

MACHINE OPTIONS

CatLine - Cutting thick sheets

With very thick materials, CatLine reduces burr formation and improves the piercing and cutting of small contours and contours close to other contours. Thanks to modifications to the laser source, the optical fiber and the eVa cutting head, we achieve unprecedented cutting quality with thick stainless steel and aluminium sheets, and exceptionally quick cutting of all thick sheets. The optics and the other parameters are adjusted in accordance with our process models while the part is being cut. CatLine makes a 20% thickness increase possible with the same laser power, and improves thick sheet throughput time by up to 50%. High quality edges are manufactured, burr formation on aluminium and stainless steel is reduced by 80%, and the cutting process is stabilized for consistent results.

FastLine

Fast cutting of thin and medium thickness sheets Super - fast cutting of thin and medium thickness sheets up to approximately 6mm (.240") thick (depending on the material and the laser power). Fastline has 2 primary functions:

- FlyCut - Fly cutting involves the piercing of relatively thin material at cutting speed, as opposed to stopping, piercing, and then moving. The head moves between contours arranged in an array at a constant speed without stopping to pierce. Cutting takes place by switching on the laser beam above the cutting lines and switching it off again between contours. If your part has an appropriate repetitive pattern, Flycut can significantly reduce the throughput time of the part, and can be used up to a thickness of 6 mm.
- FastCut - Fastcut involves "piercing on the fly" and significantly reduces the piercing time. Instead of stationary piercing, the system moves at an appropriate speed in order to reduce the piercing time, and then resumes at full speed as soon as possible. This option is used to cut sheets with a thickness of up to 12 mm. This option improves the cutting efficiency of thin and medium thickness sheets by up to 30%.

MixLine - Mixed gas cutting

MixLine is particularly effective for mild steel and aluminium. MixLine significantly increases the quality and speed of the cutting technology. With the aid of the peripheral device, a gas mixer and a gas tank, the technology tables developed by our engineers automatically switch over the cutting technology to one of the three gases (oxygen, nitrogen and oxygen/nitrogen mixture). With many materials, this results in increased throughput and fewer burrs. Pure nitrogen tends to produce more burrs than oxygen, and good edge and burr results can be achieved by mixing these gases.



CutEye - Fast sheet position recognition

If you also need to reduce the time needed to locate the sheet on the shuttle table before cutting, CutEye's rapid edge detection will meet this challenge. The CutEye rapid edge finder locates the sheet approximately 3 to 4 times faster, adjusts the cutting program to match the sheet location, and starts cutting. A sheet locating time of 5 seconds is normal for small to medium-sized sheets, with slightly longer for bigger sheets. The cutting head remains retracted during the edge finding cycle, allowing the machine to move at ultra-fast speed and avoiding the risk of collision.

AC - Automatic centering and anti-collision system

Automatic Centering is industry-leading technology that maximizes the cutting speed, the edge quality and the machine uptime while protecting your investment.

- Nozzle centre monitoring – the Eagle AC monitors the nozzle-to-beam centre while cutting, and transports the head to the alignment station if necessary. Auto realignment takes about 15 seconds.
- Collision recovery – the eVa® cutting head is designed to survive impacts of up to 50 m/min. After a collision, the AC will re-align and resume cutting. If it tries to resume cutting but hits the obstacle again 3 more times, the machine will go into standby.
- Edge quality and cutting speed – a centred nozzle provides a proper flow of gas, resulting in the maximum cutting speed and consistent edge quality all around the part. Nozzle centering is also no longer operator dependent – it is correct every time.
- Unattended operation – the EAGLE AC and the advanced collision detection allow you to significantly reduce the amount of operator intervention.
- Controlled by you – you determine the check timing. Let the Eagle AC clean the nozzle and check the nozzle centering after each sheet, after 500 piercings, after 3 operating hours or using other criteria. The Eagle AC also automatically checks itself for alignment errors.

ACS - Anti Collision System

The patented eVa cutting head provides the best collision protection that is currently available. The Eagle ACS provides three levels of collision protection.

