutting. Naturally each material is recommended to be cut with the most suitable type of saw blades. Saw unit can reach up to 5000 rpm and it is controlled with a servo drive for different penetration speeds. Various clamp units enable user to saw several different types of materials and shapes.

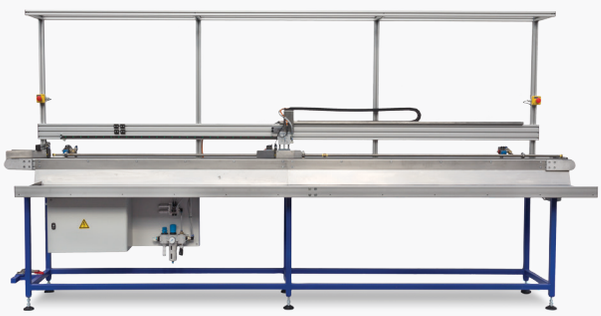

flying saw machine



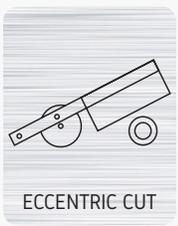
optional acessory: automatic line speed synchronization device



optional acessory: device for cutting on label

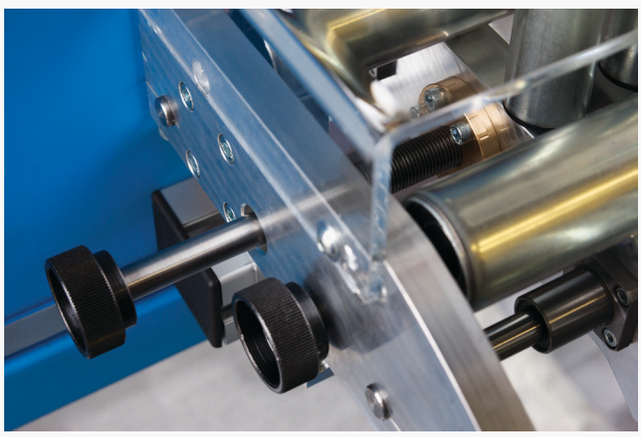


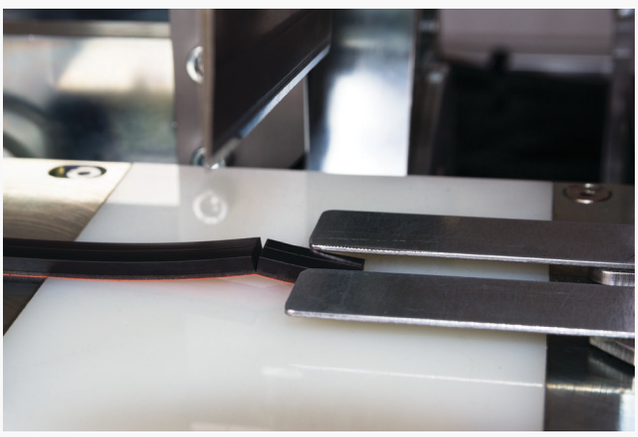
optional acessory: conveyor belt




# ECCENTRIC CUT MACHINE

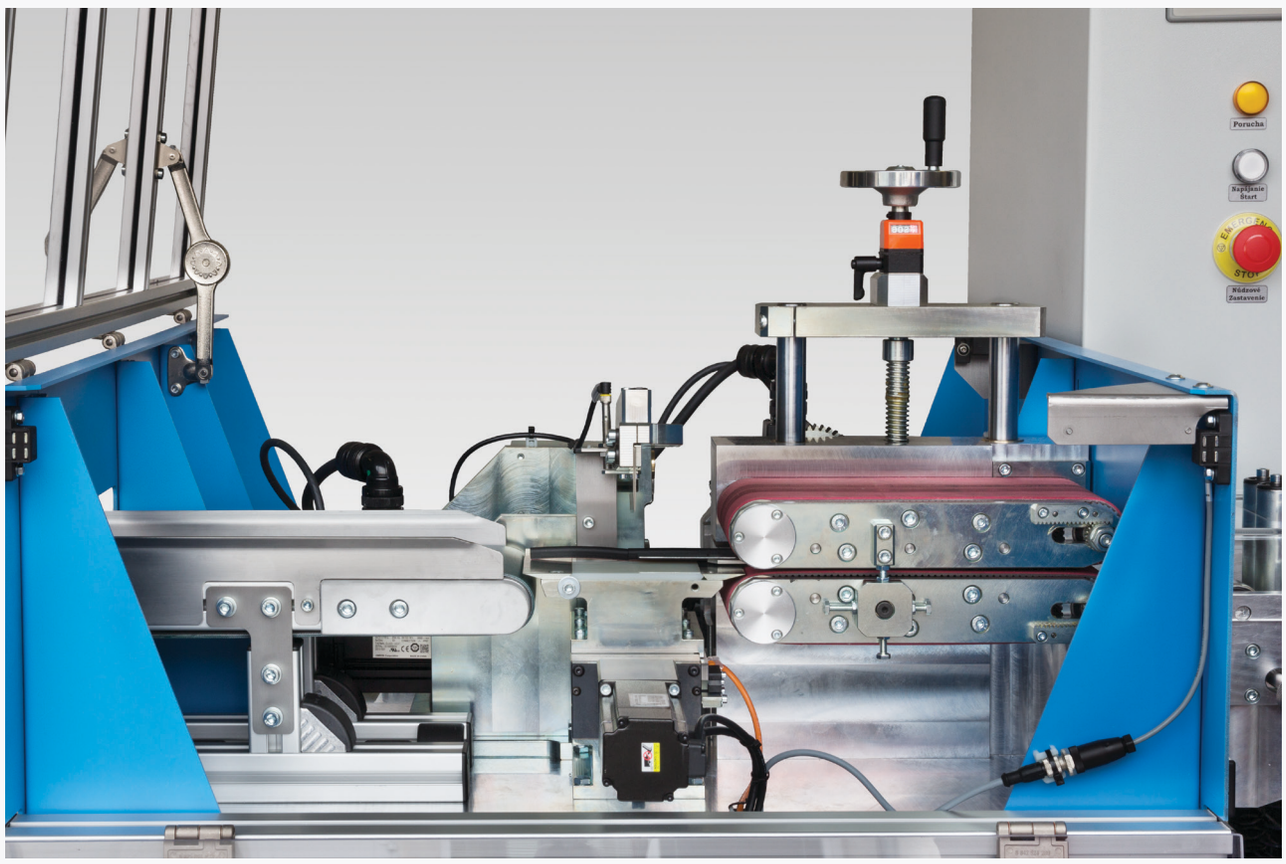
Eccentric cutting unit with servo drive is similar to die cutting but exceeds the cutting cadence by multiple times while enabling a quiet operation. Cutting movement ensures eccentric bearing unit with pivots and arm connected to the knife. Servo-drived movement is able to control  length of the profile with enormous precision. Optional possibility of adjusting penetration depth of the knife extends the possibility of usage. Penetration adjusting depth unit enables a partial cut of the profile which creates two parts connected with a thin ribbon.