- Slow cutting speed protection
At slow cutting speeds, the capacitive sensor will detect an impending collision and stop the machine before any damage can occur. The Eagle Auto Centering (AC) system will automatically realign the head and resume cutting in the event of a collision.
- Fast cutting speed protection
At fast cutting speeds of up to 50 m/min, the lower module of the cutting head below the lenses can be moved sideways, so that the machine can be stopped in good time and machine damage prevented. The Eagle Auto Centering (AC) system will automatically realign the head and resume cutting in the event of a collision.
- Rapid traverse protection
At speeds up to 14,000 ipm, the lower module of the cutting head will break off to prevent significant machine damage. The module can be replaced in just 20 to 30 minutes.
- Protect your investment and keep your machine cutting with Eagle ACS.



ANC 36/72 - Automatic Nozzle Changer

The automatic nozzle changer increases the production efficiency of the machine, allowing the machine to be used unsupervised for many hours, including night shifts or weekends. The system can be equipped with 36 or 72 nozzles, which can be reused up to 10 times. The nozzle changing time is fast and automatic - approximately 25 seconds, which is top performance.

PCS - Piercing Control System

The piercing control option increases machine performance and safety. The system developed by Eagle engineers controls the piercing procedure and notifies the control system of the completion or failure of the burning procedure. This option reduces the piercing process to a minimum. As soon as the piercing process has been successfully completed, the cutting process starts. If the machine does not have this option:

- The piercing process is fixed for a certain period of time and often continues, even though the laser beam has already penetrated through to the other side of the material.
- The machine can start cutting, even if the burning procedure has failed.

PCS I technology increases the efficiency and safety of the machine significantly. It reduces cover slide wear and tear by eliminating unsuccessful piercing and improves the durability of the conveyor beneath the machine.

CCS - Cutting Control System

The Cutting Control System allows you to use the maximum cutting speed without compromising the stability of the process. The system monitors and controls the cutting process, and informs the control system if any breakdown of this process has occurred. The CCS ensures that cutting is consistently performed at high speed. The machine will automatically slow down the cutting speed if necessary. This technology significantly increases efficiency, reduces the risk to the cover slide, eliminates sheet welding (rather than cutting), reduces the intensity with which the operator has to monitor the machine, and increases throughput.

Additional control panel

An additional control panel is available which has been specially designed for projects in which the operator would like quick and easy access to the work table. The majority of the functions and capabilities on the main control panel on the back of the machine are available to the operator, including functions such as quick programs, live view inside the machine, production planning, program start, and more.

In conjunction with the fastest pallet changer in the industry, the operator can quickly physically inspect the first part or load a small job within seconds.



Transverse conveyor

The transverse conveyor removes parts and scrap that has fallen from the end of the conveyor out of the machine and into a bin which you have provided. It can easily be removed for cleaning and has a robust design. For small thin parts, the transverse conveyor allows you to let the parts fall through the slats, in the knowledge that they will subsequently be transported to a bin outside of the machine. This device makes simple waste separation for recycling possible.

Fast comb replacement

This makes maintenance work easier for the operators. The individual combs are placed in the table frame as standard. This option makes it possible to use modules which can be taken out of the table frame and taken out of the machine for cleaning. They can be replaced with new modules without causing downtime.

HeavyDutyPackage

This option makes it possible to cut thick sheets, even up to 60 mm; the standard systems cut sheets up to 25mm thick. The HeavyDutyPackage includes:

- reinforced lower pallet,
- reinforced pallet changer, with the possibility of loading metal sheets up to 60 mm onto a pallet,
- extended Z axis stroke,
- unique cutting technology developed by EAGLE's engineers.

Delivery

Delivery of machines (CIP)

The machines are delivered together with insurance, loading, transport, unloading and transport into the manufacturing hall (the unloading crane must be provided by the customer)

Preparation for sea transport

Preparing a machine for sea transport requires special packaging. The price of this option includes both packaging and loading the machine onto a suitable container.

Tropical version of machine

The tropical version of the machine is prepared for demanding tropical climates with high humidity, high temperatures and high dust levels.

Delivery of the automation system (CIP)

The automation system is delivered together with insurance, loading, transport,

unloading, and transport into the installation location in the hall (the unloading crane must be provided by the customer).