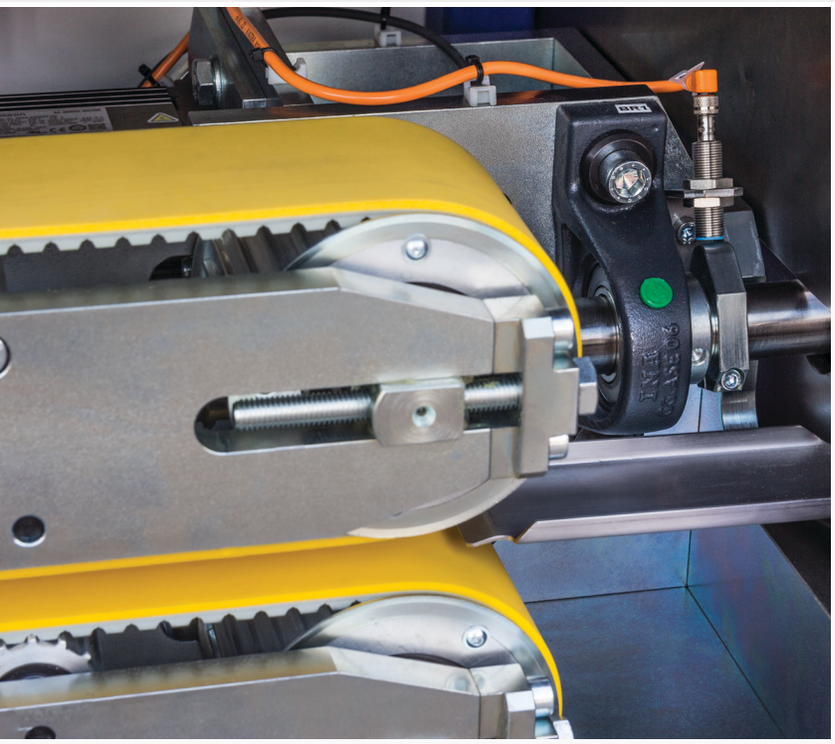




eccentric cut machine

optional acessory: device for line speed synchronization





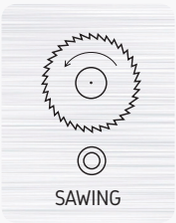

# FLYING CUT MACHINE

Flying cut machines are equipped with rotary knife and caterpillar pulling belt. This combination ensures enormous cutting cadency of semi-rigid or non-rigid materials. Rotary knife is capable of step-less cutting with 800 cuts/minute. Caterpillar pulling belt with stop & go system is used for continuous cutting. Water level under the rotating knife enables lubrication and cooling.

optional acessory: conveyor belt

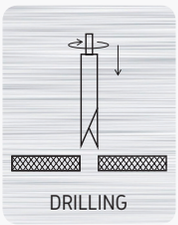

flying cut machine

optional acessory: device for line speed synchronization




# SAW MACHINE

Saw machine with one saw unit and caterpillar profile pulling belt is an excellent solution for in-line processing of semi-rigid or non-rigid materials. Saw unit couples the advantages of the flying saw unit with stop & go system that increases its power efficiency therefore decreasing the operational costs.




# DRILLING MACHINES

In-line process machine for drilling holes into extruded material. Drilling machines with installed caterpillar haul-off  are designed to work in continuous drilling operation with stop & go system for example for drilling of ventilation holes in automotive door seals. Automatic synchronization with extrusion line, more drill spindles to choose and fine press force setting of caterpillar haul-off is the right choice.

# PRE-BENDING CASSETTES

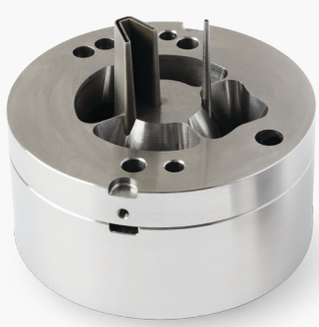
Bending cassette is necessary at the beginning of the extrusion line for rigid profiles with metal reinforcement. Bends are performed in more steps. Different shapes and materials can be processed while using several methods. Robust design with easy service and pulley change are clear advantages for fully-automatic production.

# MARKING DEVICES

AHAtech offers both in-line and off-line application marking devices depending on customer specific requests. Ink jet printing, thermal transfer printing or any other printing units can be applied into all special purpose machines with combination with other unit options. The design can be varied fully to meet the customer specific needs.

# EXTRUSION TOOLS

AHAtech technical department has the necessary know how and production machines to produce extrusion tools based on customers drawings. There are more basic types of extrusion tools. For profiles with or without metal carriers. For more various compounds and hardness in one profile. For any shape you need.



caterpillar haul-off

# CATERPILLAR HAUL-OFF

Single purpose in-line machine for pulling processed material over extrusion line. When customer already has process units to cut material and needs only pulling force. AHAtech haul-off conveyors can be supplied as a feeding or pulling devices. Slip-free belts and fine adjustment of press with combination of sensitive speed adjusting is ready for any material or profile handling. More sizes of the belt are ready for any special customer request.

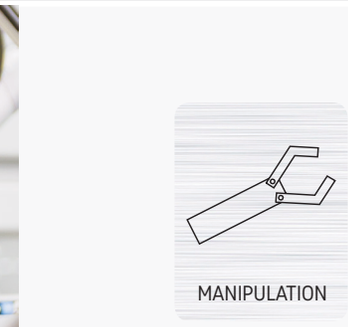

# SPECIAL PURPOSE MACHINES

Another field where AHAtech design team has lots of experience are special purpose machines in terms of manipulation, assembling and parts inspection. In today's economy there is an enormous pressure to produce more products with a higher quality while decreasing the price. Industry 4.0 needs more automation in the areas where human force has not been possible to be replaced until now. Thanks to the higher efficiency and new technologies the automation is cheaper and more available than any time before. AHAtech machines and solutions are ready to make you achieve your goals while ensuring the best product quality. AHAtech is capable of design of fully automated workplaces with integration of robotic systems.

MANIPULATORS

ASSEMBLY MACHINES AND TOOLS

SPECIAL PURPOSE MACHINES WITH CAMERA SYSTEMS

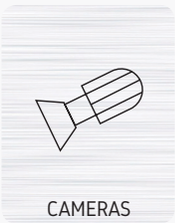



# MANIPULATORS

Various manipulators come hand in hand with camera systems. Do you want to move, insert, pick, turn or sort something? AHAtech offers many different solutions for your satisfaction. Manipulators in combination with camera systems may reach endless possibilities for mass production in any industrial sector. High speed, low speed, heavy, light, hot or cold to move, anything is possible to move right now. Send us inquiry for customer specific solution.


# ASSEMBLY MACHINES AND TOOLS

Definition of assembly machines and tools comes from increasing demand for exact, fast and reliable mass or prototype production. Combination of right tools, magazines, servo drives and smart design approach brings versatility and more options for one machine. Simple assembly tools and devices are suitable for making work easier and more productive.




# SPECIAL PURPOSE MACHINES WITH CAMERA SYSTEMS

Special purpose machines equipped with camera systems are breaking milestone on the way to Industry 4.0. Basic idea contains fast recognition of the shape and color for low speed and high speed applications. Counting, inspecting and identification have never been so easy and with combination of high speed image bus interface connected to the industrial computer opens the door to huge opportunities. Visual detection with fully integrated systems allows bin/panel picking or parts counting to almost everyone.

our future facility

# OUR TEAM

AHAtech design team consists of 5 design engineers, PLC programmer, technologist and 3 millers and assemblers. Our goal is to maintain lasting relations with our customers based on our expertise and reliability. 300 working special purpose machines and projects operating successfully for over a decade is the result that speaks for itself.

# OUR EQUIPMENT

Growth and expansion is our long term vision. That is why we are scheduled to move in a new building that will ensure us more space for R&D purposes, production as well as assembly. Our production department is equipped with all the necessary machines to produce all the shapes from different materials: CNC milling machine, Electro-erosive wire cutting machine, Grinding machines, Furnace for steel hardening and top equipped assembly shop. For designing of the machines, we use 5 PTC creo licences.

REFERENCES:

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